

AGRICULTURAL RESOURCE MANAGEMENT SURVEY
PHASE II
OATS PRODUCTION PRACTICES and COST REPORT
RESPONDENT BOOKLET



2015



National
Agricultural
Statistics
Service

Dear Producer,

Every year, the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) conducts the Agricultural Resource Management Survey (ARMS). The survey gathers information on production practices for different commodities each year. In 2015, ARMS focuses on U.S. soybeans, wheat, oats, and cotton production and or cost practices.

The interviewer will ask you to report your nutrient or fertilizer use and your pest management practices. The results of this survey will help agricultural leaders and decision-makers better understand how producers cope with risk, adapt to policy changes, and make decisions about chemical use, new technologies and many other aspects of farming.

Your participation is important. By responding to this survey not only can you help ensure that decisions impacting the production practices and well-being of farms are based on accurate, timely information, you also represent and give voice to thousands of farmers like you across the nation.

As with all our surveys, NASS safeguards the privacy of all respondents, ensuring that no individual respondent or operation can be identified. Be assured that your responses to ARMS will be kept **confidential**, as required by federal law.

Thank you in advance for investing in the future of U.S. agriculture. You are helping to ensure that decisions affecting you, your family, your business and your community are based on the facts.

Sincerely,

A handwritten signature in cursive script that reads "James M. Harris".

Mark Harris
Chair, Agricultural Statistics Board
U.S. Department of Agriculture
National Agricultural Statistics Service

Enclosures

FEDERAL CROP INSURANCE COVERAGE

Section B, Item 29a

- 1 **Federal CAT** (Basic Catastrophic Insurance) bought for a flat fee and protects against crop loss greater than 50% of average yield at 55% of the price.

- 2 **APH** -- Buy-up above Federal CAT yield and/or price level.

- 3 **Other Federal Crop Insurance** (*Group Risk Plan, Adjusted Gross Revenue, Group Risk Income Protection, etc.*)

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 aircraft
- 4 In seed furrow
- 5 In irrigation water
- 6 Chisel/injected or knifed in
- 7 Banded in or over row
- 8 Foliar or directed spray
- 9 Spot treatments (**Section D only**)

Section C, item 3

Common Fertilizers and Their Percent Analysis

[Enumerator Note: If Respondent cannot report the formulation for Section C, item 3, use the formulations below.]

| Name | Form | Percent Active Ingredients | | | |
|--|------|----------------------------|-------------------------------|------------------|--------|
| | | N | P ₂ O ₅ | K ₂ O | S |
| Ammonia | D/L | 80 | --- | --- | --- |
| Ammoniated superphosphate. | D | 12-17 | 22-35 | --- | --- |
| Ammonium metaphosphate. | D | 12 | 51 | --- | --- |
| Ammonium nitrate. | D | 32-34 | --- | --- | --- |
| Ammonium phosphate. | D | 11-18 | 46-48 | --- | --- |
| Ammonium phosphate nitrate. | D | 27-30 | 10-15 | --- | --- |
| Ammonium phosphate sulfate (APS). | D | 13-16 | 20 | --- | 15 |
| Ammonium polyphosphate (APP). | L | 10-11 | 34-37 | --- | --- |
| Ammonium polysulfide (Ammonium Sulfate). | L | 20-21 | --- | --- | 24 |
| Ammonium sulfate nitrate. | D | 20-30 | --- | --- | 5 |
| Ammonium thiosulfate solution. | L | 12 | --- | --- | 26 |
| Anhydrous ammonia. | L/G | 82 | --- | --- | --- |
| Aqua ammonia (Ammonium Hydroxide). | L | 16-25 | --- | --- | --- |
| Bone meal. | D | 0-2 | 10-20 | --- | --- |
| Calcium ammonium nitrate. | D | 15-16 | --- | --- | --- |
| Diammonium phosphate sulfur. | D | 15-16 | 39-41 | --- | --- |
| Diammonium phosphate (DAP). | D | 16-21 | 46-53 | --- | --- |
| Elemental sulfur. | D | --- | --- | --- | 52-100 |
| Greensand. | D | --- | 1 | 6 | --- |
| Magnesium sulfate. | D | --- | --- | --- | 13 |
| Monoammonium phosphate (MAP). | D | 11-13 | 48-62 | --- | --- |
| Natralene | D/L | 40 | --- | --- | --- |
| Nitrogen solutions. | L | 7-58 | --- | --- | --- |
| Nitric phosphate. | D | 12-17 | 22-35 | --- | --- |
| Phosphate rock. | D | --- | 2-35 | --- | --- |
| Phosphoric acid. | L | --- | 2-76 | --- | --- |
| Potassium carbonate. | D | --- | --- | 34-48 | --- |
| Potassium chloride (Muriate of potash). | D | --- | --- | 60-62 | --- |
| Potassium magnesium sulfate. | D | --- | --- | 22 | 23 |
| Potassium metaphosphate. | D | --- | 55-57 | 37-38 | --- |
| Potassium nitrate. | D | 13 | --- | 44 | --- |
| Potassium orthophosphate. | D | --- | 30-60 | 30-50 | --- |
| Potassium polyphosphate. | L | --- | 40-60 | 22-48 | --- |
| Potassium sodium nitrate. | D | 15 | --- | 14-15 | --- |
| Potassium solutions. | L | --- | --- | 13-15 | --- |
| Potassium sulfate. | D | --- | --- | 50-53 | 16 |
| Sodium nitrate (Nitrate of Soda). | D | 15-16 | --- | --- | --- |
| Sulfuric acid. | L | --- | --- | --- | 20-26 |
| Super phosphate (22% & under). | D | --- | 16-22 | --- | 11 |
| Super phosphate (over 22%). | D | --- | 23-39 | --- | 11 |
| Triple super phosphate. | D | --- | 40-54 | --- | 11 |
| Urea. | D | 45-46 | --- | --- | --- |
| Urea, sulfur coated. | D | 36-38 | --- | --- | 13-16 |
| Urea ammonium phosphate. | D | 25-58 | 28-35 | --- | --- |
| Urea ammonium nitrate (UAN). | L | 28-32 | --- | --- | --- |
| Urea phosphate. | D | 17 | 44 | --- | --- |

CHEMICALS and PESTICIDES for Oats, All

F = Fungicide; **H** = Herbicide; **I** = Insecticide; **M** = Misc. Other; **MD**=Defoliant/Dessicant; **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** = Microencapsalted,
P = Pellets, **S** = Solution, **SC** = Soluble Concentrate **SL** = Slurry, **SP** = Soluble powder, **W** or **WP** = Wettable powder,
WDG or **WG** = Water-Dispersible Granules, **WSP** = Water-soluble packet

| Form | Class | Code | Project Name | EPA # | Form | Class | Code | Project Name | EPA # |
|------|-------|-------|---------------|-----------|------|-------|-------|-------------------------|-----------|
| L | H | 40480 | 2,4-D Amine 4 | 62575-1 | L | H | 40264 | Butyrac 200 | 42750-38 |
| L | H | 40479 | 2,4-D Amine 4 | 42750-19 | L | H | 40570 | Clarity (4L) | 35935-6 |
| L | H | 40477 | 2,4-D Amine 4 | 34704-120 | L | H | 40465 | Curtail M (EC) | 62719-86 |
| L | H | 40478 | 2,4-D Amine 4 | 17-413 | L | H | 40309 | Esteron 6E | 62719-8 |
| L | H | 40754 | 2,4-D Amine 6 | 42750-1 | D | H | 40248 | Harmony Extra XP | 35-611 |
| L | H | 40753 | 2,4-D Amine 6 | 2217-668 | L | H | 40329 | Hi-Dep | 2217-703 |
| L | H | 40755 | 2,4-D Amine 6 | 1386-43 | L | H | 40400 | MCP Amine 4 | 2217-36 |
| L | H | 40750 | 2,4-D Amine 6 | 264-690 | L | H | 40401 | MCP Amine 4 | 34704-130 |
| L | H | 40580 | 2,4-D LV6 | 1386-616 | L | H | 40399 | MCP Amine 4 | 62719-13 |
| L | H | 4058 | 2,4-D LV6 | 1381-101 | L | H | 40666 | Peak (WDG) | 5905-503 |
| D | H | 40581 | 2,4-D LV6 | 100-763 | L | H | 41162 | Roundup Original II | 524-454 |
| L | H | 40245 | Banvel (4L) | 7969-131 | L | H | 40372 | Salvo | 34704-609 |
| L | H | 40113 | Buctril (2EC) | 264-437 | L | H | 40406 | Weedone LV4 Solventless | 71368-14 |
| L | H | 40114 | Buctril 4EC | 264-540 | L | H | 40407 | Weedone LV6 | 71368-6 |

Conversion Factors for Liquid and Dry Products

Liquid Products

1 Gallon = 4 Quarts
 1 Quart = 2 Pints
 1 Pint = 16 Fluid Ounces
 2 Cups = 1 Pint

Dry Products

1 Pound = 16 Dry Ounces
 1 Ounce = 28.3 Grams
 1 Pound = 453 Grams

MACHINERY and IMPLEMENT CODES

Section F, Item 1, Columns 3 & 4

PLOWS and DISKS

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

Moldboard

- 05 Regular
- 06 Two Way
- 07 Stubble-mulch
(Noble, Sweeps, Hoeme Plow, Muckeroy 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

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
- 68 Stalk Puller/Chopper

BEDDERS-SHAPERS

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

Disk

- 43 Hipper
- 44 Row
- 45 Float
- 46 Lister (Middle-buster)
- 47 Rorovator-bedder
- 48 Seedbed Roller
(Flat Roller)
- 49 Sub-soil Bedder
(Ripper-hipper)
- 50 Discovator

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

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

PACKERS

- 51 Culti-packer
(Pulverizer, Crow-foot,
Serrated, Ring, Spiral)

Roller-packer

- 52 Attachment
- 53 Smooth & Flat

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

CULTIVATORS

Field Cultivators

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

CHEMICAL APPLICATIONS

- 91 Aerial (Airplane)
- 92 Attachment to implement
- 93 Largest Self propelled
(or Large Truck)
- 94 Motorcycle/atv Sprayer
- 95 Small Self-propelled
(Spray-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 or 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
- 133 Corn Picker
- 134 Hand Harvesting

PTO Power Take-off

WD Wheel Drive

LAND FORMING EQUIPMENT

- 171 Backhoe
- 172 Disk Border Maker
- 173 Ditch Closer
- 174 Ditcher
- 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
- 184 Polypipe roller
- 197 Rock Picker

ENUMERATOR NOTE:

*For Land Forming Equipment codes
171 – 184, enter Total Hours Operated
in column 10.*

MOWERS and BALERS

- 141 Amish Harvester

Baler

- 145 Motor Mounted
- 146 PTO (Large)
- 147 PTO (Small)
- 148 Self-propelled
- 159 Stacker, Automatic

Mowers

- 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
- 162 Hay Tedder
- 234 Brush Rake Sweeper

HAULING EQUIPMENT

Bale wagon/mover

- 142 Bale wagon (PTO)
- 143 Bale Wagon (Self-propelled)
- 144 Bale Loader
- 158 Stack Mover
- 160 Front End Loader
- 161 Round Bale Mover
- 195 Hay wagon
- 224 Forklift

Trailers

- 194 General Purpose Wagon or Cart
- 195 Hay Wagon
- 208 Gravity Wagon
- 209 Grain Cart with Auger
- 210 Grain Cart with Auger (Self-
Propelled)
- 221 Forage Wagon
- 222 Dump Wagon
- 229 Bin Trailer
- 228 Other Trailers

Trucks

- 301 Single Axle
- 302 Tandem Axle
- 303 Tri Axle
- 304 Semi
- 305 Other Trucks

ENUMERATOR NOTE:

*For Hauling Equipment codes above,
enter Total Hours Operated in
column 10.*

OTHER IMPLEMENTS

- 191 Burn Buggy
- 192 Chaff/straw Saver
- 193 Electric-discharge Weed Killer
- 196 Off-field Thresher
- 198 Rock Windower 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

CHEMICAL APPLICATIONS

- 91 Aerial (Airplane)
- 92 Attachment to implement
- 93 Largest Self propelled
(or Large Truck)
- 94 Motorcycle/atv Sprayer
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- 124 Track
- 125 PTO/motor Mounted

Windrower-swather

- 126 (Grain/hay)PTO
- 127 (Grain/hay) self-propelled

- 133 Corn Picker
- 134 Hand Harvesting

PEANUT EQUIPMENT

- 281 Combine, PTO
- 282 Digger-shaker
- 283 Shaker-inverter
- 284 Reshaker-conditioner
- 285 Vine Cutter
- 286 Wagon

LAND FORMING EQUIPMENT

- 171 Backhoe
- 172 Disk Border Maker
- 173 Ditch Closer
- 174 Ditcher
- 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
- 197 Rock Picker

ENUMERATOR NOTE:

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Mowers

- 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
- 162 Hay Tedder
- 234 Brush Rake Sweeper

PTO Power Take-off

WD Wheel Drive

HAULING EQUIPMENT

Bale wagon/mover

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- 195 Hay wagon
- 224 Forklift

Trailers

- 194 General Purpose Wagon or Cart
- 195 Hay Wagon
- 208 Gravity Wagon
- 209 Grain Cart with Auger
- 221 Forage Wagon
- 222 Dump Wagon
- 229 Bin Trailer
- 228 Other Trailers

Trucks

- 301 Single Axle
- 302 Tandem Axle
- 303 Tri Axle
- 304 Semi
- 305 Other Trucks

ENUMERATOR NOTE:

*For Hauling Equipment codes above,
enter Total Hours Operated in
column 10.*

OTHER IMPLEMENTS

- 191 Burn Buggy
- 192 Chaff/straw Saver
- 193 Electric-discharge Weed Killer
- 196 Off-field Thresher
- 198 Rock Windower 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

IRRIGATION TYPE CODES

Section G, Item 2

| 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 |

Notes: