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Nonresponse in Phase III of the Agricultural Resource Management Survey in Louisiana

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EXECUTIVE SUMMARY

The National Agricultural Statistics Service (NASS) surveys farmers and ranchers in the fifty states and Puerto Rico to estimate crops and livestock, assess production practices, and identify economic trends. The Agricultural Resource Management Survey (ARMS) collects data covering chemical use and production practices with a specific focus on the financial well-being of agricultural operations. ARMS is composed of three phases. Phase I is conducted May through July and screens for potential inclusion in Phases II and III. Phase II is conducted October through December and collects data on cropping practices and chemical usage. Phase III occurs February through April of the following year and collects detailed economic information about the agricultural operation and the operator's household. ARMS data are used by farm organizations, commodity groups, agribusinesses, Congress, state departments of agriculture, and the United States Department of Agriculture (USDA). The USDA uses ARMS data to evaluate the financial well-being of farms and ranches and to objectively evaluate critical issues related to agriculture and the rural economies.

ARMS Phase III (ARMS III) is the only phase of the ARMS with response rates generally lower than 80 percent. The lower response rate for this phase causes a higher risk of biased results. To improve ARMS III response rates, NASS' Louisiana Field Office and NASS' Research and Development Division, conducted two studies.

The first study assessed the effect of providing an economic brief "*Economic Well-Being of Farm Households*" to a random sample of operations. The economic brief, which was produced by the USDA's Economic Research Service, summarizes data from past ARMS and evaluates the financial performance of U.S. farms and ranches. NASS hoped to demonstrate the importance of completing the ARMS survey by providing operations with an example of how the data are used and thus increase the operators' willingness to respond. An experimental design was developed to evaluate the effect of the economic brief on response rates. Operators were randomly assigned to either the treatment group or the control group. Prior to ARMS III data collection, the treatment group received a pre-survey letter announcing the survey and a copy of the economic brief. The control group received only the pre-survey letter. The analyses showed that response rates were not significantly affected by providing the economic brief prior to data collection.

The second study ran simultaneously, and its purpose was to enable NASS to better understand nonresponse in ARMS III. Field enumerators asked sampled operators who had declined to cooperate on the survey to explain why they were refusing to complete the ARMS III questionnaire. Their reasons for refusing were then classified using an updated listing of refusal reasons originally created in a previous NASS study, *Identifying and Classifying Reasons for Nonresponse on the 1991 Farm Costs and Returns Survey* (O'Connor, 1992). Enumerators also recorded reasons for identifying sampled operations as inaccessible. The tables located on the next page display the primary reasons for nonresponse.

The authors recommend that the nonresponse study be expanded to other surveys and states. This will provide NASS with documented reasons for survey nonresponse and will aid NASS in determining what areas of the data collection process (questionnaire design, field enumerator training, promotion and public awareness of NASS surveys) need improvement.

Top Five Reasons for Nonresponse (Refusal & Inaccessible/Incomplete)

Reasons for Refusal
1. Would not take time / too busy.
2. Information too personal / none of your business.
3. Refused, but no reason given.
4. I will have nothing to do with the Government.
5. Will do other surveys, but not financial surveys.

Reasons for Inaccessible/Incomplete
1. Tried several times; could not reach anyone for an appointment. Just an extremely busy person.
2. INCOMPLETE – Respondent provided partial information, but would not or could not provide enough information to make the questionnaire complete.
3. Inaccessible, but no reason given.
4. Respondent postponed the interview beyond the end of the survey period.
5. No respondent, as listed on the label, could be found.

RECOMMENDATIONS

1. Field offices should consider whether or not to distribute Economic Research Service's provided economic brief, "*Economic Well-Being of Farm Households*", to sampled operators. Although this was provided to all ARMS III participating field offices for distribution, the research in Louisiana showed that the incentive had no effect on response rates for ARMS III.
2. Continue researching the reasons for nonresponse in Louisiana to study any trends that are occurring.
3. Gradually expand nonresponse research to all surveys and states. This will improve NASS' understanding of survey specific, state, regional, and national nonresponse trends.
4. Apply the lessons learned from this study to future nonresponse studies. Specifically, implement the following:
 - a. An office use box on the front or back page of the questionnaire should be designated for nonresponse research.
 - b. An edit check should be written that triggers a warning if the questionnaire is coded refusal, inaccessible or incomplete and is missing a nonresponse reason code.
5. As NASS' knowledge of nonresponse grows, improve current training scenarios to address the major reasons for refusals and inaccessibles.

Nonresponse in Phase III of the Agricultural Resource Management Survey in Louisiana

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Abstract

The National Agricultural Statistics Service (NASS) surveys farmers and ranchers in the fifty states and Puerto Rico in order to estimate crops and livestock, assess production practices, and identify economic trends. One of NASS' annual surveys is the Agricultural Resource Management Survey (ARMS). ARMS collects data on chemical use and production practices with a specific focus on the financial well-being of agricultural operations.

ARMS is composed of three phases with Phase III being the only phase with response rates typically lower than 80 percent. This low response rate causes a higher risk of biased results. To improve Phase III response rates, NASS' Louisiana Field Office and NASS' Research and Development Division, conducted two studies. The first study assessed the effect of providing USDA's Economic Research Service's economic brief, "*Economic Well-Being of Farm Households*" to a random sample of operations. The second study assessed reasons for questionnaires being coded as refusals or inaccessible.

Key Words: Incentives, Nonresponse, Response Rate, Refusals, Inaccessibles

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1. INTRODUCTION

The mission of the United States Department of Agriculture's (USDA) National Agricultural Statistics Service (NASS) is to provide timely, accurate and useful statistics on United States and Puerto Rico agriculture. NASS conducts hundreds of surveys a year to estimate crops and livestock, explore production practices, and identify economic trends.

The Agricultural Resource Management Survey (ARMS) is a multi-purpose national survey conducted annually on varying commodities. ARMS is the primary vehicle by which NASS obtains data on chemical use and production practices for target commodities. ARMS also collects economic information used for assessing the financial well-being of the United States' agricultural sector.

Over time the response rates for ARMS and other NASS surveys have been decreasing. To help counteract this decrease, NASS is conducting research to improve its understanding of the reasons for survey nonresponse. This will provide the Agency with the necessary tools for assessing and improving the data collection process.

This report focuses on two studies conducted in Louisiana. The first study examines the effect on response rates of providing farm operators with an economic brief created from 2005 ARMS data. By showing the use and importance of the data and the operators' participation, NASS hoped to increase response rates for Phase III. The second study focused on examining the reasons for nonresponse in Louisiana.

1.1 ARMS

ARMS data are used by farm organizations, commodity groups, agribusiness, Congress, state departments of agriculture, and the USDA. The USDA uses ARMS data to evaluate the financial well-being of farms and ranches. The USDA also uses the data to objectively evaluate government policies and other critical issues related to agriculture and the rural economy.

The ARMS is composed of three phases. Phase I is conducted May through July. This first phase is designed to ensure that operations are in business and to determine whether they are currently producing targeted commodities (i.e. rice, soybeans, or broilers).

Phase II, conducted October through December, focuses on chemical usage and production practices for target commodities.

Phase III occurs February through April of the following year. ARMS Phase III's (ARMS III) data are used to assess the financial condition of the farm sector. This phase collects data on income, expenses, assets, debt, and operator characteristics.

1.2 ARMS III

This report focuses on the 2006 ARMS III in Louisiana, where data collection actually occurred in February through April of 2007. Operations sampled in ARMS III were personally interviewed by field enumerators using paper questionnaires. Louisiana had four questionnaire versions. Three versions were commodity specific and one was a general version. Responses during the screening phase had determined the questionnaire version each operation received in ARMS III.

1.3 NONRESPONSE

In general, survey nonresponse negatively impacts data and estimates, and it increases survey costs. Nonresponse in ARMS III affects NASS' income/expense estimates, increases data collection time, and significantly complicates the data editing process. Nonresponse may also introduce bias that can not be easily assessed. Therefore, NASS is focusing its efforts on understanding and improving the data collection process in order to reduce survey nonresponse.

1.4 RESEARCH PROJECT ORIGINATION

In the summer of 2006, NASS' Louisiana Field Office (LA FO) initiated a survey nonresponse research project with NASS' Research and Development Division (RDD). The original goal was to determine whether or not providing an economic brief, developed using past ARMS data, would increase survey response rates for ARMS III. The study was later expanded to include the recording/documenting of the actual reasons for survey nonresponse.

NASS expected the following:

1. Supplying the sampled operators with an economic brief based on last year's data would increase survey response rates and reduce item nonresponse in the Farm Household Section of the questionnaire.
2. Documenting reasons for nonresponse would provide a deeper understanding of nonresponse as it relates to ARMS III, which would, in

turn, provide valuable insight in increasing future response rates.

2. THE RESEARCH PROJECT

For the 2006 ARMS III, 617 operations were sampled in Louisiana, based on income, acreage, and known target commodities. Louisiana's target commodities were rice, soybeans and broilers. The probability of being sampled varied based on the operation's size and its commodities. Four versions of the ARMS III were used to collect data: a general version called the Cost and Returns Report (CRR) and three commodity specific versions (rice, broilers, and soybeans).

A pre-survey letter was sent informing operators that field representatives would be contacting them to schedule an interview. Enclosed with the pre-survey letter was an economic brief produced by the Economic Research Service (ERS) titled, "*Economic Well-Being of Farm Households*". This was provided to all NASS ARMS III participating field offices for distribution, to show the value of the data collected the previous year. [See Appendix A for a copy of the economic brief.]

The effect of the economic brief on response rates was assessed using an experimental design where operators were randomly assigned to a treatment or control group. Half (308) of the sample received the brief. This group was labeled the "treatment group". Those not receiving the brief were labeled the "control group". Questionnaires for operations receiving the economic brief had a code value of 1 entered in the 0093 office use box on the back page. This allowed for easy tracking of the group to which the questionnaire was assigned.

After the survey, the response rates of the two groups were compared, and differences were tested using the Chi-Square Test of Independence.

In the past, NASS has conducted various studies on the effect of both monetary incentives and nonmonetary ones (clocks, hats, etc.) on ARMS III response rates (McCarthy, Beckler, & Ott, 2006; Beckler, Horvath, & Ott, 2005). However, for this study the incentive is an actual document that was created from data collected in the prior year's survey.

There are three types of nonresponse: refusals, inaccessibles, and incompletes. Refusals are operators who were actually contacted for data collection but refused to respond. Inaccessibles are operators who were not available and thus were not contacted for data collection. Incompletes occur when, for some reason, the field enumerator was not able to complete all the questions on the questionnaires. In a refusal situation, the field enumerator asked the operator why he/she chose not to participate in the survey and recorded the reason on the questionnaire. In the case of an inaccessible operator, the field enumerator recorded the reason why the operator could not be contacted. For incompletes, the field enumerator would record why the questionnaire could not be fully completed.

In all cases, the field enumerator reviewed a handout containing various refusal/inaccessible reasons. Each reason had its own corresponding numerical code. The field enumerator then recorded the appropriate nonresponse code in the 0009 Office Use Box of the questionnaire. [See Appendix B for a copy of the handout.] If a reason did not have a corresponding response code, the staff in the LA FO would allocate a new code number for that reason.

2.1 ENUMERATOR TRAINING

Survey workshops are conducted annually to train field enumerators on ARMS III data collection procedures. During the LA FO's survey workshop, field enumerators were informed that only half of the ARMS III sample was receiving an economic brief. Field enumerators were also instructed on the use of the supplemental nonresponse hand-out. This additional training, in which 30 enumerators participated, took approximately 20 minutes.

2.2 FIELD ENUMERATION

Of the 617 operations sampled, only one questionnaire, where the operator is a long time refusal, was held in the office and not enumerated. The remaining 616 operations were utilized to assess the effect of the economic brief on response rates and to explore the reasons for survey nonresponse.

2.3 PROJECT COSTS

Additional field enumerator training costs were not incurred, since the research project-specific training was absorbed into the general survey workshop training. No additional burden fell on the field enumerators since recording the reasons for nonresponse is customary for all surveys. The economic briefs used for the treatment group were provided free of charge by ERS. Finally, no additional mailing costs were incurred by including the brief with the pre-survey letter.

3. RESULTS

The first study examined the effect of ERS' economic brief on response rates. The second study explored the most frequent reasons for nonresponse.

3.1 STUDY 1: RESPONSE RATES

Table 1 shows Louisiana's response rates for ARMS III. The terms used throughout the report are defined below:

Usable: Reports with complete data.

Out of Business: Operation was not operating during the survey reference period.

Refusal: Chose not to participate in the survey.

Inaccessible: Field enumerator unable to make contact.

Incomplete: The questionnaire could not be fully completed. (Generally grouped with Inaccessibles.)

Office Hold: Questionnaire was held in the office and not enumerated.

Nonfarm: Operation failed to meet NASS' definition of a farm.

Thirteen percent of respondents refused to complete the questionnaire and 8 percent were deemed inaccessible or incomplete by field enumerators.

Table 1: Overall Response Rates

617 in Sample	Usable	Out of Business	Refusal	Inaccessible or Incomplete	Office Hold	Non-Farm
Frequency	462	22	82	49	1	1
Percent¹	74.3	3.5	13.2	7.9	<0.2	<0.2

¹ Totals may be over/under 100% due to rounding.

Table 2 displays the number of questionnaires deemed usable, out of business, refusal, inaccessible/incomplete, office hold, and nonfarm by questionnaire version.

Table 3 displays the response rates by questionnaire version. A Chi-Square Test of Independence was conducted to compare response rates of the commodity

specific questionnaires to the Cost and Returns Report (CRR) questionnaire. The number of refusals significantly varied across the treatment and control groups ($X^2 = 39.21$, $df = 15$, $p = 0.0006$). Thus, response rates varied significantly by questionnaire version, due largely to the substantially lower usable rate for the CRR.

Table 2: Response Counts by Questionnaire Version

Questionnaire Version	Usable	Out of Business	Refusal	Inaccessible or Incomplete	Office Hold	Non-Farm	Total
CRR¹	187	18	53	26	0	1	285
Rice	130	1	10	14	0	0	155
Soybeans	84	1	12	5	1	0	103
Broilers	61	2	7	4	0	0	74
Total	462	22	82	49	1	1	617

¹ Cost and Returns Report

Table 3: Response Rates by Questionnaire Version (Percent)¹

Questionnaire Version	Usable	Out of Business	Refusal	Inaccessible or Incomplete	Office Hold	Non-Farm
CRR	66	6	19	9	0	<1
Rice	84	1	6	9	0	0
Soybeans	82	1	12	5	1	0
Broilers	82	3	9	5	0	0

Statistical Test Results: $X^2=39.21, df = 15, p=0.0006$

¹ Totals may be over/under 100% due to rounding.

This pattern of differences in response rates between the CRR version and the crop specific versions occurs every year across all participating states. This occurs for several reasons, some of which reflect public relations efforts that are done for the commodity specific versions. First, NASS met with the national rice and soybean organizations to obtain their support. Second, NASS also conducted presentations

to producer groups and organizations on how the cost per acre to produce rice and soybeans is derived and how this information benefits the farmer. Third, for broilers, there were bio-security concerns, requiring additional communication with the national and local broiler organizations and contractors to obtain their support and/or permission to approach the contractees. These contacts generated “buy-in” for the

commodity specific surveys. However, generating “buy-in” for the CRR version is difficult since its audience is broadly based. Thus CRR promotions had to be geared towards all farmers.

Finally, in 2006, Louisiana had a total of 22,735 farms in their survey sampling population for ARMS III, (2,085 soybean producers, 1,287 rice producers and 444 broiler growers). The LA FO staff theorized that these small numbers of rice and soybean producers are surveyed more often than the average Louisiana farmer. This allowed field enumerators to develop a closer working relationship with these particular farmers and thus may explain the lower refusal rate. This close working relationship also allowed operations’ business statuses (in/out of business) to be determined more quickly, and those operations not qualifying for the survey to be screened out before sampling occurred.

In an effort to improve response rates, the Louisiana Field Office mailed an economic brief, “*Economic Well-Being of Farm Households*”, along with a pre-survey letter to half of the sample. The economic brief, which was developed by ERS, summarized data collected from past Agricultural Resource Management Surveys. The other half of the sample served as a control group and received only the pre-survey letter.

Table 4 shows the response rates for each group. Twenty-four operations were excluded since they were deemed unusable (out of business, office hold, and nonfarm operations).

Response rates did not significantly differ between those who received the economic brief and those who did not ($X^2 = 0.38, df = 2, p = 0.82$). Therefore, one can conclude that the economic brief did not have an impact on the overall response rates for ARMS III in Louisiana.

3.2 ECONOMIC BRIEF ANALYSES

Table 4: Economic Brief’s Impact on Response Rates

Questionnaire Completion Type	Received Economic Brief		Did Not Receive the Economic Brief	
	Number	Percent	Number	Percent
Usable	232	77	230	78
Refusal	44	15	38	13
Inaccessible	24	8	25	9

Statistical Test Results: $X^2=0.38, df = 2, p=0.82$

3.3 ECONOMIC BRIEF'S IMPACT ON SECTION J (FARM HOUSEHOLD)

The LA FO also wanted to examine whether completeness of Section J (Farm Household) of the questionnaire improved for those receiving the brief. A copy of Section J is included as Appendix C. Section J contains questions pertaining to farm household demographics: race, education, income, farm assets/debt, and farm expenses. Due to the personal nature of these items, farmers often find this section invasive, and thus refuse to answer any or all of the questions. Of all the sections, Section J has the lowest item response rate.

If the respondent is unable or refuses

to answer this section, the office staff enters a value of "1" in Office Use Box 2002. Only four questionnaires had this section coded a complete refusal. Two were from the treatment group and the other two from the control group. Although these are extremely limited counts, it appears operators who received the economic brief were just as likely to refuse Section J as those who did not. However, additional states would need to be studied to truly assess the effect of the economic brief on Section J.

If Section J was partially complete, office staff coded each question left unanswered with a "-1". The analysis revealed that the response rate to questions in Section J was slightly higher for operators not receiving the brief.

Table 5: Section J (Farm Household) Results

Minus One "-1" Counts in Section J	Received Economic Brief	Did Not Receive Economic Brief
Number of Usable Questionnaires	232	230
Number of Questionnaires with -1's in Section J	67	53
Total Number of -1's in Section J	416	314
Average Number of -1's of those having at least one -1 in Section J.	6	6
Median Number of -1's of those having at least one -1 in Section J.	1	2
Percent of Usable Questionnaires having -1 in Sect. J	29%	23%

4. STUDY 2: REFUSALS AND INACCESSIBLES

The second study examines the reasons behind nonresponse.

4.1 REASONS FOR REFUSALS

When an operator refused to participate in the ARMS III, Louisiana's field enumerators were instructed to write the reason for the refusal on the questionnaire. Next, using the nonresponse

coding sheet provided, enumerators recorded the code that most closely matched the reason expressed.

The results are displayed in Table 6. The primary reason for refusing was “*Would not take time / too busy.*” This was followed by “*Information too personal / none of your business*” and “*Refused but no reason given.*”

There were six questionnaires for which the reason expressed for the refusal was “*I will have nothing to do with the*

Government”. This is unusual since a completed Phase I questionnaire is required to be eligible for Phase III. However, closer examination revealed that the spouse, or someone other than the operator, completed the screener questionnaire in five of these instances. The sixth instance occurred when the operator refused to participate but the field enumerator filled in Phase I’s questionnaire using data from the local Farm Service Agency office.

Table 6: Reasons for Refusing to Participate in ARMS III (by descending frequency order)

Frequency	Percent ^{1/}	Reason for Refusal
23	28	Would not take the time / too busy.
10	12	Information too personal / none of your business.
10	12	Refused, but no reason given.
6	7	“I will have nothing to do with the Government.”
6	7	Will do other surveys, but not financial surveys.
3	4	The respondent feels the operation’s records are inadequate to complete the interview.
3	4	Respondent only does compulsory surveys.
3	4	Contact attempted, but respondent refuses on all surveys, and refused on this one.
2	4	Family illness / death.
2	2	The respondent feels that surveys and reports hurt the farmer more than help.
2	2	Would not keep appointments.
2	2	“My farm is too small to count / too small to be representative.
1	1	“I just did a different survey for your office.”
1	1	“I do not like surveys / I do not do surveys.”
1	1	Does not think the information is kept confidential.
1	1	Mentions a specific grievance with the state cooperater.
1	1	“You contact me too often.”
1	1	Farm records are at the tax advisors / lawyers.
1	1	Spouse / secretary / etc. will not let the enumerator see the operator.
1	1	Does not want to report due to legal / financial problems.
1	1	Quitting farming.
1	1	“This is not a farm.”
82	98	Total

¹ Percent total is under 100% due to rounding.

In 1990 and 1991, reasons for refusals and inaccessible were studied across multiple states in ARMS III, (O'Connor 1991 and 1992). In those years, ARMS was called the Farm Costs and

Returns Survey. Table 7 displays Louisiana's top five refusal reasons and where these ranked in past studies. The top three reasons are the same in this Louisiana study as in the 1990 and 1991 studies.

Table 7: Comparison Ranking of the Reasons for Refusal in Louisiana's 2006 ARMS III Versus Nonresponse Studies from 1991 and 1992

2006 Louisiana Ranking	1991 Study Ranking	1990 Study Ranking	Reason for Refusal
1	1	1	Would not take the time / too busy.
2*	3	3	Information too personal / none of your business.
2*	2	2	Refused, but no reason given.
4*	6*	9	"I will have nothing to do with the Government."
4*	6*	27	Will do other surveys, but not financial surveys.

* Represents a tie.

4.2 REASONS FOR INACCESSIBLE/INCOMPLETE

As with refusals, field enumerators were instructed to record the reasons for the questionnaires being coded inaccessible or incomplete.

Table 8 displays the results. The three main reasons for questionnaires being recorded as inaccessible were 1.) *"Tried several times; could not reach anyone for an appointment. Just an extremely busy person"*, 2.) *"INCOMPLETE – Respondent provided partial information, but would not or could not provide enough information to make the questionnaire complete"*, and 3.) *"Inaccessible, but no reason given."*

There were seven instances of *"No respondent listed on the label could be found"*. This is unusual since the questionnaire was coded complete in Phase I. A closer examination of the data revealed that one such instance involved the operator relocating the entire operation to another state. The other six occurrences involved a change in the point of contact (partner spouse or someone other than the operator). Perhaps field enumerators should be instructed to write additional notes to explain why the operator on the label could not be found.

Table 8: Reasons for Inaccessible or Incomplete

Frequency	Percent^{1/}	Reasons for Inaccessible or Incomplete
10	20	Tried several times; could not reach anyone for an appointment. Just an extremely busy person.
9	18	INCOMPLETE – Respondent provided partial information, but would not or could not provide enough information to make the questionnaire complete.
8	16	Inaccessible, but no reason given.
7	14	Respondent postponed the interview beyond the end of the survey period.
5	10	No respondent, as listed on the label, could be found.
4	8	Farm records are not available until after the survey period closes.
3	6	The operator is away on business.
3	6	Illness / death in the family prevents the operator from responding.
49	98	Total

¹ Percent total is under 100% due to rounding.

As stated earlier, nonresponse studies for ARMS III have been conducted in the past. Table 9, located on the following page, shows Louisiana’s top three inaccessible/incomplete reasons and their ranking in past studies. Louisiana’s 2006 results are similar to the 1991 study but are different from the 1990 study. In 1990, the top two reasons nationwide were “*The*

operator is away on extended vacation” and “*Illness/death prevents the operator from responding.*” However, these differences may be misleading since the earlier studies covered more states. Therefore, broader based nonresponse studies should be conducted to see whether the reasons for inaccessible are the same across states.

Table 9: Comparison Ranking of the Reasons for Inaccessibles in Louisiana’s 2006 ARMS Phase III Versus Past Studies

2006 Louisiana Study Ranking	1991 Study Ranking	1990 Study Ranking	Reasons for being Inaccessible or Incomplete
1	1	3*	Tried several times; could not reach anyone for an appointment. Just an extremely busy person.
2	2	10	INCOMPLETE – Respondent provided partial information, but would not or could not provide enough information to make the questionnaire complete.
3	10*	8	Inaccessible, but no reason given.

* Represents a tie.

5. ECONOMIC BRIEF’S IMPACT ON REASONS FOR REFUSING

Results of these two studies were combined to determine whether the economic brief had an impact on the reasons for refusals. Table 10 compares refusal

percentages by treatment group. A Chi-Square Test of Independence was conducted and found that the economic brief had no significant effect on the rates of various refusal reasons, ($X^2 = 21.76, df = 21, p > .05$).

Table 10: Impact of Economic Brief on the Reasons for Refusal

Received Economic Brief		Did Not Receive Economic Brief		Reason for Refusal
Count	Percent	Count	Percent	
14	32	9	24	Would not take the time / too busy.
5	11	5	13	Information too personal / none of your business.
5	11	5	13	Refused, but no reason given.
3	7	0	0	Contact attempted, but respondent refuses on all surveys, and refused on this one.
3	7	3	5	Will do other surveys, but not financial surveys.
2	5	4	11	“I will have nothing to do with the Government.”
2	5	0	0	“My farm is too small to count / too small to be representative.”
1	2	2	5	The respondent feels the operation’s records are inadequate to complete the interview.
1	2	0	0	Mentions a specific grievance with the state cooperator.
1	2	0	0	“I just did a different survey for your office.”
1	2	0	0	Quitting farming.
1	2	1	3	The respondent feels that surveys and reports hurt the farmer more than help.
1	2	1	3	Would not keep appointments.
1	2	0	0	“I do not like surveys / I do not do surveys.”
1	2	0	0	Farm records are at the tax advisors / lawyers.
1	2	0	0	Spouse / secretary / etc. will not let the enumerator see the operator.
1	2	0	0	“This is not a farm.”
0	0	3	8	Respondent only does compulsory surveys.
0	0	1	3	Does not think the information is kept confidential.
0	0	1	3	Does not want to report due to legal / financial problems.
0	0	1	3	“You contact me too often.”
0	0	2	5	Family illness / death.
44	98	38	99	Total

Statistical Test Results: $X^2=21.76$, $df = 21$, $p=0.41$

1 Percent total is under 100% due to rounding.

6. ECONOMIC BRIEF'S IMPACT ON REASONS FOR INACCESSIBLE/INCOMPLETE

The effect of the economic brief on the reason for being recorded as inaccessible/incomplete was examined. The total number of inaccessible/incompletes was 49. Table 11 displays the breakdown of

those inaccessible based on treatment group. Although the top three reasons (see Table 8) for inaccessible or incomplete questionnaires were used more frequently by those who received the economic brief than by those who did not, these differences were not statistically significant, as shown in the Chi-Square Test of Independence results.

Table 11: Impact of the Economic Brief on the Reasons for being Inaccessible/Incomplete

Received Economic Brief		Did Not Receive Economic Brief		Reasons for being Inaccessible or Incomplete
Count	Percent	Count	Percent	
6	25	4	16	Tried several times; could not reach anyone for an appointment. Just an extremely busy person.
5	21	4	16	INCOMPLETE – Respondent provided partial information, but would not or could not provide enough information to make the questionnaire complete.
5	21	3	12	Inaccessible, but no reason given.
3	13	4	16	Respondent postponed the interview beyond the end of the survey period.
2	4	4	16	No respondent, as listed on the label, could be found.
1	8	2	8	Farm records are not available until after the survey period closes.
1	4	2	8	The operator is away on business.
1	4	2	8	Illness / death in the family prevents the operator from responding.
24	100	25	100	Total

Statistical Test Results: $X^2=2.80, df=7, p=0.90$

7. LESSONS LEARNED

For future nonresponse studies to run more efficiently and effectively, the authors recommend designating a cell on the questionnaire in which to capture the reason for nonresponse. The authors also recommend developing an edit check to ensure that a reason code is present for those questionnaires coded refusal or inaccessible.

8. CONCLUSION

Mailing the Economic Research Service's economic brief with the pre-survey letter had no effect on response rates for ARMS III or on the completion rates of Section J (Farm Household).

Studying the reasons for nonresponse has provided the Louisiana Field Office with a starting point for addressing future nonresponse. As a better understanding of nonresponse is obtained, better enumerator training scenarios can be developed for addressing the major reasons for refusals and inaccessibles.

Finally, the Research and Development Division and the Louisiana Field Office will continue working together to study nonresponse and how best to increase response rates.

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Appendix A

Economic Research Service's *Economic Well-Being of Farm Households*

March 2006



United States Department of Agriculture
Economic Research Service

ECONOMIC BRIEF NUMBER 7



Economic Well-Being of Farm Households

Carol A. Jones, Hisham El-Osta, and Robert Green

Farm subsidy programs in the 1930s were largely prompted by concern for the chronically low, and highly variable, incomes of U.S. farm households. Seventy years later, commodity-based support programs are still prominent, even though the income and wealth of the average farm household now exceed those of the average nonfarm household—wealth by a large margin.

Farm households continue to face variability in income due to weather and natural disasters. Household income is most variable for the small segment that operates commercial farms (above \$250,000 in annual sales). Relative to small farms, these farms achieve greater economies of scale, generate higher profit margins, and their households realize a larger share of their income from farming. However, the substantial net worth of these households acts as a cushion against uncertain farm income, much as off-farm income does for households operating smaller farms.

In a variable-income/high-wealth sector such as farming, economic well-being measures based on both income and wealth can provide a better signal of household capacity to support a consistent living standard than income measures alone. In 2003, 5 percent of farm households had both income and wealth below the respective U.S. household medians, and those households, on average, spent more on basic consumption than they earned in income. Households with low income and low wealth are less likely to receive farm payments, excluding conservation programs; by contrast, only 3 percent of households receiving payments had income and wealth below the U.S. household medians for each.



Increasing Farm Household Participation in Off-Farm Employment and Investment is Key to Well-Being

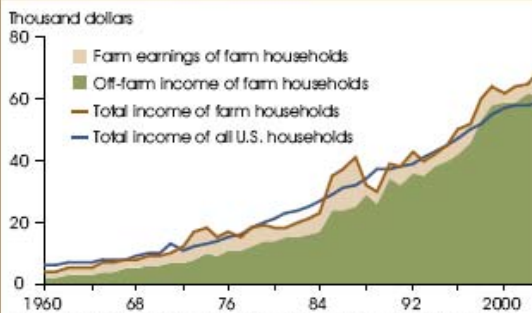
The average income of farm households increased from half of nonfarm household income (per capita) in the 1930s to relative parity by the 1970s. In every year since 1996, average income for farm households has exceeded the average U.S. household income by 5 to 17 percent. Today, the economic portfolios of most farm operator households are highly diversified. Off-farm sources of income (including employment earnings, other business activities, other investments, and transfer payments) provided 85-95 percent of household income over 1999-2003, up from around 50 percent in 1960.

¹Operating profit refers to net farm income plus interest payments, minus the opportunity cost of operators' unpaid labor and management time.

Operators of family farms in all sales classes had average household income exceeding the 2003 U.S. average for all households (\$59,083). However, farm households are following diverse paths to economic well-being. Commercial farms (annual sales above \$250,000, representing about 7 percent of U.S. farms) produce about 70 percent of total farm sales and have an average operating profit margin¹ greater than 10 percent, with economic performance and farm share of household income increasing with farm size within the commercial segment (see Economic Brief No. 6, *Growing Farm Size and the Distribution of Farm Payments*). Very large commercial farms (sales greater than \$500,000) average household income about four times the U.S. household average. Though farm income provided 80 percent of household income for the average very large commercial farm operator in 2003, off-farm income still contributed around \$44,033 per year.

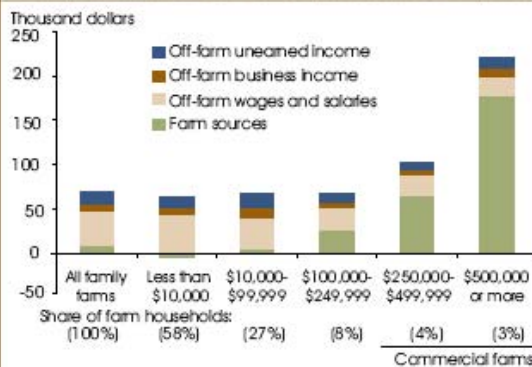
Across all other sales classes, farms have negative farm operating profits, on average, and their households draw most of their income from off-farm sources. Farm operating profit margins become more negative and shares of household income from farm sources decrease as farm size diminishes. Households just below commercial farms (\$100,000-\$249,999 in sales) represent 8 percent of U.S. farms and produce 17 percent of sales. Their average household income was \$67,275 in 2003. The remaining 85 percent of farms produce around 15 percent of sales, and earn negligible income from farming. The operators of these smaller farms (particularly those with less than \$10,000 in sales) disproportionately identify their primary occupation as "other than farming or ranching" or as "retired." The "other occupation" group, who operate 42 percent of all farms, is more integrated into the off-farm economy than the farmer/rancher or the retired, and relies primarily on earned income (off-farm wages and salaries and off-farm business income.)

Figure 1
Average household income for farm households compared with all U.S. households, 1960-2003



Source: Various sources. For details, see www.ers.usda.gov/Briefing/FarmStructure/Data/historic.htm

Figure 2
Average household income varies by sales class of farm, 2003



Source: 2003 USDA Agricultural Resource Management Survey; Economic Research Service, USDA.

Farm Household Income is Most Variable for Households with Highest Net Worth

Farm households as a group no longer experience chronically low incomes relative to nonfarm households. On the other hand, farm households do continue to experience more variable income from year to year. However, it is the 7 percent of farm households operating commercial farms, who derive a majority of household income from the farm, that experience the greatest degree of variability in household income from year to year. The 8 percent of farm households operating the next size class of farms (\$100,000-\$249,999) also experience variability in household income, though the effect is dampened because about two-thirds of their income comes from off-farm activities.

Distribution of Income and Wealth Across Farm Households

Within a given year, the variability of income across farm households tends to mirror that for all U.S. households. However, farm households tend to have lower incomes at the low end of the income spectrum than nonfarm households, and higher incomes at the high end. The share of farm households with negative household income was 6 percent in 2003, versus 1 percent of all U.S. households.

In contrast to all U.S. households, where wealth is highly concentrated at the top end of the distribution, wealth is more equally distributed across farm households. Nonetheless, differences exist by farm size and by age/retirement status. Across size classes, the variation in farm household wealth roughly mirrors the variation in income levels: farm net worth and, to some extent, nonfarm net worth are higher for households operating larger farms. So the larger farms can counter their greater exposure to variable income with higher net worth – on average in excess of \$1 million, and closer to \$2 million for very large commercial farms.

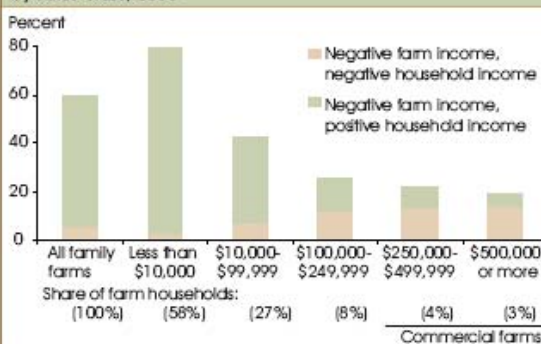
Again, the households operating larger farms (sales greater than \$100,000) are the ones more likely to experience the effects on household income from variability in farm income: in 2003, around 13 percent of households operating larger farms had negative household income, compared with 4 percent of households operating smaller farms (fig. 3). In contrast, the likelihood of incurring losses from farm operations is highest among the smaller farms (less than \$100,000 in sales). But these latter households acquire virtually all of their income from off-farm sources, so negative farm earnings seldom translate into negative household income.

A Joint Income-Wealth Indicator is More Indicative of Farm Household Well-Being

In 2003, median wealth of farm households (\$416,250) was five times the estimated median wealth of all U.S. households (\$89,578). (By definition, 50 percent of households have wealth lower than the median—also known as the 50th percentile—of wealth). Seventy-three percent of farm household net worth is in farm equity (plus an unknown share is in nonfarm business equity), whereas 17 percent of the net worth of U.S. households is in business equity. Farmland, which has appreciated greatly in recent years, particularly near urban centers, currently represents about 60 percent of farm household wealth. Excluding farm wealth, median nonfarm wealth of farm households (\$83,750) was almost as high as estimated median total wealth of all U.S. households.

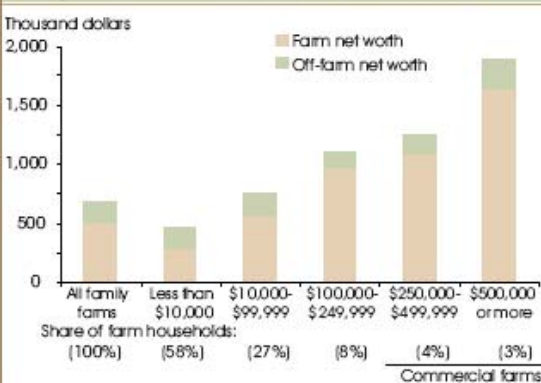
Gauging what share of farm households has low economic well-being is challenging, because farming is characterized by variable income but also by high wealth. During periods of low income, farm households may be able to maintain living standards by borrowing against, or liquidating, assets. Consequently household income for an individual year, the standard measure of economic well-being, is not necessarily a good indicator of a farm household's ability to support

Figure 3
Share of farm households with negative farm income, by whether total household income is positive or negative, and by sales class, 2003



Source: 2003 USDA Agricultural Resource Management Survey; Economic Research Service, USDA.

Figure 4
Average farm household net worth, by sales class, 2003



Source: 2003 USDA Agricultural Resource Management Survey; Economic Research Service, USDA.

How We Developed the Data in this Brief

Data on farms and farm operator households are from USDA's Agricultural Resource Management Survey (ARMS). Income data for all U.S. households are from the U.S. Census Bureau's Current Population Reports, Series P-60. Wealth data for all U.S. households are derived from the Federal Reserve Board's Survey of Consumer Finances (SCF). SCF data are collected once every 3 years, and the most recent data available are from 2001. To provide a point of comparison with farm operator wealth in 2003, we estimated median wealth levels.

This brief is drawn from . . .

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David E. Banker and James M. MacDonald, editors, *Structural and Financial Characteristics of U.S. Farms: 2004 Family Farm Report*, Agriculture Information Bulletin No. 797, 95 pp, March 2005

James MacDonald, Robert Hoppe, and David Banker, *Growing Farm Size and the Distribution of Farm Payments*, U.S. Dept. Agr., Econ. Res. Serv., EB-6, March 2006.

a given consumption level through time. And wealth is particularly important for the retired and near-retired, who may be drawing down wealth accumulated over their lifetime, rather than spending current income, to support their standard of living.

To create a well-being indicator that accounts for both income and wealth, we separate farm households by low and high income and low and high wealth, using the U.S. household medians for income and wealth as the dividing lines. By definition, 50 percent of U.S. households had income greater than the U.S. median income (\$43,378) in 2003. In contrast, 54 percent of farm households had income greater than that level in 2003. However, the big difference is in the distribution of wealth across the groups: 92 percent of all farm households—in contrast to 50 percent of all U.S. households—had wealth greater than the U.S. median (estimated to be \$89,578 in 2003).

So who is in the small group of low-wealth households? On average, the low-wealth group was younger (virtually none was retired), operated substantially fewer acres, and generated lower farm sales than the farm operator population as a whole. They reported substantial losses in the off-farm component of household wealth. Among low-wealth households, a major factor differentiating the high-income subgroup (3 percent of total households) from their low-income counterparts (5 percent of total households) is occupation: their primary occupation is disproportionately "other than farming/ranching," whereas the low-income group was more evenly split between operators declaring farming/ranching or "other" as their primary occupation.

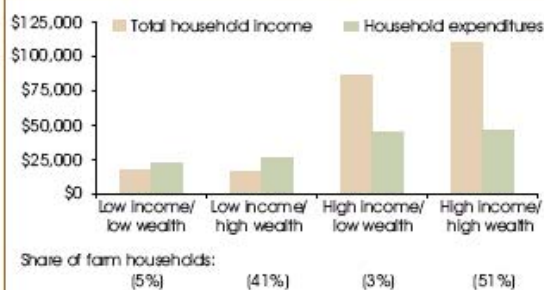
Do households with variable income have sufficient equity to borrow against, or to liquidate, to maintain living standards when income is low? Among farm households with income lower than the U.S. median (46 percent), household wealth exceeded the U.S. median in 9 out of 10 households. Retired households are disproportionately represented in this low-income/high-wealth subgroup. Even in the low-wealth group, basic consumption expenditures exceeded income, though to a lesser extent than for the high-wealth group.

Farm Households that Receive Commodity Payments also Have High Incomes and Wealth

About 32 percent of all farm households receive farm program payments, excluding environmental payments (such as those received under the Conservation Reserve Program and the Environmental Quality Incentives Program.) The share is lowest (12 percent) for households operating the smallest farms (sales less than \$10,000); over 50 percent of households operating farms in each of the larger size classes receive payments. The high-income high-wealth group is more likely to be receiving program payments (34 percent) than the low-income, low-wealth group (18 percent). Among recipients, payment levels increase with production levels, and so payments disproportionately go to farm households operating larger farms, with their higher average incomes and wealth.

Figure 5

Average farm household income and expenditures by relative economic well-being group, 2003



Source: 2003 USDA Agricultural Resource Management Survey; Economic Research Service, USDA.

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For more information, see www.ers.usda.gov/abouters/privacy.htm

Appendix B

Field Enumerator Instructions (Includes a Copy of the Listing of Reasons for Nonresponse)

Agricultural Resource Management Survey Phase III Non-Response Research Project in Louisiana

Field Enumerator Instructions

The Louisiana Field Office and the Research & Development Division are conducting a joint research project assessing why non-response (refusals, inaccessible or incomplete questionnaires) occurs in the Agricultural Resource Management Survey Phase III, (ARMS III).

These instructions pertain to only **REFUSALS**, **INACCESSIBLES**, and **INCOMPLETES**.

Step 1: Determine Non-Response Type and Write Notes

- Refusal: Find out why the person did not want to participate in the survey, and make notes on the questionnaire.
- Incomplete: Determine why the person didn't want to or couldn't complete the entire questionnaire, and make notes on the questionnaire.
- Inaccessible: Determine why no contact could be made, and make notes on the questionnaire.

Step 2: Review Listing

Review the non-response listing (located on back of these instructions) and determine which reason best describes the situation.

If a matching reason is not listed, write a note on the questionnaire explaining the situation and leave the 0009 box blank.

Step 3: Code Office Use Box

Write the corresponding non-response code in the "Office Use Box – 0009" which is located on the lower right of the questionnaire's face page.

POID _____				POID _____					
PARTNER NAME _____				PARTNER NAME _____					
ADDRESS _____				ADDRESS _____					
CITY _____	STATE _____	ZIP _____	PHONE NUMBER _____	CITY _____	STATE _____	ZIP _____	PHONE NUMBER _____		
TOTAL POINTS				0005	0006	0007	0008	0009	0010
OFFICE USE	0009	PARTNER STRATUM 102		_____	_____	_____	_____	_____	

Enter Code in 0009 Box

Reasons for Refusals, Incompletes and Inaccessibles

Code	Reasons for Refusals
1	Known refusal, no contact attempted.
2	Contact attempted, but respondent refuses on all surveys, and refused on this one.
3	Refused, but no reason given.
4	Would not take the time / too busy.
5	Information too personal / none of your business.
6	The respondent feels that surveys and reports hurt the farmer more than help.
7	"I did this survey before, but not again."
8	"I just did a different survey for your office."
9	"I just did a survey for someone else."
10	"I will have nothing to do with the Government."
11	"I do not like surveys / I do not do surveys."
12	Respondent only does compulsory surveys.
13	Does not think the information is kept confidential.
14	Mentions a specific grievance with the SSO or NASS (other than confidentiality).
15	Mentions a specific grievance with the state cooperator.
16	"My farm is too small to count / too small to be representative"
17	"You contact me too often."
18	The respondent feels the operation's records are inadequate to complete the interview.
19	Farm records are at the tax advisors / lawyers.
20	Family illness / death.
21	Would not keep appointments.
22	Spouse / secretary / etc. will not let the enumerator see the operator.
23	Wants to be paid for interview time and effort.
24	Violent / threatening refusals.
25	Does not want to talk about farming.
26	Does not want to report due to legal / financial problems.
27	Quitting farming.
28	Out of business now, will not answer for the previous year.
29	Figures for the previous year were not typical.
32	"This is not a farm."
34	Will do other surveys, but not financial surveys.
52	Questionnaire was not sent to the field to avoid jeopardizing cooperation on other surveys.
53	Would not answer the door even though they were home.
365	The operator called the office after receiving the pre-survey letter, and asked not to be contacted further.
366	Does not believe in statistics, so will not complete an interview.
400	Technical problems -- data stored electronically and are currently not accessible.
401	Never heard of NASS.
402	Feels the survey items are too complex -- too much recollection is involved.
403	Currently has or recently had disease problem with herd/crops.

Code	Reasons for Inaccessibles and Incompletes
75	No operation, as listed on the label, could be found.
76	No respondent, as listed on the label, could be found.
78	The address on the label is vacant / burned out / no structure exists.
79	The operator is away on an extended vacation.
80	The operator is away on a brief vacation.
81	The operator is away on business.
82	The address on the label is summer-seasonal housing.
83	Access to the address on the label was denied by a gate / guard / etc.
84	Illness / death in the family prevents the operator from responding.
85	Farm records are not available until after the survey period closes.
86	Respondent postponed the interview beyond the end of the survey period.
87	Enumerator workload prevented this operation from being contacted during the survey period.
92	Non-English speaking respondent; interpreter not available.
94	Inaccessible, but no reason given.
116	Tried several times; could not reach anyone for an appointment. Just an extremely busy person.
150	INCOMPLETE -- Respondent provided partial information, but would not or could not provide enough information to make the questionnaire complete.

Appendix C

**Section J (Farm Household)
of the
Agricultural Resource Management Survey Phase III Questionnaire**

SECTION J FARM HOUSEHOLD

1. Was the principal operator's spouse listed as OPERATOR 2 or 3 in Section I, item 4?

YES - [Enter code 1 then go to item 2.]

NO - [Enter code 3, and continue with item a.]

CODE
1203

a. If NO, what was the age of the operator's spouse on December 31, 2005?.....

AGE
1206

[ENUMERATOR NOTE: If the operator has a spouse, please answer for both where applicable.]

2. Is the (the operator and operator's spouse) of Spanish, or Latino origin or background, such as Mexican, Cuban, or Puerto Rican, regardless of race?

YES - [Enter code 1]

NO - [Enter code 3.]

OPERATOR
1219

SPOUSE
1220

ENTER CODE 1 FOR ALL THAT APPLY

3. Which of these do you and your spouse (the operator and operator's spouse) consider yourself? Are you-----

American Indian or Alaska Native specify tribe_____
Asian
Black or African American
Native Hawaiian or Other Pacific Islander
White

OPERATOR
1213
1215
1217
1221
1223

SPOUSE
1214
1216
1218
1222
1224

4. What is the highest level of formal education you and your spouse (the operator and operator's spouse) have completed?.....

1 Less than high school diploma
2 High school and some college
3 College graduate and beyond

OPERATOR
1257

SPOUSE
1260

5. In 2005, what was your and your spouse's (the operator and operator's spouse) major occupation?.....

1 Farm or ranch work
2 Homemaker
3 Work other than farming/ranching
4 Currently not in the workforce

OPERATOR
1207

SPOUSE
1208

7. Regarding retirement from farming, do you (the operator) consider yourself to be-----

1 Retired now
2 Retiring within the next 5 years
3 Retiring in more than 5 years

CODE
1116

OFFICE USE
2002

	NUMBER
8. How many persons lived in your (the operator's) household on December 31, 2005?	1227
a. how many of these (item 8) persons were covered by health insurance (public or private) for any part of 2005?	1226
b. how many of these persons had health insurance that was provided through:	
(i) an employer from the operator's off-farm work.	1264
(ii) an employer from the spouse's off-farm work.	1265
(iii) this farming operation.	1266
(iv) private health insurance.	1267
(v) medicare, medicaid, or other public insurance.	1268

	NUMBER
9. Of the persons who lived in your household on December 31, 2005, (item 8) how many were---	
a. younger than 6 years old?	1228
b. from 6 through 13 years old?	1229
c. from 14 through 17 years old?	1230
d. 65 years old or older?	1231

	MILES
10. How many miles do you live from the closest city with a population of 10,000 or more?	1236

	CODE
11. Do you live on or adjacent to any of your farm/ranch land?	1238

[ENUMERATOR NOTE: If principal operator and/or principal operator's spouse worked off the farm and reported hours of non-farm work in Section I—item 25aiii or Section I—item 25biii, continue. If neither principal operator nor principal operator's spouse worked off the farm, go to item 14.]

	OPERATOR	SPOUSE
12. How many miles is it one way from your home to your and/or spouse's off-farm job? (Enter zero for home based jobs such as truck driver, salesperson, enumerator, etc.)	0941	0942
13. How many years have you and/or spouse worked at this particular job?	0943	0944

[Show Value Codes in Respondent Booklet.]

14. Which value code represents the cash income the principal operator, spouse, and all other household members received in 2005 from---
(Exclude farm income reported earlier.)

1 SOURCE	2 the operator as [source] (Enter 1 if none.) CODE	3 operator's spouse as [source] (Enter 1 if none.) CODE	4 other household member(s) as [source] (Enter 1 if none.) CODE
a. All off-farm wages, salaries, and tips before taxes and withholdings?	0950	0951	0952
b. Net cash income from operating another farm or ranch?	0955	0956	0957
c. Net cash income from operating any other business?	0958	0959	0960
d. Net cash income from cash or share-renting land to others excluding land rented from this operation?	0961	0962	0963
e. Interest income?	0967	0968	0969
f. Dividend income? (Exclude corporate dividend income from this operation.)	0964	0965	0966
g. Total proceeds from the sale of non-farm capital assets---			
(i) Recognized gain/loss on the sale of capital assets reported above? (can be negative(-) if capital losses were incurred.)	0979	0980	0981
h. Income from private pensions and private disability payments?	0937	0938	0939
i. Income from public sources including Social Security, military and other public retirement, veteran's benefits, public disability, unemployment, or other public assistance?	0996	0997	0998
j. Other off-farm sources?	0991	0992	0993

15. If income was reported in 14a (off-farm wages), or 14c (net cash income from operating any other business) ask----

	OFF-FARM BUSINESS CODES	OPERATOR	SPOUSE
a. If 14(a) is greater than 1, what type of off-farm business did you/or your spouse work at?	1) Agriculture, forestry, fishing, hunting, or mining 2) Construction 3) Manufacturing 4) Education or healthcare services 5) Other government services 6) Wholesale trade, warehousing, utilities or transportation 7) Finance, insurance, real estate and other professional services 8) Recreation or tourism, including eating and lodging 9) Retail trade or personal services 10) Other non-governmental services	1070	1071
b. If 14(c) is greater than 1, what type of off-farm business did you/or your spouse operate?		OPERATOR	SPOUSE
		1072	1073

<p>16. Did any household(s) besides the operator's share in the net income of the business, either by receiving a share of profits/losses or, if incorporated, received corporate dividends or was paid a wage or salary as compensation for services to the operation?</p> <p><i>(Include services for managing the farm or for serving on the board of directors.)</i></p>	<p>1 YES - Continue 3 NO - Go to item 19</p>	<p>CODE 0976</p>
<p>7. If the operation is a sole proprietorship, partnership, or S-corporation, what percent of the net income did you <i>(the operator)</i> and your household receive?</p> <p><i>(If an LLC that elected to report income as a pass-through, consider as income.)</i></p>	<p>PERCENT 0974</p>	
<p>8. If the operation is a C-corporation, what were the corporate dividends you <i>(the operator)</i> and your household received from this farming operation?</p> <p><i>(If an LLC that elected to file as a C-corporation, consider as income.)</i></p>	<p>VALUE CODE 0975</p>	

19. [Show VALUE CODES in Respondent Booklet.]
Which value code represents the total value of each of the following categories of non-farm assets owned by the operator and members of the operator's household on December 31, 2005, for---

	VALUE CODE
a. Financial assets held in non-retirement accounts? (cash, checking, savings, money market accounts, certificates of deposits, savings bonds, government securities, money owed to the operator -- corporate stock, mutual funds, cash surrender value of life insurance, other financial assets.)	0953
b. Retirement accounts? (401k, 403b, IRA, Keogh, other retirement accounts).	0954
c. Operator's dwelling, if not owned by operation and other personal (second) homes?	0984
d. Real estate? (other farms, residential rental, commercial, and other real estate).	0985
e. Business not part of this farm?	0986
f. Other assets not reported elsewhere? (furnishings, RVs, household share of trucks, cars, etc).	0987

[Show VALUE CODES in Respondent Booklet.]

20. **Which value code represents the total value of each of the following categories of non-farm debt (debt not associated with this operation) owed by the operator and members of the operator's household on December 31, 2005, for---**
(Exclude any debt -- household debt, credit cards, etc. used to finance the farm business expenses of this operation. Report all such debt in Section H Farm Debt.)

	VALUE CODE
a. Mortgages, on operator's dwelling, if not owned by operation and other personal (second) homes? (Include home mortgages, home equity loans, and lines of credits secured by the operator's dwelling(s)).	0988
b. Mortgages on other real estate? (Include mortgages, equity loans, and lines of credits secured by other real estate, including other farms, residential rental, commercial, and other real estate).	0989
c. Loan's on businesses that are not a part of this farm operation?	1101
d. Personal loans? (credit cards, auto loans, unpaid taxes, medical bills, any other debts/liabilities not reported elsewhere).	1102

21. **Which value code represents how much this household spent in 2005 on---**

	VALUE CODE
a. food, including food away from home?	1105
b. household rent/mortgage payments, utilities, home insurance?	1106
c. non-farm transportation, including net outlays for new, used, and leased vehicles; fuel, maintenance, and insurance for non-farm share of vehicles?	1107
d. health and medical expenses:	VALUE CODE
(i) health and/or dental insurance cost (not covered by the farm operation)?	1108
(ii) Out of pocket expense for health and medical needs?	1112
e. contributions to personal insurance and retirement plans, including pensions and Social Security?	1109
f. investments for family, including home improvements, and the purchase of major appliances?	1110
g. all other family living expenses, such as clothing and personal items; household supplies and furnishings, education and child care, hobbies, recreation, and vacations, gifts and charitable contributions?	1118

[ENUMERATOR NOTE: Items 22–24 refer to Income and Expense items for 2004.]

		VALUE CODE
22. Which value code represents the total value of farm sales in the previous year (2004)?		1113
<i>(Total value of farm sales includes livestock and crop cash income and the net change in CCC loans, plus the estimated value of crop and livestock under production contracts, plus government payments to operator. Also include, if applicable, the value of the landlord share of crop and livestock production and the landlord share of government payments. Exclude contract fees, these are reported in Section D.)</i>		
23. Which value code represents the net operating income for this operation in the previous year (2004)?		1114
<i>(Cash income from all farm sources minus production costs and depreciation. If negative net operating income, indicate a minus sign before the value code.)</i>		
24. Which value code represents the total off-farm income in the previous year (2004)?		1115
<i>(Wages, salaries, and tips before taxes, income from operating other farm, income from operating any other business. If negative off-farm income, indicate a minus sign before the value code.)</i>		
		PERCENT
25. What amount of non-farm debt owed by the operator or household members was secured by farm assets?		1117
		CODE
a. Request for credit or loan application was turned down or you were not given as much credit as you applied for?	YES = 1	1120
b. Initial request for credit or loan application was turned down but later granted by reapplying to the same institution or elsewhere	YES = 1	1121
c. Thought of applying for credit at a particular place but changed your mind because you thought you might be turned down?	YES = 1	1122