

INVESTIGATION OF THE OPTIMUM TIME TO CONDUCT TELEPHONE SURVEYS

Rebecca J. Hoagland, William D. Warde and Mark E. Payton,
Oklahoma State University

William D. Warde, Statistics Department, 301 M.S., O.S.U., Stillwater, OK 74078

Introduction

Telephone surveys have increased as a mode of data collection for a number of reasons. Frey (1983) states five:

- (1) The widespread availability of telephones.
- (2) The development of a wide array of research on all aspects of conducting telephone surveys.
- (3) Lowered acceptance of traditional methods such as the face-to-face interview.
- (4) Developments in telephone technology and telephone interview technology.
- (5) World complexity which requires immediate data retrieval.

With the greater acceptance of telephone interviewing and the added use of Computer Assisted Telephone Interviewing (CATI), the need to identify the best time of day to contact an individual has become more important. Research on the timing of telephone interviews has been limited and much of the knowledge about timing is taken for granted. Studies which have given some information regarding the timing of telephone interviews include Falzhzik (1972), Vigderhouse (1981) and Warde (1986c, 1987a,b).

This paper analyses timing information from data collected in a number of surveys conducted using CATI by the National Agricultural Statistics Service (NASS) of the Department of Agriculture (USDA). Surveys considered are the September 1986 Quarterly Agricultural Survey (QAS) for Georgia, Nebraska and California and a comparison is made to the April 1986 Grain Stock Survey (GSS) reported in Warde (1987b) for the same three states.

Results.

In the September QAS, the sample size for Georgia was 1048; for Nebraska 1848 and for California 1584. Of these, in Georgia there were 655 completed interviews using CATI; in Nebraska 365, and in California 984. If the farm sampled did not have a telephone, then a personal interview was attempted. The number of calls attempted in each time period, the number completed and the percent successful completion are given for each state in table 1. The differential rates of calls attempted are

related to the number of interviewers available in each state at those times. It can be seen that in all three states the percent successful completion is maximum after 6 p.m. This result is consistent with those observed in Warde (1986c, 1987a,b).

Table 2 shows the outcome of calls for each attempt made to contact a farm operation. In general, as the number of attempted calls increases, the proportion of calls resulting in a no answer outcome also increases. This trend is particularly noticeable in the Nebraska data. The proportion of busy and call back outcomes shows no clear trend. Warde (1987) suggests that the percentage of call backs decreases as the number of attempted calls increases. In this data, only Nebraska matches this assertion while the fluctuations observed in the other two states do not allow any clear trend to be established. It is of interest to note that in Georgia and California, the percentage of completions peaked on the second attempt and then declined. This trend is noted also in Warde (1986c, 1987a,b) and in Kish (1965).

Analysis of Busy Calls.

The calls which immediately followed an attempt which resulted in an outcome of busy were analysed and the results are given in table 3. Using the time intervals defined by Warde (1987a,b), only Georgia had sufficient data for conclusions to be drawn. Here, as in Warde (1987a,b), it is apparent that any call returned within 15 minutes of a busy signal is most likely to result in another busy signal, and the highest completion rates were for calls returned between 15 and 59 minutes after the original attempt.

Analysis of No Answer Calls.

The calls which immediately followed an attempt which resulted in an outcome of no answer were analysed and the results are given in table 4. This data is partitioned into eleven time intervals. Calls made within two hours of an attempt which resulted in no answer had a greater than fifty percent chance of resulting in another no answer outcome. In California and Georgia, the highest completion rate for calls following a no answer outcome was between five and six hours later, while for Nebraska it was two to three hours later.

It should be remembered, however, that these time intervals are highly likely to cause an attempt that was made during the day to be followed by a successful attempt made during the evening, and, as has already been noted, the evening hours are the best time in which to obtain a completed interview.

Analysis of Call Back Data.

If an interviewer made contact with someone at a farm operation but that person claimed to be unable to respond to the questions posed in the survey, then call back information was recorded by the interviewer. This information was coded in the form of a date and a time. The information was supposed to be used in the CATI system automatic scheduler routines to cause a contact attempt to be made with that farm operation close to the designated time. The system in Georgia had difficulties in using the call back information and the automatic scheduler there ignored this information. For various reasons, California did not use seventy-six percent of the call back data, while Nebraska did not use forty-nine percent of the data. A typical reason for this data not being used would be when the call back appointment was for dates outside the time frame for the survey or times outside the working hours of the interviewers.

For calls attempted during the call back interval specified, in Nebraska there was a forty-three percent completion rate and in California a thirty-two percent completion rate. These percentages were compared to the completion rates for first attempts for their respective states and found to be significantly better (NB 43% compared to 34.4%, $z=1.99$, $P=0.023$; CA 32% compared to 25.5%, $z=2.33$, $P=0.0099$). We may conclude that call back information should be used, and that it will result in a greater completion rate.

Table 5 looks at calls made on the day that was recorded in the call back data but made at the wrong time. The calls are partitioned into five time intervals. The first four intervals are fifteen minute intervals up to one hour on either side of the call back appointment specified, and the last interval contained all calls made over one hour different from the call back appointment specified. For example, if the interviewer was told to call back between 2 and 3 p.m. and called back at 3:20 p.m., then the response would be coded as a call back between 15 and 29 minutes different from the time specified. In California the completion rate for calls made within fifteen minutes of the correct time fell to thirty-nine percent while for Nebraska it fell to twenty-six percent.

Analysis of Respondent Data

The U.S.D.A. is primarily concerned with collecting data on farm operations and has found that the best respondent for this information is the farm operator (Bosecker, 1977, Nealon and Dillard, 1984, Warde, 1986a,b). Information is accepted in some cases from the spouse of the farm operator, farm managers and other knowledgeable individuals. The latter could be children of the operator, the interviewer or a neighbor in some cases. Data from other knowledgeable individuals is commonly accepted when the response is of the farm operator is deceased or no longer farming, or when the farm operation does not conduct the type of farming that is of interest in a particular survey.

Table 6 presents the analysis of the number of times that the farm operator was the respondent at the time when the call was attempted. It should be observed that all calls attempted prior to 3 p.m. are likely to be the result of call back information obtained from an earlier attempt. Overall, data was obtained from the operator in California only 72.2% of the time, while in Georgia and Nebraska this rate was 89.0% and 90.9% respectively. The low response in California can be partially attributed to the relatively higher number of operations in that state which have a farm manager in charge of the day to day operation. As would be expected, the table indicates that the best time to obtain a completion with the farm operator is during the evening hours. For California, 6 p.m. to 9 p.m. yielded the best results; for Georgia 7 p.m. to 10 p.m. and for Nebraska any time after 5 p.m.

Conclusions.

The analyses made support other research which indicates that the best time to attempt to contact both farm operations and farm operators is in the evenings (after 6 p.m.). This held for all three states analysed.

The best time to attempt a call back after encountering a busy signal was between fifteen and fifty-nine minutes after that attempt. No consistent recommendations can be made regarding call backs made following a call which resulted in an outcome of no answer.

Telephone interviewers should make every attempt to make call backs at the appointed times whenever such information is available. Call back information and the time interval for calls following a busy signal should be implemented into any CATI automatic scheduler program when

written. More research is needed to deal with the timing of calls made following a no answer outcome.

References

Bosecker, Raymond R. (1977) "Data Imputation Study on Oklahoma DES." United States Department of Agriculture, National Agricultural Statistics Service, Statistical Research Division Staff Report.

Falthzik, Alfred (1972) "When to make Telephone Interviews." Journal of Marketing Research, 9 (Nov.):451-452.

Frey, James H. (1983) "Survey Research by Telephone." SAGE Publications Number 150, Beverley Hills, California.

Kish, Leslie (1965) "Survey Sampling." John Wiley and Sons, Inc., New York, New York.

Nealon, Jack and David Dillard (1984) "Response Comparison Between Husbands and Wives for Farm Characteristics." United States Department of Agriculture, National Agricultural Statistics Service, Statistical Research Division Staff Report.

Vigderhouse, Gideon (1981) "Scheduling Telephone Interviews." Public Opinion Quarterly, 45:250-259.

Warde, William D. (1986a) "Examination of the Effect of the Respondent and Collection Method on Survey Results." United States Department of Agriculture, National Agricultural Statistics Service, Statistical Research Division Staff Report SF&SRB-94.

Warde, William D. (1986b) "An Investigation of Nonsampling Errors in USDA Surveys." Proceedings of the Survey Research Methods Section, American Statistical Association, pp 580-585.

Warde, William D. (1986c) "Problems with Telephone Surveys." United States Department of Agriculture, National Agricultural Statistics Service, Staff Report Number SRB-NERS-86-01.

Warde, William D. (1987a) "Contacting the Farm Operator by Telephone: A re-examination." Unpublished report.

Warde, William D. (1987b) "Time of Day for CATI Contacts in Agricultural Surveys." Proceedings, Section on Survey Research Methods, American Statistical Association, pp 621-626.

Table 1. Number of Attempts, Responses and Response Rate for September QAS by Hour of Contact

| Hour | State | | | | | | | | |
|-------|------------|-------|------|---------|-------|------|-----------|-------|------|
| | California | | | Georgia | | | Nebraska* | | |
| | Att. | Resp. | Rate | Att. | Resp. | Rate | Att. | Resp. | Rate |
| 6- 7 | 1 | 0 | 0.0 | 0 | 0 | | 6 | 2 | 33.3 |
| 7- 8 | 6 | 1 | 16.7 | 2 | 0 | 0.0 | 38 | 20 | 52.6 |
| 8- 9 | 100 | 17 | 17.0 | 65 | 17 | 26.2 | 33 | 14 | 42.4 |
| 9-10 | 114 | 26 | 22.8 | 53 | 8 | 15.1 | 5 | 1 | 20.0 |
| 10-11 | 80 | 21 | 26.3 | 146 | 12 | 8.2 | 7 | 2 | 28.6 |
| 11-12 | 79 | 15 | 19.0 | 138 | 20 | 14.5 | 8 | 4 | 50.0 |
| 12- 1 | 64 | 10 | 15.6 | 107 | 27 | 25.2 | 61 | 20 | 32.8 |
| 1- 2 | 434 | 99 | 22.8 | 157 | 38 | 24.2 | 12 | 3 | 25.0 |
| 2- 3 | 611 | 158 | 25.9 | 112 | 22 | 19.6 | 19 | 0 | 0.0 |
| 3- 4 | 502 | 99 | 19.7 | 179 | 19 | 10.6 | 16 | 0 | 0.0 |
| 4- 5 | 506 | 104 | 20.6 | 46 | 10 | 21.7 | 88 | 9 | 10.2 |
| 5- 6 | 487 | 101 | 20.7 | 94 | 20 | 21.3 | 213 | 48 | 22.5 |
| 6- 7 | 284 | 85 | 29.9 | 405 | 94 | 23.2 | 217 | 53 | 24.4 |
| 7- 8 | 441 | 128 | 29.0 | 610 | 159 | 26.1 | 205 | 63 | 30.7 |
| 8- 9 | 363 | 119 | 32.8 | 437 | 139 | 31.8 | 289 | 87 | 30.1 |
| > 9 | 4 | 1 | 25.0 | 198 | 70 | 35.4 | 110 | 39 | 35.5 |
| Total | 4076 | 984 | 24.1 | 2749 | 655 | 23.8 | 1327 | 365 | 27.5 |

* Since there are two time zones in Nebraska, the hour of contact for analysis has been adjusted to the time for the farm operator when contact was attempted rather than the CATI log time in Lincoln.

Table 2. Count and Response Rates for the September QAS by Number of Attempts Made to Contact and Outcome

| Number of Attempts | California | | | | | | | | | | | |
|--------------------|------------|------|-----------|------|------|------|-----------|------|--------|------|-------|-------|
| | Complete | | Call Back | | Busy | | No Answer | | Other* | | Total | |
| | # | % | # | % | # | % | # | % | # | % | # | %@ |
| 1 | 401 | 26.5 | 351 | 23.2 | 147 | 9.7 | 524 | 34.6 | 93 | 6.1 | 1516 | 100.0 |
| 2 | 266 | 25.7 | 207 | 20.0 | 136 | 13.1 | 366 | 35.4 | 59 | 5.7 | 1034 | 100.0 |
| 3 | 173 | 24.5 | 138 | 19.6 | 84 | 11.9 | 264 | 37.4 | 47 | 6.7 | 706 | 100.0 |
| 4 | 85 | 19.2 | 67 | 15.1 | 59 | 13.3 | 191 | 43.1 | 41 | 9.3 | 443 | 100.0 |
| 5 | 37 | 16.1 | 29 | 12.6 | 31 | 13.5 | 111 | 48.3 | 22 | 9.6 | 230 | 100.0 |
| 6 | 15 | 16.1 | 18 | 19.4 | 12 | 12.9 | 33 | 35.5 | 15 | 16.1 | 93 | 100.0 |
| 7 | 4 | 12.1 | 1 | 3.0 | 8 | 24.2 | 16 | 48.5 | 4 | 12.1 | 33 | 100.0 |
| >7 | 3 | 14.3 | 4 | 19.1 | 2 | 9.5 | 8 | 38.1 | 4 | 19.1 | 21 | 100.0 |
| Total | 984 | 24.1 | 815 | 20.0 | 479 | 11.8 | 1513 | 37.1 | 285 | 7.0 | 4076 | 100.0 |

| Number of Attempts | Georgia | | | | | | | | | | | |
|--------------------|----------|------|-----------|------|------|-----|-----------|------|--------|------|-------|-------|
| | Complete | | Call Back | | Busy | | No Answer | | Other* | | Total | |
| | # | % | # | % | # | % | # | % | # | % | # | %@ |
| 1 | 221 | 23.3 | 167 | 17.6 | 69 | 7.3 | 413 | 43.5 | 79 | 8.3 | 949 | 100.0 |
| 2 | 177 | 27.1 | 122 | 18.7 | 57 | 8.3 | 254 | 38.9 | 43 | 6.6 | 653 | 100.0 |
| 3 | 105 | 24.7 | 64 | 15.1 | 40 | 9.4 | 185 | 43.5 | 31 | 7.3 | 425 | 100.0 |
| 4 | 74 | 26.7 | 40 | 15.1 | 19 | 6.9 | 127 | 45.9 | 17 | 6.1 | 277 | 100.0 |
| 5 | 35 | 20.1 | 32 | 18.4 | 11 | 6.3 | 86 | 49.4 | 10 | 5.8 | 174 | 100.0 |
| 6 | 25 | 22.1 | 17 | 15.0 | 5 | 4.4 | 59 | 52.2 | 7 | 6.2 | 113 | 100.0 |
| 7 | 10 | 14.7 | 17 | 25.0 | 3 | 4.4 | 35 | 51.5 | 3 | 4.4 | 68 | 100.0 |
| >7 | 8 | 8.9 | 14 | 15.6 | 7 | 7.8 | 52 | 57.8 | 9 | 10.0 | 90 | 100.0 |
| Total | 655 | 23.8 | 473 | 17.2 | 211 | 7.7 | 1211 | 44.1 | 199 | 7.2 | 2749 | 100.0 |

| Number of Attempts | Nebraska | | | | | | | | | | | |
|--------------------|----------|------|-----------|------|------|------|-----------|------|--------|------|-------|-------|
| | Complete | | Call Back | | Busy | | No Answer | | Other* | | Total | |
| | # | % | # | % | # | % | # | % | # | % | # | %@ |
| 1 | 167 | 34.4 | 118 | 24.3 | 36 | 7.4 | 146 | 30.0 | 19 | 3.9 | 486 | 100.0 |
| 2 | 104 | 35.6 | 54 | 18.5 | 30 | 10.3 | 82 | 28.1 | 22 | 7.5 | 292 | 100.0 |
| 3 | 46 | 27.5 | 29 | 17.4 | 13 | 7.8 | 59 | 35.3 | 20 | 12.0 | 167 | 100.0 |
| 4 | 22 | 21.4 | 12 | 11.7 | 5 | 4.9 | 47 | 45.6 | 17 | 16.5 | 103 | 100.0 |
| 5 | 10 | 15.6 | 8 | 12.5 | 2 | 3.1 | 37 | 57.8 | 7 | 10.9 | 64 | 100.0 |
| 6 | 7 | 14.0 | 4 | 8.0 | 2 | 4.0 | 30 | 60.0 | 7 | 14.0 | 50 | 100.0 |
| 7 | 5 | 14.3 | 0 | 0.0 | 1 | 2.9 | 26 | 74.3 | 3 | 8.6 | 35 | 100.0 |
| >7 | 4 | 3.1 | 3 | 2.3 | 5 | 3.9 | 108 | 83.1 | 10 | 7.7 | 130 | 100.0 |
| Total | 365 | 27.5 | 228 | 17.2 | 94 | 7.1 | 535 | 40.3 | 105 | 7.9 | 1327 | 100.0 |

* Includes responses coded as refusals, telephone problems, answering device, wrong number, no longer farming and deceased.

@ May not add to 100% due to roundoff.

Table 3. Analysis of Results of the Call Immediately Following a Call Which Resulted in a Busy Response for the September QAS.

| Time Between Calls | California | | | | | | | | | |
|--------------------|------------|------|-----------|------|----------|------|-----------|------|-------|---|
| | Busy | | Call Back | | Complete | | No Answer | | Total | |
| | # | % | # | % | # | % | # | % | # | % |
| 0-14 min | 3 | 75.0 | 1 | 25.0 | 0 | 0.0 | 0 | 0.0 | 4 | |
| 15-29 min | 1 | 20.0 | 1 | 20.0 | 1 | 20.0 | 2 | 40.0 | 5 | |
| 30-44 min | 3 | 37.5 | 3 | 37.5 | 2 | 25.0 | 0 | 0.0 | 8 | |
| 45-59 min | 1 | 20.0 | 0 | 0.0 | 1 | 20.0 | 2 | 40.0 | 5 | |
| > 1 hour | 9 | 18.8 | 8 | 16.7 | 7 | 14.6 | 21 | 43.8 | 48 | |
| NEXT DAY | 44 | 15.0 | 52 | 17.7 | 78 | 26.5 | 110 | 37.4 | 294 | |

| Time Between Calls | Georgia | | | | | | | | | |
|--------------------|---------|------|-----------|------|----------|------|-----------|------|-------|---|
| | Busy | | Call Back | | Complete | | No Answer | | Total | |
| | # | % | # | % | # | % | # | % | # | % |
| 0-14 min | 11 | 42.3 | 3 | 7.7 | 3 | 11.5 | 9 | 34.6 | 25 | |
| 15-29 min | 3 | 14.3 | 3 | 14.3 | 8 | 38.1 | 5 | 23.8 | 21 | |
| 30-44 min | 1 | 11.1 | 1 | 11.1 | 2 | 22.2 | 3 | 33.3 | 9 | |
| 45-59 min | 0 | 0.0 | 5 | 33.3 | 7 | 46.7 | 2 | 13.3 | 15 | |
| > 1 hour | 6 | 11.1 | 11 | 20.4 | 10 | 18.5 | 22 | 40.7 | 54 | |
| NEXT DAY | 7 | 8.8 | 21 | 26.3 | 17 | 21.3 | 32 | 40.0 | 80 | |

| Time Between Calls | Nebraska | | | | | | | | | |
|--------------------|----------|-----|-----------|------|----------|-------|-----------|------|-------|---|
| | Busy | | Call Back | | Complete | | No Answer | | Total | |
| | # | % | # | % | # | % | # | % | # | % |
| 0-14 min | 0 | 0.0 | 0 | 0.0 | 1 | 100.0 | 0 | 0.0 | 1 | |
| 15-29 min | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 3 | 75.0 | 4 | |
| 30-44 min | 0 | 0.0 | 0 | 0.0 | 1 | 50.0 | 1 | 50.0 | 2 | |
| 45-59 min | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | |
| > 1 hour | 1 | 3.7 | 4 | 14.8 | 10 | 37.0 | 9 | 33.3 | 27 | |
| NEXT DAY | 2 | 6.3 | 4 | 12.5 | 12 | 37.5 | 10 | 31.3 | 32 | |

Table 4. Analysis of Results of the Call Immediately Following a Call Which Results in a No Answer Response for the September QAS.

| California | | | | | | | | | |
|---------------|----------|------|-----------|------|-----------|-------|------|------|--------|
| Time | Complete | | Call Back | | No Answer | | Busy | | Total* |
| Between Calls | # | % | # | % | # | % | # | % | |
| 0-14 min | 3 | 6.5 | 5 | 10.9 | 29 | 63.0 | 7 | 15.2 | 46 |
| 15-29 min | 6 | 15.0 | 2 | 5.0 | 28 | 70.0 | 2 | 5.0 | 40 |
| 30-44 min | 5 | 18.5 | 5 | 18.5 | 15 | 55.6 | 2 | 7.4 | 27 |
| 45-59 min | 0 | 0.0 | 2 | 15.4 | 8 | 61.5 | 3 | 23.1 | 13 |
| 1-2 hours | 12 | 18.8 | 7 | 10.9 | 33 | 51.6 | 8 | 12.5 | 64 |
| 2-3 hours | 14 | 19.2 | 11 | 15.1 | 33 | 45.2 | 7 | 9.6 | 73 |
| 3-4 hours | 16 | 18.4 | 10 | 11.5 | 48 | 55.2 | 7 | 4.0 | 87 |
| 4-5 hours | 8 | 18.2 | 10 | 22.7 | 22 | 50.0 | 4 | 9.1 | 44 |
| 5-6 hours | 12 | 25.0 | 5 | 10.4 | 24 | 50.0 | 5 | 10.4 | 48 |
| >6 hours | 0 | 0.0 | 1 | 16.7 | 1 | 16.7 | 3 | 50.0 | 6 |
| NEXT DAY | 172 | 19.5 | 123 | 13.9 | 407 | 46.1 | 129 | 14.6 | 883 |
| Georgia | | | | | | | | | |
| Time | Complete | | Call Back | | No Answer | | Busy | | Total* |
| Between Calls | # | % | # | % | # | % | # | % | |
| 0-14 min | 7 | 16.3 | 4 | 9.3 | 20 | 46.5 | 6 | 14.0 | 43 |
| 15-29 min | 6 | 10.9 | 5 | 9.1 | 42 | 76.4 | 1 | 1.8 | 55 |
| 30-44 min | 5 | 12.2 | 6 | 14.6 | 26 | 63.4 | 2 | 4.9 | 41 |
| 45-59 min | 10 | 23.3 | 4 | 9.3 | 25 | 58.1 | 2 | 4.7 | 43 |
| 1-2 hours | 24 | 23.1 | 6 | 5.8 | 64 | 61.5 | 5 | 4.8 | 104 |
| 2-3 hours | 16 | 21.1 | 10 | 13.2 | 40 | 52.6 | 4 | 5.3 | 76 |
| 3-4 hours | 8 | 17.4 | 7 | 15.2 | 22 | 47.8 | 3 | 6.5 | 46 |
| 4-5 hours | 12 | 23.1 | 9 | 17.3 | 24 | 46.2 | 4 | 7.7 | 52 |
| 5-6 hours | 17 | 34.0 | 6 | 12.0 | 21 | 42.0 | 3 | 6.0 | 50 |
| >6 hours | 37 | 26.4 | 12 | 8.6 | 62 | 44.3 | 17 | 12.1 | 140 |
| NEXT DAY | 82 | 18.8 | 73 | 16.7 | 242 | 55.5 | 25 | 5.7 | 436 |
| Nebraska | | | | | | | | | |
| Time | Complete | | Call Back | | No Answer | | Busy | | Total* |
| Between Calls | # | % | # | % | # | % | # | % | |
| 0-14 min | 2 | 1.9 | 3 | 2.8 | 94 | 88.7 | 4 | 3.8 | 106 |
| 15-29 min | 4 | 6.3 | 3 | 4.7 | 56 | 87.5 | 1 | 1.6 | 64 |
| 30-44 min | 4 | 15.4 | 0 | 0.0 | 20 | 76.9 | 0 | 0.0 | 26 |
| 45-59 min | 6 | 14.6 | 1 | 2.4 | 29 | 70.7 | 3 | 7.3 | 41 |
| 1-2 hours | 12 | 18.2 | 12 | 18.2 | 37 | 56.1 | 2 | 3.0 | 66 |
| 2-3 hours | 12 | 36.4 | 7 | 21.2 | 11 | 33.3 | 1 | 3.0 | 33 |
| 3-4 hours | 1 | 20.0 | 0 | 0.0 | 2 | 40.0 | 1 | 20.0 | 5 |
| 4-5 hours | 2 | 18.2 | 4 | 36.4 | 5 | 45.5 | 0 | 0.0 | 11 |
| 5-6 hours | 0 | 0.0 | 0 | 0.0 | 1 | 100.0 | 0 | 0.0 | 1 |
| >6 hours | 2 | 25.0 | 2 | 25.0 | 4 | 50.0 | 0 | 0.0 | 8 |
| NEXT DAY | 42 | 27.1 | 29 | 18.7 | 53 | 34.2 | 17 | 11.0 | 155 |

* Columns listed may not add to the total given due to outcomes coded as refusal, wrong number, telephone noise, answering device, deceased or no longer farming.

Table 5. Outcome of Call Back Attempts Made on the Correct Day by Difference Between Appointment Time and Time of Calls for the September QAS.

| California | | | | | | | | | | |
|--|----------|------|-----------|------|-----------|------|------|------|-------|------|
| Outcome of Call Back Attempted on the Correct Day | | | | | | | | | | |
| Difference between Appointment Time and Actual Time Call Was Made. | Complete | | Call Back | | No Answer | | Busy | | Other | |
| | # | % | # | % | # | % | # | % | # | % |
| 0-14 min | 53 | 39.3 | 28 | 20.7 | 20 | 14.8 | 17 | 12.6 | 17 | 12.6 |
| 15-19 min | 11 | 22.5 | 16 | 32.7 | 12 | 24.3 | 6 | 12.2 | 4 | 8.2 |
| 30-44 min | 12 | 30.8 | 11 | 28.2 | 6 | 15.4 | 4 | 10.3 | 6 | 15.4 |
| 45-59 min | 6 | 26.1 | 1 | 4.4 | 9 | 39.1 | 4 | 17.4 | 3 | 13.0 |
| > 1 hour | 28 | 25.9 | 22 | 20.4 | 31 | 28.7 | 15 | 13.9 | 12 | 11.1 |

| Georgia | | | | | | | | | | |
|--|----------|------|-----------|------|-----------|------|------|------|-------|-------|
| Outcome of Call Back Attempted on the Correct Day | | | | | | | | | | |
| Difference between Appointment Time and Actual Time Call Was Made. | Complete | | Call Back | | No Answer | | Busy | | Other | |
| | # | % | # | % | # | % | # | % | # | % |
| 0-14 min | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 100.0 |
| 15-19 min | 0 | 0.0 | 2 | 50.0 | 1 | 25.0 | 1 | 25.0 | 0 | 0.0 |
| 45-59 min | 1 | 33.3 | 1 | 33.3 | 0 | 0.0 | 1 | 33.3 | 0 | 0.0 |
| > 1 hour | 57 | 32.2 | 42 | 23.7 | 45 | 25.4 | 19 | 10.7 | 14 | 7.9 |

| Nebraska | | | | | | | | | | |
|--|----------|------|-----------|------|-----------|------|------|------|-------|-------|
| Outcome of Call Back Attempted on the Correct Day | | | | | | | | | | |
| Difference between Appointment Time and Actual Time Call Was Made. | Complete | | Call Back | | No Answer | | Busy | | Other | |
| | # | % | # | % | # | % | # | % | # | % |
| 0-14 min | 11 | 26.2 | 9 | 21.4 | 12 | 28.6 | 8 | 19.1 | 2 | 4.8 |
| 15-19 min | 3 | 75.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 25.0 |
| 30-44 min | 2 | 40.0 | 1 | 20.0 | 2 | 40.0 | 0 | 0.0 | 0 | 0.0 |
| 45-59 min | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 100.0 |
| > 1 hour | 6 | 13.3 | 9 | 20.0 | 16 | 35.6 | 4 | 8.9 | 10 | 22.2 |

Table 6. Analysis of Responses by Farm Operators by Time of Attempt.

| Hour of Contact | California | | | Georgia | | | Nebraska | | |
|-----------------|------------|--------------|-------------|------------|--------------|-------------|------------|--------------|-------------|
| | # | % | Rate | # | % | Rate | # | % | Rate |
| 6- 7 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 2 | 0.6 | 100.0 |
| 7- 8 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 20 | 6.1 | 100.0 |
| 8- 9 | 12 | 1.7 | 70.6 | 16 | 3.3 | 100.0 | 11 | 3.4 | 91.7 |
| 9-10 | 13 | 1.8 | 50.0 | 6 | 1.2 | 85.7 | 0 | 0.0 | 0.0 |
| 10-11 | 9 | 1.3 | 42.9 | 11 | 2.2 | 100.0 | 1 | 0.3 | 50.0 |
| 11-12 | 9 | 1.3 | 60.0 | 13 | 2.6 | 86.7 | 4 | 1.2 | 100.0 |
| 12- 1 | 10 | 1.4 | 100.0 | 21 | 4.3 | 91.3 | 19 | 5.8 | 100.0 |
| 1- 2 | 67 | 9.4 | 67.0 | 35 | 7.1 | 92.1 | 3 | 0.9 | 100.0 |
| 2- 3 | 99 | 13.9 | 62.7 | 17 | 3.5 | 85.0 | 0 | 0.0 | 0.0 |
| 3- 4 | 70 | 9.8 | 70.0 | 12 | 2.4 | 80.0 | 0 | 0.0 | 0.0 |
| 4- 5 | 71 | 9.9 | 68.3 | 9 | 1.8 | 100.0 | 5 | 1.5 | 55.6 |
| 5- 6 | 79 | 11.1 | 76.9 | 14 | 2.9 | 87.5 | 42 | 12.8 | 87.5 |
| 6- 7 | 72 | 10.1 | 83.7 | 62 | 12.6 | 79.5 | 47 | 14.3 | 90.4 |
| 7- 8 | 103 | 14.4 | 80.5 | 116 | 23.6 | 89.2 | 57 | 17.4 | 90.5 |
| 8- 9 | 101 | 14.1 | 84.2 | 107 | 21.8 | 89.9 | 82 | 25.0 | 94.3 |
| 9-10 | 0 | 0.0 | 0.0 | 53 | 10.8 | 94.6 | 35 | 10.7 | 89.7 |
| TOTAL | 715 | 100.0 | 72.2 | 492 | 100.0 | 89.0 | 328 | 100.0 | 90.9 |