



AGRICULTURAL RESOURCE MANAGEMENT SURVEY
PHASE II
SOYBEAN PRODUCTION PRACTICES REPORT
RESPONDENT BOOKLET



National
Agricultural
Statistics
Service

2015

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. soybean, wheat, cotton, and oat production 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,

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

Enclosures

**Section C, Item 4, Column 6
and Section D, Item 1, Column 9**

APPLICATION CODES

- 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 4, Column 2

Common Fertilizers and Their Percent Analysis

[Enumerator Note: If Respondent cannot report the formulation for Section C, item 4, 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, sulfure 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 | --- | --- |

**Section D, Item 1
CHEMICALS and PESTICIDES for Soybeans**

Class Definitions:

F = Fungicide; H = Herbicide; I = Insecticide; M = Misc. Other; MD = Defoliant/Dessicant; MG = Growth Regulator;
MS = Soil Fumigant

Common Material Form Terms and Corresponding D/L Classification:

Dry: D = Dust, DF = Dry Flowable, DG = Water-Dispersible Granules, G or GR = Granular, M or ME = Microencapsalted,
P = Pellets, SP = Soluble Powder, W or WP = Wettable Powder, WDG or WG = Water-Dispersible Granules,
WSP = Water-Soluble Packet

Liquid: AS = Aqueous Suspension, E or EC = Emulsifiable Concentrate, ES = Emulsifiable Solution, F or L = Flowable,
L = Liquid, LV = Low Volatility, S = Solution, SC = Soluble Concentrate, SL = Slurry

| Form | Class | Code | Product Name | EPA # | D/L | Class | Code | Product Name | EPA # |
|------|-------|-------|---|-----------|-----|-------|-------|-----------------------------------|-----------|
| L | H | 40479 | 2,4-D AMINE 4 | 42750-19 | L | F | 70539 | DOMARK 230 ME FUNGICIDE | 80289-7 |
| L | H | 40752 | 2,4-D AMINE 6 | 42750-21 | L | H | 40746 | DUAL II MAGNUM HERBICIDE | 100-818 |
| L | H | 40834 | 2,4-D AMINE WEED KILLER | 1386-43 | L | H | 40745 | DUAL MAGNUM HERBICIDE | 100-816 |
| L | H | 40657 | 2,4-D LV4 | 1381-102 | L | I | 11460 | DUPONT ASANA XL INSECTICIDE | 59639-209 |
| L | H | 40580 | 2,4-D LV6 | 1381-101 | L | H | 40470 | DUPONT ASSURE II HERBICIDE | 352-541 |
| L | F | 70709 | ABOUND FLOWABLE FUNGICIDE | 100-1098 | D | H | 40503 | DUPONT CANOPY EX HERBICIDE | 352-635 |
| D | I | 10604 | ACEPHATE 75SP | 66330-354 | D | H | 40265 | DUPONT CANOPY HERBICIDE | 352-444 |
| L | H | 40529 | AFG PLUS | 34704-890 | D | H | 40698 | DUPONT CANOPY XL HERBICIDE | 352-589 |
| L | H | 40961 | ALBAUGH DICAMBA DMA SALT | 42750-40 | D | H | 40274 | DUPONT CLASSIC HERBICIDE | 352-436 |
| L | I | 10968 | AMMO 2.5 EC INSECTICIDE | 279-3027 | D | H | 41233 | DUPONT ENLITE HERBICIDE | 352-757 |
| D | H | 40771 | AUTHORITY 75 DF HERBICIDE | 279-3148 | D | H | 41200 | DUPONT ENVIVE HERBICIDE | 352-756 |
| D | H | 40693 | AUTHORITY BROADLEAF HERBICIDE | 279-3179 | D | H | 40248 | DUPONT HARMONY EXTRA XP HERBICIDE | 352-611 |
| L | H | 41219 | AUTHORITY IMI (F7119 4 SC) HERBICIDE | 279-3330 | D | H | 41228 | DUPONT LEADOFF HERBICIDE | 352-853 |
| L | H | 40632 | BARRAGE HF | 5905-529 | D | H | 40606 | DUPONT SYNCHRONCY STS HERBICIDE | 352-599 |
| L | I | 10336 | BAYTHROID 2 EMULSIFIABLE PYRETHROID INSECTICIDE | 264-745 | D | H | 40466 | DUPONT SYNCHRONY XP HERBICIDE | 352-648 |
| L | I | 11155 | BELT SC INSECTICIDE | 264-1025 | L | I | 11274 | ENDIGO ZC | 100-1276 |
| L | H | 40870 | BOUNDARY HERBICIDE | 100-958 | L | H | 40832 | EXTREME HERBICIDE | 241-405 |
| L | H | 40458 | BOUNDARY(R) 6.5EC HERBICIDE | 100-1162 | D | H | 41214 | F9016 DF HERBICIDE | 279-3413 |
| L | I | 11123 | BRIGADE 2EC INSECTICIDE/MITICIDE | 279-3313 | D | H | 40983 | FIRSTRATE | 62719-275 |
| L | H | 40951 | BUCCANEER GLYPHOSATE HERBICIDE | 55467-10 | L | H | 40633 | FLEXSTAR | 100-1101 |
| L | H | 40648 | BUCCANEER PLUS GLYPHOSATE HERBICIDE | 55467-9 | L | H | 41239 | FLEXSTAR GT 3.5 HERBICIDE | 100-1385 |
| L | H | 41129 | CADET HERBICIDE | 279-3338 | L | H | 40596 | FUSILADE DX HERBICIDE | 100-1070 |
| L | I | 10601 | CHLORPYRIFOS 4E AG | 66222-19 | L | H | 40537 | FUSION HERBICIDE | 100-1059 |
| L | H | 40946 | CLEAROUT 41 PLUS | 42750-176 | D | H | 41202 | GAUNTLET 70 DF HERBICIDE | 279-3246 |
| L | H | 40256 | CLETHODIM 2E | 42750-72 | L | H | 41063 | GF-1279 | 62719-517 |
| L | I | 11241 | COBALT | 62719-575 | L | H | 41136 | GF-1280 | 62719-556 |
| L | H | 40276 | COBRA HERBICIDE | 59639-34 | L | H | 40675 | GLYFOS X-TRA | 4787-23 |
| L | H | 40941 | CORNERSTONE | 1381-191 | L | H | 40910 | GLYPHOMAX | 62719-323 |
| L | H | 40520 | CORNERSTONE PLUS | 1381-192 | L | H | 40950 | GLYPHOSATE | 34704-866 |
| L | I | 10038 | DIMETHOATE 2.67 EC | 34704-489 | L | H | 41023 | GLYPHOSATE 41% | 42750-60 |
| L | I | 50200 | DIMETHOATE 400 | 34704-207 | L | H | 41053 | GLYPHOSATE 41% PLUS | 42750-61 |
| L | I | 10745 | DIMILIN 2L | 400-461 | L | H | 40506 | GRAMOXONE INTEON | 100-1217 |
| | | | | | L | F | 70549 | HEADLINE FUNGICIDE | 7969-186 |
| | | | | | L | I | 11228 | HERO INSECTICIDE | 279-3315 |

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Liquid: **AS** = Aqueous Suspension, **E** or **EC** = Emulsifiable Concentrate, **ES** = Emulsifiable Solution, **F** or **L** = Flowable, **L** = Liquid, **LV** = Low Volatility, **S** = Solution, **SC** = Soluble Concentrate, **SL** = Slurry

| Form | Class | Code | Product Name | EPA # | Form | Class | Code | Product Name | EPA # |
|------|-------|-------|--|-----------|------|-------|-------|---|-----------|
| L | H | 41114 | INTENSITY ONE POST EMERGENCE GRASS HERBICIDE | 34704-976 | L | H | 40372 | SALVO | 34704-609 |
| L | H | 41026 | INTENSITY POST-EMERGENCE GRASS HERBICIDE | 34704-864 | D | H | 40423 | SCEPTER 70 DG HERBICIDE | 241-306 |
| L | I | 10876 | INTREPID 2F AGRICULTURAL INSECTICIDE | 62719-442 | L | H | 40373 | SCEPTER HERBICIDE | 241-289 |
| L | I | 10351 | KARATE 1EC | 100-998 | L | H | 41173 | SECTION 2EC HERBICIDE | 1381-204 |
| L | I | 10739 | KARATE INSECTICIDE WITH ZEON TECHNOLOGY | 100-1097 | L | H | 41041 | SELECT 2EC HERBICIDE | 59639-3 |
| L | I | 11284 | LEVERAGE 360 INSECTICIDE | 264-1104 | D | H | 40209 | SENCOR DF 75% DRY FLOWABLE HERBICIDE | 264-738 |
| L | H | 41161 | LIBERTY 280 SL HERBICIDE | 264-829 | L | H | 41025 | SEQUENCE HERBICIDE | 100-1185 |
| L | H | 40729 | LIBERTY HERBICIDE | 264-660 | L | H | 41135 | SHARPEN POWERED BY KIXOR HERBICIDE | 7969-278 |
| L | I | 10983 | LORSBAN-4E | 62719-220 | L | I | 11124 | SNIPER | 34704-858 |
| L | H | 41021 | MANA ARROW 2EC HERBICIDE | 66222-60 | L | F | 70473 | STRATEGO FUNGICIDE | 264-779 |
| L | H | 40700 | MATADOR HERBICIDE | 279-3183 | L | H | 41120 | TAPOUT | 5905-578 |
| L | H | 41113 | MON 63410 HERBICIDE | 524-591 | L | H | 40507 | TARGA HERBICIDE | 33906-9 |
| L | H | 41042 | MON 78270 HERBICIDE | 524-537 | L | H | 41225 | TOMAHAWK 5 | 33270-15 |
| L | H | 40975 | NUFARM CREDIT HERBICIDE | 71368-20 | L | I | 10978 | TOMBSTONE | 34704-912 |
| D | H | 41246 | OPTILL POWERED BY KIXOR HERBICIDE | 7969-280 | L | H | 40918 | TOUCHDOWN HERBICIDE | 100-1117 |
| D | H | 41208 | OPTILL PRO POWERED BY KIXOR HERBICIDE | 7969-332 | L | H | 40534 | TOUCHDOWN HITECH HERBICIDE | 100-1182 |
| D | I | 10632 | ORTHENE 90 WSP | 59639-86 | L | H | 40238 | TOUCHDOWN TOTAL | 100-1169 |
| D | I | 10652 | ORTHENE 90S | 5481-8974 | L | H | 41047 | TREFLAN 4L HERBICIDE | 34704-853 |
| L | H | 40932 | OUTLOOK HERBICIDE | 7969-156 | L | H | 40550 | TRIFLURALIN 4 E.C. | 5905-519 |
| L | H | 41151 | PREFIX HERBICIDE | 100-1268 | L | I | 11159 | TUNDRA EC | 1381-196 |
| L | H | 40655 | PROWL 3.3 EC HERBICIDE | 241-337 | L | H | 40913 | ULTRABLAZER HERBICIDE | 70506-60 |
| L | H | 41010 | PROWL H2O HERBICIDE | 241-418 | L | H | 40377 | UNICO 2,4-D LO-V ESTER WEED KILLER | 1386-60 |
| L | H | 40363 | PURSUIT HERBICIDE | 241-310 | D | H | 41203 | V-10089 WDG (HERBICIDE) | 59639-117 |
| D | H | 40733 | PYTHON WDG | 62719-277 | L | H | 40005 | V-10137 1 EC (HERBICIDE) | 59639-132 |
| L | F | 70525 | QUILT FUNGICIDE | 100-1178 | D | H | 40014 | VALOR HERBICIDE | 59639-99 |
| L | MG | 90567 | RADIATE | 34704-909 | D | H | 40940 | VALOR WP HERBICIDE | 59639-98 |
| L | H | 40987 | RAPTOR HERBICIDE | 241-379 | L | H | 41137 | VERDICT POWERED BY KIXOR HERBICIDE | 7969-279 |
| L | H | 40365 | REFLEX HERBICIDE | 100-993 | L | I | 11167 | WARRIOR II WITH ZEON TECHNOLOGY | 100-1295 |
| L | H | 40628 | RESOURCE HERBICIDE | 59639-82 | L | H | 40406 | WEEDONE LV4 SOLVENTLESS BROADLEAF HERBICIDE | 71368-14 |
| L | H | 40390 | RIVERDALE 2,4-D L.V. 4 ESTER | 228-139 | L | I | 10903 | Z-CYPE 0.8 EC INSECTICIDE | 279-3249 |
| L | H | 41007 | ROUNDUP ORIGINAL 2K HERBICIDE | 524-539 | | | | | |
| L | H | 40509 | ROUNDUP POWER MAX HERBICIDE | 524-549 | | | | | |
| L | H | 41159 | ROUNDUP ULTRA HERBICIDE | 524-475 | | | | | |

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