

## **SUPPORTING STATEMENT Part A**

### **ARMS II and Fruit Chemical Use Survey**

#### **Substantive Change**

**OMB No. 0535-0218**

This substantive change is being submitted as a supplemental supporting statement to the List Sampling Frame Survey.

#### **A. JUSTIFICATION**

##### **1. Circumstances making collection of information necessary.**

NASS is requesting a substantive change to the ARMS and Chemical Use Survey docket (0535-0218) to accommodate changes to several of the questionnaires.

NASS was approached by the Office of Pest Management Policy (OPMP) through a cooperative agreement to make changes to the ARMS II and Fruit Chemical Use surveys for 2019.

The OPMP was created by the Agricultural Research, Extension, and Education Reform Act of 1998 in response to grower concerns about the implementation of the Food Quality Protection Act of 1996 (FQPA). By 1998 statute, and as reauthorized in the Agricultural Act of 2014 (P.L. 113-79), OPMP “shall be responsible for

- the development and coordination of Department policy on pest management and pesticides;
- the coordination of activities and services of the Department, including research, extension, and education activities, regarding the development, availability, and use of economically and environmentally sound pest management tools and practices;
- assisting other agencies of the Department in fulfilling their responsibilities related to pest management or pesticides under the Food Quality Protection Act of 1996, the Federal Food, Drug and Cosmetic Act and other applicable laws;
- perform other functions as required by law or by request of the Secretary;
- ensure coordination of interagency activities with EPA and FDA and other Federal and state agencies; and

- consult with agricultural producers that may be affected by pest management or pesticide-related activities or actions of the Department or other agencies.”

The additional questions that will be added to the questionnaires will address the following topics:

- Growers practices used to reduce off-field pesticide drift,
- Growers participation in programs to manage pesticide drift,
- Grower decisions regarding application methods, nozzle choices, and spray tank management,
- Sources of information growers are using to inform their pest resistance management decisions,
- Grower practices employed to manage pesticide resistance,
- Grower Best Management Practices (BMPs) to prevent pesticide exposure to pollinators,
- Grower awareness of BMPs to prevent pesticide exposure to pollinators.

**2. How, by whom, and for what purpose information is to be used.**

OPMP will be able to use the expanded NASS data to better fulfil their responsibilities listed above.

**3. Use of improved information technology.**

The ARMS II and Fruit Chemical Use Surveys are done by field enumeration. These changes to the questionnaires will not change anything as far use of technology.

**4. Efforts to identify duplication.**

There are no changes from the original approval related to duplication reduction.

**5. Methods to minimize burden of small businesses.**

NASS incorporated additional screening questions and skip patterns to help minimize additional burden as much as possible.

**6. Consequence if information collection were less frequent.**

There are no changes to the frequency of these surveys than was originally approved.

**7. Special circumstances.**

No special circumstances are associated with this information collection.

**8. Federal register notice and consultation with outside persons.**

Not applicable.

**9. Payments or gifts to respondents.**

No payments or gifts will be given to respondents.

**10. Confidentiality provided to respondents.**

Confidentiality will be provided to respondents in accordance with the Confidential Information Protection and Statistical Efficiency Act (CIPSEA) of 2002. All confidentiality protections that are applied to all products released from these surveys will remain the same as originally approved.

**11. Questions of a sensitive nature.**

No questions of sensitive nature will be asked.

**12. Hour burden and annualized costs to respondents.**

The following table contains the estimated burden hours for the surveys included in this supplemental supporting statement. Cost to the public for completing the questionnaire is assumed to be comparable to the hourly rate of those requesting the data. The adjusted overall cost to the public is estimated at \$3,896,714.16.

	Burden Hours	Estimated Hourly Rate \$	Total Cost \$
Original burden hours for total docket	105,615	\$ 36.84	\$ 3,890,856.60
Increase in burden hours for changes	159	\$ 36.84	\$ 5,857.56
Revised burden hours for total docket	105,774	\$ 36.84	\$ 3,896,714.16

NASS uses the Bureau of Labor Statistics' [Occupational Employment Statistics](#) (most recently published on March 29, 2019 for the previous May) to estimate an hourly wage for the burden cost. The May 2018 mean wage for bookkeepers was \$20.25. The mean wage for farm managers was \$38.43. The mean wage for farm supervisors was \$24.42. The mean wage of the three is \$27.70. To

calculate the fully loaded wage rate (includes allowances for Social Security, insurance, etc.) NASS will add 33% for a total of \$36.84 per hour.

# Original Burden Tables

Respondent Burden for ARMS and Chemical Use Surveys for July 2018 - June 2021 1/												
Survey Year	Survey	Sample Size 5/	Waves of Data Collection	Responses				Non-response				Total Burden Hours
				Resp. Count	Waves X Count	Min./ Resp.	Burden Hours	Nonresp Count	Waves X Count	Min./ Nonr.	Burden Hours	
<b>Agricultural Resource Management Surveys (ARMS) Phases I, II, &amp; III</b>												
2018	Integrated Screening Survey (Phase I) (Mail)1/ 4/	-	1	-	-	15	-	-	-	2	-	-
	ARMS Screening Survey (Phase I) (Enumeration) 6/	-	1	-	-	15	-	-	-	2	-	-
	Production Practices Report (Phase II) 2/	7,500	1	6,000	6,000	35	3,500	1,500	1,500	2	50	3,550
	Production Practices & Costs Report (Phase II) 2/	5,000	1	4,000	4,000	65	4,333	1,000	1,000	2	33	4,366
	Costs & Returns Report Report (Phase III) (Mail) 3/	-	1	-	-	100	-	-	-	2	-	-
	Costs & Returns Report Report (Phase III) (Enumeration) 3/	-	1	-	-	100	-	-	-	2	-	-
<b>2018 Total</b>		<b>12,500</b>		<b>10,000</b>	<b>10,000</b>		<b>7,833</b>	<b>2,500</b>	<b>2,500</b>		<b>83</b>	<b>7,916</b>
2019	Integrated Screening Survey (Phase I) (Mail)1/ 4/	100,000	1	20,000	20,000	15	5,000	80,000	80,000	2	2,667	7,667
	ARMS Screening Survey (Phase I) (Enumeration) 6/	80,000	1	60,000	60,000	15	15,000	20,000	20,000	2	667	15,667
	Production Practices Report (Phase II) 2/	7,500	1	6,000	6,000	35	3,500	1,500	1,500	2	50	3,550
	Production Practices & Costs Report (Phase II) 2/	5,000	1	4,000	4,000	65	4,333	1,000	1,000	2	33	4,366
	Costs & Returns Report Report (Phase III) (Mail) 3/	35,000	1	7,000	7,000	100	11,667	28,000	28,000	2	933	12,600
	Costs & Returns Report Report (Phase III) (Enumeration) 3/	30,000	1	22,500	22,500	100	37,500	7,500	7,500	2	250	37,750
<b>2019 Total</b>		<b>100,000</b>		<b>119,500</b>	<b>119,500</b>		<b>77,000</b>	<b>138,000</b>	<b>138,000</b>		<b>4,600</b>	<b>81,600</b>
2020	ARMS Screening Survey (Phase I) (Mail) 1/	110,000	1	22,000	22,000	15	5,500	88,000	88,000	2	2,933	8,433
	ARMS Screening Survey (Phase I) (Enumeration) 6/	88,000	1	66,000	66,000	15	16,500	22,000	22,000	2	733	17,233
	Production Practices Report (Phase II) 2/	7,500	1	6,000	6,000	35	3,500	1,500	1,500	2	50	3,550
	Production Practices & Costs Report (Phase II) 2/	5,000	1	4,000	4,000	65	4,333	1,000	1,000	2	33	4,366
	Costs & Returns Report (Phase III) (Mail) 3/	35,000	1	8,750	8,750	100	14,583	26,250	26,250	2	875	15,458
	Costs & Returns Report (Phase III) (Enumeration) 3/	30,000	1	22,200	22,200	100	37,000	7,800	7,800	2	260	37,260
<b>2020 Total</b>		<b>110,000</b>		<b>128,950</b>	<b>128,950</b>		<b>81,416</b>	<b>146,550</b>	<b>146,550</b>		<b>4,884</b>	<b>86,300</b>
2021	Integrated Screening Survey (Phase I) (Mail)1/ 4/	100,000	1	20,000	20,000	15	5,000	80,000	80,000	2	2,667	7,667
	ARMS Screening Survey (Phase I) (Enumeration) 6/	80,000	1	60,000	60,000	15	15,000	20,000	20,000	2	667	15,667
	Production Practices Report (Phase II) 2/	-	1	-	-	35	-	-	-	2	-	-
	Production Practices & Costs Report (Phase II) 2/	-	1	-	-	65	-	-	-	2	-	-
	Costs & Returns Report (Phase III) (Mail) 3/	35,000	1	7,000	7,000	100	11,667	28,000	28,000	2	933	12,600
	Costs & Returns Report (Phase III) (Enumeration) 3/	30,000	1	22,500	22,500	100	37,500	7,500	7,500	2	250	37,750
<b>2021 Total</b>		<b>100,000</b>		<b>109,500</b>	<b>109,500</b>		<b>69,167</b>	<b>135,500</b>	<b>135,500</b>		<b>4,517</b>	<b>73,684</b>
<b>Cognitive Testing</b>												
3 years	Testing approximately 50 ARMS and/or Chemical Use questionnaires per year	50	1	50	50	90	75	-	-		-	75

1/ ARMS and Chemical Use surveys are conducted on a cyclical basis that does not follow a calendar year, but instead follows the crop production year. The ARMS phase 1 is conducted in the Spring and early Summer for that crop year. The ARMS II and Chemical Use Surveys are conducted in the Autumn for the current production cycle. The ARMS III is conducted the following year for the previous years expenses and income for both whole farm and commodity specific data.

2/ Phase II surveys are all conducted as face to face interviews. Field enumerators can copy much of the chemical use data from the farm operator's record books. The remainder of the data can be obtained directly from the farm operator. The chemical data is related to a specific field selected of each farm sampled for this survey.

3/ All Phase III questionnaires will be attempted by mail with phone and field enumeration for non-respondents. In 2017 respondents have the option of completing the ARMS III questionnaire and not having to complete the Census of Agriculture. The ARMS III questionnaire contains the same essential questions as the Census.

4/ In 2016 and 2018 the ARMS Phase I Screener will also be used to pre-screen for the Vegetable Chemical Use Survey.

5/ The ARMS Phases II & III are both subsampled from the Phase I Screening Survey.

6/ Phase I is available by internet, mail, phone and face to face enumeration. The questionnaires are mailed out with pre-survey letter and internet instructions. Historically we have received approximately a 20% response rate by mail and EDR combined. This is followed by phone and personal enumeration for non-respondents.

**0535-0218 - Projected Respondent Burden for EPAs in 2018 - 2020**

(External Project Agreement "EPA" are surveys that NASS conducts under cooperative agreements with State agencies.)

State	Commodity	Sector	Survey Name	Sample Size	Waves of Data Collection	Resp. Count	Waves X Count	Min. / Resp	Burden Hours	Non-Resp Count	Waves X Count	Min / Non Resp.	Burden Hours	Total Burden Hours
Mississippi	All (crops)	Growers	Screener	1,350	1	473	473	15	118	878	878	2	29	147
Mississippi	Wheat	Growers	Cropping Practices - Wheat	70	1	56	56	90	84	14	14	2	0	84
Mississippi	Corn	Growers	Cropping Practices - Corn	115	1	92	92	90	138	23	23	2	1	139
Mississippi	Rice	Growers	Cropping Practices - Rice	40	1	32	32	90	48	8	8	2	0	48
Mississippi	Cotton	Growers	Cropping Practices - Cotton	90	1	72	72	90	108	18	18	2	1	109
Mississippi	Soybeans	Growers	Cropping Practices - Soybeans	115	1	92	92	90	138	23	23	2	1	139
Minnesota	Corn, Soybeans, Wheat, Hay	Growers	Pesticide & Fertilizer Use in Minnesota	8,400	1	6,720	6,720	30	3,360	1,680	1,680	2	56	3,416
Maryland	All	Pesticide Applicators	Maryland Pesticide Usage Survey (Mail)	6,800	1	2,040	2,040	45	1,530	4,760	4,760	2	159	1,689
			Maryland Pesticide Usage Survey (Phone Follow-Up)	4,760	1	3,332	3,332	45	2,499	1,428	1,428	2	48	2,547
Illinois	Cultural Practices	Crops	Nutrient Loss Reduction Strategy (1st Mailing)	1,900	1	570	570	25	238	1,330	1,330	2	44	282
			Nutrient Loss Reduction Strategy, (2nd Mailing)	1,330	1	200	200	25	83	1,131	1,131	2	38	121
			Nutrient Loss Reduction Strategy (Phone Follow-Up)	1,131	1	678	678	25	283	452	452	2	15	298

**Publicity Materials <sup>1</sup>**

Cover Letter and/or EDR Instruction Sheet	18,880	1	14,356	14,356	5	1,196	4,524	4,524	2	151	1,347
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**Cognitive Testing**

Questionnaire Testing	30	1	30	30	120	60	0	0	2	0	60
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<b>TOTALS</b>	<b>18,910</b>		<b>14,386</b>	<b>14,386</b>		<b>9,883</b>	<b>4,524</b>	<b>11,744</b>		<b>543</b>	<b>10,426</b>
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<sup>1</sup> The publicity materials for these reimbursable surveys is not included in the publicity materials on the third page. That number is for the Federally Funded surveys only.

Respondent Burden for ARMS and Chemical Use Surveys for July 2018 - June 2021 1/												
Survey Year	Survey	Sample Size	Waves of Data Collection	Responses				Non-response				Total Burden Hours
				Resp. Count	Waves X Count	Min./ Resp.	Burden Hours	Nonresp Count	Waves X Count	Min./ Nonr.	Burden Hours	
<b>Contractor Expense Survey 3/</b>												
2019	Contractor Expense Survey	100	1	80	80	45	60	20	20	2	1	61
2020	Contractor Expense Survey	100	1	80	80	45	60	20	20	2	1	61
2021	Contractor Expense Survey	100	1	80	80	45	60	20	20	2	1	61
<b>Total</b>		300		240	240		180	60	60		3	183
<b>Chemical Use Surveys - NASS Program Only</b>												
2018	Vegetable Chem Use	4,200	1	3,360	3,360	45	2,520	840	840	2	28	2,548
2019	Fruit Chem Use	6,700	1	5,360	5,360	45	4,020	1,340	1,340	2	45	4,065
2020	Vegetable Chem Use	4,200	1	3,360	3,360	45	2,520	840	840	2	28	2,548
<b>Total</b>		15,100		12,080	12,080		9,060	3,020	3,020		101	9,161
<b>Microbial Food Safety Practices -- Packer Survey</b>												
Discontinued	Microbial Food Safety Practices -- Packer Survey	-	1	-	-	30	-	-	-	2	-	-
<b>Total</b>		-		-	-		-	-	-		-	-
<b>Publicity Materials for ALL surveys 2/</b>												
2018	All materials for all versions 4/	16,700	1	13,360	13,360	5	1,113	3,340	3,340	2	111	1,224
2019	All materials for all versions	123,500	1	98,800	98,800	5	8,233	24,700	24,700	2	823	9,056
2020	All materials for all versions	115,800	1	92,640	92,640	5	7,720	23,160	23,160	2	772	8,492
2021	All materials for all versions	100,250	1	80,200	80,200	5	6,683	20,050	20,050	2	668	7,351
<b>Total</b>		356,250		285,000	285,000		23,749	71,250	71,250		2,374	26,123
<b>Quality Control Survey (Telephone Only) - Recontact operators to verify quality of NASDA enumerators. 4/</b>												
2019	Quality Control Worksheet (phone only)	1,500	1	1,500	1,500	5	125	-	-		-	125
2020	Quality Control Worksheet (phone only)	1,500	1	1,500	1,500	5	125	-	-		-	125
2021	Quality Control Worksheet (phone only)	1,500	1	1,500	1,500	5	125	-	-		-	125
<b>Total</b>		4,500		4,500	4,500		375				-	375
<b>Annual Totals 2/</b>												
2018	Annual Totals 4/	35,660	1	27,796	27,796		21,349	7,864	15,924		765	22,114
2019	Annual Totals	125,760	1	100,618	140,876		99,396	25,142	150,604		6,012	105,408
2020	Annual Totals	133,260	1	106,618	148,326		101,799	26,642	159,154		6,228	108,027
2021	Annual Totals	100,150	1	80,120	111,130		76,110	20,030	135,520		5,186	81,296
<b>Annual Averages</b>		131,610		105,051	142,710		99,551	26,559	153,734		6,064	105,615
Average Burden per Respondent per Year		0.80248461			1.35848255		0.6975755		5.78840		0.03944	

1/ ARMS and Chemical Use surveys are conducted on a cyclical basis that does not follow a calendar year, but instead follows the crop production year. The ARMS phase 1 is conducted in the Spring and early Summer for that crop year. The ARMS II and Chemical Use Surveys are conducted in the Autumn for the current production cycle. The ARMS III is conducted the following year for the previous years expenses and income for both whole farm and commodity specific data.

2/ For annual totals the sample size does not include the counts from the publicity materials, since it is the same operators. However, the burden counts do include the burden associated with the publicity materials. The surveys that are attempted by mail will have the publicity materials included with the initial mailing. No publicity materials are sent out with the Contractor Expense Surveys.

3/ Contractor Expense Survey is conducted to collect and summarize the amount of farm input provided by contractors. This data is summarized and used to complete surveys when the farm operator cannot provide the contractor inputs for their farming operation.

4/ Publicity materials are not sent out to sampled operations that were contacted for a quality control survey.

## Revisions

Adjustments to Total Burden for 2019 Chemical Use Surveys

	Approved Sample Size	Revised Sample Size	Difference	Approved Burden Minutes per Questionnaire	Revised Burden Minutes per Questionnaire	Difference



**13. Total annual cost burden to respondents.**

No start-up or ongoing operation/maintenance costs are associated with this information collection.

**14. Annualized costs to federal government.**

OPMP provided NASS with \$940,000 to cover the costs associated with these changes.

**15. Reasons for changes in burden.**

OPMP came to NASS wanting to incorporate additional pest management questions into the ARMS II Production Practices Reports. The PPR surveys for 2019 will be for winter, spring and durum wheat questionnaires, the new questions will be in Section E, Pest Management Practices, questions number 17 – 29. In addition, OPMP requested that similar pest management questions be added to the Fruit Chemical Use Survey which will also be conducted in 2019. The PPR and the fruit questionnaires are already approved to collect data that is related to Pest Management; OPMP needs additional detail to be included in the 2019 questionnaires. The PPR respondent burden was increased from 35 minutes per completed response to 50 minutes and for the Fruit Chemical Use Survey, the respondent burden was increased from 50 minutes to 60 minutes. However the overall sample size was reduced by 1,200. The net change in annual respondent burden is reflected in the table below.

The ARMS II Production Practices and Costs Reports (PPCR) will target the commodities of barley, cotton and sorghum in 2019. NASS conducts these surveys under a cooperative agreement with the USDA Economic Research Service (ERS). Each year, ERS adds or adjusts the questions to accommodate data needs either for research purposes or regulatory guidelines. In 2019, at the request of ERS, several changes have been made to the PPCR questionnaires for barley, sorghum, and cotton. The questions are tested questions that were previously asked on either the soybean or corn PPCR versions. Based on completion times for the corn and soybean PPCR surveys, the added questions and skip patterns are incorporated into the 2019 questionnaires; we are not expecting any increase in respondent burden per completed questionnaire.

Adjustments to Total Burden for 2019 Chemical Use Surveys						
	Approved Sample Size	Revised Sample Size	Difference	Approved Burden Minutes per Questionnaire	Revised Burden Minutes per Questionnaire	Difference
Production Practices & Cost Report (ARMS II)	5,000	5,300	300	65	65	-
Commodities (Cotton, Barley, and Sorghum)						
Production Practices Report (ARMS II)	7,500	3,600	(3,900)	35	50	15
Commodities ( Winter Wheat, Spring Wheat and Durum Wheat)						
Fruit Chemical Use Survey	6,700	6,700	-	50	60	10

**16. Tabulation, analysis, and publication plans.**

NASS will generate a summary of responses for each question at both the state and national level. The published data will be posted to the home page for the Office of Pest Management Policy which can be found at:

<https://www.ars.usda.gov/office-of-pest-management-policy/office-of-pest-management-policy-home-page/>.

**17. Request for approval of non-display of expiration date.**

No request is being made for approval of non-display of the expiration date.

**18. Exceptions to certification statement.**

No exceptions to the certification statement are requested.

June 2019