

The Savvy Survey #11: Mail-Based Surveys¹

Glenn D. Israel and Jessica L. O'Leary²

As part of the Savvy Survey Series, this publication provides Extension faculty with an overview of the process that uses mail for sending and receiving questionnaires. Mail surveys can be an effective way to collect data for needs assessments in program planning (see, for example, Gaul, Hochmuth, Israel, & Treadwell, 2009) or for follow-up surveys evaluating outcomes of Extension programs (see, for example, Israel, Easton, & Knox, 1999). Survey research consistently shows that mail surveys usually obtain as high or higher response rates than other methods (Messer & Dillman, 2011; Israel, 2013). This fact sheet provides guidance for constructing the questionnaire, addressing visual design and formatting considerations, and implementing the survey. Extension faculty who incorporate best practices of questionnaire design and mail survey procedures will be able to achieve a high response rate and collect more useful data than those who do not use these best practices.

Considerations Specific to Constructing a Mail Questionnaire

One of the major factors affecting the construction of a mail questionnaire is the available space on the printed page. Because of this limitation, mail questionnaires are best designed having two pages (a single sheet of 8½-x-11-inch paper printed front and back) or four pages (11-x-17-inch paper folded in half). The latter format can also be assembled into booklets of 4, 8, or 12 pages without adversely affecting response rates. Not only that, but legal sized paper can be used to create booklets with 7-x-8½-inch pages.



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Once the format has been chosen, the survey designer can proceed to the questionnaire's content, constructing it in a way to fit the paper format. As discussed in The Savvy Survey #5: The Process of Developing Survey Questions, a logic model can be used to help identify and select the best questions to include in the questionnaire.

A second consideration that many fail to take into account is the survey packet's weight, which includes the questionnaire, cover letter, return envelope, and out-going envelope. When the weight of the survey packet is less than one ounce, postage costs can be held to the first class letter rate. If the survey packet weighs more than one ounce, however, it is still recommended that first class postage is used for the survey reminder letters to control their timing and

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sequence. Using bulk mail postage is not recommended because people associate it with junk mail and discount the survey's importance.

Visual Design and Formatting

With the survey's paper format chosen, it is time to consider the survey's visual design and format. The appearance of individual questions, as well as the entire questionnaire, can impact whether and how people answer the survey (Dillman, Smyth, & Christian, 2014). A good design provides cues to a respondent on how to navigate from one question to another and how much information the sender is seeking. For example, the size of the answer space for the question, "What could we do to improve our services to you and others in the county?" tells a respondent how much to write. A larger space encourages people to write more than a smaller space (see Israel, 2010).

Also, a "clean" design clearly and consistently indicates where the questions start and where the associated answer choices are located. This feature helps a respondent answer the questions accurately. Figure 1 shows a side-by-side comparison of a survey's original design with its revised version, using best practices in visual design. For example, the version with good visual design uses a bold font to distinguish the question from the response options, which are in a normal font. In this example, it is easy to see where the questions are located and how to move from one to the next.

For more detailed information about writing items or for formatting a questionnaire, see Publications #6a-e and #7 of The Savvy Survey series.

Without Applying Visual Design

FLORIDA LANDSCAPE AND LAWN CARE SURVEY

Please complete this survey so that we can find out about your current landscape practices and goals. We will use the information to guide the development of additional programs for you and other homeowners. Your response also will provide a baseline for follow-up surveys with residents.

About Your Yard

- Who cares for your landscape (lawn, shrubs, trees, ground covers, and flowers)? Please "bubble in" the number of all that apply.
 - ☐ Yourself or family member
 - ☐ Lawn mowing service
 - ☐ Landscape pest service
 - ☐ Other landscape care services (please specify) _____
 - ☐ Other (specify) _____
- Which of these products do you apply yourself? (Please select all that apply)
 - ☐ Fertilizer
 - ☐ Insecticide
 - ☐ Herbicide
 - ☐ Fungicide
 - ☐ Other _____
- For the landscape that you maintain, check the type of property that best describes it:
 - ☐ House
 - ☐ Condo, townhouse or apartment unit
 - ☐ Mobile home
 - ☐ Duplex or triplex
 - ☐ Other (specify) _____

Landscape Maintenance Practices

The first few questions ask about fertilizer purchasing decisions. If you do not buy fertilizer, please skip to question 11.

- When you buy fertilizer, the amount in the bag or container is ...
 - ☐ Just enough to cover the entire lawn area
 - ☐ Not enough to cover the entire lawn area
 - ☐ Too much for the lawn area
 - ☐ Don't Know

With Visual Design

FLORIDA LANDSCAPE AND LAWN CARE SURVEY ID# 693

Please complete this survey so that we can learn about your current landscape practices and goals. We will use the information to guide the development of educational programs for you and other homeowners.

About Your Yard

- Who cares for your landscape (lawn, shrubs, trees, ground covers, and flowers)? Please mark [X] for each item.
 - Yourself or family member ... ☐ Yes ☐ No
 - Lawn mowing service ... ☐ Yes ☐ No
 - Landscape pest service ... ☐ Yes ☐ No
 - Other person or service ... ☐ Yes ☐ No (please specify) _____
- Do you have a permanent irrigation system?
 - ☐ Yes
 - ☐ No
 - ☐ Don't Know
- Do you know amount of square feet of lawn in your yard?
 - ☐ Yes ☐ If YES, what is the area? _____ square feet
 - ☐ No
- Who makes lawn/landscape decisions in your household? (Select the best choice)
 - ☐ Self
 - ☐ Spouse
 - ☐ Spouse and self together
 - ☐ Lawn/Landscape Professional
 - ☐ Other (specify) _____
- How much time per week do you spend caring for your lawn/landscape?
 - ☐ 0 hours
 - ☐ 1-5 hours
 - ☐ 6-10 hours
 - ☐ 11-15 hours
 - ☐ over 15 hours (how many?) _____

Landscape Maintenance Practices

The first few questions ask about fertilizer purchasing decisions. If you do not buy fertilizer, please skip to question 11.

- When you buy fertilizer, the amount in the bag or container is ...
 - ☐ Just enough to cover the entire lawn area
 - ☐ Not enough to cover the entire lawn area
 - ☐ Too much for the lawn area
 - ☐ Don't Know

Figure 1. Example of visual design principles.

Implementing the Mail-based Survey

Preparation

Getting ready to send a mail survey involves several steps. One is preparing the correspondence that will be used in the survey process. A pre-letter is often sent to introduce the survey to the potential respondent, followed by a survey packet with a cover letter, questionnaire, and return envelope. Each letter or postcard should be carefully worded using the principles of social exchange theory to encourage people to complete the survey (Dillman, Smyth, & Christian, 2014).

Appendix A provides a set of figures illustrating a series of messages, with each one tailored to play a specific role in the survey process. While examining these examples, note how the dates chosen demonstrate the timing for the sequence of the contacts. In addition, the correspondence should provide all of the information needed for a person to make an informed decision to participate in the survey. (It is a best practice — and may be required — to have the questionnaire and letters reviewed and approved by the Institutional Review Board (IRB) to ensure compliance with regulations for conducting research on human subjects. See *The Savvy Survey #9: Gaining Institutional Review Board Approval for Surveys* for more information on this topic.)

When preparing the correspondence, consider how to personalize it. Research shows that personalization has a small but significant effect on increasing response rates (Dillman et al., 2014). Personalization helps connect the respondent to the survey. This can be done by using individual names of clients in contact messages (e.g., Dear Joe Client), using a group name that clients identify with (e.g., Dear Jackson County Cattlemen), or by signing individual letters in blue ink, showing the survey’s importance to the respondent and showing it is not a simple photocopied paper.

A second step is preparing a mailing list with names, addresses, and other relevant information. Spreadsheet programs, such as Microsoft Excel, are useful for organizing information and keeping track of which people have responded and which have not. Table 1 illustrates a spreadsheet list, which includes a column listing the response status and one recording the date on which a completed questionnaire is received. In addition, data in a spreadsheet can be used in a mail merge to personalize cover letters by inserting names and other information.

Table 1. Example of a spreadsheet file with contact information for mailing and record keeping.

ID	Status	Date	Name	Street	City	State	Zip
001	Eligible		Joe Client	3 Magnolia St	Sun City	FL	32001
002	Returned	6/1/13	Jane Client	4 Ibis St	Live Oak	FL	32002

A third step is estimating the number of copies needed for the survey. This estimate should include mailing envelopes, return postage-paid envelopes, letters, reminder post cards, and the questionnaire. Depending on the number of reminders, the quantity of items can be two or three times greater than the number of names on the mailing list. Once the estimate is made, supplies should be ordered.

Sending Survey Invitations

The survey invitation procedures should be tailored to the situation, as recommended by Dillman, Smyth, and Christian’s “Tailored Design Survey Method” (2014). Table 2 shows examples of contact procedures. For mail surveys, a pre-letter is often used to alert potential respondents about the survey, followed by the survey packet, consisting of a cover letter, questionnaire, and postage-paid return envelope, mailed a few days later. Stamped or postage-paid envelopes should be provided, so respondents do not have to pay for mailing the completed questionnaire; this will also encourage many to respond. A best practice is to use multiple contacts to obtain a high response rate and minimize the risk of nonresponse bias.

Depending on the available resources for postage and targets for response rates, the number of contacts for the mail surveys can be more or less. In the case of the FCES customer satisfaction survey, a fifth contact was added in 2012 to reach the target of a 60% response rate.

In Summary

This publication in The Savvy Survey series has focused on procedures for constructing and implementing a mail survey. Specifically, this fact sheet discussed how the number of pages and weight of the survey packet are important considerations in the questionnaire construction. In addition, the questionnaire’s visual design and format are critical in making a respondent-friendly questionnaire. Steps for preparing the correspondence and sending invitations for completing the survey were also reviewed, with an emphasis on using multiple contacts as a best practice for mail surveys.

References

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, Phone, Mail, and Mixed-mode Surveys: The Tailored Design Method*. (4th ed.) Hoboken, NJ: John Wiley and Sons.

Gaul, S. A., Hochmuth, R. C., Israel, G. D., & Treadwell, D. (2009). *Characteristics of Small Farm Operators in Florida: Economics, Demographics, and Preferred Information Channels and Sources*. Gainesville: University of Florida Institute of Food and Agricultural Sciences. <https://edis.ifas.ufl.edu/publication/wc088>

Israel, G. D., Easton, J. O., and Knox, G. W. (1999). Adoption of Landscape Management Practices by Florida Citizens. *Hort Technology*, 9(2):262–266. <https://doi.org/10.21273/HORTTECH.9.2.262>

Israel, G. D. (2010). Effects of Answer Space Size on Responses to Open-ended Questions in Mail Surveys. *Journal of Official Statistics*, 26(2):271–285.

Israel, G. D. (2013). Combining Mail and E-mail Contacts to Facilitate Participation in Mixed-mode Surveys. *Social Science Computer Review*, 31(3):346–358. <https://journals.sagepub.com/doi/10.1177/0894439312464942>

Messer, B. L., and Dillman, D. A. (2011). Using Address-based Sampling to Survey the General Public by Mail vs. Web Plus Mail. *Public Opinion Quarterly*, 75(3):429–457. <https://doi.org/10.1093/poq/nfr021>

Table 2. Examples of contact procedures for mail surveys.

Contact	Aquatic Invasive Species Survey, 2012	Small Farms Survey, 2008	FCES Customer Satisfaction Survey, 2019
1 st (Day 1)	Pre-letter alerting person	Pre-letter alerting person	Pre-letter alerting person
2 nd (Day 4)	Survey packet: cover letter, questionnaire, & return envelope	Survey packet: cover letter, questionnaire, & return envelope	Survey packet: cover letter, questionnaire, & return envelope
3 rd (Day 11)	Reminder post card	Reminder post card	Reminder post card
4 th (Day 25)	Survey packet to nonrespondents	Survey packet to nonrespondents	Survey packet to nonrespondents
5 th (Day 39)			Survey packet to nonrespondents

Appendix A



UF/IFAS
Department of Agricultural Education and Communication

PO Box 110540
Gainesville, FL 32611-0540
352-392-0502
352-392-9585 Fax

June 1, 2012

Dear Extension Client,

A few days from now you will receive in the mail a request to fill out a brief questionnaire for people who have contacted the local Extension office for information or attended one of its programs.

The survey is being conducted by the University of Florida to find out how people feel about the information that they received. Your responses will help us find out what we are doing well and where we need to improve.

We are writing because we have found many people like to know ahead of time that they will be contacted. The study is an important one that will help the Cooperative Extension Service understand our clients' needs and whether they are being met.

Thank you for your time and consideration. It's only with the generous help of people like you that our survey can be successful.

Sincerely,

A handwritten signature in blue ink that reads "Glenn Israel".

Glenn Israel
Survey Director

The Foundation for The Gator Nation
An Equal Opportunity Employer

Figure 2. Example of a pre-letter.

UF/IFAS
Department of Agricultural Education and Communication

PO Box 110540
Gainesville, FL 32611-0540
352-392-0502
352-392-9585 Fax

June 5, 2011

<<Name>>
<<Street>>
<<City>>, FL <<Zip>>

Dear <<Name>>,

The University of Florida's Cooperative Extension Service is conducting a survey of people who have contacted the local Extension office for information or attended one of its programs. We want to find out how people feel about the information that they got. Your responses will help us find out what we are doing well and where we need to improve. The survey will take about 5 minutes to complete.

You are one of a small number of Extension clients randomly chosen to participate in this study. Since your responses will also represent others who were not selected, we hope that you will complete the survey as soon as possible. Your participation is voluntary. You do not have to answer any question that you do not wish to answer. We believe that there are no risks to you from participating in this study. There are also no direct benefits or compensation to you for participating in the study. If you have questions about your rights, please contact the UFIRB office, Box 112250, University of Florida, Gainesville, FL 32611-2250.

We will keep your answers confidential to the extent provided by law. Your name will not be used in any report. We will only use your answers after they have been combined with the other respondents' answers. Please note that the number on the questionnaire will be used only to check your name off the mailing list when your survey is returned.

If you have any questions, please call 352-273-2586, or send an email to gdisrael@ufl.edu. We have enclosed a postage paid envelop for you to mail the completed survey. Thank you for your help.

Sincerely,



Glenn Israel
Survey Director

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Figure 3. Example of a cover letter in the initial survey packet.

Dear Extension Client,

A few days ago, I sent you a questionnaire asking about your experience with contacting the Extension office for information or attending one of our programs. If you have completed and returned the questionnaire, please accept my sincere thanks.

If you have not returned your questionnaire yet, please do so as soon as possible. Because of the small number of people being asked to participate in this survey, it is important that each person complete the questionnaire. Thank you for your help.

Sincerely,

Glenn D. Israel
Professor and Survey Director

Figure 4. Example of a reminder post card.

Start Letter

June 27, 2012

<<Name>>
<<Street>>
<<City>>, FL <<Zip>>

Dear <<Name>>,

A couple of weeks ago, we sent you a survey asking about your experience in getting information from the county Extension office or attending one of its programs. As of today, however, we have not received your completed survey.

Many people have already responded. They described their experience, both good and bad, from their contact with Extension. The results will be very useful to us at the University of Florida.

We are writing again because of the importance that your questionnaire has for helping to get accurate results. Although we sent questionnaires to people across Florida, we need to hear from nearly everyone in the sample to be sure that the results are truly representative.

Your participation is voluntary. You do not have to answer any question that you do not wish to answer. We believe that there are no risks to you from participating in this study. There are also no direct benefits or compensation to you for participating in the study. If you have questions about your rights, please contact the UFIRB office, Box 112250, University of Florida, Gainesville, FL 32611.

We will keep your answers confidential to the extent provided by law. Your name will not be used in any report. We will only use your answers after they have been combined with the other respondents' answers. Please note that the number on the questionnaire will be used only to check your name off the mailing list when your survey is returned.

If you have any questions, please call 352-273-2586, or send an email to gdisrael@ufl.edu. We have enclosed a postage paid envelop for you to mail the completed survey. Thank you for your help.

Sincerely,



Glenn Israel
Survey Director

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Figure 5. Example of a second survey packet cover letter.



UF/IFAS
Department of Agricultural Education and Communication

PO Box 110540
Gainesville, FL 32611-0540
352-392-0502
352-392-9585 Fax

July 20, 2012

<<Name>>
<<Street>>
<<City>>, FL <<Zip>>

Dear <<Name>>,

This is our last call for your opinion on how we are doing! Please take just five minutes to answer the survey about your experience in getting information from the <<CountyName>> County Extension office or attending one of its programs.

Many people have already responded, but we need to hear from you too. This is because we need to hear from nearly everyone to get an accurate picture of our clients' experience, both good and bad. The results will help us serve you and your neighbors better.

Your participation is voluntary. You do not have to answer any question that you do not wish to answer. We believe that there are no risks to you from participating in this study. There are also no direct benefits or compensation to you for participating in the study. If you have questions about your rights, please contact the UFIRB office, Box 112250, University of Florida, Gainesville, FL 32611.

We will keep your answers confidential to the extent provided by law. Your name will not be used in any report. We will only use your answers after they have been combined with the other respondents' answers.

If you have any questions, please call 352-273-2586, or send an email to gdisrael@ufl.edu. We have enclosed a postage paid envelop for you to mail the completed survey. Thank you for your help.

Sincerely,

Glenn Israel
Survey Director

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Figure 6. Example of a third and final cover letter.