United
States
Department of
Agriculture

National
Agricultural
Statistics
Service

Agricultural
Statistics
Board

Washington, D.C.
20250

Issued:
November 2016

2016

ARMS 3

Agricultural
Resource
Management
Survey

Phase 3

Interviewer's Manual

This page intentionally left blank

Table of Contents

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 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 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 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.

1.3 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;

- used in the estimates of net farm income and provides data on the financial situation of farm and ranch businesses, including the level of assets and debt. ARMS data provide the ONLY National perspective on the annual changes in the financial conditions of production agriculture;

- provides 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 provided 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.

1.4 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.

New technologies make accessing information easier than ever before. Many farmers now own or have access to a computer to review ARMS reports and data summaries on the Internet.

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

1.4.1 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 survey, 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).

1.4.2 ERS Reports & Other Uses of ARMS Data

1. ARMS financial data

All versions of the Phase 3 survey 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 staffs, 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 sources of 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. Today, the farm sector overall is in a strong financial position after several years of generally rising income. However, the potential for lower income and higher interest rates in the future has raised concerns about current trends in the use of debt 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. http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib122.aspx

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. http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib107.aspx

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 farmers were more likely than small farms to receive payments from multiple farm programs; 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, and the like, or through 'intermediated channels' such as local grocers, restaurants, schools, and the like. 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. http://www.ers.usda.gov/media/1763057/ap068.pdf

Beginning farmers and ranchers. The 2014 Farm Bill (the Agricultural Act of 2014) provided 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. http://www.ers.usda.gov/amber-waves/2014-june/beginning-farmers-and-ranchers-and-the-agricultural-act-of-2014.aspx

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.
http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib101.aspx

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.
http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib117.aspx

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 providers programs. The research is on-going, 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 on 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 payment. 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 to target payments so as to increase additionality. http://www.ers.usda.gov/publications/err-economic-research-report/err170.aspx

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 (http://www.ers.usda.gov/publications/err-economic-research-report/err127.aspx)

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 prosed reductions on compliance incentives, and to evaluate alternative policy initiatives that would improve conservation incentives.
www.ers.usda.gov/media/361085/eib94_2_.pdf

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. http://www.ers.usda.gov/publications/err-economic-research-report/err44.aspx

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, 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. http://www.ers.usda.gov/publications/err-economic-research-report/err120.aspx

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. ERS research used 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 confirms 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 will be driven by changes in input prices and consumer demand, with much less of a role for productivity growth. http://www.ers.usda.gov/publications/err-economic-research-report/err158.aspx

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. http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib126.aspx

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. http://www.ers.usda.gov/publications/err-economic-research-report/err200.aspx

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 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. http://www.ers.usda.gov/publications/err-economic-research-report/err205.aspx

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.

4. Crop Production Practices and Costs

Data drawn from 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 2015 ARMS production practices data for oats and cotton 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 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). We must rely on publically available, defensible data as the basis for our analyses.

Recent ERS research on crops:
Multi-cropping practices. Over the last decade, growing demand for agricultural commodities has provided incentives 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. (http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib125.aspx)

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. http:www.ers.usda.gov/publications/err-economic-research-report/err152.aspx

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. http://www.ers.usda.gov/publications/err-economic-research-report/err162.aspx

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_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. http://www.ers.usda.gov/media/1832877/err184.pdf 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 those surveys 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 will publish estimates of GE adoption for those crops.

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 the developments can 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 (genetically engineered) 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 areused to help evaluate the prospects for coexistence of nearby GE and non-GE crop production in the U.S. http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib-149.aspx

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. Peanut and producers were targeted for baseline revisions the 2013 ARMS, while cotton, oats, and hog producers were targeted in 2013. 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 soy 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. http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib-154.aspx

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.
http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib116.aspx

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 plays an important role; ARMS cost of production estimates for 2009 show Gulf Coast production costs to be nearly 20 percent higher, with substantially higher costs for fertilizer, fuel, drying, and land. In turn, the smallest farms, with less 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.
http://www.ers.usda.gov/publications/rcs-rice-outlook/rcs-11d01.aspx

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. http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib-161.aspx

1.4.3 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 of 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.

But the survey in some years 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. But 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 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
- 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
- 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.

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 out until 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) – A written contract with contractees to raise meat-type strain chickens from newly hatched chicks to processing weight. It is a 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) – This is a written 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) – This is a written 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 questionnaires 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
- Ball point pen for completing NAS-011
- Calculator
- Clipboard

3.3 Questionnaire Versions

Version	Color	Version Number
Costs and Returns Report (CRR)	Blue	1
Corn Costs and Returns Report	Yellow	2
Dairy Costs and Returns Report	Green	4

The Face Page of the questionnaire contains the respondent and partner labels. Pre-screening of respondents 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 should 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 respondents, 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 respondents 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 Sample Frame Design 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 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.

You may need to ask Post Office staff or Farm Service Agency (FSA) employees for directions to some operations. Try to do this early in the survey so you can put the information on your map as soon as possible. Tell your supervisory enumerator (or the Regional Office if that is what you are instructed to do) about any operator whose home or office you cannot locate.

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 respondent 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 necessary 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 office 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. 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 the other operations are collected in Section N 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 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 BBBBBBBBB CCCCCC
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
```

Line	Col.(s)	Field	Description	Prism Table.Field Name / Value
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)* **Suppressed on mailed questionnaires*	Reporter.telephone_number (digits 1-3)-(digits 4-6)-(digits 7-10)
	28	L	Comment Flag	
	30-32	M	Supervisor Code (3 digits)	Reporing_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)* **Suppressed on mailed questionnaires*	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 respondents 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 this form is used to help you make sure you are interviewing the correct sampled operation.

The pre-printed information will have the following from the Phase 1 Survey and June Ag Survey:

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

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 same Item from the screening survey. If there is a discrepancy, verify that you have the correct answer.
- You can verify the information on the Information Form. 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 we are using (as a measure of respondent burden) in collecting 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, in hours, by recording the number of hours (to the tenth of an hour) in Item Code 0008. **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, (unless the OpDom status is 99). 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 named on the primary name line is the target. When OpDom=99, the operation name is the key.

Remember: The target name NEVER CHANGES. The person actually operating the farm (the farm operator) may change, but the <u>selected</u> target name is always the person identified on the label.

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. Mark through the names of any partners no longer involved in the operation. Add the names and addresses of any partners who are not listed.

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 Agricultural 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 out 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 a question or problem exists with the operation description information collected during Phase 1, the Regional Office will want you to complete the Screening Supplement. This may be because the screening data were collected from someone other than the operator on the ARMS Phase 1 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 operation 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 with Item 3.

For an operation to qualify as growing a crop, the operator 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 LESS 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) that 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 respondent 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

Operations 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 operation has taken over from the target name on the label, record the name of the operator or operation now operating the land.

This item gives us information needed to update the List Frame when operations have gone out-of-business. Record the name, address, and phone number (if available) of the individual or operation now operating land that used to be operated by the target name

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 (Item Code 9921).
- 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 the Respondent Code, Mode, ending time, date, and enumerator ID information.

Item 7 – Decision-Maker for This Operation

We are interested in how the operation was managed on a day-to-day basis. We do not care what the legal definition of the operation is. 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 operation 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'):

If there were not any other operations OR if this is an OpDom 99 record, 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 0923. 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 or verify the information for the second operation. If the operator had a third operation, complete or verify the information on an additional Screening Supplement for this operation. If the operation on the Face Page is still in business, then you will **complete the Questionnaire for the operation named on the Face Page of the Questionnaire.**

If the Regional 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. We are not interested in the legal definition of the operation.

4.7 Special Situations – Managed Operations

Do not include any operation not already listed for which the target name is a hired manager.

A special situation exists if the operation on the Face Page of the Questionnaire is a managed operation. If the target name is still the hired manager, there is no problem; handle it as you would normally.

If the label for the operation 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).

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 A – Land in Farm/Ranch

5.2.1 Section Purpose

Section A 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:
Non-agricultural 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 - d) – Acres Rented from Others

There are four categories of rented acres:

1) Cash rented acres with the payment being a fixed amount are recorded in item 2a,

2) Cash rented acres with the payment being a flexible amount are recorded in item 2b,

3) Share rented acres are recorded in Item 2c, and

4) Acres used rent-free are recorded in Item 2d.

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 2c)

4) Had free use of the land. (Item 2d)

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 respondent'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. Farmers/ranchers often do not consider the land they rent as including woods or wasteland; they only include the usable land. Even though the farmer/rancher may not consider it that way, the landlord considers the whole parcel rented. If the renter 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 now feature flexible cash rents, in which the actual rent paid may vary with prices, yields, or gross revenues. **Include** flexible cash leases in Item 2b.

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 H, Item 3g or 3i.

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 operation's total farming/ranching operation is the total of Items 1 + 2a + 2b + 2c+2d - 3. Verify this total with the respondent because it is the basis for the rest of the interview. 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 – Acres Considered Cropland

Cropland is any tillable land currently in crop production or land that has previously been tilled and used for crops and could be tilled again without additional improvements.

Include:

1) Land in crop-pasture rotation and cropland used for pasture or grazing during the current year.

2) Land in summer fallow.

3) Idle cropland (no crops planted or harvested in current year).

4) Cropland diverted for government programs (including CRP), unless the land is planted to trees.

5) Fruit orchards, vineyards, nut trees, and citrus groves.

6) Vegetables, melon crops, and other specialty food crops.

7) Nursery crops, turf grass, sod, and Christmas trees.

8) Land in hay crops, including wild hay.

9) Pastureland that has been tilled in the past and the land could be tilled again without first clearing brush, trees, undergrowth, etc.

Exclude:

1) Pasture and rangeland that has never been tilled.

2) Government program acres planted to trees. These acres are woodland.

3) Woodland and wasteland.

5.2.3 Rented Land

5.2.3.1 Land Rented From Others

This section collects information on the cash rent paid and/or the value of the landlord's share of production on land rented from others. It also obtains 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.

Item 6 – 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 A, 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 we skip this question 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:

1) Any government payments landlords received from these acres.

2) 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 8b.

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 N, Item 1c. Also, record any other income and expenditures of the packing shed in Section N and NOT in Sections E through M 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 Sections E through M of the ARMS questionnaire.

Item 7a – 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 Item 1, or rented from others Item 2 and as acres rented to others in Item 3. Record the gross fees paid in Item 8a. The value of the cash rent received for the land administered on an exchange for use basis is recorded in Item 10.

Item 7b – Amount Paid for Pasturing Livestock on Private Land

Excluding contract arrangements, 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.

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 7a.

Item 8a – Landlord's Share of Crop Production (Market Value)

Record the total MARKET VALUE of all commodities from **Section B** 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 8b – 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 **Section C**. 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. This value could be zero if no shared livestock were marketed during the year. In this case, write a note to indicate that zero is valid. 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 C. See section 5.6.3.1 for an example of recording cattle on shares.

Item 9 – 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 A, 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.

5.2.3.1 Land Rented From Others

Item 10 – Cash Rent Received for Acres Rented to Others

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

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

Include:
1) Rent owed to the operation for a previous year received during the reference year. Any rent received in advance for a later year should also be included.
2) Government payments received in association with these acres, including CRP-grasslands and emergency and disaster payments such as noninsured crop disaster assistance payments (NPA).
3) 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:
1) Short-term livestock grazing arrangements where the livestock owner “rents” land to graze livestock for a period of 2-6 months, but the operator will harvest crops from the same land later in the year or has already harvested a crop. The payments received for this short term grazing arrangement should be recorded in Section H Item 3b.

2) The income received from cell phone towers, underground pipelines, roadways, etc. should be included in Section H Item 3i.

3) The income received from windmills, wind turbines, oil wells, etc. should be included in Section H Item 3g.

Item 11 – Share Rent Received for Acres Rented to Others

Do not skip this item even if the operation did not share rent land out during the year. The operation may have received its share of commodities in the reference year for land it rented to others in the previous year. 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.

Item 12 – Value of Land & Buildings on Acres Rented To Others

If land is rented to others (Item 3), record the operator's best estimate of the total market value of all the **owned** land and buildings RENTED TO OTHERS. (This should correspond to acres reported as rented to others in Section A, Item 3.) 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.

5.3 Section B – Acreage, Production, and Cash Sales

5.3.1 Section Purpose

Acreage and production reported for crops are used to develop estimates of the value of crops produced. This information is also important to determine the types of crops grown. For example, are farms diversifying by growing a more varied mix of commodities?

Survey weights will be adjusted/calibrated so that expansions of harvested acreage for many crops reported in these sections match official NASS estimates at regional and national levels.

To avoid double counting crop and livestock value of production, the quantity of hay, grain, and other commodities produced and used on the farm must be subtracted out of total production. For example, grain fed to livestock would be reflected in the value of livestock production rather than grain production. Crops sold are not used on farm and unless livestock are present, most commodities are not 'used on farm'.

5.3.2 Crop Acreage and Production

5.3.2.1 General Instructions

This section accounts for all crops harvested on the selected operation during the year. All harvested acreage figures should be rounded to the nearest whole acre, except potatoes, tobacco, and nursery/greenhouse crops, which are reported to the nearest tenth of an acre. Total production and 'used on this operation' must be reported in the unit pre-printed on the questionnaire.

For operations that were in business for only part of the year, collect data for the part of the year when they were operating.

Acres not yet Harvested:
If a planted crop would normally be harvested before December 31 (corn, soybeans, etc.) but harvest was delayed until the following year because of weather conditions, equipment problems, etc., it should be included in Column 2 "Acres Harvested," with the estimated production included in Column 3 "Total Production".

Cash or Open Market Sales:
For income received in the reference year, report the dollar amount this operation received after subtracting marketing expenses. Exclude contract sales or removals and landlord's share of sales.

Crop Revenue from Previous Year's Production:
If income was received in the reference year for a crop harvested in a prior year, add those dollars to sales (if any) of the same current year crop sold. If there is no current production of that crop, record the dollars in Column 5 but leave Columns 2 through 4 blank.

5.3.2.2 Crop Columns 1-5

Column 1 – Crop

Most major field crops are reported in this section. The questions for crops always relate to the total acres in this operation recorded in Section A, Item 4. **Include** all crops harvested from these acres, but exclude any crops harvested from land rented or leased to others or worked on shares by others during the year.

This column identifies the crops harvested on this operation during the year. The crops are divided into four categories: Field Crops, Small Grains, Dry Hay Crops, and Other Crops. Within each category, crops of interest are indicated. These may be specific crops, such as corn for grain, or more general, such as fruits, nuts, and berries.

Commodity Specific Instructions

Field Crops:

Corn
Record the acres of corn harvested for grain, seed, silage, or greenchop for all states. Corn harvested for seed should be included as corn harvested for grain. Do not report field corn or sweet corn hogged-off as a harvested crop.

Exclude:
- Sweet corn should be included in All Other Crops.
- Popcorn and high moisture corn (for non-grain purposes) should be included in All Other Crops.
- Do not report field corn or sweet corn hogged-off as a harvested crop.

Cotton
Record all types of cotton harvested. If cotton was grown in a "skip" row pattern, count only the land harvested for cotton, excluding the skip row acreage.

Peanuts
Record only peanuts harvested for nuts.

Exclude peanuts cut for hay; record as “Hay, Dry, All Others”.

Potatoes
Record potato acreage to the nearest tenth of an acre.

Exclude:
- Potatoes produced for home consumption.
- Sweet potatoes should be included in All Other Crops.

Rice
Include only short, medium, and long grain varieties. Brown and wild rice should be reported as All Other Crops. If rice was harvested twice from the same planted acreage (a ratoon crop), count the acreage only once but record all production.

Sorghum
Include milo.

Exclude sorghum-sudan crosses harvested for hay; record as "Hay, Dry, All Others." And sorghum silage; record as "All Other Crops".

Soybeans
Include only soybeans harvested for beans.

Exclude soybeans cut for hay; record as "Hay, Dry, All Others" and soybeans cut for greenchop, haylage, or silage as "All Other Crops".

Tobacco
Include all types of tobacco harvested in the reference year. Record tobacco acreage to the nearest tenth of an acre. If "skip" rows or "sled" rows were present, record only the actual tobacco acreage.

Exclude tobacco transplants that were grown and sold from this operation; record as Nursery and Greenhouse Crops.

Small Grains:

Wheat for Grain
Include all types of wheat (winter, durum and other spring) harvested for grain or seed.

Exclude mixtures of wheat, oats, barley, and other grains planted for use as hay, forage or silage crops. If they were harvested for hay, these mixtures should be recorded in "Hay, Dry, All Others". If they were harvested as silage, they should be recorded in "All Other Crops". If the crop was not harvested (only grazed), do not record it at all.

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 in Item Code 156.

Dry Hay Crops:

Include only acres cut for hay. If a hay crop and haylage are harvested from the same acres, record this as double-cropping with the hay reported in the appropriate line and the haylage reported in "All Other Crops". Haylage is baled at a higher moisture content than dry hay.

Alfalfa and Alfalfa mixtures harvested for dry hay should be recorded under "Hay, Dry, Alfalfa and Alfalfa Mixtures".

All non-Alfalfa hay harvested for dry hay, including wild hay, should be recorded under "Hay, Dry, All Others".

If two or more cuttings of the same crop were made from the same field:

1) Record the acreage only once.

2) Record the total production from all cuttings combined. For example, suppose two cuttings were made from a 50 acre hay field with the first cutting producing 105 tons and the second cutting yielding a total of 65 tons. The total production for the 50 acre crop would be 170 tons (105+65).

3) If hay was cut from the same land from which small grains were harvested for grain,
   a) Record the acreage cut for hay as "Hay, Dry, All Others."
   b) Record the acreage harvested for grain in the appropriate item in the Small Grains section.

Exclude acres "harvested by grazing", straw and stubble, except for the value of sales which is recorded in the item code associated with the grain from which the straw was made.

Acreage from which only grass silage, hay silage (haylage), greenchop, or alfalfa seed were harvested should be reported in "All Other Crops".

Acreage from grass seed such as Bermuda, Sorghum, Alfalfa, etc. should be reported in "All Other Crops".

Other Crops:

Other Oilseeds
Include all other oilseeds harvested (oil and non-oil varieties, and crops such as flaxseed, mustard seed, rapeseed, safflower, and sunflower.

Exclude soybeans and canola.

Sugarcane or Sugarbeets
Record the acreage of sugarcane or sugarbeets harvested during the reference year, regardless of the year planted.

Exclude acreage harvested for seed.

Vegetable Crops
1) **Multiple Cropping** – Record entire acreage of each vegetable crop planted and harvested.
   For example: If 20 acres of radishes were harvested from a field and the field was replanted in radishes and harvested again, record 40 acres harvested.

2) **Sales from Home Gardens** – Record home garden acres harvested only if there were sales from the home garden. DO NOT record vegetables grown only for home use.

3) **Two or More Pickings** – If two or more pickings were made from the same planting, record the acres harvested only once.

Vegetables for Processing
Include all vegetables harvested that were for processing.

All Other Vegetables and Melons
Include all vegetables harvested that were not for processing (i.e. for fresh market) and all melon crops (watermelons, cantaloupes, and other melons).

Fruits, Nuts and Berries
Include all bearing acreage of fruit, nut, and berry crops (including citrus and strawberries).

Exclude non-bearing acres and abandoned acres.

Nursery and Greenhouse Crops
Include flowers, ornamentals, mushrooms, tobacco transplants for sale, harvested sod, Christmas trees, turf grass, hydroponic sprouts, alfalfa sprouts, etc. Record nursery and greenhouse acreage to the nearest tenth of an acre.

All Other Crops
This category is for recording information on all harvested crops not previously recorded in this section. It is a catch-all category for other crops grown and harvested on this operation. For each Other Crop reported, first determine if that crop should have been reported in another category above. If so, record it and all required information in the appropriate category.

Include sweet potatoes, brown and wild rice, haylage, and maple syrup.

Exclude straw and stubble from crops, except for the value of sales which is in the item code associated with the grain from which the straw was made.

Column 2 – Harvested Acres

Report harvested acreage to the nearest whole acre, except for potatoes and tobacco. Make sure the respondent is not reporting planted acres by crop when you are asking only for harvested acres. The total of harvested acres in Column 2 will usually be equal to or less than cropland and total acres in the operation. Double cropping can be the exception to this relationship.

Include:
1) acreage of crops harvested in the reference year.

2) acreage of crops intended for harvest in reference year even if harvest was delayed until the following year due to bad weather, etc.

3) 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 Item Code 157 and as acres of Alfalfa seed harvested in All Other Crops, Item Code 182.

Exclude:
1) 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.

2) acres of previous year's crops not harvested until the reference year due to weather conditions, etc. (However, cash sales of such crops will be included in column 5.)

Column 3 – Total Production

Record the TOTAL PRODUCTION of the harvested commodity. For some respondents, this may require multiplying average yield per acre by the number of acres harvested (column 2) and recording the total. Misrecording yield and not total is a common error.

Production MUST be reported in the unit indicated inside the item code box. If the operator reports production in a unit different from the one indicated, make the quick conversion (cwt = 100 pounds) or be sure to record complete information about that unit, including unit weight. Later, you, or the Regional Field Office, can convert the total production into the standard unit.

If harvest is not complete at the time of the interview, ask the respondent for an estimate of final production from all acres harvested and remaining to be harvested. The crop left on the field is yet to be sold (since it is still on the farm), so the asset value of that crop (estimated production multiplied by price) needs to be recorded in Section J, Item 3a. Record the expenses spent for both the harvested and un-harvested crop during the year in Section I (Farm Expenditures). Be sure to record notes for unusual items.

Include the landlord's portion in the total production.

** **Dry Edible Beans, Vegetables for Processing, All Other Vegetables and Melons, Fruits, Nuts, and Berries, and "All Other Crops"** do not have an applicable response for columns 3 or 4. Only acres harvested (column 2) and cash sales (column 5) are reported for these commodities. Report each area only once in column 2 regardless of how many crops were harvested from the same area.

** Column 3 and column 4 are unique for **nursery and greenhouse crops**. Report the Square Feet under Glass or Other protection for nursery and greenhouse crops under column 3. Report the Acres in the Open for nursery and greenhouse crops under column 4.

Column 4 – Amount of Production Used on This Operation

This column is used to record crops produced on the operation that are used as production inputs and not sold or removed from the operation. Do not record the quantity of the crop sold. Record the quantity of the share of production belonging to the operation that has been (or will be) used on the operation for feed, seed, etc.

Include:
- The landlord share that was used on the operation.

Exclude:
- any production that was (or will be) used for human consumption (record the market value of this production in Section I (Farm Expenditures), Items 29 and 30).
- 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 I, Item 6.

Column 5 – Cash or Open Market Sales minus Marketing Expenses

After subtracting marketing expenses, record the amount received in 2016 from cash sales for field crops. Marketing expenses include check-off, drying, commission, ginning, inspection, storage, and transportation, etc. (Please see Section I for a full explanation of marketing expenses).

Include:
- If the crop was grown in the reference year, record columns 2 through 4, and record current crop cash sales plus all crop sales received in the reference year from crops harvested in previous years. If the crop was not grown in the reference year, columns 2 through 4 should be blank and dollars recorded in column 5.
- CSA sales are considered a cash sale and not a contract.
- The value of straw produced on this operation and sold. Report the straw (crop residue) sales in the appropriate type of grain from which it was made. For example, if wheat straw was sold, include the sales with the wheat for grain value of sales.
- Value of the Cottonseed.

Exclude:
- Marketing Contract sales recorded in Section E, Item 2.
- Fees from Production Contracts recorded in Section F, Item 2.
- Value of landlord share of production, which is recorded in Section A, Item 8a
- Sales from other farm related activities, such as trading and speculation or livestock dealer activities (recorded in Section H).
- Value of sales from land rented to others or worked on shares by others.
- Amount received in the reference year for crops sold in earlier years. This is recorded in Section G, Items 1a and 1a(i) (Accounts Receivable).

5.3.3 Nursery and Greenhouse Crops

The category “nursery and greenhouse crops” includes “commodities grown for human consumption” but does not provide enough information to estimate definitively the value of sales for these crops. There is an upward trend in the numbers for produce farmers who are using greenhouses and other new forms of protection to substitute for or to complement their open field practices. Hoop Houses also known as “high tunnels” are used to extend the growing seasons for farmers in colder climes. Responses to these questions will generate accurate estimates of food grown under glass or other forms of protection. This format will reduce respondent error and NASS analysts’ efforts to identify misclassifications.

Item 3 – Crops for Human Consumption

All farmers growing under protection all crops for human consumption, including vegetables, fruits (e.g., blueberries and strawberries under hoop houses), herbs, etc. answer ‘yes’.

Item 4 – Percent of Sales for Human Consumption

Record the percentage of the value of sales in Item Code 0189 that was for human consumption.

Item 5 – Tunnels or High Hoops

Mark "Yes" if this operation used tunnels or high hoops for nursery crops. Otherwise, mark "No".

5.3.4 Seed Technology

This section collects information on the use of genetically engineered and non-genetically engineered crops.

Item 6 – Seed Varieties Used

Record the number of acres of alfalfa hay, canola, corn for grain, cotton, sugarbeets, or soybeans that were planted from:

Column 1: Genetically engineered (GE) herbicide-tolerant only seed. These varieties are genetically engineered to be tolerant of certain herbicides which would otherwise harm the plant. (Example: Glyphosate Resistant—Roundup Ready)

Column 2: GE, Bt only varieties. Genetically engineered to contain proteins that make the plant resistant to certain types of insects. (Example: Yield Guard Corn, Boll Guard Cotton)

Column 3: Respondent should include in column 3 the acreage planted with varieties with drought-tolerance traits (examples: DroughtGard, Optimum AQUAmax, Agrisure Artesian) whether or not these traits are stacked with other traits such as herbicide tolerance and/or insect resistance. The horizontal sum may be greater than the total harvested acres of that individual crop.

Column 4: Conventional seed varieties which do not contain any genetically engineered traits

Column 5: Acres planted to Non-GE varieties (Column 4) which will be maintained for Identity Preserved Markets. This grain is not mixed or co-mingled with any other grain in an effort to preserve the quality or trait that variety may possess.

5.3.5 Risk Management

This section asks farmers about their use of five different risk management tools: crop insurance, futures markets, options markets, marketing through cooperatives, and on-farm storage. The questions primarily focus on use of these tools for specific commodity crops: corn, soybeans, wheat, cotton, rice, cattle, and dairy.

The purposes of asking these questions are to find out:

1) which types of farmers use each of these risk management tools,
2) how much acreage do farmers allocate to different available crop insurance policies, and
3) how much output do farmers allocate to futures and options markets.

The responses to these questions are used to conduct research on the role of risk management in farm operations, the impact of risk management on farm incomes, and the impact of federal crop insurance programs on farm risk management decision-making. Data collected here will provide us with detailed information at the farm level which will provide insights into the types of

policies selected by different types of producers (Item 7). In addition, there is very little data available about operators' use of financial markets for hedging purposes, and Item 8 will provide insight into this. Not all farmers directly engage in these markets, which is why we are also interested in the use of cooperatives to market commodities (Item 9). Answers to this question will allow for insight into respondents' indirect participation in futures markets, because many cooperatives use futures contracts to hedge their positions in marketing contracts. On-farm storage (Item 10) is of interest because this risk management tool provides the ability to store crops across seasons.

Item 7 – Acres Insured Under Yield/Revenue Policies, SCO, or STAX

Column 1: Record the total number of acres planted in 2016 for each crop.

Column 2: Record two pieces of information under the header "Acres Insured Under YIELD Policies":

1) In the "Acres" column, record the total number of acres insured under yield policies for corn for grain, soybeans, wheat, or cotton acreage. Yield policies include any crop insurance policies designed to compensate farmers for output below expected yield, such as Actual Production History (APH), Yield Base Dollar Amount of Insurance (YDO), Yield Protection (YP), or Area Yield Protection (AYP).
2) In the "Average Coverage Rate (Percent)" column, record the average coverage rate purchased for all acres insured under yield policies for corn for grain, soybeans, wheat, or cotton acreage. Average coverage rate should be the average coverage for all yield policies purchased for that crop. For example, if a farmer purchased two soybean yield policies, one with coverage of 50% and the other with coverage of 70%, and two corn for grain yield policies with coverage of 70% and 80%, record 75% in box 1302 and 60% in box 1322.

Column 3: Record two pieces of information under the header "Acres Insured Under REVENUE Policies":

1) In the "Acres" column, record the total number of acres insured under revenue policies for corn for grain, soybeans, wheat, or cotton acreage. Revenue policies include any crop insurance policies designed to compensate farmers for crop revenues below expected revenue, such as Revenue Protection (RP), Revenue Protection with Harvest Price Exclusion (RP-HPE), or Area Revenue Protection Insurance (ARPI).

2) In the "Average Coverage Rate (Percent)" column, record the average coverage rate purchased for all acres insured under revenue policies for corn for grain, soybeans, wheat, or cotton acreage. Average coverage rate should be the average coverage for all revenue policies purchased for that crop. For example, if a farmer purchased two soybean revenue policies, one with coverage of 50% and the other with coverage of 70%, and two corn for grain revenue policies with coverage of 70% and 80%, record 75% in box 1303 and 60% in box 1323.

Column 4: Select "Yes" if any of the planted acres were enrolled in SCO or STAX during 2016. Select "No" if no planted acres were enrolled in SCO or STAX during 2016.

Item 8 – Quantity Hedged Using Futures or Options Markets

Screening question: If the respondent has either directly used futures or options markets for hedging or indirectly used them through someone acting on their behalf (such as a cooperative or marketing pool), check Yes and continue to the table. If not, check No and skip to Item 9.

General note: Many of the commodity categories that appear in the table encompass several different possible contract sizes or products (sub-categories of commodities). Corn refers to "corn for grain". One example of **different contract sizes** would be how "Corn for grain" encompasses both Corn futures contracts of 5,000 bushels per contract and Mini-Corn futures contracts of 1,000 bushels per contract (based on the products traded on CME Group exchanges). And as an example of **different products within a category** used in this table, "Dairy" encompasses Class III Milk Futures, Class IV Milk Futures, Non-fat Dry Milk Futures, Dry Whey Futures, Cash-Settled Butter Futures, and Cash-Settled Cheese Futures (again, based on products traded on CME Group exchanges).
Directions for what to do if respondents have hedged using multiple contract sizes or multiple products within a category are specified below.

Column 1: (only applicable to the last 2 rows) Respondent should write the name of any commodity that was hedged through the futures or options markets that does not fit into any of the categories in the table.

Column 2: This column is for the quantity hedged through futures contracts. **These should be in terms of the quantity of the underlying commodity that was traded in the futures market, NOT the number of futures contracts**. For example, if the respondent hedged 20,000 bushels of soybeans using 4 forward contracts (each contract is 5,000 bu.), report 20,000 rather than 4.

If the units used for the underlying commodity and the units for the futures contracts are not the same, the respondent should answer in terms of the units used in the contract. For example, Class III Milk futures are 200,000 **pounds** per contract, whereas the underlying commodity is measured in **cwt**. Here, the respondent would report the number of **pounds** that were hedged using futures contracts.

If a respondent has used these markets for more than one contract size or more than one product within a commodity category that is listed in this table, the respondent should sum the total of the underlying quantities. For example, if the respondent hedged using one Corn for grain futures contract (5,000 bu.) and one Mini-Corn for grain futures contract (1,000 bu.), the respondent should write 6,000 in the entry for Corn in Column 2. Or if the respondent hedged using one Live Cattle futures contract (40,000 lbs) and two Feeder Cattle contracts (50,000 lbs each, for a total of 100,000 lbs), the respondent should write 140,000 in the entry for Cattle in Column 2.

Column 2 units: (only applicable to the last 2 rows) The respondent should write the units in which the commodity is measured. If the units used for the underlying commodity and in the futures contracts are not the same, the respondent should use the units in the contract.

Column 3: This column is for the quantity hedged through options contracts. **These are in terms of the quantity of the underlying commodity, NOT the number of options contracts.**

If the units in underlying commodity and the units for the options contracts are not the same, the respondent should answer in terms of the units used for the underlying commodity. Refer to the examples used for Column 2.

If a respondent has used these markets for more than one contract size or more than one product within a commodity category that is listed in this table, the respondent should sum the total of the underlying quantities.

Column 3 units: (only applicable to the last 2 rows) The respondent should write the units in which the commodity is measured. If the units used for the underlying commodity and in the options contracts are not the same, the respondent should use the units in the contract.

Item 9 – Using a Cooperative to Market Commodities

Check **all** of the commodities for which the respondent used a cooperative to market the commodity in 2016, even if a cooperative was not used for the entire amount. Corn refers to "corn for grain". If the respondent has used a cooperative to market any commodities that are not on this list, the respondent should also check "other" and write the commodity in the box.

If the respondent did not use a cooperative to market any commodities in 2016, check "None."

Item 10 – Using On-Farm Storage

Check **all** of the commodities for which the respondent used on-farm storage 2016. Corn refers to "corn for grain". If the respondent has used on-farm storage for any commodities that are not on this list, the respondent should also check "other" and write the commodity in the box.

If the respondent did not use on-farm storage for any commodities in 2016, check "None."

5.3.6 Land Use Practices

The Land Use Practice questions ask farmers with cropland about the extent to which they adopt a number of production practices that influence soil health. A number of USDA programs require national and regional estimates of the adoption rate of these practices, and the responses to this section of the CRR provide those estimates in a consistent manner over time. For 2016, these questions focus on cover crops, double cropping, and tillage.

Item 11a – Cover Crop

Report acres of cropland that were planted with cover crops in 2016. Cover crops are not intended for harvest. Examples of cover crops are annual ryegrass, clover, hairy vetch, field peas, and even certain kinds of radish. Increasingly farmers use special cover crops mixes. Farmers usually "burn down" a cover crop with herbicide or mechanical means prior to planting a commodity crop, although often a cover crop is planted in the fall and the winter temperatures terminate the crop. This question is asked of all cropland, not just planted cropland, because farmers may incorporate cover crops into the fallow year of a crop rotation.

Item 11b – Double Cropping

Of the total cropland acres (Section A, Item 5), report the acres on which two or more crops were harvested in 2016. Typically double-cropping involves planting a fall/winter crop in the prior fall and harvesting that crop early enough in the following spring to get a spring/summer crop in the ground. Note that this question is asking about harvesting two crops in the survey year, not planting two crops.

Item 12 – No-till, Strip-till, or Other Conservation Tillage Practices

Mark "Yes" and complete the table in Item 13 if any conservation tillage practices were used in 2016. Conservation tillage is any tillage system that – at the time of planting - maintains crop residue over 30 percent or more of the soil surface. Conservation tillage includes the practices such as ridge-till, mulch-till, and strip-till that only disturb, turn-over, and incorporate a portion of the residue from the prior crop. Conservation tillage also include no-till, in which the soil and residue from the prior crop is not disturbed mechanically. With no-till production, planting or drilling is accomplished in a narrow seedbed or slot created by coulters, row cleaners, disk openers, in-row chisels, or roto-tillers.

Item 13 – Conservation Practices Table

Report the number of acres on which each conservation tillage practice was used for each crop. Corn refers to "corn for grain". Strip tillage involves only tilling a narrow area along the row of each seedbed. For each crop, do not double report acreage and do not report acreage in conventional tillage. For example, a farm that reports having 80 acres of no-till corn and 160 acres of strip till corn, would have to have at least 240 acres of corn planted. If this farm reported 320 acres of corn (question B2), then this implies that the farm had 80 acres of corn in conventional tillage.

5.4 Section C – Livestock

5.4.1 Section Purpose

This section provides a place to record removal, inventory, ownership, and cash sales data for the operation described in Section A. 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.

5.4.2 Number On Hand, Owned by Operation, Sold and/or Removed, and Cash Sales

General Instructions by Column

Column 2—Total Number on Hand

Record all livestock, poultry, and animal specialties on the total acres operated on December 31 regardless of ownership.

Include:
- Livestock and poultry raised, fed, or pastured under a contract or on a custom basis if they were located on the total acres operated on December 31.
- Livestock on land used rent free or on public, private, or industrial property under a grazing permit, per head, or AUM basis.
- Livestock 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.
- Beefalo

There are certain circumstances under which livestock or poultry should be recorded as inventory on the operation on December 31, even though they are not on the acres recorded in Section A. Examples include livestock or poultry:

- Being moved from one place to another.
- On unfenced land.
- On short-term pasture, such as wheat or crop residue.
- Grazing in National forests, grazing districts, open range, or on land under permit.

Exclude livestock owned that were being custom fed, for this operation, in feedlots operated by others, on December 31. Those livestock will be recorded in Section D.

Column 3—Total Number owned by the Operation

Record the number of livestock on the operation on December 31 (Column 3) that are also owned by the operation. Column 3 should be equal to or less than Column 2.

Column 4—Total Number Sold or Removed in reference year

Record all livestock, poultry, poultry products (ex: eggs), dairy products (ex: milk) and animal specialties that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation between January 1 and December 31 during the reference year 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 products, livestock, or poultry that belonged to landlords, contractors, or any other person. Follow descriptions carefully. Animal products like cheese, honey, semen, etc. are recorded in item 2k.

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

Exclude animals that were moved from this operation:

- For short term grazing on corn or small grain 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.

Column 5—Cash Sales

After subtracting marketing expenses, record the amount received in the reference year from cash sales of cattle, hogs, poultry, eggs, milk, other animals, and animal products sold from this operation. Marketing expenses include check-off, drying, commission, inspection, storage, transportation, and yardage, etc. (Please see Section I for a full explanation of marketing expenses).

Include:
- Livestock sales revenue received during the year from livestock produced during the reference year and earlier years.
- CSA sales are considered a cash sale and not a contract.

Exclude:
- Marketing Contract sales recorded in Section E. (Would be double counting).
- Production Contract movements recorded in Section F. (Would be double counting).
- Landlord share of production, which is recorded in Section A, Item 8b.
- Sales from other farm related activities, such as trading and speculation or livestock dealer activities (recorded in Section H).
- Value of sales from land rented to others or worked on shares by others.
- Amount received in the reference year for livestock sold in prior years. This is recorded in Section G Items 1a and 1a(i) (Accounts Receivable).

Instructions by Commodity

While the questionnaire refers to any year's production, in most cases, livestock sales will only be from the current year. Sales of previous year's production will be recorded in accounts receivable.

Item 2a – Beef Cows

Report the number of beef cows that were on this operation (regardless of ownership) on December 31 in column 2. Include beef heifers that calved by December 31. Of the (column 2) beef cows, report the number owned by this operation on December 31 in column 3. Exclude beef heifers that had not calved by December 31, and report them along with steers, calves, and bulls in Item 2c.

Report the number of beef cows that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation between January 1 and December 31 (regardless of ownership) in column 4. Beef cull cows removed are recorded in 2c.

Report the amount received in cash sales of breeding cows from any year's production in column 5. Exclude marketing contract sales. Beef cull cows sales are reported in 2c.

Item 2b – Milk Cows

Report the number of milk cows that were on this operation (regardless of ownership) on December 31 in column 2. **Include** dry milk cows and dairy heifers that had calved by December 31. Of the (column 2) milk cows, report the number owned by this operation on December 31 in column 3. **Exclude** dairy that had not calved by December 31, and report them along with steers, calves, and bulls in Item 2c.

Report the number of milk cows that were sold for breeding purposes **on the open market, delivered under a marketing contract or removed under a production contract** from the operation from January 1 through December 31 (regardless of ownership) in column 4. Dairy cull cows removed are recorded in 2c.

Record the amount received in cash sales of breeding milk cows from any year's production in column 5. **Exclude** marketing contract sales. Milk cull cow sales are reported in 2c.

Item 2c – Other Cattle

Report the number of steers, calves, bulls and heifers that were on this operation (regardless of ownership) on December 31 in column 2. Of the (column 2) livestock, report the number owned by this operation on December 31 in column 3. **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 on this operation. Report the number of steers, calves, bulls and heifers that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation between January 1 and December 31 (regardless of ownership) in column 4. Report the total cash sales received in column 5. **Include** cull cows from items above; these will have a lower average value than the breeding stock.

Item 2d – Total Cattle & Calves

Report the total number of cattle and calves of all ages located on this operation December 31 in column 2, total number owned by this operation on December 31 in column 3, total number sold or removed from this operation in column 4, and total cash sales received in the reference year in column 5. Items 2a, 2b, and 2c should add to the numbers reported in Item 2d for all columns.

Item 2d(i) – Cash Sales of Breeding Livestock

Report the portion of total cash sales received in the reference year of breeding cattle sold from this operation (equal to or less than 2d) in column 5.

Exclude all cattle grown under a production contract (reported in Section F).

Item 2d(ii) – Recognized Gain or Loss on Sales of Breeding Cattle

Record the recognized gain or loss on breeding cattle cash sales from Item 2d(i) 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 2e – 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 the reference year regardless of ownership in column 4. Report the total value of cash sales received during the year from milk produced and sold from this operation in column 5. Record the value of cash sales before any milk check expense deduction (ex: hauling fees). **Exclude** milk used to make cheese and any other processed dairy products. Record it in Section H, Item 3i as pounds of product (include a note that explains low or zero production from milk cows because IC270 is low or blank).

Item 2e(i) – Certified Organic Milk Sold or Moved

Of the amounts in Item 2e above, record the amount that was certified organic milk.

Item 2f—All hogs and pigs

Report the number of hogs and pigs that were on this operation (regardless of ownership) on December 31 in column 2. Of the (column 2) hogs and pigs, report the number owned by this operation on December 31 in column 3. Report the number of hogs and pigs that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation from January 1 through December 31 (regardless of ownership) in column 4. Report the total cash sales received in the reference year in column 5. **Exclude** sales from marketing contracts or the value of hogs produced under production contracts

Item 2f(i)– Cash Sales of Hog Breeding Stock

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

Exclude all hogs grown under a production contract (reported in Section F), and cull hog sales.

Item 2f(ii) – Recognized Gain or Loss on Cash Sales of Breeding Hogs

Record the recognized gain or loss on breeding hog cash sales from Item 2f(i) 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 2g – Egg Layers and Pullets

Egg layers are female chickens that can produce a marketable egg suitable for table or hatching use. Female chickens that are too young to produce a marketable egg are pullets (less than 18 weeks). Report the number of egg layers and pullets that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation from January 1 through December 31 (regardless of ownership) in column 4. **Include** the number of egg layers in molt.

Report the number of egg layers and pullets that were on this operation (regardless of ownership) on December 31 in column 2. Of the (column 2) egg layers and pullets, report the number owned by this operation on December 31 in column 3. **Include** layers used to produce eggs for home consumption, and "yard chickens." **Exclude** layers from exotic breeds and game birds.

After subtracting marketing expenses, record the amount received in the reference year from cash sales of egg layers and pullets from this operation in column 5. **Exclude** sales from marketing contracts or the value of egg layers produced under production contracts.

Item 2g(i) – 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 the reference year, regardless of ownership in column 4.

Report the total cash sales received in the reference year of eggs sold from this operation during the year in column 5. Do not report the value of eggs produced under marketing and production contracts.

Item 2h – Turkeys

Report the number of turkeys that were on this operation (regardless of ownership) on December 31 in column 2. Of the (column 2) turkeys, report the number owned by this operation on December 31 in column 3.

Report the number of turkeys (all types) that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation from January 1 through December 31 (regardless of ownership) in column 4.

After subtracting marketing expenses, record the amount received in the reference year from cash sales of turkeys from this operation in column 5. **Exclude** sales from marketing contracts or the value of turkeys produced under production contracts.

Item 2i – Broilers

Report the number of broilers that were on this operation (regardless of ownership) on December 31 in column 2. Of the (column 2) broilers, report the number owned by this operation on December 31 in column 3.

Report the number of broilers that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation from January 1 through December 31 (regardless of ownership) in column 4.

After subtracting marketing expenses, record the amount received in the reference year from cash sales of broilers from this operation in column 5. **Exclude** sales from marketing contracts or the value of broilers produced under production contracts.

Item 2j – Other Poultry

Report the number of all other poultry that were on this operation (regardless of ownership) on December 31 in column 2. Of the (column 2) other poultry, report the number owned by this operation on December 31 in column 3.

Record the total number of head of other poultry, and/or their products not accounted for in Items 2g, 2h and 2i that were sold on the open market, delivered under a marketing contract or removed under a production contract from the operation from January 1 through December 31 (regardless of ownership) in column 4. Be sure to note the type of livestock reported in this item. **Include** broiler and other chicks on hatchery records. Also ducks, geese, exotic birds, and other poultry not previously reported. 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.

After subtracting marketing expenses, record the amount received in the reference year from cash sales of all other poultry from this operation in column 5. Only the market value of the birds raised are included in the cash sales. Hunting fees received that are attributed for guide services, lodging, or transportation is reported in Section H, Item 3i. **Exclude** sales from marketing contracts or the value of poultry produced under production contracts.

Item 2k – Other animals and other animal products

Report the number of all other animals that were on this operation (regardless of ownership) on December 31 in column 2. Of the (column 2) other animals, report the number owned by this operation on December 31 in column 3.

Report the number of other animals that were **sold on the open market, delivered under a marketing contract or removed under a production contract** from the operation from January 1 through December 31 (regardless of ownership) in column 4.

After subtracting marketing expenses, record the amount received in the reference year from cash sales only of other livestock from this operation in column 5.

Include the sales of all other livestock, animal specialties, and their products not reported in previous items. Other livestock include, but are not limited to: alpacas, llamas, bees and honey, bison, commercial aquaculture, deer in captivity, elk in captivity, goats (including goat milk and mohair), live mink, live rabbits, lab animals, mules, pleasure horses, ponies, worms, sheep (including wool) etc. **Include** breeding stock. **Write a note** indicating what other livestock the operation is reporting.

Exclude contract sales or removals and landlord's share of sales.

Item 2k(i) –Cash Sales of Other Animals (Breeding Stock)

Record the cash sales on other animals classified as breeding stock from Item 2k above.

Item 2k(ii) – Recognized Gain or Loss on Cash Sales of Other Animals (Breeding Stock)

Record the recognized gain or loss on other animals classified as breeding stock from Item 2k(i) 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.

5.5 Section D – 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 D. This includes all expenses paid or reimbursed by the respondent (contractor) to the feedlot. These expenses should **only** be recorded in Section D. They should not be recorded in Section I (**Section I 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 D, 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 C or as a marketing contract sale in Section E.

If the feedlot was also a respondent, the feedlot would report a production contract in Section F and would report the expenses that were paid by the cattle owner (contractor) in Section I, Column 3. Any other expenses associated with the production contract and not paid by the cattle owner (contractor) would be reported in Section I, 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 J (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 I (Expenses). Section I 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 C (Livestock) or E (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 J (Farm Assets).

5.6 Sections E & F – Marketing and Production Contracts

5.6.1 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 that 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 be designed to 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 N.

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 D.

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 E or F, as Marketing Contracts and/or Production Contracts.

An operation may act as the CONTRACTEE or CONTRACTOR or both.

For hog and cattle operations, pay close attention to pricing terms and animal ownership (owned and non-owned animals in Section C) 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 B & C, column 5). 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 J Item 3.

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. 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 financial 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 (*Integrator*):**
• Arranges, prior to *completion* of a production cycle, to acquire a specified commodity at the end of the cycle.	• Arranges, prior to *beginning* a production cycle, to have a specified commodity produced.
• Commits to take a quantity and agrees on a price, a pricing arrangement, or an agreement to sell on behalf of the contractee.	• Commits to a fee or fee arrangement to be paid to the contractee.
• Does not take ownership of the commodity until it is delivered.	• Usually owns the commodity during production.
• Makes few or no production decisions but may require specific inputs (variety of seed, etc.) to be used.	• Makes many production decisions.
Contractee (*Operator*):	**Contractee (*Operator*):**
• Obtains a buyer and a marketing arrangement for commodities before completion of a production cycle.	• Provides labor and some management services used in production, as well as fixed inputs (land, buildings, etc.), for a fee.
• Supplies and finances all or most of the inputs used in production.	• Supplies only some inputs used in production.
• Owns the commodity while it is being produced.	• Usually does not own the commodity.
• Makes all or most production decisions.	• Makes only a few production decisions.
• Often bears all production risks, and contract frequently limits some price risks.	• Often bears no price risks, and contract may limit production risks or reward efficiency.
• Receives the major share of the value of production.	• 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 sugar beets, sugarcane, peanuts, dry peas or dry beans
- produce fluid milk
- produce eggs
- 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 Section C, Item 2, 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

5.6.1.1 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 F 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 I 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 E, and should record the Production Contract with a feedlot in Section D (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 D, Column 6. They should also record the rest of the production contract with a feedlot in Section D (in their capacity as a contractor).
- Feedlot respondents should only record marketing contract sales in Section E 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 Section B. 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 I, 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 5.6.3.1.

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 F.

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 I, 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 fix now 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 B, under the appropriate sales commodity in Column 5. The net profit or loss from hedging should be recorded in Section H, Item 3i 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 E or a cash sale in Section C. Any profit or loss from these futures contracts are recorded in Section H, Item 3i 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.

5.6.2 Section E – 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 x .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 I, Item 33. If the operation did not receive all of the payments owed to them

under the contract in 2016 (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 G, 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.

2015 Crop:

Situation	Record As:
In Storage	
At End of 2015	ASSET (January 1, 2016)
Sold 2015 Stored Crop on Open Market during 2016	CASH SALES
Sold for Cash	
Delivered in 2015 & NO Pmt Rcvd in 2015	Acct Rec / Def Pmts (January 1, 2016)
Set Up as Marketing Contract	
Delivered in 2015 & NO Pmt Rcvd in 2015	Acct Rec / Def Pmts (January 1, 2016)
For Delivery in 2016 and Pmt in 2016	ASSET (January 1, 2016) **AND** In Marketing Contract Table

2016 Crop:

Situation	Record As:
Sold for Cash	
Delivered in 2016 & Pmt Rcvd in 2016	CASH SALES
Delivered in 2016 but NO Pmt Rcvd in 2016	Acct Rec / Def Pmts (Dec. 31, 2016)
Set Up as Marketing Contract	
Delivered in 2015 & NO Pmt Rcvd in 2015	Acct Rec / Def Pmts (January 1, 2016)
Delivered in 2016 but NO Pmt Rcvd in 2016	Column 6 Blank in Marketing Contract Table **AND** Acct/Rec / Def Pmts Positive (December 31, 2016)
NOT Delivered in 2016 but Pmt Rcvd in 2016	Marketing Contract Table
NOT Delivered in 2016 & NO Pmt Rcvd in 2016	ASSET (December 31, 2016)
For Delivery in 2016 & Pmt in 2017	ASSET (December 31, 2016)
In Storage	
At End of 2016	ASSET (December 31, 2016)

5.6.3 Section F – 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 x .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 G, Item 1b.

5.6.3.1 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 C – Livestock

Record the 5 head of calves he kept in Item 2c, column 2 as well as column 3 (since they are owned by the operation). Record the 65 calves that were sold by the landowner in Column 4. If the original cows were still on his place at the end of the year, record 100 head in Item 2a, column 2 but not column 3.

Account for the cash sale of the calves in Item 5d(i) as $32,500 (65 head * $500 / head).

Section I – Operating & Capital Expenditures

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

Section J – Farm Assets

Account for the value of the 5 calves the land operator kept in Item 2c. 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 C – Livestock

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 5d(i) as $15,000 (30 head * $500 / head).

Section I – 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 J – Farm Assets

Account for the asset value of the original 100 cows in Item 3b.

5.7 Section G – 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 E), Production Contracts (Section F), or Cash Sales (Sections B & C) 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 E) and production (Section F) 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).

5.8 Section H – 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, such as 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 N.

5.8.1 Item 1: Commodity Credit Corporation (CCC) Loans

The Commodity Credit Corporation (CCC) was created in 1933 to help stabilize and support farm prices and income. 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 and storage charges) is recorded in Item 1b. Interest is recorded in Section I, Item 18b; storage and inspection charges are marketing charges recorded in Section I, 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 H under, "all other farm related sources of income" Item 3i.

5.8.2 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.

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.

Marketing Loan Gains (MLGs)
Commodity marketing assistance loans, 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, if any, that is waived when a loan is repaid is referred to as a marketing loan gain for the producer.

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). See above for more detail on the Conservation Reserve Program.

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:
1) 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.

2) 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 A, 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. 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 all Crop, Dairy, and Livestock Disaster Assistance Programs, the Crop Disaster Program, Dairy Disaster Assistance Program III (DDAP-III), Emergency Assistance Livestock, Honeybees and Farm-Raised Fish Program (ELAP), Emergency Conservation Program, Emergency Forestry Conservation Reserve Program (EFCRP), Livestock Compensation Program, Livestock Indemnity Program (LIP), Livestock Forage Disaster Program (LFP), Noninsured Crop Disaster Assistance Program (NAP), and Tree Assistance Program.

Exclude Federal crop insurance indemnity and other indemnity payments recorded later in Item 3e.

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:
Record the total payments the operation has received from other programs, including (but not limited to) the following:

Tobacco Buyout Payments Including Lump Sum Payments:
The Tobacco Transition Payment Program (also called the Tobacco Buyout Program) provides payments to tobacco quota holders and tobacco producers beginning in 2005 and ending in 2014. Payments for both quota holders and producers are recorded under this item.

Tobacco buyout programs exist in tobacco States where State Departments of Agriculture provide funds to producers to grow other agricultural commodities instead of tobacco. Record the total amount of payments received in 2016 from participation in the Tobacco Buyout Program.

Other Federal, State, & Local Programs:
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 2016 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.

5.8.3 Item 3: 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 3a – 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 3b – 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 3c – 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 Section B.

Item 3d – 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 3e – All Insurance and 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.

Item 3e(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:

1) the loss of grazing on rangeland
2) crop revenue coverage
3) 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 N, Item 1j).

Item 3f – 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 cooperative, 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 3g – 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 A, 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 A. Record the rent received from the 1,000 acres in Section A and the income from the wind turbines in Section H, Item 3g.

Item 3h – 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 **net** 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 N, 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 K.
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 3h(i) – Recognized Gain/Loss from Sales of Farmland/Farm Real Estate

If farmland and farm real estate sales are reported in Item 3h, 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 3h(ii) – Number of acres sold

If farmland and farm real estate sales are reported in Item 3h, record the total number of acres sold or acres where one or more 'right' was sold.

Item 3i – 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.
- Other farm-related indemnities for insurance like liability and comprehensive insurance, and insurance on the farm house (if the house was owned by the operation and the value was reported in Section J, Item 1a).
- 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 (ie, from inheritance), record in Section N, Item 1j.
- Carbon credits

5.8.4 Item 4: 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.

5.9 Section I – Operating & Capital Expenditures

5.9.1 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 estimates of the Nation's Gross Domestic Product (GDP) accounts and Personal Income Indexes. 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 IRS sample data, the Census' Survey of Population and Income, the Bureau of Labor Statistics' non-farm business surveys, the Federal Trade Commission and BEA. Data from non-farm industries are published in BEA's Survey of Current Business. Production expense estimates 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.
- Depreciation is also used in the farm household statistics so self-employment income from farming matches the Commerce Department definition of self-employment income from a non-farm business. This allows income from farm businesses to be compared with non-farm business income by the Commerce Department, which has responsibility for statistics on all aspects of the U.S. economy.
- 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 N.

5.9.1.1 General Instructions

ALL EXPENSES FOR THIS OPERATION (defined by the total acres recorded in Section A, Item 4) **paid in the reference year** should be included in this section. This includes expenses 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 N).

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.

5.9.1.2 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.

It is even more important to have a good estimate of contractor and landlord expenses when the operation's expenses are expanded to represent all 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 in this section 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.

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.

5.9.2 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 for expenditures and record the remaining $200 as a production input asset in Section J. 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, defoliants, nematicides, 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.

5.9.2.1 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 Section C and the value of those livestock reported in Section J. If not, please make a note.

Item 4 – Livestock Purchases

Include genetic royalty fees (if applicable) for purchased livestock.

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.

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 caponizing
- 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.

5.9.2.2 Fuels, Utilities, & Purchased Water (Farm Share Only): 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 H, Item 3a.
- aviation fuels
- Federal excise fuel taxes. (Refunds of Federal excise fuel taxes paid should be reported as other income in Section H, Item 3i.)
- 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. In this case, no income from custom work will be reported either in Section H, Item 3a.
- 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 94 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), 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.

5.9.2.3 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 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 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
- 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.

5.9.2.4 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 N, 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 H, 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).

5.9.2.5 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 94 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 C, Item 2e, column 5,Cash Sales and/or Section E, 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.

5.9.2.6 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)

5.9.2.7 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
- 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)

5.9.2.8 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 H.

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 H.

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 H.

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 I, 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.

5.9.3 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 I, 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 J (Farm Assets): the buildings ($40,000) would be included in Item 1c, and the land ($600,000) would be included in Item 1e. The loan would be entered in Section K (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.

5.9.4 All Other Expenses: Item 45

Record the total cost of all other FARM SHARE expenses that have not been recorded in Section I. 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 2015 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 2016. 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 H 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 N.
- 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 N)
- 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 N).

5.10 Sections J & K – Farm Assets and Debt

5.10.1 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 J gathers information about the assets owned by the operation. Section K covers term debt or notes used to purchase or acquire access to assets used by the farm.

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 essential for estimating profitability and efficiency of the farm. Aggregate profitability measures combine income statement and balance sheet data in the calculation of rates of return to assets and to equity. Efficiency measures relate output per dollar of assets used in production.

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 B-H), off-farm income (reported in Section N), 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. ARMS is interested in determining the value of assets managed by the operation. As the only available source, ARMS uses the respondent's estimate of the value of land, machinery and other assets 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.

5.10.2 Section J – Farm Assets

5.10.2.1 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 N. 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 J. If it does not belong to the operation on the label, account for it in Section N.

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.

5.10.2.2 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 3.

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 A, 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.

5.10.2.3 Value of Trucks, Tractors, Machinery, and Stocks: Item 2

Item 2a – 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 2b – 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 2c – 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 January 1, 2016, the Farm Credit System (FCS) had, for the purpose of making retail loans to farmers and ranchers, 72 ACAs with PCA subsidiaries and FLCA subsidiaries, and two FLCAs.

5.10.2.4 Value of Beginning/End of Year Inventories: Item 3

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:

1) the types of commodities or production inputs
2) the quantity of each type on hand at the beginning and end of the year
3) 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 B-E. 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 3a – 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 G because the revenue was deferred.

Items 3 (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 Section C. 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 D and are "in the fence".

Item 3b – 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 D 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 Section C. 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 3c – 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 the 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 were reported in Section C and multiply by the weight and/or price. But you will have to rely on the respondent to supply information for BOY values.

Item 3d – 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 3a (hay, crops to be used for seed, etc.) Do not include fertilizers and chemicals already applied (record in Item 3e).

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 3e – 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 F and non-owned livestock on the operation on December 31 in Section C, 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 that have not been reimbursed.

The respondent should report the sunk costs for the non-owned livestock or vegetables on the operation on December 31 (livestock from Section C) 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 3a)
- crops such as Christmas trees, fruit trees, etc. where the value of the crop is included in the value of the land in Item 1 above
- 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 3a 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.

5.10.2.5 Other Farm Assets: Item 4

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 G, Accounts Receivable/Deferred Payments)
- quotas and allotments owned by the operation, if these values are not reflected in the land values reported in Item 1
- livestock products stored on the operation, but not yet sold (ex: 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 N)
- personal debt owed to the operator

5.10.3 Section K – 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 K or in Section N and recorded only once. Loans used for both farm and household purposes should be reported in Section K and not in Section N. Section K 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 J and expenditures for inputs and/or capital purchases in Section I). Debt belonging to the other operations will be accounted for in Section N. 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 K. (Using the same guideline, asset values will have been included in Section J). If the heavy machinery does not belong to the operation on the label, account for its debt in Section N.

Item 1 – Debt Use

This is a screening question to determine if debt was used at any time during the reference year.

Include:
1) Any debt that was obtained from earlier years and was not paid off by January 1 of the reference year
2) Any amounts used from established lines of credit
3) Loans taken out in the reference year and repaid in the reference year
4) 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 question 2. If debt was not used at all during the year, check "No" for Item 1, then skip to Section L.

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 helps us gauge the share of farms that use debt during the year but do not have any debt outstanding at year end and provides help in evaluating the amount of interest paid by the operation.

5.10.3.1 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 J, 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 N.

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 N, Item 4. **Include** all other debt owed by the farm that is secured by farm assets.

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.

5.11 Sections L, M, & N – Farm Management and Household Information

Sections L, M and N provide information on 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 people 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 N provides information on off-farm incomes. This allows us to develop a key economic indicator--the level and source of household income from all sources, 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 asset, and debt data in Section N with farm business income and balance sheet data from Sections A through K to assess the economic well-being of farm households.

Information is collected on the assets and debt of a household operating the farm, which are not connected to the farm business. Non-farm assets and debt affect the economic well-being of the farm household. Non-farm debt must be paid from the farm household's income. 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 are 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 how many other households shared 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 Sections L-N, 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 and so knowledge of when a farmer began farming, reported in Section L, helps USDA know more about the target population.

Data on household expenditures (Section N) 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, in production, and in the costs for inputs such as fertilizer, fuel, and labor.

5.11.1 Section L – Farm Management and Use of Time

Item 1 – Ownership Interest by Blood, Marriage, or Adoptive 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 define the "principal" operator as the person most responsible for making decisions about the farm operation.

Report whether the operator and persons related to the principal 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 1. 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 operator and those living in the operator's 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 N).

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.

A 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 a LLC has only one member, the fact that it is a LLC is ignored or "disregarded" for the purpose of filing a Federal tax return. If a single member of a LLC is a corporation, it is treated as a C-Corporation or an S-Corporation, depending on its charter. If the only member is an individual, the LLC is treated as a proprietorship for tax purposes, unless an election to be treated as a corporation is made.

Item 4 – Operation's Legal Status

In 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 recorded in Section I, Item 24a. Any operator who insists that they receive a salary in Section I, 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 proprietor. 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 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 Item 7.

Item 6b – Income Received by Household from Farm Business, Except if the Farm is a C-Corporation

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.

Item 7 – Individuals Involved in the Day-to-Day Decisions

Record the number of operators, or individuals involved in the day-to-day decisions for this operation. Enter the number of operator(s), including the operator listed on the front of the questionnaire. **Include** family members if they are also operators. **Exclude** hired workers unless one or more are hired managers considered to be operators.

Item 8 – Presence of Spouse of Principal Operator

Ask if the principal operator had a spouse at any point during the year. If so, check "Yes" and continue, otherwise check "No" and skip to Item 10.

Note: This item is checked heavily in the Regional Field Office against the spouse questions throughout the questionnaire for consistency. Make notes about any inconsistency.

Item 9 – Is the Spouse an Operator

If the operator had a spouse (Item 8 is "Yes"), ask if the spouse made or helped make day to day decisions for the operation at any point during the year. If so, check "Yes", make sure the spouse is counted as an operator in Item 7, and record the spouse's information in the Operator 2 column for Item 10.

Item 10 – Top 3 Operator Characteristics

The 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, three columns are provided to record the names and characteristics of up to three operators. **The name of the principal operator should be listed first**. The principal operator is the person in charge, such as a hired manager, business manager, or other person primarily responsible for the on-site, day to day operation of the farm or ranch business. **If the principal operator has a spouse who also makes day-to-day decisions, include him/her as operator 2.**

Item 10a – Full Name of Operator

Identify the operator(s) in the columns provided and respond to each item for each operator. If there were more than three operators, identify the three most senior operators. Keep in mind that if the most senior operator has a spouse who makes day-to-day decisions, their name has to be included in the 2nd column.

Exclude hired workers unless one or more were hired managers or a family member was also an operator.

Print the name(s) of the operator(s) in the response area.

Item 10b – Gender of Operator

Indicate if the operator listed at the top of the column is male or female.

Item 10c – Age of Operator on December 31

Report the age of the operator listed at the top of the column on December 31.

Item 10d – Year Operator Began to Operate ANY Operation

List the four-digit year that the operator(s) first became involved in the day-to-day operational decisions on ANY farm. This information is used to determine if farmers are "beginning farmers".

5.11.1.1 Labor: Items 11-14

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 about the total hours worked on the farm, whether paid or unpaid, collected on an annual basis.

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 operator's family or others, the labor hours could be either paid or unpaid. Labor expenses associated with hired labor are reported in Section I.

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 11a – Operator Hours of Farm/Ranch Work

Ask the respondent to report the 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. 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 I, 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 11a, 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. Then, in Item 11a(i), record the number of these hours that were unpaid (meaning the operator did not receive a regular wage or salary for this work). If any of the hours reported in 11a are for a wage or salary, there should be cash wages to the operator reported in Section I.

Item 11b – 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. 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 I, 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 11b, 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. Then, in Item 11b(i), record the number of these hours that were unpaid (meaning the operator did not receive a regular wage or salary for this work). If any of the hours reported in 11b are for a wage or salary, there should be cash wages to the spouse reported in Section I.

Item 11c – Other Household Members and Other Operators' Hours Working for Farm/Ranch

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 11d or 11e 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 11a and 11b respectively. Then, in Item 11c(i), record the number of these hours that were unpaid (meaning these workers did not receive a regular wage or salary for this work). For example, if there are two other operators who worked an average of 42 and 24 unpaid hours per week, as well as a

family member who worked 15 paid hours per week, the correct entry for Item 11c is 81 hours, and the correct entry for Item 11c(i) is 66.

Item 11d – 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.

Item 11e – 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.

Item 12 – Average Number of Full-Time Workers

Items 12 and 13 are new questions designed to determine whether the operation meets the employment threshold specified in the Affordable Care Act. For each three-month period, report the average number of full-time workers on the operation. Full-time workers are defined as those who worked for wages or salaries for 30 hours per week or more on average over the given three-month period. Include all such paid workers – those who receive a regular wage or salary – regardless of whether they are operators, family members, or others. **Exclude** custom hire, contract labor, and anyone not paid a wage or salary, or who did not average 30 hours a week or more of paid work in the three-month period. **Example: A farm employed one salaried manager who worked 50 hours per week on average during the period Jan-Mar, one hired employee who worked 35 hours per week on average during this period, and three part-time employees who only worked 20 hours per week. Report "2" in Column 1 of Item 12.**

Item 13 – Total Hours/Week Worked by Part-Time Workers

For each three-month period, report the average number of hours worked by part-time workers on the operation. Part-time workers are defined as those who worked for wages or salaries for less than 30 hours per week on average over the given three-month period. **Exclude** operators, custom hire, and contract labor. **Example: Continuing the example from above, the farm employed 3 part-time workers who each averaged 20 hours per week during Jan-Mar. Report "60" in Column 1.**

Item 14a – Operator Off-Farm Work Hours Per Week

For each three-month period, report the average number of hours per week the operator spent working off the farm. Include time spent working for a wage or salary, or for a non-farm business. Exclude time spent working at any other farm/ranch and time spent commuting.

Item 14b – Spouse Off-Farm Work Hours Per Week

For each three-month period, report the average number of hours per week the operator's spouse spent working off the farm. Include time spent working for a wage or salary, or for a non-farm business. Exclude time spent working at any other farm/ranch and time spent commuting.

Item 14c – Other Household Members Off-Farm Work Hours Per Week

For each three-month period, report the average number of hours per week other household members spent working off the farm. Include time spent working for a wage or salary, or for a non-farm business. Exclude time spent working at any other farm/ranch and time spent commuting. **Example: A farm household contained two adult children who worked off-farm from April to June, one for 40 hours/week and one for 20 hours/week. Report "60" hours/week in Column 2.**

5.11.1.2 Direct Sales: Items 15-16

Direct sales include those (1) sold directly to consumers, for example at farmers markets, and those (2) sold to consumers through intermediate market channels, either as sales at retail outlets or as meals served in restaurants, workplace/school dining facilities, or hospital.. Previous statistics based on ARMS data show that intermediated channels account for the largest share, by far, of local foods sales. Like farmers markets, intermediate channels are also important because of their AMS/USDA program focus. These channels are addressed in Items 15 – 16.

Item 15 – Direct Sales to Individual Consumers for Human Consumption, Retail Outlets, or to Institutions

The goal of these items is to collect information for farm operations who marketed their products to consumers through short supply chains. That includes farms that market directly to the final consumer of the product but it could also include farms that market to a business or institution known to market directly to the final consumer. More specifically, check yes if the operation produced any agricultural products that were sold directly to:

Item 15a - individual consumers for human consumption

Include sales from roadside stands, farm stores, farmers markets, pick your own, door to door, and Community Supported Agriculture (CSAs). **Exclude** home consumption items used by the farm family and items provided to farm workers and reported in Section I.

Item 15b - retail outlets and regional distributors that sold directly to individual consumers for human consumption

Include retail outlets only if they are known to sell the products directly to individual consumers for human consumption, or regional distributors that sold directly to individual consumers for human consumption (**including** restaurants, grocers, local food hubs, and other local food aggregators known to sell the products directly to individual consumers for human consumption)

Item 15c - institutions that provide dining services to consumers.

Include corporate and government food service facilities, K-12 schools, universities, prisons, and hospitals.

If the farmer sells to a regional distributor or aggregator that brands the product as locally sourced (by locality by name of the farm), there are two considerations. Does the regional aggregator act as an intermediary serving a diversity of downstream clients, or owned and operated by large-scale grocery chain used exclusively for the internal distribution of product to its outlets?

In the first case, the respondent should record this sale in Item **16d**. These intermediaries serve other retailers (including superstores), restaurants, institutions, as well as consumers directly. They may be food hubs dedicated to local sourcing (Local Food Hub, Charlottesville, VA) or part of a large-scale distributor offering locally sourced commodities (Fresh Point Companies operated by Sysco). That the farmer knows the subsequent downstream destination of his product is useful information but has no bearing on this market transaction being recorded in Item **16d**.

In the second case, the respondent should record this sale as a direct-to-retail sale in Item **16c**. Examples are sales to regional distribution sites operated by superstores (Walmart , Costco – marketing Eastern Shore Apples in its Maryland, DC, and Virginia stores), or regional grocery chains (Safeway, Giant). Similarly, if an institution such as regional hospital chain were to operate its own regional distribution facility, the respondent would record this transaction as a direct-to-institution sale in Item **16e**.

What is direct marketing through a CSA? A Community Supported Agriculture (CSA) arrangement consists of a community of individual consumers who pledge to be a regular customer to a farming operation, or a cooperative of farming operations, thereby allowing the growers and consumers to share the risks and benefits of food production. While CSA arrangements vary widely, they usually consist of a system of weekly delivery or pick-up of vegetables and fruit and sometimes include dairy products and meat.

Include commodities reported in Section E if sold or produced under contract for any of the above channels. Include such practices as sales from roadside stands, farmer's market, pick your own, door to door, direct Internet sales, etc.

Exclude non-edible products such as Christmas trees, flowers, and craft items. Exclude processed products such as jellies, sausages, and hams; sales of these value-added goods should be reported in Section H, Item 3i.

If the operation did not sell any agricultural products directly to the above channels, skip to Section M.

Item 16a-e – Sales Directly to Consumers or Through Other Outlets by a Marketing Contract or a Cash Sale

Record the sales in whole dollars that were directly to consumers and/or short supply chain outlets through a contract or as a cash sale. See explanation of marketing channels above for Item 15a-c. The five market categories are:

a) Sales directly to consumers at farmers markets.
b) Sales directly to consumers from on-farm stores, u-pick, road-side stands, or CSAs.
c) Sales to a local retail outlet, e.g., restaurant, grocery stores.
d) Sales to a regional distributor, e.g., local food aggregators (the aggregator sources, consolidates, and transports products to the final market).
e) Sales to a local institutional outlet, e.g., schools, hospitals.

For each of the five sales categories, please report in column 1 for “Crop Commodities” and in column 2 for “Livestock Products and Livestock Commodities”.

5.11.2 Section M – Farm Operator & Household Characteristics

The information in this section is about the principal operator and principal operator’s spouse as defined in Section L. If a spouse was reported in Section L, make sure to answer Items 1-4 for both the operator and spouse.

Item 1 – Spanish, Hispanic, or Latino Origin

Mark the appropriate box as to whether the principal operator or spouse is of Spanish, Hispanic, or Latino origin or background, such as Mexican, Cuban, or Puerto Rican, regardless of race.

Item 2 – Operator’s Race

Mark one or more races to indicate what the principal operator or spouse considers himself/herself to be.

Item 3 – Highest Level of Formal Education

Check the box representing the highest level of school completed by the principal operator and spouse. Vocational school, secretarial school, etc. should not be counted as formal education unless the credits can be transferred to a college or university. A 4-year college graduate is considered as a B.S. or B.A. degree and should be coded “4”. An associate degree should be coded as a “3”.

Item 4 – Major Occupation

If the principal operator or spouse spent the majority (50% or more) of his/her work time in this or other farming/ranching operations during the year, mark the “Farm or ranch work” box. If the operator or spouse engaged in work other than farming/ranching (i.e. an off-farm job or business for compensation) for 50% or more of their work time, then mark “Work other than farming/ranching” box. If the operator or spouse is not in the paid workforce, mark that box.

Item 5 – Retired from Farming

In the opinion of the principal operator, mark whether the operator is retired from farming/ranching.

Item 6 – Number of People in Household

This question provides information about the number of people who depend on the farm household for income and are affected by its current financial situation.

Record the total number of people living in the operator's household on December 31. **Include** the operator, spouse, children, and others living in the household. Also include those who are dependent upon the household for the majority of their support, whether they are living in the household or not. This would include students who are away at school, if they depend upon the farm household for support.

5.11.3 Section N – Farm Operator Household Income, Assets, & Debt

5.11.3.1 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.

Value Codes. To make the respondent feel more comfortable answering questions pertaining to the household's financial situation, all information in Section N 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), "1" **MUST** be entered. 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
- 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.

Items 1b-1j – Other Sources of Income

Report the other sources of income separately for the operator, operator's spouse and the household for Items 1b and 1c. 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 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, Public Retirement, Public Disability, Veterans Benefits, Unemployment, and other income from public sources.

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 gifts or lottery winnings.

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 N. These expenses should be recorded in Section I with other farm expenses.

5.11.3.2 Non-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 J. **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 J**. Exclude other personal use homes, such as vacation or second homes.

Item 3d – 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.

5.11.3.3 Non-Farm Debt: Items 4-5

Item 4 – Non-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 K or in Section N 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 K, or household debt, credit cards, etc. used to finance farm business expenses. Report all such debts in Section K.

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 K, 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 K, 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 K, not in Item 12.

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 J) as collateral or security.

5.11.3.4 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, 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.

5.12 Conclusion

Item 1 – 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 2 – 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.

Completion Date – (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, 2017, enter 02 26 17 in the date cell.

Thank the respondent for taking the time out of their busy schedule to fill out the ARMS Phase 3.

5.13 Administrative Items

The following items are located under Item 2 and need to be filled out prior to turning the questionnaire in to your Supervisor or sent to the Regional Field Office.

Ending Time – (Item Code 0005)

Record the ending time (military time) of the interview.

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.

Accurate reporting of interview time (beginning and ending time) is critical for monitoring and evaluating survey burden and cost.

Total 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-Businesses, 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 2.

Mode Code – (Item Code 9903)

The Mode Code (Item Code 9903) identifies how the person was interviewed.

Code 1 = **Mail**
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 Regional Office use. These cells should remain blank unless your Regional Office directs you otherwise.

S/E 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 and complete for unusual situations.

6 Additional Questions for Version 2 - Corn

6.1 Section I – Expenses

There are several expense questions that ask for the amount of the dollars spent that was for the CORN 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 CORN 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 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

6.2 Section O – Non-GMO/GE Corn

This section gathers data relating to production practices involving non-genetically modified/genetically engineered (non-GMO/GE) corn. Non-GMO/GE corn is defined as corn produced using conventional production techniques, such as using chemical fertilizers and pesticides, but without using GE seed. Organic corn is also grown without GE seed, but in addition uses organic production techniques, and should **not** be included in this section. This data is important because a market for food produced using conventional production techniques without GE seed has emerged in addition to the market for organic food. While private groups still provide most of the third-party verification of non-GMO/GE corn, USDA began offering verification services as well as a weekly price report for non-GMO/GE corn in 2015. Economic information on this market is an important part of Secretary Vilsack's high-priority coexistence initiative.

Item 1 – Did Operation Harvest Identity Preserved, Non-GMO/GE Corn?

If the operation harvested any identity preserved, non-GMO/GE corn in 2016, mark "Yes" and go to Item 2. If not, mark "No" and skip to Section P.

Item 2 – Amount of non-GMO/GE Corn Acres Harvested

Record the amount of acres of non-GMO/GE corn harvested in 2016. **Exclude** organic corn.

Item 3 – Economic Losses Due to Unintended GMO/GE Material

Farmers selling corn on the non-GMO/GE market can incur economic losses if the presence of GMO/GE material is detected when the corn is tested by the buyer. These losses can be substantial. The presence of GMO/GE material can occur for many reasons, such as pollen drift and equipment contamination, among others.

If the operation can document such losses, mark "Yes" and complete the table in Item 3a. If not, mark "No" and skip to Item 4.

Item 3a – Economic Losses Table

Use this table to document up to 3 most recent occurrence of a loss caused by the unintended presence of GMO/GE material in a corn crop produced for sale.

Column 1 – Year

Record the 4-digit year of the loss.

Column 2 – Quantity

Record the amount of corn lost. Units will be recorded in Column 3.

Column 3 – Unit

Record the units of the loss from Column 2. Units should be recorded in pounds, bushels, tons, or cwt. Be sure to write the entire word out.

Column 4 – Loss per Unit

Record the amount of the loss per unit in dollars and cents. **Do not** use a negative sign.

Item 4 – Use of Non-GMO/GE Seed with Gene-Blocking Trait

If the operation purchased non-GMO/GE seed that contains a gene-blocking trait to inhibit GMO/GE fertilization, mark "Yes" and continue to Item 4a. If not, mark "No" and skip to Item 5. An **example** of non-GMO/GE seed that contains a gene-blocking trait is PuraMaize. Other pollen-blocking varieties are expected to be commercialized in the next couple of years, but PuraMaize is the only one that is now commercially available.

NOTE: The phrase "gene-blocking trait" is the same as "pollen-blocking trait". Farmers may recognize it as a pollen-blocking trait because that's how it's advertised to farmers, that's how it's described in the farm press, and that's how USDA extension describes PuraMaize.

Item 4a – Price Premium for Non-GMO/GE Seed

Record the price premium per bag that the operation paid for the non-GMO/GE seed with a gene-blocking trait relative to other non-GMO/GE seed in the 2016 crop year. **Example**: seed with the gene-blocking trait costs $180.00/80,000 kernel bag, while other non-GMO/GE seed costs $160.00/80,000 kernel bag. Record $20.00.

Item 5 – Practices Implemented to Avoid GMO/GE Material

If the operation implemented any practices specifically to avoid the presence of GMO/GE Material in their non-GMO/GE corn crop, mark "Yes" and continue to Item 6. If not, mark "No" and skip to Item 7. **Examples** of such practices include buffer zones, testing, late planting, using third-party verified non-GMO seed, and cleaning equipment such as combines, grain drills, and planters to assure they are free of contaminants.

Item 6 – Costs of GMO/GE Avoidance Practices

If any of the following practices were used, record the cost of those practices either in dollars and cents per bushel, **or** total dollars.

Item 6a – Buffer Zones

Buffer strips are the area located between a non-GMO/GE corn field and an adjacent GMO/GE corn field that uses physical size and other features such as tall trees, to limit the possibility of unintended contact between the non-GMO/GE and GMO/GE crops.

Item 6b – Testing for GMO/GE Traits

Non-GMO producers may test their crop for the accidental presence of GMO/GE traits after the crop is harvested, and take and maintain representative samples of grain as it's loaded into storage. Several types of tests are available to measure whether GMO/GE traits are present in a sample of grain.

Item 6c – Other Avoidance Practices

Other avoidance practices include using third-party verified non-GMO seed, and cleaning combines, grain drills, planters and other equipment to assure they are free of contaminants. Specify the practice used in the box below Item 6c.

Item 7 – Price Premium Received for Identity Preserved, Non-GMO/GE Corn Harvested

If the operation received a price premium for identity preserved, non-GMO/GE corn harvested and sold in 2016, mark "Yes" and go to Item 7a. If not, mark "No" and skip to Section P.

Item 7a – Amount of Price Premium Received

Record the amount per bushel that the operation received for the sale of identity preserved, non-GMO/GE corn during the 2016 crop year. **Example**: the operation sold their non-GMO/GE corn for $4.50/bushel, and their GMO/GE corn for $4.00/bushel. Record $0.50 (—NOTE: non-GMO premiums—especially for corn—are not as big as organic premiums since farmers are not shifting to an alternative production system).

6.3 Section P – Corn Drying

Most corn must be dried to a certain moisture level, about 15.5 percent, before it can be stored. Costs of corn drying can be significant in some years and certain locations due to annual weather conditions. Information collected about corn drying systems are used in engineering relationships to estimate the operating and ownership costs of corn drying facilities. Drying systems use various fuels as a heat source and electricity to power fans that force air through the grain. Drying costs for custom drying, on-farm fuel, electricity, repairs, and capital are added to these same costs for other operations to estimate total machinery and equipment operating and ownership costs of corn production.

Item 1 – Corn for Grain Harvested

If the operation harvested any corn for grain in 2016, mark "Yes" and continue. Otherwise, mark "No" and go to Section Q.

Item 2 – Month Harvested

Report the month, numbered 01 (January) through 12 (December) in which the majority of the 2016 corn 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 2016 crop harvested was dried by each method.

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 2016 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.

6.3.1 Items 5-8: Crop Drying By Operation

These questions should only be completed if any of the corn crop was dried by the operation (Item 3b is positive). If none of the corn crop was dried by the operation, skip these questions and go to the Conclusion.

Item 5 – Fuel Type Used to Dry Majority of Corn Crop

Record the main fuel type used to dry the 2016 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 Corn Crop at Harvest

Record an estimate of the average percentage points of moisture of the corn crop at harvest to the nearest tenth.

Item 7 – Labor Hours Used for Drying Corn Crop

Record an estimate of the hours of each type of labor that were used to dry the 2016 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 2016 corn crop.

Item 8a – Number of Facilities Used

Record the number of the (Item 8) facilities used to dry the 2016 corn crop.

Item 8b – Total Capacity

Record the total holding capacity of the (Item 8a) facilities used to dry the 2016 corn crop. For continuous flow or batch dryers, report the bushels per hour.

7 Additional Questions for Version 4 - Dairy

7.1 Section I – Expenses

There are several expense questions that ask for the amount of the dollars spent that was for the **DAIRY enterprise**. The values for these questions must be less than or equal to the total amount spent on that expense for the entire operation. Expenses for the Dairy enterprise include those for such aspects as milking, herd management, feeding, manure management and handling, etc. **Exclude** expenses for producing feed for the dairy, such as expenses associated with field work to produce corn silage and hay for dairy forage.

Additional Expense Questions for DAIRY enterprise:

- Item 3a – Agricultural Chemicals and Biocontrols
- Item 5a – Leasing of Livestock
- Item 6a – Purchased Feed for Livestock
- Item 7a – Bedding and Litter for Livestock
- Item 8a – Medical Supplies, Veterinary and Custom Services for Livestock
- Item 9b – All Fuels, Oils, and Lubricants
- Item 10c(i) – Electricity for Specialized Livestock Production Facilities
- Item 14a – Repairs, Parts, and Accessories
- Item 15a(i) – Maintenance and Repair of Specialized Livestock Production Facilities
- Item 23a – Cash Wages
- Item 25a – Payroll Taxes
- Item 26a – Benefits for Hired Labor
- Item 27a – Contract Labor
- Item 28c – Custom Work
- Item 33a – Marketing and Storage Expenses

7.2 Section L – Dairy Labor

These items provide the information necessary to estimate the labor required for dairy production. Record only the hours spent in the dairy, **including** milking, herd management, feeding, manure handling, etc. **Exclude** hours used to produce feed for the dairy, such as field operations to produce corn silage and hay for dairy forage. The respondent may be able to report the number of hours spent by workers each day for milking and other dairy production activities. If this is the best way for the respondent to remember the labor used for the dairy, multiply this estimate by 7 days per week to get the total hour per week worked in each period.

Item 12a – Principal Operator

For each quarter, record the **average number of hours** the operator worked on the dairy enterprise **per week**. Record BOTH paid and unpaid operator hours. Make sure that the total hours worked per week for dairy by the operator does not exceed the total farm hours worked per week by the operator as reported in Item 11a.

Item 12b – All Other Unpaid Workers

For each quarter, record the **average TOTAL number of hours** of farm work done **per week** by any unpaid workers (excluding the operator) for the dairy enterprise. Unpaid workers may include members of the operator's household, partners, neighbors, guests, etc.

For multiple workers, record the TOTAL average number of hours worked per week. For example, if there are three workers who worked an average of 42, 24 and 15 hours per week respectively on the dairy enterprise, the correct entry for this item is 81 hours. Make sure that the total farm hours worked per week for dairy by unpaid workers does not exceed the total farm hours worked per week by the spouse, other operators, and other unpaid workers combined as reported in Items 11b, 11c, and 11d.

Item 12b(i) – Hours Worked By All Unpaid Workers Under Age 16

Even though the workers were “unpaid” there is a value associated with the labor they performed. To accurately reflect the true cost of producing milk, a value per hour will be applied to all unpaid labor. Because children under age 16 are generally paid a lower wage than older workers, this question is asked so that an adjustment can be made to the value derived for unpaid labor.

Record the percentage of the hours worked on the dairy enterprise by all UNPAID workers (excluding the operator) that was performed by children under age 16.

7.3 Sections O-U – Dairy Production Practices

What are these sections for? How is the information used?

Cost of production surveys are conducted for selected commodities on a rotating basis (every 4-8 years) to obtain data on production practices and the amount and costs of inputs used. These data are used as the basis for cost of production estimates until a new survey is conducted. The last Dairy Cost of Production survey was conducted for 2010. Since then there have not only been changes in the technologies and economic conditions that affect dairy production, but also changes in legislation that affect farmers’ decisions with regard to how they allocate resources both within the farm unit and among farm and other competing interests. Thus, new data are needed to provide for a greater understanding of dairy production. Data collected in the 2016 ARMS will be used to describe important financial, structural, and environmental aspects of milk production. In addition, the data will provide the basis for milk cost of production estimates for 2016 and over the next several years.

Organic milk production has been one of the most rapidly growing segments of organic agriculture. As part of the sampling in the 2016 ARMS, a sample of organic operations was drawn in addition to conventional dairies. Data collected from the organic dairies will be compared to that from conventional dairies in order to examine the differences in production practices and the costs and returns associated with each production system. The data should provide insight into the profit potential offered by organic systems for U.S. milk producers.

General Information

Report information for the dairy operation only. The dairy operation includes all dairy cows (including those dry and in milk) on the operation. **Exclude** the costs and inputs used for all dairy cattle being raised by another operation unless the questionnaire specifically asks about them.

Exclude information about costs, machinery and all other inputs used to produce feed for the dairy operation. This includes, but is not limited to, information about harvested crops such as hay, haylage, and corn silage. The amounts of these homegrown feed items fed to dairy cattle will be collected in the feed section and these amounts will be valued and charged to the dairy enterprise. To avoid double-counting the costs, it is important that the production practices and costs of producing feed for the dairy operation are excluded.

7.3.1 Section O – Dairy Screening, Production and Inventory

This section determines if this operation has a dairy operation that should be included in the survey. It collects information about certified organic milk production and possible changes to dairy farms.

The information about dairy cattle inventories collected in this section is needed to determine how the dairy operation changed during 2016. Some dairy operations may have had high milk returns relative to inputs used because they were selling down the dairy cattle inventory. Likewise, some operations may have had low milk returns relative to inputs used because they were expanding the operation. In order to compare the costs and returns of all dairy operations, we need to be able to adjust for inventory changes, especially during years of extreme price conditions when major inventory adjustments are common.

Item 1 – 10 or More Dairy Cows Milked

If 10 or more dairy cows were milked on this operation, regardless of ownership, mark “Yes” and continue. Otherwise, mark “No” and skip to the Conclusion.

Operations were selected for the Phase 3 Dairy survey based on the data reported in the ARMS 1/Integrated Screening Survey (ISS). Operations that reported 10 or more milk cows (and those that indicated they raised milk cows but the number was unknown) on ARMS 1/ISS were eligible for the Phase 3 Dairy survey. Therefore, if less than 10 cows milked are reported in Item 1, indicate in notes why there is a difference from the ISS which indicated they had 10 or more milk cows.

Item 2 – Peak 2016 Milk Cow Inventory

Record the largest number of dairy cows milked on this operation, regardless of ownership, at any time in 2016.

Item 3 – Months Producing Milk in 2016

Record whether the operation produced milk in all 12 months of 2016. If the operation did produce milk all 12 months of 2016, mark “Yes” and skip to Item 5. If not, mark “No” and continue with Item 4.

Item 4 – Enter or Exit Dairy Business During 2016

If the operation entered or exited the dairy business during 2016, mark "Yes" and go to Conclusion on the back page. Otherwise, mark "No" and continue. The Dairy survey is targeting operations that were in business during all 12 months of 2016, and those that produced milk on a seasonal basis. Seasonal milk producers, such as those that produced milk during the spring through fall periods but not during the winter months, would not produce milk in all 12 months of 2016. These producers would report that they did not enter or exit the dairy business during 2016 and thus would continue to item 5 of the questionnaire.

Item 5 – Dairy Cattle Inventory

In this table we get a description of the dairy operation as it existed at the beginning and end of 2016. This lets us see if the operation was expanding or reducing its size during 2016, and also gives us a way to measure the average size of the dairy operation during 2016.

Item 5a – Milk Cows

Record the total number of milk cows on hand as of the date in column 2 and column 3. **Include** dry and milking cows. Cows generally are milked for 305 days and are "dry" (not giving milk) for the reminder of the year.

Item 5b – Breeding Bulls

Record the total number of breeding bulls on hand as of the date in column 2 and column 3. **Include** all breeding bulls and bull calves weighing 500 pounds or more that were being kept for breeding. **Include** "marker bulls" that were used to detect heat (estrus) in cows.

Item 6 – Transitioning to Organic Milk Production

Ask if the operation was transitioning to organic milk production during 2016. Dairy operations are required to go through a transition period to become certified as an organic operation. During this time organic inputs are used, but the milk produced cannot be sold as certified organic.

Item 7 – Did Operation Produce Certified Organic Milk

Organic farming systems rely on ecologically based practices, such as biological pest management; virtually excluding the use of synthetic chemicals in crop production (including livestock feed production); and prohibiting the use of antibiotics and hormones in livestock production. Organic livestock production systems attempt to accommodate an animal's natural nutritional and behavioral requirements. USDA livestock standards incorporate requirements for living conditions, pasture and access to the outdoors, feed ration, and health care practices suitable to each species.

Ask if the dairy operation produced certified organic milk in 2016. If so, mark "Yes" and continue. If not, mark "No" and skip to Section P. To be a certified organic operation it must have been certified by a USDA accredited state or private agency. USDA regulations require that all organic producers be certified by a State or private agency accredited under the uniform standards developed by USDA, unless they sell less than $5,000 a year in organic products. All organic certifiers are required to be accredited under USDA's national organic standards.

The following State certifiers are accredited by USDA:

- California-Marin County Agriculture
- California-Monterey County Certified Organic
- Colorado Department of Agriculture
- Idaho State Department of Agriculture
- Iowa Department of Agriculture
- Maryland Department of Agriculture
- Mississippi Department of Agriculture and Commerce
- Missouri Department of Agriculture
- Montana Department of Agriculture
- Nevada State Department of Agriculture
- New Hampshire Department of Agriculture, Markets,& Food
- New Mexico Organic Commodity Commission
- Oklahoma Department of Agriculture
- Rhode Island Department of Environmental Management
- South Carolina-Fertilizer and Seed Certification Services
- Texas Department of Agriculture
- Utah Department of Agriculture
- Virginia Department of Agriculture
- Washington State Department of Agriculture

The following private certifiers are accredited by USDA:

- American Food Safety Institute
- California Crop Improvement Association
- California Organic Farmers Association
- Certified Organic, Inc.
- Georgia Crop Improvement Association, Inc.
- Global Culture
- Global Organic Alliance
- Guaranteed Organic
- Hawaii Organic Farmers Association
- Indiana Certified Organic
- International Certification Services
- Integrity Certified International
- Maharishi Vedic Organic Agriculture Institute
- Massachusetts-Baystate Organic Certifiers
- Midwest Organic Services Association
- Minnesota Crop Improvement Association
- MOFGA Certification Services
- Natural Food Certifiers
- NOFA-New Jersey
- NOFA-New York
- North Carolina Crop Improvement Association
- Nutriclean (Formerly Scientific Certification Systems)
- OneCert
- Organic Crop Improvement Association
- Organic Forum International
- Organic Growers of Michigan

- Organic Certifiers
- Organic National and International Certifiers
- Quality Assurance International
- Quality Certification Services (Formerly FOG)
- Ohio Ecological Food and Farm Administration
- Oregon Tilth
- Pennsylvania Certified Organic
- Stellar Certification Services
- Vermont Organic Farmers

Item 8 – Amount Paid for Third Party Certification

Record the dollar amount paid in 2016 for a third party organic certification. Include user fees charged by organic certifiers.

Item 9 – Most Difficult Aspect of Producing Certified Organic Milk

Record the code from the list that best describes what the respondent feels is the most difficult aspect of producing certified organic milk.

7.3.2 Section P – Purchases

The purpose of this section is to collect information on purchased cows, heifers, and bulls kept for breeding.

Item 1 – Purchases Table

The table in this item collects information for purchases of dairy animals by the operation during 2016.

Column 2 – Number of Head Purchased

For each of the five categories of dairy animals listed in column 1, record the total number of head purchased by the operation during 2016.

Column 3 – Amount Spent for Purchases

Record the total dollar amount paid by the operation to purchase the dairy animals recorded in column 2. **Include** commissions, and other such charges paid as part of the purchases. **Exclude** transportation costs.

Item 1a – Milk Cows

Include:

1) All cows that have had at least one calf, regardless of breed, kept primarily to produce milk for human consumption, either for home use or for sale.
2) Milk cows, both dry and those being milked.
3) Heifers being kept for milk that have calved at least once.

Exclude:
1) Cows kept primarily to raise or nurse calves. These are considered beef cows.
2) Heifers that have not calved.

Item 1b – Replacement Heifers Weighing 500 Pounds or More

Include heifers of all breeds, 500 pounds or more, kept primarily to produce milk for human consumption, either for home use or for sale. If they are already bred but have not calved, they should be **included** in this category. This includes springers, dairy heifers that are due to calve shortly and showing signs of impending delivery. **Exclude** any that will only be kept as nurse cows to raise calves.

Item 1c – Breeding Bulls Weighing 500 Pounds or More

Include all bulls and young males for breeding, 500 pounds or more, purchased or placed on the operation in 2016.

Item 1d – Replacement Heifers Under 500 Pounds

Include all dairy heifers under 500 pounds that were purchased or placed on this operation in 2016 regardless of intended use.

Item 1e – Replacement Bulls Under 500 Pounds

Include all dairy bulls under 500 pounds that were purchased or placed on this operation in 2016 regardless of intended use.

Item 2 – Dairy Heifers Born on Operation Kept for Breeding

Enter the number of heifers born on this operation in 2016 which were kept for breeding. **Include** those which have been sold or culled but were originally intended to be used for breeding. **Include** those that were raised on other operations and then returned to this operation.

Item 2a – Replacement Heifers Raised on This Operation

Of the heifers kept for breeding, record the number of heifers that were raised on this operation.

Item 2b – Amount Spent to Have Replacement Heifers Raised on Another Operation

If the operation had another operation raise replacement heifers, record the total dollars spent for those replacement heifers to be raised on another operation. If the operator does not know the total amount, this amount can be calculated by obtaining the number of heifers raised on another operation multiplied by the amount spent per heifer.

7.3.3 Section Q – Sales and Other Income

The purpose of this section is to collect information on the marketing pattern of the dairy operation and sources of other income attributed to the dairy enterprise.

Item 1 – Sales of Dairy Animals

The data in this table provides information on the operation's marketing pattern of breeding stock, cull stock, replacement animals, and calves.

Column 1 – Type of Dairy Animals

Most of the categories in this column have been described previously. Cull cows and bulls are animals no longer used for breeding.

Column 2 – Number Sold

For each category listed in column 1, enter the total number sold from this operation in 2016.

Column 3 – Amount Received for Sales

Enter the total amount received (net of marketing charges) for sales of each category of dairy animals listed.

Column 4 – Average Weight

For each category in column 1, enter the average weight of the dairy animals sold in 2016.

Item 2 – Income From Renting Space to Other Dairy Operations

Enter the total amount received in 2016 from renting dairy cattle housing, milking facilities, feed storage facilities, and other dairy facilities to other dairy operations.

7.3.4 Section R – Dairy Housing

Housing on many dairy operations is a major capital expenditure. Information about the housing facilities will be used to estimate the capital usage and costs on dairy operations and to provide insight into the efficiency of various types of operations. These estimates are used in the cost of production accounts in order to assign the annual costs for "capital recovery." Farmers do not pay this amount each year, but when they purchase housing facilities they amortize the cost over the life of the facilities. USDA estimates a capital cost based on an estimated replacement cost of all the capital assets used in the dairy enterprise.

Report all structures used to house dairy cattle regardless of their age and condition.

Item 1 – Dairy Cattle Housing Facilities

Information will be collected on facilities used for housing cows and heifers, for calving, as a nursery, and for feeding dairy cattle (column 1). **Exclude** milking facilities (reported in Section S). Several of the columns refer to information about the **largest** facility.

Type of Facility

The most common types of dairy housing facilities have been preprinted on the table. Definitions of each type are below.

Stanchion or Tie Stall Barns: In the stall (stanchion) barn each cow is tied up in a stall for resting, feeding, and watering. The typical plan has two rows of stalls. In older buildings hay and straw are stored in an overhead loft, but in modern layouts adjacent buildings are generally used. Cows are usually milked while tied up in the stall barn.

Loafing or Loose Housing Barns: The loose-housing barn is a shelter arranged in such a way that the cows can move freely inside and sometimes also between the shelter and an outside yard. Cows are usually not milked in loose-housing barns, but rather are milked in adjacent facilities.

Freestall Barns: The freestall barn is a combination of the stall and loose housing barns. Cows have stalls for resting, feeding, and watering, but are also free to move around. Cows are usually not milked in freestall barns, but rather are milked in adjacent facilities.

Dry lot corral Sun Shades: In hot and dry climates, shade is necessary in the summer, but winters are warm enough that additional shelter is not required. Also, because annual rainfall is scant and the ground seldom muddy, earthen floors are acceptable. For these situations, characteristic of the U.S. Southwest, dry lots with simple shade structures are the least expensive housing systems.

Calf Barns: Calf barns are structures that house calves starting from shortly after birth. Calves housed in calf barns may be in individual stalls or in pens. Dairy calves are usually housed in barns or hutches beginning shortly after birth.

Other Cow Housing Facilities: Other cow housing facilities are any other facilities used to house dairy animals that have not been previously reported. A calving or maternity barn is one example of a facility to include in this category. Report other dairy housing facilities regardless of type or condition.

Column 1 – Number of Facilities

For each facility type, enter the total number of facilities used on this operation in 2016.

Note that codes for columns 2-5 are located above each column. Use the code for the largest facility in each of columns 2-5.

Column 2 – Frame Type of Largest Facility

Enter the code which represents the type of frame of the **largest** facility listed in each row of the table. Be sure to record the type of frame, and not the type of siding

Column 3 – Floor Type of Largest Facility

Enter the code which represents the floor type of the **largest** facility listed in each row of the table.

Column 4 – Manure Handling System of Largest Facility

Enter the code which represents the manure handling system of the **largest** facility listed in each row of the table.

Column 5 – Manure Storage System of Largest Facility

Enter the code which represents the manure storage system of the **largest** facility listed in each row of the table.

Column 6 – Capacity

For each of the facilities listed in the table, enter the total number of head that these facilities can house. If the operation has more than one facility of the same type (column 1 is greater than 1), enter the combined capacity of all the facilities.

Item 2 – Year Newest Facility Built

Enter the 4-digit year that the newest dairy cattle housing facility was built.

Item 3 – Number of Calf Hutches or Super Calf Hutches

Record the total number of Calf Hutches or Super Calf Hutches used on this operation in 2016. Calf Hutches are individual calf housing units often made of plastic or some other synthetic material, but can be made of wood or metal. Super Calf Hutches are large calf hutches that provide transitional housing for a small group of calves. The super hutch was created to provide housing for calves in small groups after 8 weeks of age. It allows calves to acclimate to group housing with a smaller number of calves, reducing stress when they are moved into larger groups, and provides calves with the experience of headlocks and eating from a trough or manger.

Item 4a-c – Dairy Management Practices

These items collect data about the use of various management practices on dairy operations. Data on these practices are used to identify which practices are associated with dairy animal and farm financial performance. For each item, mark “Yes” or “No”.

Item 5 – Total Acres of Land Used in the Dairy Operation

Enter the total number of acres of land used for the dairy enterprise during 2016. **Include** acres used for pasture, corrals, building sites, manure storage, etc. **Exclude** acres used for crop production to feed and bed the dairy cattle and acres to which dairy manure was applied.

7.3.5 Section S – Milking Facilities & Practices

Milking facilities on many dairy operations are a major capital expenditure, and these data will be used to estimate the cost of the capital used in the milking facilities on dairy operations. These estimates are used in the cost of production accounts in order to assign the annual costs for “capital recovery.” Farmers do not pay this amount each year, but when they purchase milking facilities they amortize the cost over the life of the facilities. USDA estimates a capital cost based on an estimated replacement cost of all the capital assets used in the dairy enterprise.

Information about the milking facilities will also help to explain the cost and expenditure profile of the operation and provide insight into the efficiency of various types of operations.

Item 1 – Cows Milked in Barn Facilities

If any cows were milked in barn facilities in 2016, mark "Yes" and continue. If not, mark "No" and skip to Item 2. If cows were milked in barn facilities, the barn should have been reported in Section R as a dairy housing facility. These will most likely be stanchion or tie stall barns, unless a robotic milking unit was used. If a robotic milking unit was used, a loose or freestall barn will likely be reported in Section R.

Item 1a – Method Used to Milk Cows in Barn Facilities

Enter the code that represents the method used to milk the cows in the barn facilities.

Item 1b – Total Number of Stalls in Barn Facilities

Enter the total number of stalls in **all** the barn facilities on the operation.

Item 1c – Total Number of Milking Units in Barn Facilities

Enter the total number of milking units in **all** the barn facilities on the operation. The number of milking units will be less than or equal to the number of stalls.

Item 2 – Cows Milked in Milking Parlor

If any cows were milked in a milking parlor in 2016, mark "Yes" and continue. If not, mark "No" and skip to Item 3.

Item 2a – Number of Milking Parlors Used

Enter the total number of milking parlors used on this operation.

Note that codes for items 2b-2e are located next to each response box. Use the code for the largest facility in each of items 2b-2e.

Item 2b – Type of Largest Milking Parlor

Enter the code of the **largest** type of milking parlor used on this operation.

Item 2c – Frame Type of Largest Milking Parlor

Enter the code of the frame type of the **largest** milking parlor used on this operation. Be sure to record the type of frame and not the type of siding.

Item 2d – Manure Handling System of Largest Milking Parlor

Enter the code of the manure handling system of the **largest** milking parlor used on this operation.

Item 2e – Manure Storage System of Largest Milking Parlor

Enter the code of the manure storage system of the **largest** milking parlor used on this operation.

Item 2f – Total Number of Stalls in all Milking Parlors

Enter the total number of stalls in **all** the milking parlors on the operation. If more than one parlor was used, this would be the sum of the number of stalls in each parlor.

Item 2g – Total Number of Milking Units in all Milking Parlors

Enter the total number of milking units in **all** the milking parlors on the operation. If more than one parlor was used, this would be the sum of the number of milking units in each parlor.

Item 2g(i) – Number of Robotic Milking Units

Of the Item 2g milking units, record the number that were robotic.

Item 2h – Year Newest Milking Parlor Built

Record the 4-digit year when the **newest** milking parlor was built on this operation.

Item 3 – Herd Milked 3 or More Times Per Day

If the cow herd was milked 3 or more times per day, mark "Yes". Otherwise, mark "No". Most operations milk the cow herd between 1 and 3 times per day.

Item 4 – Computerized Milking Systems

If the operation used a computerized milking system that permits electronic data collection (e.g., pounds of milk daily, percent milkfat, percent protein, somatic cell count, weight, etc.), mark "Yes". Otherwise, mark "No".

Item 5 – bST Use

If the operation injected cows one or more times with bST (the hormone Bovine Somatotropin), mark "Yes". Otherwise, mark "No".

Item 6a-d Dairy Breeds

Of the cows milked on this operation, record the percentage for each listed dairy breed and crossbreds. Record the percentage as a whole number. Items a-d must add to 100%.

7.3.6 Section T – Dairy Feed & Pasture

Feed comprises the largest portion of total input costs for dairy production, and therefore it is essential we collect complete information about the operation's feed usage and expense.

Item 1 – Homegrown Feed

This item accounts for the harvested feed grain and forage crops grown on this operation that were fed to the dairy cattle on this operation in 2016 (pasture and cropland used for grazing are recorded in Item 4).

If no harvested feed was fed to the dairy cattle on this operation, check “No” and go to Item 2.

Column 1 – Type of Homegrown Feed

Record the name and code for each type of feed grown on this operation and fed to dairy cattle on this operation in 2016. **Include** feed that was grown in previous years and fed to dairy cattle in 2016. **Exclude** feed that was purchased or supplied by contractors.

Column 2 – Total Amount Fed

For each type of feed listed in column 1, record the total quantity fed to dairy cattle on the operation in 2016. **Exclude** feed purchased.

Column 3 – Unit Code

Enter the code for the unit in which the quantity in column 2 was reported.

Column 4 – Feed Storage Facility

For each type of feed reported, record the code which represents the type of storage facility that was most often used.

Item 2 – Purchased Feed

This is a screening question to determine if the operation used any feed or feed supplements in 2016 that was purchased for the dairy cattle on this operation. Unless the operation grew all of the feed fed to the dairy cattle, this answer will always be “Yes”.

In the unlikely event that the operation did not purchase any feed or feed supplements, check “No” and skip to Item 3.

Column 1 – Type of Purchased Feed

Refer to the list on Page 26 of the questionnaire and record the name and code for each type of feed or feed supplement the operation fed to its dairy cattle in 2016. **Include** feed purchased and feed supplied by contractors. **Exclude** feed grown on the operation and fed to dairy cattle (this was reported in Item 1).

Column 2 – Total Amount Fed

For each type of feed or feed supplement listed in column 1, record the total quantity fed to dairy cattle on the operation in 2016. **Exclude** homegrown feed.

Column 3 – Unit Code

Enter the code for the unit in which the quantity in column 2 was reported.

Column 4 – Total Amount Spent on Purchased Feed

Record the amount spent for each type of feed fed to dairy cattle on this operation in 2016. Record the total amount spent for all purchased feed fed during 2016 regardless of when it was

purchased. Report the **total amount spent** for the feed rather than the amount spent per unit in column 3.

Item 3 – Pasture and Grazing

If pasture or cropland was used to graze dairy cattle in 2016, mark "Yes" and continue. Otherwise, mark "No" and skip to Item 7.

Item 4 – Pasture and Grazing Land Table

Column 1 – Type of Land

The most common types of grazing land are preprinted on the questionnaire.

Native or permanent pasture is land that has been permanently, or for most of the time, in pasture. Most of the forage species are native perennials.

Planted or improved pasture is land that may be used for crops but was planted in pasture for the dairy animals. This pasture may be planted in non-native forage species, such as alfalfa, and may be managed, or improved, by fertilization and/or weed control.

Small grain pasture is land planted to small grain crops, primarily wheat. Dairy cattle may graze on small grain pasture during the spring before it is harvested later during the summer.

Crop residue pasture is cropland harvested on which dairy cattle graze the crop residue and any grain that did not get harvested. Corn stalks are the primary crop residue that cattle graze.

Other grazed forage pasture includes any other type of land grazed by dairy cattle but not included in the previous categories.

Column 2 – Acres Owned

Record the number of acres owned for each column 1 land type that dairy cattle grazed on during 2016.

Column 3 – Acres Rented or Leased

Record the number of acres rented or leased for each column 1 land type that dairy cattle grazed on during 2016.

Column 4 – Dollars Spent to Rent Pasture

If any column 3 acres were reported, record the total dollars spent to rent/lease the column 3 acres.

Column 5 – Acres Irrigated

Record the number of acres irrigated for each column 1 land type that dairy cattle grazed on during 2016.

Item 5 – Months Grazing Cows on Pasture

Record the number of months in 2016 that milk cows typically grazed on pasture. This will depend on the farm location and climate.

Item 6 – Percentage of Total Forage Ration Obtained from Pasture

Record the percentage range that best describes the amount of the total forage ration that milk cows obtained from pasture during the grazing months reported in Item 5. **Example**: if the milk cows grazed on pastures for 6 months each year and obtained 30 percent of their forage from pasture during these 6 months, record code 2 (25-49%) in Item 6.

Item 7 – Bedding Produced or Obtained for Free

This item accounts for bedding grown/produced on this operation or was obtained free that was used on this operation in 2016. If any bedding was grown/produced on this operation or obtained for free, mark "Yes" and complete Item 7a. Otherwise, mark "No" and skip to Section U.

Item 7a – Market Value of Bedding

If any bedding was grown/produced on this operation or obtained for free, ask the operator what they think the total market value of the bedding would be if it was sold. This could also be the dollar amount that the operator thinks he would have had to pay had he purchased the bedding.

7.3.7 Section U – Dairy Manure

The primary purpose of this section is to get information on the methods used to store, handle and dispose of dairy manure. Dairy manure may be considered a waste product, a fertilizer by-product, and/or a bedding by-product of dairy production. As a fertilizer material, it can provide income to the operation and can also reduce the operation's fertilizer expenditure. As a composted bedding material, it can reduce the operation's bedding expenditure. As a waste material, the cost of handling it is an expense to the operation. Also, manure handling methods are of interest because of the potential environmental impact they may have on water and air resources and rural communities.

Item 1 – Type of Manure Handling System

Enter the code that best describes the type of manure handling system that was used to handle the majority of the dairy manure on this operation in 2016.

Item 1a – Manure Handling in Milking Area

If the manure produced in the milking area was handled by a separate manure handling system, mark "Yes". Otherwise, mark "No".

Item 2 – Frequency of Manure Removal

Record the code that best describes the frequency at which manure was removed from dairy housing and holding facilities.

Item 3 – System to Collect and Use Methane from Storage Facilities

If a system was used to collect and use the methane from the manure storage facilities, mark "Yes" and continue. Otherwise, mark "No" and go to Item 4.

Item 3a – Methane used for electricity generation

If the collected methane was used for electrical generation mark "Yes" and continue.

Item 3b – Methane flared for disposal

If the collected methane was disposed of by flaring mark "Yes" and continue

Item 4 – Dairy Manure Applied to Fields

If dairy cattle manure was applied to any fields on this operation in 2016, mark "Yes" and continue. Otherwise, mark "No" and skip to the Conclusion.

Item 4a – Acres on which Dairy Manure was Applied

Record the number of acres on this operation to which dairy cattle manure was applied during 2016. If manure was applied to the same acres more than once during the year, count these acres only once.

Item 5 – Commercial Fertilized Applied to Same Acres as Manure

If commercial fertilizer was applied to any of the same (Item 4a) acres to which dairy cattle manure was also applied, mark "Yes" and answer Item 5a. Otherwise, mark "No" and skip to the Conclusion.

Item 5a – Adjusting Commercial Fertilized Application

If the operation applied commercial fertilizer to any of the same (Item 4a) acres on which dairy manure was also applied, indicate if commercial fertilizer application rates were adjusted according to the nutrients (nitrogen or phosphorus) available from the dairy manure by marking "Yes" Otherwise, mark "No".