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ARMS 3

**Agricultural
Resource
Management
Survey**

Phase 3

Interviewer's Manual

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1 General

1.1 Purpose

The Agricultural Resource Management Survey (ARMS) is the U.S. Department of Agriculture's primary source of information on the financial condition, production practices, and resource use of America's farm businesses and the economic well-being of America's farm households. ARMS is a nationally representative survey administered using several phases—sample screener, field-level, and farm-level phases—targeting about 5,000 fields and 30,000 farms each year.

The field-level phase collects information on production practices and costs (fertilizer, pesticide, labor, tillage, seed, etc.) for target commodities. The farm-level phase collects financial information for farm businesses and a variety of financial and demographic information (age, education, occupation, off-farm income, etc.) for farm operators and their households. The survey collects information from 48 States and is designed to be representative of the continental U.S and to support State-level estimates for 15 key agricultural States.

Many policy decisions made in Washington, D.C. and in the states directly affect U.S. farmers and ranchers. The ARMS provides farmers and ranchers with one of the best means to ensure that policy-makers have access to accurate and objective information when making those decisions.

1.2 ARMS 3 / Census Integration

The 2017 Census of Agriculture is the 29th Federal Census of Agriculture and the fifth conducted by the United States Department of Agriculture's (USDA) National Agricultural Statistics Service (NASS). It covers land use, net income, operator and farm attributes, production and sales of agricultural products during 2017, inventory of livestock, poultry, and other animals as of December 31, 2017, and many other farm-related items.

A combined questionnaire to collect both ARMS Phase 3 and 2017 Census of Agriculture data was created again this year, as done in 2007 and 2012. Questionnaires for the mandatory 2017 Census of Agriculture are mailed to all farmers and ranchers in the U.S. during the same month the 2017 ARMS Phase 3 is mailed out. Since data collected on the ARMS and Census are similar, it was deemed an unnecessary burden to ask farm operators to complete both complex surveys.

Operators sampled for ARMS Phase 3 will receive the integrated ARMS/Census questionnaire, instead of receiving the Census of Agriculture questionnaire. Completing the ARMS questionnaire will satisfy the mandatory Census reporting requirement and also provide the necessary information for the ARMS. ARMS data will be transferred to Census after ARMS is completed.

1.3 Data Collection Phases

Annually, the ARMS collects production practices and cost of production data on selected commodities. The ARMS also collects detailed whole farm financial information from a

representative sample of farms and ranches across the country. To accomplish this, the ARMS project is conducted in three data collection phases. In many ways, the three phases can be viewed operationally as independent surveys. However, the power of the ARMS design is that the data between phases are related and can be combined and analyzed to provide a comprehensive look at farming and ranching operations.

- The initial phase (ARMS - Phase 1), conducted from May through July, determines the status of the business and collects general farm data such as crops grown, livestock inventory, and value of sales. Phase 1 data are used to qualify (or screen) farms for the other phases.
- The second phase (ARMS - Phase 2) is conducted from September through December. This phase collects data associated with agricultural production practices, resource use, and variable costs of production for specific commodities.
- The final phase (ARMS - Phase 3), which is the focus of this manual, is conducted from the following January through April. Phase 3 collects whole farm finance and operator characteristics information.

Respondents sampled for the Production Practices and Costs Report (PPCR) in Phase 2 will be asked to complete a Phase 3 report to obtain financial, resource use, and cost of production data for the entire operation. It is vital that both the Phase 2 and Phase 3 questionnaires be completed for these operations. Data from both phases provide the link between agricultural resource use and farm financial conditions. This is a cornerstone of the ARMS design.

1.4 Uses of ARMS Data

Farm organizations, commodity groups, agribusiness, Congress, the President, State Departments of Agriculture, and the USDA use information from ARMS to evaluate the financial performance of farm/ranch businesses and to make policy decisions affecting agriculture. Specifically, the ARMS:

- gathers information about relationships among agricultural production, resources, and the environment to support evaluations of these relationships. The data are used to understand the relevant factors in producing high quality food and fiber products while maintaining the long term viability of the natural resource base and rural communities;
- determines production costs of various crop and livestock commodities, and the relative importance of various production expense items;
- is used in the estimates of net farm income and provides data on the financial situation of farm and ranch businesses, including the levels of assets and debt. ARMS data provide the ONLY National perspective on the annual changes in the financial conditions of production agriculture;
- informs the farm sector portion of the national Gross Domestic Product (GDP). While the farm sector portion may be small, its volatility must be accurately measured to identify the sources of change in the overall economy;

- provides the agricultural component of State and Local Area Personal Income estimates prepared by the Commerce Department's Bureau of Economic Analysis (BEA). These measures are used to drive formulas for distribution of federal assistance dollars to communities, and by businesses and state and local governments to make local investment and infrastructure decisions;
- identifies the characteristics and financial situation of agricultural producers and their households, including information on management strategies and off-farm income. ARMS provides the ONLY source of data that link household financial resources and outcomes to farm business finances;
- provides baseline commodity cost and return estimates that are used to establish annual estimates during the next 4-8 years. Annual commodity estimates are set by updating the survey base using changes in annual prices, acreage, and production.

In general, ARMS data benefits farmers directly through governmental policy, like the farm bill, that are influenced by ARMS data. Most respondents do not realize the data coming from the ARMS helps them indirectly through information from extension advisors, in reports issued by State colleges and universities, in farm magazines, newspapers, and on radio or TV broadcasts.

1.5 ARMS Products

Markets cannot operate efficiently without accurate and timely information. As with all USDA reports everyone, from the smallest farmer to the largest agribusiness firm, has free and equal access to the results from this survey. This access to information allows farmers to stay on equal footing with agribusiness firms and others who market agricultural commodities.

Reports and tables using ARMS data can be downloaded from the following NASS and ERS Web Sites:

- The NASS Web Site is: <http://www.nass.usda.gov>
- The ERS Web Site is: <http://www.ers.usda.gov>
- The ERS ARMS Data User's Manual is: <http://www.ers.usda.gov/data-products/arms-farm-financial-and-crop-production-practices.aspx>

1.5.1 NASS Reports

NASS publishes two reports from ARMS. The "Agricultural Chemical Use - Field Crops" publication (http://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/Chemical_Use/) uses data collected in the ARMS Phase 2, and is normally released the following May.

The second report, "Farm Production Expenditures", compiled from the ARMS Phase 3, is released in early August. This report shows expenditures for the U.S., 5 farm production regions, 15 major agricultural estimating States, 8 U.S. economic sales classes, and U.S. crop and livestock farms. (<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1066>).

1.5.2 ERS Reports & Other Uses of ARMS Data

1. ARMS financial data

All versions of the ARMS Phase 3 provide data used in constructing farm-level financial accounts--income statements and balance sheets--and those farm-level measures are used to construct aggregated financial accounts for regions, states, and the entire agricultural sector. The financial and production measures from the surveys are used for a range of research analyses.

Ongoing uses of the data:

Farm income and balance sheet accounts. ARMS data form an essential element in ERS' annual estimates and forecasts of net farm income, farm sector value added, and farm assets and debt. In turn, the estimates and forecasts are widely used by policymakers, lenders, and input providers to track the financial performance and outlook for agriculture.

ARMS data are used directly by leaders of the House and Senate Ag committees, and their staff, through the ERS ARMS on-line data tool at <http://www.ers.usda.gov/data-products/arms-farm-financial-and-crop-production-practices/tailored-reports-farm-structure-and-finance.aspx>. The tool provides data on farm income and farm balance sheet accounts, sorted by region, commodity orientation, and farm size class. Information on farm structure and farm production practices is also available. They use the data tool as they plan and debate farm policy, in the Farm Bill, and in other contexts. USDA officials also use the tool as they implement legislation passed by Congress.

ERS estimates of farm sector assets, debt and net worth are widely used by lenders, input providers, and policymakers to evaluate credit and lending conditions in the farm sector. When faced with poor information and uncertainty, lenders can become reluctant to provide financing except under the most favorable circumstances. Data drawn from ARMS surveys, made widely available in summary form to a wide range of users, provide one of the few reliable, representative, and sector-wide sources of information on farm financial conditions.

Personal Income. ARMS data are used by the Commerce Department's Bureau of Economic Analysis (BEA) in the development of State and Local Area Personal Income estimates. In turn, the Personal Income estimates are used in formulas for allocating federal funds across States. Examples of programs that use personal income data in formulas to allocate Federal funds across states include Medicaid, Supplemental Security Income, Agricultural Extension, University Research, and Agricultural Lending.

U.S. agricultural productivity accounts. ERS uses ARMS data in the construction of USDA's official annual sector-wide estimates of agricultural output, input, and productivity growth. The estimates are used by policymakers, commodity groups, academics, and media to understand the sources of growth in US agriculture, to evaluate the impacts of investments in research, infrastructure, and extension on agricultural output and productivity, and to project the links between agricultural productivity, commodity prices, and food prices.
<http://www.ers.usda.gov/data-products/agricultural-productivity-in-the-us.aspx>

Recent Research Uses of ARMS financial and structural data:

Debt use by farm businesses. ERS used ARMS data to analyze how farm businesses used debt over the last two decades, with a focus on the considerable variety in their debt obligations.

The share of highly leveraged farm businesses (those with a debt-to-asset ratio greater than 0.40) has declined over time, as has the share of the value of production contributed by highly leveraged farms. Although stable overall, U.S. farm debt use varied widely by farm size, specialization, operator age, and other farm characteristics.

<https://www.ers.usda.gov/publications/pub-details/?pubid=43843>

Tax reform: likely impacts on farm businesses. Proposals calling for fundamental tax reform have once again called attention to a tax system that many regard as overly complex, inefficient, and inequitable. The primary elements of proposed reforms include the elimination of tax preferences, a restructuring of capital gains and dividend tax rates, lowered tax rates on ordinary income, and a reduction in the number of tax brackets. Such changes could have a significant impact on the after-tax income of both farm businesses and rural households, since the current tax system contains features that provide substantial benefits to farm businesses in the form of reduced rates on capital gains, accelerated cost recovery provisions, and other special deductions for farm production activities. This report uses ARMS farm financial data to support detailed analyses of the potential impact of tax reform proposals on farm businesses and rural households in the United States. <https://www.ers.usda.gov/publications/pub-details/?pubid=43714>

Is there duplication among farm programs? In the summer of 2013, the U.S. Government Accountability Office (GAO) undertook a project investigating the potential for overlap and duplication among USDA's farm programs. ERS staff used 2008-2011 ARMS data to provide custom analyses based on farm size, farm production type, and major program category – direct payments, program payments related to low commodity prices, major conservation programs, and other agricultural programs such as disaster relief. Publicly released in 2014, the report found that: about one-third of all farms received payments from at least one farm program; large farms were more likely to receive payments from multiple farm programs than small farms; and, although financial assistance provided to farmers under the 60 USDA programs may have overlapped, the programs did not appear to be duplicative. <http://www.gao.gov/products/GAO-14-428>

Local and regional food systems. A key to understanding farmers' participation in local/regional food systems is to distinguish the types of market channels through which farmers' sell food commodities: directly to consumers at farmers' markets, farm stands, etc., or through 'intermediated channels' such as local grocers, restaurants, schools, etc. ARMS has provided data on both types of channels since 2008. For a Report to Congress, ERS researchers combined ARMS with census of agriculture data to estimate the value of local food sales at \$5.8-\$6.6 billion. The report also covers several other issues related to local and regional foods, including farm business survival, local economic impacts, food safety standards and the Food Safety Modernization Act, characteristics of local foods consumers, and environmental issues. <https://www.ers.usda.gov/publications/pub-details/?pubid=42807>

Beginning farmers and ranchers. The 2014 Farm Bill (the Agricultural Act of 2014) provides increased funding for beginning farmer development, facilitates the transfer of farmland to the next generation of farmers, and improves outreach and communication to military veterans about farming and ranching opportunities. This report uses ARMS data to provide basic economic and demographic information on beginning farmers and ranchers, and ties that information to these recent policy initiatives. <https://www.ers.usda.gov/amber-waves/2014/june/beginning-farmers-and-ranchers-and-the-agricultural-act-of-2014/>

Farmland leasing and debt: According to ARMS data, farmers own about 59 percent of the farmland acres they operate, while they lease 35 percent with cash payments and 6 percent on a cash-crop-share basis. Large commercial farms are the largest users of leasing compared to intermediate and small farms. Larger farms may use land leasing to take advantage of scale economies while smaller farms may use leasing as a substitute for debt (especially beginning farms) due to the high cost of land and other capital inputs. This work looks at the degree of substitution between debt and leasing for different farm typologies. Leasing was a close substitute (a dollar of leasing replaces about a dollar of debt) for large and medium sized farms. For beginning farms, a dollar of leasing was found to replace less than a dollar of debt. The finding suggests that leased assets may be more risky for these farms and may expose the lessee to additional liquidity and bankruptcy costs.

<http://ageconsearch.umn.edu/bitstream/170495/2/Final%20Poster%20draft.pdf>

Research on farm households

Farmers and non-farm business ventures. ARMS farm-level data show that almost a third of U.S. farm households generate income by engaging in business ventures independent of farming, with distinctly different community and household benefits. On-farm diversification activities--like agritourism--and off-farm business ventures (such as an equipment dealership) each accounted for about half of these activities, but off-farm businesses generated about 80 percent of all alternative (nonfarm) business income earned by farm households, creating the largest impact on the local economy. Off-farm businesses operated by farm households contributed an estimated \$55 billion in value-added income to the gross regional products of their local economies and paid out \$25 billion in wages and salaries to 853,100 part-time and full-time employees. In general, the share of the local employment base accounted for by farmer-owned off-farm businesses was higher in more rural counties.

<https://www.ers.usda.gov/publications/pub-details/?pubid=43674>

Off-farm employment: Most farm households earn income from nonfarm sources, and most nonfarm income comes from off-farm jobs (rather than from pensions or financial investments). Moreover, income growth among farm families from nonfarm sources has grown more rapidly than income growth among all US families. ERS used ARMS data to evaluate off-farm employment among farm families. Farm operators and their spouses were more likely than other workers to have managerial and professional off-farm occupations. This pattern is particularly true among those with a college education. Those occupations paid relatively high wages, which helps account for the relatively strong growth in farm families' off-farm incomes.

<https://www.ers.usda.gov/publications/pub-details/?pubid=43792>

Farm families' health insurance coverage: ARMS collected information on health insurance coverage among farm operator households from 2006 through 2011, along with other data on farm and farm family attributes. Since most health insurance is employer-provided, and since most farmers are self-employed, there have been concerns that many farmers would be without health insurance. The resulting study established that farm-operator households are just as likely to have health insurance coverage as other Americans. Off-farm work plays an important role in coverage, by increasing access to health insurance through coverage provided directly by employers, and by providing farm households with an alternative source of income for purchasing insurance directly. (<http://naldc.nal.usda.gov/download/55962/PDF>).

Farm businesses and the internet: Over two-thirds of American farm businesses now access the Internet to purchase agricultural inputs, market their products, obtain market and other information, apply for loans and grants, and conduct other business. ERS research uses ARMS data on farm Internet use to evaluate the economic impact of Internet infrastructure, the use and

availability of technology alternatives, and Internet use policy issues. The studies provide scientific information in the formulation and implementation of policy impacting the provision of infrastructure and technology as well as impacting digital economy market efficiency. The research also supports USDA's management of its rural loan and grant, distance education, and telemedicine programs for broadband Internet service provider programs. The research is ongoing and the latest ERS publication can be found at: <http://www.ers.usda.gov/publications/eb-economic-brief/eb23.aspx>

2. Conservation Programs and Practices

The Phase 2 and Phase 3 surveys include questions about on-farm conservation practices and conservation program participation. ERS uses these data to help inform the design of conservation programs and to produce economic research on the effects of programs and practices.

Recent conservation research

Additionality in conservation programs. The Federal Government spends more than \$6 billion a year on voluntary conservation programs to encourage the adoption of a wide range of conservation practices that address multiple environmental and resource conservation goals. However, payments lead to improved environmental quality only if the farmers and ranchers who receive them adopt practices that they would not have adopted without the payments. This research uses ARMS data to measure “additionality”—the extent to which payments cause adoption of practices—for a set of common conservation practices. It also examines how to target payments to increase additionality. <https://www.ers.usda.gov/publications/pub-details/?pubid=45245>

Managing nitrogen use. Nitrogen is a critical input in agriculture, enabling farmers to produce high yields profitably. However, nitrogen compounds released into the environment are a source of many environmental problems, including eutrophication and hypoxia in aquatic ecosystems, visibility-impairing haze, and the loss of biodiversity. ERS used Phase 2 ARMS data to assess nitrogen management on eight major field crops. The study focused on the adoption of three “best management practices” (BMPs), applying nitrogen at an appropriate rate, accounting for all other sources of nitrogen; application as close to the time that the crop needs it as practical; and using methods to incorporate nutrients into the soil, to reduce runoff and atmospheric losses. While all three BMPs were realized on over a third of planted acres, substantial amounts of production fell short, leading to excessive nitrogen expenses and to environmental damages. The study estimated the extent to which improvements in management are needed, and assessed alternative policy mechanisms for improving management. (<https://www.ers.usda.gov/publications/pub-details/?pubid=44919>)

Environmental compliance with farm programs: Farmers who receive direct commodity program payments are required to comply with provisions of the programs aimed at land and wetland conservation, known collectively as environmental compliance requirements. Some farm bill proposals called for sharp reductions in direct payments; with no other changes to current law, reductions in direct payments would also reduce compliance incentives and potentially worsen environmental quality. This analysis used ARMS and other data sources to assess the impact of proposed reductions on compliance incentives, and to evaluate alternative policy initiatives that would improve conservation incentives. <https://www.ers.usda.gov/publications/pub-details/?pubid=44669>

Integrating conservation and commodity payments: The Conservation Stewardship Program, enacted as part of the 2008 Farm Act, provides performance-based conservation payments. These payments offset the cost of adopting new conservation practices and provide support to producers who have already achieved a high level of environmental performance. The program was introduced after the release of an ERS report that used an ARMS-based model to evaluate the design options for such a program. The model provided insight on (1) trade-offs between environmental gain and income support in a performance-based conservation program and (2) the distribution of support across farms compared to the support provided by existing commodity programs. <https://www.ers.usda.gov/publications/pub-details/?pubid=45851>

Current conservation research with ARMS data

Evaluating grassland conversion. Grasslands, particularly native grasslands in the Northern Plains, are important breeding habitat for ducks and other migratory waterfowl. About half of all ducks in North America are born in the Prairie Pothole Region—an area of vast grasslands interspersed with small wetlands. In recent years, higher prices for crop commodities may be encouraging farmers to expand crop production onto these grasslands, therefore destroying the habitat. Data gleaned from these questions will help in understanding the magnitude of these conversions and can be used to help devise programs to preserve grasslands. In the Western Corn Belt and Northern Plains, for example, the Fish and Wildlife Service (FWS) and USDA often purchase easements against cropland conversion on grassland that is also valuable wildlife habitat. These easements are purchased only from willing sellers and allow producers to continue grazing without restriction. <https://www.ers.usda.gov/publications/pub-details/?pubid=44880>

3. Research Focused on Livestock

ARMS Phase 3 livestock versions (dairy in 2000, 2005, 2010, and 2016, broilers in 2006 and 2011, and hogs in 1998, 2004, 2009, and 2015) provide detailed enterprise level changes that support reporting and analysis on policies and economic developments related to livestock production.

Recently published research

The transformation of the U.S. hog sector. Hog production was dramatically transformed in the 1990's and 2000's, as production shifted to larger and more specialized farms that were integrated into a chain of production with the use of production and marketing contracts. The transformation also featured the rapid expansion of new production practices in the industry. In 2013, ERS researched data from ARMS hog versions for 2009, 2004, 1998, and 1992 to show how the industry's structure shifted, and to estimate the impacts of the shifts on resource use, productivity, industry production costs, livestock and pork prices, and the industry's environmental performance. This 2013 ERS report confirmed that the productivity gains from expanded scale and the use of new technologies were largely exhausted by 2009, and that any future gains would require new innovations. Absent new innovations, future pork cost and price movements would be driven by changes in input prices and consumer demand, with much less of a role for productivity growth. <https://www.ers.usda.gov/publications/pub-details/?pubid=45151>

Organization, costs, and risks in broiler production. U.S. production of broilers grew rapidly until the mid-1990s, but growth then began to slow and production declined in 2009, with very modest growth since then. The industry's distinctive organization—with a high degree of vertical integration, nearly complete reliance on contract growers to raise chickens for poultry

companies, and grower compensation based on relative performance—helped fuel growth in the early period, and growth provided good returns and low risks for growers. However, slowing growth has placed new financial pressures on the industry and its organization. The industry is the subject of several important policy debates relating to competition, environmental regulation, international trade, and public health, which require an understanding of its organization. ERS used ARMS data to delineate the key features of the industry's organization and to analyze the industry's recent financial and productive performance, with a focus on contract growers.

<https://www.ers.usda.gov/publications/pub-details/?pubid=43872>

Economics of Antibiotic Use in U.S. Livestock Production: U.S. livestock producers have provided antibiotics in animal feed to treat animal diseases, prevent the spread of disease, and enhance feed conversion. But widespread antibiotic use—in and outside of agriculture--can lead to increased human health risks if it encourages the spread of microbes that are resistant to antibiotic treatment. As a result, the US Food and Drug Administration will phase out the use of antibiotic drugs for growth promotion, and major food retailers are changing procurement practices and requiring suppliers to limit the use of antibiotics in livestock production. ERS research used ARMS data to estimate the extent of antibiotic use in livestock production, measure the impacts of growth promoting antibiotics on production and farm-level costs, identify the production practices and equipment used by farms that are not using growth-promoting antibiotics, and evaluate the likely impacts of restrictions on livestock and meat markets.

<https://www.ers.usda.gov/publications/pub-details/?pubid=45488>

Changing Structure, Financial Risks, and Government Policy for the U.S. Dairy Industry.

Congress initiated a major change in dairy policy in the 2014 Farm Bill, by introducing a new margin protection program (MPP) in place of the combination of three programs aimed at countercyclical payments, dairy product price supports, and dairy export incentives. The shift occurred against a continuing major shift of production to larger farms, and a set of changes in product and input markets that are leading to widening product and input price risks. The MPP aims to limit the impact of those price risks, without reducing the industry's competitiveness and efficiency. ERS used ARMS data to measure how structural change in dairy farming affected industry production costs, and to evaluate the financial risks posed to dairy farmers by product and input price movements. The research forms an important component of the evaluation of the new dairy policy. <https://www.ers.usda.gov/publications/pub-details/?pubid=45522>

What's Driving Economic and Financial Success of U.S. Cow-Calf Operations? Cow-calf production is widespread and economically important throughout the U.S. Most farms are small part-time operations and producers have a diverse set of production goals. The economic performance of these operations varies by region, farm size, and use of production and management practices. We use ARMS cow-calf survey data to evaluate the drivers of farm financial performances. Our model links the "levers" of profitability (ROE)--operating profit margin, asset turnover, and inverse solvency--across five production regions reflecting different cow-calf production technologies and management practices. We find higher ROE in the Northeast and West, on larger farms with more harvested acres, on diversified farms, on farms where operators and spouses work off farm, and on farms that adopt feed technologies and advanced farm management and breeding practices.

<https://naldc.nal.usda.gov/naldc/download.xhtml?id=59617&content=PDF>

4. Crop Production Practices and Costs

Phase 2 of the survey provides data on production practices for specific targeted crop commodities. Farms in Phase 2 are surveyed again in Phase 3 for information on whole-farm production and finances and farm household attributes. Uses of the data include:

Production practices. The 2017 ARMS production practices data for wheat will be summarized and published on the ERS website for public use. Data users can generate customized summaries using this innovative web data tool. These data underlie federally mandated estimates of chemical use on major field crops, and also provide a perspective on trends in the use of seeds, precision agriculture adoption, and conservation tillage. The tool for accessing the ARMS production practice data can be found at: <http://www.ers.usda.gov/data-products/arms-farm-financial-and-crop-production-practices.aspx>

Crop insurance indemnities: USDA's Risk Management Agency (RMA) uses crop planting costs summarized from ARMS Costs of Production (COP) data to evaluate prevented planting and replanting payment rates (percent of total insurance coverage) that crop insurance policies would pay.

Fertilizer demand: Fertilizer providers use estimates of application rates, derived from ARMS crop surveys, to help gauge fertilizer demand in different regions, and to plan production and delivery schedules.

Economic damages: USDA's Office of Civil Rights uses COP costs and returns data to determine economic damages in cases in which discrimination has been found in USDA programs. The primary example is in Farm Service Agency (FSA) civil rights complaints (when people are denied loans or other benefits or there has been a delay in processing loans or other benefits to the point that there was an adverse impact upon their farming operations). Publicly available, defensible data are relied upon as the basis for analyses.

Recent ERS research on crops:

Multi-cropping practices. Over the last decade, growing demand for agricultural commodities has provided incentive for farmers to increase production. One way to increase production is to expand cropland acres; an earlier ERS study found that about one third of the recent expansion in corn acreage has come from hay production, grazing land uses, or Conservation Reserve Program (CRP) enrollment. Those shifts are not without environmental costs, since land in hay, grazing, or CRP provides important wildlife habitat as well as soil conservation and carbon reduction benefits. Double-cropping—the harvest of two crops from the same field in a given year—is another way to expand production. Researchers using ARMS data found that double cropping occurred on about 2 percent of cropland in most years between 1999 and 2012. Soybeans were the most common crop found on double-cropped acres, and winter wheat most commonly preceded these soybean plantings. However, regional and temporal variation is apparent in all double-cropping trends, reflecting local conditions and changing market incentives. Double cropping can limit the environmental consequences associated with cropland expansion, but it may have some negative environmental effects of its own. (<https://www.ers.usda.gov/publications/pub-details/?pubid=43865>)

Farm size and the organization of U.S. crop farming. Crop production has shifted to much larger farms over time. The increases have occurred steadily over the last three decades, and have occurred in almost all states and crops. Despite the shifts to much larger farms, most crop production is still carried out on family farms, in contrast to developments in some other

countries. This report documents the shifts to larger operations, and evaluates the separate roles played by technology, land attributes, risk-management strategies, and public policies in driving shifts to larger farms. The report also delineates the strengths of family organizations in agriculture, and identifies the factors that could undermine those strengths.

<https://www.ers.usda.gov/publications/pub-details/?pubid=45110>

Genetically engineered crops in the United States. This 2014 report found that 15 years after their first successful commercial introduction in the United States, genetically engineered (GE) seeds are now used on over 90 percent of U.S. corn, soybean, and cotton acres. ERS researchers used ARMS data to show that planting insect-resistant (Bt) corn and cotton is associated with higher net returns when pest pressures are high. The effect of herbicide tolerant (HT) adoption on net cash returns is more mixed; however, HT adoption is associated with substantial reductions in farm labor hours per acre, thus allowing farmers to raise household incomes through off-farm work or expanded farming operations. HT adoption is also associated with reduced tillage, which provides environmental benefits and further reduces labor requirements. Since the introduction of GE seeds, farmers have substantially reduced their use of insecticides on corn and cotton, and they have substituted glyphosate for more toxic and persistent herbicides. However, overreliance on glyphosate and a reduction in the diversity of weed management practices have contributed to the evolution of glyphosate resistance in some weed species. <https://www.ers.usda.gov/publications/pub-details/?pubid=45182>

Strategies to manage pesticide resistance in weeds: Glyphosate (Roundup) is an effective and widely-adopted weed-killing herbicide, but there is now widespread evidence of growing resistance to the chemical. ARMS data documents the spread of glyphosate use in soybeans, and the extent of resistance, in this NASS report with ARMS data:

[http://www.nass.usda.gov/Surveys/Guide to NASS Surveys/Ag Resource Management/ARMS S Soybeans Factsheet/](http://www.nass.usda.gov/Surveys/Guide%20to%20NASS%20Surveys/Ag%20Resource%20Management/ARMS_Soybeans_Factsheet/). Pesticide-resistant weeds can raise farm costs and reduce crop yields. Scientists, extension specialists, crop producers, firms in the crop protection industry, and the USDA are conducting education campaigns, voluntary weed management initiatives, conservation activity plans, and herbicide rebate programs to promote the adoption of weed best management practices (BMPs). A 2015 ERS report used ARMS information to examine the extent of resistance, the impacts of resistance on the returns to crop production, the extent of the adoption of BMPs, the impacts of BMPs on production costs and returns, and the potential impacts of education campaigns and government and industry programs on the adoption of BMPs. <https://www.ers.usda.gov/publications/pub-details/?pubid=45357> ARMS data on practices, yields, and costs are used more broadly to plan strategies for pest management.

Adoption of genetically engineered alfalfa, canola, sugar beets. Annual USDA surveys track acreage planted to genetically engineered (GE) corn, cotton, and soybeans with traits for herbicide tolerance and insect resistance, but do not track planted acreage for other crops or traits. The 2013 ARMS Phase 3 gathered data on the use of GE seeds and traits for alfalfa, canola, and sugar beets, and ERS published estimates of GE adoption for those crops.

<https://www.ers.usda.gov/publications/pub-details/?pubid=81175>

Precision agriculture in crop production. Increasing numbers of producers are using information technology to fine-tune their production practices, decrease input costs, and increase yields. Farmers are organizing detailed within-field information on yields, soil characteristics, fertilizer and pesticide applications, and weather conditions using computer mapping programs. A global positioning system (GPS), the same technology that makes mobile road maps for vehicles, makes it possible to create these detailed maps as well as tractor guidance auto-steer systems. The maps can be used to regulate farm implement input

applications using variable rate input-application technologies (VRT). When first developed, VRT was envisioned as the most productive use of farm information technologies, but maps of field conditions have proven to be useful themselves in helping farmers manage field operations. Current ERS research uses ARMS data to evaluate these trends and their impact on farm financial performance, and provided information reported in the July 2014 issue of National Geographic Magazine. A video discussing these developments is found under the box "FOOD BY THE NUMBERS: What Happens When Farming Goes High-Tech?".

<http://video.nationalgeographic.com/video/food-by-the-numbers>

The Coexistence of Organic, Genetically Engineered (GE), and non-GE Crops: Consumer markets for non-GE corn and soybeans began emerging in the U.S. and elsewhere in late 1990s. In recent years, as GE varieties were introduced for alfalfa, canola, and sugar beets, markets for non-GE crops emerged there as well. Crops marketed as non-GE must use specific identity-preservation protocols, such as the use of practices, to prevent co-mingling with other crops during production and handling. Farmers receive a price premium for non-GE crop production to cover the additional expenses associated with these crops. In addition to segregation costs to prevent co-mingling, grain buyers may require use of lower-yielding food varieties and may set higher quality standards for these crops. Buyers may also reject non-GE crops if they test higher than the buyer-set tolerance level for the presence of GE material. Data collected in the 2013 ARMS are used to estimate the extent of non-GE production for identity-preserved markets, and the impacts on production costs and returns. The estimates are used to help evaluate the prospects for coexistence of nearby GE and non-GE crop production in the U.S. <https://www.ers.usda.gov/publications/pub-details/?pubid=44044>

5. ERS Cost and Returns (CAR) Estimates

ERS produces estimates of the commodity costs of production for hogs, milk, and cow-calf production, as well as for barley, corn, cotton, oats, peanuts, rice, sorghum, soybeans, and wheat. Baseline estimates are derived from data collected in Phase 2 and Phase 3 COP questionnaires directed to producers of target commodities in any given year. Baseline estimates are then combined with annual price, production, and acreage data to set cost and return estimates for later, non-baseline, years. Periodic new baselines are needed because changes in farm structure and technology can occur and change economic fundamentals. Cotton, oats, and hogs were targeted for baseline revisions in the 2015 ARMS, while corn and dairy producers were targeted in 2016. Commodity costs and returns data can be accessed at: <http://www.ers.usda.gov/data-products/commodity-costs-and-returns.aspx>

Recent CAR research

Corn and Soybean Production Costs and Export Competitiveness in Argentina, Brazil, and the United States. Argentina, Brazil, and the United States account for 88 percent of world soybean exports, and 93 percent of corn exports. International demand for corn and soybeans is expanding because of growing global consumption of pork and poultry. Comparisons of production costs across countries are useful because they allow decision makers to infer how the export competitiveness of each country and crop could be affected by changes to factors underlying production costs, such as land, fertilizer, seed, fuel, chemicals, transportation, and labor. ARMS provides the underlying data for the U.S. and the U.S. cost and returns framework was applied to data for Argentina and Brazil. <https://www.ers.usda.gov/publications/pub-details/?pubid=44093>

Wheat costs of production. Wheat, produced in nearly every part of the United States, is the third largest U.S. crop in terms of both value and acreage, behind corn and soybeans. The wide

variation of wheat production costs across the country reflected differences in yields, cropping practices, and costs of land, labor, and capital assets. Regional climatic differences across the United States accounted for much of the variation in the class of wheat grown, each with its own production practices and associated costs. Northern wheat producers, for example, chose spring wheat varieties that were harvested in the fall because winter wheat—planted in the fall for summer harvest—would be killed by the cold during its winter dormancy. Growers in areas with abundant rainfall were able to boost their yield potential by applying high rates of fertilizer. At the other extreme, some regions had areas so dry that costly irrigation was needed to produce a wheat crop.

<https://www.ers.usda.gov/publications/pub-details/?pubid=43786>

Production costs and rice sector consolidation. U.S. rice production has shifted from the Gulf Coast to the Mississippi River Delta and to non-Delta regions of Arkansas, and production has also shifted to much bigger farms as the total number of producers fell sharply. Changes in Federal policy, initiated in the 1996 Farm Bill, likely encouraged the geographic shift in production. Cost played an important role; ARMS cost of production estimates for 2009 show Gulf Coast production costs to be nearly 20 percent higher than other regions, with substantially higher costs for fertilizer, fuel, drying, and land. In turn, the smallest farms, with fewer than 250 acres planted to rice, realize production costs that exceed the largest farms by about 20 percent (on a per acre basis). California is also an important center of rice production, but they produce a different variety that incurs higher costs but yields higher returns.

https://www.ers.usda.gov/webdocs/publications/38491/6122_rcs11d01_1_.pdf?v=41056

6. Land Use, Tenure, and Transition

U.S. Farmland Ownership, Tenure, and Transition. In 2014, ARMS Phase 3 was combined with TOTAL—the Tenure, Ownership, and Transition of Agricultural Land survey, for the first USDA survey of farmland since 1999. The ARMS component of TOTAL gathered information from farm operators, while another component gathered information from non-operator landlords. The first ERS report from the survey examined patterns of farmland ownership, tenure arrangements, and channels by which agricultural land is transitioned among owners and renters. <https://www.ers.usda.gov/publications/pub-details/?pubid=74675>

1.5.3 Non-Financial Data in ARMS Phase 3

This survey also collects a considerable amount of nonfinancial data. Some, such as hours worked on the farm, or types of equipment or livestock housing, or quantities of feed delivered to livestock, are used to develop estimates of the costs of farm production—that is, they are used to develop complete cost information.

In some years, the survey also asks about production practices used on the farm, including manure management and animal breeding practices on livestock enterprises, marketing practices on crop enterprises, or Internet usage and procurement practices for the whole farm. These questions are driven by particular public policy issues, and their inclusion in ARMS allows us to link responses to farm financial data. As a result, we can link the usage of practices to the types of farms that use them and to the financial performance of farms.

The survey asks questions about the farm's ownership, organization, and legal status. Some of those questions are necessary to allow us to accurately track flows of farm income to stakeholders—such as farm operators, contractors, landlords, and equity holders—and thereby

provide better estimates of farm financial performance. The questions also enable us to track the changing nature of agriculture, as production continues to shift to larger and more complex enterprises.

ARMS Phase 3 contains questions pertaining to farm households—concerning not only their demographics, but also their off-farm income, health insurance, and consumption expenditures. These questions are included to meet increasing policy concerns related to the financial well-being of farm households, as well as issues related to access to health insurance in rural areas. They also enable ERS to assess the financial resources available to farm households and farm operations to meet often sudden and sharp changes in farm financial performance.

2 Terms and Definitions

2.1 General

Enumerators working on this survey should be familiar with the definitions of the terms listed below. To gain the most benefit from training, enumerators should review the definitions of these terms before attending the regional training workshop. A comprehensive list of Terms and Definitions used in all NASS surveys (including those below) can be found on the Internet under the following address:

<http://www.nasda.org/File.aspx?id=2467>

2.2 Economic and Cost of Production Terminology

- accounting, accrual
- accounting, cash
- acreage base
- acreage, eligible contract
- acreage, contract
- acreage, noncontract
- agricultural commodity
- agricultural production
- animal unit (AU)
- animal unit month (AUM)
- aquaculture
- area sample
- assessed value
- assessments
- assets
- auction pool
- balance sheet
- barrel (bbl)
- base acreage
- Bureau of Land Management (BLM)
- borrowing capacity
- call back
- carryover
- cash receipts
- cattle on shares
- check-off
- commission charges
- commodity
- commodity, contract
- Commodity Credit Corporation (CCC)
- confidentiality
- Conservation Reserve Program (CRP)
- conserving use
- contract
- contract, delayed pricing
- contract, forward
- contract, marketing
- contract, production
- contract sale
- contractee
- contractor
- Cooperative State Research, Education, and Extension Service (CSREES)
- Corporation
- cost of production
- cover crop
- cropland
- crop rotation
- cull
- date, due
- date, mailing
- date, reference
- date, release
- depreciation
- direct sales
- discount
- double crop
- drip irrigation

- editing
- Employee Identification Number (EIN)
- Environmental Quality Incentives Program (EQIP)
- equity
- estate
- expenditure
- expenses, capital
- expenses, operating
- expenses, production

- fallow
- farm
- farm, contract
- farm, corporate
- farm, institutional
- farm, noncontract
- farmstead
- Farm Service Agency (FSA)
- Federal Agriculture Improvement and Reform (FAIR) Act
- feeder
- fertilizer
- field
- financial health
- finish
- flat
- flexibility contract, 7-year production flexibility contract
- forage
- forward pricing
- free-of-charge
- fringe benefits
- futures market

- government program land
- grazing land association, public or industrial (PIGA)
- grazing allotment
- grazing association
- grazing fee
- greenhouse
- gross value

- harvested acres
- hay
- hedging
- herbicide
- hired manager
- household

- hundredweight (cwt)
- idle land
- implement
- improvements
- inaccessible
- income, gross farm
- income, net cash farm
- income, net farm
- income, non-farm
- income, off-farm
- input
- input provider

- landlord
- landlord, non-operator
- landlord, operator
- liability
- liquidity
- loan, marketing
- loan, marketing assistance
- loan, nonrecourse

- market value
- military time

- Natural Resources Conservation Service (NRCS)
- net worth
- nonresponse
- nursery

- oilseed crops
- on feed
- operating arrangement
 - individual
 - managed
 - partnership
- operator
- orchard
- out-of-business

- partner
- pasture
- patronage refund
- payment, advanced
- payment, cost-share
- payment, disaster
- payment, final

- payment, incentive
- payment, loan deficiency
- payment, transition
- payment limitations
- payment quantity
- payment yield
- pesticide
- planting flexibility
- pick your own (U-Pick)
- power-take-off (PTO)
- premium
- primary name
- processor
- production expenses
- production flexibility contract
- production flexibility contract payment
- questionnaire
- rangelands
- ratio, debt-asset
- ratio, parity
- real estate
- refusal
- rent
- rent, cash
- rent, share
- respondent
- retired
- salary
- sample, list
- sample, probability
- sampling frame
- sampling unit
- secondary name
- seed
- sharecropper
- shrinkage
- small grains
- solar energy
- sold-out
- solvency
- straw
- subsidy
- survey
- survey period
- survey, statistically defensible
- tenant
- wages
- water rights
- wetlands
- Wetland Reserve Program (WRP)
- woodland
- work, agricultural
- work, contract
- work, custom
- work, service
- worker
- yardage

2.3 Livestock Production Categories

The following livestock production categories are located on page 2 of the Respondent Booklet. The codes are for use in Sections 19-21.

2.3.1 Hog Contractee Operations

Farrow to Wean (Code 802) – This operation oversees the breeding of sows or gilts and the farrowing of their litters. The contractee will feed and care for the pigs for about 16 to 20 days, until they reach 12 - 14 pounds. The weaned pigs will be moved to a nursery and/or grower operation and the sows will either be bred again or go to slaughter.

Farrow to Feeder (Code 805) – This operation oversees the breeding of sows or gilts and the farrowing of their litters. The contractee will keep the pigs for approximately 6 weeks, until they reach 35 - 45 pounds. The pigs will be moved to a finishing operation and the sows will either be bred again or go to slaughter.

Farrow to Finish (Code 807) – This operation oversees the breeding of sows or gilts and the farrowing of their litters. The contractee will keep the pigs and finish them out until they reach market weight. The sows will either be bred again or go to slaughter.

Nursery (Code 806) – This operation only handles young pigs. Pigs from 12 - 14 pounds are received, fed, and cared for until they reach 35 - 45 pounds. They are then transferred to a finishing operation.

Nursery/Finish (Early Wean, ISO Wean, SEW Pigs) (Code 808) – This operation receives pigs around 12 - 14 pounds and finishes them until they reach market weight. ISO Wean stands for “Isolation Weaning”. SEW Pigs stands for “Segregated and Early Weaning”.

Finisher (Feeder to Finish) (Code 809) – This type of operation will receive pigs that average about 35 - 45 pounds and finishes them until they reach market weight.

Other Hogs and Pigs (Code 804) – This category includes a range of different types of operations. An example is an operation that receives gilts or boars only and feeds them until ready for breeding.

2.3.2 Chicken Contractee Operations

Broiler Growout (Code 916) – Contractees raise meat-type strain chickens from newly hatched chicks to processing weight. It is common practice to raise female or male flocks separately (see code 939 below). Includes Cornish and roasters.

Pullets for Hatchery Supply Flock Replacement (Code 926) – Pullets are raised from newly hatched chicks to about 15 to 22 weeks for layer flock replacement. Almost all pullets for broiler hatchery supply flock replacement are raised on production contracts.

Pullets for Table Egg Flock Replacement (Code 925) – Pullets are raised from newly hatched chicks to about 14 to 20 weeks for table egg flock replacement. Under a production contract, the hatchery or egg producer retains ownership of the birds.

Fertile Hatching Eggs (Code 921) – Producer cares for layers and gathers eggs, which go to a hatchery. Virtually all broiler - type hatching eggs are raised by a production contract. Some respondents say they have a 'broiler' contract because they are paid by a broiler company. Be careful not to confuse an egg producer with a broiler growout contractee. Most EGG - type hatching eggs are produced by production contract, with the hatchery retaining ownership of the birds.

Table Eggs (Code 920) – Producer cares for layers and gathers unfertile eggs, which go to a processor or an egg breaker. To be considered a production contract, the egg processor or egg breaker would own the birds. Sometimes partners, such as feed mills, are involved, and all partners claim ownership of the birds.

Broilers, Chicks, Hatchery Run (Code 935) – Broiler chicks less than 3 days old direct from the hatchery. Normally, these are sold to small operations under a marketing contract (NOT a production contract). Exclude integrated contractor delivered birds to be raised under a production contract.

Roosters, Meat Type (Code 939) – Domestic chicken males raised from chicks to breeding age of approximately 25 weeks that will be used for meat. For the most part, these should be recorded as broilers unless they are kept for research purposes.

Roosters, Breeding Flock (Code 940) – Domestic chicken males raised from chicks to breeding age of approximately 25 weeks and will be moved to a hatchery flock.

2.3.3 Turkey Contractee Operations

Turkeys Growout (Meat Type) (Code 969) –Contract to raise turkeys for meat production. The contractee will raise turkeys from poults received at 6 weeks of age from a brooder operation (growout operation) to market weight. Contract fee for this work is smaller than Code 970.

Turkeys All In/All Out (Meat Type) (Code 970) –Contract to raise turkeys for meat production. The contractee will raise turkeys from newly hatched poults to market weight. Contract fee for this work is larger than Code 969.

Turkeys (Meat Type) Brooders (Code 967) – Brooder operations grow the chicks for about 6 weeks. After 6 weeks, the birds are moved to another facility (code 969) where they are grown out to market weight.

Poults Breeding Flock (Code 938) – Poults are raised from newly hatched chicks to laying age for the purpose of breeding stock replacement.

Eggs, turkey hatchery (Code 919) – Producer cares for turkey layers and gathers eggs which are separated into either a meat type turkey flock or a breeding flock.

3 Survey Procedures

3.1 General

This chapter provides an overview of the questionnaire(s) and other materials. General guidelines for collecting data are also discussed in this chapter. Administrative matters are covered in the NASDA Enumerator Handbook. The handbook is available online at:

<http://www.nasda.org/File.aspx?id=2193>

3.2 Survey Materials

You will receive the following from your Regional Field Office:

- Questionnaires with labels identifying the assigned operations.
- Extra questionnaires without labels.
- Respondent Booklets containing Code tables and the survey cover letter that was sent to respondents.
- Supplements for questionnaires you are assigned.
- Envelopes for mailing completed questionnaires.
- Other materials may also be provided by your Regional Field Office or State Office.

You should have these materials on hand:

- Interviewer's Manual (sent from RFO and/or found on NASDA.org)
- Highway and/or street maps
- Black lead pencils
- Name tag
- NASDA Identification Card
- NASDA Employee Handbook
- Calculator
- Clipboard

3.3 Questionnaire Versions

<u>Version</u>	<u>Color</u>	<u>Version Number</u>
Costs and Returns Report (CRR)	Blue	1
Wheat Costs and Returns Report	Brown	2

The Face Page of the questionnaire contains the target operator and partner labels. Pre-screening of target operators was done during Phase 1. Any previously reported data from Phase 1 (for List records) and June Area Survey (for NOL records) that is again asked in Phase 3 will be printed next to the question in the questionnaire. Screening is discussed in Chapter 4 of this manual.

3.4 Respondent Booklet

The Respondent Booklet contains information respondents need to reference when answering some survey questions, such as Code Lists. Since most versions are mailed to operators, most tables in the Respondent Booklet have been added to the questionnaire.

Tables remaining in the Respondent Booklet are the Crop Codes, Livestock Codes, List of General Business Expenses, Value Codes, and Grain Conversion table. Also, the Cover Letter that was included in the questionnaire mailing to operators has been placed on the front page of the Respondent Booklet.

3.5 Respondent Burden

Headquarters recognizes that this survey poses a heavy burden on respondents. The Sampling and Frame Development Section strives to minimize the burden on respondents in terms of multiple contacts per year and consecutive contacts from one year to the next. For the list sample, a special burden reduction procedure is used prior to selecting the screening sample to minimize most overlap with other major surveys (Crops APS, Hogs, Cattle, Labor), as well as ARMS from the previous year. However, there are situations where duplication with other major surveys is unavoidable.

You will reduce the reporting burden on the respondent if you are thoroughly familiar with the questionnaire and instructions. Follow "Go To" instructions carefully to avoid asking questions needlessly. If "Go To" instructions do not appear after an item, continue with the next item.

Also be aware of the estimate of average completion time in the burden statement. This figure is determined by either the actual average time from previous interviews or what NASS and the Office of Management and Budget (OMB) think the average completion time will be. The OMB is an agency that is required to review and approve all surveys conducted by the Federal government.

3.6 Entering Data

Use a black lead pencil to record data and make notes; never use ink on a questionnaire. Make all entries clear and easy to read. Entries in check boxes and Item Code boxes must be entirely inside the boxes.

Record responses in the unit required (such as acres, bushels or dollars). If a respondent gives an answer in a different unit, write the answer outside the printed box, convert it to the required unit, and record the converted data in the box. If the answer is "none", check the "none" box. Record all zeros (unless instructions indicate to enter a specific Code to indicate none or zero, such as when using Value Codes).

Make sure to record data to the nearest whole number, unless a decimal point is printed in the box. Locate numbers correctly in relation to decimal points, and fill in every space printed after the decimal. Use zeros as fill when answers are not given to as many decimal places as required, or are given in whole numbers.

If answers appear unreasonable but are valid, make notes in the margins or on the notes pages to explain. Do not write notes or make unnecessary entries in answer boxes.

3.7 Planning Your Work

The operator and/or operation name, mailing address and identification number are on the questionnaire label along with any other information the Regional Field Office has that might be helpful.

Mark the location of each operation assigned to you on a map before you begin the survey. Show the location by a small circle with the ID number or target operator name (or operation name) written beside it. Use this map to plan your daily travel; this will help keep travel expenses down and save time.

If you cannot locate an operator at the address on the label, utilize other sources in your area to help locate the operator. Try to do this early in the survey so you can put the information on your map as soon as possible. If you need additional assistance, contact your supervisor or Regional Office staff.

3.8 Interviewing

Interview the farm operator, if possible, because information collected from other people often is less accurate. However, if the operator says someone else is more knowledgeable, interview that person.

The ARMS Phase 3 is very detailed, which often requires an interview to be completed in person. It is advisable to call or visit each operator early in the survey period to set up an appointment to complete the interview at his/her convenience. During this initial contact, explain the survey purpose and importance, the scope of the interview and that it will be beneficial for them to have their farm records available during the actual interview.

If the operator will not be available before the survey is over, try to interview someone who is well informed about the operation. A partner, family member or employee may know enough about the aspects of the farm operation covered in the questionnaire to give you the information needed.

The NASS rule-of-thumb is to make up to three attempts (the first visit plus two call backs) if necessary to get an interview. If you have an appointment or information from a neighbor on when to try to reach the operator, obviously you should return then. If not, make each visit at a different time of the day.

Respondents often ask how long the interview will take. Never contradict the burden statement; however, it is okay to add to it. For example, you might say: "The official nationwide average for this survey is 100 minutes, but the interviews I have done in this area averaged about ____ minutes." Be honest about the average time, even if your interviews are averaging longer than the time estimate in the burden statement.

Put the respondent at ease about time and burden. Respondents are often not experts about their own finances and may not have their records in order. Because you know the survey questions well, you will be able to help farmers find most of the information in their books or

records. Make sure they understand you are helping them find the answers, not quizzing them on their records. Your expert knowledge of this survey will help minimize their effort while maximizing the quality of the data collected.

Encourage respondents to have their farm records at hand. If records are used, accurate information will be readily available and answering will take less interviewing time.

Always begin by reading questions exactly as they are worded in the questionnaire. You may also use any optional wording or explanations printed in the questionnaire. If the respondent still does not understand, or asks you to explain, then use what you learned in training and information from this manual to explain what is needed.

Ask questions in the order they appear in the questionnaire. Do not skip any questions unless instructions allow you to do so. Sometimes respondents will volunteer information you need later in the interview. When you get to a question the respondent already answered, take the opportunity to verify the information. Say something like, "I think you told me this earlier, but let me be sure I got it right." And then ask the question. This shows the respondent you were paying attention earlier and that you want to get things right.

Sometimes you will need to probe in order to get an adequate answer to a question.

You should probe when:

- the respondent cannot answer the question,
- the answer is not exact enough to record,
- the answer may be incorrect because it does not fit with the information already obtained
- you think the respondent did not understand the question.

The purpose of probing is to verify unusual data or to correct misreported data. Be careful when you phrase your probing questions that you do not influence the respondent's answers. Probes should be "neutral". That is, they should not suggest one answer over another. In fact, all questions should be asked in a neutral manner. Do not say things like, "What do I mean by marketing contracts? Oh, you must not have had any, did you?" Instead, say, "During the year, did this operation have any livestock marketing contracts for livestock raised?"

In another example, if a respondent tells you an expense is between two amounts, such as, "Oh, I guess the total was between two and three hundred dollars," you should ask, "Would you say it was closer to \$200 or \$300, or what amount exactly?" Probing is especially important early in the interview when the respondent is 'learning' from you what level of effort and accuracy are ideal. If you fail to probe, you may be suggesting that good answers are not needed.

Strike a balance between motivating the respondent to search out sound numbers and taxing the respondent to account for every nickel. Probes should also be "non-threatening." Be careful you do not appear to be questioning or challenging the respondent's answers. Do not say, "That can't be right! You just said you had 20 pigs, so your vet expense couldn't have been that high!" Instead, say, "Earlier you said that you had 20 pigs during the year. Can you tell me why your vet expenses were so high?" And then make notes of the respondent's answer.

The importance of good notes cannot be overemphasized. Notes are especially important when you find unusual situations or the respondent explains why information that seems incorrect actually is correct. Good documentation saves the Regional Field Office from having to re-contact the farmer to confirm the accuracy of the data. Also write down any complicated calculations you make to come up with an answer. These notes will help the survey statistician understand this operation when reviewing the questionnaire. Make sure the notes are clear and can be read. Never erase a note unless it is wrong. **Notes are the single most valuable editing tool available to the survey statistician!**

After completing each interview, be sure to review the questionnaire while the interview is still fresh in your mind:

- check all the answers for correctness and completeness,
- double-check your calculations, and
- make sure your notes are legible and make sense.

3.9 Fiscal Year versus Calendar Year

The questionnaires are designed to collect expenses and income for the calendar year. However, some farm businesses keep their books on a fiscal year basis, such as October 1-September 30. In these cases, collect information for the operation's fiscal year and make a note on the questionnaire indicating the time period of the operation's fiscal year.

3.10 Non-Response

If an interview cannot be conducted, explain why on the questionnaire. Make a note about whether the operation appears to be a farm and any other information you think might be helpful to the Regional Field Office.

Most farmers are willing to cooperate on NASS surveys, but in every survey some will refuse to do so. The key to reducing the chances of getting refusals is to be courteous and friendly, but persistent. Most respondents will greet you with basic questions about the survey. Be prepared to answer their questions confidently and concisely. Respondents will want to know what the survey is about, how long it will take and why they should report. Remember that during a Census year, completing the ARMS Phase 3 fulfills their mandatory Census of Agriculture obligations. You should develop and practice an introduction with which you feel comfortable. Your introduction should explain the purpose of the survey, the need for accurate agricultural statistics, and the confidentiality of the data. Make use of materials on the survey purpose provided at your Regional/State training workshop.

Above all, do not become discouraged when you get a refusal. Stay in touch with your supervisor. Continue to meet farm operators with ease, friendliness and optimism as you contact other respondents in the sample.

3.11 Supervision

Your supervisor will set up an appointment to meet with you early in the survey. This visit will help you get off to a good start by spending some time to review a few of the interviews you

have completed. Hold all your completed work until this review takes place unless you are instructed to do otherwise.

Your supervisor, or someone from the Regional Field Office, will contact a few of your respondents to conduct a quality check. The quality check will verify that you spoke with the person named in the questionnaire and that the respondent understood the survey procedures.

3.12 Completed Questionnaires

Turn in your completed questionnaires according to the instructions you receive from the Regional Field Office. If you think that under these procedures the last few questionnaires you complete might not reach the Regional Field Office before the final due date, call your supervisor.

4 Face Page and Screening

4.1 Face Page

4.1.1 Introduction

Before approaching the farm operator, develop and practice an introduction with which you are comfortable. In the introduction include who you are, whom you represent and the purpose of the survey. Become familiar with the information in Chapter 1 of this manual and be prepared to answer general questions about the survey.

During your introduction, be sure to remind the respondent that all the data are confidential and used only in making State, Regional and National estimates. In preparing for the interview, mention that using farm financial records (including milk checks, co-op statements, FSA records, etc.) are extremely helpful. These records do not have to be in perfect order to be useful. Make sure the respondent knows you will be conducting several of these interviews so you know the questionnaire very well and will help them find the answers in whatever records are available.

If the operator has multiple operations, only one operation is selected for this survey. For these situations, it is beneficial to recognize which operation has been selected so the operator can obtain the records for that particular operation. The label and preprinted screening information are helpful in this determination. It is important to keep in mind which operation is selected throughout the interview. Only the acreage, crops, livestock, income, expenses, assets, and debt for that selected operation are collected on the questionnaire. Assets, debt, and net cash income from all other operations are collected in Section 37 on the farm household.

Often when making the initial contact on this survey, you are only setting up an appointment to complete the questionnaire at a later date. If the Regional Office has included a Screening Supplement with a particular questionnaire **it is best to complete it on this first contact**, because you may find out information about the operation you need to discuss with the office. This procedure gives you plenty of time to contact the office before doing the full interview. Account for the screening time in notes so the interview beginning or ending time can be adjusted to more accurately reflect total interview time.

4.1.2 Target Label (All Versions)

123456789012345678901234567890123456789
 Line 1 **Survey Code = AA BBBB BBBB CCCCC**
 Line 2 Barcode |||
 Line 3 Barcode |||
 Line 4 Barcode |||
 Line 5 Barcode |||
 Line 6 **ID 12345678901** AA BB C DDD F EE QQ PPP
 Line 7 GG HHH II JJ KKK-KKK-KKKK L MMM NNN RRR
 Line 8 SSS-SSS-SSSS TTT OOOO
 Line 9 Sequence Number
 Line 10 Blank Line
 Line 11 Operation Name
 Line 12 Person Name
 Line 13 Street Address
 Line 14 Place Name ST 12345-6789

<u>Line</u>	<u>Col.(s)</u>	<u>Field</u>	<u>Description</u>	<u>Prism Table.Field Name / Value</u>
1	1-17		Survey Code = ' (BOLD)	Value = `Survey Code =`
2-5			Barcode Layout Contains:	
	1-11		State Reporting ID (11 digits) (BOLD)	Reporter.State_poid
	12-13		Tract (2 digits)	Reporter.Tract
	14-15		Subtract (2 digits)	Reporter.Subtract
	16		Questionnaire Version (1 digit)	Reporting_Unit.Questionnaire_version
	17-19		Survey Identification Code (3 digits)	Survey.Survey_code
	20		Blank (1 digit)	
6	1-2		'ID'	Value='ID'
	4-14		State Reporting ID (11 digits) (BOLD)	Reporter.State_poid
	16-17	A	Tract (2 digits)	Reporter.Tract
	19-20	B	Subtract (2 digits)	Reporter.Subtract
	22	C	Questionnaire Version (1 digit)	Reporting_Unit.Questionnaire_version
	24-26	D	Survey Identification Code (3 digits)	Survey.Survey_code
	27	F	Blank Barcode Filler (1 digit)	
	28-29	E	Scoring Indicator (2 digits)	
	34-35	Q	Manager Flag	Value='MM' based on Opdom_status
	37-39	P	Multiple Operation Flag	Value='ZZZ' based on Opdom_status
7	1-2	G	District Code (2 digits)	Reporting_Unit.class3_code
	4-6	H	Op County Code (3 digits)	Reporter.Op_county_id
	8-9	I	Op Dom Status (2 digits)	Reporter.Opdom_status
	11-12	J	Active Status (2 digits)	Reporter.Active_status
	14-25	K	Phone Number (10 digits)* <i>*Suppressed on mailed questionnaires</i>	Reporter.telephone_number (digits 1-3)-(digits 4-6)-(digits 7-10)
	28	L	Comment Flag	
	30-32	M	Supervisor Code (3 digits)	Reporting_Unit.class1_code
	34-36	N	Enumerator Code (3 digits)	Reporting_Unit.class2_code
	38-40	R	County Code (3 Digits)	Reporter.county_id
8	14-25	S	Phone Number (10 digits)* <i>*Suppressed on mailed questionnaires</i>	Reporter.oper_phone (digits 1-3)-(digits 4-6)-(digits 7-10)
	33-36	O	Sequence Number (4 digits)	Reporting_Unit.Subgroup3
	27-29	T	Method Code (3 digits)	
9	1-12		Sequence Number	Machine Sequence
10			Blank Line	
11	1-30		Operation Name (30 digits)	Reporter.Operation_name
12	1-30		Person Name (30 digits)	Reporter.Person_name
13	1-30		Street Address (30 digits)	Reporter.Addr_delivery
14	1-18		Place Name (18 digits)	Reporter.Place_name
	20-21		State Abbreviation (2 digits)	Reporter.State_abbrev
	23-32		Zipcode (9 digits)	Reporter.Zip5 (digits 1-5)-Zip4(digits 6-9)

4.2 Screening Information

A screening survey (ARMS Phase 1) was conducted on the sampled operators to determine their operating status for the reference year. Area frame records were screened during the June Area Survey. The National Processing Center (NPC) will print any of this previously reported data in the questionnaire, next to the appropriate question. This pre-printed information on the questionnaire is used to help you make sure you are interviewing the correct sampled operation.

The following pre-printed information will be from the Phase 1 Survey or June Area Survey:

- Who responded to the screening interview (operator, spouse, etc.)
- How the screening interview was completed (mail, phone, etc.)
- Was the screening interview complete or did it have to be estimated
- Owned land
- Land rented to others
- Land rented from others
- Total acres operated
- Total cropland acres

These eight items can be used during the interview in one or more of the following manners.

- You can ask the question to the respondent, and compare their answer to the response from the screening survey. If there is a discrepancy, verify that you have the correct answer.
- You can verify the pre-printed information. For example, you may ask "I have this operation's total land owned as 250 acres. Is this correct?"

4.3 Interview Completion Times

There are two methods to record the length of the interview: beginning and ending times and total time in hours. Interview times are used to determine how much respondent time was used (as a measure of respondent burden) to collect data. We are trying to reduce interview times as much as possible and still collect the high quality data we need. Accurate reporting of interview time is critical for monitoring and evaluating survey burden and cost.

4.3.1 Beginning & Ending Times

Record the **beginning time**, in military time (Item Code=0004 on the front page of the questionnaire), of the interview when the respondent agrees to cooperate on the survey and you actually start the interview.

When the interview has been completed, record the **ending time** in military time (Item Code=0005 on the back page of the questionnaire). If more than one person was interviewed or it took more than one appointment to complete the interview, times should reflect the approximate total time for the questionnaire.

Exclude the time you spend reviewing the questionnaire or verifying calculations by yourself after you have completed the interview. Be sure the ending time is after the beginning time entered on the face page.

4.3.2 Time in Hours

If multiple interviews occurred or multiple people were interviewed, the total interview time can be estimated, by recording the number of hours (to the tenth of an hour) in Item Code 0008 on the back of the questionnaire. **If Item Code 0008 is used, then do not use the beginning and ending times.**

4.4 List Frame – Verification of Sampled Operations

Questionnaires will be pre-labeled with names and addresses. If the first line (primary name line) of the label after the identification number line has an individual name (JOHN SMITH), this is the target name. If the first line contains a combination of individual names (JOHN AND BILL SMITH) or an operation name (SMITH FARMS), then the name on the next line (the secondary name line) is the target name. If the OpDom status is 99, then the operation listed on the first line is the target.

Remember: The target name NEVER CHANGES. The person actually operating the farm (the farm operator) may change, but the selected target (person or operation) name does not change.

The first thing you will do is verify the operator's (or operation's) name and address, and the names and addresses of any known partners. If there are partner labels, be sure the partner names and addresses are correct, and all partners are listed. Make any updates, deletions, or additions to the partners.

4.5 Area Frame – Verification of Sampled Operations

All of the area frame samples selected for the survey were identified as farm operators during the June Area Survey.

We are interested in the operation the way it existed on June 1, so ignore any changes that have occurred in the operation since June 1. For example, if the tract was individually operated in June and changed to a partnership in September, collect data for the individual operation for the time it existed (January through August). Do not collect any data for the partnership.

Collect data for the operation as it existed on June 1.

We know that by using this rule we will lose some data for those few farms or ranches that were formed after June 1. However, there usually are not very many of these operations and they are generally relatively small. Therefore, they would not have much impact on the overall estimates from the survey.

If you find an error was made in June (the operating arrangement was incorrectly identified), make notes to explain the error, but complete the questionnaire for the operation **as it actually existed on June 1**. *If you have time between your first contact with the respondent (when you find out the June report was wrong) and your appointment to complete the survey interview, call the Regional Field Office and let them look up the corrected operating arrangement. If it is overlap with the List, you will not have to do an interview.*

4.6 Screening Box on Face Page

If the respondent reports the target name is no longer farming, complete the Screening Supplement. Changes may have occurred if screening data were collected from someone other than the operator on the ARMS Phase 1 or June Area Survey or the information that was obtained was incomplete.

4.6.1 Completing the Screening Supplement

Farm operations in each State were sampled for the ARMS based on List Frame information about crop acreage, livestock inventory, and an estimated gross value of farm sales. Agri-business firms and agricultural services that do not have crops or livestock of their own should have been excluded from the sample, but it is possible some records were misclassified. Screening questions determine the eligibility of the selected name for this survey.

Institutional (Abnormal) operations such as prison farms, private or university research farms, not-for-profit farms, and Indian reservations are out-of-scope for ARMS and should be excluded from the survey. If your assignment includes any of these farms, notify your supervisor or the survey statistician.

If an operation was in business during any part of the reference year, but went out of business during the year, **complete a questionnaire for the part of the reference year during which the operation did business**. If the operation was taken over by another operator or operation when it went out of business, make a note of this. This note should include a name, address, phone number and any other pertinent information.

Item 1 – Other Operation Name

Even though you have already verified the label, you need to ask this item to detect duplication and make sure the list is up-to-date. Indicate if this name should appear on the label in the future.

Item 2 – Crops, Livestock or Poultry

Check 'Yes' if the original target name grew any crops (field crops, fruit/nut crops, vegetables, oilseeds, specialty crops, hay, etc.) or had cattle, hogs, sheep, poultry or other livestock during the reference year on the total acres operated. If 'Yes', go to Item 7. If 'No', continue to Item 3.

For the target name to qualify as growing a crop, the target name must have made the decisions on planting, caring for and harvesting the crop.

Include: field crops, fruit and nut crops, vegetables, mushrooms, flowers, nursery stock, greenhouse crops, hay, Christmas trees, etc.

Exclude: home gardens and crops received as payment for land rented to someone else

This screening question would also be checked 'Yes' if the target name had any livestock or poultry, regardless of ownership, on the total acres operated at any time during the reference year.

Include:

- 1) All cattle, hogs, sheep, equine, goats, chickens, turkeys, ducks, geese, bees, rabbits, mink or other fur bearing animals, and fish that are raised commercially or for home consumption. FFA and 4-H livestock projects should also be included.
- 2) Operations that **own FIVE or MORE** pleasure horses and no other agricultural items.

Exclude:

- 1) Operations that have FOUR or fewer pleasure horses, and/or any number of other animals kept ONLY for pleasure use or as pets. For an operation to be excluded from ARMS, no other agricultural items (including hay produced on the operation) may be present.
- 2) Horse boarding operations, riding stables, or race horse training operations that
 - a) do not have other agricultural items (i.e. has hay produced on the operation or breeds horses) unless they have more than 99 acres of pasture, or
 - b) keep separate accounting books from the farming operation's accounting books. If the horse boarding, riding stable, or race horse training operation's income and expenses can be broken out from the traditional agricultural enterprises' income and expenses, exclude the horse boarding, riding stable, or race horse training operation.
- 3) Slaughter or packing houses, auction barns, stockyards or other buyers. These operations have livestock which are committed for slaughter. The presence of these livestock alone does not qualify an operation for the survey.

Item 3 – Sales of Ag Products or Receipt of Government Ag Payments

Include sales of crops, livestock, aquaculture and other products from the total land in the operation. **Include** any government payments received under the 7-year market transition program, conservation programs, etc.

This item should be answered 'No' when the target name is a landlord who sold agricultural products from or received government farm payments only for land which was rented out.

If this item is checked 'Yes', go to Item 7.

Item 4 – Idle Cropland and Pastureland

Target names with more than 99 acres of pastureland or 19 acres of idle cropland and no other agricultural commodities qualify as point farms. It is necessary to correctly identify these point farms to ensure their representation in the summary.

If this item is checked 'Yes', go to Item 7.

If Item 2, 3 and 4 are all 'NO', continue with Item 5.

Item 5 – Out-of-Business Determination

This item determines if anyone else is now operating the land formerly operated by the target name on the face page. Ask this item ONLY if the respondent answered 'No' to Questions 2, 3 and 4. If another operator has taken over the land from the target name on the label, record the name of the new operator and/or operation now operating the land.

If the respondent answers 'No' to this item, probe to determine what happened to the land and make notes.

Item 6 – Enumerator Action

These instructions ONLY apply in rare cases where the selected target name is out-of-business. If the answer to Items 2, 3 and 4 are all 'No':

- On the Screening Supplement, enter Code '9' for the Reporting Unit in Item 7 and Item Code 9921 on the face page of the questionnaire.
- On the face page of the questionnaire, enter Code '1' in Item Code 0006, if not already entered.

Go to the back page of the questionnaire, enter code '1' in Item Code 9901 and complete Date Completed, ending time, Respondent, Mode, and Enum codes, information.

Item 7 – Decision-Maker for This Operation

We are interested in how the operation was organized on a day-to-day basis. We do not care about the legal definition.. Definitions of individual, partnership, and managed land can be found in the Ag Surveys Interviewer's Manual. Landlord-tenant, cash-rent and share crop arrangements should not be considered partnerships.

When an individual operator is reported, enter Code "1". When a partnership is reported, enter the number of partners. **Include** the person listed on the face page and all of the other partners. If there are more than 5 total partners, consider this a managed operation and enter a Code "8". When a hired manager is reported, enter Code "8".

Item 8 – Other Operations

This is a screening question to find out if the target name made day-to-day decisions for any other operations in the reference year. Each additional (**non-managed**) operation must be listed or verified on the back side of the Screening Supplement. The information collected on the Screening Supplement will be used to update the List Sampling Frame.

If the operator does not have other operations OR if this is an OpDom 99 record (Item 8 is 'No'):

Enter a "1" in Item Code box 0923, return to the questionnaire and begin the interview.

If the operator has other operations (Item 8 is 'Yes'):

Item 8a – Total Number of Operating Arrangements

Enter the TOTAL number of operating arrangements, **including the sampled operation labeled on the face page** of the questionnaire in Item Code box 0922 on the face page. Entering a "2" indicates the operator makes day-to-day decisions for two operations (the one labeled on the face page of the questionnaire and one additional operation).

Item 8b – Identifying Additional Operating Arrangements

After entering the TOTAL number of operating arrangements in Item 8a, complete the information for the second operation. If the target name had a third operation, complete the information on an additional Screening Supplement for this operation.

If the Regional Field Office already knows about additional operations associated with the target name, there should be additional screening supplements for these operations. Verify that the target name is still involved with each of these operations. Also, there may be partner labels for any or all of these operations. Verify the names and addresses of additional operations and partners associated with them. Mark out any operations the target name was not associated with in the reference year. If any partner names are not listed, add them with complete name and address information.

If the target name is involved (either as individual operator or as a partner) with any other operations which are not listed on a Screening Supplement, record these. In the partner space record the names of all of the partners (up to four) other than the target name associated with each of the additional operations.

Item 8c – Day-to-Day Decisions for Additional Operations

For each of the additional operations, check the appropriate box to explain how the day-to-day decisions were made in the reference year. We are interested in how the operation was managed on a day-to-day basis; not the legal definition of the operation.

4.7 Special Situations – Managed Operations

Treat Managed Operations as you would OpDom 99 operations, the target name is the operation.

If the operating arrangement for the target name on the face page is a managed operation and was still in business in the reference year, under a new hired manager, you will contact the new hired manager and collect data for the operation named on the face page. You will also need to contact the original target name to verify the other operations listed, and if that originally selected target individual has any additional operations you will list them on one or more Screening Supplement(s).

If the managed operation is no longer farming, complete the Screening Supplement and record the new operator and/or operation.

5 Completing the Questionnaire

5.1 Introduction - Layout

This chapter will describe, in detail, the questions in the Cost and Returns (CRR) version. Detailed instructions for questions related to specific commodity versions are located in Chapter 6.

5.2 Section 1 – Acreage in 2017

5.2.1 Section Purpose

Section 1 has the following primary functions:

- 1) Measure the total land operated.
- 2) Determine the tenure arrangements and whether farmers are renting on a share, cash, flexible, or rent-free basis.
- 3) Account for rent paid and value of land rented from others.
- 4) Account for rent received and value of land rented to others.

Acres of owned and rented land are used to determine the total size of the farm under the operating arrangement identified on the label. Total acres are one measure of farm size used in reports and analyses. Knowledge of how much land is owned versus rented is the basis for studying farm tenure arrangements.

5.2.2 Acres Operated

5.2.2.1 General Instructions for Items 1-5

Items 1-4 account for acres owned, acres rented from others, and acres rented to others by this operation at any time during the year. Answers for these items are reported to the nearest whole acre.

For operations that were in business for only a part of the year, collect data for the part of the year when it was still in operation. If the operation went out-of-business before December 31, end-of-year inventory values for crops in storage or livestock should be zero when you ask about these later in the interview. However, you will usually find fairly large amounts of cash or other assets such as land contracts due from sales of farmland.

Exclude data for the part of the year that an operation was not in business including any income from renting the operation to others after this operation went out-of-business.

Sometimes an operator has several operating arrangements, such as an individual operation and a partnership operation, so be sure the questionnaire contains data only for the arrangement identified on the label.

Include:

- 1) All cropland, the farmstead, government program land, idle land, orchards, pasture, wasteland, wetland and woodland, regardless of location, if the operator made the day-to-day decisions for that land under the selected operating arrangement.
- 2) Land in another state that is part of the operation (if the operator made the day-to-day decisions for that land).
- 3) Land worked by sharecroppers. Sharecropper operations are considered part of the landowner's operation. A sharecropper is a worker who furnishes ONLY LABOR (his own and often his family's) for a share of the crop. Sharecroppers generally furnish no machinery, seed, fertilizer, etc.
- 4) All land in the operation that is used by the operator's children for 4 H or FFA projects, if the operation's equipment is used.

Item 1 – Acres Owned

Include:

All land owned by the operation such as cropland, the farmstead, government program land, idle land, orchards, pasture land, wasteland, and woodland. Include land that has the potential for growing crops or grazing livestock even if it was not used for agricultural purposes during the year. Also include land held under title, purchase contract, homestead law, or as part of an estate (if someone associated with the operation is an heir or trustee).

Exclude:

Land separate from the operation (such as land in subdivisions, commercial buildings, timber, etc.) which is permanently out of agricultural use.

Sometimes you will find a situation where the operator (and/or partners) owns the land but has set up the operation so that the land is rented to the operation. This is done for tax and other financial benefits. When this occurs, do not include the acres the operation rents from the operator as owned acres. Treat them as you would acres rented from any other landlord, and be sure the amount of rent paid is recorded.

If the operator (as a landlord to the operation) paid some of the expenses, you should also handle them the same as for any other landlord. You will usually have to probe very carefully in these situations.

Item 2 (a - c) – Acres Rented from Others

There are three categories of rented acres:

- 1) Cash rented acres with the payment being a fixed or flexible amount are recorded in Item 2a,
- 2) Share rented acres are recorded in Item 2b, and
- 3) Acres used rent-free are recorded in Item 2c.

Include:

All land rented from private individuals, partnerships, corporations, Federal, State or local governments, Indian reservations, railroads, etc. if the operation:

- 1) Paid fixed cash rent. (Item 2a)
- 2) Paid for use of land with a flexible lease agreement, including hybrid rental arrangements. (Item 2b)
- 3) Paid for use of the land with a share of the crops (either standing or harvested) or livestock production. (Item 2b)
- 4) Had free use of the land, including "handshake" agreements for other services like maintenance of the landlord's property, lawn mowing, etc. (Item 2c)
- 5) Was privately owned by the operator, but rented to the operation for tax purposes either for free or for rent. This land will not be considered an asset to the farming operation.

Exclude:

- 1) Grazing land rented on a fee-per-head or Animal Unit Month (AUM) basis, including public lands the operation has grazing rights, sole use, or year-round use of.
- 2) Land on which the operator's livestock were fed under a contract (for example, commercial feedlots).
- 3) Shared livestock production that does not involve land rental.
- 4) Short-term land rental agreements where the operator will graze livestock for a period of 2-6 months, after which the landlord will harvest crops later in the year or has already harvested a crop. In this case, the landlord "operates" the land.

If the operation is a corporation that rents land from the operator (who is a private individual landowner), record the land as rented from others.

Be sure you obtain the full number of rented acres from the respondent. Operators often do not consider the land they rent as including woods or wasteland; they only include the usable land. Even though the operator may not consider it that way, the landlord considers the whole parcel rented. If the operator was responsible for looking out for the owner's interest in the woodland and/or wasteland, or had the right to cut firewood, hunt, etc. on the acres, then these acres should be included as acres rented from others.

Many land rental arrangements feature flexible cash rents, in which the actual rent paid may vary with prices, yields, or gross revenues. **Include** flexible cash leases in Item 2a.

Item 3 – Acres Rented To Others

Include:

- 1) Land this operation owned which was rented to another operation for cash. This land should also be included in Item 1.
- 2) Land this operation rented or leased from someone else but which it subleased to another operation. This land must also be included in one of the categories in Item 2.

- 3) Land rented to others for which this operation received a specified amount of the crop or livestock produced, a share of the crop or livestock produced, or other non-cash compensation.
- 4) Land this operation let someone else use without ever intending to receive payment (rent-free).
- 5) Pasture or grazing land rented out on a per acre basis for the whole productive season. **Exclude** land rented out on short-term land rental agreements where the rentee will graze livestock for a period of 2-6 months after which the operator will harvest crops later in the year or has already harvested a crop.
- 6) Privately owned land administered by a Public, Industrial, or Grazing Association (PIGA) agency as part of a range grazing unit on a fee-per-head or AUM basis through exchange-of-use. This land should also be included in Item 1.
- 7) Land owned but managed for a fee or salary by someone else.
- 8) Land used for such purposes as cell phone towers, pipelines, roadways, windmills, oil wells, etc., in which the operation receives a payment. The income received from these items is included in Section 27, Item 5h or 5j

Exclude:

- 1) Land enrolled in Government programs for which this operation has enrolled and makes day to day decisions (such as acres under Direct and Counter-cyclical Payment Program (DCP), acres in the Conservation Reserve Program, etc.).
- 2) Land worked by sharecroppers on this operating unit.
- 3) Land used by a child for 4-H or FFA projects if the operation's equipment was used.
- 4) Land on which crops were grown under contract by this operation.
- 5) Land on which the operator fed livestock under contract for someone else.
- 6) Land used for pasturing someone else's livestock when payment was made on a per head, fee, or AUM basis.
- 7) Land rented out on short-term (grazing) rental agreements where the "renter" (livestock owner) will graze livestock for a period of 2-6 months after which the operator will harvest crops later in the year or has already harvested a crop. The livestock owner in this case is not making decisions about the management of the land therefore the land is not rented out. This differs from Ag Census.

Item 4 – Total Acres Operated in this Operation

The entry here will be the sum of all land owned, Item 1 (Box A), **plus** land rented or leased FROM OTHERS, Item 2 (Box B), **minus** the land rented or leased TO OTHERS, Item 3 (Box C). The result will equal the total acres in this operation for 2017 (Box D). It is very important to establish the correct acres for this operation in Item 4 (Box D) since the rest of the report form

questions apply to this acreage entry. Be sure this total includes all cropland, the farmstead, government program land, idle land, orchards, pasture, wasteland, wetlands and woodland associated with this operation.

For future sections of this questionnaire, data will be collected for the operation as defined by the acres in Item 4.

Item 5– AUM Land

Grazing land rented on a fee per head or animal unit month (AUM) basis, including public lands the operation has grazing rights, sole use, or year round- use of are not considered part of the operation. These acres should not be included in the total acres operated, Item 4 (Box D).

5.2.3 County Breakout

Item 6 – Principal County

The principal county is the county where the largest value of the agricultural products sold was raised or produced. Data will be tabulated and published in this county. Please print the principal county, the two letter state abbreviation, and the number of acres from this operation that were located in that county. All acres in the principal county should be reported here, not just land which is cropland harvested.

Item 6a – Agricultural Activity in any OTHER County

If the acres in this operation (Section 1, Item 4) are located in more than one county, print the names of the additional county (ies), the state(s), and the number of acres in each additional county in these response cells. Up to three additional counties may be reported. The number of acres in Items 6 and 6a should equal the number of acres in Item 4. If the acres in this operation are in more than four counties, report the four counties that have the largest value of production.

5.3 Section 2 – Land Use in 2017

In Section 2, report how the land in Section 1, Item 4, this operation, was used during 2017. Reminder: the land rented **to others**, as reported in Section 1, Item 3 is **not** part of this operation and will not be reported in this section.

5.3.1 Special Situations

Land used for multiple purposes - In general, the land use items have been arranged in what is normally considered a decreasing order of importance. In this section, each acre in this operation should be reported only once, even though the land may have been used for more than one purpose. See explanations below. Total acres reported in Section 2, Item 5 (Box E), should equal the total acres reported in Section 1, Item 4 (Box D).

Double-cropping - If more than one crop was harvested from the same land in 2017, report the acreage only once in Item 1a as "Cropland harvested." For example, if wheat was harvested from a 40-acre field in 2017, and then soybeans were planted and harvested from the same field in 2017, report only 40 acres of cropland harvested in Item 1a. However, when reporting

acres of the individual crops harvested in Section 7 "Field Crops", the 40 acres of wheat and the 40 acres of soybeans should both be reported on separate lines.

Interplanted crops - If a crop was interplanted in an orchard and harvested, report the acres once in Section 2, Item 1a, "Cropland harvested. Record each crop in the appropriate crop section. For example, if a vegetable crop was interplanted among trees in a 5-acre orchard, report the portion of the 5 acres devoted to vegetables in Section 9 "Vegetables, Potatoes, and Melons" and report the 5 acres for the orchard in Section 10 "Fruit, Nuts, and Berries".

Crops grown in alternating strips - If two crops were grown at the same time in alternating strips in the same field, report them once in Section 2, Item 1a, "Cropland harvested." Acreage devoted to each crop will be recorded in the appropriate crop sections in the report form. If a 50-acre field was planted in corn and soybeans, with 16 rows of corn followed by 16 rows of soybeans, 25 acres should be reported for corn and 25 acres should be reported for soybeans in the area where these crops are listed in Section 7 "Field Crops".

Crops grown in alternating strips with idle land or summer fallow – For example, a field had a crop grown in alternating strips with unharvested grass planted to control erosion. Report the acreage devoted to the crop in acres in Item 1a, "Cropland Harvested" and the appropriate crop section. Report the acreage devoted to the unharvested grass in Section 2, Item 1d "Cropland idle or used for cover crops."

Skip row planting with idle land or summer fallow - "Skip" row planting involves leaving a space between the rows for conserving moisture, soil conservation, tillage practices, movement of machinery and equipment between the rows for spraying and harvesting of the crop, etc. See the examples below.

Example 1. If a crop was planted in "skip" rows with a cover crop for soil improvement, report the harvested portion of the field in this section, Item 1a, "Cropland harvested" as well as in the appropriate crop's section. Include the acres in soil improvement in this section, Item 1d, "Cropland idle."

Example 2. If "skip" rows were in cultivated summer fallow, report the harvested portion of the acres in Item 1a, "Cropland harvested" as well as the appropriate crop's section. Record the acres in cultivated summer fallow in Item 1c, "Cropland in cultivated summer fallow."

5.3.2 Cropland

Item 1a - Cropland harvested

Includes all acreage from which crops were harvested in 2017 and land in fruit and nut trees and vines, bearing age acres and nonbearing age acres in an orchard, land in berry production, grove, or vineyard being maintained for production. The acreage of cropland harvested will include:

- Field crops (corn, wheat, barley, oats, sorghum, soybeans, cotton, tobacco, etc.)
- Hay and forage crops (dry hay, haylage, silage, greenchop, etc.)
- Christmas trees (whether harvested or not in 2017), short rotation woody crops, fruit trees, nut trees, and grapevines (include bearing age acres and nonbearing age acres of trees and vines whether harvested or not in 2017)

- Nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative material.
- Vegetables, potatoes, and melons
- Any other acreage from which a crop was harvested even if the crop was considered a partial failure and the yield was very low.
- The sum of acres reported harvested in Sections 5-10, plus the total square feet under glass in Section 8, minus the acreage of land from which two or more crops were harvested (acres double-cropped), equals "Cropland harvested," Section 2, Item 1a.

Item 1b - Cropland on which all crops failed or were abandoned

Include:

- All land on which a crop failed (except fruit or nuts in an orchard, grove, or vineyard or berries being maintained for production) and no other crop was harvested and which was not pastured or grazed.
- Acreage not harvested because of low prices or labor shortages (except fruit or nuts in an orchard, grove, or vineyard being maintained for production).
- If some, but not all, of the crop acreage was harvested, the harvested acreage should be reported in Item 1a, and in the appropriate crop section. The remainder of the acreage should be reported in this item provided it was not used for pasture or grazing.

Item 1c - Cropland in cultivated summer fallow

Includes cropland in cultivated summer fallow or chemical fallow. The land may have been only treated with herbicides, only tilled, or a combination of these practices to control weeds and conserve moisture and not seeded for harvest in 2017. Include cropland summer fallowed in 2017 and planted to a crop (i.e. winter wheat, etc.) for harvest in 2018.

Item 1d - Cropland idle or used for cover crops or soil improvement but not harvested and not pastured or grazed

Cropland idle includes any other acreage which could have been used for crops without any additional improvement and which was not reported elsewhere in Item 1.

Include:

- Land used for cover crops or soil improvement but not harvested, grazed, or cultivated.
- Land in Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), Farmable Wetlands Program (FWP), Conservation Reserve Enhancement Program (CREP), or other Federal or State conservation programs that was not hayed or grazed in 2017.
- Land occupied with growing crops for harvest in 2018 or later years but not harvested or summer fallowed in 2017 (except fruit or nuts in an orchard, grove, or vineyard or berries being maintained for production). Examples are acreage planted in winter wheat, strawberries, etc., for harvest in 2018 and no crop was harvested from these acres in 2017.
- Land in "skipped" rows between rows of crops or field strips should be reported here if the land was not used for any other purpose. It should not be reported in Item 1a, "Cropland harvested."

Exclude acreage from which crops were harvested or planted and intended to be harvested or used for pasture or grazing.

5.3.3 Pasture, Woodland, All Other Land, and Total Acres

Item 2a - Permanent pasture and rangeland

This land use item includes pastureland and rangeland, other than woodland pasture or cropland, normally used for pasture or grazing. It usually includes land referred to as meadow, prairie, or range and consists of various types of grasses, such as bunch grass, shortgrass, buffalo grass, bluestem, bluegrass, switch grass, etc. It also includes land predominantly covered with brush or browse. Pastureland or rangeland containing desert shrubs, sagebrush, mesquite, greasewood, mountain browse, salt brush, cactus, juniper, pinion, etc., are to be reported here. Also, include grazing lands that were improved by seeding, liming, fertilizing, irrigating, drainage, or controlling brush or weeds.

Item 2b - Woodland pastured

Report all woodland or timber tracts, natural or planted, used for pasture or grazing.

Exclude:

- Land planted for Christmas tree production. This should be reported in Item 1a.
- Cut over or deforested (clear cut) land improved for pasture. This should be reported in Item 2a.
- Pastureland or rangeland containing desert shrubs, sagebrush, or mesquite land. This land should be reported in Item 2a.

Item 3 - Woodland not pastured

Include:

- Cut over and deforested land with new or remaining growth that has future value as wood products and was not pastured in 2017.
- All other woodland, including tapped maple trees (sugar bush).

Item 4 - All other land

Include all other land occupied by building sites, farmsteads, windbreaks, lanes, roads, ponds, owned or leased water used for aquaculture production, barn lots, gardens for home use, wasteland, etc. Also, include all land in this operation that does not fit the definition of the other land use categories listed in Items 1, 2, and 3 above.

Item 5 (Box E) - Total Acres

This is the total of all entries reported for Items 1 through 4.

Item 6 – Check Box E = Box D

The total acres reported in Item 5 should be the same as the acreage reported in Section 1, Item 4 (Box D). If not, go back and make the necessary corrections.

5.4 Section 3 – Land Rented From Others

Item 1 – Land Rented or Leased for Cash or Per Head/AUM Basis

Answer yes if the operation rented or leased any land from others for cash or on an AUM basis in 2017. Also answer yes if cash rent was paid in 2017 for previous years or if rent was paid in 2017 in advance (see Item 5).

Items 2-4 – Cropland and Pastureland Rented for Cash

Report the number of acres for each type of land (Item 2 non-irrigated cropland, Item 3 irrigated cropland, and Item 4 permanent pasture, grazing or grassland), that were rented on a per acre basis for **cash** in 2017. Acres reported in these items should be included in Section 1, Item 2.

Exclude:

- Acres rented/leased for a share of the crop or livestock.
- Acres rented/leased on a fee per head, per pound of gain, or AUM basis.
- Acres rented/leased that includes dwelling and buildings along with farmland.
- Acres rented/leased free of charge.

Item 5 – Cash Rent Paid for Acres Rented From Others

Include rent for land and/or buildings. Record the total amount paid during the year to all landlords for cash rented acreage. When an operator rents buildings, they are renting the land under the buildings as well. The land cannot be used by the landlord if the building is rented. If the operator rents the buildings only, record the number of acres the building site covers in Section 1, Item 2a.

Ask this question even if no land was rented during the reference year. The operation may have paid rent for land operated in a prior year or pre-paid rent for the upcoming year. If this question is skipped just because the operation did not rent any land in the reference year, we might miss previous year's rent paid or rent paid in advance. If an operation had more than one cash rental arrangement, the sum of **all** the individual rents should be recorded.

For crops such as sugarbeets, co-op shares may be rented with or without associated land. The rent, if any, associated with the rental of the land, should be included in this item.

Exclude:

- Any government payments landlords received from these acres.
- Any short-term livestock grazing arrangements where the livestock owner grazes livestock for a few months, but the owner will harvest crops later in the year. The payments for this short term grazing arrangement should be recorded in Item 6b.

Buildings for Non-Agricultural Purposes:

If the operation rented a building for a non-agricultural use (for example, a packing shed), determine whether or not the operator keeps income & expenses of the packing shed separate from the agricultural enterprise.

If the financial records are kept separately, do not count the packing shed rental as part of the farm. Record it as part of the profit or loss of a separate business in Section 37, Item 1c. Also, record any other income and expenditures of the packing shed in Section 37 and NOT in other sections of the ARMS questionnaire.

If the financial records are kept together, count the packing shed rental as part of farm rent in this item. Also, record any income or other expenditures of the packing shed in the appropriate items in other sections of the ARMS questionnaire.

Item 6a – Usage Fees Paid for Use of Public Land

(Mostly found in AZ, CA, CO, ID, MT, NE, NV, NM, ND, OK, OR, SD, TX, UT, WA, and WY)

The operations that use public, industrial or grazing association land will likely have rental payments on an AUM basis. This is usually controlled by the Bureau of Land Management (BLM), the Forest Service (FS), Bureau of Indian Affairs (BIA), or by grazing associations, energy companies, timber companies or railroads.

Include expenses for use of **public** land, industrial land or grazing association land associated with a range grazing area (allotment or unit). **Include** all expenses for any year, as long as they were paid in the reference year.

Exclude expenses for use of land controlled by private individuals or partnerships even if the operator reports livestock were pastured on an AUM basis on this land.

If the operation owned (or rented from others) land which was administered on an exchange-of-use basis, these acres should be reported as owned in Section 1 Item 1, or rented from others Section 1 Item 2 and as acres rented to others in Section 1 Item 3. Record the gross fees paid in Section 28 Item 2. The value of the cash rent received for the land administered on an exchange for use basis is recorded in Section 27, Item 5b.

Item 6b – Amount Paid for Pasturing Livestock on Private Land

Record the total amount paid in the reference year for pasturing or grazing livestock on **privately** owned land on a fee per-head (AUM), gain, or other basis. **Exclude** contract arrangements.

Include expenses for a 2-4 month rental where the operator will graze livestock and the landlord will harvest crops from the same land later in the year or has already harvested a crop.

Exclude expenses for pasturing or grazing livestock on public land. These expenses should be recorded in Item 6a.

5.5 Section 4 – Land Use Practices

Item 1a – Acres Drained by Tile

Tile drainage is a type of drainage system that removes excess water from soil below the surface.

Item 1b – Acres Drained by Ditches

Ditch drainage systems are designed to provide primarily surface drainage.

Item 1c – Acres Under a Conservation Easement

A conservation easement (also called conservation covenant, or conservation restriction) is a power invested in a qualified private land conservation organization (often called a "land trust") or government (municipal, county, state or federal) to constrain, as to a specified land area, the exercise of rights otherwise held by a landowner as to achieve certain conservation purposes. Some examples of conservation goals include maintaining and improving water quality, perpetuating the growth of forests, maintaining wildlife habitat and migration corridors, and protecting scenic vistas visible from roads and other public areas.

Item 2a – No-till Practices

No-till farming practices is cropland used for production from year to year without disturbing the soil through tillage other than planting. No-till is an agricultural technique which increases the amount of water that infiltrates into the soil and increases organic matter retention. In many agricultural regions it can reduce or eliminate soil erosion.

Item 2b – Reduced Tillage

Reduced tillage leaves between 15% and 30% residue cover on the soil of small grain residue to conserve moisture and prevent erosion. This may involve the use of a chisel plow, field cultivators, or other implements.

Item 2c – Intensive Tillage

Intensive tillage leaves less than 15% of crop residue of small grain residue. This type of tillage is often referred to as conventional tillage. Intensive tillage often involves multiple operations with implements such as a mold board, disk, and/or chisel plow.

Item 2d – Cover Crops

A cover crop is a crop planted primarily to manage soil erosion, soil fertility, soil quality, water, weeds, pests, and diseases on non-CRP acres.

Item 3a – Harvested Cropland Irrigated

Report the number of harvested acres which were irrigated one or more times in 2017. These acres should be included in Section 2, item 1a.

Item 3b – Pastureland, Rangeland, Abandoned Land, and Other Land Irrigated

Report the number of acres of pastureland, rangeland, abandoned cropland and other land which was irrigated one or more times in 2017.

Item 4 – Acres Irrigated at least Once in the last five years

Report the number of acres of all classes of land which were irrigated one or more times in the past five years. If the same land was irrigated more than once in the past five years, record those acres only once.

5.6 Sections 5 to 10 – Crops

5.6.1 Section 5 – Hay and Forage Crops

Complete this section if any hay or forage crops were cut or harvested from this operation in 2017 **or** if this operation received any income from these crops in 2017.

Include hay, haylage, grass silage, baleage, or greenchop cut from cropland pastures or CRP land. Any pasture or CRP land that had hay cut from it in 2017 should be reported as “Cropland harvested” in Section 2, Item 1a.

If two or more cuttings of the same crop were made from the same field, i.e., all cuttings harvested as dry hay or as haylage, then report the acreage only once for acres harvested and any irrigated harvested acres. Report the total tonnage from all cuttings combined in the “Total Tons Harvested” column. Dry hay is reported as “Tons, dry” and haylage, grass silage, and greenchop are reported as “Tons, green.”

If haylage, grass silage, or greenchop was cut from the same land from which dry hay was cut, report the acreage and production for that land which was cut for dry hay under the appropriate dry hay category and the acreage and production under the appropriate haylage, silage, or greenchop category. For example, if 20 acres of alfalfa were cut for hay and then the same land was used to produce alfalfa haylage, report 20 acres and the tons harvested of hay in Item 4 “Alfalfa and alfalfa mixtures for dry hay,” and 20 acres and the green tons harvested of haylage in Item 5 “Haylage or greenchop from alfalfa or alfalfa mixtures.”

Report quantity harvested in tons. Example: If 400 square bales of hay were produced, estimate the average weight of the bales and convert total quantity harvested to tons (the requested unit of measure).

(70 pounds * 400 bales) divided by 2,000 pounds = 14 tons

Exclude the acreage and production when straw was produced, but if the straw is sold, report the value of the straw sales under the appropriate grain from which it was produced in Section 7 Field Crops.

Item 2 - All land from which dry hay, haylage, grass silage, or greenchop was cut or forage was harvested

Report the total acres from which hay and forage crops were harvested and any irrigated harvested acres from this operation. If different harvesting methods were used on the same acreage or when multiple cuttings of the same harvesting method were used, report the acreage only ONCE. Only acres harvested and irrigated acres harvested are needed here. Report the tons harvested in Items 4-7. **Exclude** corn silage, sorghum silage, and straw.

Item 3 – Hay and forage crops sold

After subtracting marketing expenses, record the amount received in 2017 from cash sales for hay and forage crops. **Exclude** contract sales or removals and landlord's share of sales. **Exclude** hay and forage that was fed on this operation. Do not report straw sales here. Report the straw sales in the appropriate type of grain from which it was made in Section 7 Field Crops,

Item 3. For example, if wheat straw was sold, include the sales with the wheat for grain value of sales.

Item 4 - Alfalfa and alfalfa mixtures for dry hay

Report only the acres and dry tons of alfalfa harvested or cut for hay and any irrigated harvested acres. Report the dry weight in tons at the time the hay was removed from the field for storage or feeding. Also include the amount of production that has been (or will be) used on this operation.

Item 5 - Haylage or greenchop from alfalfa or alfalfa mixtures

Report acres harvested, tons harvested green, and any irrigated harvested acres of haylage or greenchop (hay cut and fed green) of alfalfa and alfalfa mixtures. If haylage or greenchop from alfalfa or alfalfa mixtures was cut from the same land from which dry alfalfa hay was cut, also report the acreage and production for the acres which were cut for alfalfa dry hay in Item 4. Also include the amount of production that has been (or will be) used on this operation.

Item 6 - Other dry hay

Report the acres, irrigated harvested acres, and tons harvested, from small grains or small grain mixtures. Include hay made from small grains and alfalfa mixtures where the quantity harvested was predominantly from small grains. Report all dry hay made from such crops or mixtures as clover, lespedeza, fescue, timothy, Bermuda grass, Sudan grass, sorghum cut for dry hay, sorghum-sudan crosses, orchard grass, soybeans, peanuts, etc. Also include the amount of production that has been (or will be) used on this operation.

Item 7 - All other haylage, grass silage, and greenchop

Report the acres, irrigated harvested acres and tons harvested green, of haylage, grass silage, and greenchop (hay cut and fed green) made from such crops or mixtures as small grains, clover, lespedeza, fescue, timothy, Bermuda grass, sudangrass, sorghum-sudan crosses, orchardgrass, soybeans, peanuts, etc. When reporting haylage, grass silage, and greenchop, include acres and total quantities from all cuttings, whether harvested from land previously cut for dry hay or from land used mainly for pasture. Also include the amount of production that has been (or will be) used on this operation. Report alfalfa haylage in Item 5 in this section.

5.6.2 Section 6 – Cultivated Christmas Trees/Woody Crops/Maple Syrup

Complete this section if any woodland crops were grown, harvested, or tapped on this operation in 2017 **or** if this operation received any income from these crops in 2017.

Item 2 - Cultivated Christmas trees - cut and to be cut

Report the total acres of Christmas trees grown for cut Christmas trees as “Acres in Production” whether harvested in 2017 or for future harvest. “Number of Trees Cut” should be only those trees harvested in 2017. If there were acres in production, but no trees cut in 2017, report the “Acres in Production” and enter “0” for “Number of Trees Cut.” Also, “Acres in Production” should be included in Section 2, Item 1a, “Cropland harvested.”

Report acres of Christmas trees harvested as live nursery stock (balled and burlapped) in Section 8, Item 4 using code 0488, "Nursery stock."

After subtracting marketing expenses, record the amount received in 2017 from cash sales for cut Christmas trees. **Exclude** contract sales or removals and landlord's share of sales.

Item 3 - Short rotation woody crops

Report the total acres of short rotation woody crops as "Acres in Production" whether harvested in 2017 or for future harvest. Also, "Acres in Production" should be included in Section 2, Item 1a, "Cropland harvested."

A short rotation woody crop is a tree that grows from seed to a mature tree in 10 years or less. These are trees for use as paper or pulp, or as engineered wood or for ethanol. The wood is too soft to be used directly for lumber. Exclude nursery stock or trees that will be harvested for lumber, fence posts, telephone poles, etc.

After subtracting marketing expenses, record the amount received in 2017 from cash sales for short rotation woody crops. **Exclude** contract sales or removals and landlord's share of sales. Report timber and pulp wood sales in Section 27, Item 5d.

Acres Irrigated

In Section 6, Items 2 and 3, report the total acres in production that were irrigated at least once in 2017

Item 4 - Maple syrup

Report the total number of taps in 2017 and the gallons of syrup produced from the sap harvested from these taps. If sap was sold, estimate the number of gallons of syrup it would have produced. Also, report the acres of tapped maple trees in Section 2, Item 3 (Woodland Not Pastured). Do not include syrup produced from sap purchased from others.

After subtracting marketing expenses, record the amount received in 2017 from cash sales for maple syrup and maple sap sold from this operation in 2017. **Exclude** contract sales or removals and landlord's share of sales. **Exclude** from the value of sales any syrup produced from sap purchased from others.

5.6.2 Section 7 – Field Crops

Complete this section if any field crops were grown or harvested on this operation in 2017 **or** if this operation received any income from these crops in 2017.

This section collects information on harvested tobacco, small grains, field seeds, and row crops. Report acres from which field crops were harvested in Item 2. Acres which more than one crop were harvested are reported separately in Item 3 but only counted once in Item 2. Report quantity harvested in the requested unit of measure.

5.6.3.1 Completing the Table

To report a field crop harvested in 2017, locate the field crop name in the list below the table. Use the information provided (name, unit of measure, and code) to fill the blank write-in spaces in the table. Be sure to enter the correct crop code in the second column.

Report any other field crop harvested in 2017 but not listed anywhere on the report form in this section. Print the crop name in the first column and crop code "0752" in the second column.

Column 3 – Acres Harvested

Except for tobacco, report harvested acreage to the nearest whole acre. Make sure the respondent is not reporting planted acres by crop when you are only asking for harvested acres.

Include acreage for which two uses were made of the same crop. An example is alfalfa acreage harvested for both hay and seed. These acres are recorded twice: as acres of alfalfa in Section 5, and as acres of alfalfa seed harvested in Section 7, Crop Code 542 to account for the seed.

Exclude acreage for second or later harvests (for the same use) of any crop from a single planting, such as second or third pickings of cotton and ratoon crops of rice. **Exclude** acres of 2016 crops not harvested until 2017 due to weather conditions.

Partial acreage harvested in a field

If only some of the acres within the field were harvested, report only the acres actually harvested and not the total acres in the field. As an example, if 3 acres of corn drowned out in a 20-acre field of corn and 17 acres of corn were harvested for grain, report the 17 acres harvested in this section. The remaining 3 acres, if not summer fallowed, hayed, or grazed, should be included in Section 2, Item 1b, "Cropland on which all crops failed or were abandoned."

Acres not yet harvested

If a planted crop would normally be harvested before December 31, 2017 (corn, soybeans, etc.) but harvest was/will be delayed until 2018 because of weather conditions, equipment problems, etc., it should be included in "Acres Harvested," the estimated production included in "Total Quantity Harvested," and the portion of the acres harvested that were irrigated, if any, included in "Acres Irrigated."

Column 4 - Total Production Harvested

Report the total quantity harvested in the unit of measure specified for each crop. If the unit of measure is different in the respondent's records than the unit of measure requested on the report form, convert the total quantity harvested to the requested unit of measure. Enter quantity harvested data on the same line as the crop's acreage harvested. Note that Sections 5 and 7 are the only sections that request the total quantity harvested for crops. Report cut Christmas trees in Section 6. Report maple syrup produced in Section 6.

Example: If 240 tons of sunflower seed were harvested, convert to pounds harvested. (240 tons multiplied by 2,000 pounds = 480,000 pounds.)

Column 5 - Acres irrigated that were harvested

Acres irrigated are acres on which water was applied by any artificial or controlled means, such as sprinklers, furrows and ditches, spreader dikes, flooding, or sub-irrigation pipes. Include the harvested field crop acres where lagoon waste water from livestock operations was distributed by a sprinkler or flood system.

Column 6 – Amount of Production Used on This Operation

Record the amount of the share of production belonging to the operation that has been (or will be) used on this operation for feed, seed, etc.

Include:

- The landlord share that was used on the operation. In this case, do not record the production used in the landlord's share of the crop in Section 28 (Landlord's Share of Crops & Livestock).

Exclude:

- Any production that was (or will be) used for human consumption.
- The landlord's share of production if it was used outside the operation.
- Any crop production that was fed to non-owned livestock as part of a production contract with the livestock owner. This production should be recorded as a cash sale to the livestock owner and the same value for the crop sold should be recorded as a contractor expense in Section 29, Item 6.

Example:

125 irrigated acres of oats were harvested for grain with an average yield of 60 bushels per acre. These oats were harvested off share rented acres where the landlord received a 50% share. The operation used its entire share of the oats on the operation in 2017. This information would be recorded as follows:

Column 3	–	125	acres harvested
Column 4	–	7,500	total production [125 acres x 60 bu/acre = 7,500 bushels]
Column 5	–	125	irrigated acres that were harvested
Column 6	–	3,750	operation's share used on this operation [7,500 total bushels produced x 50% share x 100% used = 3,750 bushels]
Section 28, Item 2	–	13,650	market value of landlord's share of production [7,500 total bushels produced x 50% landlord share x \$3.64 per bushel = \$13,650]

Column 7 – Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales for field crops. Marketing expenses include check-off, drying, commission, ginning, inspection, storage, and transportation, etc.

Include:

- Crop sales received in 2017 from crop harvested in 2016 and earlier years. In this case, columns 3 through 6 should be blank if no acres were harvested in 2017.
- Community Supported Agriculture (CSA) sales are considered a cash sale and not a contract.
- The value of straw produced on this operation **and sold**. Report the straw sales in the appropriate type of grain from which it was made in Item 3. For example, if wheat straw was sold, include the sales with the wheat for grain value of sales.

Exclude:

- Marketing Contract sales recorded in Section 20, Item 2.
- Production Contract movements recorded in Section 21, Item 2.
- Landlord share of production, which is recorded in Section 28, Item 2.
- Sales from other farm related activities, such as trading and speculation or livestock dealer activities which are recorded in Section 27.
- Value of sales from land rented to others or worked on shares by others.
- Amount received in 2017 for crops sold in 2016 and earlier years. This is recorded in Section 22, Items 1a and 1a(i) (Accounts Receivable).

5.6.3.2 Crop-Specific Instructions

Corn

Report the acres of corn harvested for grain, seed, silage, or greenchop.

Report:

- Sweet corn for seed, code 740, in Section 7.
- Popcorn, code 662, in Section 7.
- Sweet corn harvested for fresh market or processing, code 0461, in Section 9.
- Blue corn, code 067, Corn for grain or seed, in Section 7.
- Purple corn, white corn, etc. code 067, Corn for grain or seed in Section 7.

Wheat, oats, barley, and rye

Report acres of wheat, oats, barley, and rye harvested for grain or seed from this operation in 2017 in Section 7. Report acres of wheat harvested for grain or seed by class (Winter, Durum, Other Spring), as requested on the report form. Winter wheat, winter barley, and oat acres harvested and quantity harvested should be reported for the crop **harvested in 2017** (not the acres planted in the fall of 2016). White wheat may be winter or spring wheat. Do not report white wheat in code 752. Mixed grains should be reported under code 752, "Other field crop" (report the quantity harvested in pounds). Report any small grains harvested for hay, haylage, baleage, silage, or greenchop in 2017 in Section 5.

Do not report the acres or quantity produced of straw baled from small grain crops that were previously harvested for grain or seed. Report straw sales in the appropriate type of grain from

which it was made. For example, if spring wheat straw was sold, include the sales using code 728.

Cotton

Report acres of cotton harvested as either Pima, code 644 or Upland, code 581. Report the quantity harvested in bales. If cotton was grown in a skip-row pattern, report only the acres of cotton harvested and not the land occupied by the skip rows.

Report total value of sales of cotton and cottonseed sold or moved from this operation during 2017. Include the value of any cotton or cottonseed given to landlord(s) as rent. Include payments received in 2017 from cooperatives or marketing organizations for crops produced on this operation regardless of the year in which the crops were harvested.

Dry edible beans, dry edible peas, and lentils

Report the information requested for acres harvested on this operation as follows:

Crop	Code
Chickpeas/Garbanzo	2816
Dry edible beans (excluding chickpeas and lima)	554
Lentils	635
Lima beans, dry	557
Dry Southern/cowpeas	584
All other dry edible peas	659

Herbs Dried

Include Clary sage in item 620. Report Clary sage as pounds of sclareol (oil) extracted. The producer is paid for the sclareol (oil) that is extracted and not the weight of the dry matter harvested. This is similar to mint in which production is reported in pounds of oil.

Peanuts

Report all types of peanuts for nuts harvested on this operation. Peanuts cut for hay should be reported in Section 5 as "Other dry hay" or "All other haylage."

Potatoes and sweet potatoes

Report the acreage and the total quantity of potatoes and sweet potatoes harvested from this operation in Section 9. Exclude home use.

Sorghum

Include:

- Sorghum or milo harvested for grain or seed, silage, or greenchop
- Sorghum or milo harvested by cutting the heads from stalks and used for feed un-threshed as sorghum for grain
- Acres from which sorghum or milo was harvested for grain, seed, or silage then grazed after harvest

- Sorghum for syrup, code 704

Soybeans

Report soybeans harvested for beans. Report soybeans cut for dry hay in Section 5 as "Other dry hay" and soybeans cut for greenchop, haylage, or silage as "All other haylage, grass silage, and greenchop."

Sugarbeets

Report separately the acreage of sugarbeets for sugar, code 719, and the acreage of sugarbeets for seed production, code 716.

Sugarcane

Report the acreage of sugarcane for sugar, code 722, and the acreage of sugarcane for seed, code 725, separately. If some acreage in a field was harvested as sugarcane for sugar and some acreage was harvested as sugarcane for seed, prorate the acreage on the basis of each use. ***In Florida and Texas***, report cuttings of sugarcane from September 2017 through April 2018 harvest season. Estimate if necessary. Other states report 2017 crop year.

Tea

Report "mint for tea leaves" in code 767. Report other types of tea in code 752.

Tobacco

Report all types of tobacco harvested from this operation in 2017. In reporting the total acreage, include tenths of acres. If skip rows or sled rows were used, only record the acreage occupied by the harvested tobacco.

Report the total value of sales of tobacco sold or moved from this operation during 2017 regardless of the year the tobacco was grown. Include payments received in 2017 from cooperatives or marketing organizations for crops produced on this operation regardless of the year in which the crops were harvested.

Report tobacco transplants that were **grown and sold** from this operation in Section 8, Item 4, code 1004.

5.6.4 Section 8 - Nursery, Greenhouse, Floriculture, Sod, Mushrooms, Etc.

Review the crop types listed at the bottom of the page before completing this section. Report all of the area for these crops grown for sale or future sale on this operation under glass or other protection, including tunnel production, or in the open, whether wholesale or retail. Include those sold on consignment. Exclude greenhouse vegetables grown for home consumption. Report food crops temporarily covered for early germination, frost protection, etc. in Section 9.

Complete this section if any of the listed crops were grown for sale on this operation in 2017 **or** if this operation received any income from these crops in 2017.

Item 2 – Area Under Glass or Other Protection

Report the total area on which nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials were grown as square feet under glass or other protection. Report the area of these crops that were irrigated in 2017 as square feet. Report the total area only once in Item 2 regardless of how many crops were grown for sale from the same area. If more than one type of crop was grown for sale from the same area, report each crop separately in Item 4.

Item 3 – Acres in the Open

Report the total area on which nursery, greenhouse, floriculture, sod, mushrooms, vegetable seeds, and propagative materials were grown in the open as acres to the nearest tenth acre. Report the area of these crops that were irrigated in 2017 as acres to the nearest tenth acre. Report the total area only once in Item 3 regardless of how many crops were grown for sale from the same area. If more than one type of crop was grown for sale from the same area, report each crop separately in Item 4.

Item 4 – Crop Table

Print the crop type name, corresponding crop code from the list below the table, the area grown for sale, and cash sales for this crop type. Do not duplicate the area grown for sale for each crop type in the “Square Feet Under Glass or Other Protection” in Item 2 and “Acres in the Open” in Item 3.

Area under protection refers to plants grown under a structure (such as glass, fiberglass, plastic, or saran) for the **entire** growing season. Crops covered only temporarily to be further grown in the open should not be included for area under protection.

- If the same crop was grown for sale more than once, such as mushrooms, report the square footage only once. In the case where different crops were grown on the same benches or beds, report the area for each crop grown for sale.
- For crops grown in hot beds, benches, or cold frames, report only the square feet of the beds, benches, or frames and not the walkways or storage areas. An example might be where crops are grown in stacked trays 3 tiers high. In this case, calculate the square footage of one tier and multiply the footage by 3. (If a tier equals 160 square feet, multiplied times 3 levels equals a total 480 square feet).
- For sod, report area grown for sale only as “Acres in the Open.”
- If more than one type of crop was grown for sale from the same area, report each crop separately in Item 4.
- Report tobacco transplants that were grown and sold from this operation using code 1004. **Exclude** tobacco transplants that were grown and then transplanted on the same operation.
- Report vegetable transplants that were grown and sold from this operation for transplanting to fields on another operation using code 1006.
- Report vegetable transplants that were grown and sold from this operation for household gardens using code 0479.
- Report acres grown for sale of live Christmas trees (balled and burlapped, potted, etc.) grown on this operation using code 0488. Cut Christmas trees are reported in Section 6, Item 2.
- Blueberries raised and sold for transplanting are reported in Nursery stock, code 0488.

- Report the total value of sales (at point of first sale, wholesale/retail value) for those crops grown on and sold directly from this operation. Report only the wholesale value of crops grown on this operation and sold through a retail outlet which is not part of this operation or if the retail outlet is considered a separate business establishment. Estimate values, if necessary.
- **Exclude** crops bought for resale without additional growing, such as plugs and started plants or garden center items, such as pot liners, chemicals, and fertilizers.

Column 5 – Cash Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales for nursery, greenhouse, floriculture, etc. Marketing expenses include check-off, drying, commission, ginning, inspection, storage, and transportation, etc.

5.6.5 Section 9 – Vegetables, Potatoes, and Melons

Review the crops listed at the bottom of the page before completing this section. Report all of the area for vegetable, potato, and melon crops harvested on this operation. Include yams with sweet potatoes. Exclude vegetables, potatoes, and melons grown for home consumption.

Complete this section if any of the listed crops were grown for sale on this operation in 2017 **or** if this operation received any income from these crops in 2017.

Report strawberries in section 10, code 0536. Report dry edible peas, dry edible beans, dry lima beans, lentils, and chickpeas in Section 7. Vegetables grown under glass or other protection should be included in Section 8. (**Harvest season** - In all states, except Florida and Arizona, report vegetables harvested in the calendar year 2017. For Florida and Arizona, report vegetables and melons harvested from September 1, 2016, through August 31, 2017.)

Item 2 – Acres Harvested and Irrigated

Report the total harvested acres and irrigated harvested acres of vegetables, potatoes, and melons in whole and tenth acres. Report the area only once regardless how many crops were harvested from the same area. If more than one type of crop was harvested from the same area, report each crop separately in Item 4.

Example: If 20 acres of summer squash were harvested from a field and the same field was replanted in summer squash and harvested again, report only 20 acres of land from which vegetables were harvested in item 2, but report 40 acres harvested in Item 4, summer squash, code 0468. Report the 40 acres in the appropriate columns for fresh market or processing.

Item 3 – Cash Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of vegetables, potatoes, and melons sold from this operation during 2017. Include the value of sales for fresh market or processing and sales to consumers, wholesalers, canners, freezers, dehydrators, or other processors or buyers. Report total value of sales of vegetables grown under glass or other protection in Section 8. **Exclude** the value of the commodities produced under a marketing or production contract and the landlord's share of sales. **Exclude** value-added commodities, to be reported in Section 27, Item 5i.

Marketing and Production Contracts

Report the acreage of all vegetables and melons grown under marketing or production contracts but **exclude** from Item 3, the value of the commodities produced under a marketing or production contract. The dollar amounts received from the contractor for commodities produced under a marketing or production contract are reported in Section 20 or 21.

Two or more pickings of the same crop

Report the acres harvested only once even when two or more pickings were made from the same field.

Potatoes and sweet potatoes raised and sold for seed

Report the acreage of potatoes and sweet potatoes raised and sold for seed as acres harvested for fresh market.

Item 4 – Crop Table

Report the crop listed in the table at the bottom of the page. If a harvested crop's name is not listed in the table, write in the crop name, and other vegetable code 0475, the total acres harvested, the acres harvested for fresh market, and the acres harvested for processing. Report all acreage in whole and tenth acres.

5.6.6 Section 10 – Fruit, Nuts, and Berries

Review the crops listed at the bottom of the page before completing this section. Report the acreage if there were bearing or non-bearing age fruit, tree nuts or berry plants which were maintained for current or future commercial production. Exclude acreage of trees and vines which were abandoned or used for home use.

Complete this section if any of the listed crops were grown for sale on this operation in 2017 **or** if this operation received any income from these crops in 2017.

Native pecan trees are the only native or "wild" tree nuts that are reported. Exclude acreage and sales of black walnuts.

Item 2 – Acres Harvested and Irrigated

Report the total acres and irrigated acres of trees, berries, and vines for fruits and nuts in whole and tenth acres. In the total acreage, include bearing age acres and nonbearing age acres and bearing age acres not harvested due to unsatisfactory prices, labor shortages, etc. If native pecan tree density is less than 20 trees per acre, divide the number of pecan trees by 20 and enter that value as the number of total native pecan acres. Exclude abandoned acres of trees or vines that were not maintained for production and young trees and vines designated for future transplanting and replacement. Report these acres of young trees in Section 8, Code 0488, "Nursery stock."

Item 3 – Cash Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of fruit trees, berries, and vines for fruits sold or moved from this operation during 2017. **Exclude** the value of the commodities produced under a marketing or production contract and the landlord's share of sales. **Exclude** value-added commodities, to be reported in Section 27, Item 5i.

Item 4 – Crop Table

Report all of the area for fruits, nuts and berries harvested on this operation. Write in the crop name, corresponding crop code from the list at the bottom of the page, total acres, bearing age acres, and nonbearing age acres. Report any other non-citrus fruits, other citrus fruits, or other nuts harvested in 2017 but not listed in this section or anywhere on the report form in this section. For crops not listed in the table, print the crop name in the first column and the corresponding "Other" crop code "0261", "0315", "0363", or "539" in the second column. Report the total acres, bearing age acres, and nonbearing age acres.

Report all acreage in whole and tenths acres. The total acres of all trees and vines is equal to the acres of bearing age trees plus the acres of nonbearing age trees. Nonbearing trees that were planted as replacements for trees that died in bearing blocks should have an estimate of the land that they occupied reported in the nonbearing acres column.

- For Florida report the acreage of limes for the April 2017 - March 2018 harvest season. Estimate if necessary.
- Report the acreage of all other citrus crops in all other states for the 2016-2017 harvest season.
- For California report the acreage of avocados for the 2017 crop year, November 1, 2016 - November 30, 2017. The 2017 crop year consists of the fall crop, November 1, 2016 - June 20, 2017 and the spring crop, April 20, 2017 - November 30, 2018. Report the acreage of olives for the September 2016 - March 2017 harvest season.

5.7 Sections 11 to 19 – Livestock

5.7.1 Section Purpose

This section provides a place to record removal, inventory, ownership, and cash sales data for the operation described in Section 1. Livestock removals and sales are used to develop estimates of the value of livestock production. This information allows us to determine the degree to which operations are diversified across varied types of livestock and enables us to assess trends in consolidation of the livestock industry.

Include landlord's share, animals sold on the open market (non-contract), animals removed from this operation under a marketing or production contract in the reference year, and FFA / 4-H livestock projects, in inventory cells.

5.7.2 Section 11 – Cattle and Calves

Report inventories of all beef and dairy cattle and calves on this operation on December 31, 2017 and number of cattle and calves sold or moved from this operation during 2017. Inventories should include cattle on land used rent free or on public, private, or industrial property under a grazing permit, per head, or AUM basis. **Include** cattle located on or fed on this operation for others on a custom or contract basis. **Include** cattle and calves on this operation that were owned by members of the family, i.e. 4-H and FFA project cattle and calves raised on this operation that were owned by a son or daughter. **Include** Beefalo.

Exclude any cattle owned that were being custom fed in feedlots operated by others on December 31, 2017. Do not report the sales of animals bought and then sold within 30 days.

Item 2a – Beef Cows

Report the number of beef cows on this operation and the number owned by this operation on December 31, 2017 that were kept for beef production. Report beef heifers that had calved by December 31, 2017. Beef heifers that had not calved by December 31, 2017 should be reported in Item 2c. Steers, calves, and bulls should be reported in Item 2c.

Item 2b – Milk Cows

Report the number of cows of any breed kept for milk production on this operation and the number owned by this operation on December 31, 2017. **Include** dry milk cows and dairy heifers that had calved by December 31, 2017. Milk heifers that had not calved by December 31, 2017 should be reported in Item 2c.

Item 2c – Other Cattle

Report the combined number of steers, calves, bulls, and heifers that had not calved by December 31, 2017. Also report other cattle that were owned by this operation on December 31. **Include** number of cattle and calves of all ages that were grazing or being fed for others on a custom or contract basis on December 31, 2017 on this operation.

Item 2d – Total Cattle & Calves

Report the total number of cattle and calves of all ages on this operation and the total number owned by this operation on December 31, 2017. Items 2a, 2b, and 2c should add to the number reported here.

Item 3 – Cattle, Calves & Milk Sold or Moved

Record all cattle, calves, and milk that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation from January 1, 2017 through December 31, 2017, regardless of who owned them. "Removed" or "moved" is intended for livestock under a production contract that were never owned by the operation.

Include any cattle, calves, or milk that belonged to landlords, contractors, or any other person.

Exclude animal deaths. Deaths do not add a value of production, and they are not counted.

Do not include animals that were moved from this operation:

- to another operation to graze on winter wheat for a month or two and then returned to this operation
- for short term grazing on corn stubble and then returned to this operation
- for the summer to public grazing land and then returned to this operation
- for the summer to private or grazing association land and then returned to this operation

Item 3a – Calves Sold or Moved

Report the number of calves weighing less than 500 pounds that were sold or moved from this operation during 2017.

Item 3b – Cattle Sold or Moved

Report all the cattle and calves weighing 500 pounds or more that were sold or moved from this operation during 2017.

Item 4 – Milk Sold or Moved

Record the total amount (in hundredweight – CWT) of milk sold on the open market or removed under contract from the operation in 2017 regardless of ownership.

Items 5 to 7 – Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of cattle, calves, and milk from this operation. Marketing expenses include check-off, drying, commission, inspection, storage, transportation, and yardage, etc. (Please see Section 29, item 33 for a full explanation of marketing expenses).

Include:

- Livestock sales received in 2017 from livestock produced in 2016 and earlier years.
- CSA sales are considered a cash sale and not a contract.

Exclude:

- Marketing Contract sales recorded in Section 20, Item 2
- Production Contract movements recorded in Section 21, Item 2
- Landlord share of production, which is recorded in Section 28, Item 3.
- Sales from other farm related activities, such as trading and speculation or livestock dealer activities (recorded in Section 27).
- Value of sales from land rented to others or worked on shares by others.
- Amount received in 2017 for livestock sold in 2016 and earlier years. This is recorded in Section 22, Items 1a and 1a(i) (Accounts Receivable).

Item 5 – Cash Sales of Cattle & Calves minus Breeding Stock

Report the total cash sales received in 2017 of cattle (fed cattle, beef and dairy cull animals, stockers and feeders, beefalo, veal calves, etc.) sold or moved from this operation in 2017.

Include cull bulls. **Exclude** cattle breeding stock.

Item 6 – Cash Sales of Breeding Stock

Report the total cash sales received in 2017 of breeding cattle sold or moved from this operation in 2017.

Exclude cattle grown under marketing contract or production contract on this operation.

Item 6a – Recognized Gain or Loss on Sales of Breeding Cattle

Record the recognized gain or loss on breeding cattle cash sales from Item 6 above.

For raised livestock, the gain will generally be the amount of cash sales proceeds reported above since the costs of raising the livestock have already been deducted as a business expense.

For purchased livestock, the gain or loss is equal to the cash sales proceeds minus any remaining purchase costs that have not already been recovered through depreciation.

Item 7 – Cash Sales of Milk from Cows

Report the total value of cash sales received in 2017 from milk produced and sold from this operation in 2017. Cheese and any other dairy products processed should be recorded in Section 27, Item 5j. Record the value of cash sales before any deduction of hauling fees.

Item 8 – Cattle in Feedlots

Include animals for slaughter market that were fed a ration of grain or other concentrates that are expected to produce a carcass that will grade select or better. **Exclude** cattle that were pastured only, being backgrounded, fed for home use, or veal.

Item 8a – Cattle on Hand Shipped Directly to Slaughter Market

Of the cattle on hand reported in Item 2c, report the total cattle and calves that were on feed December 31, 2017, and were or will be shipped directly from your feedlot to slaughter market.

Exclude veal calves that were fattened primarily on milk, dairy cows that were fed only the usual dairy ration before being sold, and any cattle and calves being preconditioned, backgrounded, or fed a warm-up ration.

Item 8b – Cattle Sold & Shipped Directly to Slaughter Market

Of the cattle reported in Item 3b, report the cattle sold during 2017 weighing 500 pounds or more that were shipped directly from your feedlot to slaughter market. **Exclude** any of your cattle being custom fed in feedlots operated by others. **Exclude** cattle sold as feeders. **Exclude** dairy cows fed only the usual dairy cow ration before being sold.

5.7.3 Section 12 – Hogs and Pigs

Report all hogs and pigs on this operation on December 31, 2017. **Include** hogs grown for others on a contract basis. **Include** hogs on this operation that were owned by members of the family, such as 4-H and FFA project hogs raised on this operation that were owned by a son or daughter. Contractors should only report hogs on land they operate. If the addressee is a contractor or integrator and in 2017 grew no hogs other than those raised for him/her by contractees, do not report any hogs in inventory or any hogs sold. If the addressee was a contractor or integrator and grew hogs himself/herself and had hogs grown for him/her by others, report only the hogs which he/she raised on this operation. **Exclude** hogs grown for the addressee by someone else on another operation under contract.

Item 2 – Total hogs and pigs

Report the total number of hogs and pigs of all ages on this operation and owned by this operation on December 31, 2017. Include those being fed or kept for others under a production contract or an agreement.

Item 3 – Hogs & Pigs Sold or Moved

Report the total number of hogs and pigs sold or moved off the operation, including feeder pigs, in 2017. "Removed" or "moved" is intended for livestock under a production contract that were never owned by the operation.

Exclude animal deaths. Deaths do not add a value of production, and they are not counted.

Items 4 to 5a – Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of hogs & pigs from this operation. **Exclude** contract sales or removals and landlord's share of sales.

Item 4 – Cash Sales of Hogs & Pigs minus Breeding Stock

Report the total cash sales received in 2017 of swine sold or moved from this operation in 2017. **Include** cull breeding hogs. **Exclude** cash sales of breeding hogs. **Exclude** hogs grown under production contract for this operation or on this operation.

Item 5 – Cash Sales of Hog Breeding Stock

Report the total cash sales received in 2017 of breeding hogs sold or moved from this operation in 2017.

Exclude hogs grown under production contract on this operation.

Item 5a – Recognized Gain or Loss on Cash Sales of Breeding Hogs

Record the recognized gain or loss on breeding hog cash sales from Item 5 above.

For raised livestock, the gain will generally be the amount of cash sales proceeds reported above since the costs of raising the livestock have already been deducted as a business expense.

For purchased livestock, the gain or loss is equal to the cash sales proceeds minus any remaining purchase costs that have not already been recovered through depreciation.

Item 6 – Type of Operation

Mark the one type which best describes this operation.

- A farrow-to-wean operation sells or moves pigs from the operation soon after they are weaned from the sow, generally at 2 to 5 weeks of age.
- A farrow-to-feeder operation sells or moves pigs from the operation after the pigs are weaned and fed to a feeder pig weight, approximately 35 to 55 pounds.
- A farrow to finish operation farrows and sells or moves pigs from the operation after they have reached market weight and are sold or moved directly to slaughter.
- A nursery operation buys pigs for or moves pigs to the operation after they have been weaned and will feed them for a short period of time, after which they are sold or moved from the operation to a finishing operation.
- A finish only operation buys pigs for or moves pigs to the operation at weaning weight or feeder pig weight and feeds them until they have reached market weight and are sold or moved directly to slaughter.
- An “other” hog operation could include operations where a majority of production focuses on raising and selling breeding stock. Print the type of hog operation in the response area.

Item 7 – Describe the Producer

Mark the one type that best describes this operation.

5.7.4 Section 13 – Horses, Ponies, Mules, Burros, and Donkeys

Equine include horses, ponies, mules, burros, and donkeys. Include equine of all ages and breeds for all uses. **Exclude** wild horses and zebras.

HORSE BOARDING, TRAINING, RACING OPERATIONS

With the popularity of the equine industry in many States, you may run into an operation that has both agricultural and equine related businesses. Economic surveys like the ARMS and

Census account for agricultural enterprises as defined by the North American Industrial Classification System (NAICS). Commercial equine boarding, training, and racing do not fall into the agricultural category. As a result, income and expense items for these operations should not be recorded if at all possible.

If the operator has a horse boarding, training, or racing operation, determine whether or not the operator keeps income and expenses of the horse operation separate from the agricultural enterprise.

If the financial records are kept **separately**, do not count the horses associated with the horse operation. Also, do not record any income or expenditures of the horse operations in later sections of the ARMS questionnaire.

If the financial records are kept **together**, count the horses associated with the horse operation. Also, record any income or expenditures of the horse operations in later sections of the ARMS questionnaire. Record good notes throughout the questionnaire.

Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of equine from this operation. **Exclude** contract sales or removals and landlord's share of sales.

Item 2 – Horses & Ponies Owned

Report the number of horses and ponies on this operation which were OWNED by this operation on December 31, 2017. **Include** as owned all horses and ponies on this operation even if only partially owned by this operation. Report the number of owned horses and ponies sold in 2017 and cash sales.

Item 3 – Horses & Ponies NOT Owned

Report the number of horses and ponies on this operation which were NOT owned by this operation on December 31, 2017. Report the horse and pony inventory that were not owned by this operation but boarded by this operation for others. An example is if this operation is a boarding stable or racetrack. Report the number of horses and ponies not owned which were sold in 2017 and cash sales.

Item 4 – Mules, Burros, & Donkeys

Report the inventory of all mules, burros, and donkeys on the operation on December 31, 2017 REGARDLESS OF OWNERSHIP. Report the total number of mules, burros, and donkeys sold during 2017 and cash sales.

Item 5 – Horse Breeding or Stud Fees, Semen & Other Equine Products

Report the cash sales of equine breeding service fees or stud fees including sales of semen or other equine products sold in 2017. Record income for services from horses, ponies, burros and donkeys in Section 27, Item 5j.

5.7.5 Section 14 – Sheep and Goats

Report the inventory of sheep and goats on the operation on December 31, 2017, regardless of ownership. Report the number of sheep and goats sold or moved from this operation during 2017, regardless of ownership, and their value of cash sales.

Include:

- Sheep and goats on public or industrial property under a grazing permit
- Sheep and goats on land used rent free by this operation
- Sheep and goats grown or fed on this operation for others on a custom or contract basis

Exclude:

- Sheep and goats grown or fed by someone else on a custom or contract basis

Total Number Sold or Removed in 2017

Record all livestock and livestock products that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation from January 1, 2017 through December 31, 2017, regardless of who owned them. “Removed” or “moved” is intended for livestock under a production contract that were never owned by the operation.

Include any livestock and livestock products that belonged to landlords, contractors, or any other person.

Exclude animal deaths. Deaths do not add a value of production, and they are not counted.

Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of sheep and goats from this operation. **Exclude** contract sales or removals and landlord's share of sales.

Item 2 – Sheep & Lambs

Report the total number of sheep and lambs on this operation or custom fed, regardless of ownership, on December 31, 2017. Report the number of sheep and lambs sold or moved from the operation during 2017 and the value of cash sales.

Item 3a – Angora Goats & Kids

Report the total number of Angora goats and kids on this operation, regardless of ownership, on December 31, 2017. Report the number of Angora goats and kids sold or moved from the operation during 2017 and cash sales. **Include** only Angora goats and kids raised for the production of mohair.

Item 3b – Milk Goats & Kids

Report the total number of milk goats and kids on this operation, regardless of ownership, on December 31, 2017. Report the number of milk goats and kids sold or moved from the operation during 2017 and the cash sales. **Include** only milk goats and kids raised for the production of milk.

Item 3c – Meat & Other Goats and Kids

Report the total number of meat goats and all other goats and kids on this operation not reported in Items 3a or 3b, regardless of ownership, on December 31, 2017. Report the number of meat goats and all other goats and kids sold or moved from the operation during 2017 and the value of cash sales. **Include** Angora goat breeds and milk goat breeds if they are being raised only for meat production.

Item 4a – Wool Shorn

Report the total pounds of wool shorn (whether sold or not), total pounds of wool sold or moved from the operation, and cash sales in 2017. Include pounds shorn whether or not the sheep are currently on the operation. Include the weight of tags shorn in pounds of wool shorn.

Item 4b – Mohair Clipped

Report the total pounds of mohair clipped (whether sold or not), total pounds of mohair sold or moved from the operation, and cash sales in 2017. Include pounds clipped whether or not the goats are currently on the operation.

Item 4c – Milk from Sheep & Goats

Report the cash sales of sheep and goat milk sold or moved from the operation in 2017. Exclude the value of sales of cheese and other processed milk products, to be reported in Section 27, Item 5j.

5.7.6 Section 15 – Aquaculture

Aquaculture is defined as the farming of fish, crustaceans, mollusks, and other aquaculture products. The aquaculture production reported in ARMS/Census requires some form of intervention in the rearing process and requires inputs such as seeding, stocking, feeding, protection from predators, etc. It also requires ownership of the stock being cultivated and harvesting that is conducted in a controlled environment by this operation. Fish, shellfish, and other aquaculture products that are caught or harvested from non-controlled waters or beds (public lakes, rivers, bays, or streams) are considered wild caught and **should not** be included as aquaculture production. Aquatic plants should be reported in Section 8, Nursery, Greenhouse, Floriculture, Sod, Mushrooms, Vegetable Seeds, and Propagative Materials. Algae is included here in Section 15, Aquaculture.

Examples of controlled environments include:

- Ocean-raised fish in pens, cages, etc.

- Leased, owned, controlled, or managed beds including exclusive use of public water area for shellfish
- State, Federal, Reservation, and privately owned fish hatcheries
- Tanks for the shedding of soft-shelled crabs

The area of the controlled environment of this operation should be included in Section 1, Item 1 or 2 and Item 4. The area of land and water area associated with these production areas should be included in Section 2, Item 4 and Item 5.

Review the aquaculture types listed at the bottom of the page in the report form before completing this section. Print the name of the aquaculture type and the corresponding code from the list at the bottom of the page. Report pounds **OR** number sold of all species sizes and/or eggs of one species type under the corresponding aquaculture type and code. Do not report pounds **AND** number of the same species. For example, if you raised trout and sold some as food size and some as fingerlings report all food size and fingerlings under Trout, code 0863, and report all the pounds **OR** number sold or moved from this operation in 2017.

Report the pounds or number sold or moved from this operation whether wholesale, retail, or on a contract basis or consignment. Include the aquaculture raised by Federal, State, Reservation, and privately owned hatcheries and sold or moved for stocking public waters or distributed for conservation purposes. Estimate the market value for the value of sales if distributed and not sold. Report the gross value of sales for each aquaculture type sold or moved from this operation. Exclude aquaculture grown for home consumption.

All other aquaculture and aquaculture products such as frogs, turtles, caviar, eels, alligators, sea urchins, snails, tadpoles, live rock, etc., should be reported as code 0869, (other aquaculture products).

Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of aquaculture from this operation. **Exclude** contract sales or removals and landlord's share of sales. Estimate the market value for cash sales, if necessary. Report the cash sales for each aquaculture type sold or moved from this operation. **Exclude** animal deaths. Deaths do not add a value of production, and they are not counted.

5.7.7 Section 16 – Poultry

Report inventories of all poultry including layers and all meat-type birds on this operation regardless of ownership on December 31, 2017. Poultry also includes exotic or game birds such as emus, ostriches, ducks, pheasants, quail, etc. Report the number sold or moved from this operation during 2017. **Include poultry raised for others on a contract basis when reporting the inventory and number sold or moved from this operation.**

If the number sold or moved from the operation is not known, an estimate should be given. Roasters, capons, and Cornish not used for breeding should be reported in Item 2a with broilers, fryers, and other meat-type chickens.

Poultry should be reported by the person who actually raised the birds even though he may not be the person who owns the poultry.

Exclude animal deaths. Deaths do not add a value of production, and they are not counted.

Exclude poultry owned by you but raised by someone else on another operation under contract.

Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of poultry from this operation. **Exclude** contract sales or removals and landlord's share of sales.

Item 2a – Broilers, Fryers, & Other Chickens Raised for Meat Production

Report the number of broilers, fryers, capons, roasters, and other meat-type chickens on this operation and the number owned by this operation on December 31, 2017, including those raised under contract. In column 3, report the number sold or moved from this operation during 2017, including those raised under contract. **Include** only birds raised for meat production. **Exclude** meat-type hatching layers which should be reported in Item 2c. For column 4, **exclude** the value of poultry produced under marketing and production contracts.

Item 2b – Table Egg Layers

Table egg layers are female chickens that can produce a marketable egg suitable for table use or infertile eggs for human consumption. Female chickens that are too young to produce a marketable egg are pullets. Report the number of table egg layers on this operation and the number owned by this operation on December 31, 2017, including those under contract. **Include** the number of table egg layers in molt. In column 3, report the table egg layers sold or moved from this operation during 2017, including those under contract. **Include** layers used to produce eggs for home consumption, and "yard chickens." **Exclude** layers from exotic breeds and game birds. For column 4, **exclude** the value of poultry produced under marketing and production contracts.

Item 2c – Hatching Layers for Meat Types

Layers are female chickens which can produce a marketable egg. Female chickens that are too young to produce a marketable egg are pullets. Hatching layers for meat types are layers of meat-type strains that produce fertile eggs that could supply a hatchery to produce meat type chicks. Report the number of hatching supply layers for broilers, roasters, and other meat types on this operation and the number owned by this operation on December 31, 2017, including those under contract. In column 3, report any of the hatching supply layers for meat types sold or moved from this operation during 2017, including those under contract. **Exclude** broilers or other chickens raised for meat production, which should be reported in Item 2a. For column 4, exclude the value of poultry produced under marketing and production contracts.

Item 2d – Hatching Layers for Table Eggs

Layers are female chickens which can produce a marketable egg. Female chickens which are too young to produce a marketable egg are pullets. Hatching layers for table eggs are layers that produce fertile eggs, which could supply a hatchery to produce table-egg chicks. Report the number of hatching supply layers for table-egg types on this operation and the number owned by this operation on December 31, 2017, including those under contract. In column 3, report any of the hatching supply layers for table eggs sold or moved from this operation during 2017, including those under contract. **Exclude** layers for table eggs or "market" eggs, which

should be reported in Item 2b. For column 4, exclude the value of poultry produced under marketing and production contracts.

Item 2e – Pullets for Laying Flock Replacement

Report the number of chicken pullets for laying flock replacement on this operation and the number owned by this operation on December 31, 2017, including those under contract. In column 3, report the total number sold or moved from this operation during 2017, including those under contract. **Include** the pullets intended for laying flocks of table-egg layers, or hatching supply flocks for meat-type, or hatching supply flocks for table-egg types. Pullets are female chickens which are too young to produce a marketable egg. Female chickens which are mature enough to produce a marketable egg are layers. For column 4, exclude the value of poultry produced under marketing and production contracts.

Item 2f – Chicken Eggs

Record the total number (in dozens) of all chicken eggs (including hatching eggs), sold on the open market or removed under contract in 2017, regardless of ownership.

Report the total cash sales received in 2017 of eggs sold from this operation in 2017. Do not report the value of eggs produced under marketing and production contracts.

Item 3a – Turkeys for Meat Production

Report the number of turkeys raised for immediate slaughter on this operation and the number owned by this operation on December 31, 2017, including those raised under contract. In column 3, report the number of turkeys for meat production sold or moved from this operation during 2017, including those raised under contract. **Exclude** turkey hens and toms kept for breeding, which should be reported in Item 3b. For column 4, exclude the value of poultry produced under marketing and production contracts.

Item 3b – Turkey Hens & Toms Kept for Breeding

Report the number of turkey hens and toms kept for breeding on this operation and the number owned by this operation on December 31, 2017, including those under contract. In column 3, report the number of turkey hens and toms kept for breeding sold or moved from this operation during 2017, including those under contract. For column 4, exclude the value of poultry produced under marketing and production contracts.

Item 3c – Turkey Brooders for Further Growout on another Farm

Report the number of turkey brooders on this operation and the number owned by this operation on December 31, 2017, which **were moved or will be moved** to another farm for further growout. In column 3, report the number of turkey brooders that have been moved to another farm for further growout during 2017. Turkeys that will be sold or moved from this operation directly to slaughter should be reported in Items 3a or 3b, not in Item 3c. For column 4, exclude the value of poultry produced under marketing and production contracts.

Item 4 – All Other Poultry

Report the inventory of all other poultry on this operation and the number owned by this operation on December 31, 2017, not accounted for in Items 2 and 3. Enter the name of other poultry species in the first column provided. Enter the corresponding code in the second column. Report the inventory and number sold or moved from this operation during 2017, including those raised under contract. Birds such as pheasants or chukars used for conservation, restoration, or hunting, such as on a game farm, should be reported only by the operation which raised the birds. Only the market value of the birds raised is included in the cash sales and the balance of hunting fees received that is attributed for guide services, lodging, or transportation is reported in Section 27, Item 5j. **Exclude** birds such as canaries. They are reported in Section 18, Item 2, "Other Livestock." For column 6, **exclude** the value of poultry produced under marketing and production contracts.

Item 5a – Poultry Hatched

Report all types of poultry hatched on this operation in 2017. The number hatched includes all poultry hatched on your operation and placed, sold, or destroyed. Specify the kinds of poultry hatched (chickens, turkeys, ducks, pheasants, emus, etc.). Do not include poultry hatched on this operation as sold in Items 2 through 4, unless raised past the newly hatched stage of development. For example, chicks hatched and moved from this operation the same day should be reported only in Item 5, not in Item 2.

Item 5b – Type of Poultry Hatched on this Operations Hatcheries

For the poultry hatched in Item 5a, check the type(s) of the poultry hatched. Check all that apply.

5.7.8 Section 17 – Colonies of Honey Bees

Item 2 – Colonies of Bees Owned

Report the inventory of honey bee colonies of bees owned, regardless of location on December 31, 2017 in column 1. Report the largest number of honey bee colonies owned for all purposes in 2017 in column 2, including the number of colonies from which no honey was harvested.

Exclude package bees; they are not considered as separate colonies. Package bees are reported in Section 18, Item 2. Report the largest number of honey producing colonies owned in 2017 in column 3.

Report the total pounds of honey collected in 2017, whether or not it was sold. Report the cash sales of honey in 2017, regardless of which year the honey was produced. Report sales of beeswax, pollen, royal jelly, etc. in Section 18, Item 3. Report sales of colonies in Section 18, Item 2.

Fees received from pollination services should be reported in Section 27, Item 5j as "all other farm related sources of income".

5.7.9 Section 18 – Other Livestock and Livestock Products

Report all other livestock, animal specialties, and their products not reported in previous sections. Report the inventory of alpacas, llamas, bison, deer in captivity, elk in captivity, live mink, live rabbits, lab animals, worms, etc., raised in captivity that were on this operation and owned by this operation on December 31, 2017. Report the total number sold from this operation during 2017, including those raised under contract. **Exclude** animals and products owned by the addressee but raised on another operation under contract.

Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2017 from cash sales of other livestock from this operation. **Exclude** contract sales or removals and landlord's share of sales.

Alpacas

Report the total and owned inventory of alpacas on this operation on December 31, 2017, including those raised under contract. Report the total number sold from this operation during 2017, including those raised under contract. Also record any cash sales.

Llamas

Report the total and owned inventory of llamas on this operation on December 31, 2017, including those raised under contract. Report the total number sold from this operation during 2017, including those raised under contract. Also record any cash sales.

Bison

Report the total and owned inventory of bison raised in captivity on this operation on December 31, 2017, including those raised under contract. Report the total number sold from this operation during 2017, including those raised under contract. Also record any cash sales.

Deer in Captivity

Report the total and owned inventory on this operation on December 31, 2017 including those raised under contract. Report the total number sold in 2017 of deer raised in captivity. Also record any cash sales.

If the deer were raised in captivity on an operation which is a game farm and a hunting fee was received for the deer, allocate the fee between the Cash Sales and Fee Received in Section 27. Only the market value of the deer is included in the Cash Sales column and the balance of the hunting fee received that is attributed for guide services, lodging, or transportation is reported in Section 27, Item 5j.

Deer "raised in captivity" are deer confined to the operation with fencing that require inputs such as feed, veterinary services, etc. The deer may have been purchased from other producers and transported and cared for within the confines of this operation. **Exclude** wild deer on the operation.

Elk in Captivity

Report the total and owned inventory on this operation on December 31, 2017 including those raised under contract. Report the total number sold in 2017 of elk raised in captivity. Also record any cash sales.

If the elk were on a game farm and a hunting fee was received for the elk, split the fee between the Cash Sales and Fee Received in Section 27. Only the market value of the elk is included in the Cash Sales column and the balance of the hunting fee received that is attributed for guide services, lodging, or transportation is reported in Section 27, Item 5j.

Elk "raised in captivity" are elk confined to the operation with fencing that require inputs such as feed, veterinary services, etc. The elk may have been purchased from other producers and transported and cared for within the confines of this operation. **Exclude** wild elk on the operation.

Live Mink

Report the total inventory, owned inventory, and number sold in 2017 of live mink raised on this operation. Also record any cash sales. Mink pelts should be reported only in Item 3.

Live Rabbits

Report the total inventory, owned inventory, and number sold in 2017 of live rabbits raised on this operation. Also record any cash sales. Rabbit pelts should be reported only in Item 3.

Package Bees

Report the total inventory, owned inventory, and number sold in 2017. Package bees are honey bees sold by the pound, with or without the queen. Inventory should be recorded as number of packages, not pounds sold. Nucleus colonies, "nucs", whole colonies sold, and individually sold queens should be counted under "Other Livestock" with code 4898.

Bees, Other than Package Bees

Report the total inventory, owned inventory, and number sold in 2017 of all bees other than honey bees. Inventory and sales should be recorded as the number of kits, hives, boxes or sets of bees sold. Solitary bees should not be counted individually, rather as the whole unit they are sold in. For example, bumble bees should be counted by the hive, not by the individual bee. Include leaf cutter bees. Wild caught mason, carpenter, or other bees should be excluded.

Other Livestock

Report the total inventory, owned inventory, and number sold of any other livestock and animals (worms, ladybugs, lab animals, snakes, package bees, canaries, etc.) raised in captivity for sale on this operation on December 31, 2017 and not previously reported on this report form. Print the name of the livestock in the specify area, the total and owned inventory on this operation on December 31, 2017, the total number sold from this operation during 2017, and any cash sales.

Item 3 – Other Livestock Products

Report the production of all other livestock and livestock products and value of sales including semen, embryos, manure sold, beeswax, bee pollen, feathers, worm castings, or other livestock or animal products produced and sold from this operation during 2017. **Exclude** value added products such as cheese, candles and lotions (reported in Section 27, Item 5J). Print the type of product and indicate the unit (tonnage, pounds, etc.) used in reporting the product.

5.7.10 Section 19 – Other Operations Growing/Feeding/Raising Livestock for this Operation

If this operation paid another operation a fee for the service of growing, feeding, or raising a commodity (owned by the selected operation), then answer this question 'YES' (the operation is acting as contractor).

The commodity remains an asset of the selected operation. (It is neither sold to the contractee operation, nor is ownership transferred to that operation.) Summary formulas add these items to expenses or assets when appropriate.

Keep in mind that any livestock, sales, or expenditure data recorded in this section are not recorded anywhere else on the questionnaire. This is referred to as the “in the fence” rule.

Examples of these types of contracts include:

- A cow/calf producer who has calves fed out through a feedlot.
- A dairy producer who pays another operation to raise the dairy producer's replacement heifers. (See special handling instructions for this type in Column 6 instructions below.)
- A hog farrowing operation that contracts with another operation to raise feeder pigs up to slaughter weight.

Example:

Respondent has a Production Contract with a Feedlot and a Marketing Contract with a Meatpacker

In this case the respondent is the owner of the cattle, and has a production contract with a feedlot (the respondent is the contractor). This contract should be reported in Section 19. This includes all expenses paid or reimbursed by the respondent (contractor) to the feedlot. These expenses should **only** be recorded in Section 19. They should not be recorded in Section 29 (**Section 29 is used to record expenses incurred on the respondent's operation**).

If the finished cattle are removed for slaughter from the feedlot, the receipts from the sale of the cattle should be recorded in Section 19, regardless of whether the sale is made by the respondent or by the feedlot acting on the operator's behalf. If the cattle are returned to the operation prior to sale, then the receipts from the sale should be recorded as a cash sale in Section 11 or as a marketing contract sale in Section 20.

If the feedlot was also a respondent, the feedlot would report a production contract in Section 21 and would report the expenses that were paid by the cattle owner (contractor) in Section 29,

Column 3. Any other expenses associated with the production contract and not paid by the cattle owner (contractor) would be reported in Section 29, Column 1.

Column 1 – Commodity Contracted Out

Record the type of commodity that was placed on another operation to be fed or raised. **Include** commodities that were placed on contractee operations prior to January 1 and were still under contract on January 1 of the reference year.

Column 2 – Livestock Code

Record the livestock code from the Respondent Booklet that relates to the commodity identified in Column 1.

Column 3 – Market Value of Commodities under Contract on January 1

Record the estimated market value of all of this operation's commodities under contract as of January 1.

Make sure this value is not recorded in Section 30 (Farm Assets).

Column 4 – Estimated Market Value of Commodities Placed

Using the market price at the time the commodity was placed, record the estimated value of the contracted commodities this operation placed on contractee operations during the reference year. If more than one arrangement existed, or if arrangements existed for more than one commodity, record each one on a separate line.

Column 5 – Production Expenses and Fees Paid to Contractees

Record the total amount this operation paid to contractees for labor fees, management fees, and reimbursements for expenses.

Make sure this value is not recorded in Section 29 (Expenses). Section 29 is used to record expenses incurred on the respondent's operation.

Column 6 – Gross Receipts from Contracts

Record the gross income to this operation from sales of commodities produced under this contract by other operations (quantity times market price) during the reference year.

This item will be zero for all replacement animals (such as dairy replacement heifers) that are removed back to the respondent's (contractor's) operation.

Make sure this value is not recorded anywhere else in Sections 11-18 (Livestock) or 20 (Marketing Contracts).

Column 7 – Market Value of Items Under Contract on December 31

Record the estimated market value of commodities still under contract as of December 31.

Make sure this value is not recorded in Section 30 (Farm Assets).

5.8 Sections 20 to 22 – Marketing/Production Contracts, Accts. Receivable

5.8.1 Overview

Importance of Obtaining Information on Marketing and Production Contracts

The contracting information collected on this survey is USDA's only source of data to separate production, income, and expenses among operators, contractors, landlords and others. To show an accurate picture of both the value of the farm sector's output and the financial condition of farming operations, we must fully account for other businesses or individuals who provide inputs used on the farm to produce agricultural commodities and who receive income from the sales of these products. For these reasons, collecting complete and accurate information on contracting is critical.

Previous ARMS surveys show widespread and growing use of production and marketing contracts. As contractees, producers sometimes use contracts because they can reduce price risks, and they sometimes use them to reduce input financing requirements. As contractors, processor-buyers often use contracts to obtain consistent supplies of commodities with specific desired qualities.

If the operator has multiple operations, only account for the income that belongs to the operation identified on the label. For operators with multiple operations, keep in mind the acres and livestock reported in the previous sections because they define the selected operation and answers should relate directly to that operation. Income from the other operations is accounted for in Section 37.

Terms – Contractor versus Contractee

The respondent is a **contractor** when another operation produces crops, livestock, or poultry under agreement for the respondent. If the respondent is a **contractor**, you should record that information in Section 19.

The respondent is a **contractee** when he/she produces and/or markets the commodity under a contractual agreement with another farm operation or entity such as a packer or processor. That information is recorded in Section 20 or 21, as Marketing Contracts and/or Production Contracts.

An operation may act as the **contractor** or **contractee** or both.

For hog and cattle operations, pay close attention to pricing terms and animal ownership (owned and non-owned animals in Sections 11-18) under contracts because both marketing and production contracts are common. Non-owned animals are a strong clue for the presence of a production contract.

Details of Marketing and Production Contracts

Contracts are formal agreements (written and verbal) that are reached prior to the harvest of a crop, or prior to the completion of a normal production cycle for livestock or poultry. Verbal agreements are contracts if they contain a commitment to provide inputs or commodities such that failure to meet the commitment will incur penalties.

For purposes of this survey, we only want to count contracts as those agreements reached before crop harvest or before completion of a livestock production phase. All sales made from inventory should be considered cash sales and reported in their respective commodity section (Sections 5-18). A marketing contract that has not been delivered should not be recorded as a marketing contract since technically, the operator still has the control of the commodity. When this occurs the commodity is an asset to the farm and should be recorded in Section 30 Item 6.

Marketing pools occur in some States where a group of producers will combine or “pool” their crop or livestock commodities for sale and delivery to a buyer to save on hauling expenses and/or marketing charges. If the pool agreement occurred after harvest or completion of the livestock production, this should be considered a cash sale and reported in its respective commodity section.

The ARMS recognizes two kinds of agricultural contracts:

- 1) **Marketing** contracts identify an outlet for a commodity and set pricing and delivery specifications. In a marketing contract, the operator (contractee) assumes most of the financial risk for inputs. Although marketing contracts are more common for crops, they are also used to market livestock and/or livestock products. Marketing contracts account for a growing share of fed cattle shipments from feedlots to meatpackers. Record custom-fed cattle, owned by someone other than the respondent, under production contracts.
- 2) **Production** contracts cover an entire production cycle for a commodity. They specify responsibilities for the provision of inputs and the payment of expenses by different parties to the contract, and they also specify rules for compensation, production practices, and commodity removal from the operation. In a production contract, the contractor assumes most of the price risk.

Contracts can take on many different forms. The accompanying table provides an overview of contract features, and lists how we want to distinguish between marketing contracts and production contracts for the purposes of this survey.

Marketing Contracts	Production Contracts
Contractor:	Contractor (<i>Integrator</i>):
<ul style="list-style-type: none"> • Arranges, prior to <i>completion</i> of a production cycle, to acquire a specified commodity at the end of the cycle. • Commits to take a quantity and agrees on a price, a pricing arrangement, or an agreement to sell on behalf of the contractee. • Does not take ownership of the commodity until it is delivered. • Makes few or no production decisions but may require specific inputs (variety of seed, etc.) to be used. 	<ul style="list-style-type: none"> • Arranges, prior to <i>beginning</i> a production cycle, to have a specified commodity produced. • Commits to a fee or fee arrangement to be paid to the contractee. • Usually owns the commodity during production. • Makes many production decisions.
Contractee (<i>Operator</i>):	Contractee (<i>Operator</i>):
<ul style="list-style-type: none"> • Obtains a buyer and a marketing arrangement for commodities before completion of a production cycle. • Supplies and finances all or most of the inputs used in production. • Owns the commodity while it is being produced. • Makes all or most production decisions. • Often bears all production risks, and contract frequently limits some price risks. • Receives the major share of the value of production. 	<ul style="list-style-type: none"> • Provides labor and some management services used in production, as well as fixed inputs (land, buildings, etc.), for a fee. • Supplies only some inputs used in production. • Usually does not own the commodity. • Makes only a few production decisions. • Often bears no price risks, and contract may limit production risks or reward efficiency. • Receives a fee that is usually only a small share of value of production.

Marketing Contracts:

For the purpose of this survey, a marketing contract for a commodity is recorded when the following two events occur:

- A verbal or written agreement to market the commodity is reached **before completion** of a normal production cycle (prior to harvest for crops, prior to removal from the operation for livestock). The agreement will include a price, an arrangement for determining price, or (in the case of marketing pools or some operating cooperatives) a commitment by the contractor to negotiate for a price on the contractee's behalf.
- Delivery of the commodity has taken place so that the operator does not have control of the commodity. "Delivered" includes commodities for which partial payment was made even if not physically delivered by December 31.

Characteristics of marketing contracts:

- Attribute-related price terms are often expressed as deviations from a base price tied to overall market conditions (incentives) and often set prices according or require delivery of commodities with certain measurable qualities. Examples include high oil corn, low linoleic soybeans, or organic apples.
- Prices often vary with the attributes of the commodity produced, as in grade and yield contracts for cattle or oil content for high-oil corn contracts that reward the contractee for higher oil content.

Marketing contracts may include:

- forward sales of livestock or a growing crop (or a crop to be grown). The contract identifies a window, or a specific date, for delivery, and it will set a price or specify how price will be determined.
- agreements made with processors to deliver commodities with certain measurable qualities
- agreements to set prices according to realization of the qualities. Examples include high oil corn, low linoleic soybeans, or organic apples
- milk contracts to market milk for the coming year through a co-op with prices determined later through a pricing formula that is applied 30 days after delivery of the milk. (Perishable products are usually priced after delivery.)
- a marketing pool. Farmers may agree to pool their crop and sell along with other producers through a cooperative or other pooling firm. The final price received is determined by the net pool receipts for the quantity sold (by selling a larger amount the pool may get a better price). Farmers may have to wait a year or more to receive final payment and decisions related to selling are made by the pool manager. Pooling is common in rice and cotton marketing.

Marketing contracts are typical on farms that:

- grow citrus fruits, other fruits, or nuts
- grow ornamentals or horticultural crops
- produce fresh vegetables
- grow potatoes
- grow sugarbeets, sugarcane, peanuts, dry peas or dry beans
- produce fluid milk
- sell fed cattle directly to slaughter or meatpackers

Production Contracts:

Production contracts are used for livestock, poultry and crop production. Under poultry or livestock production contracts, the farm/ranch operator (for example, a feedlot or broiler grower) houses and feeds the poultry or livestock until they reach a specified age or weight. The contractor usually provides many production inputs and reimburses the contractee for input expenses incurred while the commodity is on the contractee's operation. For example, in broiler contracts, the contractor normally provides chicks, feed, chemicals, transportation, and technical assistance. The contractor may also reimburse the contractee for LP gas used, bedding, etc.

Under crop production contracts the contractor often supplies inputs such as seeds or plants, fertilizer, chemicals, transportation and technical assistance. Examples include processed green peas, sweet corn, and snap beans; seed corn; vegetable seeds; popcorn; and beets.

Characteristics of Production Contracts:

The contractee and contractor reach agreement **before production begins**, and the contract provides considerable detail on specifics such as fees, responsibility for input provision, and product ownership. Contractees may provide labor, farm management services, utilities, housing, and equipment. Contractees usually receive fees for their services that are considerably less than the full market value of the commodity and are reimbursed for covered expenses.

Strong clues to the presence of a production contract (even if not reported) is non-owned livestock that are recorded in Sections 11-18, and little or no livestock sales dollars reported. Contract fees may be reported as custom work income. The operator may also report livestock or poultry facilities and/or livestock production expenses, with few or no livestock owned. The non-owned animals are almost certainly being produced under contract.

Production contracts are typical on farms that:

- have broiler houses or other poultry and/or egg producing facilities
- have hog nursery or confinement feed arrangements
- provide 'custom-feeding' services for cattle
- produce vegetables for processing
- produce seed crops

5.8.1.1 Special Topics

Feedlot Operations:

Cattle in feedlots may be owned by the feedlot operator, or they may be custom-fed by the feedlot for an owner, under a production contract between the feedlot (the contractee) and the owner (the contractor). Feedlot respondents should record production contracts in Section 21 for the "custom fed" cattle that they feed under production contracts. Contractee fees should include only overhead (farm management services, utilities, housing, and equipment), labor, and margin on pass through input items. Expenses paid or reimbursed by the owner (contractor) to the feedlot should be reported in Section 29 in the "contractor" column. Fed cattle are also often sold to meatpackers under marketing contracts. Here are the specifics for recording transactions:

- Respondents who own cattle that are custom fed at a feedlot, returned to the respondent, then sold to a packer through a marketing contract should record the Marketing Contract in Section 20, and should record the Production Contract with a feedlot in Section 19 (in their capacity as a contractor).
- Respondents who own cattle that are custom fed at a feedlot, then sold to a packer directly from the feedlot through a marketing contract should record the sale in Section 19, Column 6. They should also record the rest of the production contract with a feedlot in Section 19 (in their capacity as a contractor).
- Feedlot respondents should only record marketing contract sales in Section 20 for those cattle that the feedlot owns, not for custom fed cattle owned by another entity. One should be skeptical of a respondent that has non-owned cattle on the operation and wants to record a large value for custom work performed. This usually indicates that a production contract should be completed. Do not confront the operator but collect information as instructed by the office and take good notes.
- If a feedlot grows any crop that was fed to non-owned livestock as part of a production contract with the livestock owner, do not record the production as used on the operation in Sections 5-10. This production should be recorded as a cash sale to the livestock owner and the same value for the crop sold should be recorded as a contractor expense in Section 29, Item 6. Verify that the production contract fees do not include payments to the feedlot for feed costs.

Livestock on Shares:

The production of livestock, primarily cattle, "on shares" is common in Montana, North and South Dakota, Nebraska, and other states. For example, an individual who owns beef cows places them on someone else's land. The land operator cares for the cows and calf crop. The cattle owner and land operator share the calf crop in a 50-50, 60-40, 70-30, or other agreed to arrangement. Instructions and a detailed example are provided in Section 5.8.3.1.

Contractee is Part of another Business:

An operation such as an egg hatchery may be owned by the business it contracts with. In this case, unit fees/prices and total receipts will not be available since no market transaction takes place. In most cases the operation will have recorded a "book value" for the commodity it produced. Use the book value if available, to record unit price/fee and total receipts for Section 21.

Reimbursement for Expenses in Production Contracts:

Contractees in production contracts sometimes purchase some variable inputs, and reimbursement for their expenses is added to the amount paid for contractee services. Settlement sheets or other contract documents usually break out reimbursed expenses. Since we want to collect data on reimbursed expenses separately, they should be included in Section 29, Column 3 under the appropriate item.

Futures Contracts Obtained for the Purpose of Hedging:

Such contracts should not be reported as marketing contracts. Hedging occurs when the farmer takes opposite positions in the futures and cash markets. It allows farm operators to now fix the price of products they intend to sell later. For example, farmers who are growing a commodity for sale are said to be "long" in the cash market. The appropriate hedge is to sell futures. Then, when the farmer sells his commodity, he buys back his futures contract, preserving a price. This type of transaction should be recorded in two places. The actual sale of the commodity should be recorded in Sections 5-10, under the appropriate sales commodity. The net profit or loss from hedging should be recorded in Section 27, Item 5j as "all other farm related sources of income".

Dairy Futures Contracts:

It is easy to confuse milk marketing contracts with a futures contract as described above. An indication of futures hedges is when more than two marketing contracts exist for milk production. (A producer almost never sells to more than two milk buyers.) Futures contracts are NOT marketing contracts. They should be recorded like the crop hedges mentioned above. The sale of the commodity (milk) should be recorded as a marketing contract in Section 20 or a cash sale in Section 11. Any profit or loss from these futures contracts are recorded in Section 27, Item 5j as "all other farm related sources of income".

Grain Delivered With High Moisture:

There may be seasons, where a number of operators will deliver grains that exceed the moisture standard for that commodity. The amount operations are paid are affected by two

different methods: Shrink and Dock (an additional fee for drying). They are handled differently when it comes to prices/amount received as well as marketing charges.

Shrink:

Some elevators apply a percentage reduction to gross weight delivered. This is essentially adjusting the load of the commodity down to what it would weigh at standard moisture. For example, Joe Farmer brought in a semi-load of corn with a weight of 33,000 pounds, at 17 percent moisture. The elevator would “shrink” the weight and Joe Farmer would be paid on 32,340 pounds of corn at 15 percent moisture. Shrink is NOT a marketing charge. For marketing contracts, record the shrunk bushels (standard moisture) as delivered and the price per delivered bushel. This should be consistent with other NASS surveys.

Dock (additional fee for drying):

If an elevator charges a fee per bushel for drying, it is a marketing charge and is known as a “dock”. Record the total amount docked (or paid for the extra drying) as a marketing charge and make sure that price per bushel and total amount received exclude the marketing charges as instructed on the questionnaire.

Inferior Quality Grain Delivered:

If the operator gets a reduction in pay for inferior quality grain being delivered, it is NOT a marketing charge. Inferior grain contains things like mold, weevils, foreign matter, etc. The grain can still be marketed despite being inferior quality unlike if the grain had too high of moisture content. Record bushels delivered and the delivered price.

5.8.2 Section 20 – Marketing Contracts

Item 1 – Presence of Marketing Contracts

If the operator had any marketing contracts (as defined above), check “Yes” and continue. **Exclude** CSA sales because contract sales are for one specific crop guaranteeing a price or pricing mechanism at the time of delivery. CSA sales are considered a cash sale of multiple products.

Item 2 – Marketing Contracts

Include contracts made in prior years but delivered in the reference year. Make sure the contract meets the definition of a contract above. “Delivery” includes commodities for which partial payment was made even if not physically delivered by December 31.

Exclude arrangements where a price formula or price was set prior to the completion of a normal production cycle but delivery has NOT occurred.

Column 1 – Commodity

Show the respondent the list of Crop and/or Livestock Codes in the Respondent Booklet. Record each commodity for which the operation delivered a set quantity marketing contract in the reference year.

Column 2 – Commodity Code

Record the commodity code that relates to the commodity identified in Column 1.

Column 3 – Quantity Delivered

Record the total amount of the commodity delivered under the contract. Do not include the landlord's share of production even if it was delivered along with the operation's share.

Column 4 – Unit Code

Record the code that represents the commodity unit (specified in the contract), such as pounds, tons, bushels, head, etc. If a unit other than those indicated on the questionnaire is reported, make good notes. **Be careful with the units** because many analysis' issues later are caused by conflicts between data here and in the previous crop section.

Column 5 – Price per Unit

Record the final price, net of marketing charges, in dollars and cents (to the nearest cent [. ____]) per unit, that the operation has or will receive for all of the production delivered under the contract. For commodities that receive payments monthly such as milk, the final price will be an **average** price calculated from the quantity and price received for each month covered by the contract. **Final price is not the last month's price received for the year (e.g. December).** The respondent may have to estimate this price.

Column 6 divided by Column 3 will equal Column 5 **ONLY** when the operation was paid in full during the reference year for the commodity delivered under the contract. Use caution if you calculate final price by dividing Column 6 by Column 3. Make sure the operation received full payment during the calendar year for the contact.

Be sure the unit for the price reported agrees with the unit for the quantity reported. Cotton is an example. A common mistake is to record cotton sales in bales, but price as a price per pound. Consider an example where a single bale was contracted at 65 cents per pound. If you recorded "1" in Column 3, Code 7 (for bales) in Column 4 and .65 in Column 5, the gross income to the operation would show up as 65 cents. Assuming a standard bale weight of 480 pounds, you came up short by \$311.35 (the price per BALE is $480 \times .65 = \$312$)!

Column 6 – Total Amount Received

Since total payments are not always received in the calendar year of production, you always have to ask this question in order to complete this Column correctly. Record the total amount the operation **received during the calendar year** for sales under the marketing contract.

For some commodities, this is always less than the quantity delivered times the per unit price, because price is not known until the commodity is fully marketed by the agent the following year. Sometimes the producer is not paid at all until after the first of the next year. If the operation did not receive any payment under the contract in the reference year, enter a dash and make a note.

Be sure any marketing charges related to sales under the contract are subtracted out and recorded in Section 29, Item 33. If the operation did not receive all of the payments owed to

them under the contract in 2017 (Column 6 is less than Column 3 times Column 5), the remaining amount owed must be accounted for as an asset in accounts receivable in Section 22, Item 1b.

The following two tables can be used as a guide to help record Marketing Contracts, Cash Sales, Assets, Accounts Receivables, and Deferred Payments. This table is courtesy of the Northern Plains Regional Field Office.

2016 Crop:

Situation	Record As:
In Storage	
At End of 2016	ASSET (January 1, 2017)
Sold 2016 Stored Crop on Open Market during 2017	CASH SALES
Sold for Cash	
Delivered in 2016 & NO Pmt Rcvd in 2016	Acct Rec / Def Pmts (January 1, 2017)
Set Up as Marketing Contract	
Delivered in 2016 & NO Pmt Rcvd in 2016	Acct Rec / Def Pmts (January 1, 2017)
For Delivery in 2017 and Pmt in 2017	ASSET (January 1, 2017) AND In Marketing Contract Table

2017 Crop:

Situation	Record As:
Sold for Cash	
Delivered in 2017 & Pmt Rcvd in 2017	CASH SALES
Delivered in 2017 but NO Pmt Rcvd in 2017	Acct Rec / Def Pmts (Dec. 31, 2017)
Set Up as Marketing Contract	
Delivered in 2017 & Pmt Rcvd in 2017	Marketing Contract Table
Delivered in 2017 but NO Pmt Rcvd in 2017	Column 6 Blank in Marketing Contract Table AND Acct/Rec / Def Pmts Positive (December 31, 2017)
NOT Delivered in 2017 but Pmt Rcvd in 2017	Marketing Contract Table
NOT Delivered in 2017 & NO Pmt Rcvd in 2017	ASSET (December 31, 2017)
For Delivery in 2018 & Pmt in 2018	ASSET (December 31, 2017)
In Storage	
At End of 2017	ASSET (December 31, 2017)

5.8.3 Section 21 – Production Contracts

Item 1 – Presence of Production Contracts

If the operator had any production contracts (as defined above), check “Yes” and continue.

Item 2 – Production Contracts

Column 1 – Commodity

Show the respondent the list of commodity codes in the Respondent Booklet. Record each commodity the operation produced under a production contract in the reference year.

Column 2 – Commodity Code

Record the commodity code that relates to the commodity identified in Column 1.

Column 3 – Quantity Removed

Record the total amount of the commodity removed from the operation under the contract. Do not include the landlord's share of production even if it was removed along with the operation's share.

Column 4 – Unit Code

Record the code that represents the commodity unit (specified in the contract), such as pounds, tons, bushels, head, etc. If a unit other than those indicated on the questionnaire is reported, make good notes.

Column 5 – Fee per Unit

Record the final fee in dollars and cents per unit (to the nearest cent [. ____]) that the operation will receive for all of the production removed under the contract. DO NOT use Columns 6 and 3 to estimate a final fee. Column 6 divided by Column 3 will equal Column 5 ONLY when the operation was paid in full during the reference year for the commodity removed under the contract. The fee should not include reimbursed expenses like utilities, feed, etc. These reimbursed expenses should be recorded as contractor expenses in Section I.

Be sure the reported fee per unit agrees with the unit for the quantity reported. Broilers are an example where the units for fees and quantities often do not agree. A common mistake is to record broiler removals in number of head, but fees on a per-pound basis. Consider an example where one broiler was contracted at a fee of 4.6 cents per pound. If you recorded “1” in Column 3, Code 11 (for head) in Column 4 and 4 cents in Column 5, the gross income to the operation would show up as 4 cents. Assuming a standard broiler weight of 5 pounds, you came up short by 16 cents (the fee per head is $5 \times .04 = \$0.20$)!

Any bonus received should be included in the Total Fee received column. The bonus should then be divided out per unit and included in the price per unit. For example, if a \$1,000 bonus was paid to the operator and 100,000 hogs were removed, then an extra \$1,000 should be

included in the total fee received and an additional \$0.01 per unit should be added to the final fee received per unit.

Column 6 – Total Fees Received

Since total payments are not always received in the calendar year of production, you always have to ask this question in order to complete this column correctly. Record the total amount the operation **received during the calendar year** for removals under the production contract excluding marketing charges. This can be less than the quantity removed under contract times the per unit fee. Sometimes the producer is not paid at all until after the first of the next year. If the operation did not receive any payment under the contract in the reference year, enter a dash and make a note. If the operation did not receive all of the payments owed to them under the contract in the reference year (Column 6 is less than Column 3 times Column 5), the remaining amount owed must be accounted for as an asset in accounts receivable in Section 22, Item 1b.

5.8.3.1 Specialty Operations: Examples of Livestock on Shares

The parties involved with livestock on shares usually do not consider these arrangements to be contracts. The following approach simplifies collecting, editing, coding, and validating livestock on share arrangements, while maintaining the integrity of the cost and returns data.

The following is an example of a 'common' livestock on shares arrangement. After the scenario are examples of how the data should be coded, from both the cattle owner and the land operator perspective.

Livestock on Shares Example:

A cattle owner has a deal with a land operator to raise calves on shares. The cattle owner supplies 100 head of cows. The land operator takes care of the cows and provides all necessary inputs. They agree the land operator will receive 70% of the calf crop and the owner of the cattle will receive 30%. For purposes of this example, there are 100 calves produced, therefore, the land owner's share is 70 calves and the cattle owner's share is 30 calves. The land operator decides to keep 5 of his calves and sells the rest for \$500 each. The cattle owner sells all of his calves and averages \$500 / head.

Coding for the Land Operator:

If the land operator was sampled (*the most common situation*), the information would be recorded as follows:

Section 11 – Cattle and Calves

Record the 5 head of calves he kept in Item 2c in both columns (since they are owned by the operation). Record the 65 calves that were sold by the landowner in Item 3a. If the original cows were still on his place at the end of the year, record 100 head in Item 2a, column 1 but not column 2.

Account for the cash sale of the calves in Item 6a as \$32,500 (65 head * \$500 / head).

Section 29 – Operating & Capital Expenditures

Account for the expenses paid by the land operator for caring for all the cows and raising all the calves.

Section 30 – Farm Assets

Account for the value of the 5 calves the land operator kept in Item 6c. Do not account for the value of the cows because he does not own them.

Coding for the Cattle Owner:

If the cattle owner was sampled, the information would be recorded as follows:

Section 11 – Cattle and Calves

None of the 'livestock on shares' should be included in this section unless the cows are back on this operation on December 31. The cows will be accounted for on the land operators' questionnaire.

Account for the cash sale of the calves in Item 6a as \$15,000 (30 head * \$500 / head).

Section 29 – Operating & Capital Expenditures

The cattle owner did not have any expenses for the cattle on shares in this example. Any expenses the operator had would be recorded if they occurred. For example, if special bulls were used for breeding, any breeding or semen expenses would be recorded.

Section 30 – Farm Assets

Account for the asset value of the original 100 cows in Item 6b.

5.8.4 Section 22 – Accounts Receivable & Deferred Payments

Item 1 – Accounts Receivable & Deferred Payments

Item 1 accounts for deferred payments, records money received in the reference year for sales that occurred in earlier years, and tracks the accounts receivable – balances owed to the operation at the beginning and end of the reference year. Farm operations frequently do not receive cash payment for services provided or commodities sold in the same calendar year in which the sale occurred. Such deferrals are often requested by operators to smooth out cash income as an income tax management strategy. Sometimes deferrals are necessary because price is not final until the next calendar year. In order to determine the income that was actually earned in a given year (accrual income), adjustments must be made for the timing of the receipt of payments.

Three pieces of information are needed to accurately compute net farm income, net cash income, the income statement and balance sheet of the farm operation:

- 1) the amount the operation was owed at the beginning of the year for crops or livestock sold and delivered before January 1
- 2) how much of that amount was received during the year
- 3) the amount the operation was owed for crops or livestock produced in the reference year or earlier for which full payment was not received in the reference year

Exclude: Marketing Charges and money received as reimbursement for expenses.

Item 1a – Payment Owed at Beginning of Year (BOY)

Record the amount owed to this operation at the beginning of the reference year for commodities sold and delivered/removed on either cash markets or under a marketing/production contract in any year prior to the reference year.

Item 1a(i) – Money Received in the reference year for Prior Production

Record the dollar amount received during the reference year from the amount recorded in Item 1a above. Verify that these deferred receipts are NOT included in Marketing Contracts (Section 20), Production Contracts (Section 21), or Cash Sales (Sections 5-18) recorded on this year's questionnaire. This amount should be equal to or less than Item 1a.

Item 1b – Payment Owed at End of Year (EOY)

Record the amount owed to this operation at the end of the reference year for commodities sold and delivered / removed on either cash markets or under a marketing / production contract in the reference year or any prior year.

This amount should include both:

- Any amounts that the operation was owed for crops or livestock sold and delivered in the reference year for which the operation has not received payment. This can be computed for each commodity under marketing (Section 20) and production (Section 21) contracts by going back to those items, multiplying column 3 by column 5 and then subtracting column 6. There is no way to compute this for commodities sold in cash or open market sales.
- Any amount the operation is owed for crops or livestock sold and delivered in previous years where the payment was not received in the current year. This is simply the difference between Items 1a and 1a(i).

5.9 Sections 23 to 26 – Organic Ag, Practices, Food Marketing Practices, Fertilizer/Chemicals/Soil Conditioners Applied

5.9.1 Section 23 – Organic Agriculture

Organic production is commodity production that is managed in accordance with the Organic Foods Production Act (OFPA) of 1990. The USDA National Organic Program (NOP) develops, implements, and administers national production, handling, and labeling standards for organic production.

Operations engaged in the production of organic food must produce commodities without the use of synthetic fertilizers, herbicides, pesticides, genetic engineering (biotechnology), growth hormones, and irradiation. These practices are usually required to be followed for a period of three years before the operation can be certified as an organic operation.

Operations or portions of operations that produce or handle agricultural products that are intended to be sold, labeled, or represented as "100 percent organic," "USDA organic," or "made with organic ingredients" or food group(s) must be certified by an accredited certifying agent. Producers and handling (processing) operations that sell less than \$5,000 a year in organic agricultural products do not have to be certified. Although exempt from certification, these producers and handlers must abide by the national standards for organic products and may label their products as "organic."

Item 2 – Type of Production

Check all that apply to describe the operation as it relates to organic agricultural production.

A USDA NOP certified operation has followed the organic production practices outlined above for a period of at least three years and has been certified by a state or private organic certification agency. Write the name of the certifying agency or organization in the space provided.

A USDA NOP exempt operation follows the organic production practices outlined above for a period of at least three years, but sells less than \$5,000 in commodity sales per year.

Transitioning acres are land that is transitioning from conventional production to USDA's NOP production practices outlined above. The acres have not met the three year time requirement for organic production.

There are operations which follow organic production practices but do not consider themselves USDA NOP certified or exempt. Operations such as "natural growers" or "pledge producers" may consider themselves in this classification.

Item 3 – Value of Production

Report the value of USDA NOP certified or exempt organically produced commodities sold from this operation in 2017. Producers that also grow and process the organic crops and sell the processed products should report only the "farm" value of the crop used to make the processed product. Do not include commodities sold from transitioning acres or commodities which are not USDA NOP certified.

5.9.2 Section 24 – Practices

Item 1a – Irrigation Water Supplied by Bureau of Reclamation

The Bureau of Reclamation is an agency under the U.S. Department of the Interior that oversees water resource management, specifically as it applies to the oversight and/or operation of numerous water diversion, delivery, and storage projects and facilities.

Item 1b – Rotational Grazing

Rotational grazing is the practice of subdividing pasture into smaller sections and grazing different sections at different times.

Item 1c – Alley Cropping, Silvopasture, etc.

Alley cropping is defined as planting crops in strips in the alleys formed between rows of trees or shrubs, and silvopasturing is defined as grazing livestock on forage crops or pastures within an actively managed tree or shrub crop area. Alley cropping and silvopasture are specific practices of agroforestry; the management of trees in combination with other crops or livestock. The trees in an agroforestry system are used for fruit or nut crops or will otherwise be harvested at some point in the future as a short rotation woody crop or for timber.

Item 1d – Harvesting Biomass for Renewable Energy

Biomass is a renewable energy source and can include such crops as switchgrass, hemp, corn, poplar, willow, sorghum, sugarcane, and a variety of trees harvested for the purpose of making ethanol. Ethanol is then blended with gasoline.

Item 1e – On-farm Packing Facility

On-farm packing facilities include equipment used to package bags, crates, hampers, baskets, cartons, etc. for the handling, transportation, or marketing of vegetables, potatoes, fruits, nuts, berries or other crops.

Item 1f – Raise or Sell Veal Calves

Veal calves are primarily male calves of dairy breeds. They are usually fed milk and milk by-products such as whey. Veal calves are slaughtered when only a few days old or up to around 30 weeks old.

Item 1g – Barn Built Prior to 1960

Include any barn, used or not, on your operation that was built prior to 1960.

Item 2 – Processed or Value-Added Products

This applies to value added products that originated from crop or livestock commodities produced on the operation. Through further manufacture or processing, these items are transformed into products worth more than the originally produced commodity. Check “Yes” if these items were produced and SOLD in 2017.

Item 2a – Value of Sales

Report the gross value of the sales of processed or value added products received in 2017.

Item 2b – Products Sold

Enter which processed or value added products were sold from this operation in 2017.

Item 3 – Internet Access

If this operation had access to the internet, check which service(s) were used.

5.9.3 Section 25 – Food Marketing Practices

Complete this section if this operation grew or raised any crops, livestock, poultry, or their products (include processed or value-added products reported in Section 24, Item 2) that were sold directly to:

- Consumers (farmers markets, farm stores or farm stands, CSA (Community Supported Agriculture), online marketplaces, pick-your-own, etc.),
- Retail Markets (food cooperatives, supermarkets and other grocery stores, restaurants, caterers, etc.),
- Institutions (K-12 schools, universities, hospitals, workplace cafeterias, foodbanks, etc.),
- Intermediate Markets (distributors and other businesses marketing locally- and/or regionally-branded products, food hubs, food processors, artisanal food makers, etc.).

Include all edible agricultural products defined below as “food” that were produced by this operation. **Exclude** nonfood items such as craft items, hay, cut flowers, nursery products, etc.

Item 2a – Direct Sales to Consumers

Report the gross value of sales of the crops, livestock, poultry, or their products from this operation that were sold directly to consumers and used for food. Specify the item(s) sold in the area provided.

Item 2b – Direct Sales to Retail Markets, Institutions, or Intermediate Markets

Report the gross value of sales the crops, livestock, poultry, or their products from this operation that were sold to retail markets, supermarkets, schools, institutions, etc. and used for food. Specify the item(s) sold in the area provided.

5.9.4 Section 26 – Fertilizers, Chemicals, and Soil Conditioners Applied

Report the number of acres that were treated with fertilizers, manure, herbicides, insecticides, fungicides, nematicides, other pesticides, growth regulators, or other chemicals used on this operation during 2017 (rock phosphate, lime, and gypsum are included as fertilizers). Also report acres treated with chemicals to control growth, thin fruit, ripen, or defoliate. For all acres treated with chemicals, it will be necessary to report all acres treated regardless of who provided the materials, i.e., farm or ranch operator, landlord, custom sprayers, cooperatives, or

contractors. If more than one application of fertilizer or chemicals was applied, report the acreage only once. Report in whole acres. Exclude the acreage reported in section 2, item 4, "All other land," to which fertilizer and chemicals were applied. Examples include farmsteads, livestock facilities, ditches, fence rows, road banks, etc., to which fertilizer or chemicals were applied.

Item 2a – Fertilizer or Soil Conditions Applied to Cropland

Acres of cropland to which commercial fertilizer or soil conditions were applied in 2017 - Report the acres of all cropland on this operation to which commercial fertilizer or soil conditioners were applied in 2017. Cropland used solely for pasture should be excluded.

Item 2b – Fertilizer or Soil Conditions Applied to Pastureland

Acres of pastureland to which commercial fertilizer or soil conditions were applied in 2017 - Report the total number of acres on this operation of pastureland and rangeland, including cropland pastured and woodland pasture, to which commercial fertilizer or soil conditions were applied in 2017.

Item 3 – Manure Applied

Acres of cropland and pastureland to which animal manure was applied in 2017 - Report the acres to which animal manure was applied in 2017. Animal manure includes beef, dairy, swine, horse, poultry, and exotic animals raised in captivity. Poultry manure includes all egg and meat birds, turkeys, and other fowl raised in captivity. Manure includes solid or liquid form. **Exclude** municipal sludge.

Item 4 – Organic Fertilizer Applied

Acres of cropland and pastureland to which organic fertilizer was applied in 2017 – Report the acres on the operation to which organic fertilizer was applied in 2017. Organic fertilizers include non-mineral material such as manure, peat, chicken litter, compost, green manure, etc.

ACRES TO WHICH CHEMICALS WERE APPLIED ON THIS OPERATION

Report the acres treated with chemical sprays, dusts, granules, and other materials. The same acres can be reported in more than one item listed. If two or more applications of the same chemical were applied to the same acres, report the acres only once. If chemicals were applied to more than one crop raised on the same land, count the acres only once. Report all land treated, even if the crop was later abandoned.

Item 5a – Acres Treated for Insects

Report the acres treated with chemicals to control insects on crops including hay and pastureland. Exclude acres treated only with parasitic insects or acres to which mechanical methods only were used to control insects.

Item 5b – Acres Treated to Control Weeds, Grasses, or Brush

Report the acres treated with chemicals to control weeds, grasses, or brush. Include acres treated with both pre-emergence and post-emergence applications. Exclude area in ditches, fence rows, road banks, etc., that were treated.

Item 5c – Acres Treated to Control Nematodes

Report the acres treated to control nematodes.

Item 5d – Acres Treated to Control Diseases

Report acres treated to control diseases (blight, smut, rusts, etc.) in crops and orchards.

Item 6 – Acres Treated to Control Growth, Thin Fruit, Ripen, or Defoliate

Report the acres of crops and orchards treated to control growth, thin fruit, ripen, or defoliate.

5.10 Section 27 – Government Payments & Other Farm Related Income

A farm operation's gross income includes payments received from the production and sale of crop and livestock commodities, but it can also include payments received through government agricultural programs as well as payments from ancillary activities that are part of the farm business. Examples include custom work provided to other farmers; recreation and Agritourism activities on the farm; sales of forest products, farm machinery, or farm land; insurance payments; cooperative patronage dividends; or sales of goods processed on the farm from farm commodities. This section is intended to track that other farm-related income.

If the operator has multiple operations, only account for the income that belongs to the operation identified on the label. For operators with multiple operations, keep in mind the acres and livestock reported in previous sections for the selected operation. Income from the other operations is accounted for in Section 37.

5.10.1 Item 1: Commodity Credit Corporation (CCC) Loans

The Commodity Credit Corporation (CCC) was created in 1933 to help stabilize, support, and protect farm income and prices. These questions account for the operation's entire CCC loan transactions during the reference year, allowing us to get a complete accounting of the farm's income. If the operation received or repaid any CCC loans, check "Yes" and answer Items 1a and 1b. If the operation did NOT receive or repay any CCC loans, check "No" and skip to Item 2.

Farmers can pledge feed grains, corn, wheat, soybeans, cotton and rice as collateral to get a CCC non-recourse commodity loan. Record how much they received in Item 1a. The loans they get are based on a per unit support price (loan rate) established by law for their particular county and commodity.

Loans mature on demand but no later than the last day of the ninth calendar month following the month the loan was made. Any time before the final maturity date of the loan, the farmer may repay the loan amount plus any interest that has accrued. If the loan is not repaid by the final loan maturity date, the CCC takes title to the commodity as full payment of the loan and interest charges.

Farmers can reclaim title to their crops by paying back the loans along with any interest and storage charges. They usually do this when the market price is higher than the loan redemption price. The amount spent to repay the loan (minus any interest, storage, and service fees) is recorded in Item 1b. Interest is recorded in Section 29, Item 18b; storage and inspection charges are marketing charges recorded in Section 29, Item 33. When a farmer reclaims title to the commodity, he/she can then either sell it or store it for future use.

Loans not paid by the maturity date are considered forfeited. Farmers usually do this when the market price is less than the loan redemption price.

Farmers who have placed a crop under loan can transfer the loan to someone else. When they do this, they are no longer responsible for loan repayment. (This cannot be done in all areas of the country.) If the farmer did this, any money received above the face value of the loan (equity or premium payment) should be recorded later in Section 27 under, "all other farm related sources of income" Item 5j.

5.10.2 Item 2: Federal, State, or Local Farm Program Payments

If the respondent received any payments from Federal, State or Local Farm Programs (excluding CCC loan payments), then check "Yes", and ask Item 2a. It is not imperative that the enumerator fully understand the nuances of all program payments since the respondent should know the source of any payments received. Operators should have an IRS Form 1099 showing what Federal programs they received monies from. If he/she did not receive any of these payments, then check "No" and skip to Item 3.

Item 2a – LDPs & MLGs

Record the total amount received from Loan Deficiency Payments and realized from Marketing Loan Gains. Include any Graze-Out Program Payments received and any Commodity Certificate Exchange Gains.

Loan Deficiency Payments (LDPs)

Loan Deficiency Payments (LDPs) are payments made to producers who are eligible to obtain a marketing assistance loan on a loan commodity, but agree to forgo obtaining the loan for the commodity in return for Loan Deficiency Payments. Loan commodities include wheat, rice, corn, sorghum, barley, oats, upland cotton, soybeans, other oilseeds, dry peas, lentils, small chickpeas, graded wool, non-graded wool, mohair, and honey.

Non-graded wool in the form of unshorn pelts and hay and silage derived from a loan commodity are not eligible for marketing assistance loans. However, they may be eligible for loan deficiency payments.

Graze-Out payments are made to eligible producers who elect to use their acreage planted to barley, oats, triticale, or wheat for livestock grazing; and agree to forgo harvesting the commodity during the applicable crop year. Requested Graze-Out acreage is not eligible for any marketing assistance loans or LDPs for the crop; nor crop insurance indemnities for the same field and tract grazed; nor Noninsured Crop Disaster Assistance Program (NAP) for the crop. Producers must request Graze-Out payments on form CCC-633 by farm serial number by March 31 of the calendar year following the year the crop is normally harvested. The Graze-Out payment rate is the LDP rate in effect for the farm on the date the producer submits a complete program application form CCC-633 GRAZING in the FSA administrative county office for the farm.

Marketing Loan Gains (MLGs)

Commodity marketing assistance loans (MALs), with repayment provisions, are available for wheat, rice, corn, sorghum, barley, oats, upland cotton, soybeans, other oilseeds, small chickpeas, lentils, dry peas, wool, mohair and honey. Market loan repayment provisions are in effect when the alternative repayment rate, as determined by CCC, is less than the per-unit principal plus accrued interest, other charges, and in the case of upland cotton only, per-unit storage costs, for a given outstanding loan. Then, farmers are allowed to repay commodity loans at the repayment rate. Each day, other than weekends and holidays, CCC calculates and posts loan repayment rates, except for rice, upland cotton, other oilseeds, small chickpeas, lentils, dry peas, and peanuts, which are posted weekly. The portion of the principal that is waived when a loan is repaid is referred to as a marketing loan gain for the producer.

Commodity Certificate Exchange Gains

Commodity certificates are available to producers, beginning with the 2015 crop, to exchange collateral pledged to CCC for MALs. Commodity Certificates will be available for sale at USDA service centers to producers with outstanding nonrecourse MALs. Realized gains from the certificate exchange gains equal the amount by which the loan rate exceeds the repayment rate. Commodity certificate exchanges will not be available when the exchange rate exceeds the applicable loan rate. Payment limitations do not apply to commodity certificate exchanges.

Item 2b – Conservation Program Acres and Payments

Record the total number of acres the operation has enrolled in the following conservation programs. Record the total amount of payments received from participation in the following conservation programs. Include annual rental, stewardship, enhancement, cost share, and incentive payments.

Item 2b(i) - Conservation Reserve Program (CRP):

The CRP is a long term (10-15 year) cropland retirement program that provides incentives and assistance to farmers and ranchers for establishing valuable conservation practices that have a beneficial impact on resources both on and off the farm. CRP is administered by NRCS. It encourages farmers to voluntarily plant permanent covers of grass and trees on land that is subject to erosion, where vegetation can improve water quality or provide food and habitat for wildlife. The CRP is the Federal government's single largest environmental improvement program. **Include** CREP acres and amounts (program defined below).

Conservation Reserve Enhancement Program (CREP):

The Conservation Reserve Enhancement Program (CREP) is a voluntary land retirement program that helps agricultural producers protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water. CREP is administered by NRCS and other cooperating agencies. The program is a partnership among producers; Tribal, State, and Federal governments and, in some cases, private groups. CREP is an offshoot of the country's largest private-lands environmental improvement program - the Conservation Reserve Program (CRP).

Item 2b(ii) - Environmental Quality Incentive Program (EQIP):

The Environmental Quality Incentives Program (EQIP) offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land. EQIP is administered by NRCS. EQIP contracts provide incentive payments and cost-shares to implement conservation practices. The minimum contract term ends one year after the implementation of the last scheduled practices and a maximum term of ten years. Payments may not be received in every year that a contract is in force.

Record the total acres that were subject to conservation treatments under current contracts funded through the EQIP.

Include:

- Acreage of fields/tracts where practices are applied (such as reduced tillage, terraces, and grassed waterways). For example, if a 1 acre grassed waterway drains storm water from 10 adjacent acres, include 10 acres.
- Acreage of fields/tracts that are adjacent to field edge practices (such as filter strips, riparian buffers, or fences). For example, if a 1 acre filter strip captures nutrient runoff from a 20 acre field, include 20 acres. In another example, if fencing is installed to restrict access to 15 acres of sensitive habitat, or to establish a grazing boundary around 15 acres, include 15 acres.

The number of acres reported here may exceed total acres reported in Section 1, if conservation treatments involve land not operated by the producer.

Note: EQIP contracts do not always provide a payment in every year of current contracts.

Item 2b(iii) - Conservation Stewardship Program (CSP):

CSP (or CStP) is a voluntary program that provides financial and technical assistance to (1) reward good stewardship of agricultural resources and the environment and (2) promote further improvement (enhancement) of soil, water, air, energy, plant and animal life, and other conservation purposes on working agricultural lands. Both programs are administered by NRCS. Contracts can be 5-10 years in length. The Conservation Stewardship Program replaced the Conservation Security Program in 2008. **Include** Conservation Security Program acres and amounts (program defined below).

Conservation Security Program (CSP):

CSP is a voluntary program that provides financial and technical assistance to (1) reward good stewardship of agricultural resources and the environment and (2) promote further improvement (enhancement) of soil, water, air, energy, plant and animal life, and other conservation purposes on working agricultural lands. Both programs are administered by NRCS. Contracts can be 5-10 years in length.

Note: The Conservation Security Program stopped taking new contracts in 2008. Existing contracts are still in force and will be allowed to continue to maturity. Funding for the program is slowly ramping down. Because contracts can be for as long as 10 years, we will have some Conservation Security Program payments well into this decade.

Item 2b(iv) - All other U.S. Federal conservation programs:

Record the total number of acres the operation has enrolled in and the total amount of payments received from other U.S. conservation programs, including (but not limited to) the following:

Wetlands Reserve Program (WRP):

The Wetlands Reserve Program is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. WRP is administered by NRCS. USDA provides technical and financial support to help landowners with wetland restoration efforts. USDA can purchase long-term or permanent easements that prohibit agricultural production or other non-wetland uses. About 90 percent of WRP acres are enrolled under 30

year or permanent easements. The program goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program.

Item 2c – Disaster and program payments

Item 2c(i) - Agricultural Disaster Payments

Include the total amount of all market loss, disaster, or emergency assistance payments received from Federal programs. These programs include Emergency Assistance Livestock, Honeybees and Farm-Raised Fish Program (ELAP), Emergency Conservation Program (ECP), Emergency Forest Restoration Program (EFRP), Livestock Indemnity Program (LIP), Livestock Forage Disaster Program (LFP), Dairy Indemnity Payment Program (DIPP), Animal and Plant Health Inspection Service (APHIS) indemnity and compensation received for damages suffered due to avian influenza (bird flu), Noninsured Crop Disaster Assistance Program (NAP), the Supplemental Assistance Program (SURE), the Tree Assistance Program (TAP), Reimbursement Transportation Cost Payment Program (RTCP), Trade Adjustment Assistance for Farmers (TAAF), and emergency watershed and emergency general programs operated by the Natural Resources Conservation Program (NRCS).

Exclude Federal crop insurance indemnity and other insurance indemnity payments included under 5f. Exclude loans received for losses to crops, trees, livestock, farmland, and farm property under the USDA Emergency Loan Program.

Item 2c(ii) - Price Loss Coverage (PLC) Program:

Payments are issued when the effective price of a covered commodity is less than the respective reference price for that commodity. The payment is equal to 85 percent of the base acres of the covered commodity times the difference between the reference price and the effective price times the covered commodity's program payment yield.

Item 2c(iii) - Agricultural Risk Coverage (ARC) Program:

Following the 2014 Farm Bill, FSA offered producers a one-time option to sign up eligible base acreage to the Agricultural Risk Coverage (ARC) Program. This program has a payout when revenues fall below a reference value. One program used a reference value based on cash revenues measured at the County level (ARC-CO) and another used a reference value based on cash revenues at the Individual farm level (ARC-IC). Because over 99% of the sign-ups were for the ARC-CO program rather than ARC-IC program, there were too few observations of ARC-IC recipients to produce a reliable estimate, so the questionnaire now asks for payments received under any ARC program that producers participate in.

Item 2c(iv) - Margin Protection Program for Dairy (MPP – Dairy):

The Dairy Margin Protection Program replaces MILC. It became effective August 29, 2014. The national dairy production margin is the difference between the all-milk price and average feed costs. MPP-Dairy offers protection to dairy producers when the national dairy production margin falls below a certain dollar amount selected by the producer. Producers may purchase buy-up coverage that provides payments when margins are between \$4 and \$8 per cwt. Catastrophic coverage provides payments to participating producers when the national dairy production margin is less than \$4 per cwt. Adjusted gross income provisions do not apply to

MPP-Dairy. To be eligible, dairy producers cannot be enrolled in the Risk Management Agency's Livestock Gross Margin for Dairy.

A participating dairy operation will receive a margin protection payment whenever the average actual dairy production margin for a consecutive two-month period is less than the coverage level threshold selected by the participating dairy operation. Payments may be reduced by a certain percentage due to the Sequester required by Congress.

Item 2c(v) – All other Federal, State, or Local Program Payments:

Include Federal, State, and Local agricultural program payments not reported above, such as rental, cost share, and other incentive payments received. **Exclude** payments received from private, non-profit, or other non-governmental entities. **Exclude** payments received in 2017 from selling an easement. Generally, an easement permanently restricts use of the land (e.g., a grassland easement restricts cropping rights, and a farmland preservation easement restricts development), although some States specify a maximum easement term of about 30 years. **Exclude** CCC loan payments.

Item 3 – Acres Covered Under Crop Insurance

Report the acres in this operation that were covered under federal, private, or other forms of crop insurance during 2017 for cropland and grazing land. Acres reported here should be included in Section 2.

Item 4 – Knowledge of Right to Appeal

The National Appeals Division (NAD) reports directly to the Secretary of Agriculture and is independent of other parts of USDA. Its sole mission is to provide fair and timely hearings and appeals to USDA program participants.

Any person who receives an adverse program decision from USDA's Farm Service Agency, Risk Management Agency, Natural Resources Conservation Service, or the three USDA Rural Development agencies may file an appeal with NAD.

5.10.5 Item 5: Other Farm-Related Income

Other farm related income sources may be an important part of the operation's total income. The items below capture that income.

Item 5a – Custom Work and Machine Hire

Include income received by the operation for work this operation or its employees did for others using the operation's machinery such as plowing, planting, spraying, harvesting, preparation of products for market, etc. **Exclude** custom work which was considered separate from the operation and which had its own set of books.

Item 5b – Cash & Share Rent Received for Acres Rented to Others

Cash Rent Received:

Do not skip this item even if the operation rented no land out in 2017. The operation may have received income in 2017 for land rented to others before 2017, or the operation may have received a pre-payment of land to be rented in 2018.

Include rent for land and/or buildings. Record the total cash rent received during 2017, for all land rented to others for cash.

Include:

- If rent owed to the operation for 2016 was received in 2017, it should be included here. If rent for 2018 was received in advance (in 2017), it should also be included.
- Government payments received in association with these acres should also be included.
- For privately owned land administered by a Public, Industrial, or Grazing Association agency as part of a range grazing unit on a fee-per-head or AUM basis through exchange-of-use, include the value of AUMs administered by BLM under exchange for use.

Exclude:

- Short-term livestock grazing arrangements where the livestock owner “rents” land to graze livestock for a period of 2-4 months, but the operator will harvest crops from the same land later in the year. The payments received for this short term grazing arrangement should be recorded in this Section under Item 5c.
- The income received from cell phone towers, underground pipelines, roadways, etc. should be included in this Section under Item 5j.
- The income received from windmills, wind turbines, oil wells, etc. should be included in this Section under Item 5h.

Share Rent Received:

Do not skip this item even if the operation did not share rent land out in 2017. The operation may have received its share of 2016 commodities in 2017 for land it rented to others in 2016. Record the total value of the share of production received by the operation plus the value of all government payments received in association with the share rented land.

If the operator (as a landlord) has received his share of the production but has not sold it yet, record the operator's best estimate of its market value plus the amount received in government payments associated with the share rented land.

Be sure that commodities the operator gets in payment of share rent **ARE NOT INCLUDED** in the sales reported in the commodity sections (Sections 5-18).

Item 5c – Grazing of Livestock

Include:

- Any income this operation had from grazing of another operation's livestock on a per head or gain basis.
- Any income this operation had from grazing of another operation's livestock on a short term (2-4 month) basis where the operation will harvest crops later in the year.

Exclude any contract arrangements previously recorded.

Item 5d – Sales of Forest Products

Record the total income from sales of all forest products from the total acres operated. **Include** sales of timber, pulpwood, firewood, etc.

Exclude short rotation woody crops, maple syrup and Christmas tree sales; they should be reported as crop sales in Sections 6 or 8.

Item 5e – Sales of Farm Machinery & Vehicles

Include:

- All direct sales of machinery used for farming, such as tractors, combines, farm machinery, and equipment.
- Farm share of cars and trucks sold.

Exclude items traded in for other items since the value of these is deducted from the purchase price.

Item 5f – All Insurance Indemnity Payments

Report all insurance payments that were received by this operation. **Include** payments received from crop and livestock insurance, casualty insurance, vehicle liability, blanket liability policies, and operator dwelling insurance. **Exclude** USDA “indemnities” included under 2c(i) agricultural disaster payments.

Item 5f(i) – Federal Crop & Livestock Insurance

In 1996, Catastrophic Crop Insurance replaced disaster assistance. Under the new law, the Federal Crop Insurance Reform Act of 1995, farmers are required to obtain at least the basic catastrophic level of crop insurance coverage if they want to participate in most USDA programs. Information on Federal Crop Insurance Corporation (FCIC) crop insurance indemnity payments, combined with expense data for purchases of FCIC crop insurance reported in Section I, are used to assess the impact of this crop insurance program on farmers.

Record the amount which was received from crop insurance indemnity payments. If more than one payment was received, total the payments. **Include** indemnity payments for the following if the program is administered by a Federal agency:

- the loss of grazing on rangeland
- crop revenue coverage
- hail insurance

If members of the operator's family received any insurance payments or workman's compensation for illness or injury, include this income under off-farm income (Section 37, Item 1j).

Item 5g – Cooperative Patronage Dividends & Refunds

Record the amount of patronage dividends resulting from ownership of shares in cooperatives. **Include** cash, equity dividends and patronage dividends returned to this operation by cooperatives, sugarbeet 'retains' when received, and dividend payments received for shares in farmer-owned commodity processing plants, such as ethanol plants. These are frequently referred to as "value-added" shares.

Item 5h – Income from Royalties or Leases Associated with Energy Production

Include income from royalties or leases associated with energy production from natural gas, oil, wind turbines, etc. If the wind turbine, oil well, etc. is on acres rented TO others (Section 1, Item 3), include income from royalties here.

Example:

If an operation owns 2,500 acres and rents out 1,000 acres – with 5 of these rented acres containing wind turbines and access roads – report 2,500 acres in owned acres and 1,000 acres in acres rented TO others in Section 1. Record the rent received from the 1,000 acres in Item 5b and the income from the wind turbines in Item 5h.

Item 5i – Proceeds from Sales of Farmland/Farm Real Estate

For the small number of farms with farmland sales, the proceeds from such sales can make an important contribution to the cash available to farm households for investment or consumption purposes. Report the gross proceeds for the sales of farmland or any other real estate for acres that were part of the operation on January 1. Report sales of other off-farm farmland and other assets in Section 37, Item 1g.

Example:

An operator owned two Sections of land, and partitioned off and sold one section of unimproved (no buildings or other improvements) land for \$640,000. The entire farm had a mortgage of \$200,000 at the time of sale. At settlement, (ignoring real estate commissions and other closing costs) the entire mortgage was paid off and the operator received a check for \$440,000. The total proceeds from this sale are \$440,000. Had half the mortgage been paid, then the operator would have received a check for \$540,000, reported here as proceeds, and the remaining \$100,000 balance on the mortgage would be reported as farm debt in Section 32.

Include proceeds received from selling an easement (i.e., a permanent or long-term (30-year) easement for the sale of development rights, cropping rights, etc.) or other partial interest in land. Generally, an easement permanently restricts use of the land and the landowner typically receives payment in one lump sum.

Item 5i (i) – Recognized Gain/Loss from Sales of Farmland/Farm Real Estate

If farmland and farm real estate sales are reported in Item 5i, record the recognized gain or loss from the sales. Record a loss as a negative number. **Include** gains or losses from selling an easement (i.e., a permanent or long-term (30-year) easement, sale of development rights, mineral rights, cropping rights, etc.) or other partial interest in land.

Item 5i (ii) – Number of acres sold

If farmland and farm real estate sales are reported in Item 5i, record the total number of acres sold or acres where one or more 'right' was sold.

Item 5j – All Other Farm Related Sources of Income

Report all other farm income not accounted for above. It may be helpful to prompt the respondent by referring to the list of “Other Farm Income” items on the questionnaire. Describe each of the items recorded here. If the income should have been reported in another item, then make the necessary corrections.

Include:

- Allotment or quota leases.
- Any Federal Excise Tax (FET) refund claimed, if the FET was included in fuels purchase cost.
- Hedging (futures contract) profits or losses.
- Refunds claimed for marketing charges which were withheld. (for example, Cotton Inc. refunds or Dairy Refund Payment Program refunds.)
- Equity or premium payments on CCC loans transferred to someone else (money received above the face value of the loan).
- Real estate tax rebates for land preservation.
- Income from renting or leasing of livestock.
- Income from renting or leasing of tractors, trucks, etc.
- Road tax refunds.
- Sale of water. In areas of the West, operations with irrigation rights have been able to sell a portion of their annual water allotment to municipal, commercial, and other industrial users.
- Sale of soil.
- Sale of value-added goods from farm commodities. These sales should be **excluded** from other sections for crops and livestock.
- Payments received for cell phone towers, underground pipelines, access roads, etc., in which the operation receives an ongoing payment for their presence on the farm.
- Mineral royalties if they are tied to the farm. If they are not tied to the farm (i.e.; from inheritance), record in Section 37, Item 1j.
- Carbon credits
- Payments received under the Biomass Crop Assistance Program (BCAP).

5.10.4 Item 6: Largest Portion of Gross Value of Sales

Ask the respondent to select the category (crop or livestock) which, in the operator's opinion, represents the largest portion of this operation's gross value of sales. If the operation had no sales, choose crops if the value of cropland on the operation exceeds the value of any livestock. Otherwise, choose livestock.

5.11 Section 28 – Landlord's Share of Crops & Livestock

Complete this section if the operation had a share rent agreement for land rented from other in 2017. If not, go to Section 29.

Item 2 – Landlord's Share of Crop Production (Market Value)

Record the total **market value** of all commodities from Sections 5-10 given to landlord(s) in return for use of the land. The value of the landlord's share is defined as the value at the time the landlord takes possession of the crop. This value could be zero if no crop shares were marketed during the year. Probe to make sure that the operator does not include the value of hay or other crops that were used on the farm. This item is very important because it is used to determine the value of the landlord's share for rent.

Item 3 – Landlord's Share of Livestock Production (Market Value)

Before asking this item, probe to find out if any of the operation's share-rented acres involved livestock production in Sections 11-18. Record clear notes if livestock are unrelated to share rent of land.

Record the Market Value of the share of livestock production given to landlord(s) during the year. The value per unit of the landlord's share is defined as the price at the time the landlord takes possession of the livestock. If the respondent does not know the value, probe for the best estimate.

Exclude livestock production not associated with land. Shared livestock production that is not part of a land rental arrangement (such as raising cattle on shares) should be reported in Section 11-18. See section 5.8.3.1 for an example of recording cattle on shares.

5.12 Section 29 – Operating & Capital Expenditures

5.12.1 Introduction – Importance and Uses

What's this Section for? How is the information used?

This section provides the data used to develop estimates of farmers' and ranchers' costs of doing business -- the expense side of an income statement. Estimates of net farm income published by ERS are critical indicators of the health of the entire farm economy and help provide measures of how individual farmers are doing.

Since reports include all crops and livestock produced by the farm, data from this section provides the basis for tracking how costs are changing for different types of farms. Financial changes tracked over time provide USDA and Congress the best information for understanding the changes taking place in agriculture today. Under- or over-reporting of costs would limit USDA's ability to accurately report the cost of producing various crop and/or livestock commodities.

The first publication of estimates based on indications each year is the *Farm Production Expenditures Summary* produced in early August by NASS. Closely following this release is the [Farm Sector Income Forecast](#) in late August by ERS. It relies heavily on results of this survey, and includes income statements of the farm sector, along with balance sheets and financial ratios.

This report and others are electronically available in the Farm Sector Income and Finances page of the ERS web site at: <http://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances.aspx#.VCGz4xbisqI>. They are also presented in the ERS publication Amber Waves. Each publication is available via the Internet to anyone interested in farm sector financial performance. USDA also provides periodic reports of the Structure and Finances of U.S. Farms: Family Farm Report to Congress.

USDA provides summarized data and farm sector accounts to the Bureau of Economic Analysis (BEA), an agency within the Department of Commerce. BEA uses these data in preparing the Nation's Gross Domestic Product (GDP) accounts and Personal Income Accounts. These data ensure that BEA can accurately reflect the value of agricultural goods produced in the United States relative to the other industries. Information for non-farm industries comes from Census Bureau surveys, Bureau of Labor Statistics' data products, IRS tabulations of business tax returns and other sources. BEA data along with ERS data on farm income are provided to the Council of Economic Advisers in the Office of the President, which publishes them in its monthly Economic Indicators. This publication is prepared for the Joint Economic Committee of Congress.

In this section, each major cost item is obtained--seeds, fertilizers, chemicals, feed, purchased livestock, veterinary and medicines, custom services and work, labor costs including wages, taxes, benefits and services provided, fuel, utilities, repairs, insurance, accounting, attorney fees, real estate taxes, interest, and depreciation. The detail allows USDA to compare and quantify, item by item, cost per unit indicators. Examining expenditures this closely improves the quality of both the individual and aggregate estimates of farm expenses. We know that from experience, if we did not ask for cost by item, respondents fail to report items that are not

typically listed in their record books. While it takes longer to ask the detail of the cost statement, leaving out some costs would make net income appear larger than it is!

More detail is asked on some items:

- Breeding stock is separated from other cattle, calves, hogs, pigs, sheep and lambs. Purchases of breeding stock are an addition to the farm's capital, much like a truck or tractor. Operators can place breeding stock on a depreciation schedule and claim a deduction on their taxes. These purchases are not a part of ordinary operating expenses. Breeding stock is included in the balance sheet and the depreciation is included in the income statement.
- Although poultry farms may also have breeding stock, all chickens and turkeys should be recorded in Item 4c. All other poultry should be recorded in Item 4d, "Other Livestock and poultry".
- Depreciation and other non-cash items like inventory adjustment, and non-cash benefits paid to workers are not a cash outlay for farm operations, but are necessary for ERS' Farm Business Income Statement on its ARMS Farm Financial and Crop Production Practices web page.
- Depreciation measures the cost of using capital items during a particular year and reflects what has happened to the value of a farm's capital equipment. Usually, the entire cost of capital items (trucks, tractors, machinery, buildings, etc.) is not deducted as a business expense in the year they are purchased or built. Rather, the cost is spread out over their useful life. Farm operators are familiar with depreciation because it is a deduction claimed on their 1040F tax form. Many farmers seek the advice of an accountant or tax advisor on how much depreciation they will claim on their purchased buildings, equipment and breeding stock.
- If the operator has multiple operations, only account for the expenses that belong to the operation identified on the label. For operators with multiple operations, keep in mind the acres and livestock reported in previous sections for the selected operation. Expenses from the other operations are accounted for in Section 37.

5.12.1.1 General Instructions

ALL EXPENSES FOR THIS OPERATION (defined by the total acres recorded in Section 1, Item 4) **paid in the reference year** should be included in this section. This includes expenses paid by the Operator and Partners, Landlords, and Contractors. The three columns represent this division of expenses. Be sure to record the expenses in the correct column. In particular, do not record an expense that a contractor reimbursed the operator for in the operator column. Probe to verify the respondent has reported costs associated with each item that were paid for by the landlord or contractor.

Exclude expenses not related to the farm/ranch, and household and living expenses. **Exclude** expenses for performing custom work for others if a separate set of books are used for the custom business (in this case, custom work income is recorded in Section 37).

Ask the respondent to use farm/ranch records and explain that the interview will probably be shorter if these records are used. You are far more likely to get accurate information from records than from respondents who are relying on memory or guess-work. The questionnaire generally reflects common record keeping systems.

Many of these expenses or groups of expenditures are mentioned on the IRS 1040F. The 1040F should not be used to entirely complete this section of the questionnaire. While many expenses are covered, the items in 1040F do not have the details necessary for each item in the questionnaire. There are also some definitional differences between the 1040F and the questionnaire.

If the respondent cannot give exact dollar figures, BEST ESTIMATES are acceptable.

5.12.1.2 Expenses for Landlords & Contractors

Expenses paid by landlords and contractors are recorded in the appropriate columns in this section. These figures are added to the expenses provided by operators for their farms to develop estimates of the total costs incurred to produce crops and livestock during the calendar year. In some situations, landlords and contractors provide a relatively large share of some expense items such as seeds, fertilizer, pesticides, purchases of livestock and feed, and property taxes. For example, in 2016, contractors paid \$25.9 billion (46.6 percent) of the total \$55.6 billion feed expenses.

It is particularly important to have a good estimate of contractor and landlord expenses because the operation's expenses are expanded to represent other farms. This gives us the complete estimate of total farm production expenses used to calculate net farm income. If landlord or contractor expenses are incomplete or understated, then total expenses will be understated. When that happens, the farm sector net income is reported too high and the sector appears in better financial shape than it actually is.

ERS combines expense data reported for landlords with the gross rent reported elsewhere for cash rent and share rent to develop an estimate of the net rent earned by landlords. Landlords' net rent is similar in concept to farmers' net income -- both measure economic well-being.

Contractor Expenses

The expenses reported for contractors are combined with an estimate of the value of product removed under production contracts (quantity removed under contract times an average price for the state), to develop an estimate of contractors' share of net farm income.

Under most production contracts, the contractor usually directly pays most of the production expenses or reimburses the contractee for the expenses while the commodity is on the contractee's operation. Sometimes reimbursement for these expenses is added to the amount paid (fee) to the contractee for services. Settlement sheets or other contract documents usually break out reimbursed expenses. **Include** reimbursed expenses in the contractor column.

Sometimes the contractor charges the operator for some expenses the contractor originally paid. Examples of this are sometimes found in production contracts for processing vegetables, where the contractor originally paid for items such as seed and chemicals. Then the contractor charges the operator for their costs, as deductions from the gross value on the settlement sheet. These expenses should be recorded in the operator's column, since the operator ultimately paid for the inputs.

If the operator cannot provide settlement sheets (or otherwise report contractor expenses), write notes detailing the type and amount of services provided by the contractor. Record the

contractor's name, address and phone number so the Regional Field Office can contact the contractor to get the information.

DO NOT CONTACT CONTRACTORS to complete this section. Contact landlords and contractors only when instructed to do so by the Regional Field Office. This contact should be made only through (or by) the Regional Field Office to avoid the possibility of several enumerators contacting the same contractor. NASS has authorization to conduct a contractor survey before the normal ARMS cycle and may already have the data on hand. Enumerators assigned to complete any of the follow-up interviews with contractors can get the information on expenses paid by the contractor using a blank questionnaire or by using a contractor expense worksheet provided by some Regional Offices.

Landlord Expenses

Most operators who rent land will know which expenses were paid by their landlords. If for some reason, the operator cannot provide these numbers **DO NOT CONTACT THE LANDLORD(S)**. If the operator does not know the amount paid by their landlords, they should know which items were paid. If this happens, provide detailed notes explaining which items were paid for by the landlords so the Regional Field Office can provide an estimate for these expenses. Clearly determine whether a landlord paid taxes on rented land. This is particularly important because taxes are the largest landlord expense in aggregate and are one of the most overlooked expenses. If the operator paid the landlord's taxes, please include a comment.

Expenditures Related to Final Commodity Transportation

This survey focuses on the financial status of the farm sector. When and where the commodity is sold affects not only who is responsible for the expenditure, but also if the expenditure should be recorded. After payment and ownership are transferred, any expenditure related to the commodity is the responsibility of the new owner and should be recorded as such on the questionnaire only if the new owner is the target operator.

One situation that occurs in livestock operations is livestock that are priced and sold on the farm (FOB) to a slaughterhouse (payment and ownership are transferred at the farm). If the slaughterhouse agrees to a price, pays for, and takes ownership of the livestock on the farm, the slaughterhouse is responsible for the transportation expenditures from the farm to the final destination. The transportation expenditures, as a result, are NOT recorded in the ARMS questionnaire since at the time of transport; the livestock are no longer part of the target operation.

For a transfer of ownership between one operation and another, the timing of payment and commodity transfer determines which operation accounts for the transportation expense to the final destination. If payment and commodity transfer occurs at the final destination, then any expenditure associated with transportation is the responsibility of the seller.

5.12.2 Operating Expenses

Item 1 – Seeds, Plants, Trees, etc.

This item refers to the cost of any purchases in the reference year whether they were entirely used or not. For example, a farm may have purchased \$1,000 of seed but only planted \$800 of

it. In this case, record the \$1,000 expense in item 1 and record the \$200 worth of seed that was unused as a production input asset in Section 30. Make sure the respondent accounts for all purchases of seed, sets, plants, trees, etc., not only the amount used to plant the crop harvested. Note that operations can have these expenditures even when they did not have any harvested acres. Be sure the operator remembers to include any expenses for seed for pastures. Seed expenses are often a line item in record books (and on the IRS 1040F).

Include:

- expenditures for cleaning or treating homegrown seeds or plants
- expenditures for trees or shrubs used as windbreaks or for reforestation (if the operation did not consider this a capital expense)
- seed expenses for cover crops planted on idle land
- expenditures for plants purchased and transplanted to grow as a crop (for example, tobacco transplants)
- technology fees for purchasing genetically altered seed

Exclude:

- expenses for items purchased for direct resale without additional growth
- tree purchases that were considered capital expenses. These should be recorded as land improvements later in this section
- value of homegrown seed
- oyster/clam seed, these should be recorded in Item 4d

Item 2 – Nutrient, Fertilizer, Lime, and Soil Conditioners

This expense is a line item in almost all farm record books (and on the IRS 1040F).

Include expenses for:

- all commercial fertilizer
- fertilizer-pesticide combinations
- pre-emergence herbicides mixed with fertilizer sold as one product
- trace elements (micro nutrients) such as zinc and copper
- lime and all soil conditioners, purchased manure, cottonseed hulls, sludge, gypsum, sulfur, marl, peat, and other conditioners
- application costs if materials were custom applied

Exclude expenses for potting mixes, vermiculite, and sterilized soil. This is recorded in Item 45 (other expenses)

Item 3 – Agricultural Chemicals or Biocontrols

Chemical and biocontrol expenses are recorded as a line item in most record books (and the IRS 1040F). Include crop, livestock, dairy, poultry, and general farm use chemicals.

Include expenses for:

- insecticides, herbicides, fungicides, defoliant, nematocides, fumigants, growth regulators, and rodenticides used on crops, pastures, seeds, crop storage buildings or seed beds for the control of all types of weeds, diseases, insects, rodents, fungi, nematodes and other predators
- all sprays, dusts, granules or other materials

- application costs if materials were custom applied
- carrier materials such as fuel oil, solvents or wetting agents mixed with pesticides
- all pesticides applied to crops or buildings
- all sprays, dips, dusts, dairy pesticides, udder antibacterial disinfectants, and other chemicals purchased for use on livestock. If the respondent records these items under supplies, try to get them broken out and include them here.

Exclude expenses for:

- the value of pesticides in fertilizer-pesticide combinations (record in Item 2)
- cleaning chemicals for equipment and buildings on dairy and other livestock enterprises (record these expenses in Farm Supplies later in this section)

Item 3a – Custom Application

Record the dollar amount of the total (Item 3) chemical and biocontrol expense that was for custom application only. **Include** the cost of chemicals that were used for custom application.

5.12.2.1 Livestock Expenses: Items 4-8

Purchased feed, livestock purchases, livestock leases and livestock expenses such as breeding and veterinary services are usually recorded as line item expenses in record books. You may have to probe to break figures out for some of the expense categories. If there are livestock expenses, there will likely be livestock inventories in Sections 11-18 and the value of those livestock reported in Section 30. If not, please make a note.

Exclude all expenses incurred by feedlots and other types of contractees that fed this operation's livestock on a custom basis. If this operation is a feedlot, include only expenses for which it was not reimbursed in the Operator column. Expenses for which the operation was reimbursed should be recorded in the Contractor column. One common example where a feedlot is almost always reimbursed is the cost of feed – even if the feedlot grows the feed.

Item 4 – Livestock Purchases

Include genetic royalty fees (if applicable) for purchased livestock.

If the respondent purchased livestock in the reference year, include the purchases of animals directly related to production on this operation. If livestock are purchased then grown on another operation, make a note of the situation for the Regional Field Office. Purchases of livestock and poultry during the reference year should include the price of the animals plus commission, yardage, insurance and fees.

In large integrated operations, livestock or poultry are usually transferred from one production phase of the operation to another production phase. Although this is not a true purchase, we need an estimate of the value of the livestock or poultry at the points they move between production phases to accurately gauge the net value of production. An example of this is a hatchery that receives hatching eggs from another part of the integrated operation. In this case, we would obtain an estimated value or "book value" of the hatching eggs. Without an estimated cost of hatching eggs to the hatchery, the net value of the hatchery output would be overstated. This practice is in line with accounting practices of non-farm corporations that assess the

“profitability” of each phase of production. This makes it possible to compare profitability of farms with non-farm businesses at the National and State level.

Item 4a – Breeding Stock for Cattle, Hogs, & Sheep

Include expenses for:

- BEEF animals to be used as breeding stock or herd replacement for this operation, regardless of age
- MILK cows
- DAIRY animals to be used as breeding stock or herd replacement for this operation, regardless of age
- all gilts, sows and boars purchased for breeding purposes
- all ewes, rams and lambs purchased for breeding purposes

Item 4b – All Other (Non-Breeding) Cattle, Calves, Hogs & Pigs

Include expenses for:

- any cattle or calves not purchased for breeding herd replacement and/or expansion
- cattle placed in a feedlot
- all other hogs and pigs such as feeder pigs and market hogs

Item 4c – Chickens & Turkeys Purchased

Record the total cost for all chickens and turkeys purchased by the operation or transferred from one production phase of the operation to another production phase in the reference year. Transfers are not a true purchase, but we need an estimate of the value of the poultry moving through the operation.

Include poultry raised under contract in the operator column only if the operation is considered to have purchased the birds. In most contract arrangements, the contractee does not purchase the birds. In this case, record the value of the poultry at the time it was placed on the operation as a contractor expense.

The respondent may have settlement sheets from their contractor for each flock that list these expenses. Expenses are listed either as a total for each item or on a per pound basis. Total expense for the year is determined by the number of flocks or total pounds of birds raised. If the operator cannot provide a settlement sheet or report the expenses, find out how many birds the operation grew under contract in the reference year and explain with a note.

Item 4d – Other Livestock, Poultry, Fish, Bees, etc.

Include expenses for:

- all sheep and lambs, other than for breeding
- mules, goats, all horses and ponies, etc.
- ducks, geese, guineas, pigeons, etc.
- hatching eggs
- bees purchased
- rabbits, mink and other fur bearing animals
- catfish, brood fish, fingerlings, or other fish raised commercially or for on-farm consumption
- oyster/clam seed

- milk and eggs purchased to fulfill marketing contracts
- dogs used to work livestock or as guard dogs
- all other livestock or products not already included

Exclude expenses for animals kept only as pets.

Item 5 – Leasing of Livestock

Include expenses for:

- Renting or leasing of livestock by this operation.
- Renting bees and bee hives.

Item 6 – Purchased Feed

This expense is a line item in most farm record books (and the IRS 1040-F).

Include all feed grains, hay, forages, mixed or formula feeds, concentrates, supplements, premixes, salt, minerals, animal by-products and all other feed additives and ingredients. Almost every livestock operation should have something for this expense even if it is basic salt and mineral blocks.

Item 7 – Bedding & Litter

Record the amount spent by the operation for bedding and litter for livestock, dairy and poultry.

Include expenses for:

- straw, hay, etc
- sawdust, wood chips, corn stalks, etc
- all other bedding and litter items

Item 8 – Medical Supplies, Veterinary, & Custom Services for Livestock

Include expenses for:

- artificial insemination and breeding (AI)
- breeding fees and semen
- branding
- castrating and caaponizing
- custom feed processing, grinding and mixing services. (The cost of feed should be included in purchased feed. If the respondent includes custom feed processing with feed costs in farm records, try to get this item broken out and include it here.)
- veterinary services or supplies, etc.
- Pregnancy testing and other health examinations
- Hormone injections
- miscellaneous livestock and poultry medical services and supplies (regardless of where purchased)
- performance testing
- singeing of fish
- sheep shearing
- horse-shoeing for work horses used on the operation

- removal of dead animals

Exclude expenses for manure disposal. These will be reported in Item 28a.

5.12.2.2 Fuels, Utilities, & Purchased Water (Farm Share): Items 9-12

These questions ask for the total spent for the farm share of utilities, fuels and irrigation water. Farm record books (and the IRS 1040F) have an entry for total gasoline, fuel and oil expenses but will not have the breakdown needed for these questions.

Only the **FARM SHARE** should be reported, which is whatever the operation took as its business expense on its tax form and/or income statement. One way to help the operator report here, especially if his records are itemized differently, is to remind him/her of how the costs would have been incurred, such as for operating irrigation pumps, drying equipment, motor vehicles, machinery, etc.

For farm share of utility expenses, include monthly or annual charges to maintain service even when a utility is not being used (stand-by fees). Also include emergency electric guarantee fees, etc.

If farm and home meters are separate, **exclude** costs for water and/or electricity for the home except in situations where the farm office is in the home. In this case, include the farm share of home water and/or electricity expense. If some or all of the farm buildings shared the same meter as the home, include only the farm's share of the costs in this item.

Include expenses for:

- FARM SHARE ONLY of all fuels used (on this operation) in autos, trucks, tractors, self-propelled machinery (combines, swathers, etc.), irrigation pumps, elevators, chain saws, etc.
- all fuels for heating and lighting farm buildings
- fuels used to heat a farm office (including the cost of coal or wood)
- fuels used for drying or curing crops (including the cost of coal or wood)
- fuels for vehicles and machinery used both on this operation AND for custom work or machine hire, provided these activities are NOT a separate business (See 1st Exclusion below). Income from custom work and machine hire will be reported as farm-related income in Section 27, Item 5a.
- aviation fuels
- Federal excise fuel taxes. (Refunds of Federal excise fuel taxes paid should be reported as other income in Section 27, Item 5j.)
- purchased irrigation water
- the costs of electricity or other fuel associated with irrigating
- All farm share expenses for other utilities including telephone service and water other than irrigation

Exclude expenses for:

- fuel for machinery used only for custom work where separate books were kept and income from custom work was considered to be from a separate business (there was no income reported for custom work in Section 27, Item 5a). petroleum products used as carriers with pesticide sprays. (These should be included in Item 3 in this section.)
- fuel used in motor vehicles for non-farm use and in other engines or machinery used for non-farm purposes

- fuels used for heating or cooking in the operator's residence
- fuel provided to farm employees for non-farm use as a non-cash benefit

Item 9 – Fuel Expense: General

Record the farm share of the total fuel expense including diesel fuel, gasoline and gasohol, natural gas, LP gas (propane and butane), all other fuels (coal, fuel oil, kerosene, wood, etc.), and oils and lubricants (grease, hydraulic fluids, motor oils, transmission fluids, etc.). Refer to the header “Expenditures Related to Final Commodity Transportation” at the end of the Introduction of this section, Page 112 to determine which fuel expenses related to final commodity transfer are recorded in this Item.

Item 9a – All Fuels, Oils & Lubricants

Record the farm share of expenses for ALL fuel, oils and lubricants. Items 9a(i) through 9a(vi) must equal 9a.

Item 9a(i) – Diesel Fuel

Record the farm share of expenses for diesel. **Include** biodiesel and vegetable oil.

Item 9a(ii) – Gasoline and Gasoline Blends that Include Ethanol

Record the farm share of expenses for gasoline and gasohol **including** ethanol.

Item 9a(iii) – Natural Gas

Record the farm share of expenses for natural gas.

Item 9a(iv) – LP Gas

Record the farm share of expenses for LP gas (propane, butane).

Item 9a(v) – Oils and Lubricants

Record the farm share of expenses for oils and lubricants. **Include** grease, hydraulic fluids, motor oils, transmission fluids, etc.

Item 9a(vi) – All Other Fuels

Record the farm share of all other fuels. **Include** coal, fuel oil, kerosene, wood, etc.

Item 10 – Electricity

Record the farm share of the total amount spent for electricity, **including** irrigation. **Include** electricity for the farm office, barns and other farm buildings. If the farm office is in the home, include only the farm's share of the home electricity expense. **Include** monthly or annual charges to maintain service even when electricity is not being used. **Include** emergency electric guarantee fees, etc.

Item 11 – Purchased Irrigation Water

Record the total costs of purchased irrigation water acquired from any off-farm water source to irrigate crops on the farm. **Include** any drainage assessments, delivery charges, or other fees associated with the purchased water, and any standby fees and/or taxes which must be paid even if no water is used.

Item 12 – All Other Utilities

Record the farm share of the total expense for telephone service and calls, water (other than for irrigation), internet access, and all other utilities not previously reported. **Include** monthly or annual charges to maintain service even when the utility is not being used (stand-by fees). If farm and home meters are separate, **exclude** all costs for utilities for the home except in situations where the farm office is in the home. In this case, **include** the farm share of the utility expenses for the office. If some or all of the farm buildings shared the same meter as the home, **include** only the farm's share of the costs.

5.12.2.3 Farm Supplies, Repairs, and Maintenance: Items 13-16

Item 13 – Farm Supplies, Marketing Containers, Tools, Shop Equipment, etc.

Record expenses for miscellaneous supplies and equipment, marketing containers, hand tools and farm shop power equipment not placed on a depreciation schedule. (Power equipment is defined as equipment requiring fuel or electricity to operate). **Exclude** expenses for containers purchased for direct resale to consumers. **Exclude** expenses for permanent fencing and irrigation equipment--these will be collected separately.

Include expenses for:

- **general farm supplies**, agricultural bags, canvas, polyethylene film, tarpaulins, baling wire and twine, scales, acetylene gas, oxygen and welding rods, dairy equipment cleaning chemicals (detergents, sanitizers) etc.
- **carpentry, electrical, and plumbing supplies**, axes, fencing tools, forks, picks, scoops, shovels, spades, chainsaws, ladders, bolts, chains, nails, rope, etc.
- **mechanic's tools**, pliers, wrenches, bolt cutters, power drills, grinders, saws, sanders, welders, compressors, battery chargers, hoists, jacks, winches, fuel tanks etc.
- **containers** purchased for planting, growing, harvesting or marketing any commodity such as baskets, boxes, flats, trays, sheets, totes, bins, crates, wool bags, etc., and nursery production (even if they are to be resold with the plant.) **Exclude** containers purchased for direct resale to consumers.
- **usage charges** or rental fees for containers provided by a buyer, shipper, or packer
- **rental or per unit fees** for containers, sheets, etc. provided by a marketing association or cooperative
- **attachments and accessories** for any items in this category
- **rain gear** or other protective clothing purchased for use on the operation
- **repair of tools** and other items in this category
- **other supplies and tools** which are generally reusable and which are not included elsewhere

Item 14 – Repairs, Parts and Accessories for Vehicles, Machinery, & Equipment

Record the total **FARM SHARE** of expenses for materials, labor, parts and services for repair and upkeep of motor vehicles and equipment. **Include** the cost of accessories for machines and equipment. If they are not listed separately in the operator's records, family use expenses may be included.

Include expenses for all:

- tune-ups or overhauls of machinery or equipment (if not placed on a depreciation schedule)
- damage repairs even if covered by insurance settlements
- maintenance and repairs for all vehicles, machinery, equipment, implements, EXCEPT irrigation equipment
- parts and accessories for vehicles and equipment

Examples of these expenses include:

- major engine overhauls, if not placed on a depreciation schedule,
- repair of power equipment: services and parts for overhauls, minor tune-ups, valve and ring jobs, tune-ups, brake adjustments, exhaust system repairs, tubes, tires, front end alignments, steering adjustments, wheel balancing, replacement of shock absorbers, repair of carburetors, fuel pumps, fuel injector systems, water pumps, electrical systems, clutches and transmissions, body work, frame repairs, painting and glass replacement
- accessories: hitches, wheel weights (including fluid), mirrors, radios, tractor cabs, air conditioners, hydraulic cylinders
- electric sensor systems (auto steering, yield monitoring, etc.)
- replacement parts for all machinery including disk blades, cultivator sweeps and shovels, sickles, guards and baler parts
- repair of livestock or poultry equipment
- frost protection system repairs and maintenance

Exclude expenses for:

- accessories included in the purchase cost of vehicles, machinery, equipment, etc.
- utility beds, boxes and hydraulic systems purchased separately from a newly purchased truck. Record these in Item 44 (All Other Capital Expenditures).
- Repairs that are included on a capital asset's depreciation schedule. (Expenses that are placed on a depreciation schedule are capital expenses. Repairs of this kind should be recorded in Item 44 (All Other Capital Expenditures) with a note on the specify line indicating that the expenditure is a major repair to an owned capital asset and record the type of capital asset repaired.)

Item 15 – Maintenance/Repair of Farm Buildings & Land Improvements

Record all expenses associated with maintenance of fences, buildings and other structures, and land improvements. Maintenance and repair expenses for existing land and conservation improvements are those expenses the operation has on a regular basis and which have to be done for these improvements to continue to be useful.

Example: Annual leveling done for irrigation systems and repairing existing dikes and ponds.

Include maintenance and repair of:

- houses for hired farm/ranch labor or tenants

- all other farm/ranch buildings such as barns, shops, storage facilities, sheds, silos, bins and similar structures
- wells
- drainage facilities
- resurfacing of driveways
- repairs and maintenance of irrigation equipment
- all other farm improvements

Exclude any new construction or remodeling expense (These should be reported under Capital Expenses (Items 34-36)).

Item 16 – Maintenance & Repair of the Operator's House

Record the total amount spent in the reference year for maintenance and repairs to the operator's house, if it was **owned by the operation**.

If the operator does not understand what is meant by “owned by the operation”, offer the definitions noted on the questionnaire. “Owned by the operation” means the house is recorded as an asset in farm record books, or deeded as part of the farm.

Exclude any new construction or remodeling expense.

5.12.2.4 Insurance, Interest, Taxes, Vehicle Expenses and Depreciation: Items 17-22

Item 17 – Insurance

All expenses for this item should be for the farming operation only.

Include the farm share of all types of insurance including casualty insurance, crop, grazing, and livestock insurance, motor vehicle liability, blanket insurance policies, etc. In most record books, insurance expense is a line item. The IRS 1040F also contains a similar expense item.

Exclude premiums paid in prior years for coverage in the reference year. Also exclude premiums paid for life, health, and other payroll insurance which are included in Section 37, as part of the household expenses.

Item 17a – Federal Crop Insurance

Record the dollar amount of the total (Item 17) insurance expense that was for Federal crop insurance.

Include:

- insurance premiums for the loss of grazing on rangeland, if the program is administered by a Federal agency
- insurance premiums for crop revenue coverage, if the program is administered by a Federal agency

Item 17b – Margin Protection Program for Dairy

Record the dollar amount of the total (Item 17) insurance expense that was for FSA's MPP-Dairy program. **Include** the \$100 administrative fee. See Section 27, Item 2c(iv) for program definition.

Item 18a – Interest & Fees Paid on Debts Secured by Real Estate

Record the total amount spent by the operation in the reference year for interest and service fees for all loans owed by the operation which were secured by real estate. "Secured by real estate" means that real estate, such as land, building or a home, was used as collateral in obtaining the loan.

Exclude:

- interest on farm debts that was not part of this operation
- interest on the operator's residence if it is owned by the operator separately from the operation
- payments made on the loan principal amount
- interest and fees paid on debts NOT secured by real estate

Item 18b – Interest & Fees Paid on Debts NOT Secured by Real Estate

Record the dollar amount spent by the operation in the reference year for interest and service fees for all loans owned by this operation that were secured by farm assets other than real estate, such as machinery, tractors, trucks, other equipment, fertilizer, feed, seed, or livestock and poultry, breeding stock, money borrowed for use as working capital, and interest paid on CCC loans. **Exclude** interest and fees paid on debts secured by real estate that are reported in Item 18a.

Item 19a – Real Estate Taxes

Record the amount of real estate taxes paid by the operation in the reference year. This is a line item in most farm record books (and the IRS 1040F.) **Exclude** taxes paid on personal property (they are included in Item 19b).

Some states allow homestead exemptions, old age exemptions, etc., so all land owners may not be required to pay taxes on any, or a part, of their land. If the operation is not required to pay taxes due to an exception, make a note on the questionnaire.

Include:

- taxes on farm land and buildings including the operator's dwelling, if owned by the operation
- taxes paid in the reference year, even if they were levied in another year
- all partners' shares of taxes when a partnership is reported

Exclude:

- taxes on personal property (include in Item 19b)
- income taxes paid to IRS
- taxes on land rented to others (this is collected on the rentee's form)

Item 19b – Other Property Taxes

Personal property taxes may be assessed on things such as cars, trucks, farm machinery, livestock, production inputs, etc. that are not associated with land or buildings. Record the total amount this operation paid in the reference year for property taxes on assets other than land or buildings. Exclude vehicle registration and license fees; they will be collected in Item 21.

Item 20 – Renting & Leasing Vehicles, Tractors, Equipment & Storage Structures

Record the total expense for renting or leasing all vehicles, tractors, farm machinery, equipment and structures.

Item 21 – Vehicle Registration & Licensing Fees

USDA accounts for income generated on farms in a manner consistent with that used internationally, following guidelines established by the Organization for Economic Co-operation and Development (OECD). The U.S. value-added measure includes payments linked to production made to governments as an expense category. Property taxes and vehicle registration and licensing fees are components of this category.

Record the total expense paid by the operation in the reference year for the farm share of registration and license fees for motor vehicles, trailers, etc. Also include hazardous material (HAZ-MAT) hauling license fees required in some states to haul agricultural chemicals on public roads. If license fees associated with new vehicles were collected by the dealer when the vehicle was sold, they should be listed on the purchase agreement or bill of sale. Probe to be sure personal property taxes assessed on purchased vehicles are **excluded** from this item. These taxes should be recorded in Item 19b.

Item 22 – Depreciation for Capital Assets

Capital assets typically last for multiple years, so the cost of using an asset must be allocated over the life of the asset. In taxes and accounting, this is done through “depreciation”. It is not counted as a cash expense for the year. Since it is not a cash expense, depreciation and capital expenses are not double counted.

Depreciation is a formula based estimate of an asset’s useful life and how much value is lost each year it is owned by the operation and employed in production. DO NOT enter the CURRENT VALUE of all depreciable assets in this cell.

Depending on current tax rules, depreciation may be accelerated into one or two years, but more routinely, the formula for depreciation is the original cost of an item, less expected salvage value, spread over the years in the service life set for the item by the IRS. Accountants and tax advisors usually determine a depreciation schedule (over how many years capital assets will be used up) for the farmer.

The depreciation expense is the amount that was claimed for the reference year and is a line item which is available on the IRS 1040F. For this survey, use the depreciation amount claimed by the respondent on his income tax return if he/she is agreeable.

Special conditions:

- If the operator has been farming a long time, his equipment and breeding stock may be 'depreciated out', meaning he or she did not claim any depreciation on his or her taxes. If this is the case, make a note explaining the situation.
- If the operation is a partnership, include the amount claimed by all partners.

Item 22a – Depreciation for Breeding Livestock

Record the amount of Item 22 that was specifically for breeding livestock. (Only purchased breeding stock can be depreciated).

5.12.2.5 Labor Expenses: Items 23-29

Item 23 – CASH WAGES paid to hired farm and ranch labor

Record the total cash wages and bonuses paid to all hired farm and ranch labor on this operation during the reference year for agricultural work.

Include in the total amount paid:

- cash wages, incentives, bonuses and profit percentages paid to workers doing agricultural work on land in the operation
- wages paid to family members and corporate officers
- salaries of hired managers
- the **SALARY** paid to the operator. (**Do not include "draws"**. "Draws" are money taken out of the farm/ranch business for household expenses or other non-farm/ranch expenses.)
- portions of payroll taxes and cash benefits paid by the employee and withheld from their wages.

Exclude from the total amount paid:

- wages paid for housework
- expenses for contract labor
- money taken by the operator's household on a "draw"
- Employer's share of payroll taxes including Social Security, Unemployment, Worker's Compensation, etc.
- benefits such as health insurance, life insurance, pensions, retirement, etc.

Paid labor includes only those workers whose pay was considered a business expense of the farm/ranch operation during the reference year. These workers should have gotten a W-2 form from the operation, but for some reason they may not have. The key point in this item is that if the wages paid to the workers were considered a business expense to the operation, include them here. Operators who had more than 500 work hours of farm labor in any quarter during the year are affected by minimum wage laws.

Paid labor Includes:

- agricultural workers on the payroll no matter where they worked
- agricultural workers on paid vacation or sick leave
- service workers provided to other operations by the selected operation
- family members who were paid by the operation

In order to be counted as agricultural workers, employees must be involved in activities defined as being agricultural work.

Include as Agricultural Work:

- work done ON this operation in connection with the production of agricultural products, including nursery and greenhouse products and animal specialties such as furs, fish, bees, honey, etc.
- work done OFF this operation such as trips for marketing products of the operation, buying feed, delivering products to local markets or handling other farm-related business
- repairs of farm/ranch buildings and machinery when performed by someone who is considered an employee of the operation
- bookkeeping done by an employee of the operation
- managing a farm/ranch for a salary
- meal preparation for work crews

Exclude from Agricultural Work:

- housework such as cooking, cleaning, babysitting, etc. done for the operator's family and household
- operating a gasoline station, store or other such non-agricultural enterprise even if it was located on the operation
- work involved in training, boarding or renting animals such as horses and dogs unless it was part of, and cannot be separated from, the business of raising the animals
- caring for research animals
- work at a roadside stand (or farm store) UNLESS the operation produced more than 50 percent of the products sold at the stand
- work which alters the commodity produced (such as wineries, canneries, textile mills, etc.) even if it is done on the operation and the workers are paid by the operator. Make a note if the respondent cannot separate these workers and their wages from operation's total payroll.
- all work provided by service firms such as cotton ginning (record as a marketing charge), commercial bookkeeping, legal and other professional services provided at a location off the farm. All other items, except the ginning and farm management (professional) services, should be recorded as a "General Farm Business Expense" in Item 32.

Items 24(a-e) – Breakout of Cash Wages Paid

The breakout of total cash wages is important to assure that the respondent includes cash wages paid to self, spouse, other operators, and other family members. The wages paid to farm and ranch labor are more obvious to the operator when he/she responds to this section. This breakout also allows for the proper allocation of cash wages to operator household income when data is processed. Record the actual dollars paid of the total cash wages paid (Item 23) to people in each of the categories listed. The sum of 24a + 24b + 24c + 24d + 24e MUST equal the total reported in Item 23 in the questionnaire.

Item 24a – The Operator

Record the amount paid to the operator, including hired managers. A hired manager is a salaried or hourly employee that gets a fixed wage or salary paid out from either the owner or the farm's financial accounts to manage and make day-to-day decisions for the farm. Bonuses are part of the hired manager's salary.

Exclude money taken out of the operation on a draw by the owner/operator.

Item 24b – Wages Paid to Spouse

Record the amount paid to the principal operator's spouse.

Item 24c – Other Household Members

Record the amount paid to the other members of the operator's household. Household members **include** everyone who lives in the operator's house and shares the financial resources of the operator. Usually these are family members. **Include** people who do not live in the house if they are dependents of the operator (college students, etc.). **Exclude** salaries paid to partners (unless they live in the household) and to their household members. These should be included in Item 24d.

Item 24d – Other Operators

Record the amount paid to other operators for this operation. These are persons responsible for the day-to-day management decisions for this operation, including hired managers as defined in 24a. **Exclude** operators that are household members of the principal operator. These should be included in 24c.

Item 24e – All Other Paid Farm/Ranch Labor

Record the amount paid to all hired workers of the operation except those included in Items 24a, 24b, 24c, and 24d. **Include** wages and salaries to family members who are not members of the operator's household.

Item 25 – Payroll Taxes

Record the total dollars spent by this operation for payroll taxes like Social Security, Unemployment, etc. If the employees paid a share of some of these items and their share was withheld from their wages, the expense for their share should be included in Cash Wages.

Item 25a – Percentage of Payroll Taxes that was for household members

Record the percentage of the total (Item 25) payroll taxes that was for household members.

Item 26 – Benefits for Hired Labor

Record the total dollars spent by this operation for cash benefits including life insurance, health insurance, pensions, Worker's Compensation, retirement, etc. for employees of this operation. If the employees paid a share of some of these items and their share was withheld from their wages, the expense for their share should be included in Cash Wages.

When the operator or the operator's spouse was a paid employee of the operation, and the operation paid for health insurance for the farm family as a benefit of this employment, this is a valid business expense and should be included in this item.

Item 26a – Percentage of Benefits that was for household members

Record the percentage of the total (Item 26) benefits that was for household members.

Item 27 – Contract Labor Expense

Record the total amount spent by the operation in the reference year for contract agricultural labor.

Contract workers are paid by a crew leader, contractor, buyer, processor, cooperative or other person who has an oral or written agreement with a farmer/rancher. Record the total expenses for contract labor used in the reference year.

Include:

- contract expenses for workers hired to harvest fruits, vegetables, potatoes, berries and all other crops
- other agricultural work which was performed on a contract basis by a contractor, a crew leader or a cooperative
- expenses for work done by any custom operator who does not provide his own machinery and who was hired on a contract

Exclude expenses for contract construction or maintenance of buildings and land improvements. Contract labor expenses for maintenance and repair should be reported in Items 15 and 16. Contract labor expenses for all new construction should be reported in Items 34-36; land improvements, new buildings/structures, or new construction/remodeling of operator's dwelling.

Item 28 – Custom Work

Custom work is work performed by machines and labor when it is hired as a unit. Expenses for transporting or hauling animals or other products such as milk to the processor go here if the driver and the vehicle are hired together. Loading is probably also part of the fee. If only the labor is hired (no machines or vehicles), then the expense goes either under contract labor or in total cash wages if the labor was seasonal hired labor.

Item 28a – Custom Hauling

Record the total cost for all hauling done for this operation by a custom operator. Examples of custom hauling are paying a driver with his truck to haul grain to the elevator, livestock hauled to an auction, and milk hauled to a pooling station. At this point in the interview you will know enough about the operation to probe for specific hauling expenses the operation may have incurred. For example, if you are interviewing a dairy farmer, probe to be sure milk hauling is included. Most dairies have an expense for custom hauling, but may overlook that expense or not consider it "custom" work.

Keep in mind when the payment and commodity transfer occurs when accounting for custom hauling expenses. Refer to the header "*Expenditures Related to Final Commodity Transportation*" at the end of the Introduction of this section, Page 112 to determine which custom hauling expenses related to final commodity transfer are recorded in this Item.

Include:

- hauling to market
- hauling between farm/ranch parcels
- milk hauling charges. (If these were deducted from the operator's milk check, add them back to get the "total value" figure we want in Section 11, Item 7, Cash Sales and/or Section 20, Item 2, Marketing Contracts).
- hauling of feed, seed and fertilizer to the operation
- manure hauling
- all other hauling charges for the operation

Item 28b – Other Custom Work

Most farm accounting record books (and the IRS 1040F) have a line for total expense for custom hire (machine work). Custom work is defined as work performed by machines and labor hired as a unit. Other custom work on crops would include custom planting, harvesting, leveling, and soil testing. Planting by plane or helicopter should also be included in this Item.

Exclude:

- contract labor
- custom fertilizer, lime &/or soil conditioner applications (include in Item 2)
- custom applications of crop chemicals and pesticides (record in Items 3 and 3a) and pest scouting (record in General Business Expenses, Item 32)
- leasing of cars, trucks, tractors or other equipment (record in Item 20)
- custom livestock expense (record in Item 8)

Item 29a – Cash Value of Commodities and NON-CASH PAYMENTS Provided to Household Members for Farm Work

Record the value of any commodities and non-cash payments provided to members of the household instead of payment of actual dollars. The value of the commodities is whatever the commodities could have been sold for. **Include** quantities of grain or other crops, head of livestock, or livestock products such as milk provided as a non-cash payment to household members.

Exclude living expenses for family members unless the expenses were considered a business expense of the operation.

Item 29b –Cash Value of All Food, Goods, & Services Provided as Payment to Workers who are NOT Household Members

This question only applies to workers who are not members of the operator's household. The value of heating fuels, transportation, telephone, electricity, clothing and furniture supplied to hired workers who are not members of the operator's household should be calculated in terms of what they cost the operator. The value of food produced on the farm and furnished to paid workers should be whatever the items would have been worth at local prices (at the time they were given to the workers).

Operators may not regularly keep records of this type of employee compensation. For this reason, the question specifies items which are commonly overlooked by farmers in reporting these non-cash payments. Use items such as the value of commodities (head of livestock,

bushels of grain, etc.) paid to any workers in lieu of wages for farm work, including such payments-in-kind. Using these items as probes will help the respondent better consider which type and amount of these payments were made.

5.12.2.6 Commodities Used on Operation, Professional Services: Items 30-31

Item 30 – Market Value of Products Used or Consumed on the Operation

Record the estimated MARKET value of all the meat and livestock products, fruit, vegetables, berries, firewood, etc. produced and used or consumed on this operation during the year. Include products used or consumed by partners and their families (e.g., corn used for household furnaces). Exclude home gardens if expenses were excluded earlier. Also exclude any commodities provided as payment to household members for farm work reported in Item 29a.

Item 30a – Percentage of Market Value of Products that was Livestock

Of the total amount from Item 30, give a percentage of that amount that was from livestock or livestock products.

Item 31 – Fees Paid for Professional or Farm Management Services

Record the amount of money spent in the reference year by the operators and partners for professional farm management services related to the management of this operation. Report fees paid for accounting, record keeping, tax preparation, planning, or farm product advice.

Exclude fees paid for:

- custom fertilizer, lime and/or soil conditioner applications (include in Item 2)
- custom applications of crop chemicals and pesticides (record in Item 3)
- entomologists, service companies, etc, for pest scouting (record in General Business Expenses, Item 32)

5.12.2.7 General Business Expenses: Item 32

Show the respondent the list of General Business Expenses in the Respondent Booklet.

These expenses are generally recorded in the “other expense” category of most farm record books (and the 1040F). They are so varied that when you ask the operator for his general business expenses he may say ‘none’ or itemize the ones that come to mind or include previously reported data. To gain some consistency in what is reported here, read the list of the “Includes” below and have the respondent refer to the Respondent Booklet. The purpose of this list is not to have the respondent itemize each expense to the nearest penny but to prompt him to consider various categories which define what you mean when you ask for ‘other business expenses’. List the expense items and amounts in the lines. If an individual item is a fairly “large” expenditure, make notes explaining the expense.

Include:

- Travel expenses (such as lodging, meals and parking) associated with purchasing or selling commodities for farm, association or cooperative business, attending fairs where the respondent's farm products were exhibited and other farm/ranch business

- Postage, telegrams, and faxes for the farm business
- Expenses for title searches, abstracts, recording deeds and mortgages, court costs and other legal expenses for the land operated
- Fees paid to attorneys in connection with the farm/ranch
- Charges for permits and licenses obtained in the reference year for production and marketing of commodities produced on the land operated. **Exclude** quota and allotment purchases and rentals.
- Fees paid on a voluntary basis to marketing associations or government agencies (Federal, State or local) on the basis of sales or production, for the promotion of sales or for other specific purposes
- Registration of purebred animals
- Brand registration fees
- Charges for sales promotion or advertising
- Farm management expenses including books, papers and magazines on subjects related to crop or livestock production, market reports, farm newsletters and Ag bulletins. Report only expenditures for the reference year, even if these cover more than one year.
- Real estate agent commissions and other direct selling or buying expenses
- Garbage collection or dumpster service for barns and farm buildings
- Rental expense for farm office space not on the operation
- Fees paid to entomologists, service companies, etc. for pest scouting
- Fees paid for programs like Boll Weevil Eradication Program (BWEP) and Pink Bollworm Program (PBWP) if there is one assessment fee (i.e., per-acre) and no additional fees are charged for chemicals. Any additional charges for chemicals should be recorded as chemical expenses.
- Trapping club memberships and dues. (Trapping clubs are formed to trap predator animals such as coyotes.)
- Stall or space rental fees for farmer's markets
- Parcel post expenses or charges for marketing agricultural products
- Purchases of farm office equipment not placed on a depreciation schedule
- Other internet fees, including the cost of having and maintaining a webpage
- Loan origination fees
- Payments to Cooperatives Working Together (CWT)

Exclude:

- Wages paid to farm employees (on the payroll) for bookkeeping (exclusively or in addition to other farm work). (WAGES AND SALARIES FOR ALL FARM EMPLOYEES SHOULD BE REPORTED EARLIER IN THIS SECTION.)
- Gasoline and other vehicle operating expenses
- Taxes paid which were levied for general purposes
- Marketing expenses and check-off fees deducted from sales of commodities paid by the operator
- Expenditures for magazine or journal subscriptions for the reference year that were paid in other years
- Purchases of farm office equipment if placed on a depreciation schedule
- Potting soil and topsoil for nursery/greenhouse operations (record in all "Other Expenses" not previously recorded, Item 45)

5.12.2.8 Marketing Expenses: Item 33

The following instructions should be used when completing information on marketing charges for the sales of crops and livestock. **Include** marketing charges paid for cash and/or contract sales.

Almost all operations that sell commodities as cash sales or under marketing contracts have some marketing charges. These are usually deducted from the gross payment, so the check the farmer receives already has these charges subtracted. Farmers do not generally keep very good records of charges that were already deducted before they received their payment checks. Marketing expenses include check-off fees, drying, commission, ginning, inspection, storage, transportation, and yardage, etc., and are identified on payment vouchers, along with the gross and net receipts. **PROBE TO BE SURE THAT THESE "HIDDEN COSTS" ARE ACCURATELY REPORTED.**

If the respondent reports that no marketing charges were paid, probe by asking if anything was subtracted out of the total price before the buyer wrote the check. If the answer is yes, this usually means marketing charges were paid. Be careful not to include expenses for production inputs or loan re-payments that were netted out of the farmer's check, these are not marketing charges. If an operation sold commodities but truly did not have any marketing charges, make a note of this, or the Regional Survey Statistician may want to call you or your supervisor back to verify the information.

If you absolutely cannot get per commodity charges, record the total quantity (and unit) sold so the survey statistician has something to use for calculating these charges. If you have to use a handout sheet of marketing charge rates (provided by some Regional Field Offices), make a note in the margin so the survey statistician knows the farmer could not supply this information. **DO NOT** use these sheets unless the farmer cannot supply the information.

All marketing expenses paid by the operation, landlord(s) and contractor(s) for the sale of all commodities produced/sold on this operation in the reference year must be included. All check-off fees, commercial crop drying, sales commission fees, ginning charges, inspection fees, storage fees and expenses (for commodities not stored on-farm), transportation, yardage fees, etc. should be included even if the crop is not yet sold. (However, storage-related expenses such as those for LP gas to run on-farm dryers should be excluded.) If a commodity was not sold from storage, but was returned to the operation, out-of-pocket expenses for storage should be included as a marketing expense.

Share rentals should be considered a payment for the privilege of marketing the crop and should be recorded as a marketing expense. In field crops such as sugarbeets, co-op shares are often rented or leased from operators who do not use their share. It is not necessary to rent land in order to rent a co-op share. If only land is rented, it should be recorded in Section A. But, if co-op share rents are reported be sure the rent payment reported in Section A is only for land and not for the land and share rental combined.

Perishable products such as fruits, vegetables and fish often have to be refrigerated or iced during storage or transportation. These expenses should be considered marketing expenses.

When promotion or check-off fees are automatically deducted from gross sales of commodities such as soybeans, cotton, beef, hogs, or milk, the fee is INVOLUNTARILY charged and should

be considered a marketing expense. Operations also make voluntary payments for marketing and production programs. VOLUNTARY payments should be recorded under general farm business expenses (Item 32).

Include fees which are deducted from payment even if the producer has the option of applying for a refund (such as a refund from Cotton Incorporated). Refunds of marketing expenses should be included as other farm related income in Section 27.

Include unit retains for sugarbeets which are deducted by the coop or processor from payment even though the producer receives payment from them in future years. Refunds of marketing expenses should be included as Cooperative Patronage Dividends and Refunds in Section 27.

Milk & Dairy Products:

Include as a marketing charge the withholding or reduction in price for the Dairy Refund Payment Program. Capital Retains should also be included since they are cooperative profits withheld and refunded in later years. Refunds of these charges should go in Section 27.

Exclude milk hauling as a marketing charge. If the hauling charge is netted out in the operator's books, add it back to the total sales value for milk and other dairy products. Be sure to note the hauling expense if it is known at this point and make sure milk hauling charges are included in custom hauling (Section 29, Item 28a). Also **exclude** Cooperatives Working Together (CWT) payments. This is a voluntary program and not a marketing expense.

Cotton:

The cost of ginning is usually paid by surrendering the cottonseed to the gin. Often neither the ginning expense nor the cottonseed income appears on the farmer's books; however, the value of the cottonseed traded to the gin is technically an income item, and the cost of ginning is a marketing expense to the operation. This information should appear on the operation's statement from the ginning company. You will have to probe for this information. Occasionally, the cost of ginning is more than the value of the seed produced by the cotton. The operation then has out-of-pocket expenses for ginning. If the cost of ginning was less than the value of the cottonseed, the operation should have received money for cottonseed. This info should be in the operation's record books.

Landlord(s) & Contractor(s) Marketing Expenses

Marketing Expenses paid by landlords and/or contractors MUST also be accounted for in the appropriate column.

In most production contracts, the marketing charges are paid by the contractor. These expenses may be on the contractee's settlement sheet. If not, record the respondent's best estimate of the total marketing expenses paid by the contractor for commodities produced on the operation under contract.

5.12.3 Capital Expenses: Items 34-44

Capital expenses are expenditures that are typically placed on a depreciation schedule. These expenditures may include the purchase of new or used tractors or equipment or major repairs,

such as installation of a new or overhauled engine, which the operator placed on a depreciation schedule.

Expensing a Major Repair:

In the case of extensive repairs on capital equipment, the enumerator should follow the same action as the operator did. Even though they are not typical capital purchases, an operator may place a major repair on a depreciation schedule. If an operator places such an expenditure on a depreciation schedule, then it should be recorded as a capital expense. If the operator does not place the expenditure on a depreciation schedule, it should be considered a repair and the value should be recorded in Section 29, Item 14.

USDA's capital consumption estimate is a measure of the value of capital items used up each year in the production of commodities and services. To accurately estimate this value, ERS needs to know the full value of capital purchases every year.

Item 34 – Land Improvements

Land improvements are those additions or improvements to the land which change it in a PERMANENT way.

Include:

- Expenses for improvements such as terraces, water and sediment control basins, grassed waterways, ponds, windbreaks, permanent cover, contouring, grading, filter strips, etc.
- Expenses for drainage improvements such as ditches, bedding, shaping, subsurface drain tile, etc.
- Expenses for irrigation improvements such as digging wells or ditches
- Expenses for land leveling (removal of irregularities on the land surface by the use of special equipment for the purpose of improving drainage, achieving more uniform planting depths, more effective use of water and greater efficiency in tillage operations)
- Expenses for corrals, feedlots, feeding floors, trench silos, waste facilities, wells and equipment not for irrigation
- (In Western states) capital improvements to grazing land

Exclude:

- Land purchases
- New Irrigation equipment or pumps

Item 35 – New Construction and Remodeling of Farm Buildings, Structures, & Dwellings (excluding the operator's dwelling)

Record expenditures that were paid in the reference year for the construction of or remodeling of buildings, structures, or other dwellings. Record these expenditures regardless of whether the construction or remodeling was completed or not. If expenses were paid in the reference year for work completed in prior years, include them in this Item.

Include:

- all costs for new construction or remodeling of houses for hired farm/ranch labor or tenants
- all costs to construct or remodel farm/ranch buildings, storage facilities, sheds, silos, bins and similar structures

Item 36 – New Construction and Remodeling of Operator's House

Include all costs for new construction or remodeling of the operator's house, if it was owned by the operation. "Owned by the operation" means the house is recorded as an asset in farm record books or deeded as part of the farm.

Item 37 – Cars (Item Codes 816 & 817)

Record the total cost (after trade-ins, rebates and/or discounts have been subtracted) of all the new and used cars bought for use on the operation during the reference year in Item Code 816. The total cost should include the cost of accessories purchased with the vehicle(s), special servicing, delivery charges, dealer preparation, Federal Excise Tax and sales tax.

If registration and license fees, financing charges and insurance were included in the purchase price, include them unless these fees were separate and itemized on the bill. Itemized financing charges should be recorded in Item 18. Itemized registration and license fees should be recorded in Item 21.

Farm Share Percent—Item Code 817

Often, cars are purchased for both farm and personal (home) use. This question is asked to properly allocate the correct amount of the purchase to the farm. Farm share can be estimated by determining the percent of total use of the vehicle that was for farm/ranch related business. This percentage is the part of total cost of the vehicle that is the basis for claiming the depreciation expense on the operation's tax return. If all of the vehicles purchased in Item 37 are strictly for farm use, record 100 in Item Code 817.

Item 38 – Trucks (Item Codes 818 & 819)

Record the total cost (after trade-ins, rebates and/or discounts have been subtracted) of all the new and used trucks, pick-ups, sport utility vehicles, vans, campers, buses bought for use on the operation during the reference year in Item Code 818. The total cost should include the cost of accessories purchased with the vehicle(s), special servicing, delivery charges, dealer preparation, Federal Excise Tax and sales tax.

If registration and license fees, financing charges and insurance were included in the purchase price, include them unless these fees were separate and itemized on the bill. Itemized financing charges should be recorded in Item 18. Itemized registration and license fees should be recorded in Item 21.

Exclude ATVs. ATV expense should be reported in other capital expenditures, Item 44.

Farm Share Percent—Item Code 819

Often, trucks are purchased for both farm and personal (home) use. This question is asked to properly allocate the correct amount of the purchase to the farm. Farm share can be estimated by determining the percent of the total use of the vehicle that was for farm/ranch related business. This percentage is the part of the total cost of the vehicle that is the basis for claiming the depreciation expense on the operation's tax returns. If all of the vehicles purchased in Item 38 are strictly for farm use, record 100 in Item Code 819.

Item 39 – Tractors

Record the total purchase price (after any trade-in allowance, rebates, discounts, etc.) of all new and used tractors that were bought during the reference year for use on the operation. If the respondent's operation bought tractors in partnership with another operation, include only the amount that was this operation's share of the tractor's total cost. The total cost should include the cost of accessories bought with the tractor, special servicing, delivery charges, dealer preparation, Federal Excise Tax and sales tax. Registration and license fees should be included in the purchase price if they were not separated on the bill. If these fees were separate and itemized on the bill, exclude them here and report them in Item 21. Financing charges should be recorded in Item 18.

Item 40 – Self-Propelled Farm Equipment

Record the total purchase price (after any trade-in allowance, rebates, discounts, etc.) of all new and used self-propelled equipment, implements and machinery that were bought during the reference year for use on the operation. If the respondent's operation bought machinery in partnership with another operation, include only the amount that was this operation's share of the machine's total cost. The total cost should include the cost of accessories, special servicing, delivery charges, dealer preparation, Federal Excise Tax and sales tax. Registration and license fees should be included in the purchase price if they were not separated on the bill. If these fees were separate and itemized on the bill, exclude them here and report them in Item 21. Financing charges should be recorded in Item 18.

Item 41 – NON-SELF-PROPELLED Equipment, Implements &/or Machinery Purchased

Record the total purchase price for all non-self-propelled equipment, implements and machinery (after any trade-in allowance, rebates and discounts, etc.) that were bought in the reference year for use on the operation. **Include** purchases of livestock, dairy and poultry equipment, (including calf shelters/hutches), new irrigation equipment and pumps, delivery charges and sales taxes in the net expense. If the respondent's operation bought machinery in partnership with another operation, include only the amount that was this operation's share of the machine's total cost.

Exclude expenses for equipment purchased for personal or pleasure use such as rodeo equipment.

Item 42 – Office Equipment, Furniture, & Computers

Include all capital purchases (items typically placed on a depreciation schedule) of farm office equipment, furniture, and computers. Any such equipment purchased but not typically placed on a depreciation schedule should be included in Item 32, "General Business Expenses".

Item 43 – Purchase of Farmland & Other Farm Real Estate

For the small number of farms that bought farm real estate during the year, the cost of that acquisition can have a significant impact on the cash available to farm households for consumption or other investment purposes.

Report the number of acres bought during the reference year in Item Code 802

Include only real estate that was added to this farming operation during the year. **Exclude** buildings that were purchased separately and moved onto the farm. These should be reported in Item 35.

Report the total cost of the land and buildings acquired.

Example: the operation added an adjoining section of land to this operation during the year, at a cost of \$640,000. The land was worth about \$600,000 and the service buildings on it were valued at \$40,000. The operator paid \$140,000 down and the balance of the purchase was financed by a bank loan of \$500,000. Enter \$640,000 here. The value of the real estate would also be included in Section 30 (Farm Assets): the buildings (\$40,000) would be included in Item 1c, and the land (\$600,000) would be included in Item 1f. The loan would be entered in Section 32 (Farm Debt) with a column coded to indicate that a bank loan was obtained in the reference year to purchase land.

Item 44 – All Other Capital Expenditures

Record the total cost of all other capital items (items placed on a depreciation schedule) purchased by the operation in the reference year. **Include** major repairs.

5.12.4 All Other Expenses: Item 45

Record the total cost of all other FARM SHARE expenses that have not been recorded in Section 29. Note in the comment box provided the description of the remaining expenses and the amount of each expense that summed to the total values recorded in Item 45. This is particularly important because items are often miscategorized as All Other Expenses.

Include:

- potting soil or topsoil for nursery/greenhouse operations
- money paid back to the government for government farm program overpayments in previous years. For example, a farmer signs up for a program surrounding a certain field crop. The farmer gets paid \$X in 2016 for either a direct payment or counter-cyclical payment. Market price then goes up and farmer is asked to pay back some or all of the money that they had received in 2017. Conversely, if the operation's payment back to the government was in the same year as the operation received the money, this should be reflected in the income questions in Section 27 as net income (money received – money paid back).
- donations, for operations which are corporations. If the operation is a sole proprietorship, donations are recorded as a family living expense in Section 37.
- expenses used to acquire additional commodity to fulfill marketing contracts if the operator had a bad year
- Investments in cooperatives if the investment was made by the operation and not the operator or operator's household (operator and operator's household investment should be recorded in Section 37)
- For agricultural operations which have the same books as a winery, include such items as wine bottles and yeast in this Item. If the winery is an entirely separate operation from the farm, include the costs in the net income from operating any other business (Section 37).

5.13 Sections 30 to 32 – Farm Assets and Debt, Renewable Energy

5.13.1 General

What are these Sections for? How is the information used?

Farmers assemble capital assets from several sources. Key sources may include initial and subsequent investments made by farm owner(s), retained earnings from previous production and/or service activities, borrowed funds, or leased inputs such as land, machinery or equipment. Section 30 gathers information about the assets owned by the operation. Section 32 covers term debt or notes used to purchase or acquire access to assets used by the farm. Section 31 for renewable energy is in between the assets and debt sections this year due to space constraints.

Data from these sections underlie the farm's balance sheet. The balance sheet lists the farm's assets, debt, and owner's equity of the farm at a specific point in time. USDA's accounting procedures set December 31 as the reference date for the farm's balance sheet while the income statement covers the calendar year from January 1 through December 31. The balance sheet is necessary for determining the financial efficiency of the farm as well as the longer term ability of the operation to continue. Aggregate profitability measures combine income statement and balance sheet data in the calculation of rates of return to assets and to equity. Efficiency measures the amount spent on assets relative to total production expenses.

The balance sheet shows the amount of "owned" assets the farm used in producing its crop and livestock commodities--the real estate, equipment, breeding livestock, cooperative investments, and current assets owned by the operation. The owner's equity is equal to total assets of the operation minus any debt that is owed.

The balance sheet excludes assets and debt of agribusiness firms that supply inputs or market or process farm products, and the value of machinery leased to farmers by agri-business firms. Leased machinery is considered an asset of the service input sector (payments for the flow of services from leased machinery are an expense in the farm income account). However, farm machinery owned by a farm operator and leased or contracted to another operator is part of the balance sheet.

Correspondence between the length of term of loans and the type of assets held is also very important for evaluating the financial position of the farm. If a farm has a large amount of current debt (payable or due in a year or less), but few current assets (such as cash, accounts receivable, or crop or livestock inventories), the farmer could have to liquidate a part of his/her holdings to meet obligations as they come due. This could affect the farm's organization, production decisions, or future profitability. If current debt substantially exceeds current assets, farmers may even have to take "fire sale" prices for assets put on the market to meet obligations. Therefore the match between types of debt and assets, as well as total debts and assets, are important for evaluating the financial status of farms.

Assets are economic resources that are used up in the production process. Assets expected to be used up or converted to cash within one year of the date of the balance sheet are called "current assets." Examples include cash, financial assets, crop and livestock inventories, purchased inputs, cash invested in growing crops, as well as accounts receivable. All other

assets (machinery and equipment, buildings, farmland, breeding livestock, etc.) are classified as long-term assets.

The farm's assets are financed or paid for using either debt or the business owner(s)' own funds (equity). Some farms use no debt while others use a mixture of debt and equity to buy farm assets. Farm operations that report no use of debt tend to be smaller farms as measured by total sales.

Debt data are used to develop indications of debt service charges, which are compared with cash available from the farm business (derived from data in Sections 5-27), off-farm income (reported in Section 37), and other sources to assess which types of farms may be encountering loan repayment problems due to insufficient income, large debt loads, and/or high interest rates.

Owner's equity is equal to total assets less total debt. Owner's equity is often referred to as "net worth" or "net assets." USDA uses balance sheet and income statement data to develop key indicators of financial health and performance for farm businesses.

These indicators **include**:

- **Solvency** – debts in relation to assets,
- **Liquidity** – money available to pay bills as they come due,
- **Profitability** – the return to management and risk of the farmer in relation to farm assets and equity used in production, and
- **Financial Efficiency** – how effectively the farm uses inputs to produce crops and livestock.

Balance sheets and indicators of farm financial health and performance are reported to the Secretary of Agriculture, other policy officials within USDA, and to Congress. Survey findings are reported for use by the media, farm organizations, and others with an interest in agriculture. Data summaries are also made available to the public through the ARMS data tool located on the Economic Research Service web page.

Value of Farm Assets

On average, land and buildings account for nearly three-fourths of farmers' assets. Dwellings on the farm are also assets of the farm operation. These include the operator's house (when it is owned by the farm and included in the books of the farm) and hired labor and tenant houses.

In addition to land and buildings, balance sheets include a value for machinery and equipment owned by the farm, including cars and trucks. Finally, livestock and crop inventories are a large part of the balance sheet for some farms, particularly grain and livestock farms.

Farmers also operate assets leased or rented from others. We are interested in determining the value of assets managed by the operation. As the only available source, the respondent's estimate of the value of land, machinery and other assets is used when estimating the total value of assets managed by the operation.

Debt by Lender

These data are used to help establish who is providing funds to meet farmers' borrowing needs. We ask about the loan balance, interest rate, type of loan (production, non-real estate, real

estate loans for the operator's dwelling, or other real estate loans), and the year in which the loan was obtained. These items are used to estimate the farm sector's debt payments that must be met each year.

Many farmers use farm assets as security for loans for a variety of purposes. For each of the five largest loans reported by the operator, we ask what percent of the loan was for operating expenses, capital expenditures, or other expenses of the farm operation. Responses to the primary purpose of the loans provide information about how farm assets are used for farm and family finances.

5.13.2 Section 30 – Farm Assets

5.13.2.1 General Instructions

This section is different from the sections before it in the questionnaire because most of these questions focus on assets OWNED by the operation. For this section, we define assets of the operation as:

- **For individual or partnership operations:** the assets belong to the operation or to the operator and partners. When the operator and/or partners rent their personal assets to the operation, exclude them as assets in this section.
- **For corporations:** the assets belong to the corporation.

In this section we ask for the operator's estimate of the MARKET VALUE of several types of assets on December 31 of the reference year. Obtain the operator's best estimate of the current market value of specific assets owned by the operation. If operation assets are owned by partners, include the value of assets belonging to all partners (exclude the landlord's share).

If the operator has multiple operations, only account for the assets that belong to the operation identified on the label. Assets belonging to the other operations will be accounted for in Section 37. Some operators may use heavy machinery (tractors, planters, combines, etc.) for all their operations. For each piece of heavy machinery, determine which operation it belongs to by determining which operation uses the item most. If the piece of heavy machinery belongs to the operation on the label, account for it in Section 30. If it does not belong to the operation on the label, account for it in Section 37.

The "fair market value" (market value) is the price for which the land and/or buildings or other assets could be sold under the market conditions existing at the time of the reference date and assuming that willing and financially able buyers and sellers exist and that there are no unusual circumstances such as forced liquidation, shortages, and emergencies.

5.13.2.2 Value of Land and Buildings Owned: Item 1

Record the market value for land and buildings. It should be based on highest and best use that the land could be sold for, including non-agricultural uses.

This information may not be available in records, but most operators should be aware of the current value of their land and buildings or comparable land and buildings. If loan funds have been obtained for use in the operation, the operator has likely prepared net worth statements for

use with his/her lender. The business financial statement would be a source for asset value information.

It is not necessary for the operation to own land in order to own buildings. Operations can own buildings that are permanent structures located on rented or leased land, or they may own mobile homes, shops or offices located on rented or leased land. When this occurs, be sure to include a note in the margin for the survey statistician to review.

Item 1a – Market Value of Operator's Dwelling, if OWNED

Record the market value of the operator's dwelling as of December 31 if it is owned by the operation. "Owned by the operation" means the house is recorded as an asset in farm record books or deeded as part of the farm. This definition is the same used to report expenses, which makes the income statement and the balance sheet consistent.

If the operator cannot give you an estimate of current market value, probe to get values of similar houses, or get the replacement value listed for insurance purposes.

Item 1b – Market Value of All Other Dwellings Owned

Record the market value on December 31 of tenant and hired labor dwellings as well as all other dwellings owned by this operation. This includes houses/dwellings of partners, relatives, etc. The dwellings must be owned by the operation, not by the partner or relative separately from the land in the operation.

Item 1c – All Other Farm Buildings & Structures Owned

Record the market value on December 31 of all other farm buildings owned by the operation including barns, cribs, silos, equipment shops, grain bins, storage sheds and similar type buildings. Exclude processing facilities such as cotton gins, packing sheds, commercial elevator facilities, etc. even if they are owned by and located on the operation, and the books are kept separately. Probe if necessary to obtain values, but do not accept "book value" (the original cost of the building minus depreciation).

Item 1d – Orchard Trees, Vines, Nursery Trees, & Trees Grown for Woody Crops

Record the market value on December 31 of trees in orchards, vines in vineyards, other perennials in the field, Christmas trees, and short-term rotation woody crops. **Exclude** uncultivated acreage in timber – this should be recorded with the value of the land in Item 1f.

Item 1e – Oil, Gas, and Mineral Rights

Record the market value on December 31 of natural resources of oil, gas, and mineral rights owned by the operation. **Exclude** production inputs of these resources that will be utilized on the operation. This should be recorded with the value of the inputs in Item 6.

Item 1f – Land Owned

Record the operator's best estimate of the total market value of land OWNED by the operation on December 31. This should correspond to the acres owned reported in Section 1, Item 1. **Include** the value of land rented to others, plus any water rights, permanently installed irrigation

equipment, frost protection systems, grazing permits, uncultivated timber, etc., that go with the land. Verify with the operator that the average value per acre is reasonable for the area by dividing the amount reported by the number of acres owned. Make a note if very high or very low.

Exclude the value of dwellings, buildings and structures, and trees in orchards, vines in vineyards, other perennials in the field, Christmas trees, trees cultivated for woody crops, and the value of water rights if they were sold.

5.13.2.3 Value of Land Rented From/To Others: Items 2-3

Item 2 – Value of Land & Buildings on Acres Rented From Others

Record the operator's best estimate of the total market value of all the land and buildings Cash Rented, Share Rented, or Used Rent Free by the operation during the year. This should correspond to acres reported as rented in Section 1, Item 2 and does not include grazing land rented on a fee-per-head or AUM basis. **Include** the value of any water rights, any mineral rights, permanently installed irrigation equipment, frost protection systems, permanent plantings in orchards, groves, vineyards, Christmas trees, grazing permits, etc., that go with the land.

Exclude the value of water or mineral rights if they were sold.

Item 3 – Value of Land & Buildings on Acres Rented To Others

If land is rented to others (Section 1 Item 3), record the operator's best estimate of the total market value of all the **owned** land and buildings RENTED TO OTHERS. Include the value of any water rights, any mineral rights, permanently installed irrigation equipment, frost protection systems, permanent plantings in orchards, groves, vineyards, Christmas trees, grazing permits, etc., that go with the land.

Exclude the value of water or mineral rights if they were sold.

5.13.2.4 Value of Trucks, Tractors, Machinery, and Stocks: Item 4

Item 4a – Trucks & Cars Owned

Record the end-of-year (December 31) estimate of the market value of the farm share of trucks and cars owned by the operation.

Item 4b – Tractors, Machinery, Tools & Equipment Owned

Record the end-of-year (December 31) estimate of the market value of the farm share of tractors, machinery, tools, equipment and implements owned by the operation. Prices of machinery, equipment and implements change over time. Reflect these changes in determining the current market value by using prices that would be received for a similar item if traded or sold in the used equipment market.

Item 4c – Stock in Cooperatives & Farm Credit System

Record the value on December 31, of the stock the operation owns in the Farm Credit System and all other farm cooperatives. Be sure to include the value of shares received during the year in lieu of dividends.

As a condition of obtaining a loan, the Farm Credit System may have requirements for a borrower to purchase stock in the Farm Credit System. The value of the stock is reported here.

Ag Credit Act of 1987 created Farm Mac and allowed PCAs (Production Credit Associations) and FLBAs (Federal Land Bank Associations) in same territory to merge into a new entity, the ACA (Agricultural Credit Association). Federal Land Credit Associations (FLCAs) were established as direct lenders making long-term mortgage loans. The FLCAs make real estate mortgage loans, including rural residential real estate loans. ACAs may, directly or through their subsidiaries, make real estate mortgage loans, production and intermediate-term loans, agribusiness loans (processing and marketing loans, and certain farm-related business loans) and rural residential real estate loans. These retail loans are made to farmers, ranchers, producers or harvesters of aquatic products, farm-related businesses and rural homeowners. As of July 1, 2017, the Farm Credit System (FCS) had, for the purpose of making retail loans to farmers and ranchers, 68 ACAs with PCA subsidiaries and FLCA subsidiaries, and two FLCAs.

5.13.2.5 Machinery and Equipment – Item 5

For the items listed in this item, report the total number usually kept on this operation on December 31, 2017 in the first column and of these, report the number that were manufactured in the last 5 years (from 2013 through 2017) in the second column. Include the number of leased machines used for farm activities and on this operation on December 31, 2017. Mark the “none” box when appropriate. **Exclude** obsolete or abandoned equipment.

Item 5a – Trucks, including pickups

Report the number of trucks, including pickups, used in 2016 or 2017 that were on this operation on December 31, 2017.

Item 5b – Tractors less than 40 horsepower (PTO)

Report the number of tractors with less than 40 horsepower (PTO) used in 2016 or 2017 that were on this operation on December 31, 2017. **Exclude** garden tractors.

Item 5c – Tractors with 40 to 99 horsepower (PTO)

Report the number of tractors with 40 to 99 horsepower (PTO) used in 2016 or 2017 that were on this operation on December 31, 2017.

Item 5d – Tractors with 100 horsepower (PTO) or more

Report the number of tractors with 100 horsepower (PTO) or more used in 2016 or 2017 that were on this operation on December 31, 2017.

Item 5e – Grain and bean combines, self-propelled

Report the number of self-propelled grain and bean combines (used for harvesting and threshing operations) used in 2016 or 2017 that were on this operation on December 31, 2017. Include all grain combines equipped with picking head attachments for corn or grain harvest. Report self-propelled silage and forage harvesters in Item 5g. **Exclude** all pull-type grain and bean combines.

Item 5f – Cotton pickers and strippers, self-propelled

Report the number of self-propelled cotton pickers and strippers used in 2016 or 2017 that were on this operation on December 31, 2017.

Item 5g - Forage harvesters, self-propelled

Report the number of self-propelled forage harvesters used in 2016 or 2017 that were on this operation on December 31, 2017.

Item 5h - Hay balers

Report the number of hay balers used in 2016 or 2017 that were on this operation on December 31, 2017. Include pull type and self-propelled hay balers.

5.13.2.6 Value of Beginning/End of Year Inventories: Item 6

We must account for changes in inventories between January 1 and December 31 of the reference year if we are to accurately measure net farm income. A portion of cash sales in any year may come from commodities produced in prior years, and carried into the reference year as inventory. Some of this year's production may remain in inventory at the end of the year. Accurately measuring net farm income to reflect this year's production must account for changes in inventory levels between January 1 and December 31. For that reason, we ask beginning and ending inventory values for crops, livestock, and production inputs.

Obtaining estimates of the value of assets such as stored crops, livestock, and inputs on January 1 and December 31 is critical to development of accurate estimates of profitability for farms. The change in input inventories is important to calculate the balance sheet, which is the wealth of the farm and an indicator of profitability.

There are three main criteria you should guide the respondent toward considering in providing answers to beginning or ending year inventory values:

- the types of commodities or production inputs
- the quantity of each type on hand at the beginning and end of the year
- their market prices on the two dates in question (BOY and EOY)

The most accurate figures would be obtained if we collected all these pieces. This may not be possible; thus it is acceptable for you to get the operator's best estimate of the market value of commodities or production inputs on hand at the beginning and the end of the year. Still, ask the respondent to think about differences in the quantity of crops, livestock or inputs on hand in January and December (for example if more crops were stored, or crops were sold, or inputs

were purchased or used up in production) and prices that could have been received for the commodities in January versus December and the prices that would have been paid for inputs on hand.

If the operator says the market values were the same, YOU MUST PROBE for the commodity/input types, the quantity, livestock weights, and the market price on the date in question. This will ensure as accurate figures as possible. If the respondent says values were the same even after probing for additional information, make good notes of the reason why they were the same so the survey statistician understands the situation and will be in position to write a good explanatory comment.

The value of commodities held in inventory relate to the figures reported earlier in the questionnaire for crop production (but crops can be stored for several years and inventories may include previous year's production), the amount (of crops) used on farm or the quantity (of livestock) sold, and the sales data reported in Sections 5-20. If the commodity was produced in the reference year (or if livestock was bought in the reference year – see reporting of livestock purchases in Section I) but not sold or used on farm, it should be in ending inventory and its value would be recorded here.

In most cases, the value of commodities or production inputs on hand at the beginning of the year should not equal their value at the end of the year. Many farms operate in the same production and sales pattern each year. It is likely they will have crops on hand in January from the previous year that then are sold in the current year and crops on hand from the current year's production on December 31. After finding out the value at the end of the year, you should ask about the value at the beginning of the year. Do not say, "Was it (about) the same?" or "It was about the same, was it not?" Instead, probe for changes in quantities on hand, for prices for which commodities could have been sold, or for prices that would have been paid for inputs bought for farm use.

Item 6a – Value of CROPS Owned

Record the operator's best estimate of both the beginning of year and end of year market value of all crops stored on or off the operation. Be sure to consider the quantity on hand and market prices on the date in question.

Include all types of crops including those for which there are Government programs as well as non-program crops.

Include the value of:

- all crops owned by the operation whether stored on or off the operation
- hay and silage crops
- crops produced in the current and earlier years stored in whole (original) form
- mature standing crops not harvested by December 31 due to weather or market conditions. This is an "alternate storage issue" and an estimated value for these crops should be recorded if they were originally intended for harvest as of December 31.
- crops (in whole form) to be used for feed, seed, sales, etc.
- all whole grains on hand
- all crops purchased in whole form
- crops owned by the operation which were produced under a contract but not removed as of December 31

- crops in storage which had been redeemed from CCC loan as of December 31
- nursery and greenhouse products in saleable condition

Exclude the value of:

- crops still under CCC loans. Exclude the crop only if it was placed under loan and was still under loan on either of the reference dates of January 1 or December 31 of the reference year
- feed items such as cracked corn, rolled oats, etc. (record under production inputs Item 3d)
- growing crops
- Exclude crops that were sold and are already recorded as receivable income in Section 22 because the revenue was deferred.

Items 6 (b & c) – Value of Livestock Owned

Record a total value for beginning-of-year (BOY) and the end-of-year (EOY) inventory for livestock.

For livestock, you also need to consider their weights or size on January 1 to get the market value of the beginning-of-year inventory and on December 31 to get the market value of the end-of-year inventory. It is highly unlikely that all of these things are the same at the end of the year as they were at the beginning of the year. The number of head and the number owned on December 31 were reported in Sections 11-18. Use the responses to items in these sections to obtain end-of-year values.

Beginning-of-year values should be in comparison to the end-of-year values. For example, number of head may be different, or prices may be different, or weights of the animals may be different on the two reference dates. Changes in any one of these items between January 1 and December 31 would result in inventory values being different in December than they were in January.

Include the value of:

- all animals held for resale
- beef and dairy cows, bulls, steers, heifers, calves and any other cattle
- hogs and pigs
- sheep and lambs
- horses, ponies and mules
- goats
- chickens, ducks, geese, guineas, pigeons, etc.
- fur bearing animals
- catfish, crawfish and other fish
- bees
- other specialty livestock

Exclude the value of:

- livestock on hand not owned by the operation
- animals owned for pleasure use only (except equine)
- livestock owned by this operation, but being produced by another operation (grown by others) under contract. The value of these animals is collected in Section 19 and are “in the fence”.

Item 6b – Breeding Livestock

Record the operator's best estimate of both the beginning-of-year and end-of-year market value for all breeding livestock (including dairy animals) and poultry owned by, and located on or off, the operation. **Exclude** breeding livestock being produced on another operation under contract. The value of these animals is collected in Section 19 and are "in the fence".

Be sure to consider the quantity on hand, their size or weights, and the market prices on the date in question. Breeding livestock animals are considered non-current assets on an operation's balance sheet. They reflect a long term investment.

The number of head on hand as well as owned on December 31 was reported in Sections 11-18. For the end-of-year value, ask the respondent about January 1 values, multiply by the EOY inventory, and keep in mind changes in numbers, weights, and prices.

Item 6c – Value of Non-Breeding Livestock Owned

Record the operator's best estimate of both the beginning-of-year and end-of-year market value for all non-breeding livestock (including dairy animals) and poultry owned by, and located on or off, the operation.

For livestock, compare BOY and EOY, as you consider animal weights, size, or age on January 1 and December 31 and get the market value for each date. It is highly unlikely that these values will be identical. Be sure to consider the quantity on hand, their size or weights, and the market prices on the date in question. Non-breeding livestock (calves, heifers, and steers) held in inventory for sale within the next year are considered current assets on an operation's balance sheet.

You can use the number of head and the number owned on December 31 that were reported in Sections 11-18 and multiply by the weight and/or price. But you will have to rely on the respondent to supply information for BOY values.

Item 6d – Value of Production Inputs Owned

Record the operator's best estimate of both the beginning-of-year and end-of-year market value of inputs owned by this operation. **Include** such things as processed feed, fertilizer, chemicals, fuels, purchased seed and other supplies, etc. **Exclude** the value of any items that should be reported in Item 6a (hay, crops to be used for seed, etc.) Do not include fertilizers and chemicals already applied (record in Item 6e).

Prices of many inputs such as fuel and fertilizer could have changed during the year. An estimate of the quantity on hand on January 1 and price paid at that time and the quantity and price at year end will likely result in the value of inventory being different for these two time periods. The change in the value in input inventory on hand will be very important in helping put production costs into perspective and in helping explain estimates of net farm income for farm businesses. Sometimes these assets can vary greatly due to pre-purchases for next year.

Item 6e – Production Inputs Already Used for Crops or Livestock (Sunk Costs) or Value of Inputs Used for Production Contracts yet to be Delivered

Why do we ask this question?

Growing crops represent a substantial investment and have a significant impact on a farmer's balance sheet. As purchases of fertilizer, seed, herbicide, gas, labor, etc. are made and the resources used, either cash is diminished or liabilities are increased. These kinds of changes by themselves can affect how current assets of the farm are viewed relative to debts owed by the operation. It is important that an asset value still be shown. One method is to assume these cash inputs transformed into growing crops, do in fact have a value; that is, someone would pay to acquire such resources during the year. For a December 31 balance sheet and a winter wheat crop, this means a value should be placed on the growing crop. Since the actual market value is hard to determine, actual cash invested in the crop is used as the balance sheet value.

Record the amount spent up through December 31 for physical production inputs (seeds, fertilizers, pesticides, etc.) for all cover crops and crops planted but not harvested as of that date. Also include the amount spent for fertilizers and pesticides already applied to benefit a crop that had not been planted yet as of December 31. This is important because the cost of the fertilizers and/or pesticides applied prior to December 31 would be considered an expense of the farm and would reduce net income from a cash perspective. Recording the value of the inputs applied as an asset would be reflected in the balance sheet and in the change in asset values that is included in the estimate of overall net income and profitability of the farm.

Sunk Costs and Production Contracts

If the operator has a production contract and is still completing the growing cycle for that commodity on either January 1 or December 31 there will be sunk costs that would be reported in this question. If the operator has a production contract in Section 21 and non-owned livestock on the operation on December 31 in Sections 11-18, there will be sunk costs that would be reported in this question. The sunk costs for this operation (who is a contractee) is the money that the operation has already spent (and not been reimbursed) for the contract livestock or vegetables that are growing on the operation on the reference date.

The respondent should report the sunk costs for the non-owned livestock or vegetables on the operation on December 31 (livestock from Sections 11-18) in the December 31 column. If the respondent had non-owned livestock or vegetables on the operation on January 1 the sunk costs associated with those commodities should be reported in the January 1 column.

These sunk cost values need to be accounted for to get a more accurate picture of how the farm is doing economically. If they are not accounted for, there will be expenses in the reference year with no corresponding income or potential income (recorded as an asset).

Include the value of inputs already applied to:

- winter or spring grain crops which had been planted by December 31
- feed, labor, fees, etc. used on farms with crop or livestock production contracts for non-owned commodities
- nursery crops
- greenhouse crops
- mushrooms, fruit or vegetable crops
- cover crops
- material applied to the land to benefit a crop to be planted after December 31

Exclude the value of inputs to:

- crops already harvested and on hand (these crop values should be recorded in Item 6a)
- crops such as Christmas trees, fruit trees, etc. where the value of the crop is included in the Orchard Trees and Vines in Item 1d.
- mature standing crops not harvested by December 31 due to weather or market conditions. This is an “alternate storage issue” and an estimated value for these crops should be recorded in Item 6a if they were originally intended for harvest as of December 31

Sunk Costs for Processed Vegetables Operations:

can be reported by recording either:

- the percentage of the fee due for the processed vegetables not yet harvested and removed based on time on the operation from placement to the reference date.
- the value of utilities, labor, fuel, and other expenses utilized. Keep in mind that the contractor typically provides the seed, fertilizer, and chemicals. In this case, seed, fertilizer, and chemicals would not be accounted for here as the contractee does not pay for it.

Sunk Costs for Feedlots:

can be reported by recording either:

- The value of net weight gain (portion of feed, fees, etc. not yet recovered from the contractor) for fed cattle not yet removed from the feedlot.
- the value of feed, vet care, labor, fuel, and other expenses utilized for fed cattle not yet moved from the feedlot, or

Sunk Costs for Broilers & Hogs:

can be reported by recording either:

- the percentage of the fee due for the broilers or hogs not yet removed based on time on the operation from placement to the reference date.
- the value of utilities, labor, fuel, and other expenses utilized. Keep in mind that the contractor typically delivers the feed, vet, and sometimes bedding to the farm. In this case, feed, vet, and bedding would not be accounted for here as the contractee does not pay for it.

5.13.2.7 Other Farm Assets: Item 7

Record the operator's best estimate of the market value of all other assets of the farm/ranch. These can be known as “Liquid Assets”.

Almost every operator should have some other farm assets!!

Include the value of:

- cash, bonds, certificates of deposit, savings and checking accounts belonging to the operation
- hedging account balances

- government payments due
- balance of land contract sales
- money owed to the operation (other than that reported in Section 22, Accounts Receivable/Deferred Payments)
- quotas and allotments owned by the operation, if these values are not reflected in the land values reported in Item 1f
- livestock products stored on the operation, but not yet sold (for example, milk before hauling)
- money owed to this operation (except money owed from commodity sales and eggs still on the operation)

Exclude the value of:

- assets for which values were obtained earlier in the questionnaire
- personal assets (record in Section 37)
- personal debt owed to the operator

5.13.3 Section 31 – Renewable Energy

Item 1 – Renewable Energy Types

Check the renewable energy producing systems that were on this operation in 2017, regardless of ownership. **Include** all systems that generate energy, including heat. **Include** the value of energy sold from this operation in section 27, Item 5h.

Solar panels

A flat panel designed to capture the sun's energy. **Include** photovoltaic systems which convert light from the sun into electricity and also thermal systems that passively generate electricity.

Wind turbines

A device which converts wind power into electricity. Include wind generators, wind power units, wind energy converters and aero generators. **Exclude** windmills which do not produce electricity.

Methane digesters

A device which captures biogas resulting from the decomposition of manure, processing by-products, and other materials. Harvested biogas is used as a substitute for natural gas to power engines which generate electricity. It is fed into the natural gas pipeline or flared. **Include** methane digesters only if in production and used in 2017.

Geothermal/Geoexchange system

A system which captures heat stored in the earth.

Small hydro system

A water driven system which produces electricity by the gravitational force of falling or flowing water. **Exclude** water driven systems that only provide mechanical power, such as turning a grinding stone for a flour mill.

Biodiesel production system

Non-petroleum based diesel fuel made from vegetable oil or animal fats. It can be used alone or blended with conventional petroleum-based diesel fuel. **Include** only if there was production of biodiesel fuel.

Ethanol production system

A fuel produced by converting crops such as corn and sugarcane, biomass crops, or wood. This is generally blended with gasoline. Production of ethanol for fuel requires a permit from the ATF. **Include** only if there was production of ethanol for fuel.

Other

Any other on-farm device or system not listed above. Exclude gasoline or diesel generators for heating.

Item 2 – Wind Rights Leased to Others

Check “Yes” if the operation allowed the installation of one or more wind generators and an access road to the equipment in exchange for a payment to the landowner. The landowner does not typically use any energy produced by these generators.

5.13.4 Section 32 – Farm Debt

Farmers use debt to help obtain assets used by the operation to produce crops or livestock or to provide a range of business services such as custom work, recreational activities, or livestock grazing. Estimates of debt are used to measure how solvent the business is (debt/assets) at a point in time. Estimates of debt are also used to develop estimates of interest and principal that have to be paid that can be compared with income earned by the farm (reported in earlier Sections of the questionnaire). Debt service needs relative to income earned is used to prepare measures of financial position reported by USDA for U.S. farms.

All farm household and business debt should be recorded in either Section 32 or in Section 37 and recorded only once. Loans used for both farm and household purposes should be reported in Section 32 and not in Section 37. It is important to note that the obligation to repay a loan used for both farm and household remains with the farm business. The percent used for household purpose is used to reflect that the farm household should make a contribution to the farm business for repayment. Section 32 is organized to reflect farmers' use of debt in their businesses. The organization of this section is intended to provide the large share of respondents who do not report use of term debt or notes from creditors a more streamlined interview.

If the operator has multiple operations, only account for the debt that belongs to the operation identified on the label (there should be assets for these items in Section 30 and expenditures for inputs and/or capital purchases in Section 29). Debt belonging to the other operations will be accounted for in Section 37. For example, some operators may use heavy machinery (tractors, planters, combines, etc.) for all their operations. For each piece of heavy machinery, determine which operation it belongs to by determining which operation uses the item most. If the heavy machinery belongs to the operation on the label, account for its debt in Section 32. (Using the same guideline, asset values will have been included in Section 30). If the heavy machinery does not belong to the operation on the label, account for its debt in Section 37.

Item 1 – Debt Use

This is a screening question to determine if debt was used at any time during the reference year.

Include:

- Any debt that was obtained from earlier years and was not paid off by January 1 of the reference year
- Any amounts used from established lines of credit
- Loans taken out in the reference year and repaid in the reference year
- Loans taken out in the reference year and not fully repaid in the reference year

If debt was used at any time during the reference year, check “Yes” for Item 1, and continue with Item 2. If debt was not used at all during the year, check “No” for Item 1, then skip to Section 33.

Item 2 – Loans Taken out & Repaid in the reference year

This item includes only loans taken out and entirely or partially repaid during the reference year. For example, if an operation took out a \$100,000 operating loan and had repaid all but \$20,000 by the end of the year, record \$80,000 in Item 2 as the loan amount taken out and repaid during the year. Record the \$20,000 debt balance in the Item 3 table.

Loans acquired through access to “lines of credit” would be reported in Item 2. Any outstanding balance on December 31 would be reported in Item 3 following the same instruction as provided for the above example.

Responses to this question help us gauge the share of farms that use debt during the year.

5.13.4.1 Debt by Lender Table: Item 3

If the operation had debt at the end of the reference year, the table in this item must be completed. **Include** debt on the operator’s house only if it was owned by the operation. Refer to Section 30, Item 1a to determine if the operator’s house was owned by the operation and included in assets. Record line of credit balances outstanding at the end of the year in the same manner as any other conventional loans.

Start completing the table by asking about the largest loan. Work down the rows in the table for each loan, **starting with the largest loan owed** and working down to the smallest loan owed, for up to five loans.

Some debt may be used for both farm and household purposes. For example, the proceeds of a loan may be used in part to remodel a kitchen that is not part of the farm operation, and in part to purchase equipment used on the farm. Report such loans in this section, and report the percentage of the loan balance used for the farm business in column 8. Do not report such loans in Section 37.

Be sure the respondent **excludes** debt entirely for non-farm purposes even if the loan was secured by the operation's assets. For example, a loan for a child's education with the farm as collateral would NOT be reported in this Section. The amount of this off-farm debt secured by farm assets is to be reported in Section 37, Item 4. **Include** all other debt owed by the farm that is secured by farm assets.

Exclude any loans with a \$0 balance at the end of 2017. This table is only for loans that have a positive balance at the end of 2017.

Column 1 – Lender

Refer the respondent (and yourself) to the list of Lender Codes below the Item 3 table on the questionnaire.

There is no need for the respondent to report specific firms or persons with whom he/she has loans, such as 'First State Bank of Iowa' or 'my mother-in-law'. By encouraging the respondents to look at the questionnaire, you are assuring them your interests are in obtaining what types of loans are typical in their state, not where they personally have obtained loans to finance their operations. Typically, lenders will be grouped to provide reports by lending institutions, trade creditors, individuals, etc.

Enter the Code for the lender type from whom the operation obtained a loan. If more than one loan is owed to the same lender, record the loans separately if possible.

Report as Farm Credit System debt (Code 1) any loans from the Federal Land Bank Association, Production Credit Associations, Agricultural Credit Associations, or any other organizations through which Farm Credit System loans are made.

USDA's Farm Service Agency (FSA) has taken over the lending functions of the former Farmers Home Administration (FmHA). FSA provides credit to farm operators through direct loans and through guarantees of loans made by private lenders. Use Code 2 only for direct loans made by the former FmHA and/or the new FSA. For loans made through private lenders but guaranteed by FSA, use other Codes, such as 5, 6, and 7, etc. **Exclude** loans borrowed against the cash value of life insurance policies from Code 7. Record these type loans under "any other lenders", Code 15.

Report as contractor debt (Code 11) any loans from corporations, cooperatives, partnerships, individuals, or other organizations for which this operation produces or markets any commodity or product under contract. Poultry and other livestock contractors may provide financing for the construction of facilities and for the purchase of feed and other inputs. Similarly, fruit and vegetable processors may finance seed, specialized machinery, and packing and on-farm processing facilities for producers who grow for them under contract.

For Code 12 and Code 13, lenders are individuals; however, there is a difference in the two types of loans. For Code 12, (individuals from whom land in the operation was bought under a mortgage or deed of trust) title to the land transfers immediately. For Code 13, (individuals from whom land in the operation was bought under a land purchase contract) title to the land transfers after a specified portion of the purchase price has been paid, or after a certain amount of time has passed.

Report credit card debt (Code 16) only for credit card balances outstanding at the end of the year. The farm press frequently reports on the dangers farmers face in charging feed, seed, and other inputs on credit cards to gain frequent flier miles and other affinity program benefits, with the intention of refinancing these purchases during the credit card grace period. **Exclude** credit card purchases that were paid from an equity credit line or rolled into other debt before the end of the year. The balance owed to the bank, or other lender, should be reported in the table instead. **Exclude** any outstanding credit card balances not related to the operation of the farm business.

Farmer Mac guarantees the timely payment of principal and interest on securities backed by qualified loans or guaranteed portions, and either retains those securities in its portfolio or sells them in the secondary capital markets. Securities retained in the Farmer Mac portfolio and serviced by the institution are not reported by originating lenders who no longer hold the debt. If a loan is known to be held by Farmer Mac enter the amount using code 17.

In the United States, credit unions are not-for-profit organizations that exist to serve their members rather than to maximize corporate profits. Like banks, credit unions accept deposits and make loans. Credit unions have expanded membership in recent years and become an attractive alternative lender for both mortgages and vehicles. Report loan activity with credit unions using code 18.

Include as other debts (Code 19) the farm share of all unpaid bills. Unpaid bills are a current liability of the farm operation.

Columns 2 & 3 – Balance Owed on January 1 and December 31

Record the beginning and end-of-year balance remaining to be paid. **Include** both principal and unpaid interest which was delinquent. Obtaining an accurate estimate of the balance that farmers owe on any loans taken to acquire assets is critically important. The amount of debt owed by farmers helps drive the development of financial indicators and perspectives about the financial health of farm businesses. Reported debt, for example, forms the numerator of the debt-to-asset ratio developed for farms. Reported debt is also used to assess the capital structure of farms, indicating what portion of assets is owned by the farm family and what share is owned by creditors.

Include any interest which was unpaid and/or delinquent. **Exclude** any “future” interest that will be owed and accrued interest that was not delinquent.

Column 4 – Interest Rate

Enter the interest rate associated with the loan balance recorded in Column 3. Rates should be entered to the nearest basis point (hundredth of a percent), such as 10.25, 9.50, 8.00 or 6.75 percent. You can have debt recorded with a zero percent interest rate if no interest is charged.

This is most common with very short term debt, although it is sometimes found with debt owed to family members. Write a note of explanation whenever the interest rate is zero.

Column 5 – Loan Type

Select one of the 4 choices in the “Loan Types” list below the Item 3 table on the questionnaire that best describes the type of loan that the respondent has. Line of credit balances will most often be designated as “production loans” but in some cases may be included as non-real estate or real estate loans.

Production loans refer to seasonal loans that farmers typically borrow to finance the production of a commodity, and repay when the commodity is sold.

Non-real estate loans (longer than one year) refer to machinery, equipment, and breeding livestock loans that the farmer will repay over a number of years.

Select code 3 for real estate loans over one year in the form of mortgages on the operator's dwelling, provided the dwelling is owned by the farm operation. If the dwelling is included in loans reported, the amount of debt associated with the dwelling should also be reported in Item 5.

Use code 4 for other real estate loans over one year, which refer to loans secured by farmland. These loans may be for any purpose, but typically are repaid over a period of 10-20 years.

To help respondents who may not know, the first determination for loan type is whether a loan is a real estate loan or a non-real estate loan. This determination should be based on whether or not a mortgage is held. The determination between non-real estate and production loans should be based on length of loan. Loans 12 months or more should be classified non-real estate (code 2) and those less than 12 months as production/operating loans (code 1).

Column 6 – Year Loan was obtained

If the loan has never been refinanced, enter the 4-digit year the loan was obtained. If the original loan was refinanced, record the year in which it was refinanced.

Column 7 – Original Term of Loan

If the loan has never been refinanced, record the original term of the loan. If the original loan was refinanced, record the number of years for which it was refinanced. If less than a year is owed on any loan, round up to 1 year.

Column 8 – Percent for FARM Expenditures

If the loan was obtained entirely for farm expenditures, this item should be 100. If part of the loan was used for non-farm purposes, enter the percent of the original loan which was used for operating expenses, capital expenditures or other expenses of the farm operation.

Reminder: If the respondent attempts to report 0 percent for a loan in this table, verify if the loan is actually for farm expenditures. If no part of the loan is for farm purposes, the entire loan should be removed from the table.

Column 9 – Purpose of Loan

Check below the Item 3 table on the questionnaire for the “Loan Purpose Code” list. Respondents have seven choices for the purpose of the loan. Record the purpose that reflects the respondent's primary use of loan funds for the farm.

1) Purchased real estate (land and its attachments)

Include:

- Farm and home improvements
 - Building construction
 - Construction of livestock and poultry facilities
 - Grove development and rehabilitation
 - Mortgage for the operator's dwelling (if owned by the operation)
- 2) Purchase feeder livestock
- 3) Purchase other livestock
- 4) Other current operating expenditures such as:
- Current crop production
 - Care and feeding of livestock including poultry
 - Labor, seed, feed, fertilizer, grove caretaking, repair, and maintenance
- 5) Farm machinery and equipment
- 6) Debt consolidation
- 7) Other

Item 4 – Outstanding Balance of Additional Loans

Space is provided to record details for up to five loans in the Item 3 table. If the operation had more than five loans with balances outstanding at the end of the reference year, enter the total dollar amount owed on loans in addition to the five identified in the table.

Item 5 – Debt Owed for Operator's dwelling

This should be the portion of debt from all of the loans listed in Items 3 and 4 that is specifically for the operator's dwelling. If the operator's dwelling is not owned by the operation this item should be zero and no debt for the operator's dwelling should have been included in Items 3 and 4.

5.14 Sections 33 to 37 – Farm Management and Household Information

Sections 33-37 provide information on the personal characteristics and decision-making of farm operators, farm business organization, farm business strategies, operator household characteristics and operator household incomes. Information on the economic well-being of farm households is needed to evaluate the effects of current and proposed policies that affect farms and rural areas. The questions in these sections provide information on the relationships between farm household members and their farms. No other source of data is available to illustrate how the financial situation of the farm and farm household varies among operators and households. These sections also provide data to identify the farm's management, including whether decisions are made by one person or a team.

A key function of management is planning: how the farm will be organized; what to produce and how to produce it; what types of equipment to use; whether to hire labor; and how to market commodities or products produced on the farm. A key to farm competitiveness is the adoption and use of cost effective practices by producers.

It is well known that many operators and household members work off-farm. Section 37 provides information on off-farm income. These data allow us to develop a key economic indicator--the level and sources of household income from all sources, both farm and non-farm. The estimate is also used to help determine the debt repayment capability of farmers, considering both the amount of debt owed to all lenders and income from all sources.

The economic well-being of farm households is affected not only by income from all sources (farm and non-farm) but also by the debt they owe and whether income can adequately support the basic needs of the farm household without having to draw down assets or sell the farm or a part of the farm. We combine off-farm income, household assets, and debt data in Section 37 with the farm business income statement and balance sheet data from earlier sections to assess the economic well-being of farm households.

Information is collected on the farm-operator household's assets and debt that may not be connected to the farm business. Non-farm assets and debt affect the economic well-being of the farm household. The household's overall financial status depends in part on non-farm assets and non-farm debt. Moreover, farmers can decide to use farm business assets as collateral for non-farm loans, and they can use non-farm income and assets to acquire farm business assets and to pay expenses for the farm. Thus, a full understanding of financial health of farms in today's agriculture requires information on the finances of both the farm business and farm household.

Some farms support more than one family. Income sharing among partnerships and farm corporations is obvious, but income generated from farms operated as individual proprietorships may also go to support multiple households. As a result, it is not accurate to assume that all of the farm business income goes to the farm operator household. Instead, we estimate the operator household's share of net farm income, by asking for the number of other households sharing in the net income of the farm operation and the percentage of the net income received by the operator's household.

Knowledge of age, gender, education, ethnicity, race, and major occupation from Section 33 helps USDA determine how farm household well-being varies across different demographic groups, and to identify the extent to which different groups participate in farming. USDA now

has programs targeted to beginning farmers and ranchers, so knowledge of when a farmer began farming, reported in Section 33, helps USDA know more about the target population.

Data on household expenditures (Section 37) are used for important purposes including:

- 1) For inclusion into the Indexes of Prices Paid.
- 2) To estimate farmers' debt repayment capacity (family living expenses are deducted from net income to determine how much is left over to replace equipment and to repay outstanding debt).
- 3) To understand the relationship between household income and family living expenses as well as how farm families adjust to changes in prices received for crops and livestock, changes in production, and changes in the costs for inputs such as fertilizer, fuel, and labor.

5.14.1 Section 33 – Personal Characteristics

Operators are those persons responsible for the day-to-day management decisions for this operation, including hired managers. In the event there is more than one person involved in the day-to-day decisions, four columns have been provided to record the names and characteristics of up to four operators.

Item 1 – Men and women involved in decisions

Report how many men and women were involved in the day-to-day decisions for this operation.

Exclude hired workers unless they were a hired manager or a family member who was also an operator.

Item 2 – Characteristics

Respond for up to four operators in the columns provided. Respond to each item for each operator. If there were more than four operators, identify the four most senior operators in the columns.

Item 2a – Name

Identify the operator(s). Print the name(s) of the operator(s) in the response area.

Item 2b – Person(s) completing this form

Report “Yes” or “No” as to whether the person listed in the column completed the report.

Item 2c – Sex of operator

Indicate if the operator listed at the top of the column is male or female.

Item 2d – Age

Report the age of the operator listed at the top of the column on December 31, 2017.

Item 2e – Hispanic, Latino, or Spanish

Mark the appropriate box as to whether the operator listed at the top of the column is of Spanish, Hispanic, or Latino origin or background, such as Mexican, Cuban, or Puerto Rican, regardless of race.

Item 2f – Race

Mark one or more race categories to indicate what the operator listed at the top of the column considers himself/herself to be.

Item 2g – Highest level of formal education

Check the box representing the highest level of school completed by the operator listed at the top of the column. Vocational school, secretarial school, etc. should not be counted as formal education unless the credits can be transferred to a college or university. Respondents holding a B.S. or B.A. degree are considered a 4-year college graduate and should be coded "4". An associate degree should be coded as a "3".

Item 2h - Occupation at which the operator spent a majority of his/her worktime in 2017

If the operator listed at the top of the column spent the majority (more than 50 percent) of his/her work time farming or ranching on this operation in 2017, mark the "Farm or ranch work" box. The "Other" box should be marked for operators spending less than 50 percent of their worktime in farming or ranching operations, including those working off-farm or who are not in the workforce.

Item 2i – Retired from farming or ranching

Mark whether the operator considers himself/herself to be retired.

Item 2j – Off-farm work

Report how many days the operator(s) worked outside this operation for at least 4 hours with pay in 2017. Include time spent working on someone else's farm. Mark the appropriate box.

Item 2k – Living on operation

Mark whether the operator listed at the top of the column lived on this operation at any time during 2017.

Item 2l – Year began to operate THIS operation

Report the first year the operator listed at the top of the column began to operate any part of THIS operation on a continuous basis through 2017.

Item 2m – Year began to operate ANY operation

Report the first year the operator listed at the top of the column began to operate ANY farm operation.

Item 2n – Served in U.S. armed forces

For the operator listed at the top of the column, mark the appropriate box indicating the current status of military service, if any.

Item 2o – Number in household

For column 1, report the number of persons living in the operator's household. For columns 2, 3, and 4 report the number of persons living in each operator's household, but enter "0" if this operator was counted in a previous column.

Item 2p – Hired manager

Indicate whether the operator listed at the top of the column was a hired manager for this operation.

Item 3 – Specific decisions

Indicate whether the operator listed at the top of the column was involved in these specific decisions as of December 31, 2017. Mark all that apply

Item 3a – Day-to day decisions

For the person listed at the top of the column, check the box if this operator participated in day-to-day decisions for this operation as of December 31, 2017.

Item 3b – Land use and/or crop management decisions

For the person listed at the top of the column, check the box if this operator participated in land use and/or crop management decisions for this operation as of December 31, 2017.

Item 3c – Livestock decisions

For the person listed at the top of the column, check the box if this operator participated livestock management decisions for this operation as of December 31, 2017.

Item 3d – Record keeping and/or financial management

For the person listed at the top of the column, check the box if this operator participated in record keeping and/or financial management for this operation as of December 31, 2017.

Item 3e – Estate planning or succession planning

For the person listed at the top of the column, check the box if this operator participated in estate planning or succession planning for this operation as of December 31, 2017.

Item 4 – Principal operator

Of the persons listed in columns 1-4, enter the number of the person who is most responsible for decisions on this operation. For the remainder of the questionnaire, all references to the "principal operator" will be to this person.

Item 5 – Principal operator's spouse

If the principal operator had a spouse, mark "Yes" and continue. Otherwise, mark "No" and go to Section 34.

Item 6 – Spouse already listed

If the principal operator's spouse is already listed in columns 1-4 above, mark "Yes", enter the number of the column containing the principal operator's spouse in Item 6a, and go to Section 34. If not, mark "No" and complete Items 7-11.

Items 7-10 Spouse characteristics

These items are the same as Items 2d-g earlier in this section.

Item 11 – Does spouse make decisions

If the principal operator's spouse makes decisions for this operation, mark "Yes". Otherwise, mark "No".

5.14.2 Section 34 – Farm Labor and Management

These items record the hours of labor used in farming, and provide the information (1) to estimate the labor required to produce agricultural products, (2) to study the effects of agricultural policy changes, and (3) to measure the well-being of farm households. The data obtained from these questions are the only information collected annually about the total hours worked on the farm, whether paid or unpaid.

Labor used in agriculture:

Labor is an important input in agriculture. About half of the labor used in agriculture is provided by farm operators and their families. Most of the time farm families do not pay themselves a wage or salary. The collection of this data pictures how respondents use their time and allows for an estimate of the cost of using it in the production of agricultural products. Regardless of who is providing labor, the labor hours could be either paid or unpaid. Labor expenses associated with hired labor are reported in Section 29.

Policy analysis:

Information on how labor is allocated is also used to study the effects of different policies. Policy changes can affect how much agricultural output is produced and the supply of product affects the prices farmers receive for their product. One way in which policies affect agricultural output is through their effects on how farm families spend their time.

Farm household well-being:

Farm families can allocate their time to a variety of activities, some of which earn them income and some of which do not. In addition to working on the farm, the majority of farm families have someone in the household who also works off the farm. Since most of the income of most of the

farm families comes from working off the farm, knowing both where families spend their time and where they earn their income provides policy makers and others with an understanding of the returns to farming compared to other activities of the household and leads to a better understanding of the well-being of farm operator households.

Item 1 – Unpaid workers

Report the number of workers who worked without a wage or salary on the operation in 2017. Unpaid workers could include non-operator partners or family members who are not operators. Record the number of unpaid workers regardless of age or length of the time working, **excluding** the operator.

Item 2 – Hired workers

Report the number of paid farm or ranch workers, including paid family members, who worked on this operation in 2017. Hired labor includes bookkeepers, office workers doing farm business, maintenance workers, field hands, machine operators, etc.

Item 2a – Hired workers less than 150 days

Report the number of hired farm or ranch workers, including paid family members and office workers, who worked on this operation less than 150 days in 2017. **Exclude** contract labor.

Item 2b – Hired workers 150 days or more

Report the number of hired farm or ranch workers, including paid family members and office workers, who worked on this operation 150 days or more in 2017. **Exclude** contract labor.

Item 3 – Migrant workers

Report the number of foreign and domestic migrant workers who worked on the operation at any time during 2017. The definition of a migrant worker is a farm worker whose employment requires travel that prevents the worker from returning to his or her permanent place of residence the same day. **Include** contract workers.

Item 4a – Principal operator's hours of farm/ranch work

Ask the respondent to report the principal operator's average hours per week working on the farm/ranch, for the four different 3-month periods. The respondent should be able to approximate the average number of hours per week in each quarter because the quarters roughly correspond to the four seasons. These items should be recorded for the principal operator, whether he/she is a hired manager or not. Record all of the hours of farm work, even for operators who only work for a few hours a week on the farm (bookkeeping, running errands, etc.). **Include** all work done for the farm business. **Include** both paid and unpaid hours.

Some respondents may say they do not spend any time working on their operation. This is particularly true of those whose entire operation is enrolled in the CRP. These respondents should count the time spent on oversight, paperwork, filing income tax forms, and even the time spent completing this interview! Section 29, Item 23 instructions give examples of agricultural work, and principal operator respondents should include hours spent in any of these activities. There should almost always be hours worked in at least one quarter for every operation. In Item

4a, record the hours of work regardless if they are paid (meaning the operator received a regular wage or salary for this work) or unpaid hours. If any of the hours reported in 4a are for a wage or salary, there should be cash wages to the operator reported in Section 29.

Item 4b – Principal operator's spouse's hours of farm/ranch work

Record all of the spouse's hours of farm work, even for spouses who only work a few hours a week on the farm (bookkeeping, running errands, etc.). **Include** all work done for the farm business. **Include** both paid and unpaid hours.

Some respondents may say that the operator's spouse does not spend any time working on their operation. This is particularly true of those whose entire operation is enrolled in the CRP. These respondents should count the time spent on oversight, paperwork, filing income tax forms, and even the time spent completing this interview! Section 29, Item 23 instructions give examples of agricultural work; all hours spent by the operator's spouse in any of these activities should be included. In Item 4b, record spouse's hours of work regardless if they are paid (meaning the spouse received a regular wage or salary for this work) or unpaid hours. If any of the hours reported in 4b are for a wage or salary, there should be cash wages to the spouse reported in Section 29.

Item 4c – Other household members and other operators' hours of farm/ranch work

Record the hours all other household members, and all operators other than the principal operator and spouse, worked on the farm/ranch. **Include** both paid and unpaid hours.

Other operators include those persons responsible for the day-to-day management decisions for this operation, and may include hired managers. Hired workers hours are reported in 4e below. Other household members may include other operators. If multiple people fit this description, record the TOTAL average number of hours worked per week. Do not include the hours of the principal operator and spouse, which should be reported in Items 4a and 4b above, respectively.

Example:

The principal operator has 2 sons, who each work 15 hours/week on the farm every quarter. Record 30 in each box for Item 4c.

Item 4d – Other unpaid labor hours

Ask of all other workers, i.e. all workers who were not operators or household members.

Record the sum of hours per week provided by other unpaid workers who worked on the farm, who were not operators and not household members. **Include** unpaid volunteers and interns, but **exclude** custom hire and contract labor.

Item 4e – Other paid labor hours

Ask of all other workers, i.e. all workers who were not operators or household members.

Record the sum of hours per week provided by other paid workers on the farm, who were not operators and not household members. **Include** paid volunteers and interns, but **exclude** custom hire and contract labor.

5.14.3 Section 35 – Ag Activity on Reservations, Pueblos, & Service Areas

Item 1 – Land within borders

Report “Yes” to item 1 and complete this section if this operation had cropland or livestock within the borders of an American Indian Reservation, Pueblo, or Service Area. If the response is “No,” go to Section 36.

Item 2 – Name and State of agricultural activity

Print the name of the American Indian Reservation, Pueblo, or Service Area and State where the agricultural activity was located.

Item 3 – Acres used for livestock or cropland

Report how many total acres this operation used for cropland or livestock within this Reservation, Pueblo, or Service Area in 2017. Include deeded acres owned or leased from others. Exclude land used on a per-head or Animal Unit per Month (AUM) basis. If all land used on the Reservation is AUM grazing land, then 0 acres is the proper entry.

Item 3a – Harvested cropland

Report how many of the acres reported in Item 3 were harvested cropland.

Item 4 – Livestock within borders

Mark the appropriate “Yes” or “No” box whether this operation had any livestock on the American Indian Reservation, Pueblo, or Service Area in 2017. Include livestock on land used on a per-head or animal unit month (AUM) basis. If the response is “No,” go to Section 36.

Item 4a – Percent of livestock within borders

If the response to item 4 was “Yes,” then mark the box of the percent range that best represents the percentage of this operation’s livestock that were on the Reservation, Pueblo, or Service Area on December 31, 2017. If the response is “No,” go to Section 36. Mark only one box.

5.14.4 Section 36 – Type of Organization

Item 1 – Ownership interest by operator and relatives

The purpose of this question is to accurately classify farm operations as family farms, because sometimes family members who share the ownership of the farm do not all live in the same household. For the purposes of the next three sections, we are referring to the “principal” operator as the person identified in Section 33 as being most responsible for making decisions about the farm operation.

Report whether any of the operators, members of his or her household, and/or persons related to the operator by blood, marriage or adoption own more than 50 percent of the assets of this farm or ranch operation. Consider only farm or ranch assets owned – not rented or leased – by this operation, and **exclude** the assets held by non-family landlords and contractors.

Check 'Yes' for Item 1 if this is the case. Check "No" if this is not the case.

Persons related to the operator by blood, marriage, or adoption may live outside the operator's household.

DO NOT include non-family landlords, contractors, or lenders as those with ownership interest.

Item 2 – Number of owners of the operation

Report the number of owners for the farm operation in Item 2. Do not count landlords, contractors, or lending institutions that may have a lien on the operation.

Item 2a – Percent ownership interest in operator's household

Report the farm asset ownership interest for this operation, in percentage terms, that the principal operator and those living in his or her household have in the farm operation. The purpose of this question is to develop an estimate of the farm's contribution to the net worth of the farm household. The total net worth of the farm household is calculated by adding its share of the net worth of the farm business to its non-farm net worth (from Section 37).

Item 3 – Limited Liability Company

Check 'Yes' for Item 3 if the operation is organized as a Limited Liability Company (LLC) under State law. Check "No" otherwise. How a farm is treated for tax purposes does not change the fact that the business is legally a Limited Liability Company. Any of type of legal status in question 4 may also be organized as an LLC under State law.

An LLC is a business organization which provides limited liability for the owners at the State level. Some States may recognize Limited Liability Partnerships (LLPs) in which the individual partners are protected from liabilities of the partnership.

Most LLCs with more than one member are generally considered partnerships for both Federal and State tax purposes. When an LLC has only one member, the fact that it is an LLC is ignored or "disregarded" for the purpose of filing a Federal tax return. It is treated as a proprietorship for tax purposes, unless an election to be treated as a corporation is made. If a single member of an LLC is a corporation, it is treated as a C-Corporation or an S-Corporation, depending on its charter.

Item 4 – Operation's legal status

For this item, we want to record the operation's legal status as a business organization. This does not mean how decisions are made for the operation on a day-to-day basis. Therefore, the answer to this question may be different than the answer to the question on day-to-day decision-making in the screening section of this questionnaire.

Responses to this question are used for a variety of purposes including classifying farms in the U.S. Department of Commerce's National Income Accounts and estimating after-tax income. Select the organization used for tax purposes, by checking the appropriate box.

1) Family or individual (sole or family proprietorship):

A farm operation that has no partners and no shareholders. The proprietor is personally liable for all the firm's obligations. The proprietor, who is regarded as self-employed, bears all the costs and keeps all the after-tax profits, filing IRS Form Schedule F. As a result, the operator typically does not have a fixed salary or cash wages recorded in Section 29, Item 24a. Any operators who insist that they receive a salary in Section 29, Item 24a and is an individual operation should be noted for the office.

Individual operations include a single-member Limited Liability Company (LLC) taxed as a sole proprietorship. Consider an operation that is operated as a husband-wife team to be a sole proprietorship, unless it is legally organized as a partnership or some other legal form.

2) Legal partnership:

Farm business operations owned by two or more persons who agree to abide by a partnership agreement. Partners must be owners but do not need to be identified as an operator. The partnership agreement sets out how management decisions are to be made and the proportion of the profits to which each partner is entitled. **Exclude** arrangements that do not involve jointly operating a farm or ranch, such as landlord-tenant arrangements.

Partnerships include general partnerships where all partners bear unlimited liability for the operation's debts as well as most Limited Liability Companies (LLCs) with more than one member and Limited Liability Partnerships (LLPs). The partners pay personal income tax on their share of the profits. Formal, legal partnerships file IRS Form 1065. Note that not all LLCs are treated as partnerships; LLCs can also consist of only one member, where that member can be either an individual or a corporation.

Partnership questions – (Item 2 a-b)

a – Registered under State law

For partnerships, answer the "YES"/"NO" question as to whether the partnership is registered under State law.

b – Number of Partners

For partnerships, record the number of partners in the operation in this item.

3) C – Corporation:

Indicate whether or not the corporation is a C-Corporation. Generally, a corporation is a business entity chartered under a State or Federal statute, or under a statute of a federally recognized Indian tribe, if the statute describes or refers to the entity as incorporated or as a corporation, body corporate, or body politic. It is also regarded as a corporation if the business entity is organized under a State statute and described by the statute as a joint-stock company or joint-stock association. For the purpose of Federal taxation, corporations are defined specifically under instructions for IRS Form 8832 (Entity Classification Election). C-Corporations also include single-member limited liability companies (LLC) taxed as a C-Corporation.

A corporation is legally separate and distinct from its owners (called share- or stockholders). The corporation is formed by filing articles of incorporation with the authority, which returns it with a certificate of incorporation; the two documents together become the corporate charter. The corporation is regarded by the courts as an artificial person and thus may own property, incur debts or make loans, sue or be sued, own assets and pay taxes.

The corporation's chief distinguishing features are:

- 1) Limited liability—owners (shareholders) can lose only what they invest;
- 2) Easy transfer of ownership through sale of shares of stock;
- 3) Continuity of existence: i.e.; the operation does not cease to exist when one or more of its owners die.

The most important aspect of a corporation is limited liability. That is, shareholders are not held personally liable for the corporation's debts. Shareholders elect a board of directors who appoint and oversee the management of the corporation. Although a corporation does not necessarily have to be for profit, the vast majority of corporations are set up with the goal of providing a return for its shareholders.

Corporations pay Federal income taxes. Corporations must file income taxes separately from its owners. C-corporations file IRS Form 1120. Owners pay individual income tax only on money they draw from the corporation in the form of salaries, bonuses, and dividends.

4) S – Corporation (small business corporation):

Indicate whether or not the corporation is an S–Corporation. The “S-Corporation” (for small business corporation) is a form of corporation that meets certain requirements (see IRS Form 2553). This gives an S-Corporation the benefit of incorporation while being taxed on the same basis as a partnership or sole proprietorship. This means that any profits earned by the corporation are usually not taxed at the corporate level, but rather at the level of the shareholders. However, an S-Corporation may still owe tax on certain income. S-Corporations also include single-member Limited Liability Companies (LLC) taxed as an S-Corporation, reporting income and expenses on Form 1120S.

5) Other:

If this operation is any other kind of organization not readily classified in the above-mentioned categories, check the “Other” box. Some examples are:

- **Estate** – Undivided property still in, or subject to, probate.
- **Trust** – The farm is operated by a person as trustee for someone else who is not of age, or may be in a hospital, institution, or is otherwise unable to carry on his/her own business. Estate or trust may be further defined as a property administered for the benefit of another individual or organization. Estate or trust may also be defined as a fund of money or property administered for the benefit of another individual or organization.
- **Cooperative** – Non-taxable business organization formed to eliminate “the middleman” and which exists for the production and/or marketing of goods owned collectively by the members who share in the benefits.

- **Grazing associations** – A corporation or cooperative mutually operated for the purpose of aiding in the conservation, restoration, improvement, development and utilization of natural forage resources where a grazing area has been acquired for joint use by its members.

Item 5 – Number of households that shared net farm income

Determine if any households, other than the principal operator's, share in the net farm income of the operation. If so, record the number of *other* households (not including the principal operator's) that shared the net income from the farm business in Item 5a.

Item 6 – Is the operation a C-Corporation?

Report whether this operation is a C-Corporation **OR** an LLC that chose to file as a C-Corporation.

**If this Item is checked "Yes", continue on to Item 6a.
If this Item is checked "No", skip 6a and go to Item 6b.**

Item 6a – Income received from C-Corporation

Record dividends received by operator's household from the Farm Operation if the operation is a C-Corporation.

Note: After answering Item 6a, **skip Item 6b** and proceed to Section 37.

Item 6b – Income received by household from farm business, except if the farm is a C-Corporation

For the purposes of calculating the total income of the principal operator's household, it is necessary to identify their share of farm profits (or losses). Record the percent of the farm operation's net income the operator's household is entitled to receive if the operation is not a C-Corporation.

5.14.5 Section 37 – Farm Operator Household Income, Assets, & Debt

5.14.5.1 Household Income and Spending: Items 1-2

Item 1 – Off-farm income (cash income from sources other than this farm operation)

To understand the economic situation of agricultural producers, it is important to know how much outside income is available to farm/ranch households. The request for income by total household income, operator, and spouse, for Items 1a, 1b, and 1c recognizes that there can be multiple sources of income for the household by each household member, and that the contribution of each should be included. Ask for income received by source, including wages or salaries from off-farm work, income from operating another farm or any other business, cash or share rent from other farming operations, interest, dividends, capital gains/losses from the proceeds of sales other than from this farming operation, retirement, social programs, and other sources. The breakout is to assure that income from each of these sources is considered by each respondent. This also allows us to analyze how the composition of income may be

affected by differences in operator or farm characteristics and to align farm and off-farm income with the hours worked on and off the farm.

Note: the total income received from the household in item 1a should be equal to or greater than the sum of the principal operator's income and spouse's income.

Value Codes. To make the respondent feel more comfortable answering questions pertaining to the household's financial situation, all information in Section 37 is recorded in value codes. These codes correspond to a range of dollar amounts. For instance for amount between \$1,000 and \$1,999, record value code "4." Negative numbers may be entered by placing a minus sign "-" before a value code. For instance, a loss between \$1,000 and \$1,999 should be recorded as value code "-4." If no income was received (zero income), check the "None" box and/or enter a "1". When using value codes a code "1" indicates zero.

For the categories of off-farm income, record the value code that represents off-farm income for the operator, operator's spouse and the total household income for the year for Items 1a-1c. For items 1d-1j, enter the value code that represents off-farm income for the entire household for the year.

Include:

- the principal operator
- the spouse of the principal operator
- all other members of the operator's household. If an operator lives with parents, or other adults, any income earned by these household members (Social Security, off-farm jobs, net income from other farms, etc.) must be included.

Exclude:

- landlord's share
- other partners in a partnership, unless they lived in the same house as the operator

Note: If NO spouse was reported in the previous sections, please leave the entire spouse column blank.

Item 1a – Off-Farm Wages or Salaries

Report the off-farm wages, salaries, and tips before withholding separately for the operator, operator's spouse and the household.

Item 1b – Net Cash Income from Operating Another Farm or Ranch

Report the net cash income from operating other farms or ranches, net of depreciation. Report the income separately for the principal operator, spouse, and household.

Item 1c – Net Cash Income from Operating An Off-farm Business

Report the net cash income from operating any non-farm businesses, net of depreciation. Report the income separately for the principal operator, spouse, and household.

Items 1d-1j – Other Sources of Income

For Items 1d-1j, report total household income.

Item 1g – Proceeds from the sale of farm and non-farm capital assets

Include the proceeds from the sales of capital assets of this farming operation. **Include** the proceeds from the sales of farm assets of other farming operations and the sale of non-farm capital. **Include** the proceeds received from selling an easement (i.e., a permanent or long-term (30-year) easement, sale of development rights, mineral rights, cropping rights, etc.) or other partial interest in land. Generally, an easement permanently restricts use of the land and the landowner typically receives payment in one lump sum. For example: The operator sold a rental house in town for \$100,000. The house had a mortgage balance of \$50,000 at the time of sale. At settlement, (ignoring real estate commissions and other closing costs) the mortgage was paid and the operator received a check for \$50,000. The total proceeds from this sale are \$50,000.

Item 1g (i) – Recognized gain/loss on the sale of farm & non-farm capital assets

There may be tax consequences when a capital asset is sold. Certain assets can be exchanged for “like-kind” assets in tax-free transactions. Report recognized taxable gain/loss associated with the sale of farm assets, assets from other farms, and non-farm assets here. **Include** gains or losses from selling an easement (i.e., a permanent or long-term (30-year) easement, sale of development rights, mineral rights, cropping rights, etc.) or other partial interest in land. Gains/losses on the sale of capital assets are essential in estimating an after-tax farm household income measure. Gains/losses are computed as the difference between the sale price and the seller's tax basis in the property (cost plus improvements less accumulated depreciation). In the example above, the operator sold the rental house for \$100,000; it had a \$50,000 mortgage. If the operator had originally paid \$40,000 for the house, spent \$10,000 on an addition, and had taken \$15,000 in depreciation, the basis in the house would be \$35,000 ($\$40,000 + \$10,000 - \$15,000$). As a result, at the time of sale the operator would have a recognized taxable gain of \$65,000 ($\$100,000$ sale price less $\$35,000$ basis).

However, sellers often defer the payment of these taxes, under certain conditions, by purchasing a replacement property in a tax-free exchange. Ask the respondent if the sale of the property involved a tax-deferred like-kind exchange. Section 1031 and Starker exchanges are common forms of like-kind exchanges.

Item 1h – Income from private pensions & private disability payments

Record the value code representing the amount of private pensions and private disability payments.

Item 1i – Income from public sources

Record the value code representing the income from public sources. Examples of public sources include Social Security, military and other public retirement, veteran's benefits, public disability, and other public assistance.

Item 1j – Other off-farm income

Record the value code representing the off-farm income from sources other than the ones mentioned above. Examples include alimony, annuities, net income from estates or trusts, regular contributions from person(s) not living in this household, net rental income from non-farm properties, and royalties from mineral leases.

Item 2a-j – Household spending

Because farm businesses and households are linked, household expenditures are important to understand the financial viability of both the farm business and household. Expenses are reported for the year for each general category. If the operator's dwelling is owned by the farm operation, do not report rent, mortgage interest, or property taxes in Section 37. These expenses should be recorded in Section 29 with other farm expenses.

5.14.5.2 Off-Farm Assets Owned by Operator and Household: Item 3

This question applies to the non-farm assets of the operator's household for which data was not previously reported. Assets of the operation were reported in Section 30. **Include** the value of the operator's dwelling here if it is owned separately from the operation and excluded from farm business assets.

Record the value code which includes the value of assets owned by the operator and members of the operator's household SEPARATELY from the operation on December 31.

Item 3a – Financial assets in non-retirement accounts

Record the value code which includes the value of household financial assets held in non-retirement accounts. Income generated by assets in non-retirement accounts is generally taxable in the current year. Such accounts include CDs, mutual funds, stocks, bonds, taxable brokerage accounts, and money market accounts. Include the cash value of life insurance policies.

Item 3b – Financial assets in retirement accounts

Record the value code which includes the value of household financial assets held in retirement accounts. Income generated by assets in retirement accounts is generally NOT taxable in the current year. Such accounts include Regular IRAs, Roth IRAs, 401(k)s, 403(b)s, Keogh accounts and other tax-deferred accounts. Investments in these accounts generally include financial assets that can also be held in taxable accounts.

Item 3c – Operator's dwelling

Record the value code which includes the value of the operator's dwelling **if it is not owned by the operation and recorded in Section 30**. Exclude other personal use homes, such as vacation or second homes.

Item 3d – Other real estate

Record the value code which includes the value of any other farms, residential rental, commercial, industrial, or other real estate owned by members of the operator's household. **Include** other personal use homes, such as vacation or second homes.

Item 3e – Other businesses

Record the value code which includes the value of any other businesses that are not part of this farm.

Item 3f – All vehicles

Record the value code of the non-farm share of all vehicles. **Include** such items as RVs as well as non-farm share of cars and trucks.

Item 3g – Other assets

Record the value code which includes the value of any other assets not reported elsewhere. Furnishings are an example of what would be reported here.

5.14.5.3 Off-Farm Debt: Items 4-5

Item 4 – Off-farm debt

Debt is classified as business or household depending on the purpose of the loan. All farm and household debt should be recorded in either Section 32 or in Section 37 Item 4, and recorded only once. **Item 4 applies to the operator's household only, not to the operator's farm business.**

Record the value code which includes the value of debts owned by the operator and members of the operator's household SEPARATELY from the operation on December 31.

Exclude loans obtained for farm and household purposes that were reported in Section 32, or household debt, credit cards, etc. used to finance farm business expenses. Report all such debts in Section 32.

Item 4a – Mortgages on operator's dwelling

Record the value code which represents the amount of household mortgage debt on the operator's dwelling, if not owned by the farm operation. **Include** home equity loans, and other lines of credit secured by the operator's dwelling. **Exclude** if the purpose of the line of credit was for this farm business; it should be recorded in SECTION 32, not in Item 4.

Item 4b – Mortgages on other real estate

Record the value code which represents the amount of household debt for other real estate properties, such as other personal homes, residential / commercial properties, and other farms. **Include** other personal homes. **Include** any lines of credit secured by other real estate.

Exclude if the purpose of the line of credit was for this farm business; it should be recorded in Section 32, not in Item 4.

Item 4c – Other businesses loans

Record the value code which represents the amount of debt associated with non-farm business loans. These businesses are independent of the farming operation.

Item 4d – Personal loans

Record the value code which represents the amount of household debt in the form of personal loans such as credit card debt, auto loans, medical bills, and unpaid taxes. **Exclude** if the purpose of the credit card debt was for the farm business; it should be recorded in Section 32, not in Item 4.

Item 4e – Other off-farm debt

Record the value code which represents the amount of household debt other than what has been mentioned above.

Item 5 – Non-farm debt secured by farm assets

The purpose of this question is to examine the effect that non-farm debt has on the financial ratios of the farm business, specifically on debt/asset and debt/equity ratios.

Record the value code which represents any debt owed by the operator's household for non-farm business purposes (as the respondent noted in previous question), which used any farm assets (such as farmland or any other assets reported in Section 30) as collateral or security.

5.14.5.4 Previous Year Income: Items 6-8

The definition of a Limited Resource Farm requires two consecutive years of sales, operating income, and off-farm income data. Items 6-8 ask for previous year data so Limited Resource Farms can be identified when combined with the current report.

Item 6 – Total value of farm sales in previous year

Record the value code which represents the respondent's best estimate of the total value of farm sales in the previous year.

Item 7 – Net operating income in previous year

Record the value code which represents the respondent's best estimate of net operating income for the farm in the previous year. In cases where the respondent reports a negative value for net farm income in the previous year, indicate a minus sign before the value code. For example, code "-3" for losses between \$500 and \$999.

Item 8 – Total off-farm income in previous year

Record the value code which represents the respondent's best estimate of total off-farm income in the previous year for the operator and the operator's household members. In cases where the respondent reports a negative value for total off-farm income in the previous year, indicate a minus sign before the value code. For example, code "-3" for losses between \$500 and \$999. Total off-farm income should include all of the income sources listed in the current year off-farm sources (item 1 in this section), except for the sales of capital assets and the capital gains from the sales of those capital assets. Include such items as Social Security, private pensions, and/or other retirement payments.

5.15 Conclusion

Item 1 – Possible Duplication

It is important that we avoid duplication on our list of farms and ranches. Indicate if it is possible that the information on this form for this operation would be reported by another operation or under another name or address. If yes, print the other name, address, city, state, and zip code.

Item 2 – Additional Farm or Ranch

Indicate whether the individual named on the label makes any day-to-day decisions for another farm or ranch. If yes, indicate whether a report form was received for this additional farm or ranch in item 2a and print the name of the additional farm or ranch and telephone number where the respondent can be reached.

Item 2b – Including All Data

Indicate whether all the data for the additional farm or ranch was included in this report form. Do not make changes to the data in this report, regardless of the answer.

Item 3 – Survey Publication

After completing the interview, ask the respondent if he/she would like to receive a copy of the survey results. The *Farm Production Expenditures Report* will be published in August. Check “1” for YES.

The respondent can also receive reports by subscription free of charge direct to their e-mail address. If the respondent would like to subscribe, the respondent should go to the NASS Home Page at www.nass.usda.gov. In the “Publications” drop down menu, select the appropriate link under “Receive Reports by Email”.

Item 4 – Respondent Information

Please record the respondent's name and phone number in case you or your Regional Field Office needs to re-contact them to verify or clarify a question.

Date Completed (Item Code 9910)

Record the date the questionnaire was completed. Enter the date in MMDDYY format on the lines provided in Item Code 9910. For example, if the interview was completed on February 26, 2018, enter 02 26 18 in the date cell.

Thank the respondent for taking the time out of their busy schedule to fill out the ARMS Phase 3.

5.16 Administrative Items

The following items are located under Item 4 and need to be filled out prior to turning the questionnaire in to your supervisor or sending to the Regional Field Office.

Ending Time – (Item Code 0005)

Record the ending time (military time) of the interview.

Exclude the time you spent reviewing the questionnaire or verifying calculations by yourself after you completed the interview. Be sure the ending time is after the beginning time entered on the face page.

Accurate reporting of interview time (beginning and ending time) is critical for monitoring and evaluating survey burden and cost.

Time in Hours – (Item Code 0008)

For interviews that require multiple contacts (personal or phone), you should write the date and time the interview began in a note on the face page.

If more than one person was interviewed to complete the interview, times should reflect the approximate total time for the questionnaire.

Accumulate the hours and minutes of interview time and write the total on the back page in the 0008 box. This box is filled out in tenths of an hour, so a 90-minute interview would be reported as 1 hour and 5 tenths.

If Item Code 0008 is used, there is no need to record a beginning or ending time.

Response Code – (Item Code 9901)

Upon completion of the interview, enter the Response Code in Item Code 9901 on the Back Page of the questionnaire. Response Codes are:

Code 1 = **Complete** (Good Reports, Out-of-Business, and Abnormal Farms)

Code 2 = **Refusal**

Code 3 = **Inaccessible / Incomplete**

Respondent Code – (Item Code 9902)

The Respondent Code identifies the person who was interviewed. Enter the code identifying the person who provided most of the data in Item Code 9902.

Code 1 = **Operator or Manager**

Code 2 = **Operator's Spouse**

Code 3 = **Accountant or Bookkeeper**

Code 4 = **Partner**

Code 9 = **Other**

Record the respondent's name and phone number in Item 4.

Mode Code – (Item Code 9903)

The Mode Code (Item Code 9903) identifies how the person was interviewed.

Code 2 = **Telephone**

Code 3 = **Face-to-Face**

Enumerator Number – (Item Code 9998)

Record your 5-digit enumerator ID number in Item Code 9998.

Optional Use

Item Codes 0093, 0003, and 0009 (located on the front and back pages) are reserved for your Regional Office use. These cells should remain blank unless your Regional Office directs you otherwise.

Name

Sign your name in this box.

Review the entire questionnaire before forwarding it to your Supervisor or the Regional Field Office. Make sure all items are complete, including 'Yes' and 'No' boxes checked, and dashes are entered in cells when the response is 'None' or 'No' as appropriate. Make sure notes are present, legible, and complete for unusual situations.

6 Additional Questions for Version 2 - Wheat

6.1 Section 29 – Expenses

Several expense questions ask for the amount of the dollars spent that was for the WHEAT enterprise. The values for these questions must be less than or equal to the total amount spent on that expense for the entire operation.

Additional Expense Questions for WHEAT enterprise:

- Item 1a – Seeds
- Item 2a – Nutrients, Fertilizer
- Item 3a – Agricultural Chemicals and Biocontrols
- Item 9b – All Fuels, Oils, and Lubricants
- Item 10a(i) – Electricity for Irrigation
- Item 10b(i) – Electricity for Drying
- Item 11a – Purchased Water for Irrigation
- Item 14a – Repairs, Parts, and Accessories
- Item 15b(i) – Maintenance and Repair of Irrigation Equipment and Pumps
- Item 17a(i) – Federal Crop Insurance
- Item 23a – Cash Wages
- Item 25a – Payroll Taxes
- Item 26a – Benefits for Hired Labor
- Item 27a – Contract Labor
- Item 28c – Custom Work

Other Additional Expense Questions in the WHEAT version:

- Item 10a – Electricity for Irrigation (farm)
- Item 10b – Electricity for Drying (farm)
- Item 10c – Electricity for Specialized Livestock Facilities
- Item 15a – Maintenance and Repairs of Specialized Livestock Facilities
- Item 15b – Maintenance and Repairs of Irrigation Pumps (farm)

6.2 Section 38 – Wheat Drying

This section collects data necessary to estimate the drying costs associated with wheat. Drying costs are part of the total costs of producing wheat and will be added to the other costs collected in Phases 2 and 3. Drying costs include costs for custom drying, the fuel and labor used for on-farm drying, and the capital costs associated with the facilities used for on-farm drying.

Item 1 – Wheat for Grain Harvested

If the operation harvested any wheat for grain in 2017, mark “Yes” and continue. Otherwise, mark “No” and go to Section 39.

Item 2 – Month Harvested

Report the month, numbered 01 (January) through 12 (December) in which the majority of the 2017 wheat crop was harvested.

Item 3 – Crop Drying

Crop drying can be a considerable part of the operating and ownership costs of commodity production on some farms. Various fuels are used as a heat source to dry grain and electricity is used to power fans that force air through the grain or seed.

Record how much of the 2017 crop harvested was dried by each method. Report either the actual numbers of bushels or percentages of the total crop.

Item 3a – Custom Dried

Custom drying may also be called commercial drying. Custom drying is often done at the local elevator. Also, if drying facilities on another operation were used to dry the crop, record this as custom drying.

Item 3b – Dried by this Operation

This includes on-farm drying. Count the crop as dried only if fuel and/or electricity was used to remove moisture from the crop.

Item 3c – Not Dried

Include the amount of crop that was left to dry completely in the field as not dried.

Item 4 – Cost of Custom Drying

If any of the 2017 crop was custom dried (Item 3a is positive), record the cost of custom drying the crop in either dollars and cents per bushel or total dollars for the entire crop. If total dollars are reported, be sure to include the landlord's share.

6.2.1 Items 5-8: Crop Drying By Operation

These questions should only be completed if any of the wheat crop was dried by the operation (Item 3b is positive). If none of the wheat crop was dried by the operation, skip these questions and go to the Conclusion.

Item 5 – Fuel Type Used to Dry Majority of Wheat Crop

Record the main fuel type used to dry the 2017 crop. If more than one fuel type was used to dry the crop, enter the code for the fuel used to dry the largest portion of the crop.

Item 6 – Moisture Percentage of Wheat Crop at Harvest

Record an estimate of the average percentage points of moisture of the wheat crop at harvest to the nearest tenth.

Item 7 – Labor Hours Used for Drying Wheat Crop

Record an estimate of the hours of each type of labor that were used to dry the 2017 crop. **Include** the time spent unloading and loading the crop, filling and emptying the dryers, and overseeing the drying. **Exclude** custom drying labor and contract labor.

Item 8 – Type of Facility Used

Record the code that represents the primary facility used to dry the 2017 wheat crop.

Item 8a – Number of Facilities Used

Record the number of the (Item 8) facilities used to dry the 2017 wheat crop.

Item 8b – Total Capacity

Record the total holding capacity of the (Item 8a) facilities used to dry the 2017 wheat crop. For continuous flow or batch dryers, report the bushels per hour.