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IDENTIFYING AND CLASSIFYING REASONS FOR NONRESPONSE ON THE 1990 FARM COSTS AND RETURNS SURVEY

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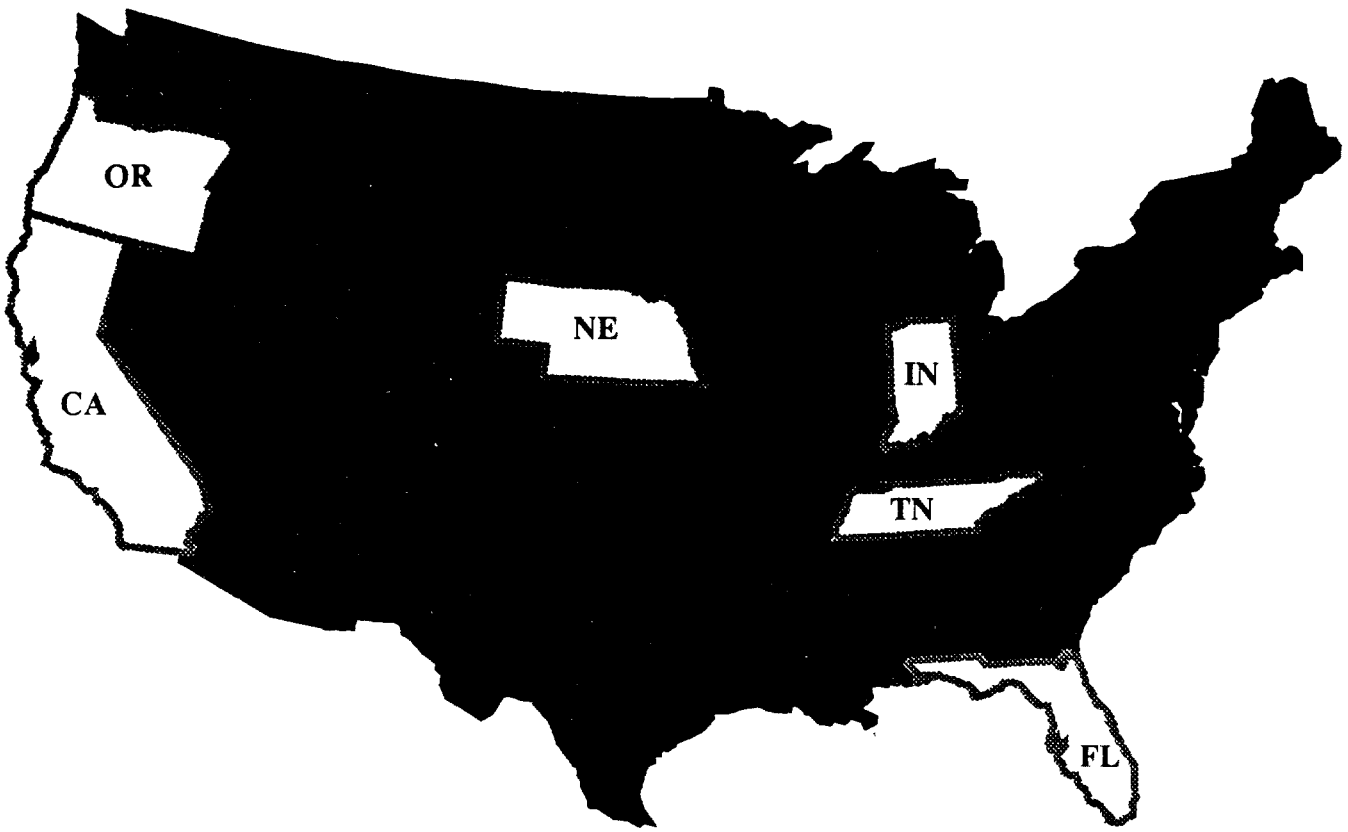

IDENTIFYING AND CLASSIFYING REASONS FOR NONRESPONSE ON THE 1990 FARM COSTS AND RETURNS SURVEY, by Terry P. O'Connor. Research and Applications Division, National Agricultural Statistics Service, U.S. Department of Agriculture, Washington DC 20250. December 1991. Research Report No. SRB-91-11.

ABSTRACT

A research study was conducted during the 1990 Farm Costs and Returns Survey (FCRS) to identify and classify the reasons given to field enumerators by respondents for refusing to participate in the survey. The reasons given by field enumerators for coding a sampled unit as "inaccessible" during the survey were also identified and classified. The research was conducted in six states, including two states that average high nonresponse rates, two states that average mid-level nonresponse rates, and two states that average low nonresponse rates on the FCRS. Results of the refusal classification indicate that one reason given by respondents for refusing to participate in the survey was the first or second most frequent response in all six states. However, only four reasons for refusing made the top ten list in all six states, and the relative frequency of the respondents' reasons for refusing varied considerably among the six states. In classifying the reasons given by enumerators for coding a sampled unit inaccessible, no one reason was given most frequently across the six states. There were only three reasons common to all six states, with fewer reasons provided and less variation within state when compared to the refusal identification. It is recommended that this study be expanded to include all FCRS states, and that the information gathered be used to prepare enumerators for situations common to their state.

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* This paper was prepared for limited distribution to the research *
* community outside the U.S. Department of Agriculture. *
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SUMMARY

The Farm Costs and Returns Survey (FCRS) is a face to face interview survey conducted annually during February and March by the National Agricultural Statistics Service (NASS). It is a survey of the agricultural sector, and is conducted in the 48 conterminous states to collect detailed information on farm expenditures and income, costs of production and demographic data.

A nonresponse identification research project was conducted during the 1990 FCRS (conducted during February and March, 1991) to identify and classify the reasons given to field enumerators by respondents who refused to participate in the survey. The reasons given by field enumerators for coding a sampled unit as "inaccessible" during the survey were also identified and classified.

The research was conducted in six test states including two states that average high nonresponse rates, two states that average mid-level nonresponse rates, and two states that average low nonresponse rates on the FCRS. Results of the refusal identification indicate that a single reason given by respondents for refusing to participate in the survey ("Respondent would not take the time / too busy") was the first or second most frequent response in each of the six states, accounting for 29.7 percent of all refusals received in the six states. However, only four reasons for refusing made the top ten list in the test states, and the relative frequency of the respondents' reasons for refusing varied considerably among the six states.

No single reason for coding a sampled unit inaccessible was given most frequently in all of the test states. The most frequent reason for an inaccessible among the six states ("The operator is away on an extended vacation") accounted for 13.7 percent of all inaccessibles. There were only three reasons for inaccessibles common to all six states, with fewer reasons provided and less within state variation when compared to the refusal identification.

One benefit of collecting this type of information is that survey managers can make adjustments to the public's perception of a too long interview by testing a shortened version of the questionnaire (as is being planned for 1992). Headquarters can prepare training materials to aid Survey Statisticians in training their enumerators to meet the challenges of the refusal types common across states. Survey Statisticians should develop materials for use in their state workshops to prepare enumerators for situations common to their state. Experienced enumerators who have had success in converting refusals into respondents could share their techniques.

In this way, enumerators will maximize response rates on the initial contact by being prepared to discuss concerns and grievances brought up by the respondents, thus avoiding the additional time and money costs of a re-contact.

Determining the reasons given for coding a sampled unit as inaccessible will allow headquarter's staff to consider new surveying techniques, and to more clearly identify the few non-farms now coded as inaccessibles, to improve nonresponse adjustment procedures.

INTRODUCTION

The Farm Costs and Returns Survey (FCRS) is a face to face interview survey conducted annually during February and March by the National Agricultural Statistics Service (NASS). It is a survey of the agricultural sector, and is conducted in the 48 conterminous states to collect detailed information on farm expenditures and income, costs of production and demographic data (Rutz, 1991). The FCRS has a multiple frame design utilizing a list sample of medium and large ranches and farms, and an area nonoverlap sample of Resident Farm Operators (RFOs) not represented by the list, most of whom operate small farms (Rutz, 1991).

While all 48 FCRS states utilize the same survey procedures, the FCRS includes several questionnaire versions which are used in different combinations across the country. The versions used in a particular state for a given year depend upon the agriculture in that state and the areas of agricultural specialization being studied. Costs of producing the various agricultural commodities are studied on a year-to-year rotating basis. Additionally, there are variations in geography, sample sizes, farm or ranch types and sizes, economic conditions and respondent attitudes about the survey across the country; therefore, many factors must be considered when making direct state to state comparisons of the survey results (Rutz, 1991).

The 1990 FCRS national response rate was 70.8 percent, with a refusal rate of 21.5 percent and an inaccessible rate of 7.7 percent. Response rates on the survey have declined slightly over time, despite extensive efforts to limit nonresponse (Rutz, 1991). While NASS uses farm expense data from the FCRS in its reports, the primary user of the FCRS dataset is the Economic Research Service (ERS), which utilizes all of the FCRS data in producing economic analyses and cost of production reports (Rutz, 1991).

A nonresponse identification research project was conducted in 6 of the 48 states during the 1990 FCRS. The purpose was to identify and classify the reasons given to field enumerators by respondents for refusing to participate in the survey. The reasons given by field enumerators for coding a sampled unit as "inaccessible" during the survey were also identified and classified. The information gained through this research should be beneficial in aiding enumerators to maximize response rates on their initial contacts.

Other projects to minimize nonresponse on the FCRS have included a refusal conversion project, providing individual farm financial analyses to respondents, and extensive media blitzes. According to Rutz (1991), "Despite these extensive efforts, most agree that the best way to increase response rates would be to decrease the length of the questionnaire." Support for this, from the respondent's point of view, can be seen through the information obtained on the nonresponse identification project.

BACKGROUND

The research project to identify and classify nonresponse on the FCRS stems from four years of preliminary work which the author completed while on staff in the South Carolina and Indiana State Statistical Offices (SSOs).

Beginning with the 1985 FCRS, the author required that the South Carolina enumerators document the reasons given by respondents for refusing to participate in the survey. A similar effort was underway in California at the time. Previously, enumerators were likely to simply write "refusal" across the questionnaire, and the information which the enumerator received from a refusal was discussed second or third hand, and was sketchy at best.

Then on the 1986 FCRS, South Carolina was selected as one of six states to take part in a refusal conversion research project. All respondents who refused to participate in the survey during the initial contact were to be re-contacted with the purpose of convincing them to complete an interview. It was apparent that enumerators selected to re-contact a refusal in the current survey had an advantage if they were aware of the reason the respondent gave when initially refusing.

The information on "reasons for refusing" gathered during 1985 were discussed during the training workshop for the 1986 FCRS, and responses to the various reasons were considered. To prepare for the re-contact required by the research, enumerators were again required to write on the questionnaire the exact reason or circumstances behind each refusal received on the FCRS. In this way, subsequent enumerators knew exactly what type of situation they were entering.

The primary benefit of identifying the refusal types was that the enumerators could PREPARE for each situation before encountering it in an interview situation. According to enumerator comments, this preparation improved their confidence in approaching interviews, and even when they could not prevent a refusal, they were able to set the stage for the respondent's cooperation on other upcoming surveys. A second benefit was that a subsequent enumerator could prepare for the specific situation when approaching a re-contact on the refusal conversion project. A third benefit was that enumerators (with their supervisor's approval) could eliminate re-contacts of certain refusal types (violent refusals, death in the family, etc.), saving money and time during the critical data collection period.

Perhaps because the refusal conversion project was new and received much attention, or perhaps because the refusal identification preparation worked, the FCRS response rate in South Carolina for 1986 was 17 percent higher than in 1985 (Dillard, 1987). The author attributes most of this increase to enumerator preparation on the initial contact since only a small number of refusal conversions were obtained.

Upon transferring to the Indiana SSO, the author instructed the field enumerators to document the reasons given by refusals. By identifying the most common FCRS refusal types in Indiana,

we were able to devote workshop training time prior to the survey to address these reasons. Comments from enumerators who had successfully converted each refusal type were discussed to better prepare all enumerators in dealing with these situations. The idea was to MAXIMIZE RESPONSE RATES on the initial contact by being prepared to discuss concerns and grievances brought up by the respondents, thus avoiding the additional time and money costs of a re-contact.

While the refusal identification and enumerator preparation led to an initial decrease from 35 percent to 31 percent in the refusal rate in Indiana, no additional gains have been evident, with the refusal rate averaging 31 percent over the past four years. The list of refusal types compiled during this time served as the basis of the list utilized for the refusal identification project on the 1990 FCRS.

Additionally, comments from the FCRS post-survey evaluations completed by survey statisticians around the country alluded to problems with certain refusal types, but with only anecdotal information to support their impressions. Evaluation comments included:

* "Many of the refusals, I'm convinced, arise from the frequency in which certain operations are sampled for our surveys."

* "Refusal rates were about the same as last year despite numerous comments concerning response burden from farmers and enumerators."

* "Comments for refusing ranged from 'Not enough time' to 'The Government programs do not help me'."

* "Most of the second time contacts were refusals and didn't want to be contacted again."

* "Many farm operators refused due to the length of the questionnaire."

* "Some farmers feel it's none of our business."

Some...many...most. The author proposed broadening the use of the refusal identification process in order to put some numbers on these valid concerns, to better determine what a state is up against when trying to minimize nonresponse.

RESULTS

The results of the refusal identification and classification research are listed in Appendix A in frequency of response order, and in Appendix B in code order. In each case, the first column is a frequency count per refusal type, summed across the six states. The second column is a code preassigned to each refusal type for consistency across states. Refusal types coded 01 - 29 were provided in the survey instructions. Refusal types coded 31 - 74 were initially left

blank for state use, and the states added a few refusal types based upon their data collection experiences with the survey.

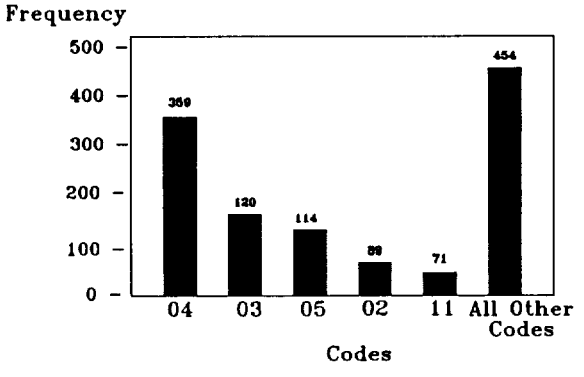
The most frequent reason given by farmers in the test states for refusing to participate in the survey was "Would not take the time / too busy". This response was given by 359 of the 1,207 refusals encountered (29.7%), and was recorded three times as often as the next most frequent response. This seems to be strong evidence for those involved with the survey who believe that farmers perceive the interview to be too involved or take too long.

The second most frequent reason recorded was "Refused, but no reason given", mentioned 120 times, or 9.9 percent of the total refusals received. This category represents a difficult type of refusal to convert to a respondent: they just say NO. They understand what NASS is and its mission, and may even recognize the enumerator from previous contacts, but cut off any attempt at an interview before their concerns can be identified and addressed.

The third most frequent reason recorded was "Information too personal / none of your business", mentioned 114 times, or 9.4 percent of the total refusals received. The FCRS interview is an in-depth analysis of an individual's farming practices and financial standing. Stressing confidentiality may not be enough; these farmers may feel that they are giving deeply to the survey but receiving nothing in return.

Together these first three reasons account for 49 percent of the total refusals received, even though 38 different reasons for refusing were mentioned during this research, and the top five reasons account for 62 percent of the total refusals received.

The Top Five Reasons For Refusing in The Test States (With All Other Reasons Combined), On The 1990 FCRS



04. Would not take the time/too busy.
03. Refused, but no reason given.
05. Information too personal/none of your business.
02. Contact attempted, but the respondent refuses on all surveys, and refused on this one.
11. "I do not like surveys/I do not do surveys."

Determined by the frequency of occurrence, each state's top ten reasons for refusing accounted for between 80 to 100 percent of the reasons given in a state. There is variation among the states in reasons given, with only the first three reasons mentioned above and "My farm is too small to count / too small to be representative" making the top ten list in all states (see Appendix C). This seems to indicate that while some reasons should be addressed on a national level, others must be resolved on the state level.

The research also involved identifying and classifying the reasons given by an enumerator for coding a sampled unit inaccessible, shown in Appendix D in frequency of response order, and in Appendix E in code order. While basically separate from the refusal identification, certain respondent situations (such as "Family illness / death") could be coded either as a refusal, an inaccessible or a valid zero out-of-business depending upon the circumstances encountered.

The most frequent reason recorded by the enumerators was "The operator is away on an extended vacation", given for 33 of the 241 inaccessibles encountered (13.7%). Normally thought to be a Midwest or Northern situation for escaping the snow, this reason was also mentioned in California, Florida and Tennessee.

The second most frequent reason recorded was "Illness / death prevents the operator from responding", mentioned 28 times, representing 11.6 percent of the total. This is a difficult situation for an enumerator to encounter, and setting the stage to see a respondent under better circumstances in the future is the best that can be accomplished.

The third most frequent reason recorded was a tie between "Farm records are not available until after the survey period closes", and "Tried several times; couldn't reach anyone for an appointment. Just an extremely busy person" mentioned 26 times, representing 10.8 percent of the total.

Together these first four reasons account for 46.9 percent of the total inaccessibles recorded, with 22 different reasons for coding an inaccessible mentioned during this research.

Five of the six test states had fewer than 10 different reasons for coding inaccessibles, and only three reasons were mentioned in all states (see Appendix F):

"The operator is away on an extended vacation;"

"Illness / death prevent the operator from responding;" and

"Respondent postponed the interview beyond the end of the survey period."

While the variety in the reasons for the inaccessibles would seem to indicate that solutions should come at the state level, complying with the national program may prevent adjustments at the state level.

For information, Appendix G shows the refusal and inaccessible rates for the test states compared to the national level; and Appendix H shows the refusal and inaccessible rates in the test states and national level over time.

DISCUSSION AND RECOMMENDATIONS

Data analysts, survey managers, survey statisticians and enumerators all are concerned about the levels of nonresponse on the FCRS. Being close to the survey, they develop impressions about what factors are "driving" the nonresponse. The purpose of this research was to identify reasons for nonresponse, and to attach some numbers to them in order to rank their relative importance.

Considering the nature of the FCRS, that it is a long, detailed interview of a respondent's operating procedures, income and expenses, assets and liabilities and demographic information, many survey organizations would be thrilled to have a national response rate exceeding 70 percent. Rather than defend this position, the survey managers at NASS and ERS continually strive to improve the response rates on the survey.

Following a discussion of the preliminary results of this study, and from previous consideration of the subject, NASS and ERS have agreed to test a shortened version of the questionnaire for the 1992 survey year. Additionally, NASS will provide training and materials to the state survey statisticians at the regional workshops in January, 1992, to aid in training their field enumerators during state workshops. These materials will help to prepare enumerators to discuss the concerns of those who might decline to participate in the survey, with the goal of converting these individuals into respondents on the initial contact.

The author has recommended that this research be extended to all states for the 1991 FCRS, and the survey managers have agreed. In this way, each state can be aware of the causes of nonresponse likely to be encountered, and patterns of nonresponse can be compared. This will expand the information available to NASS and ERS for future decision making on combating nonresponse on the FCRS.

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APPENDIX A

Reasons Given By Respondents When Refusing To Participate on the 1990 Farm Costs and Returns Survey, With Six Test States Combined Data in Declining Frequency of Response Order.

Frequency	Code	
359	04.	Would not take the time / too busy.
120	03.	Refused, but no reason given.
114	05.	Information too personal / none of your business.
89	02.	Contact attempted, but the respondent refuses on all surveys, and refused on his one.
71	11.	"I do not like surveys / I do not do surveys."
48	16.	"My farm is too small to count / too small to be representative."
42	06.	The respondent feels that surveys & reports hurt the farmer more than help.
33	19.	Farm records are at the tax advisors / lawyers.
32	10.	"I will have nothing to do with the Government."
31	18.	The respondent feels the operation's records are inadequate to complete the interview.
29	12.	Respondent only does compulsory surveys.
29	20.	Family illness / death.
26	21.	Operator wouldn't keep appointments.
22	27.	Respondent is quitting farming.
21	17.	"You contact me too often."
17	07.	"I did this survey before, but not again."
14	28.	Out of business now, won't answer for the previous year.
11	29.	Figures for the previous year were not typical.
9	01.	Known refusal, no contact attempted.
9	52.	Questionnaire was not sent to the field to avoid jeopardizing cooperation on other surveys.
8	08.	"I just did a different survey for your office."
8	23.	Wants to be paid for interview time & effort.
8	32.	"This is not a farm."
7	25.	Respondent does not want to talk about farming.
6	13.	The respondent does not think the information is kept confidential.
6	22.	Spouse / secretary / etc. won't let enumerator see the operator.
6	34.	Will do other surveys, but not financial surveys.
5	26.	Respondent doesn't want to report due to legal / financial problems.
5	53.	Wouldn't answer door even though they were home.
4	09.	"I just did a survey for someone else."
4	54.	Just finished taxes. Tired of looking at records.
3	14.	The respondent mentions a specific grievance with the SSO or NASS (other than confidentiality).
3	24.	Violent / threatening refusals.
3	35.	Lost all citrus - not interested in survey at all.
2	61.	It's 3/4 complete from accountant, no other data available.
1	15.	The respondent mentions a specific grievance with the state cooperator.
1	33.	My farm is not like other farms.
1	56.	"Let younger farmers do it."

* Code numbers not listed were not used.

APPENDIX B

Reasons Given By Respondents When Refusing To Participate on the 1990 Farm Costs and Returns Survey, With Six Text States Combined Data in Code Order.

Frequency	Code	
9	01.	Known refusal, no contact attempted.
89	02.	Contact attempted, but respondent refuses on all surveys, and refused on this one.
120	03.	Refused, but no reason given.
359	04.	Would not take the time / too busy.
114	05.	Information too personal / none of your business.
42	06.	The respondent feels that surveys & reports hurt the farmer more than help.
17	07.	"I did this survey before, but not again."
8	08.	"I just did a different survey for your office."
4	09.	"I just did a survey for someone else."
32	10.	"I will have nothing to do with the Government."
71	11.	"I do not like surveys / I do not do surveys."
29	12.	Respondent only does compulsory surveys.
6	13.	The respondent does not think the information is kept confidential.
3	14.	The respondent mentions a specific grievance with the SSO or NASS (other than confidentiality.
1	15.	The respondent mentions a specific grievance with the state cooperator.
48	16.	"My farm is too small to count / too small to be representative."
21	17.	"You contact me too often."
31	18.	The respondent feels the operation's records are inadequate to complete the interview.
33	19.	Farm records are at the tax advisors / lawyers.
29	20.	Family illness / death.
26	21.	Operator wouldn't keep appointments.
6	22.	Spouse / secretary / etc. won't let enumerator see the operator.
8	23.	Wants to be paid for interview time & effort.
3	24.	Violent / threatening refusals.
7	25.	Respondent does not want to talk about farming.
5	26.	Respondent doesn't want to report due to legal / financial problems.
22	27.	Respondent is quitting farming.
14	28.	Out of business now, won't answer for the previous year.
11	29.	Figures for the previous year were not typical.
8	32.	"This is not a farm."
1	33.	My farm is not like other farms.
6	34.	Will do other surveys, but not financial surveys.
3	35.	Lost all citrus - not interested in survey at all.
9	52.	Questionnaire was not sent to the field to avoid jeopardizing cooperation on other surveys.
5	53.	Wouldn't answer door even though they were home.
4	54.	Just finished taxes. Tired of looking at records.
1	56.	"Let younger farmers do it."
2	61.	It's 3/4 complete from accountant, no other data available.

* Code numbers not listed were not used.

APPENDIX C

The Top Ten Reasons For Refusing Shown in Code Order, Based Upon Frequency of Response By State, on the 1990 Farm Costs and Returns Survey.

CODE	CA.	FLA.	IND.	NEB.	OR.	TENN
			RANK			
1						2
2	6		4	3		8
3	2	8	1	6	8	3
4	1	1	2	1	1	1
5	10	4	3	2	3	4
6			6	5	6	9
7		9	5			
8						*10
10	7	10	7		7	
11		2		4		5
12	4		*10		4	
16	3	5	8	9	5	*10
17					2	6
18		6		7		*10
19	5	3			9	
20	8	7	9			*10
21				10		7
24						*10
27			*10	8		
29					*10	*10
32	9					
61					*10	

*** Indicates a tie in the frequency of mentions for a state.**

APPENDIX D

Reasons Given By Enumerators When Coding a Sample Unit as Inaccessible on the 1990 Farm Costs and Returns Survey, With Six States Combined Data in Declining Frequency of Response Order.

Frequency	Code	
33	79.	The operator is away on an extended vacation.
28	84.	Illness / death prevents the operator from responding.
26	85.	Farm records are not available until after the survey period closes.
26	116.	Tried several times; couldn't reach anyone for an appointment. Just an extremely busy person.
24	76.	No respondent, as listed on the label, could be found.
21	86.	Respondent postponed the interview beyond the end of the survey period.
17	81.	The operator is away on business.
16	94.	Reason for inaccessible not known.
13	83.	Access to the address on the label was denied by a gate / guard / etc.
9	112.	Incomplete, or wasn't knowledgeable enough to complete survey. Just did not know answers.
8	75.	No operation, as listed on the label, could be found.
4	80.	The operator is away on a brief vacation.
3	87.	Enumerator workload prevented this operation from being contacted during the survey period.
2	77.	No address, as listed on the label, could be found.
2	92.	Non-English speaker; interpreter not available.
2	93.	Weather made the roads not accessible.
2	104.	No one ever answered the door.
1	78.	The address on the label is vacant / burned out / no structure exists.
1	82.	The address on the label is summer-seasonal housing.
1	113.	Spouse didn't know all figures and operator wouldn't finish interview.
1	119.	Enumerator mistake; should have completed it.
1	120.	Farm and packing plant records all combined.

* Code numbers not listed were not used.

APPENDIX E

Reasons Given By Enumerators When Coding a Sample Unit as Inaccessible on the 1990 Farm Costs and Returns Survey, With Six States Combined Data in Code Order.

Frequency	Code	
8	75.	No operation, as listed on the label, could be found.
24	76.	No respondent, as listed on the label, could be found.
2	77.	No address, as listed on the label, could be found.
1	78.	The address on the label is vacant / burned out / no structure exists.
33	79.	The operator is away on an extended vacation.
4	80.	The operator is away on a brief vacation.
17	81.	The operator is away on business.
1	82.	The address on the label is summer-seasonal housing.
13	83.	Access to the address on the label was denied by a gate / guard / etc.
28	84.	Illness / death prevents the operator from responding.
26	85.	Farm records are not available until after the survey period closes.
21	86.	Respondent postponed the interview beyond the end of the survey period.
3	87.	Enumerator workload prevented this operation from being contacted during the survey period.
2	92.	Non-English speaker; interpreter not available.
2	93.	Weather made the roads not accessible.
16	94.	Reason for inaccessible not known.
2	104.	No one ever answered the door.
9	112.	Incomplete, or wasn't knowledgeable enough to complete survey. Just did not know answers.
1	113.	Spouse didn't know all figures and operator wouldn't finish interview.
26	116.	Tried several times; couldn't reach anyone for an appointment. Just an extremely busy person.
1	119.	Enumerator mistake; should have completed it.
1	120.	Farm and packing plant records all combined.

* Code numbers not listed were not used.

APPENDIX F

The Reasons For Enumerators Coding a Sampled Unit as Inaccessible, in Code Order, on the 1990 Farm Costs and Returns Survey.

CODE	CA.	FLA.	IND.	NEB.	OR.	TENN
			RANK			
75	7	8				4
76	1	1	7			
77		7				
78	14					
79	10	5	1	3	1	2
80	11		8			5
81	8	9	4	4		6
82	15					
83	4	6				
84	6	2	5	5	2	1
85	2	3	2	6		
86	5	4	3	8	3	3
87	9					
92	12					
93	13					
94	3			7		
104			6			
112				2		
113				9		
116				1		
119					4	
120					5	

APPENDIX G

Number of Contacts, Refusals and Inaccessibles on the Farm Costs and Returns Survey: Six Test States and U.S., 1990.

STATE	NUMBER OF CONTACTS	NUMBER OF REFUSALS	PERCENT OF REFUSALS	NUMBER OF INACCESS.	PERCENT OF INACCESS.
CALIFORNIA	901	185	20.5	87	9.7
FLORIDA	602	119	19.8	32	5.3
INDIANA	669	199	29.7	27	4.0
NEBRASKA	1,187	607	51.1	68	5.7
OREGON	544	57	10.5	13	2.4
TENNESSEE	585	40	6.8	14	2.4
TEST STATES COMBINED:	4,488	1,207	26.9	241	5.4
U.S. 1/	23,996	5,163	21.5	1,841	7.7

1/ Source: Rutz (1991).

APPENDIX H

Refusal and Inaccessible Rates on the Farm Costs and Returns Survey: Six Test States and U.S., 1986 - 1990 (in Percentages).

	Refusal Rate					Inaccessible Rate				
STATE	1986	1987	1988	1989	1990	1986	1987	1988	1989	1990
CALIF.	10	14	16	22	21	6	10	11	12	10
FLOR.	14	16	8	11	20	8	11	10	15	5
IND.	31	29	34	30	30	9	10	8	7	4
NEBR.	44	41	44	39	51	10	14	8	10	6
OREGON	9	9	9	13	10	2	1	2	1	2
TENN.	12	9	9	9	7	2	2	3	2	2
U.S.	20	18	19	20	22	7	9	8	8	8

Source: Gregory (1990), and Rutz (1991).

☆ U.S. Government Printing Office 1991 - 311-355/40708