

AGRICULTURAL RESOURCE MANAGEMENT SURVEY **SORGHUM (MILO)** PRODUCTION PRACTICES and COSTS REPORT for 2003

RESPONDENT BOOKLET

FERTILIZER / PESTICIDE APPLICATION METHODS

Section C, Column 6

&

Section D, Column 9

- | | |
|---|---|
| 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 D ONLY) |

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The time required to complete this information collection is estimated to average 65 minutes per response for the Sorghum (Milo) Production Practices and Costs Report.

Section C, Item 4

Common Fertilizers and Their Percent Analysis

[Enumerator Note: *If Respondent cannot report the formulation for Section C, item 4, enter the formulations below.*]

Name	FORM	Percent Active Ingredients			RANGE	RANGE
		N	P ₂ O ₅	K ₂ O		
Ammonium metaphosphate	D	12	51	–		
Ammonium nitrate	D	32	–	–	32-34%N	
Ammonium phosphate	D	11	48	--		
Ammonium phosphate nitrate	D	27	14	–	14-15%P	
Ammonium phosphate sulfate (APS)	D	16	20	–	13-16%N	20-39%P
Ammonium polyphosphate (APP)	L	10	34	–	10-11%N	34-37%P
Ammonium polysulfide (Ammonium Sulfate)	L	20	–	--	20-21%N	
Ammonium sulfate nitrate	D	21	–	–	20-26%N	
Ammonium thiosulfate solution	L	12	–	--		
Anhydrous ammonia	G	82	–	--		
Aqua ammonia (Ammonium Hydroxide) ..	L	20	–	–	16-30%N	
Calcium ammonium nitrate	D	15	–	–	15-16%N	
Diammonium phosphate sulfur	D	16	40	–	15-16%N	39-41%P
Diammonium phosphate (DAP)	D	18	46	–	16-21%N	46-53%P
Mixed fertilizer	D					
		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		
		10	34	--		
		11	37	--		
Monoammonium phosphate (MAP)	D	11	52	–	11-13%N	48-62%P
Nitrogen solutions	L	28	–	–	7-58%N	
Phosphoric acid	L	–	54	–	2-75%P	
Potassium chloride (Muriate of potash) . . .	D	–	–	60	60-62%K	
Potassium magnesium sulfate	D	–	–	22		
Potassium metaphosphate	D	–	55	37	55-57%P	37-38%K
Potassium nitrate	D	13	–	44		
Potassium orthophosphate	D	–	45	40	30-60%P	30-50%K
Potassium polyphosphate	L	–	50	35	40-60%P	22-48%K
Potassium sodium nitrate	D	15	–	14	14-15%K	
Potassium solutions	L	–	–	14	13-15%K	
Potassium sulfate	D	–	–	50	50-53%K	
Sodium nitrate (Nitrate of Soda)	D	16	–	--	15-16%N	
Super phosphate (22 % & under)	D	–	19	–	16-22%P	
Super phosphate (over 22 %)	D	–	30	–	23-39%P	
Triple super phosphate	D	–	46	–	40-54%P	
Urea	D	46	–	–	45-46%N	
Urea ammonium nitrate (UAN)	L	32	–	–	28-32%N	

CHEMICALS and PESTICIDES for SORGHUM (MILO), All

F = Fungicide; H = Herbicide; I = Insecticide; M = Misc. Other; MD = Defoliant/Desiccant; MG = Growth Regulator
 AS; Aqueous Suspension, D; Dust, DF; Dry flowable, DG; Water-Dispersible Granules, E or EC; Emulsifiable Concentrate, ES; Emulsifiable
 solution, F or L; Flowable, G or GR; Granular, L; Liquid, LV; Low volatility, M or ME; Microencapsulated, P; Pellets, S; Solution, SL; Slurry, SP;
 Soluble powder, W or WP; Wettable powder, WDG or WG; Water-Dispersible Granules, WSP; Water-soluble packet

D/L	Class	Code	Product Name	D/L	Class	Code	Product Name
L	H	4377	2,4-D/Amine 4	L	I	1686	BMP 123 (48 LC)
L	H	4664	2,4-D/Amine 6	L	H	4154	Bronco (4EC)
L	H	4531	2,4-D/Barrage				
L	H	4444	2,4-D/Class 40 A	L	H	4024	Buctril (2EC)
L	H	4443	2,4-D/Class LV4	L	H	4026	Buctril + Atrazine (1+2EC)
L	H	4001	2,4-D/Dacamine 4D				
D	H	4184	2,4-D/Defy	L	H	4027	Bullet 4EC
L	H	4221	2,4-D/Hi-Dep	L	MG	9032	Burst Yield Booster
L	H	4203	2,4-D Esteron 6E				
L	H	4204	2,4-D/Esteron 99 Concentrate	L	I	1011	Carbaryl 4L
L	H	4291	2,4-D/Formula 40	D	I	1012	Carbaryl 50W
L	H	4232	2,4-D/Lithate	D	I	1014	Carbaryl 80S (WP)
L	H	4480	2,4-D/LV 6	L	I	1482	Chlorpyrifos 4E AG
L	H	4265	2,4-D/Salvo	L	H	4469	Clarity 4L
D	H	4391	2,4-D/Savage	L	I	1008	Comite (6.55EC)
				L	I	1401	Comite II
L	H	4307	2,4-D/Weed-Rhap A-4D				
L	H	4306	2,4-D/Weed-Rhap LV-4D	D	I	1670	Condor WP
				D	I	1009	Counter (15G)
L	H	4003	2,4-D/Weedar 64				
L	H	4004	2,4-D/Weedar 64A	L	H	4330	Cycle (4L)
L	H	4294	2,4-D/Weedar Emulsamine E-3	L	H	4181	Cyclone (2EC)
L	H	4296	2,4-D/Weedone 638	L	I	1027	Cygon 400 (4EC)
L	H	4298	2,4-D/Weedone LV4	L	M	9269	Cytoplex HMS
L	H	4299	2,4-D/Weedone LV6	L	I	1141	Cythion 57% EC
				L	MG	9081	Cytokin Bio. Conc.
L	H	4006	AAtrex 4L				
D	H	4007	AAtrex 80W	D	I	1043	D-z-n Diazinon 14G
D	H	4008	AAtrex Nine-O (WP)	D	I	1044	D-z-n Diazinon 50W
				L	I	1045	D-z-n Diazinon AG500 (4E)
D	H	4123	Ally 60DF				
L	I	1003	Asana 1.9EC	L	MG	9291	Defol 5
L	I	1004	Asana XL (.66EC)	L	MG	9285	Defol 750
L	H	4041	Atrazine 4L	D	I	1033	Di-Syston 15% G
D	H	4043	Atrazine 80 (WP)	L	I	1034	Di-Syston 8 (EC)
D	H	4044	Atrazine 90DF				
				D	I	1047	Diazinon 14G
L	H	4136	Banvel (4L)	L	I	1041	Diazinon 4E
L	H	4138	Banvel	D	I	1050	Diazinon 50W
L	H	4327	Banvel SGF (2EC)	L	I	1046	Diazinon AG500 (4E)
L	H	4617	Banvel + 2,4-D	D	I	1361	Diazinon 5 Granules
L	H	4676	Banvel-K + Atrazine				
				L	I	1028	Dimethoate 2.67EC
L	H	4019	Basagran (4L)	L	I	1029	Dimethoate 4EC
L	I	1246	Baythroid 2EC	L	I	1403	Dimethoate 5 lbs.
L	H	4021	Bicep 6L	D	I	1023	Dipel 2X (WP)
L	H	4470	Bicep II	L	I	1024	Dipel 4L
L	H	4637	Bicep II Magnum	L	I	1025	Dipel ES
L	H	4468	Bicep Lite II				
L	H	4638	Bicep Lite II Magnum	L	H	4039	Direx 4L
L	I	1213	Bidrin 8	D	H	4040	Direx 80 DF
L	H	4022	Bladex 4L				
D	H	4023	Bladex 80WP				
D	H	4143	Bladex 90DF	L	F	7015	Dithane F-45 (4EC)

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D/L	Class	Code	Product Name	D/L	Class	Code	Product Name
L	H	4051	Dual (8E)	L	I	1236	Malathion 5EC (57%)
D	H	4050	Dual 25G	L	I	1157	Malathion ULV 9.33 Lb (95%)
L	H	4659	Dual Magnum	D	F	7328	Manzate 75 DF
L	H	4466	Dual II	D	F	7025	Manzate 200 DF (75%)
L	H	4660	Dual II Magnum	L	H	4235	Marksman
L	H	4661	Dual II Magnum SI	L	I	1072	Metasystox-R (2EC)
L	I	1039	Dyfonate 4EC	L	I	1075	Methoxychlor 4L
D	I	1037	Dyfonate II 10-G	L	H	4231	Micro-Tech
D	I	1038	Dyfonate II 20-G	L	H	4358	Milogard 4L
L	MG	9277	Early Harvest	D	H	4359	Milogard 80W
L	I	1148	Ethyl Parathion 8E	L	I	1507	MVP Bioinsecticide
L	I	1201	Ethyl-Methyl Parathion 6-3E	D	I	1546	Nufos 15 G
L	H	4208	Extrazine II 4L	L	I	1115	Parathion 8E
L	H	4210	Fallow Master	D	H	4352	Partner WDG
D	H	4214	Finesse DF	D	H	4569	Peak
L	H	4448	Frontier 6.0	D	H	4525	Permit 75DF
L	I	1054	Furadan 4F	L	MG	9137	PGR-IV
D	I	1053	Furadan 15G	D	MG	9301	PGR-IV Granule
L	H	4494	Guardsman Herbicide	L	MG	9300	PGR-IV Plus
L	I	1555	Gemstar LC	D	I	1240	Phorate 20-G
D	H	4125	Glean FC (75DF)	L	I	1104	Phosdrin 4EC
D	I	1682	Golden-Dew	L	H	4329	Pledge (4SL)
D	F	7333	Golden-Dew	L	MG	9231	Poly-Foliant 5
L	H	4314	Gramoxone Extra (2.5L)	L	I	1007	Pounce 3.2EC
L	H	4654	Gramoxone Max/Cyclone Con.	L	H	4086	Prowl (4EC)
L	I	1252	Karate 1 EC	L	H	4360	Prowl 3.3 EC
L	I	1707	Karate Z	D	H	4088	Ramrod 20 (G)
D	H	4066	Karmex DF	D	H	4090	Ramrod 65 WP
L	H	4068	Laddok	L	H	4089	Ramrod Flowable (4L)
L	H	4229	Landmaster BW	L	H	4091	Ramrod/Atrazine (4L)
L	H	4326	Landmaster II	D	H	4331	Ramrod/Atrazine DF
L	I	1063	Lannate L 1.8 Lbs.	L	H	4328	Rattler
D	I	1065	Lannate (90WSP)	L	H	4700	Roundup Custom
L	I	1064	Lannate LV (2.4 lbs.)	D	H	4702	Roundup EZ Dry
L	H	4230	Lariat (4F)	L	H	4093	Roundup Original
L	H	4069	Lasso (4EC)	L	H	4376	Roundup D-Pak
D	H	4070	Lasso II (15G)	L	H	4561	Roundup Ultra
L	H	4231	Lasso Micro-Tech (4E)	L	H	4675	Saber Herbicide
L	H	4665	LeadOff	L	H	4667	Scythe
L	MG	9230	Leafex 3	L	H	4447	Select 2EC
D	H	4077	Lorox DF (50%)	L	I	1132	Sevin 4F
L	H	4076	Lorox L (4lbs.)	D	I	1015	Sevin 5% Bait
D	I	1068	Lorsban 15G	D	I	1172	Sevin 50W
L	I	1069	Lorsban 4E	D	I	1018	Sevin 80S
				L	I	1019	Sevin XLR Plus (4E)
				D	I	1496	Sevin 80 WSP

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D/L	Class	Code	Product Name	Conversion Codes for Liquid & Dry Products
L	MG	9273	Stimulate Yield Enhancer	Liquid Products
L	I	1123	Supracide 2E	1 Gallon = 4 Quarts
				1 Quart = 2 Pints
				1 Pint = 16 Fluid Ounces
L	H	4315	Roundup RT	2 Cups = 1 Pint
				Dry Products
D	F	7481	T Planter Box Bio Fungicide	1 Pound = 16 Dry Ounces
D	F	7035	Terraclor 10% G	1 Ounce = 28.3 Grams
D	F	7037	Terraclor 75WP	1 Pound = 453 Grams
D	I	1124	Temik 15G	
D	I	1127	Thimet 20-G	
D	I	1187	Thiolux (80 DF)	
D	F	7038	Thiolux (80DF)	
L	H	4281	Tordon 22K (2EC)	
L	H	4108	Treflan EC (4Lbs.)	
L	H	4629	Treflan HFP	
L	H	4110	Treflan MTF (4EC)	
L	H	4450	Trifluralin 4 (EC)	
L	I	1176	Trithion 8E	
L	MS 9012		Vapam (3.18EC)	
L	I	1435	Warrior 1EC	
L	I	1553	Warrior T	
D	H	4858	Yukon Herbicide	
D	I	1685	Xentari Biological Insecticide DF	

PEST MANAGEMENT INFORMATION SOURCES

Section E, item 34 .

- 1 County, Cooperative, or University Extension Advisor, Publications or Demonstrations
- 2 Farm Supply or Chemical Dealer
- 3 Commercial Scouting Service
- 4 Independent Crop Consultant or Pest Control Advisor/Custom Applicator
- 5 Other Growers or Producers
- 6 Producer Associations, Newsletters or Trade Magazines
- 7 Electronic Information Services (*DTN, Internet, World Wide Web, etc.*)
- 8 Employee Pest Advisor
- 9 Other - (Specify _____)
- 10 None - Operator used no **outside** information source

Section F, item 3

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, Sweeps, Hoeme Plow, Muckerooy Plow)
08	Subsoiler (Chisel, Ripper, V-ripper)
09	Disk-chisel (Mulch Tiller)
	Offset Disk
10	-Heavy Disk
11	-Light Disk
12	One-way Disk (Disk Tiller)
13	Single Disk
	Tandem Disk
14	-Plowing
15	-Regular
16	Paraplow

PACKERS	
51	Culti-packer (Pulverizer, Crow-foot, Serrated, Ring, Spiral)
	Roller-packer
52	-Attachment
53	-Smooth & Flat

CULTIVATORS	
21	Field Cultivator (Regular Digger, Triple K, Danish Tined, Swedish Tined, Incorporated, S-tine, Cultivator, Vibra-shank Harrow, Lilliston Tiller)
22	Furrow-out
23	Rotary Hoe (Crust Buster)
	Row
24	-Disk Sweep, Shovel
25	-Rolling, Rotary
	Field Cultivator
26	-Heavy Duty (Duckfoot Cultivator)
27	Marker
28	Fallow Master

BEDDERS-SHAPERS	
41	Bedder (Shaper) Bedshaper, Crowder)
42	Bed Shaper
	Disk
43	-Hipper
44	-Row
45	Float
46	Lister (Middle-buster)
47	Rotovator-bedder (Flat Roller)
48	Seedbed Roller (Flat Roller)
49	Sub-soil Bedder (Ripper-hipper)
50	Discovator

HARROWS (DRAGS)	
30	Heavy Harrow
31	Field Conditioner (Scratcher, Seed Bed Conditioner, Soil Conditioner, Ground Hog)
32	Finishing (Harrogator, Spiral, Roller, Knives, Shanks, Pegs, Smoother)
33	Flex-tine Tooth (Coil Tine)
34	Multi-weeder (Cultivator & Harrow)
35	Rail, Pipe, Log, Plank
36	Rod Weeder
37	Roller (Culti-mulcher, Pulvi-mulcher, Crumbler, Packer-mulcher, Packer & Shanks)
38	Spike Tooth
39	Spring Tooth
40	Powered Spike Tooth Harrow

PLANTERS	
111	Bedder-shaper Planter
112	Lister-bedder
113	No-till, Minimum Till, (Ripper Planter)
114	Conventional, Regular (Tye, Flex)
115	Air Delivery/vacuum
116	Ridge till

Section F, item 3

MACHINERY and IMPLEMENT CODES**MISCELLANEOUS TILLAGE**

- 61 Land-all, Do-all Mix-n-till, Till-all
(Disk, Shovels, Reel & Spikes)
- 62 Mulch Treader, Picker,
Treader, Skew
- 63 Roto-tiller
- 64 Roterra (Roto-spike, Lely)
- 65 Sand-fighter
- 66 Soil Finisher
(Finishing Tool, Mulch Finisher
Tri-tiller, Task Master)
- 67 Root Crown Puller

FERTILIZER APPLICATORS

- 71 Aerial (Airplane)
 - 72 Attachment to Implement
 - 73 Manure Spreader
 - 74 Self-propelled
 - 75 Truck Spreader
- Tractor Mounted
- 76 -Anhydrous
 - 77 -Dry
 - 78 -Liquid
- Trailer Mounted
- 79 -Anhydrous
 - 80 -Dry
 - 81 -Liquid

CHEMICAL APPLICATORS

- 91 Aerial (Airplane)
- 92 Attachment to Implement
- 93 Largest Self-propelled
(Or Large Truck)
- 94 Motorcycle/atv Sprayer
- 95 Small Self-propelled
(Spra-coupe, Hi-cycle)
- 96 Small Truck (Skid Mounted)
- 97 Tractor Mounted
- 98 Trailer Mounted

DRILLS and SEEDERS

- 101 Aerial Seeding
 - 102 Broadcast Seeder
- Drill
- 103 -Air Delivery
 - 104 -Lister Disk
 - 105 -No-till,
Minimum till
 - 106 -Plain
 - 107 -Press, Disk or Hoe

HARVESTING EQUIPMENT

- Small Grains/Row Crops Combine
- 121 -Hillside
 - 122 -Self-propelled, 2wd
 - 123 -Self-propelled, 4wd
 - 124 -Track
 - 125 -PTO/motor Mounted
- Windrower-swather
- 126 -(Grain/hay)pto
 - 127 -(Grain/hay)
Self-propelled

- PTO - Power Take-off
- WD - Wheel Drive

HAULING EQUIPMENT

- Trailers
- 194 General Purpose Wagon or Cart
 - 195 Hay Wagon
 - 208 Gravity Wagon
 - 209 Grain Cart with Auger
 - 221 Forage Wagon
 - 222 Dump Wagon
 - 220 Other Trailers
- Trucks
- 301 -Single Axle
 - 302 -Tandem Axle
 - 303 -Tri-Axle
 - 304 -Semi
 - 305 Other Trucks

LAND FORMING EQUIPMENT

- 171 Backhoe
- 172 Disk Border Maker
- 173 Ditch Closer
- 174 Ditched
- 175 Levee Plow Disk
- 176 Quarter Drain Machine
- 177 Rear Mounted Blade
- 178 Corrugator
(Furrow Dicer,
Dammar Dicer, Dicer)
- 180 Land Plane Leveler
(Water Leveler)
- 181 Laser Planer, Laser Leveler
- 182 Gate Setter
- 183 Bull Dozer

For implements codes 171-177, enter
Total Hours Operated in the column
labeled *Total Acres Covered*.
Total Acres Covered is not
meaningful for these implements.

MOWERS and BALERS

- 141 Amish Harvester
- Bale Wagon
- 142 -Pto
 - 143 -Self-propelled
 - 144 Bale Loader
- Baler
- 145 -Motor Mounted
 - 146 -PTO (Large)
 - 147 -PTO (Small)
 - 148 -Self-propelled
 - 149 Mower-chopper-Rotary
 - 150 -Conditioner/PTO
 - 151 -Self-propelled
 - 152 -Drum-disk
 - 153 -Flail
 - 154 -Sickle
- Rake
- 155 -Dump
 - 156 -Side Delivery
 - 157 -Wheel
 - 158 Stack Mower
 - 159 Stacker, Automatic
 - 160 Front End Loader

OTHER IMPLEMENTS

- 191 Burn Buggy
- 192 Chaff/straw Saver
- 193 Electric-discharge Weed Killer
- 196 Off-field Thresher
- 197 Rock Picker
- 198 Rock Windrower or Rake
- 199 Rodent (Gopher) Killer
- 200 Roller Groover
- 201 Rubber-wheeled Weed Puller
- 202 Flail Shredder
- 203 Rotary Shredder
- 204 Silage Harvester
- 205 Stalk Shredder, Stalk Cutter
- 206 Swath Roller
- 207 Tractor or Truck - No Attachments
- 223 Flame Thrower

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

RUN-OFF CODES

Section G, item 9

1	Retained at the end of the field?
2	Re-used to irrigate on the farm?
3	Collected in evaporation ponds on the farm?
4	Drained from the farm?
5	There is no runoff.

LANDLORD/CONTRACTOR COSTS

Section I, Item 1

Seed Costs	Custom Field Operations and Services
a. Purchased seed	i. Custom land preparation, shaping, and/or leveling
Fertilizer Costs [Exclude Lime and Gypsum]	m. Custom cultivating
b. Fertilizer custom applications	n. Custom planting and/or reseeding
c. Fertilizer materials	o. Custom harvesting
Chemicals/Pesticides Costs	r. Custom hauling
d. Chemicals/pesticides custom applications	t. Custom drying
e. Chemicals/pesticides materials	v. Contract and other paid labor
Technical Services	w. Other custom and/or technical services
h. Soil tests or plant tissue tests	Drying Costs
i. Scouting service	x. Fuel and/or electricity for drying
j. Develop or write plans	y. Repairs of the facilities used for drying
	Irrigation and Water Management Costs
	z. Purchased irrigation water
	aa. Fuel, lubrication, and electricity for irrigation