



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



2017

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 2017, ARMS focuses on U.S. soybean, wheat, and cotton production 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,

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	40834	2,4-D AMINE	1386--43	L	F	70490	BUMPER41.8 EC	66222--42
L	H	40479	2,4-D AMINE 4	42750--19	L	H	40263	BUTYRAC 175	42750--39
L	H	40752	2,4-D AMINE 6	42750--21	L	H	40264	BUTYRAC 200	42750--38
L	H	40377	2,4-D Lo-V ESTER	1386--60					
L	H	40657	2,4-D LV4	1381--102	L	H	41129	CADET	279--3338
L	H	40390	2,4-D L.V. 4 ESTER	228--139	D	H	40265	CANOPY	352--444
L	H	40580	2,4-D LV 6	1381--101	D	H	40503	CANOPY EX	352--635
					D	H	40773	CANOPY SP	352--596
L	F	70709	ABOUND	100--1098	D	H	40698	CANOPY XL	352--589
L	H	40948	AIM EC	279--3241	L	H	40985	CINCH	352--625
L	H	40949	AIM EW	279--3242	L	H	40570	CLARITY	7969--137
D	I	10973	AMBUSH 25W	5481--502	D	H	40274	CLASSIC	352--436
D	F	70479	AMISTAR	100-1164	L	H	40946	CLEAROUT 41 PLUS	42750--176
L	I	10968	AMMO 2.5 EC	279--3027	L	H	40276	COBRA	59639--34
D	H	40771	AUTHORITY 75 DF	279--3148	L	H	40673	COMMAND 3 ME	279--3158
L	H	41021	ARROW 2EC	66222--60	L	H	40941	CORNERSTONE	1381--191
L	I	10004	ASANA XL	342--515	L	H	40520	CORNERSTONE PLUS	1381--192
L	H	40470	ASSURE II	352--541	L	H	40960	CREDIT	228--364
L	H	40130	ATRAZINE 4L	1386--647	L	H	40053	EXTRA CREDIT 5	71368--43
D	H	40693	AUTHORITY	279--3179	L	H	41147	CREDIT XTREME	71368--81
D	H	40738	AXIOM DF	264--766					
					L	I	10038	DIMETHOATE 2.67 EC	34704--489
L	H	40862	BACKDRAFT	241--407	L	I	50200	DIMETHOATE 400	34704--207
L	H	40632	BARRAGE	5905--529	L	I	10041	DIMETHOATE 4 ED	19713--231
L	H	40871	BASAGRAN	7969--45	D	I	10214	DIMILIN 25 W	400--465
L	I	10336	BAYTHROID 2	264--745	L	I	10745	DIMILIN 2L	400--461
L	H	40951	BUCCANEER	55467--10	D	H	40880	DOMAIN	264--771
L	H	40648	BUCCANEER PLUS	55467--9	L	F	70539	DOMARK 230 ME	80289--7
L	H	40870	BOUNDARY	100--958	L	H	40745	DUAL MAGNUM	100--816
L	H	40458	BOUNDARY 6.5 EC	100--1162	L	H	40746	DUAL II MAGNUM	100--818
L	F	70528	BRAVO 720	50534--188	L	H	40747	DUAL II MAGNUM SI	100--829
L	H	40951	BUCCANEER	55467--10	D	H	40829	DUAL IIG MAGNUM	100--910
L	H	40648	BUCCANEER PLUS	55467--9					

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 #	Form	Class	Code	Product Name	EPA #
L	F	70500	ECHO 720	60063--7	L	I	10351	KARATE 1EC	100--998
D	F	70333	ECHO 90 DF	60063--10	L	I	10739	KARATE WITH ZEON	100--1097
L	F	70330	ECHO ZN	60063--4					
L	H	40309	ESTERON 6E	62719--8	L	I	10097	LANNATE LV	352--384
D	H	40310	EXPRESS	352--509	D	I	10098	LANNATE SP	352--342
L	H	40832	EXTREME	241--405	L	F	70446	LAREDO EC	62719--412
					L	F	70207	LAREDO EW	62719--493
D	H	40983	FIRSTRATE	62719--275	L	I	10099	LARVIN 3.2	264--379
L	H	40633	FLEXSTAR	100--1101	D	I	10509	LARVIN DF	264--530
L	H	40541	FRONTIER 6.0	7969--147	D	I	10704	LEPINOX WDG	70051--89
L	H	40537	FUSION	100--1059	L	H	40729	LIBERTY	264--660
L	H	40596	FUSILADE DX	100--1070	L	I	10983	LORSBAN-4E	62719--220
D	H	41029	GANGSTER	59639--131	L	F	70711	MERTECT 340-F	100--889
L	H	41053	GLY-4 PLUS	42750--61	L	H	40528	MIRAGE PLUS	34704--883
L	H	40675	GLYFOS X-TRA	4787--23					
L	H	40910	GLYPHOMAX	62719--323	D	F	70297	ORIOUS 45 DF	264--749
L	H	41063	GLYPHOMAX XRT	62719--517	D	I	10632	ORTHENE 90 WSP	59639--86
L	H	40506	GRAMOXONE INTEON	100--1217	D	I	10652	ORTHENE 90S	5481--8974
					L	H	40932	OUTLOOK	7969--156
D	H	40248	HARMONY EXTRA XP	352--611					
D	H	40246	HARMONY GT XP	352--446	L	H	41062	PARALLEL	66222--87
D	H	40251	HARMONY SG	352--633	L	H	41049	POAST	7969--58
L	F	70549	HEADLINE	7969--186	L	H	41050	POAST PLUS	7969--88
					D	I	10157	POUNCE 25 WP	279--3051
L	I	10876	INTREPID 2F	62719--442	L	H	41151	PREFIX	100--1268
L	H	41033	INTRRO	524--314	L	H	40655	PROWL 3.3 EC	241--337
					L	H	41010	PROWL H20	241--418
					L	H	40363	PURSUIT	241--310

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 #	Form	Class	Code	Product Name	EPA #
L	H	40364	PURSUIT PLUS EC	241—331	L	H	41040	SPARTAN	279—3189
D	H	40733	PYTHON WDG	62719—277	L	H	41146	SPARTAN ADVANCE	279—3334
L	F	70079	QUADRIS OPTI	100—1171	L	H	40662	STORM	70506—59
L	F	70525	QUILT	100--1178	L	F	70473	STRATEGO	264—779
L	H	40987	RAPTOR	241—379	D	H	40606	SYNCHRONY STS	352—599
L	H	40365	REFLEX	100—993	D	H	40466	SYNCHRONY XP	352--648
L	H	40628	RESOURCE	59639—82	L	H	40507	TARGA	33906—9
L	H	40604	REZULT	7969—194	D	I	10190	TEMIK 15G	264—330
L	H	41007	ROUNDUP ORIGINAL MAX	524—539	L	H	40918	TOUCHDOWN HERBICIDE	100—1117
L	H	40509	ROUNDUP POWER MAX	524—549	L	H	40238	TOUCHDOWN TOTAL	100—1169
L	H	41159	ROUNDUP ULTRA	524—475	L	H	40534	TOUCHDOWN HITECH	100—1182
L	H	41042	ROUNDUP WEATHERMAX	524--537	L	H	41047	TREFLAN 4L HERBICIDE	34704—853
L	H	40372	SALVO	34704—609	L	H	40550	TRIFLURALIN 4 E.C.	5905—519
L	H	40373	SCEPTER	241—289	L	H	40913	ULTRABLAZER	70506—60
D	H	40423	SCEPTER 70 DG	241—306	D	H	40014	VALOR	59639—99
L	H	41173	SECTION	1381—204	D	H	40940	VALOR WP	59639—98
L	H	41041	SELECT 2EC	59639—3	L	H	41137	VERDICT	7969—279
L	H	40005	SELECT MAX	59639--132	L	I	11167	WARRIOR II WITH ZEON	100—1295
L	H	40208	SENCOR 4F	264—735	L	H	40404	WEEDONE 538	71368—3
D	H	40209	SENCOR 75DF	264--738	L	H	40406	WEEDONE LV4	71368—14
L	H	41025	SEQUENCE	100—1185	L	H	40407	WEEDONE LV6	71368--6
L	I	10198	SEVIN 4F	264—349					
D	I	10028	SEVIN 80	264—316					
L	H	41135	SHARPEN	7969--278					

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