

2-1-2006

Effectively Disseminating Information to Limited-Scale Landowners in the Urban/Rural Interface

D Dwayne Cartmell II

Oklahoma State University, dwayne.cartmell@okstate.edu

Chandra L. Orr

American Paint Horse Journal, c_orr77@yahoo.com

Danna B. Keleman

Oklahoma State University, danna.keleman@okstate.edu



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 4.0 License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

Recommended Citation

Cartmell, D., Orr, C. L., & Keleman, D. B. (2006). Effectively Disseminating Information to Limited-Scale Landowners in the Urban/Rural Interface. *The Journal of Extension*, 44(1), Article 7.

<https://tigerprints.clemson.edu/joe/vol44/iss1/7>

This Feature Article is brought to you for free and open access by the Conferences at TigerPrints. It has been accepted for inclusion in The Journal of Extension by an authorized editor of TigerPrints. For more information, please contact kokeefe@clemson.edu.



Effectively Disseminating Information to Limited-Scale Landowners in the Urban/Rural Interface

Abstract

The study described here addressed the preferred methods of receiving information by limited-scale landowners and the role demographic variables play in the preferred delivery method of information. Findings indicated Extension's audience prefers the use of direct mail as a primary method of information dissemination. Less than half used Extension. In cross-referencing age and education level with preferred sources of information, the study indicated audience members, regardless of age and education level, preferred direct mail as their source for information.

D. Dwayne Cartmell II

Assistant Professor
Oklahoma State University,
Stillwater, Oklahoma
dwayne.cartmell@okstate.edu

Chandra L. Orr

Copy Editor
American Paint Horse Journal
Ft. Worth, Texas
c_orr77@yahoo.com

Danna B. Kelemen

Graduate Associate
Oklahoma State University
Stillwater, Oklahoma
danna.kelemen@okstate.edu

Introduction

Information dissemination is a core principle of Extension (Orr, 2003). If information is to be used, it must be disseminated in a way that best facilitates its use by agricultural producers. However, information is delivered in a multitude of methods, and the challenge is to determine which method is most appropriate to the targeted.

Knowing where people look for information is only half the battle for Extension communicators; knowing where people find information is the other half (Pounds, 1985). Studies clearly show clientele preferences do exist and may be quite different depending upon the audience being served. Considering the variability among groups and indicated personal preferences, it is likely that no single delivery method is suitable for everyone (Richardson, 1995).

Previous studies have noted farmers' preferences for informational delivery methods depend on a variety of demographic characteristics such as age, income, formal education, and farm size (Iddings & Apps, 1992). Landowners living in the urban/rural interface have diverse interests and unique concerns (Creighton, Baumgartner, & Gibbs, 2002).

Extension must provide information that makes a difference (Astroth, 1990). Extension provides an important linkage between farmers and researchers, and farmers have come to value the services they receive from Extension (Ekanem, Singh, Tegegne, & Akuley-Amenyenu, 2001). Today, in this information- and technology-laden world, the sharing of information becomes easier and yet more complex. New methods for dispersing information have surfaced, yet not all individuals have

adapted to this new form of communication via electronic media such as DVDs and the Internet.

The challenge arises in how best to disseminate information to target populations. Not only does Extension strive to meet the needs of large-production farms, but also it seeks to fulfill the needs of small-farm landowners, non-traditional producers, and homeowners (Polson & Gastier, 2001). Consequently, Extension must seek the most effective means of reaching individuals based on their preferences for receiving information.

Research indicates that people use different sources depending on the kind of information they are seeking (Pounds, 1985). One study showed family, friends, and neighbors, along with newsletters, bulletins and fact sheets, magazine articles, printed dealer/sales materials, and farm organizations/associations were most frequently used as information sources (Phipps, Murphy, Maddox, & Neas, 2001). However, Richardson reported (1995) regardless of a great diversity in the interests of a targeted audience, preferred delivery methods were remarkably similar. Extension uses many methods to disseminate information to select audiences (Orr, 2003). Orr stated that while Extension still uses meetings, on-farm visits, and field days to some extent, much information can be found in media formats such as the Internet, videos, and computer software packages. Thus, the need to know the audience is imperative to determine the preferred methods of information dissemination.

In urban counties and counties adjacent to urban areas, the farm population is an even smaller proportion of the rural population due to the increased movement of non-farm residents from city to countryside (Sharp, Imerman, & Peters, 2002). In Oklahoma, approximately 36.8% of the state's population lives in the metropolitan areas of Tulsa and Oklahoma City (Population Statistics, 2003). In 2002, 33% of Oklahoma's population was classified as living in rural areas (Development Alliance, 2002). However, in Lincoln County, Oklahoma, the urban/rural interface between Tulsa and Oklahoma City, 82.8% of the population is considered rural (Development Alliance, 2002).

Purpose/Research Objectives

The purpose of the study described here was to examine methods of information dissemination to limited-scale landowners in Lincoln County, Oklahoma. The following research objectives were used to guide this study.

1. To determine the preferred information dissemination method/s of limited-scale landowners in Lincoln County, Oklahoma.
2. To determine what method/s of information dissemination the Oklahoma Cooperative Extension Service uses to reach limited-scale landowners in Lincoln County, Oklahoma.
3. To describe the preferred information dissemination method/s based on demographic variables of limited-scale landowners in Lincoln County, Oklahoma.

Methods

The research design used for the study was a descriptive telephone interview. The survey used a random sample of Lincoln County landowners. The authors recognize results of this study can only be generalized to the original population. However, the authors hope this study serves as a guide for how to study target audiences.

The population was landowners who owned 50 acres of land or less (N=808) in Lincoln County. The landowners' information was compiled by the Lincoln County Cooperative Extension Service (Jones, 2001). Lincoln County was chosen in Oklahoma because of the concentration of limited-scale landowners, and it is an ideal representation of the urban/rural interface because it is located between Tulsa and Oklahoma City.

Individuals on the original list who were duplicates or did not have a phone number were removed from the population. The final population used in this study numbered 707. According to Krejcie and Morgan (1970), approximately 254 responses were needed to reach a 95% confidence level for generalizability. The Oklahoma Agricultural Statistics Service conducted the telephone interviews. The OASS generated 300 useable responses.

Instrument

A 42-question telephone survey was developed. A pilot study was conducted, and the instrument was revised to improve validity and to reduce confusion on the part of the respondents and those administering the survey. The questions were short-answer, "yes/no," interval, and multiple-choice.

In the pilot study, some wording issues were identified. A committee was formed to review the pilot study, analyze the problem areas, and clarify the instrument. This not only made the survey easier to administer and respond to, but also allowed the results from the instrument to be more valid and reliable.

Reliability was assessed by pilot study participants' ability to consistently answer the questions without confusion. Because there were no scaled items in the instrument, it was unnecessary to

run a Chronbach's Alpha.

The Associate Director of the Oklahoma Cooperative Extension Service, the Associate Director of the Oklahoma Agricultural Statistics Service, and the State Statistician of the Oklahoma Agricultural Statistics Service were used to establish content validity of the instrument.

Data Collection and Analysis

The Oklahoma Agricultural Statistics Service administered the telephone survey. A postcard was sent to the population prior to data collection. Both genders were surveyed; however, gender was determined by the landowner who answered the phone. Descriptive statistics were used for data analysis.

Findings

Findings Related to Information Dissemination Methods and Information Dissemination Methods Used by Extension

The first and second research objectives addressed the preferred information dissemination methods of limited-scale landowners in Lincoln County, Oklahoma, and the methods used by Extension to reach these landowners. To address these questions, it was necessary to know how respondents use Extension.

Limited-Scale Landowners in the Rural/Urban Interface of Lincoln County, Oklahoma, Who Use Extension

Of the responses generated in this survey, 32.7% (n=98) answered that they did use Extension, 66.7% (n=200) answered that they did not use Extension, and 0.7% (n=2) failed to answer.

Of those respondents who did use Extension, 85.7% (n=84) also provided a response of how they used Extension (Table 1). The primary usage was for information purposes about soil conservation, types of vegetation to plant, water testing, supplies for livestock, and breeds of livestock that are suitable to Oklahoma.

Table 1.
Extension Uses

Use	n	%
Information	33	39.3
Crop problems/needs	14	16.7
Gardening/Canning	7	8.3
Livestock information	7	8.3
Other	7	8.3
Soil issues	6	7.1
Workshops/Classes	4	4.8
Land Improvement	3	3.6
Water issues	3	3.6

Important Information Sources and Media Formats for Limited-Scale Landowners in the Urban/Rural Interface in Lincoln County, Oklahoma

Information Sources

For Extension to better serve its audience, it needs to know the information sources its audience is already using. Those respondents who completed the survey were asked where they received their agricultural information. They were allowed to respond with more than one source. From this question, the survey generated 437 responses. The primary response was Extension, with 108 responses, which was more than the 98 respondents indicating they used Extension as noted above. This was followed by the Internet, with 59. Numerous other responses were generated such as: magazines (11.5%), other people (11.5%), local co-op (11.1%), Oklahoma State University (6.1%), agricultural organizations (5.8%), local agriculture teacher 5.6%), feed store (4.6%), coffee shop (4.0%), library (0.6%), reading (1.5%), courthouse (0.8%), T.V. (0.6%), trial and error (0.4%), mail (0.2%), newspaper (0.2%), radio (0.2%), and fairs (0.2%) (Table 2).

Table 2.
Information Sources

Source	n	%
Extension	108	22.5
Internet	59	12.4
Magazines	55	11.5
Person to Person	55	11.5
Local Coop	53	11.1
Oklahoma State University	29	6.1
Agriculture Organizations	28	5.8
Agricultural Teacher	27	5.6
Feed store	22	4.6
Coffee shop	19	4.0
Reading	7	1.5
Courthouse	4	0.8
T.V.	3	0.6
Library	3	0.6
Trial & Error	2	0.4
Direct Mail	1	0.2
Newspaper	1	0.2

Veterinarian	1	0.2
Radio	1	0.2
Fairs	1	0.2

Preferred Media Format

The respondents were given the option in the survey to select their preferred method of receiving information from the following: Internet, direct mail, magazines, technical publications, newspaper, television, radio, workshops, and other. The respondents were allowed to select as many methods as they used. A majority of the respondents preferred direct mail (53.0%), and the least preferred methods were workshops and the radio, both with 3.0% (Table 3).

Table 3.
Preferred Media Format

Format	n	%
Direct Mail	159	53.0
Magazines	70	23.3
Television	59	19.7
Internet	53	17.7
Other	28	9.3
Newspaper	27	9.0
Technical Publications	17	5.7
Radio	9	3.0
Workshops	9	3.0

Findings Related to Demographic Variables

The final research objective of the study addressed the demographic variables with regard to preferred information dissemination methods of limited-scale landowners in Lincoln County, Oklahoma. A cross-tabulation was conducted between the age of the respondents and their education level in comparison to their preferred method for information dissemination.

Age

Respondents' ages were grouped into four categories; 30 years old or younger, between the ages of 31 and 50, between the ages of 51-70, and over the age of 70. These age groups were then cross-referenced with the different information sources. Those respondents 30 years old or younger preferred direct mail, as did respondents aged 31-50 and 51-70, whereas respondents over the age of 70 equally preferred direct mail and television (Table 4). The second preferred media format for all respondents under the age of 70 was magazines. Respondents over 70 preferred television.

Table 4.

TABLE 4.
Preferred Media Format Based on Age

Age	30 or less(n)	31-50(n)	51-70(n)	Over 70(n)
Direct Mail	7	61	79	12
Television	2	13	32	12
Magazines	3	25	36	6
Internet	3	21	23	6
Newspaper	1	7	16	3
Technical Publications	1	8	7	1
Radio	0	1	7	1
Workshops	0	3	5	1
Other	0	7	17	4

Education Level

The respondents' educational level was grouped into four categories; did not graduate, high school diploma, technical school or some college, and degreed. These education levels were then cross-referenced with the different information sources. All respondents in all four education level categories preferred direct mail (Table 5). The second preferred media format by education level varied among television, magazines, and the Internet.

Table 5.
Preferred Media Format Based on Education Level

Ed. Level	No Diploma(n)	Diploma(n)	Tech/College(n)	Degree(n)
Direct Mail	16	65	58	20
Television	11	22	21	5
Magazines	6	22	27	15
Internet	3	11	26	13
Newspaper	3	9	10	5
Technical Pub.	0	3	9	5

Radio	0	3	4	2
Workshops	0	3	4	2
Other	2	8	11	7

Conclusions

The findings indicate direct mail as the preferred method of information dissemination. In addition, television, magazines, videos that can be seen on a VCR, and the use of the Internet were secondary preferred media formats.

The findings showed that two-thirds of the audience did not use Extension. However, the findings did indicate the audience most often sought agricultural information from Extension or the Internet. The audience members preferred direct mail for receiving information.

In cross-tabulation, the study further showed that the majority of respondents aged 30 years or less, aged 31-50, and aged 51-70 preferred direct mail, while those over the age of 70 equally preferred direct mail and television as their preferred method of information dissemination. This finding is in agreement with the general findings of the study. The general findings of the study are further reaffirmed with respondents having all levels of education choosing direct mail as well. The cross-tabulation of age and education level indicates no differences from those found in the findings of the general study. Therefore, while age and educational levels of respondents may differ, their preferred method of information dissemination remains the same.

Recommendations/Implications

With technology in the 21st century changing on a daily basis, it is crucial for the dissemination of information to be purposeful and targeted. Extension strives to meet this need for relaying information to their intended audience by determining their audiences' preferred method of informational delivery. The challenge lies in not necessarily using the latest or trendiest of technological advancements to deliver the message, but rather in determining the preferred method for reaching a particular audience. In addition, determining the method that has the most impact and is most effective would be an excellent follow-up study to determine if the preferred method actually is the most useful method for disseminating information.

Demographic factors may or may not play a role in informational delivery and should be examined further to determine how they relate to a particular audience with specific demographic characteristics and technological capabilities.

References

- Astroth, K. A. (1990). Information technology: Extension's future. *Journal of Extension* [On-line], 28(1). Available at: <http://www.joe.org/joe/1990spring/f1.html>
- Boldt, W. G. (1987). Targeting audiences and using creative media approaches. *Journal of Extension* [On-line], 25(1). Available at: <http://www.joe.org/joe/1987spring/rb2.html>
- Buford, J. A. (1990). Extension management in the information age. *Journal of Extension* [On-line], 28(1). Available at : <http://www.joe.org/joe/1990spring/fut2.html>
- Creighton, J. H., Baumgartner, D. M., & Gribbs, S. D. (2002). Fire prevention in the urban/rural interface: Washington's backyard forest stewardship/wildlife safety program. *Journal of Extension* [On-line], 40(2). Available at: <http://www.joe.org/joe/2002april/iw5.html>
- Development Alliance. (2002). *Development alliance community demographics – State data of Oklahoma*. Retrieved July 11, 2003 from: <http://www.developmentalliance.com/demog/GetDAstate1.cfm?=&OK>
- Dillman, D. A. (1991). Agricultural gatekeepers – Real barrier to rural development. *Journal of Extension* [On-line], 29(1). Available at: <http://www.joe.org/joe/1991spring/tp2.html>
- Ekanem, E., Singh, S. P., Tegegne, F., & Akuley-Amenyenu, A. (2001). Differences in district extension leaders' perceptions of the problems and needs of Tennessee small farmers. *Journal of Extension* [On-line], 39(4). Available at: <http://www.joe.org/joe/2001august/rb4.html>
- Hatch Act. (1887). *Hatch Act of 1887*. Retrieved April 9, 2003 from: <http://www.higher-ed.org/resources/hatch.htm>
- Homestead Act (1862). Retrieved April 1, 2003 from:

<http://www.geocities.com/Heartland/Bluffs/3010/homestd.htm>

Homestead National Monument of America. (n.d.) *The Homestead Act*. Retrieved May 1, 2003 from: http://www.nps.gov/home/homestead_act.html

Iddings, R. K., & Apps, J. W. (1992). Learning preferences and farm computer use. *Journal of Extension* [On-line], 30(3). Available at: <http://www.joe.org/joe/1992fall/a4.html>

Jones, M. (2001). Lincoln County Cooperative Extension Service Database.

Krejcie, R. V., & Morgan, D. E. (1970). Determining sample size for research activities. *Educational And Psychological Measurement*. 30. 607-610.

Morrill Act. (1862). Retrieved March 31, 2003 from: <http://www.higher-ed.org/resources/morrill1.htm>

Morrill Act. (1890). Retrieved April 1, 2003 from: http://www.ifas.ufl.edu/ls_grant/morrill2.htm

Orr, C. L. (2003). Informational needs of limited-scale landowners within the urban/rural interface of Lincoln County, Oklahoma (Master's thesis, Oklahoma State University, 2003).

Phipps, M. S., Murphy, B., Maddox, S., & Neas, K. (2001). Agriculture information preference study. Available at: <http://www.ncagr.com/research>

Polson, J., & Gastier, T. (2001). Small farm/new farm: One agent meeting other agents' needs for research-based information through the WWW. *Journal of Extension* [On-line], 39(4). Available at: <http://www.joe.org/joe/2001august/tt1.html>

Populations Statistics. (2003). *United States of America - Oklahoma :Urban population*. Retrieved July 11, 2003 from: <http://www.library.uu.nl/wesp/populstat/Americas/usas-okt.htm>

Pounds, D. (1985). Putting Extension information where people will find it. *Journal of Extension* [On-line], 23(4). Available at: <http://www.joe.org/joe/1985winter/a6.html>

Richardson, J. G. (1995). *An assessment of clientele preferences for receiving Extension information*. Raleigh, N.C.: North Carolina State University. (ERIC Document Reproduction Service No. ED356358)

Sharp, J., Imerman, E., & Peters, G. (2002). Community supported agriculture (CSA): Building community among farmers and non-farmers. *Journal of Extension* [On-line], 40(3). Available at: <http://www.joe.org/joe/2002june/a3.html>

Smith-Lever Act. (1914). Retrieved April 1, 2003 from: <http://www.higher-ed.org/resources/smith.htm>

St. Clair, C. (2001). *The history and philosophy of Extension*. University of Missouri Outreach & Extension. IMPACT: A Council Development Project, Leaflet No. 9. Retrieved April 10, 2003 from: <http://www.outreach.missouri.edu/extcouncil/Impacts/9.htm>

Copyright © by Extension Journal, Inc. ISSN 1077-5315. Articles appearing in the Journal become the property of the Journal. Single copies of articles may be reproduced in electronic or print form for use in educational or training activities. Inclusion of articles in other publications, electronic sources, or systematic large-scale distribution may be done only with prior electronic or written permission of the *Journal Editorial Office*, joe-ed@joe.org.

If you have difficulties viewing or printing this page, please contact [JOE Technical Support](#)