

**AGRICULTURAL RESOURCE
MANAGEMENT STUDY
SUNFLOWER
PRODUCTION PRACTICES REPORT
for 1999**

RESPONDENT BOOKLET

FERTILIZER / PESTICIDE APPLICATION METHODS

Section C, Column 6

&

Section D, Column 9

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|---|---|
| 1 | BROADCAST, GROUND WITHOUT INCORPORATION |
| 2 | BROADCAST, GROUND WITH INCORPORATION |
| 3 | BROADCAST, BY AIR |
| 4 | IN SEED FURROW |
| 5 | IN IRRIGATION WATER |
| 6 | CHISEL/INJECTED OR KNIFED IN |
| 7 | BANDED/SIDEDRESSED IN OR OVER ROW |
| 8 | FOLIAR OR DIRECTED SPRAY |
| 9 | SPOT TREATMENTS |

Section C, Item 4

Common Fertilizers and Their Percent Analysis

[Enumerator Note: *If Respondent cannot report the formulation for Section C, item 1, enter the formulations below.*]

Name	Percent Active Ingredients				RANGE
	N	P ₂ O ₅	K ₂ O	S	
Anhydrous ammonia	82	--	--	--	
Aqua ammonia	20	--	--	--	16-30% N
Ammonium nitrate	33	--	--	--	33-34% N
Ammonium sulfate	21	--	--	--	20-21% N
Nitrogen solutions	28	--	--	--	7-58% N
Sodium nitrate	16	--	--	--	
Urea	46	--	--	--	45-46% N
Urea ammonium nitrate	32	--	--	--	
Super phosphate (22 % & under)	--	19	--	--	18-22% P
Super phosphate (over 22 %) . . .	--	30	--	--	23-39% P
Triple Super Phosphate	--	46	--	--	40-54% P
Ammonium phosphate	11	48	--	--	
Di-ammonium phosphate	18	46	--	--	
Mono-ammonium phosphate	11	52	--	--	
Potassium chloride	--	--	60	--	50-62% K
Potassium nitrate	13	--	44	--	
Potassium sodium nitrate	15	--	14	--	
Mixed Fertilizer	2	6	12	--	
	3	9	18	--	
	3	10	30	--	
	5	10	15	--	
	5	10	30	--	
	5	15	30	--	
	6	24	24	--	
	8	24	24	--	
	9	18	9	--	
Soil sulfur	--	--	--	92	
Sulfur-bentonite	--	--	--	90	
Sulfur dioxide	--	--	--	50	
Ammonium polySulfide	20	--	--	45	
Ammonium sulfate	21	--	--	24	
Ammonium thiosulphate solution .	12	--	--	26	
Diammonium phosphate-sulfur . .	16	40	--	13	
Potassium sulfate	--	--	50	18	48-52% K
Potassium-magnesium sulfate . . .	--	--	22	22	

CHEMICALS and PESTICIDES for SUNFLOWERS

D/L	Class	Code	Product Name	D/L	Class	Code	Product Name
L	I	1004	Asana XL 9.66EC)	D	I	1546	Nufos 15G
L	H	4133	Assert (2.5EC)	L	I	1547	Nufos 4E
D	H	4704	Assert SG	L	I	1365	Phaser (3EC)
L	I	1686	BMP 123 (48 LC)	D	I	1366	Phaser 50WP
L	I	1246	Baythroid 2 (EC)	L	H	4081	Poast (1.5 EC)
L	I	1203	Biobit FC	L	H	4703	Poast HC (3.5EC)
D	I	1488	Biobit HPWP	L	MG	9231	Poly-Foliant V
D	I	1207	Biobit WP	L	H	4360	Prowl 3.3 EC
L	I	1482	Chlorpyrifos 4E AG	D	H	4504	Prowl DG
L	I	1282	Condor	L	I	1210	Pyrellin E.C.
D	I	1670	Condor (WP)	L	I	1224	Pyrenone Crop Spray
D	I	1528	Costar Biological Insecticide	L	H	4561	Roundup Ultra
D	I	1477	Crymax WDG	L	MD	9281	Roundup Ultra
D	I	1318	Cutlass WP	L	I	1170	Scout X-TRA (0.9lb EC)
L	MD	9291	Defol 5	L	H	4667	Scythe
L	MD	9014	Defol 6	D	I	1015	Sevin 5% Bait
L	MD	9285	Defol 750	D	I	1496	Sevin 80WSP
D	I	1411	Diatect Multipurpose Insecticide	L	H	4100	Sonalan (3EC)
D	I	1023	Dipel 2X (WP)	D	H	4474	Sonalan 10G
D	I	1516	Dipel DF	L	H	4507	Sonalan HFP
D	I	1026	Dipel WP	D	H	4705	Spartan
D	I	1527	Dursban 1% Granules	L	I	1317	Thiodan 2 C.O. EC
L	I	1199	Endosulfan 3EC	L	I	1128	Thiodan EC
D	I	1231	Ednosulfan 50W	D	I	1174	Thiodan 50WP
L	I	1309	Evergreen Emulsifiable 60-6	D	I	1499	Thiodan WSB
L	I	1304	Evergreen Growers Spray	L	H	4109	Treflan 5 (EC)
L	I	1413	Evergreen Growers Spray 7405	L	H	4108	Treflan (EC)
L	I	1054	Furadan 4F	L	H	4629	Treflan HFP
L	I	1555	Gemstar LC	L	H	4110	Treflan M.T.F. (4EC)
D	H	4125	Glean FC (75DF)	D	H	4111	Treflan TR-10
L	H	4314	Gramoxone Extra (2.5L)	D	H	4452	Trifluralin 10G
L	MD	9037	Gramoxone Extra (2.5L)	L	H	4450	Trifluralin 4 (EC)
D	I	1142	Javelin WG	L	H	4451	Trifluralin 5 (EC)
L	I	1252	Karate (1EC)	L	H	4112	Trilin (4EC)
D	F	7137	Kumulus S	D	H	4285	Trilin 10G
L	H	4069	Lasso (4EC)	L	H	4368	Trilin 5
D	H	4070	Lasso II (15G)	L	F	7261	Trilogy 90EC
L	MD	9268	Leafex 2	L	H	4572	Ultima 160
L	MD	9230	Leafex 3	L	I	1435	Warrior
D	I	1068	Lorsban 15G	L	I	1553	Warrior T
L	I	1069	Lorsban 4E	D	I	1685	Xentari Biological
L	I	1434	Lorsban 4E-HF	D	I	1377	Xentari WDG
L	I	1507	MVP Bioinsecticide				Insecticide (DF)
L	I	1232	MVP II Bioinsecticide				
L	I	1472	Mattch Bioinsecticide				
L	I	1158	Methyl Parathion 4EC				

TARGET PEST CODE LIST

SECTION D, Item 1 Column 12

INSECTS

- 010 APHIDS

- 020 BEETLES, WEEVILS or WIREWORMS
 - 727 Corn Rootworm (adults)
 - 728 Corn Rootworm (larvae)
 - 020 Other Beetles, Weevils or Wireworms

- 030 CUTWORMS OR ARMYWORMS

- 040 MOTH / CATERPILLAR
 - 754 Pink Bollworm
 - 045 Other Bollworm
 - 757 Tobacco Budworm
 - 040 Other Moths or Caterpillars
(For example: loopers, leafminer, leaf perforator, leafworm, corn borer, webworm, leafrollers, soybean podworm, fall armyworm, corn ear worm, etc.)

- 050 TRUE BUG
(For example: fleahoppers, lygus bugs, stink bugs, chinch bugs, tarnished plant bugs, etc.)

- 060 WHITEFLY, MEALYBUGS or LEAF HOPPERS

- 080 GRASSHOPPERS or CRICKETS

- 090 MITES

- 095 FLIES or MAGGOTS

- 085 THRIPS

- 100 NEMATODES

DISEASES

- 105 BACTERIAL DISEASES

- 110 FUNGAL DISEASES, (FUNGUS)

- 120 VIRAL DISEASES, (VIRUS)

WEEDS

- 171 GRASSES, ANNUAL
 - 607 Foxtail
 - 171 Other Annual Grasses

- 172 GRASSES, PERENNIAL
 - 617 Shattercane
 - 608 Johnsongrass
 - 616 Quack Grass
 - 172 Other Perennial Grasses

- 175 BROADLEAVES, ALL
 - 173 Perennial broadleaf
 - 174 Annual broadleaf

- 177 SEDGES

OTHER PESTS

- 180 OTHER PESTS
(For example, defoliant, desiccant or growth regulator, vine killer, etc.)

Conversion Codes for Liquid and Dry Products

Liquid Products	Dry Products
1 Gallon = 4 Quarts	1 Pound = 16 Dry Ounces
1 Quart = 2 Pints	1 Ounce = 28.3 Grams
1 Pint = 16 Fluid Ounces	1 Pound = 453 Grams
2 Cups = 1 Pint	

PEST MANAGEMENT INFORMATION SOURCES

Section E, item 27

- 1 Extension Advisor, Publications or Demonstrations
(County, Cooperative or University)
- 2 Farm Supply or Chemical Dealer
- 3 Commercial Scouting Service
- 4 Crop Consultant or Pest Control Advisor
- 5 Other Growers or Producers
- 6 Producer Associations, Newsletters or Trade Magazines
- 7 Electronic Information Services (*World Wide Web, DTN, etc.*)
- 8 Other
- 9 None

MACHINERY and IMPLEMENT CODES

PLOWS and DISKS

- 01 Chisel Plow (Big Ox)
- 02 Coulter Plow
(Coulter Chisel, Soil Saver, Soil Conserver)
- 03 Deep Ripper
(Knife, Bed Knife, Slide)
- 04 Disk Plow

Moldboard
- 05 -Regular
- 06 -Two-way
- 07 Stubble-mulch
(Noble Blade, Sweep/Hoeme/
Muckeroy Plow)
- 08 Subsoil Ploe
(Chisel, V-ripper)
- 09 Disk-chisel
(Mulch Tiller)

Offset Disk
- 10 -Light Disk
- 11 -Heavy Disk
- 12 One-way Disk
(Disk Tiller)
- 13 Single Disk

Tandem Disk
- 14 -Regular
- 15 -Plowing or Heavy Duty
- 16 Paraplow

CULTIVATORS

- 21 Field Cultivator
(Regular digger,
Danish tined,
Swedish tined,
S-tine Cultivator,
Vibra-shank harrow,
Lilliston tiller)
- 22 Furrow-out Cultivator
- 23 Rotary Hoe

Row Cultivator
- 24 -Shank, Rolling
- 25 -Lister, Disk
- 26 Field Cultivator
-Heavy Duty
(Duckfoot cultivator)
- 27 Marker

PACKERS

- 51 Culti-packer
(Pulverizer)
- 52 Plow Packer
- 53 Roller Packer (Smooth & Flat)

HARROWS (DRAGS)

- 31 Field Conditioner
(Seed Bed Conditioner,
Soil Conditioner, Scratcher)
- 32 Finishing Harrow
(Harrogator)
- 33 Flex-Tine Tooth
(Coil Line)
- 34 Multi-weeder
- 35 Rail, Pipe, Log, Plank, Etc...
- 36 Rod Weeder
- 37 Roller Harrow
- 38 Spike Tooth Harrow
- 39 Spring Tooth Harrow
- 40 Powered Spike Tooth Harrow

BEDDERS-SHAPERS

- 41 Bedder-Shaper (Crowder)
- 42 Bed-Shaper, Bed Former

Disk
- 43 -Hipper
- 44 -Row
- 45 Lister (Middle-Buster or Breaker)
- 46 Rotovator-bedder
- 47 Seed Bed roller, Flat Roller)
- 48 Subsoil-Bedder, Subsoiler
(Ripper-hipper, Tiller,
No-till Disk Bedder)
- 49 Discovator

MISCELLANEOUS TILLAGE

- 61 Land-all, Do-all, Till-all, Mix-n-till
- 62 Mulch Treader, Picker-Treader,
Skew Treader
- 63 Roto-tiller (rotary tiller)
- 64 Roterra, Lely
- 65 Sand-fighter
- 66 Soil Finisher
(Finishing tool, Mulch
finisher, Tri-tiller, Task
master)

DRILLS and SEEDERS

- 101 Aerial Seeding
- 102 Broadcast Seeder

Drill
- 103 Drill-Air Delivery
- 104 Grain Drill (Lister disk)
- 105 No-Till, Minimum-Till Drill,
Zero-Conventional
- 106 Grain Drill (Plain)
- 107 Press Drill (Disk or Hoe)

PLANTERS

- 111 Bedder-shaper
- 112 Lister-bedder Planter
- 113 No-till, Minimum Till
- 114 Conventional, Row Crop
Planter, All Crop Planter
- 115 Air Delivery
- 116 Planter, Ridge till

LAND FORMING EQUIPMENT

- 171 Backhoe
- 172 Disk Border Maker
- 173 Ditch Closer
- 174 Ditcher (Vee Rotary)
- 175 Levee Plow Disk
- 176 Quarter Drain Machine
- 177 Rear Mounted Blade
- 178 Corrugator
- 179 Float
- 180 Land Plane Leveler
- 181 Laser Planer

For implements codes 171-181,
enter *Total Hours Operated* in the
column labeled *Total Acres
Covered*.
Total Acres Covered is not
meaningful for these implements.

OTHER IMPLEMENTS

- 191 Burn Buggy
- 192 Chaff/Straw Saver
- 193 Electric-Discharge
Weed Killer
- 197 Rock Picker
- 198 Rock Windrower or
Rock Rake
- 199 Rodent (Gopher) Killer
- 200 Roller groover
- 201 Rubber-Wheeled
Weed Puller
- 202 Shredder Flail
- 203 Shredder Rotary
- 205 Stalk Shredder, Cutter
- 206 Swath Roller

SECTION G, IRRIGATION TYPE CODES

PRESSURE SYSTEMS	GRAVITY SYSTEMS
1 HAND-MOVE	10 SIPHON TUBE from unlined ditches
2 SOLID OR PERMANENT SET	11 SIPHON TUBE from lined ditches
3 SIDE ROLL OR WHEEL LINE	12 PORTAL SYSTEM from unlined ditches
4 CENTER PIVOT OR LINEAR MOVE with sprinklers on main line	13 PORTAL SYSTEM from lined ditches
5 CENTER PIVOT OR LINEAR MOVE with sprinklers below main line, but more than 2 feet above ground	14 ANY POLY PIPE SYSTEM
6 CENTER PIVOT OR LINEAR MOVE with sprinklers less than 2 feet above ground	15 GATED PIPE (not poly pipe)
7 BIG GUN	16 IMPROVED GATED PIPE (surge flow or cablegation not poly pipe)
8 LOW FLOW IRRIGATION (drip, trickle or micro sprinkler)	17 SUBIRRIGATION
9 OTHER - SPECIFY	18 OPEN DISCHARGE FROM WELL OR PUMP
	19 OTHER - SPECIFY