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#### **ABSTRACT**

The findings of a questionnaire survey of 702 North Carolina agricultural producers indicated that communication methods historically used by the North Carolina Agricultural Extension Service for information dissemination are accepted by state farmers and continue to be popular. Information delivery methods most frequently preferred are newsletters, meetings, farm visits (agent to farmer), telephone calls, and on-farm tests and demonstrations. Newer extension information delivery techniques such as teleconferencing, video tapes, audio cassettes, cable television, and home study courses were rated quite low. Results indicated that only slight variation existed among preferences of individual commodity groups (field crops, tobacco, peanuts, hogs, beef cattle, dairy, forestry, poultry, Christmas trees, ornamental horticulture; and fruit and vegetable horticulture). When respondents were requested to project five years into the future as to their expected preferred methods, traditional methods continued to be most popular. Implications suggest that extension should avoid moving too rapidly into newer, impersonal forms of communications to meet informational needs of its agricultural audiences. However, there was an indicated desire to receive information more directly. Thus the continuing utilization of familiar teaching methods, coupled with the introduction/inclusion of newer direct methods of information delivery, will likely be acceptable to agricultural clientele. (NEC)

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PREFERRED METHODS FOR DELIVERY OF TECHNOLOGICAL INFORMATION BY
THE NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE: OPINIONS OF
AGRICULTURAL PRODUCERS WHO USE EXTENSION INFORMATION

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Preferred Methods for Delivery of Technological Information by the North Caroira Agricultural Extension Service: Opinions of Agricultural Producers Who Use Extension Information

> John G. Richardson and R. David Mustian

County Extension agents have by tradition, used a variety of information delivery methods for effecting desirable change among their clientele. From the use of the traditional on-farm demonstration to computers, this variation in delivery methods has allowed agents to focus on their primary audiences and to attempt to provide information to those audiences in the most effective and efficient manner possible.

As newer technologies have emerged for information delivery, coupled with a tightening of human resources within Extension and research and a rapidly changing agriculture structure, it becomes even more important for Extension agents to be aware of the effectiveness of their various delivery methods and to be able to tailor those delivery methods to the expressed desires of the farmers who receive the information. Furthermore, as newer information delivery techniques such as computers or video tapes are implemented, the agent's knowledge of farmers' acceptance of these newer techniques can be of value in helping the agent to gauge the degree of utilization of these techniques and to also be aware that some effort may need to be directed toward enhancing acceptance of those newer techniques.

#### Purpose of the Study

The two primary purposes of this study were (1) to determine the methods that North Carolina agricultural producers who use Extension prefer to receive information from Extension both currently and in the future and (2) to determine any differences that may exist between the producers of selected major farm enterprises as to their preferred Extension informational delivery techniques.

### Research Methodology

A mailed survey instrument was used to obtain information from agricultural producers who were users of North Carolina Agricultural Extension Service services in two randomly selected counties from each of the six Extension districts in North Carolina. Of the 1178 instruments mailed, 702 viable instruments were returned, for a 60 percent return rate.

The questionnaire contained thirty different communication techniques. Farmers surveyed were asked to respond to three specific questions relating to their preferences and perceptions



of the various methods. Initially, respondents were requested to identify all of the methods that they currently used to obtain information from Extension. Secondly, respondents were asked to identify the five methods that they used most Finally, respondents were asked to think about the future and to identify the five methods that they felt they would use most frequently five years in the future. Consistency of respondents' preferences were measured by means of Spearman's rho and Kendall's coefficient of concordance. These measures indicated the degree of association among perceptions of importance, current use, and pojected future use of communication media.

### Findings

Agricultural producers surveyed generally expressed a strong preference for those information delivery methods that can be classified as traditional Extension methods. When asked to list the five methods most frequently used, producers listed as most important (1) newsletters, (2) meetings, (3) farm visits (agent to farmers), (4) telephone calls, and (5) on-farm tests and demonstrations. Newer Extension informational delivery techniques such as teleconferencing, video tapes, audio cassettes, cable television, and home study courses were rated quite low as preferred methods for receiving information.

When respondents were requested to project five years into the future as to their expected preferred methods of receiving Extension information, they indicated no significant differences from their current preferences.

The variable of major farm enterprise was analyzed to determine if the producers of the different major enterprises held significantly different preferences for receiving information. By weighting the top ten preference scores for each of the eleven commodity groups, when combined, the five methods considered to be most important were (1) newsletters, (2) farm visits (agent to farmers) (3) meetings, (4) field days, and (5) demonstrations. Newer Extension informational delivery techniques such as teleconferencing, video tapes, audio cassettes, cable television, and home study courses were rated quite low as methods considered to be important.

When asked to list the five methods used most frequently, again, traditional communication methods were preferred. Weighted rankings by eleven enterprise groups indicated preferences for (1) farm visits, (2) meetings and newsletters (tie), (4) telephone calls and (5) field days. Communication methods such as teleconferencing, computers, fact sheets, video tapes, audio cassettes, and cable television failed to receive a top ten ranking by any commodity group.



When respondents were requested to project five years into the future as to their expected preferred methods, traditional methods continued to be most popular. Meetings were ranked first, with farm visits second, newsletters third, telephone calls fourth, and on-farm tests and demonstrations fifth. In this future category, some shift in thinking was projected by respondents, in that computers were ranked in the top ten preferences by producers of eight commodity groups as compared to none previously. Other methods gaining at least top ten ranking among some commodity groups that had not been previously ranked include video tapes, exhibits, and teletip.

Among those methods listed in the top ten by one or more commodity groups that is expected to decline in importance are magazine articles and bulletins. Indeed, bulletins received a currently used top ten ranking by ten commodity groups, and when projecting into the future, only four commodity groups continued to rank bulletins in their top ten preferred methods of receiving information. Magazine articles also declined in importance, in that six commodity groups ranked this method in their top ten most currently used methods, while only three groups continued to see magazines as an important delivery mechanism for the future.

The results indicated that only slight variations exist among the preferences of the individual commodity group. Those commodity groups included field crops, tobacco peanuts, hogs, beef cattle, dairy, forestry, poultry, Christmas trees, horticulture (ornamentals), and horticulture (fruits and vegetables). Therefore, the summary of all groups on a weighted basis generally coincides with the summary Table 1 as to the preferences of agricultural producer users of Extension/research information.

### Conclusions and Implications

These findings demonstrate that communication methods that Extension has historically used for information dissemination are accepted by North Carolina farmers and continue to be popular. Also, the familiarity by the farmers to traditional methods appears to confirm their validity as methods that will continue to be preferred. However, the decline in popularity of bulletins and magazine articles as compared to the increasing popularity of computers and special publications appears to indicate that more prompt and specific sources of information will gain in popularity among Extension clientele.

The implications of theme findings suggest that Extension should avoid moving too rapidly into newer, impersonal forms of communications to meet the information needs of its agricultural audiences. however, there is an indicated desire to receive information more directly. Thus, the continuing utilization of familiar teaching methods coupled with the



introduction or inclusion of newer direct methods of information delivery will likely be acceptable to agricultural clientele. By using an incremental type approach to using newer, less familiar communicators techniques, the Agricultural producers will have an opportunity to gain familiarity with these new techniques and through this process of acclimation may come to prefer the newer methods as situations and needs for learning changes. However, through this methodical, planned introduction process, the producers will also have the opportunity to continuously assess the acceptability of old and new communication methods. Thús, it will be the responsibility of the Extension information communicators to constantly stay attuned to the assessments of their audiences and to be prepared to make adjustments in information delivery techniques as appropriate or as the need arises.

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Table 1: Frequency Distribution of Respondents by Methods
Used to obtain Information Provided by The North Carolina
Agricultural Extension Service (N=702)

Meth to	Methods Considered to be important			ods Used requently	Projected Futur Most frequently	
	N 	<b>%</b>	H	*	N Dean	lethods %
Meetings	571	24.0				
Newletters	608	81.3	443	<b>63.1</b>	400	<b>57</b> .0
Radio	219	86.1	469 .	66.8	376	53.6
TV	236	31.2	78	11.5	68	9.7
Newspapers	3 <b>6</b> 7	33.6	80	11.4	94	13.4
Field Days		52.3	143	<b>20. 4</b>	108	15.4
Morkshops	462	€5.8	204	<b>29</b> . 1	165	23.5
Tours	2 <b>5</b> 7 3 <b>93</b>	36.6	88	9.4	76	10.8
Demonstrations		56.0	140	19. <b>9</b>	119	17.0
Teleconferencing	440	62.7	159	<b>22</b> . 6	161	22.9
Computers	16	2.3	0	0	24	3.4
Symposiums	75	10.7	16	2.3	140	19.9
	33	4.7	6	. 9	11	1.6
Home Study Courses Bulletins		4.0	1	. <b>1</b>	17	2.4
Movies	373	53.1	156	22.2	97	13 8
Teletip	55	7.8	5	. 7	10	1.4
	69	9.8	11	1.6	34	4.8
Telephone Calls	422	60. i	271	38.6	224	31.9
Fact Sheets	247	35.2	88	9.4	57	8.1
On-Farm tests	477	67.9	241	34.3	226	32.2
and demonstrations					220	36.6
Farm Visits	575	81.9	392	55.8	351	50.C
(sgent to farmer)					001	<b>9</b> 0. <b>0</b>
Video Tapes	35	5.0	2	. 3	56	8.0
Audio Cassettes	10	1.4	0	Ö	13	1.9
Cable Television	9	1.3	O	Ö	15	2.1
Office Conferences		28.8	102	14.5	96	
Posters	34	4.8	2	. 3	3	13.7
Magazine Articles		48.7	118	16.8	84	. 4
Special Publica-	287	<b>4</b> 0. <i>9</i>	74	10.5		12.0
tions or articles Fairs	_		- <del>-</del>	20.0	80	11.4
	178	25.4	28	4.0	n t	0.0
Exhibits	153	21.8	13	1.9	21	3.0
Other	6	. 9	4	.6	17	2.4
		· -	•	. 0	5	. 7



Table 2: Frequency Distribution of Respondents with Horticulture (Fruits and Vegetables) as Major Enterprise by Methods used to obtain Information Provided by the North Carolina Agricultural Extension Service (N=57)

Met to	Methods Considered to be important			ods Used requently	Projected Future Most frequently	
	N 	<b>%</b> 	N	<b>%</b> - <b>-</b>	Used M N	eth <b>od</b> s %
Meetings	<b>4</b> 9	86.0	34	<b>50.0</b>		
<b>Newdet</b> ters	48	84.2	33	59. <b>6</b>	35	61.4
Radio	11	19.3	33 4	57. <b>9</b>	30	<b>52.6</b>
TV	14	24.6	3	7.0	4	7.0
Newspapers	31	<b>5</b> 4.4	_	<b>5</b> . 3	3	5. <b>3</b>
Field Days	38	66.7	11	19.3	6	10.5
Workshops	25	43.9	17	29.8	15	26.3
Tours	31		7	12.3	10	17.5
Demonstrations	39	54.4	16	28.1	14	24.6
Teleconferencing	1	68.4	17	29.3	17	<b>29</b> .8
Computers	7	1.8	0	0	1	1.8
Symposiums	4	12.3	1	1.8 .	7	12.3
Home Study Course		7.0	1	1.8	1	1.8
Bulleting		3.5	0	Q	$\bar{1}$	1.8
Movies	31	54.4	17	29.8	10	17.5
Teletip	6	10.5	Q	O	1	1.8
Telephone Calls	3	5.3	0	0	3	5. š
Fact Sheets	30	<b>5</b> 2.6	18	31.6	18	31.6
On-Farm tests	18	31.6	4	7.0	3	5.3
and demonstration	41	71.9	20	35.1	18	31.6
Form Visits		_			10	31.0
(agent to farmer)	51	89.5	<b>37</b>	<i>6</i> 4.9	34	59.6
Video Tapes		<u>.</u> .			7-3	30. <b>0</b>
Audio Cassettes	2	3.5	0	0	2	3. <b>5</b>
Cable Television	2	3.5	0	0	õ	0
Office Conference	2	3. <b>5</b>	0	0	ĭ	1.8
Posters		<b>35</b> . 1	7	12.3	9	15.8
	1	1.8	0	0	1	1.8
Magazine Articles Special Publica-		<i>36.</i> 8	5	8.8	5	8.8
tions on out	22	<b>3</b> 8.6	8	14.0	10	17.5
tions or articles Fairs					10	17.5
Exhibits	14	24.6	2	3.5	4	1.0
Other	9	15.8	Ō	0.0	1	1.8
Const	O	0	Ō	0	3	<b>5</b> .3
			•	V	0	0



Table 3: Frequency Distribution of Respondents with Horticulture (ornamentals) as Major Enterprise by Methods used to obtain Information Provided by N.C. Agricultural Extension Service (N=19)

	Methods Considered to be important			ods Used requently	Projected Future Most frequently Used Methods	
	N	<b>%</b> 	N	% 	N 	% 
Meetings	16	84.2	8	42.1	7	<b>36</b> . 8
Newletters	15	78.9	13	68.4	12	63.2
Radio	3	15.8	0	0	0	0
TV	3	15.8	2	10.5	Ŏ	Ö
Nevspapers	5	26.3	1	5.3	i	5.3
Field Days	14	73.7	6	31. <b>6</b>	5	26.3
Workshops	12	63.2	3	15.8	2	10.5
Tours	14	73.7	7	36.8	6	31.6
Demonstrations	13	68.4	1	<b>5</b> .3	ž	10.5
Teleconferencing	1	<b>5</b> .3	ō	0	1	5.3
Computers	0	0	i	5.3	$\overline{4}$	21.1
Symposiums	0	Ó	Ō	0	ó	0
Home Study Course	s 2	10.5	õ	Ó	Ŏ	Ŏ
Bulletins	8	42. 1	3	1 <b>5</b> .8	1	5.3
Movies	2	10.5	0	0	Ō	0
Teletip	4	21.1	O	0	i	5.3
Telephone Calls	12	<b>53</b> . 2	8	42.1	8	42.1
Fact Sheets	8	42.1	2	10.5	ĭ	5.3
Om-Farm tests	12	63.2	5	26.3	Ŝ	26. <b>3</b>
and demonstration			•	50.0	•	20.4
Farm Visits	17	89.5	15	78.9	13	68.4
(agent to farmer)					10	00.4
Video Tapes	2	10.5	0	0	0	0
Audio Cassettes	1	5.3	Ŏ	ŏ	ĭ	<b>5</b> .3
Cable Television	0	0	Ö	ŏ	ô	0
Office Conference	es 7	36.8	5	26. <b>3</b>	š	26.3
Posters	0	0	ŏ	0	0	0
Magazine Articles		31. <b>6</b>	3	15.8	2	10.5
Special Publica-	8	42.1	2	10.5	3	15.8
tions or articles			<b>U</b>	10.0	•	10.0
Fairs	3	15.3	0	0	0	0
Exhibits	2	10.5	ŏ	ŏ	ő	ŏ
Other	ō	0	ŏ	ŏ	ő	ŏ
_	•	•	V	V	U	V



Table 4: Frequency Distribution of Respondents with Christmas
Trees as Major Enterprise by Methods used to obtain
Information provided by the North Carolina Agricultural
Extension Service (N=13)

Method to be	Methods Considered to be important		Metho Most Fi	ods Used requently	Projected Future Most frequently	
	N 	<b>%</b> 	N	<b>%</b> 	Used M N	ethods %
Meetings	13	100	4.0	<b>=</b>		——————————————————————————————————————
Newletters	12	9 <b>2</b> .3	10	76.9	8	61. <b>5</b>
Radio	3	23.1	5	38. <u>5</u>	5	38. <b>5</b>
TV	2	25. 1 15. 4	1	7.7	0	0
Newspapers	4	30.8	0	0	0	0
Field Days	12	92.3	0	0	0	O
Workshops	6	46.2	7	<b>53</b> .8	6	<del>4</del> 6.2
Tours	9	40.2 69.2	4	30.8	4	30.8
Demonstrations	9	69.2	2	15.4	3	23.1
Teleconferencing	õ	09.2	6	46.2	7	53.8
Computers	2	15.4	0	0	0	0
Symposiums	1	7.7	0	0	2	15.4
Home Study Courses	Ö		0	.0	0	0
Bulletins	6	0	0	0	0	0
Movies	2	46.2	3	23.1	4	30.8
Teletip	2	15.4	0	0	O	Q
Telephone Calls	10	15.4	1	7.7	1	7.7
Fact Sheets	2	76.9	8	61.5	9	69.2
On-Farm tests	-	15.4	1	7.7	0	0
and demonstrations	10	76. <del>9</del>	3	23.1	3	23.1
Farm Visits	4.0				-	
(agent to farmer)	13	100	8	61.5	9	69.2
Video Tapes					•	
Audio Cassettes	2	15.4	0	0	0	0
Cable Television	0	0	0	0	Ö	ŏ
Office Conferences	0	0	0	0	ŏ	ŏ
Posters	3	23.1	2	15.4	ž	15.4
Magazine Articles	1	7.7	0	0	ŏ	0
Special Publica-	3	23.1	0	0	ŏ	ŏ
tions or articles	7	<b>53</b> .8	2	15.4	š	23. ĭ
Fairs					v	20.1
Exhibits	1	7.7	1	7.7	0	o
Other	4	30.8	O	0	ő	Ö
へかは此だ。	0	0	Ð	Ö	ŏ	Ö

Table 5: Frequency Distribution of Respondents with Forestry as Major Enterprise by Methods used to obtain information Provided by North Carolina Agricultural Extension Service (N=18)

	Methods Considered to be important			ds Used equently	Projected Future Most frequently Used Methods	
	N 	% 	N	<b>%</b>	N	% 
Meetings	15	<b>8</b> 3. <i>3</i>	10	55.6	11	61.1
Newletkers	17	94.4	15	83.3	9	<b>5</b> Q. 0
Radio	10	55.6	4	22.2	ž	16.7
TV	7	38.8	i	5. <b>6</b>	ĩ	5.6
Newspapers	11	61.1	3	16.7	ż	11.1
Field Days	15	83.3	ช	27.B	3	16.7
Workshops	10	55.6	4	22.2	3	16.7
Tours	13	72.2	5	27.8	ž	11.1
Demonstrations	13	72.2	0	.0	2	11.1
Teleconferencing	0	0	0	·o	2	11.1
Computers	3	16.7	0	0	3	16.7
Sympos i ums	1	5.6	1	5.6	Ŏ	0
Home Study Course	<b>3</b> 3	16.7	1	5.6		5.6
Bulletins	13	72.2	5	27. B	$\dot{f 2}$	11.1
Movies	3	16.7	0	0		5.6
Teletip	4	22.2	1	5.6	3	18.7
Telephone Calls	17	94.4	11	61.1	5	27.8
Fact Sheets	10	55.6	1	5.6	3	16.7
On-Farm tests	13	72.2	6	33.3	6	33.3
and demonstration			· ·	<b>00</b> .0	U	55.5
Form Visits	15	83.3	11	61.1	9	50.0
(agent to farmer)	••	90.0	• •	01.1	0	30.0
Video Tapes	5	27.8	0	0	4	22.2
Audio Cossettes	2	11.1	ŏ	ŏ	2	11.1
Cable Television	Õ	0	ő	0		
Office Conference		<b>5</b> 0.0	ž	11.1	O	0
Posters	ĭ	5.8	0		1	5.6
Magazine Articles		50.0	-	0	0	0
Special Publica-	8		2	11.1	2	11.1
tions or articles		44.4	2	11.1	4	22.2
Fairs		07.0	•	_		
Exhibits	5	27.8	0	Ç	1	11.1
Other	4	22.2	O O	0	3	16.7
viner	0	0	0	0	1	5.6



Table 6: Frequency Distribution of Respondents with Tobacco as Major Enterprise by Methods used to obtain information Provided by North Carolina Agricultural Extension Service (N=231)

	Methods Cons to be impor			ds Used equently	Projected Fu <b>tu</b> re Most frequently Used Methods	
	N	%	N	%	N N	% 
Meetings	190	82.3	146	<b>63</b> .2	141	61.0
<b>Newdett</b> ers	206	89.2	160	<b>69</b> . 3	127	55.0
R <b>a</b> dio	95	41.1	<b>3</b> 0	<b>13</b> .0	24	10.4
TV	110	47.6	44	19.0	42	18.2
Newspapers	153	57.6	48	20.8	<b>3</b> 8	1 <b>6</b> .5
Field Days	144	62.3	45	19.5	40	17.3
Workshops	90	<b>39</b> . 0	19	8.2	25	10.B
Tours	1 <b>3</b> 9	60.2	42	18.2	39	16.9
Demonstration	s 152	65.8	51	22.1	52	22.5
Teleconferenc	ing 8	3.5	0	0.	8	<b>3</b> . 5
Computers	26	11.3	3	1.3	39	16.9
Symposiums	13	<b>5</b> .6	1	. 4	4	1.7
Home Study Co	urses 9	3. <b>9</b>	0	0	5	2.2
Bulletins	120	51. <b>9</b>	44	19.0	26	11.3
Movies	20	8.7	2	. 9	1	. 4
Teletip	23	10.0	4	1.7	13	5. <b>6</b>
Telephone Cal	1 1 1 4 9	64. <b>5</b>	88	38.1	67	29.0
Fact Sheets	94	40.7	24	10.4	22	9.5
On-Farm tests	177	76. <b>6</b>	104	45.0	102	44.2
and demonstra	tions					
Farm Visits	198	85.7	139	60.2	134	58.0
(agent to far	mer)					
Video Tapes	17	7.4	0	0	24	10.4
Audio Cassett	es 3	1.3	0	0	5	2.2
Cable Televis	ion 5	2.2	0	0	6	2.6
Offike Confer	ences 72	31.2	31	13.4	31	13.4
Posters	17	7.4	1	. 4	0	0
Magazine Arti	cles 111	48.1	26	11.3	15	6.5
Special Publi		41.1	16	6.9	21	9.1
tions or arti		- · · <del>-</del>		- · ·	<b>J.</b>	
Fairs	57	24.7	7	<b>3</b> .0	7	3.0
Exhibits	54	23.4	3	1.3	4	1.7
Other	5	2.2	3	1.3	3	1.3



Table 7: Frequency Distribution of Respondents with Dairy as Major Enterprise by Methods used to obtain Information Provided North Carolina Agricultural Extension Service (N=54)

N	Me t	Methods Considered to be important		Methorst F	Methods Used Most Frequently		Projected Future Most frequently	
NewSeletters		N 	<b>%</b>	И	<b>%</b>	Used M	ethods	
NewSeletters	Meetings	4	70 e	<b>50</b>	<b>.</b>			
Radio TV 16 29.6 8 11.1 5 9.3 Newspapers 26 48.1 11 20.4 8 14.8 7 13.0 Field Days 34 63.6 16 29.6 16 7 13.0 8 14.8 Workshops 25 48.3 9 16.7 8 14.8 Demonstrations 33 61.1 10 18.5 11 20.4 Computers 9 13.7 0 0 2 3.7 Symposiums 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		4.0				26	48.1	
Newspapers 26 48.1 11 20.4 8 14.8 7 13.0 Field Days 34 63.0 16 29.6 14 25.9 Tours 30 55.6 7 13.0 8 14.8 Demonstrations 33 61.1 10 18.5 11 20.4 Computers 9 18.7 5 9.3 12 35.2 Home Study Courses 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		•				31	<b>57</b> . <b>4</b>	
Newspapers 26 48.1 11 20.4 8 14.8 Workshops 34 63.6 16 29.6 14 25.9 Tours 30 55.6 7 13.0 8 14.8 Demonstrations 33 61.1 10 18.5 11 20.4 Computers 9 18.7 5 9.3 19 35.2 Home Study Courses 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	TV					5	9.3	
Fie:d Days 34 63.6 16 29.6 14 25.9 Morkshops 25 48.3 9 16.7 8 14.8 Demonstrations 33 61.1 10 18.5 11 20.4 Computers 9 18.7 5 9.3 15 35.2 Home Study Courses 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Newspapers		-			7		
Workshops         25         48.3         9         16.7         8         14.8           Tours         30         55.6         7         13.0         8         14.8           Demonstrations         33         61.1         10         18.5         11         20         4           Computers         9         18.7         5         9.3         19         35.2           Computers         9         18.7         5         9.3         19         35.2           Home Study Courses         0         0         0         0         0         0         0           Bulletins         31         57.4         13         24.1         6         11.1         1         1         1         1         0         1         1.1         1	Field Dava					8		
Tours 30 55.6 7 13.0 8 14.8  Demonstrations 33 61.1 10 18.5 11 20 4  Computers 9 13.7 0 0 2 3.7  Symposiums 1 1.9 0 0 0 0 0  Bulletins 31 57.4 13 24.1 6 11.1  Teletip 5 9.3 1 1.8 2 3.7  Telephone Calls 39 70.4 24 44.4 20 37.0  On-Farm tests 33 61.1 10 18.5 8 14.8  Telephone Calls 39 70.4 24 44.4 20 37.0  On-Farm tests 33 61.1 10 18.5 8 14.8  Fam Visits 45 83.3 36 66.7 33 61.1  Video Tapes 2 3.7 0 0 0 3 5.6  Cable Television 1 1.9 0 0 0 0 0  Magazine Articles 29 53.7 14 25.9 8 14.8  Taleshotts 17 31.5 1 1.9 0 0 0  Special Publica- 25 46.3 5 9.3 4 7.4  Exhibits 12 22.2 1 1.9 0 0 0  Other 0 0 0 0 0  Other 19 0 0 0  Other	Workshops					14		
Demonstrations 33 61.1 10 18.5 11 20 4 Teleconferencing 2 3.7 0 0 2 3.7 Symposiums 1 1.9 0 0 0 0 0 Bulletins 31 57.4 13 24.1 6 11.1 Teletip 5 9.3 1 1.8 2 3.7 Telephone Calls 39 70.4 24 74.4 20 37.0 Telephone Calls 39 70.4 24 74.4 20 37.0 On-Farm tests 33 61.1 10 18.5 8 14.8 Farm Visits 45 83.3 36 66.7 33 61.1 Video Tapes 2 3.7 Audio Cassettes 1 1.9 0 0 0 3 5.6 Cable Television 1 1.9 0 0 0 0 0 Office Conferences 12 22.2 6 11.1 7 13.0 Magazine Articles 29 53.7 14 25.9 8 14.8 Telexhibits 12 22.2 1 1.9 0 0 0 Ofther 0 0 0 0 0					îe.7			
Teleconferencing 2 3.7 0 0 2 3.7 Symposiums 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				7	13.0			
Computers 9 13.7 0 0 0 2 3.7 Symposiums 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				10	18.5	<del>-</del>	_	
Symposiums 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0			<del>-</del>	
Home Study Courses 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- · · · · · · · · · · · · · · · · · · ·			5	-			
Bulletins 31 57.4 13 24.1 6 11.1 Teletip 5 9.3 1 1.8 2 3.7 Telephone Calls 35 70.4 24 74.4 20 37.0 Cn-Farm tests 33 61.1 10 18.5 8 14.8 Farm Visits 45 83.3 36 66.7 33 61.1 Video Tapes 2 3.7 Audio Cassettes 1 1.9 0 0 0 1 1.9 Cable Television 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			1.9				_	
Movies 3 5.6 0 24.1 6 11.1 Teletip 5 9.3 1 1.8 2 3.7 Telephone Calls 39 70.4 24 44.4 20 37.0 On-Farm tests 33 61.1 10 18.5 8 14.8 Farm Visits 45 83.3 36 66.7 33 61.1 Video Tapes 2 3.7 0 0 3 5.6 Cable Television 1 1.9 0 0 0 3 5.6 Cable Television 1 1.9 0 0 0 0 0 Office Conferences 12 22.2 6 11.1 7 13.0 Magazine Articles 29 53.7 14 25.9 8 14.8 Fairs Exhibits 12 22.2 1 1.9 0 0 Other 0 0 0 0	nome Study Cour	-	O					
Teletip 5 9.3 1 1.8 2 3.7 Telephone Calls 39 70.4 24 4.4 20 37.0 Cn-Farm tests 13 24.1 5 9.3 4 7.4 and demonstrations Farm Visits 45 83.3 36 66.7 33 61.1 Video Tapes 2 3.7 0 0 3 5.6 Cable Television 1 1.9 0 0 0 0 0 Office Conferences 12 22.2 6 11.1 7 13.0 Magazine Articles 29 53.7 14 25.9 8 14.8 Fairs Exhibits 12 22.2 1 1.9 0 0 Other 0 0 0			57.4	=			-	
Telephone Calls 39 70.4 24 44.4 20 37.0 Cn-Farm tests 13 24.1 5 9.3 4 7.4 and demonstrations Farm Visits 45 83.3 36 66.7 33 61.1 Video Tapes 2 3.7 0 0 3 5.6 Cable Television 1 1.9 0 0 0 1 1.9 Cable Television 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			<b>5</b> .6		_			
Fact Sheets 13 24.1 5 9.3 4 7.4  Con-Farm tests 33 61.1 10 18.5 8 14.8  Farm Visits 45 83.3 36 66.7 33 61.1  Video Tapes 2 3.7 0 0 3 5.6  Cable Television 1 1.9 0 0 0 0 0  Office Conferences 12 22.2 6 11.1 7 13.0  Magazine Articles 29 53.7 14 25.9 8 14.8  Fairs 17 31.5 1 1.9 0 0  Other 0 0 0  Other		5	9.3				•	
Cact Sheets       13       24.1       5       9.3       4       7.4         Con-Farm tests       33       61.1       10       18.5       8       14.8         Farm Visits       45       83.3       36       66.7       33       61.1         Video Tapes       2       3.7       0       0       3       5.6         Cable Talevision       1       1.9       0       0       0       0       0         Cable Television       1       1.9       0	Telephone Calls	39			1. B 44. A			
Cn-Farm tests       33       61.1       10       18.5       4       7.4         and demonstrations       45       83.3       36       66.7       33       61.1         Farm Visits       45       83.3       36       66.7       33       61.1         Video Tapes       2       3.7       0       0       0       3       5.6         Cable Television       1       1.9       0       0       0       0       0         Office Conferences       12       22.2       6       11.1       7       13.0         Posters       1       1.9       0       0       0       0       0         Magazine Articles       29       53.7       14       25.9       8       14.8         tions or articles       5       9.3       4       7.4         Fairs       17       31.5       1       1.9       0       0         Other       0       0       0       0       0       0       0		13						
Farm Visits 45 83.3 36 66.7 33 61.1  Video Tapes 2 3.7 0 0 0 3 5.6  Cable Television 1 1.9 0 0 0 0  Office Conferences 12 22.2 6 11.1 7 13.0  Magazine Articles 29 53.7 14 25.9 8 14.8  Fairs 17 31.5 1 1.9 0 0  Other 0 0 0		33				=		
(agent to farmer)       43       53.3       36       66.7       33       61.1         Video Tapes       2       3.7       0       0       0       3       5.6         Audio Cassettes       1       1.9       0 <t< td=""><td>and demonstration</td><td>ons</td><td>· · · ·</td><td>10</td><td>10.3</td><td>8</td><td>14.8</td></t<>	and demonstration	ons	· · · ·	10	10.3	8	14.8	
(agent to farmer)       33 61.1         Video Tapes       2       3.7       0       0       3 5.6         Audio Cassettes       1       1.9       0       0       0       0         Cable Television       1       1.9       0       0       0       0       0         Office Conferences       12       22.2       6       11.1       7 13.0       13.0         Posters       1       1.9       0       0       0       0       0         Special Publica-       25       46.3       5       9.3       4       7.4         Fairs       17       31.5       1       1.9       0       0         Other       0       0       0       0       0       0		45	83 3	20	00 7			
Video Tapes       2       3.7       0       0       3       5.6         Audio Cassettes       1       1.9       0       0       0       0       0         Cable Television       1       1.9       0       0       0       0       0         Office Conferences       12       22.2       6       11.1       7       13.0         Posters       1       1.9       0       0       0       0         Magazine Articles       29       53.7       14       25.9       8       14.8         tions or articles       4       7.4         Fairs       17       31.5       1       1.9       0       0         Exhibits       12       22.2       1       1.9       0       0         Other       0       0       0       0       0       0       0	(agent to farmer	r)	33.0	36	68.7	33	61.1	
Audio Cassettes 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Video Tapes	2	3 7	0	_			
Cable Television 1 1.9 0 0 0 1 1.9 O O O O O O O O O O O O O O O O O O O	Audio Cassettes	1			-	3	5.6	
Office Conferences 12 22.2 6 11.1 7 13.0 Posters 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Cable Television	7 1	_	_	=	0	0	
Posters  1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Office Conference					1	1.9	
Magazine Articles 29 53.7 14 25.9 0 0 0 Special Publica- 25 46.3 5 9.3 4 7.4 Fairs 17 31.5 1 1.8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Posters					7	13.0	
Special Publica-       25       46.3       5       25.9       8       14.8         tions or articles       17       31.5       1       1.9       0       0         Exhibits       12       22.2       1       1.9       0       0         Other       0       0       0       0       0       0	Magazine Article			-	•	0		
tions or articles  Fairs  Exhibits  Other  17  17  31.5  1  1.9  Other  1.9  O  O	Special Publica-				25.9	8	-	
Fairs 17 31.5 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	tions or article	40 An	46.3	5	9.3		•	
Exhibits 12 22.2 1 1.9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Faire					<b>T</b>	7 . 7	
Other $\begin{array}{cccccccccccccccccccccccccccccccccccc$					1.9	0	0	
0 0 0	Other							
		U	0	0	0	ŏ	0	



Table 8: Frequency Distribution of Respondents with Swine as Major Enterprise by Methods used to obtain Information Provided by the Nortl. Carolina Agricultural Extension Service (N=60)

Metho to b	Methods Considered to be important		Metho Most Fi	Methods Used Most Frequently		Projected future	
	N 	<b>%</b> 	N 	<b>%</b>	Used Mo N	ethods %	
Meetings	47	78.3	37	61.7			
Newlettors	51	8 <b>5</b> .0	38		35	58.3	
Radio	· 24	40.0	7	63.3	30	<b>50</b> .0	
TV	23	38.3	5	11.7	5	8.3	
Newspapers	32	.3.3	9	8.3	8	13.3	
Field Days	42	70.0	15	15.0	6	10.0	
Workshops	22	<b>36.7</b>		25.0	14	<b>23.3</b>	
Tours	31	51.7	8	13.3	9	<b>15</b> .0	
Demonstrations	36		11	18.3	11	18.3	
Teleconf rencing	4	60.0	10	16.7	13	21.7	
Computers	11	6.7	0	0	4	6.7	
Symposiums		18.3	3	<b>5.0</b>	13	21.7	
Home Study Courses	6	10.0	1	1.7	3	5.0	
Bulletins	1	1.7	1	1.7	3	5.0	
Movies	36	60.0	15	<b>25.0</b>	6	10.0	
Teletip	2	<b>3</b> .3	0	0	2	3.3	
	5	8.3	0	0	2	3.3	
Telephone Calls	34	<b>56.7</b>	19	31,7	14	23.3	
Fact Sheets	21	3 <b>5</b> .0	8	13.3	5	8 3	
On-Farm tests	41	<b>68</b> .3	19	31.7	17	28.3	
and demonstrations						~0.0	
Farm Visits	49	81.7	39	6 <b>5</b> . 0	27	45.0	
(agent-to farmer)					Z i	45.0	
Video Tapes	5	8.3	0	0	4	6.7	
Audio Cassettes	2	<b>3</b> .3	Ō	ŏ	2	3.3	
Cable Television	0	0	Ô	ŏ	i	1.7	
Office Conferences	17	28.3	6	10. ŏ	7	11.7	
Posters	2	3.3	Ö	0	i		
Magazine Articles	29	483	12	20. ŏ	8	1.7/ 12.3	
Special Publica-	24	40.0	5	8.3	9	15. Q	
tions or articles					ð	19.0	
Fairs	22	36.7	4	6.7	5	8.3	
Exhibits	15	25.0	1	1.7	2	3.3	
Other	0	0	Ō	0	1	3.3 1.7	

Table 9: Frequency Distriction of Respondents with Beef Cattle as Major Enterprise by Methods Used to obtain Information Provided by the North Carolina Agricultural Extension Service (N=159)

MeSI to	Methods Considered to be important		Metho Most Fi	ods Used requently	Projected Future Most Frequently	
		<b>%</b>	N 	% 	Used Mo N	eth <b>o</b> ds %
Meetings	133	<b>83</b> .6	112	70.4		
Newletters	137	86.2	101	70.4 6 <b>3</b> .5	93	58.5
Radio	50	31.4	17	10.7	80	<b>5</b> 0.3
TV	43	27.0	8	5.0	15	9.4
Newspapers	78	49.1	29	18.2	14	8.8
Field Days	115	72.3	64	40. <b>3</b>	23	14.5
Workshops	49	<b>3</b> 0.8	9	40.3 5.7	48	30. <b>2</b>
Tours	106	66.7	50	31.4	12	7.5
Demonstrations	111	69. <b>8</b>	47	29.6	35	22.40
Teleconferencing	3	1.9	0		45	28.3
Computers	10	<b>6</b> . 3	4	. 0 2. <b>5</b>	5	3.1
Symposiums	Š	3.1	0	2.5	31	19.5
Home Study Course	38 <b>Å</b>	<b>3</b> .8	ŏ		1	. 6
Bulletins	87	54.7	36	C	5	3.1
Movies	18	11.3	1	22.6	24	15.1
Teletip .	16	10.1	4	.6 2. <b>5</b>	1	. 6
Telephone Calls	86	54.1	48	30. 2	11	6.9
Fact Sheets	50	31.4	ğ	5. 7	34	21.4
On-Farm-tests	105	66.0	5 <b>5</b>	34. <b>6</b>	9	5.7
and demonstration	- 15		<b>0</b>	<b>01.0</b>	46	28.9
Farm Visits	134	84.3	80	<b>5</b> 0.3	61	20.4
(agent to farmer)	)		30	<b>3</b> 0.5	0.1	38.4
Video Tapes	7	4.4	1	. 6	10	7 F
Audio Cassettes	3	1.9	ō	0	12 3	7.5
Cable Television	S	1.3	Ŏ	ŏ	<b>5</b>	1.9
Office Conference	es 46	28.9	2ŏ	12.6	·	3.1
Posters	6	3.8	ő	12.0	18	11.3
Magazine Articles	77	48.4	зĭ	19.5	0	0
Special Publica-	65	40.9	16		23	14.5
tions or articles	,	- · ·	10	10.1	19	11.9
Fairs	50	31.4	10	c a	_	•
Exhibits	43	27.0	8	6. <b>3</b>	8	5.0
Other	1	.6	1	<b>5</b> .0	7	4.4
	•	٠. ٠	1	. 6	1	. <b>6</b>



Table 10: Frequency Distribution of Respondents with Field Crops as Major Enterprise by Methods used to obtain Information Provided by the North Carolina Agricultural Extension Service (N=229)

Me t	Methods Considered to be important		Metho Most Fi	ods Used requently	Projected Future Most frequently	
	N	%	H 	<b>%</b> 	Used M N	ethods % 
Meetings	188	82.1	139	60.7	4.5.5	
Newdetters	196	85.6	158	60.7	128	<b>55.9</b>
Radio	82	<b>3</b> 5.8	26	69.0	121	52.8
TV	88	38.4	26	11.4	22	9.6
Newspapers	132	57. <b>6</b>	39	11.4	32	14.0
Field Days	157	68.6		17.0	33	14.4
Workshops	84	<b>36.7</b>	64	27.9	52	22.7
Tours	122	53.3	15	6.6	19	8.3
Demonstrations	146	63.8	40	17.5	35	15.3
Teleconferencing	g 7	3.1	41	17.9	55	24.0
Computers	23		0	0	10	4.4
Symposiums	<b>8</b> 53	12.2	4	1.7.	39	17.0
Home Study Cours	es 13	3. <b>9</b>	0	0	1	. 4
Bulletins	120	<b>5</b> .7	1	. 4	6	2.6
Movies	16	52.4	53	23.1	29	12.7
Teletip	23	7.0	1	. 4	2	. 9
Telephone Calls	136	10.0	4	1.7	16	7.0
Fact Sheets	97	5 <b>9</b> .4	97	42.4	80	34.9
On-Farm tests	173	42.4	24	10.5	19	8. <b>3</b>
and demonstration	1/3	75.5	94	41.0	84	36.7
Farm Visits	188	00.4		_		
(agent to farmer	100	82.1	134	58. <b>\$</b>	125	54.6
Video Tapes	15					
Audio Cassettes		6.6	1	. 4	17	7.4
Cable Television	3	1.3	0	0	3	1.3
Office Conference	_	2.2	O	0	7	3.1
Posters		27.5	31	13.5	32	14.0
	13	5.7	2	. 9	1	. 4
Megazine Article		<b>49</b> .3	42	18.3	25	10.9
Special Publica-		41.9	21	9.2	22	9.6
tions or article					2.6	<b>3</b> .0
Fairs	57	24.9	6	2.6	2	. 9
Exhibits	49	21.4	4	1.7	5	2.2 2.2
Other	4	1.7	3	1.3	4	1.7
					- 4	1.7



Table 11: Frequency Distribution of Respondents with Poultry as Major Enterprise by Methods used to obtain Information Provided by the North Carolina Agricultural Extension Service (N=51)

- Method to be	Methods Considered to be important			ods Used requently	Projected Future Most frequently	
	N 	<b>%</b> 	N 	% 	Used M N	eth <b>ods</b> %
Meetings	37	72.5	31	60.0		
Newletters	42	82.4	33	60.8	23	45.1
Radio	23	45.1	33 9	64.7	27	52.9
TV	26	51.0	5	17.6	9	17.6
Newspapers	33	64.7	14	9.8	6	11.8
Field Days	36	70.6	24	27. <b>5</b>	13	25.5
Workshors	18	35.3	7	47.1	19	37.3
Tours	32	62.7	13	13.7	8	15.7
Demonstrations	29	56. 9	11	25.5	13	25.5
Teleconferencing	Õ	0.9	0	21.6	8	15.7
Computers	š	5.9	0	0	1	2.0
Symposiums	1	2.0	0	0	ð	17.6
Home Study Courses	2	3.9	0	0	1	2.0
Bulletins	30	58.8	8	0.	1	2.0
Movies	6	11.8		15.7	8	15.7
Teletip	4	7.8	1	2.0	1	2.0
Telephone Calls	30	58.8	2	3.9	2	3.9
Fact Sheets	19	37.3	16	31.4	13	25.5
On-Farm tests	29	56.9	6	11.8	5	9.8
and demonstrations	29	<b>36.9</b>	12	23.5	10	<b>19</b> .6
Farm Visits	38	74.5	00			
(agent to farmer)	30	74.5	22	43.1	16	31.4
Video Tapes	4	7.8	•			
Audio Cassettes	1	2.0	0	0	4	7.8
Cable Television	Ô	2.0	0	0	0	0
Office Conferences	15	29.4	0	0	0	0
Posters	2	3.9	8	15.7	5	9.8
Magazine Articles	26	51.0	0	0	0	O
Special Publica-	24	<b>4</b> 7.1	10	19.6	10	19.6
tions or articles	<b>८</b> ₩	41.1	5	9.8	8	15.7
Fairs	15	29.4	•			
Exhibits	14	29.4 27.5	5	9.8	3	<b>5</b> .9
Other	0	0	0	0	1	2.0
	V	U	0	0	0	0



Table 12: Frequency Distribution of Respondents with Peanuts as Major Enterprise by Methods Used to obtain information Provided by North Carolina Agricultural Extension Service (N=73)

to be	Methods Considered to be important		Meth Most F	ods Used requently	Projected Future Most frequently	
	H 	<b>%</b> 	N 	<b>%</b> 	Used Methods N %	
Meetings	60	82.2	A7			
Newsletters	63	8 <b>6</b> .3	<b>4</b> 7 <b>5</b> 3	64.4	45 61.6	
Radio	29	39.7		72.6	42 57.5	
ŢV	32	43.8	<b>8</b>	11.0	5 6.8	
Newspapers	41	<b>56</b> . 2	10	13.7	14 19.2	
Field Days	51	<b>69</b> .9	15	20.5	12 16.4	
Workshops	31	42.5	16	21.9	8 11.0	
Tours	33	45.2	4	<b>5</b> .5	7 9.6	
Demonstrations	46	<b>63</b> .0	7	9. ¢	5 6.8	
Teleconferencing	3	4 1	12	16.4	11 15.1	
Computers	15		0	0	2 2.7	
Symposiums	6	20.5	1	1.4	18 24.7	
Home Study Courses	7	8.2	0	0	1 1.4	
Bulletins	49	9.6	0	0	2 2.7	
Movies	7	67.1	23	31.5	13 17.8	
Teletip	11	9.6	2	2.7	1 1.4	
Telephone Calls	48	15.1	1	1.4	7 9.6	
Fact Sheets		65.8	33	45.2	29 39.7	
On-Farm tests	38	<b>5</b> 2.1	10	13.7	12 16.4	
and demonstrations	57	78.1	34	<b>46</b> .6	30 41.1	
Farm Visits	^^	<b>.</b>			00 41.1	
(agent to farmer)	63	86.3	48	<b>65.8</b>	43 58.9	
Video Tapes				_	43 58.9	
Audio Cassettes	4	5.5	0	0	7 9.6	
Cable Television	2	2.7	0	Ŏ		
Office Conferences	2	2.7	0	Ö		
Posters	22	30.1	6	8. ž	- · ·	
Magazine Articles	4	<b>5</b> .5	1	1.4	_ · · · ·	
Special Publica-	44	<b>6</b> 0.3	8	11.0	0 0	
tions or articles	32	43.3	6	8.2	7 9.6	
Fairs			-	0. 8	8 11.0	
Exhibits	11	15.1	0	0	• • •	
Other	13	17.8	Ö	ŏ	1 1.4	
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