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ABSTRACT

The way in which agricultural scientists of the Texas Agricultural Experiment Station research staff pereive aspects of the uses and importance of the mass media in communicating their research work was surveyed. The profile developed from the 65 responses to the survey shows that agricultural scientists place only moderate importance on mass media as a communication tool to further their research work. They devote an average of 2.6 percent of their professional time to mass media communications but feel that they should spend more time on this task. Their highest priority audience is specialists and teachers who use the results of their work. The general public is a low priority audience. Although they tend to distrust somewhat their co-workers who use the mass media extensively, they qualify this attitude by saying each case should be considered individually. About 50 percent feel they should be evaluated on their use of mass media as well as on their contribution to professional and technical journals. They put high trust in farm magazines and low trust in newspapers. They are not very sure about the present state of their professional image. (Author/JK)

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A MASS MEDIA PROFILE

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AGRICULTURAL SCIENTISTS

at

TEXAS A&M UNIVERSITY

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ABSTRACT

This survey attempts to establish a benchmark profile of how agricultural scientists of the Texas Agricultural Experiment Station research staff perceive certain aspects of the uses and importance of mass media in communicating their research work.

Scientists were requested to respond to a series of survey questions designed to reflect their opinions and attitudes around variables related to (1) the importance they attach to mass media as a communication tool for their work, (2) how they view audience priorities, (3) what role they should perform in mass media communication, and (4) certain message-channel variables.

A stratified random sample of 91 scientists was drawn to receive the survey form from which 69 percent were returned for analysis.

The general profile developed from the data shows agricultural scientists to place only moderate importance on mass media as a communication tool to further their research work. They devote an average of 2.6 percent of their professional time to mass media communications, but generally feel that they should spend more time in this role. They view the general public (i.e. the man on the street) as a very low priority audience, placing highest priority to specialists and teachers who use the results of their work.

They tend to have a certain distrust for their co-workers who use mass media extensively, but qualify this attitude by saying each case should be considered on its individual merit. About 50 percent of the scientists feel they should be evaluated on their use of the mass media as well as on their contribution to technical and professional journals. Scientists put high trust in farm magazines but consider newspapers to be rather low in credibility.

They agree universally that mass media is the single most important source of information on which their professional image is formed among general public, and are not very sure about the present state of their professional image.

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A MASS MEDIA PROFILE OF AGRICULTURAL SCIENTISTS AT TEXAS A&M

INTRODUCTION

Old line agencies like the Texas Agricultural Experiment Station that had their beginning in the agrarian era are experiencing an identity crisis. The ability to develop a variable public identity in contemporary society is a major concern to those charged with maintaining the financial support necessary to their continued existence.

When the Experiment Station system was established there was little need to be concerned about being consistent with the goals and needs of the larger society. In fact, the emphasis on agricultural research was viewed as one way to solve many of the human and economic problems facing America at that point. The public decision makers who controlled the allocation of public dollars were, in fact, the very ones who stood to benefit most from agricultural research. Industrialization and urbanization have changed all that. The "farm block" no longer exists. The political power of agriculture has been minimized. Larger societal values tend to conflict with traditional agrarian value systems. At best, the agricultural sector is a minority force. Competition for public identity is extreme, and even more severe is the annual clash for the public dollar in the legislative halls of state capitols, to say nothing of the scurry in Washington, D.C.

To be sure, obtaining funds from public sources was never easy, but today as one agricultural leader implied, "It is much more difficult when you have to duck stones while trying." (1) Throwing stones at agriculture and the agricultural scientists is something of a new art. It is only recently that the motives of both have really been challenged.

All this leads the agricultural leadership to pose some rather direct questions about the direction they and their organizations should take to turn the anti-agriculture tide.

The role of mass media in developing public awareness about an organization has suddenly become a major concern. Obviously, the success of mass media information programs to a great extent is dependent upon the attitude held by the scientists who make up the Agricultural Experiment Station staff. It was with this assumption in mind that the present study was undertaken.

PURPOSE

The primary purpose of this study was to develop a mass media profile on the attitudes and opinions agricultural scientists hold toward the use of mass media as a means of reporting on their research. Data was collected to gauge how much importance they attach to the use of mass media as a means of communication, how they view their audience priorities, what role they should perform in mass media communication, and how they view certain message-channel variables related to the mass media communication process.

The results of this study were used in conjunction with other information to make judgements about the preferred involvement of the individual scientists in mass media programs implemented in behalf of the Texas Agricultural Experiment Station. The mass media programs were aimed at three basic functions: (1) to foster the goal that the society has a right to know what is being done at the experiment station, (2) to promote the diffusion of technical information for the purpose of utility, and (3) to promote a public identity or awareness for the experiment station among the non-agricultural sector of the society.

METHOD

The information survey was developed by the author, reviewed with three agricultural scientists, revised and mailed to 91 agricultural scientists listed in the 1971 Directory of Texas A&M University, College of Agriculture staff with either full-time or joint teaching-research appointments. The sample was drawn randomly, but stratified to allow for the varying number of staff researchers between departments, and differences of full-time and joint teaching-research appointments.

No attempt was made to obtain relevant demographic data to be used in the analysis. All responses were anonymous, except in those cases where the scientist signed voluntarily.

Of the 91 forms mailed, 65 or about 72 percent were returned to be included in the analysis. Of the 65 returned, two were not completed, leaving 63 usable survey included in this analysis.

A MASS MEDIA PROFILE OF THE AGRICULTURAL SCIENTIST -- IN BRIEF FORM

The data would suggest that the "typical" agricultural scientist on the Texas A&M Agricultural Experiment Station staff could be characterized in this manner:

The chances are about even that he does not view mass media channels as being more than slightly important as a means to communicate about his research work. The odds are only 1 in 5 that he would view mass media as being extremely important to him for communication purposes.

He most probably will not spend more than 2.6 percent of his professional time annually using mass media channels, and the odds are 1 in 4 that he doesn't spend any time on mass media reporting. However, he is likely to tell you that he should spend more time reporting via mass media channels; in fact the odds are 2 to 3 that he feels he spends too little time reporting in the mass media.

When it comes to potential audiences to whom he could report on his personal research work, the general public usually is given the lowest priority. He is most likely to assign highest priority to communicating to extension specialists, teachers and other educators who use his research results. Fellow-scientists in his own field are next most important followed by farmers and ranchers, agri-business or industry leaders, administrators, legislators and fellow-scientists in other fields in that order.

He tends to be a little leery of the colleague who uses the mass media and achieves considerable visibility as a result, but puts heavy qualifications on this point wishing to consider each case individually.

He is not particularly fond of the idea that he should be evaluated, at least in part, on his ability to use the mass media channels. However, the chances are about even that he would support the idea. He apparently would generally prefer that professional communicators be hired to perform the reporting task for him.

When it comes to assigning credibility to different mass media channels, it's farm magazines all the way, as illustrated by the fact that 94 percent of all scientists surveyed rated them credible to very credible.

On the whole he sees TV, Radio, Life, Saturday Review and newspapers to be credible, but has considerably less faith in newspapers. The odds are about 1 in 3 that he will view them as not being credible at all.

Even though he doesn't assign high priority to reaching the "man on the street" with information about his research, he believes that for the most part his research is not so complex and technical that it is uninteresting to the average person.

If asked whether or not he prefers to give personal interviews directly to mass media representatives, the chances are about even that he views this possibility with some trepidation. He is almost certain to agree that the mass media is the single most important source of information on which the general public forms an image of agricultural scientists and their work. He is almost as certain that there should indeed be more importance placed on reporting agricultural research via mass media channels now than say 15 to 20 years ago.

He is not very sure about the present status of the agricultural research scientist's image. In fact, the chances are about 20 percent that he doesn't have an opinion that he cares to share. However, on the other side of the coin, the odds are about 50 percent that he feels agricultural research is viewed by the general public as being less desirable today than it was 15-20 years ago.

A more detailed analysis and discussion of these major findings follows in this report.

PERCEPTIONS ABOUT THE IMPORTANCE AND USE OF MASS MEDIA

It is assumed that the importance agricultural scientists assign to mass media as a means of reporting on their research is a function of what priority he assigns to his relevant audiences. It appears to follow then that the relative low importance assigned to mass media reporting by 41 percent of the sample in Table 1 might be attributable to the face that he feels that his priority audiences can be reached more efficiently by other communication methods.

Table 1 The Importance Agricultural Scientists Assign to Mass Media As a Means of Reporting on Their Personal Research Work N=63

Importance	Percent
Extremely Important	22
Very Important	37
Slightly Important	25
Not Important	16

Another measure of importance assigned to mass media reporting might be the amount of time the scientist devotes to the task. Table 2 shows that as a group the average time devoted is only 2.6 percent annually. Twenty-five percent report no personal time devoted to mass media reporting. Nearly 45 percent spend 1 percent or less of their time using mass media with the remainder reporting from 2-10 percent.

Table 2 Agricultural Scientists Estimate of the Amount of Time Devoted to Mass Media Reporting N=63

Percent of Time Devoted	Percent of Scientists Reporting
0	25
1	29
2	12
3	2
4	2
5	15
10	11
NR	4

Average Percent of Time Devoted by All Scientists: 2.6 percent

However, there appears to be a rather widely held opinion on the part of the scientists that they should spend more time using the mass media channels. Table 3 indicates that nearly two-thirds of the sample believe that they spend too little time on this task. Apparently some 5 percent write mass media off as useless to them.

Table 3 Agricultural Scientists Evaluation of the Amount of Time They Devote to Mass Media Reporting N=63

Amount of Time Devoted	Percent Devoted
About Enough	17
Too Much	2
Too Little	63
Don't Know	13
It's Not Important	5

These scientists almost totally agree that mass media is the single most important source of public image forming information about them personally and their work as shown in Table 4.

Table 4 To what Extent Do Agricultural Scientists Perceive the Mass Media as the Single Most Important Source of Information on Which the General Public Forms an Image of Agricultural Scientists and Their Research N=63

Opinions	Percent of Scientists Reporting
Agree	90
Disagree	5
Don't Know	5

They generally agree that more importance should be given to mass media reporting today than would have been the case 15-20 years ago. In view of the importance assigned to audience priorities i.e. low priority to general public, it is somewhat difficult to interpret this finding.

Table 5 The Perceptions that Agricultural Scientists Hold About How Much Importance Should be Placed on Their Reporting Via Mass Media Channels Now as Compared to 15-20 Years Ago. N=63

Opinions	Percent of Scientists Reporting
Should Give More Importance	83
Should Not Give More Importance	2
Don't Know	15

Agricultural scientists are rather ambiguous about the relative status of their profession as may be reflected by public image. Table 6 shows that perhaps as high as 46 percent of the scientists feel there is some public image problem.

The fact that nearly one-fifth of the sample hasn't formed an opinion that they want to make public may be significant.

Table 6 Does the General Public View Agricultural Research Generally Less Favorable Today than 10-15 Years Ago? N=63

Opinions	Percent of Scientists Reporting
Agree	46
Disagree	36
Don't Know	18

DISCUSSION AND IMPLICATIONS

The basic attitudes, motivations and goals of the individual agricultural research scientist, will in final analysis determine to a great extent how much the mass media channels will be exploited and used to his advantage.

To the extent that these data reflect the nature of the scientist in regard to the importance and use of mass media at Texas A&M, it appears that for the most part he has deferred this type of communication task to others or has not chosen to communicate via mass channels to any great extent as a personal effort. At the same time, the scientist appears to assign an average or greater importance to using mass media. Although these data do not support the idea, one might imply that individual researchers believe that the use of mass media is more designed to obtain organizational support (research funds) than it is to help them achieve their personal research goals.

One example of this underlying attitude might be reflected by this note on a returned survey:

> "We need a public relations effort, but do not give the job to the research workers. Let them be willing helpers only; their job is complicated enough with non-productive efforts now."

Overall, one must conclude that A&M agricultural scientists do not demonstrate an overwhelming use of mass media as a group, and they present a rather guarded enthusiasm towards its importance to their personal research objectives.

PERCEPTIONS ABOUT AUDIENCE PRIORITIES

Agricultural scientists are apparently faced with a paradox in trying to integrate the concept of mass media into their perceptions of audience priority. Mass media by definition attempts to reach a diversified audience particularly in those outlets referred to in this survey. Table 7 indicates that as individual scientists, the general public or "man on the street" is assigned a rather low priority as compared to other potential audiences. It is expected that the eight general audience types listed would not be reached equally effectively by current mass media methods. For instance, one would not normally expect to communicate research to other scientists, extension specialists or administrators via mass media channels. This would leave farmers-ranchers, agri-business leaders, legislators and the general public yet to be considered. Where do they belong on the mass media scale as far as potential audiences are concerned? Would the general public be rated higher if the scientist had viewed it from an organizational support framework? What effect does the agricultural knowledge held by the "general public", particularly the non-agriculturally oriented sector have on the thinking of legislators and other public decision makers? How does a research organization develop public identity? What is the role of the individual researcher in this regard? These and many other questions like them may be worth the scientist's consideration in this age of electronic communications.

Table 7 Percentage Distribution of How Essential Agricultural Scientists Perceive Certain Audiences as Potential Receivers of Information About Their Personal Research N=63

Audience Type	Percent of Scientists Reporting: Extremely Essential	Very Essential	Essential	Not Essential	No Response	Essential Index Score[1]
Extension Spec., Teacher, Etc.	63	24	11	0	2	2.53
Fellow-scientist: Own Field	57	26	13	2	2	2.43
Farmer-Rancher	54	29	14	3		2.33
Agri-Business	57	22	15	6		2.30
Administrators	54	20	24	2		2.26
Legislators	44	24	28	4		1.93
Fellow-scientist: Other Fields	10	16	61	11	2	1.24
General Public	10	19	46	25		1.15

[1] On a 0-3 scale

PERCEPTIONS ABOUT ROLE OF SCIENTIST IN MASS COMMUNICATIONS

Traditionally agricultural scientists have been in part evaluated on their ability to report their research through journals and other scholarly publications. Apparently other forms of communication abilities have not generally been considered to be essential to his primary role. Does the present situation indicate that this tradition should be re-evaluated. Apparently 55 percent (Table 8) of this sample thinks so, as they would favor being evaluated at least in part on their use of the mass media as well as traditional journals and publications.

Table 8 How Agricultural Scientists Feel About Being Evaluated in Part on Their Ability to Use the Mass Media Channels to Report on Their Research Work N=63

Opinions	Percent of Scientists
Would Favor	55
Would Not Favor	38
Don't Know	7

At the same time 58 percent of the research scientists would favor having hired professional communicators to assist them to carry their information to the mass media. Table 9 also indicates that 38 percent question this plan.

Table 9 How Agricultural Scientists Feel Towards the Use of Professional Communicators to Report on Their Personal Research Work Via Mass Media Channels N=63

Opinions	Percent of Scientists
Favor Their Use	38
Question Their Use	58
Don't Know	2
No Response	2

Peer group approval apparently operates within the scientific community as elsewhere in our society. Although the data in Table 10 doesn't explain the reason, a relatively high percentage of the scientists surveyed do not necessarily consider their mass media oriented colleagues to be highly competent scientists. Some of the comments reported tend to reveal a distrust of the mass media oriented scientist's motivations. For example, here are a few comments taken from the survey forms:

> Smacks of advertising which is distasteful to me.
>
> May increase his esteem in the eyes of administrators, but not mine.
>
> Possibly not good. They often look to be "showboating" to influence financial support.
>
> Facts are too easily twisted to suit product being sold.
>
> Some are windbags.
>
> One who devotes his time to this usually is not proficient in his own area of research. This certainly could be changed.

Table 10 Individual Scientists Who Use Mass Media Channels to a Great Extent and as a Result Receive Considerable Visibility are Held in High Esteem by Their Colleagues, Generally N=63

Opinions	Percent of Scientists Reporting
Agree	22
Disagree	52
Don't Know	21
No Response	5

DISCUSSION AND IMPLICATIONS

The data suggests an element of role conflict among agricultural scientists at Texas A&M. The question of who should devote their time communicating to what audiences for what purpose is largely unresolved. In addition, there appears to be further conflict between traditional norms and emerging needs, particularly as pertaining to the communication needs of the organization versus the needs of the individual scientist.

The individual scientist appears to encompass the need for an active public relations program to gain public organizational identity and the necessary financial support. However, he appears to be very ambiguous as to what his individual role should be in achieving this goal. There appears to be a tendency on his part to want to transfer this responsibility to others within the organization when it comes to mass media information dissemination responsibility.

The data may suggest that negative peer group pressures are directed towards scientists who use mass media extensively. At least his motives are being questioned by what appears to be a rather large segment of his co-workers. To be sure, there no doubt is justification for negative feelings toward individual scientists at times, but the underlying attitude appears to go beyond this point concern.

It has been suggested by at least one agricultural scientist that part of this uncertainty about the scientist's role in mass media information dissemination is a function of lack of administrative direction and leadership in this area. It would be interesting to know how closely the perceptions of the administrative heads match those held by the staff researchers on the area covered in this

survey. One might intuitively expect considerable diversity of expectations in the area of importance and current use of mass media by research scientists. This could probably be attributable to the difference in their respective forms of references; organizational support needs Vs individual goals.

PERCEPTIONS ABOUT MESSAGE-CHANNEL VARIABLES

Data in Table 11 indicates that agricultural scientists do assign significantly different credibility ratings to at least six different mass media outlets included in the survey. They obviously place the greatest faith in the traditional farm magazine when it comes to communicating their personal research work. The lack of trust in the newspaper medium may be more extreme than would normally be expected. The fact that nearly one-third of the sample believe it to be generally not credible could be a serious handicap to the individual scientists use of this medium by individual scientists.

Table 11 The Level of Credibility Assigned to Six Different Mass Media Channels by Agricultural Scientists at Texas A&M N=63

Media Channels	Level of Credibility					Credibility Index Score[1]
	Very Credible	Credible	Not Credible	Don't Know	No Response	
	Percent					
Farm Magazines	24	68	4	4	--	1.22
Saturday Review	8	33	8	40	11	1.00
Radio	5	71	16	6	2	.88
Life	5	46	23	22	4	.74
TV	2	63	25	6	4	.73
Newspapers	0	65	30	5	--	.68

[1] On a 0-2 scale

From a professional communicator's point of view, it is encouraging to note that the scientists themselves believe that their research can be presented interestingly to a generally uncommitted audience. As shown in Table 12, 68 percent of the scientists surveyed do not consider their research to be so technical and complex that it is impossible to communicate about it in an interesting manner.

Table 12 For the Most Part, the Research Work of an Individual Scientist is so Complex and Technical that it is of Little Interest to the General Public N=63

Opinions	Percentage of Scientists Reporting
Agree	21
Disagree	68
Don't Know	7
No Response	4

Personal interviews directly with mass media representatives appear to lack overall general support as the preferred way to disseminate research information to the media channels. Table 13 indicates that 38 percent may have had less than desirable results under such circumstances or for some other reason question this as the preferred method of linkage with the media channels.

Table 13 How Agricultural Scientists Perceive the Direct Personal Interview by the Mass Media Representative as the Most Effective Way to Use the Mass Media Channels N-63

Position on Method	Percent of Scientists Reporting
Best	55
Questions	32
Don't Know	13

DISCUSSION AND IMPLICATIONS

The data appears to support the assumption that agricultural scientists express limited agreement in their thinking about certain message and channel variables. The level of credibility assigned to the six channels or outlets rated appear to be significantly different and might determine to a great extent how much a particular channel would be used by an individual scientist if he were given a choice.

The general lack of trust for newspaper information appears to be inverse to the current use of the mass media channels, as by far the most column inches of agricultural information is communicated via this medium at the present time.

In 1967 a national survey (2) by the Roper Research Associates 41 percent rated television as the most believable and only 8 percent felt magazines in general were most believable. Newspapers were rated as most believable by 24 percent of the sample. Although these data are not entirely comparable they appear to give a general contrast between agricultural scientists and a cross-section sample of U.S. citizens.

Obviously researchers do not fully trust media representatives to report on their research adequately. This could be a major roadblock to obtaining adequate linkage with major mass media outlets.

The tendecy for research scientists to favor the limited audience mass media outlets may make it even more difficult to disseminate information to the mass audiences.

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