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Public Awareness of Outlying Michigan Agricultural Experiment Stations

Abstract

The location of specialized agricultural research sites in areas of production removed from the parent land-grant university's campus has undoubtedly contributed to the present strength and stature of American agriculture.

Refereed Article

Public Awareness of Outlying Michigan Agricultural Experiment Stations

Eileen Lehnert and Dick Divelbiss

Introduction

The location of specialized agricultural research sites in areas of production removed from the parent land-grant university's campus has undoubtedly contributed to the present strength and stature of American agriculture. Although these locations are widely known within the local agricultural community, little is known about whether or not the general public is aware of these research sites.

Members of the general public might be aware of the local experiment station via several means. First, the stations are highly visible to the casual passerby—being major geographical entities and being well marked with Michigan State University signs. Second, stories about local station events in the media might be the basis of awareness for

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some members of the general public. Third, particularly in smaller communities, word of mouth messages about the station, its activities, or about station personnel might be the basis of awareness.

At the time of this study there were 16 agricultural experiment stations located throughout Michigan. According to a Michigan Agricultural Experiment Station (MAES) bulletin, the "stations are located in important producing areas of the state and this helps the research projects identify local problems and focus on their solutions. When solutions are found, they can be quickly relayed from research to producer and this close communication keeps the scientist in touch with the needs of the state."

These research facilities are funded, primarily, through a line item on the State of Michigan budget, but funding is also sought through the Michigan State University Development Fund.

This study was developed to determine two key facets of public awareness of locally based agricultural research. First, some measure of awareness is needed to determine if local research station activities have created awareness in the local community. Second, the effective management of ongoing public relations efforts on behalf of outlying research locations requires knowledge of the effect of previous public relations efforts by both local station personnel and by information specialists based at the university. To answer these questions the following specific research objectives were developed:

1. To ascertain if the neighboring public is aware of the Michigan State University outlying agricultural experiment station to their area.
2. To determine the degree of awareness of the neighboring public about the outlying stations.
3. To be able to identify where public relations efforts should be made to educate the public about the purposes, scope, and individual benefits of the experiment stations.

A library search of appropriate research indexes and journals revealed that there had been no previous work in this area. In addition, four experts in the field of agricultural communication research were consulted.[1] They concurred that

[1]The four scientists were Lloyd Bostian, University of Wisconsin, Madison; Herbert F. Lionberger, University of Missouri, Columbia; Phil Tichenor, University of Minnesota; and Paul Yarbrough, Iowa State University.

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there were no existing or related studies in the area of public awareness of outlying agricultural research stations.

Although no research has been done in the area of public awareness of agricultural research stations, it is well known that awareness on the part of an individual or a group is the first, and necessary, step in any activity designed to move that person or group toward some action (Rogers, 1965).

Method

Six of the 16 outlying stations of the Michigan Agricultural Experiment Station were included. The stations were chosen to represent a cross section of population densities, geographical location within the state, and type of research activity. Included in the study were:

1. W.K. Kellogg Biological Experiment Station, Kalamazoo-Battle Creek (Research activities: farm management, forestry, wildlife management, bird sanctuary, limnology);
2. Sodus Horticultural Experiment Station, Sodus (Research activities: horticulture—vegetables and small fruits);
3. Saginaw Valley Bean and Beet Research Farm, Saginaw (Research activities: sugar beets, dry edible beans and cash crops in rotations with the beans and beets);
4. Graham Horticultural Experiment Station, Grand Rapids (Research activities: tree fruits, especially apples);
5. Upper Peninsula Experiment Station, Chatham (Research activities: farm management, dairy, beef cattle);
6. Northwest Horticultural Experiment Station, Traverse City (Research activities: tree fruits, especially cherries).

Using the U.S. Census tracts as a guide, names of 600 people were randomly selected within a 15-mile radius of each station. Selections were made from telephone directories[2] (400 respondents would represent a 5 percent sampling error at the 95 percent confidence level).

[2]This method can introduce bias since subscribers with unlisted numbers and those who have no telephone service are eliminated as potential respondents. The size of the sample, however, is calculated to reduce any bias that might arise from this shortcoming.

The Sodus station was used to check the relation between awareness and the distance a respondent lives from the station. Sodus was chosen to check the distance/awareness relationship because:

(1) It is less than 30 miles from another station (twice the radius of the awareness areas tested in this study, and

(2) It is the only station that meets the above requirement and where research commonly considered to be agricultural is conducted.

The sample for the Sodus station was selected by drawing people from a 15-mile radius around the Russ Forest station in Cassopolis, Michigan. Since the Russ Forest and the Sodus areas are contingent and partially overlapping, one would expect some level of awareness less than the norm for the other five stations in the study.

A questionnaire was developed (in consultation with Arvo Juola, professor, MSU Language and Evaluation Services) to measure the sample population's awareness of the experiment station in its area (Bolluyt and Yarbrough, 1977; Francis, 1979; and Parten, 1950). A pretest was conducted by asking selected county extension directors to complete the questionnaire and suggest changes that they might suggest. The agents were also asked to administer the questionnaire to a friend or neighbor not directly connected to the station or MSU and note any questions or suggestions raised by these people.

A week before the first mailing, a postcard was sent to each person in the sample population advising them of the questionnaire's pending arrival. This technique has been shown to increase response rates between 5 and 6 percent (Linsky, 1975).

Three weeks after the first questionnaire mailing a follow-up letter and questionnaire were sent to nonrespondents. A postage-paid return envelope was included in each of the mailings to encourage the return of completed questionnaires.

Data analysis was done on MSU's Cyber 750 computer using the Statistical Package for the Social Sciences (SPSS) program; specifically, subprograms Frequencies (for the computation of the pattern of case distribution on single variables) and Crosstabs (for the joint frequency distribution of two or more variables in contingency tables).

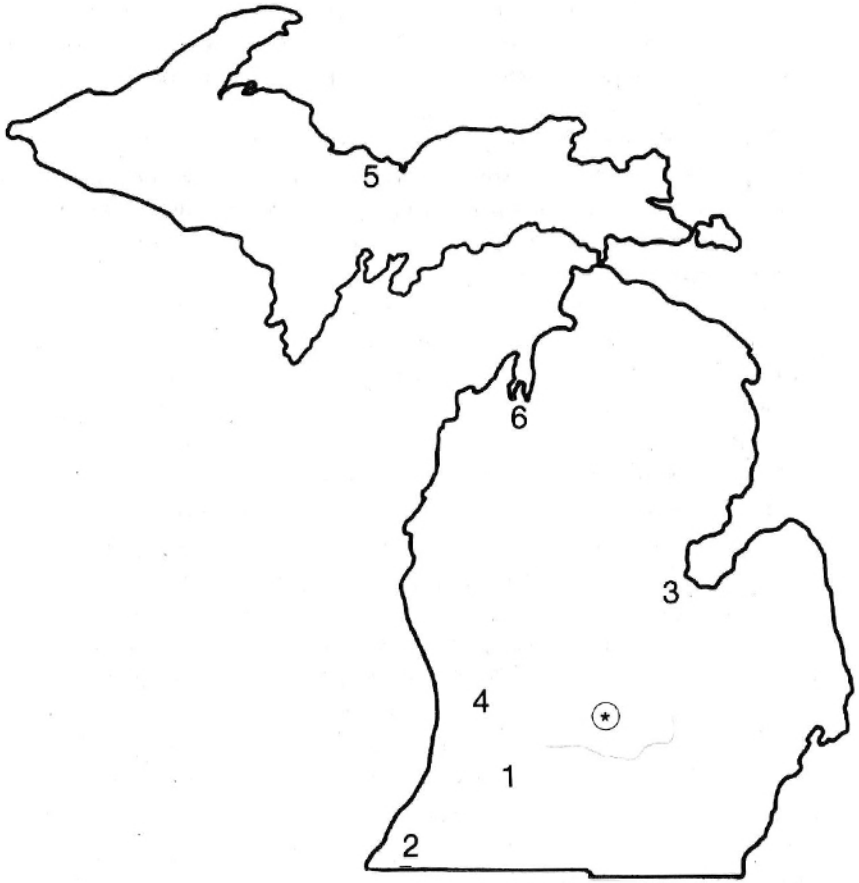


FIGURE 1. Geographic location of outlying stations included in the study:

1. W. K. Kellogg Biological Experiment Station (suburban).
2. Sodus Horticultural Experiment Station (rural).
3. Saginaw Valley Bean and Beet Research Farm (rural).
4. Graham Horticultural Experiment Station (urban).
5. Upper Peninsula Experiment Station (rural).
6. Northwest Horticultural Experiment Station (suburban).

⊙ Michigan State University/Michigan Agricultural Experiment Station Headquarters.

Results and Discussion

Findings

Of the more than 3,500 questionnaires mailed out, 1,516 were completed and returned for a 43 percent return rate. Respondents were predominantly male (75 percent) and the

average age of the sample was 42 years old. Almost 80 percent of the respondents were married. Interestingly, this figure almost exactly matched the number of respondents who reported owning their own residence.

The sample proves to be very stable in terms of geographic mobility. Respondents reported living in their present community for an average of 24 years and at the present address an average of 12 years.

A surprising 55 percent of the people said that they had lived on a farm at some time in their lives. The figures for those presently involved in farming were much closer to expected, national norms. Of the total sample, 1.8 percent listed farmer as their occupational title. Of the 132 people who said they currently lived on a farm, 30 percent indicated they were full-time farmers and 70 percent said they were part-time farmers. The most frequently reported occupation was that of skilled laborer. The largest single group, however, was retired persons, composing 18 percent of the total sample.

More than 50 percent of the respondents had not completed high school, but 20.2 percent reported earning some sort of advanced degree beyond high school.

Respondents were also asked a series of questions that were designed to ascertain their awareness of extension and the experiment stations.

To eliminate, as much as possible, confusion of these two services, a detailed explanation of the Cooperative Extension Service and the Agricultural Experiment Station preceded these questions in the instrument.

Twenty-eight percent of the respondents said that they had contacted extension and 46 percent of the people said that they were aware of the experiment station in their area. Of those people who said they were aware of the agricultural experiment stations in their areas, 46 percent said they learned of the station by word of mouth, 20 percent through newspapers, 5 percent by radio, 2.5 percent by television, and 27 percent by other means.

Of the 269 people who responded from the Kellogg station area, 87 people (32 percent) could actually list more than 50 percent of the major research activities conducted at the station.

Of the 218 people who responded from the Saginaw Valley station area, 23 people (10.5 percent) could list more than 50 percent of the major research activities conducted at the station.

Of the 205 people who responded from the Upper Peninsula station area, 98 people (47.8 percent) could list more than 50 percent of the major research activities conducted at the station.

Of the 260 people who responded from the Sodus station area, 12 people (8 percent) could list more than 50 percent of the major research activities conducted at the station.

Of the 277 people who responded from the Graham station area, 25 people (9 percent) could list more than 50 percent of the major research activities conducted at the station.

Of the 316 people who responded from the Northwest station area, 32 people (10 percent) could list more than 50 percent of the major research activities conducted at the station.

Somewhat surprising was the fact that awareness of both the Cooperative Extension Service and the agricultural experiment station did not go hand-in-hand. About 59 percent of those respondents who said that they had contacted extension said that they were unaware of the agricultural experiment station in their area.

A series of questions designed to determine media use habits of the respondents were included in the questionnaire. These questions were included for two reasons: (1) No recent data were available on media use habits of Michigan residents; and (2) these data would be useful in any public relations efforts that might evolve from this study's results.

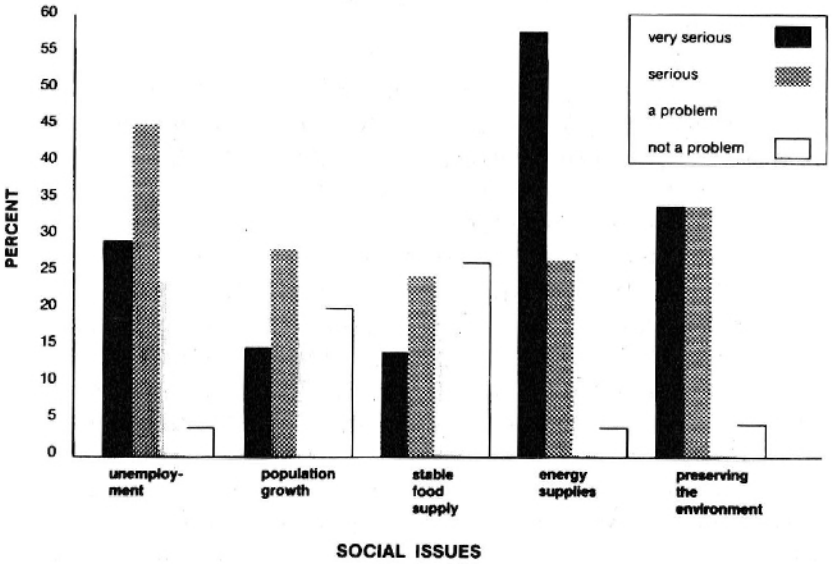
Almost 82 percent of all respondents subscribe to a newspaper of some sort. About 75 percent read a daily newspaper, usually one serving their local community. Only 6 percent of the respondents reported reading a weekly newspaper. Respondents more likely to read weekly newspapers lived in towns of less than 5,000 people.

A cross tabulation of type of newspaper read by area corresponds with this preference based on size of community. 98.1 percent of those responding from Traverse City said they read a daily newspaper; Saginaw Valley, 98.9 percent daily newspaper; Cassopolis, 95.3 percent daily, 4.2 percent weekly, .5 percent Sunday only; Chatham, 85.6 percent daily, 12.3 percent weekly, 2.1 percent Sunday only, Grand Rapids, 89.1 daily, 2.9 percent weekly, 7.9 percent Sunday only; and Battle Creek-Kalamazoo, 91.7 percent daily, 3.4 daily weekly, 4.9 percent Sunday only.

The average household watched TV for five hours each day and listened to radio broadcasts for nearly four hours, for a total daily electronic media exposure of 8.8 hours per household.

Respondents were also asked to rate a series of current social issues (See Figure 2). It was thought that the issues in which respondents voiced a high degree of concern could be used for public relations strategies to promote the stations.

FIGURE 2. Respondent ratings of current social issues.



Discussion

The results of this study demonstrate that most people living near the stations studied are unaware of them and, more specifically, they are unaware of the range of activities these stations are engaged in.

Furthermore, the study also found that awareness was not significantly linked with distance from the station. (The test station, Sodus, did not show an appreciable loss of awareness even though the sample was pulled from the area around the adjacent Russ Forest Station.)

This study also found that those people who had lived on a farm were more likely to be aware of the experiment stations

and that the more education a respondent had, the more likely she/he was to have contacted both the Cooperative Extension Service and the agricultural experiment stations.

Respondents were asked if they were aware of the existence of the station in their areas and if they could list the activities of the station. The latter question was designed to be a more accurate measurement of awareness since it involved more than simple name recognition. It was not surprising that two of the stations emerged with higher levels of awareness: the Upper Peninsula station and the Kellogg biological station.

The Upper Peninsula station is in a sparsely populated rural area where neighbors are more likely to be employed by or associated in some way with the station. Moreover, it is one of the oldest stations in the state.

Part of the Kellogg biological station is a bird sanctuary/nature center. Numerous school groups and families visit this facility annually, which is bound to increase awareness of the station.

Looking at the demographics of the sample population, the level of awareness is lower than might be expected. Four demographics are important in this consideration: (1) An average age of 42 years; (2) an average time at present address of 12 years; (3) an average time living in the community of 24 years; and (4) the fact that 55 percent of the respondents had lived on a farm. Of these, only having lived on a farm appears to have any positive, direct relationship to awareness of local experiment stations.

The low readership for weekly newspapers was perhaps the most startling finding of the study. Only 6 percent of the respondents reported regular weekly newspaper readership. This brings into question the traditional news release production practice of developing stories specifically for weeklies as a group. Perhaps, at least in Michigan, weekly newspapers should not be included in general mailings, but should only receive specific releases related to events in their circulation areas.

Further research in this specific area is needed before the significance of levels of public awareness of local agricultural research activities can be determined. One possible project would be to develop a public relations campaign for a particular outlying research site. Before and after awareness tests could be made, and followed by a longer-range monitoring of the community to measure the public and political impacts in the research site and its activities.

For the public relations practitioner, this study provides some basic starting points for development of local information efforts. Obviously, much more attention must be paid to informal communication systems outside the traditional media if the campaign is to have a major effect on the community. The traditional method of working through the media will have to be supplemented with innovative activities that bring the station and its personnel into direct contact with members of the general public, especially those who are opinion leaders.

REFERENCES

Bolluyt, Karen, and Yarbrough, Paul (eds.). "Evaluation Research for Information Programs." (unpublished workbook developed for the NCR-90 Communications Committee Workshop, Des Moines, Iowa: NCR-90, April 14-15, 1977, *passim.*

Francis, J. Bruce (ed.). *Surveying Institutional Constituencies, New Directions for Institutional Advancement,* No. 6 (San Francisco: Jossey-Bass, Inc., Publishers, 1979), pp. 45-58.

Linsky, Arnold S. "Stimulating Responses to Mailed Questionnaires: A Review," *Public Opinion Quarterly*, Vol. 39, No. 1, Spring 1975.

Parten, Mildred. *Surveys, Polls, and Samples.* (New York: Harper & Brothers, 1950), pp. 157-218.

Rogers, Everett M. *Diffusion of Innovations.* (New York: The Free Press of Glencoe, A division of the Macmillan Company, 1965), pp. 81-82 — *passim.*