

A STUDY OF
THE QUESTIONS ASKED OF COUNTY EXTENSION AGENTS IN
FOUR MICHIGAN COUNTIES
AND THE
PUBLICATIONS AVAILABLE TO ANSWER THE QUESTIONS

by
Charles Louis Lang

A THESIS

Submitted to the College of Agriculture of Michigan State
University of Agriculture and Applied Science
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AN ABSTRACT

One of the primary responsibilities of the Michigan Cooperative Extension Service is to disseminate needed information to the public. This study deals with only one of these sources, namely publications.

The purpose of this study was to determine the effectiveness of current publications in answering questions asked of county agents by the people. For the purposes of this study, the effectiveness of a publication was measured by the degree to which it provided the information requested.

To find out what information was requested the extension agents in four Michigan counties volunteered to record the questions asked of them during the first week in each month for the year 1958. These questions were then classified and tabulated according to the type of information requested, seasonality and by county. The number of times each question was asked was carefully noted as a measure of importance.

Of particular significance was the fact that most people ask very specific questions requiring definite answer rather than general questions requiring an involved discussion of the topic as is commonly included in many extension bulletins. Thus for the one purpose of answering the questions asked of extension agents by the people, the simple, inexpensive fact sheet or folder would appear more efficient than the more expensive types of publications.

Many of the most frequently asked questions were very seasonal in nature. Thus, by keeping a record of questions asked by date would be most helpful in anticipating questions and preparing publications designed to provide the desired information.

The kinds of questions asked is also important in planning the total extension educational program both on the county and state level as it gives an indication of the problems of the people.

The number of questions asked of the extension office increased in direct ratio with the population. The kinds of questions, however, and the frequency with which they were asked varied by type of farming and the rural or urban character of the population. This indicates the desirability of county and area publications planning. Also, contrary to common belief, over one-half of the people who asked questions of the county extension office were women; and over one-half of their questions involved problems in subject matter areas other than home economics such as home gardening and lawn care.

It was shown that 79 percent of the available publications contained information about questions asked of the agents in this study. Of the different kinds of questions, 61 percent were satisfactorily answered in currently available publications. In general, publications of the Michigan Cooperative Extension Service contained answers to the questions more frequently asked by a number of people. Thus, it can be said that they are meeting, in large measure, the needs of people as expressed by their requests for information. However, this analysis of questions asked and the answers available in existing publications indicates additional needs for, particularly, leaflets and simple information sheets on additional topics. A careful study of the questions asked and the frequency of requests points up some of these needs. A continuing analyses of the kind undertaken in this research should prove

extremely valuable as a basis for publications planning in the future within each county and state as well as nationally.

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CHAPTER I

Introduction and Background

The publications program of the Michigan Cooperative Extension Service was the primary subject of concern in this study. The scope of the study included the questions asked of Michigan county extension agents and the information that was made available to help answer these same questions. The type of information herein refers only to that found in the publications made available through the Cooperative Extension Service.

The primary purpose of this study was to determine the effectiveness with which publications were used to answer the questions asked of county extension agents.

This study dealt with only two facets of the extension program. One area dealt with the questions asked of county extension agents; the other dealt with information in extension publications. Though both were important parts of the total extension program, they were not in any sense considered as the only important areas.

The significance of the above purpose will be made more meaningful by examining the organization and program of the Cooperative Extension Service.

The Cooperative Extension Service is "cooperative" in that the federal, state, and local governments provide funds and facilities for the extension program. In the fiscal year 1957-1958 the Michigan Cooperative Extension Service received 48 percent of its allocations from

the State Legislature, 33.5 percent from the Federal Government and 16.8 percent from County governments. Of the remaining 1.7 percent, most of the funds came from the Kellogg Foundation.¹

It is an "extension" or, more accurately, a division of Michigan State University. The director of the Michigan Cooperative Extension Service is responsible to the Dean of the College of Agriculture. In turn the Dean is responsible to the President of the University, and he is responsible to the State Board of Agriculture, a constitutional board of six members. These members are elected at large for a six year term; two members elected every two years.

The extension director and his staff are responsible also to the Federal Extension Service, a branch of the United States Department of Agriculture.

In terms of its educational program it is a "service" to the public. The basis for determining the program was defined by the Smith-Lever Act of 1914.

"To aid in diffusing among the people of the United States, useful and practical information on subjects related to agriculture and home economics, and to encourage the application of the same. . . Cooperative Extension work will consist of giving instruction and demonstrations in agriculture and home economics to persons not attending or residents in said colleges."²

It was noted the words "people of the United States" and "persons" were used to define the recipients of extension information. There was

¹Michigan Cooperative Extension Service, Budget Report for Fiscal Year 1957-1958, July 1, 1957.

²U.S. Congress, Amended Smith-Lever Act, Public Law 85, 83rd Congress, Chapter '57 - 1st session. 81675.

no mention of serving only those people engaged in agriculture though for many years these people have been the primary recipients of extension educational information.

The word "related" defined the type of information to be used by the extension service. It has been a common conception that information disseminated dealt primarily with production techniques in agriculture and home economics. Because of its affect on total production and profits farmers of today have learned that they must have information in many related areas in addition to information on production techniques. Such information involves marketing, agricultural policy, zoning, land values, business trends, et cetera.

The county extension office is the most important segment of the extension service for disseminating information to the public because there is more contact made with the people at the county level.

Each county extension program is carried out according to a plan of work. Briefly this is a plan of what should be done, when, how, and by whom. Most of the extension agents time is spent in carrying out this plan. Such a plan is formulated partly on the needs, wishes, desires and problems of the people in the county. The county agent is able to define such situations through personal contact and organized extension and related groups. Some extension groups have suggested educational programs they believed the people in the county should have.

Another part of the extension program is determined on the state and national level. This is done by studying (1) changes made in agriculture and home economics (2) other programs, policies and organizations that directly or indirectly affect agriculture or home economics, (3)

careful prediction of the future changes in these areas, and results of (4) programs carried out or in progress in the counties.

Then the county extension agents study the information from their contacts with the people, suggestions and recommendations of county extension groups, and the program plans from the state and national levels. Through his analysis of this information a plan of work is constructed for the coming year.

To execute the county plan of work, the county extension agent may utilize many resources. From the extension service he may use state specialists, printed information by specialists and research personnel, as well as his own background of training through study and experience. He may cooperate with and utilize the resources of other agencies and organizations, especially those located in the county. Those might include Federal Agricultural agencies, local marketing organizations, public service organizations, and businesses.

With the various resources of information at his disposal, the county extension agent must be familiar with all channels of communication and know how to use them to disseminate his information. Such channels are group meetings, individual face-to-face contact, telephones, letters, publications, newspapers, radio, television, and almost any other channel of communication available. In each channel he must learn to use the aids that will help communicate his message and help the receiver to remember and learn how to use this information. He must know his goals; who he wants to contact and what action he expects them to take. He must know the means to these goals, who and how many people

have received information through each channel, what channel is the most effective for his message, when he should use it, and how he should present it.

In summary, the areas discussed included a brief analysis of the organization and program of the Cooperative Extension Service and how its program was determined and carried out.

As pointed out the printed publication is one of the forms of information that the county extension agent may use. For the purposes of this study a publication is defined as information in printed form with or without illustrations, bound in a soft cover, and available for distribution to the public by the Cooperative Extension Service. It may be classified as a folder, extension bulletin, special bulletin, or a circular. Circular publications include five different series; farm buildings, tourist and resort, extension, park management, and miscellaneous.

Some publications printed by the extension service are not intended for general public use. Most of these are technical bulletins. Because of their limited use, they are not included in the definition of publications for this study. Some of the special bulletins are of a technical nature, while others could be used effectively as sources of information by the general public. Therefore all of the special bulletins are included in the definition of publications.

The content of the publication depended largely on its subject matter area and the type of information that is believed to be necessary to discuss the subject. A bulletin contains more information than the smaller leaflet and folder. For example, a bulletin may present a

recommended spraying program for all vegetable crops while a folder may discuss one spraying program for one or a few vegetable crops.

The major uses made of publications are variable. One use is to supply the related technical and complex information about a subject that an agent may need but could not recall from memory. Such information may have involved exact measurements of equipment, procedure, or proper diagnosis.

It may be used to educate the agent about a new or seldom used idea or subject.

It may be used as an educational aid by the agent to educate the public.

Depending upon the situation involved it may be used as the only means of communicating the information or as a supplement to other information the agent may be using.

Some publications are distributed on individual request. Many county extension offices have a display area with copies of publications which allow anyone to make personal selections.

Practically all publications are distributed free of charge. Only a very few publications have a charge made to the recipient because of high printing cost. During the fiscal year 1957-1958, a total of \$38,702 was spent for the printing of 954,000 copies of 77 different publications.³ The average printing cost for a single publication was a small \$.042.

³Interview with Donald E. Gregg, Publications Editor, Michigan Cooperative Extension Service.

Added to the printing cost is the time spent by the publications editor, his staff, the person or persons writing the publication, and those who must approve it. Other costs include labor and postage for distribution. The county extension agents and their staff are involved but to a lesser degree.

The cost of a publication from the time its idea is born until it reaches the hands of its user represents a sizeable amount of the extension budget.

The extension publication must be an effective source of extension information. The most important determinant of this effectiveness is to publish information that was requested by the users.

Having analyzed the publication and its place in the extension program the purpose of this study will be expanded and discussed in more detail. The purposes of this study are:

1. To find what questions are asked of county extension agents. An attempt will be made to identify:
 - a. The kinds of questions that are asked and in what major subject matter areas, if any, can they be grouped.
 - b. How frequently are the questions asked.
 - c. What questions are asked during definite seasons of the year.
 - d. What difference, if any, exist among the counties in the questions asked.
2. To identify the extension publications that are available to answer questions. Identify those publications that can not answer the questions.
3. To prove or disprove the following hypotheses that:
 - a. At least one-half of the questions are answered with information found in publications.

- b. Less than half of the questions are answered in part or not at all because of the lack of publications in certain subject matter areas.
- c. When the questions are categorized by the nine⁴ areas of program emphasis of the scope report, over 90 percent of the questions are in the four areas of:
 - 1. efficiency in agricultural production
 - 2. efficiency in marketing distribution
 - 3. management on the farm and in the home
 - 4 youth development

The results of this study need not be limited in use. Coupled with the related research in Chapter II the information can be applied in several ways. The office of information services of Michigan State University can use the information to determine:

- 1. What information is needed to answer the questions.
- 2. In what form the information is needed; i.e. publication, news release, county program, or some other form of information.
- 3. The intensity of the coverage or the amount of information that is needed.
- 4. Where the information should be disseminated.
- 5. When the information should be disseminated.
- 6. What information should not be used or is not needed at that time.

The administrative staff of the Cooperative Extension Service could use the same information as a basis to plan the utilization, publication, and dissemination of publications in the extension program. Furthermore a plan of work or a part thereof can be developed that utilizes

⁴ Subcommittee on Scope and Responsibility, The Cooperative Extension Service, ... Today. Special report, April 1958.

at least part of the information gained from studying the questions used in this study.

CHAPTER II

Review of Related Research

The purpose of this section was to review any research believed to further enhance the understanding of this study. The areas considered important were:

1. Where people got their information and the importance of publications as one of the sources.
2. The type of information people expected to get from the Cooperative Extension Service.
3. Who used the publications.
4. How often people used publications and how satisfied they were with them.
5. What people thought of extension publications as a source of information.
6. A study by the United States Department of Agriculture on publication needs.

A distinction was made between the usage of the terms "information," and "information in the form of publications." While the latter was well defined, the first term, "information," included any and all forms of information disseminated by the Cooperative Extension Service.

1. Where people get their information and the importance of publications as one of the sources.

A study made by James N. Young and C. Paul Marsh⁵ of the adoption of recommended farm practices and the sources of information used by

⁵James N. Young and C. Paul Marsh. The Adoption of Recommended Farm Practices and Source of Farmers Information. University of Kentucky Agricultural Experiment Station, Lexington, Ky., Progress Report 40, October 1956.

Kentucky farmers described the value farmers placed on ten different sources of information.

Young and Marsh questioned 393 farmers in 1950 and 343 of the same sample in 1955. They asked the farmers where they got their information and how helpful it was in adopting 14 recommended farm practices in the two years before each interview (Table 1).

TABLE 1

Percentage of farmers reporting use of various channels
for farming information in the two years before
they were interviewed; 1950 and 1955⁶

Channel of communications	1950 ^b (N-393) percent	1955 (N-343) percent
Radio	86	85
Farm magazines	77	78
Newspapers	67	69
Television ^a	-	41
Agricultural agency representatives	56	61
Farm meetings	33	42
Circular letters from county agent	76	86
Friends, neighbors, or relatives	88	87
Dealers and salesmen	33	55
Farm bulletins	46	67

^aTelevision was not used in 1950.

^bTotal percentage for each year was more than 100 percent because each farmer gave all the sources of information he used.

Extension could have been responsible for part of the information disseminated through radio, newspapers, television, agricultural agency representatives, farm meetings, circular letters from the county agent,

⁶Ibid., p. 11.

and farm bulletins. But no description was made as to the amount of extension participation in each of these channels of communication.

Farm bulletins included Extension and USDA bulletins. There was no mention of the number of bulletins that came from either agency.

A little less than half of the farmers reported using farm bulletins in 1950. This increased to about two-thirds of the farmers in 1955.

Despite the increasing and high use of farm bulletins over the five year period, the farmers rated it low as the most helpful source of information (Table 2).

TABLE 2
Percentage of farmers who reported various channels
as among those from which they got the most helpful
information; 1950 and 1955⁷

Channel of communication	1950 (N-393) percent	1955 (N-343) percent
Radio	33	23
Farm magazines	16	18
Newspapers	4	20
Agricultural agency representatives	20	32
Farm meetings	7	7
Farm bulletins	5	3
Circular letters from county agent	6	6
Friends, neighbors, or relatives	30	52
Dealers and salesmen	2	4
None helpful	3	3

Only five percent of the farmers reported farm bulletins as the most helpful source of information in 1950. This decreased to three percent by 1955.

⁷Ibid., page 7.

In 1955 the category friends, neighbors, or relatives was reported by over half of the farmers as the most helpful source. This was followed by agricultural agency representatives and radio. These sources of information and their usefulness were closely related to the reliable sources of agricultural information indicated in the 1955 report by the Subcommittee for the Study of Diffusion of Farm Practices, "How Farm People Accept New Ideas."⁸

A part of Elgin Cornett's⁹ study on how different publics see the Cooperative Extension Service showed where people got their information. However, his study does not rate the value or relative importance of each source of information.

In his study, Cornett used 63 full-time Jackson County dairy farmers, 40 part-time farmers, 161 members of Jackson Rotary and Kiwanis Clubs, 41 members of the Jackson business and professional women's clubs and 50 Michigan State University faculty members. All of these 355 people represented a 42 percent response to the questionnaires. Of these, 80 percent said that they had heard of the Cooperative Extension Service.

They were asked if they or any member of their family had used information provided by extension agents. The following percentages of each group indicated that they had (Table 3).

⁸Subcommittee for the Study of Diffusion of Farm Practices, How Farm People Accept New Ideas, North Central Regional Publication 1. Agricultural Extension Service, Iowa State College, November, 1955.

⁹Elgin M. Cornett, "A Study of Public Concepts Related to the Role of Cooperative Extension Service," (Unpublished Master's Thesis), Department of Extension Personnel Development, Michigan State University, 1958.

TABLE 3

Indication of who has used extension information¹⁰

Group using information	Percentage of group using
Full time farmers	94
Part time farmers	83
Urban groups	42

Farmers and their families were the largest group that used extension information. A little less than half of the urban group used extension information.

Cornett asked the people to recall how they received their information from the Cooperative Extension Service (Table 4). The response to this question showed personal contact as the most common method. Bulletins were used by a little more than half of the people. The 64 percent of full time farmers who used bulletins was very close to the 67 percent of farmers that used farm bulletins in 1955 as shown in the study made by Marsh and Young.

In summary of this section certain generalizations were made about the source of information and importance of publications.

1. Considering all the sources of information, farm bulletins were used by not less than half of the farm population.
2. Farm bulletins seldom were indicated as the most helpful source of information. But it can be assumed that they were helpful to some degree.

¹⁰Ibid., p. 29.

TABLE 4

Methods recalled by which extension information was received¹¹

Method Recalled	% of full time farmer	% of part time farmer	% of urban men	% of urban women
Telephone	32	21	20	41
Letter	64	43	24	18
Personal contact	90	73	54	55
Radio	46	49	35	32
T.V.	10	20	9	9
Newspaper	51	43	31	23
Bulletin	64	58	50	41
Friend	7	3	17	27

3. Considering the information people received from extension, bulletins were used by half of the people (farmers and non-farmers).

4. A higher percentage of the farm population have used extension information as compared to the urban population.

2. The type of information people expected to get from the Cooperative Extension Service

Cornett asked if the city population benefited from the agricultural education that was intended specifically for farmers. Farmers and urban people seemed to agree on its usefulness. About a third of all the respondents said it was of much benefit. A little over half indicated that it was only of some benefit.

In Cornett's study the term agricultural education can be rather broad. The respondents gave some idea of what this might include when

¹¹Ibid., p. 31.

they indicated certain areas of importance for extension's educational assistance to the farmers (Table 5).

Information on production techniques was mentioned by over half of the farmers and non-farmers. A quarter of non-farmers indicated business methods as the second area of importance. However, a third of the farmers felt business methods and marketing were the second most important areas.

TABLE 5

Comparison Between Rural and Urban Answers on What
Information is The Most Useful to Farmers¹²

Area of primary assistance to farmers	percent farmers	percent non-farmers
Production techniques	57	50
Business methods	17	25
Marketing	15	9
Conservation	11	9
Organizations	0	5
Public policy	0	2

The women were asked what was the most useful information from the home demonstration agent (Table 6). Only 25 percent of the women responded to this question.

¹²Ibid., p. 40.

TABLE 6

Rural and Urban Opinions on the Most Useful Help
Received From the Home Demonstration Agent¹³

Most helpful	Percent rural	Percent urban
Homemaking skills	49	43
Nutrition information	12	6
Ways to save money	9	3
Social graces	9	6
Improve community living standards	2	12
Information on family relations	7	24
No help	12	2

Not more than half of the rural and urban women indicated that they received the most helpful information in the area of homemaking skills. However, there was some difference between rural and urban women in indicating other areas of the most helpful information. Nutritional information was mentioned by only 12 percent of rural women. Other areas followed closely to the area of nutritional information. However, a quarter of the urban women indicated information of family relations as the second most important source of information.

All the people (men and women) indicated that extension should have increased its educational efforts in areas of zoning, taxation, health, and community problems.

¹³Ibid., p. 48.

Based on the above discussion the following generalizations were made about information people expected from the extension service.

1. Half of the people expected extension to be of primary assistance to farmers on matters pertaining to production techniques.
2. Women feel that the most helpful information from the home demonstration agent is in the area of homemaking skills.

3. Who used the publications?

Most of the research available on the users of publications involved only the farm population. However, Cornett's study showed that 49 percent of the urban men and 41 percent of the urban women use publications for extension information.

In the rural population, Cornett found over two-thirds of the full time farmers and their families used publications as a source of extension information. A little over half of the part-time farmers and their families used publications as a source of extension information.

The Kentucky study by Young and Marsh described the users by gross sales, and the rate of adoption of recommended farm practices. The use of farm bulletins as a source of information increased appreciably from 1950 to 1955 in all groups (Table 7).

According to gross sales more farmers with gross sales over \$2,500 used farm bulletins as a source of information than those who grossed less than \$2,500. Except for television, all channels of communications were used more by farmers with high gross sales than those with low gross sales.

TABLE 7

Percentage of Farmers Having Different Gross Sales
Who Reported Use of Various Channels for Farming
Information, 1950 and 1955¹⁴

Channel of communications	Less than \$2,500		More than \$2,500	
	1950	1955	1950	1955
Radio	83	82	90	98
Farm magazines	67	73	93	92
Newspapers	56	45	83	88
Television	-	27	-	25
Agricultural agency representatives	40	43	84	84
Farm meetings	21	25	54	62
Farm bulletins	31	53	71	86
Circular letters from county agent	66	79	92	97
Friends, neighbors or relatives	88	82	89	92
Dealers and salesmen	28	45	42	67

With a few exceptions all the different channels increased as sources of information from 1950 to 1955 for those people in both income groups.

According to the rate of adoption of recommended farm practices, i.e. low, medium or high adoption, the use of bulletins increased over the five year period (Table 8).

In 1955 less than half of those living in a low adoption neighborhood reported farm bulletins as a source of information. Those living in medium and high adoption neighborhoods used farm bulletins frequently.

As the rate of adoption moves from low to high the use of all channels of communications as sources of information increased. Radio; farm magazines; and friends, neighbors or relatives increased slightly

¹⁴Young and Marsh, Op. cit., p. 15.

TABLE 8

Percentage of Farm Operators Reporting Use of Various Channels
For Farming Information in the Two Years Preceding
The Interview, 1950 and 1955, Classified According
to the Type of Neighborhood in Which They Lived¹⁵

Channel or communication	Low adoption		Medium adoption		High adoption	
	1950 (N-156)	1955 (N-138)	1950 (N-139)	1955 (N-123)	1950 (N-98)	1955 (N-82)
Radio	82	88	88	81	89	88
Farm magazines	70	75	88	81	93	92
Newspapers	52	48	71	84	85	84
Television	-	34	-	40	-	54
Agr'l. agency repres.	34	41	66	70	82	84
Farm meetings	19	24	36	44	53	70
Farm bulletins	28	47	50	80	69	83
Circular letters from county agent	63	73	84	93	86	98
Friends, neighbors	88	82	82	86	97	95
Dealers and salesmen	27	49	29	58	49	61

but were mentioned quite frequently as sources of information and varied little according to the neighborhood in which they lived.

Young and Marsh found that farm bulletins were not given as the most helpful source of farm information regardless of the description of the user, i.e. gross sales and rate of adoption. Farm bulletins, when reported as the most helpful source, ranged from a low one to nine per cent of farmers in all of the groups.

In summary of this section, the following generalizations were made concerning those who used publications.

1. About half of the urban population using extension information used publications.
2. About two-thirds of the farm population using extension information used publications.

¹⁵Ibid., p. 17.

3. Farmers with high gross sales were more frequent users of farm bulletins as a source of information than those with low gross sales.
4. Farmers who lived in neighborhoods with medium and high adoption rates were more frequent users of farm bulletins as a source of farming information than those who lived in a low adoption neighborhood.
5. Regardless of who had used the publication, they were seldom indicated as the most helpful source.

These are rather limited assumptions and tell very little about people who use publications. But it described those farmers who used extension information as to gross sales and rate of adoption of recommended farm practices.

4. How often people used publications and how satisfied they were with the publications.

No research was found that studied how often all the people used publications and to what degree. But the study on awareness and use of USDA and State Agricultural Publications among Illinois Farmers¹⁶ gave the desired information about the farm population.

The Illinois study was based on the results of 794 questionnaires returned from 836 panel members. Each panel member was a farm family engaged in farming on a commercial basis, as defined by the United States Census Bureau. Each county in Illinois was represented by at least one panel member.

A large majority (81.5 percent) of all the respondents had known that USDA publications were available and a slightly smaller majority

¹⁶Office of Information, USDA, Awareness and Use Among Illinois Farmers of USDA and State Agricultural Publications, mimeo. April 1958.

(79.3 percent) knew they were free. Fewer people (66.6 percent) were aware that College publications were available and slightly less (62.8 percent) knew that they were free.

The types of users were determined by the number of publications used per year (Table 9).

TABLE 9

Intensity of Use as Shown by Number of Publications
Received in the Last 12 Months¹⁷

Number of Publications Received	Percent Answering
None (non-user)	27.6
1-5 (light user)	23.5
6-15 (Medium user)	30.0
16 or more (heavy user)	18.9

About half of the non-users knew that publications were available.

The average number of publications used by all of the respondents in a 12 month period was 13.1. College publications made up about two-thirds of this number or about 8.6 publications. Among the heavy users, twice as many college publications were used as the USDA publications. Among light and medium users USDA publications had a higher number.

About a quarter of the respondents had no publications in their home. Another quarter had 11 or more, while the remaining half had one to ten different publications (Table 10).

¹⁷Ibid., p. 12.

TABLE 10

Average Number of Publications Received
Last 12 Months by Source¹⁸

Type of User	Average Number by Source		
	USDA	U. of Ill.	Other Colleges
All respondents	4.4	8.3	0.4
Non-user	--	--	--
Light user	1.3	1.7	0.2
Medium user	3.9	4.9	0.2
Heavy user	9.0	21.6	0.8

In summary of this section the following generalizations were made about the users of publications.

1. About two-thirds of the farm population were aware that college publications were available for distribution. About the same percent knew that they were free.
2. A quarter of the farm families have used college publications.
3. About half of the farm families have used between one and five college publications per year per family.
4. About 20 percent of the farm families have used about 20 college publications per year per family. These families were classified as heavy users of publications.
5. What people thought of extension publications as a source of information.

Recalling the study by Young and Marsh, it was shown that farm bulletins were mentioned seldom as the most helpful source of information.

¹⁸Ibid., p. 18.

The Illinois study stated about half of the people indicated that publications were of some help. Farm families were not overly enthused about the help received from publications.

Table 11 indicates that non-users received some help from publications. No explanation was made on what is meant by the amount of help the non-users have received since they supposedly have not used publications.

TABLE 11
Amount of Help Received From Publications
By Type of User¹⁹

Amount of Help	Type of User				
	All Families	Non-user	Light	Medium	Heavy
Very much	14.1%	2.7%	11.2%	18.1%	28.0%
Much	16.1	2.3	12.8	23.1	29.3
Some	44.2	19.2	64.3	54.6	39.3
Very little or none	10.1	21.0	11.2	3.8	2.7
No answer	15.5	54.8	0.5	0.4	0.7

In the previous sections of this chapter it was generalized that bulletins were used by not less than half of the farm population. It was also generalized that bulletins were seldom indicated as the most helpful source of information. The above table has shown the amount of help the people thought they had received.

Three editorial factors were used in the Illinois study to measure the attitudes of the users concerning their use of publications as a

¹⁹Ibid., p. 13.

source of information. These factors were: (1) ease of reading, (2) ease of finding information, and (3) the practicability of content.

According to ease of reading about half of the people indicated that at least three-fourths of the publications were easy to read. A third gave no answer. Only about 2 percent indicated that none of the publications were easy to read.

A majority (57.3 percent) of the farm families indicated that ease of finding information was fairly easy or very easy. About a third gave no answer with a small 7.5 percent indicating some sort of difficulty.

Another good majority (58.3 percent) indicated that the information in the publication was practical. About a third gave no answer with the balance indicating little or no practicability.

A New York study of Homemakers' Opinions of an Extension bulletin by Emilie T. Hall reported what homemakers think of the publication, "Reupholstering Chairs With Foam Rubber."²⁰ The results of this study were quite limited. It involved only those people who requested the publication.

During the period April 1954 to February 1955, the Cornell University mailing room received 1,104 requests for the publication. Of this total 694 were women with New York state addresses. The balance were men, business concerns, and out of state women.

A random sample of 343 was made from the requests by 694 New York women. The response to the mailed questionnaire was 263 (77%).

²⁰ Emilie T. Hall, et al, Homemakers' Opinions of an Extension Bulletin. Extension Work in Agriculture and Home Economics, State of New York, May 1956.

About two-thirds of the women said they wanted the bulletin because they had some furniture that needed reupholstering and they wanted to do it themselves. This was the main purpose of the bulletin. The remaining number of respondents said they wanted the bulletin for information for future reference.

A high proportion of the women indicated the bulletin met their expectations or was better than expected.

Nearly all of the women (95%) felt satisfied about paying the 25¢ charge for the publication. Only 2 percent said they did not get their money's worth.

According to this study there was a very high percentage of women who were satisfied with the publication. But as mentioned earlier these were women who had requested the publication. It could be assumed that the women believed the bulletin would give the information they wanted. Otherwise they might not have ordered it.

In summary of this section the following generalizations have been made for this study:

1. About half of the farm families felt they received at least some help from publications.
2. A majority of the farm families found that publications were easy to read, easy to find information, and contained practical information.
3. A very large percentage of women who requested publications believed the publications met their expectations.

6. Other related research.

The Office of Information, United States Department of Agriculture, has completed a study that was very similar to this one.²¹ The results were not available at the time this study was made.

The purpose of the study was to gain information that would aid in the determination of subject matter, editing, and quantity of USDA publications for public use.

The scope of the study was to record the questions asked of the Cooperative Extension Service during the year 1958. The sample included five states, Massachusetts, Michigan, Mississippi, Oklahoma, and Washington. In each state a few sample counties were selected.

Because of its similarity in procedure and method, further analysis of the USDA study was made in the following chapters.

This chapter was an incomplete summary of all related information but has summarized the more important findings. In the specific field of this study research unknown to the author may have been available. The generalizations made from the related research were incorporated in the analysis and conclusion of this study.

²¹Letter from Larry E. Sarbaugh, Office of Information, United States Department of Agriculture, June 30, 1958.

CHAPTER III

Collection of Data

1. Procedure and Method of Classifying Questions

The scope of this study included only the questions recorded in the four Michigan sample counties of Arenac, Berrien, Gratiot, and Macomb.

These counties were selected as a representative sample of the state of Michigan to be used in the USDA study. Yet each county represented different major types of farming carried out in various areas of the state. Because of the differences in the agriculture, population, and non-farm business, differences in county extension programs were expected.

Arenac represented the small population (9,644) and farm business area; Berrien had a strong agricultural interest in fruit and dairy and a growing suburban population of 135,000; Gratiot was strong in general farm crops and livestock and had 36,000 residents; and Macomb had a growing metropolitan and suburban population (380,000) which lived close to the Detroit area with major agricultural interest in truck farming.

The questions used in this study were the same questions used in the USDA study. However, the questions in this study were those asked during the first 28 weeks of 1958: roughly the first seven months of the year. For the most part the questions were very specific. An example of some of the questions is, "What varieties of corn should I plant?"

All of the county extension agents and the office staff of these counties were asked to record all the questions asked of the Cooperative

Extension Service. This included any and all means of communications and situations through which the questions were asked.

There were a few errors in recording questions. The agents in each sample county pointed out some of the problems encountered.

The county extension agents were asked what percent of all the questions they failed to record. Arenac county agents indicated that they probably missed 25 to 30 percent of the questions; Berrien agents missed 25 to 40 percent; and Gratiot and Macomb missed 50 to 75 percent.

This error represented many questions. Certainly this would not be taken as a criticism of the agents. It was very difficult to record all the questions under so many different circumstances.

Many times questions were asked too rapidly for agents to record every question. When the opportunity to record did arise they had to rely on their memory to recall the questions. The agents admitted that this was how many questions were missed. They also felt that the questions recalled from memory were the most difficult questions and the questions most often repeated. Those not remembered were many of the so-called "easy" questions.

Each county was assigned a week to record questions. During the first week of 1958 Arenac county agents recorded the questions asked in their county, the second week Berrien county agents did the same for their county; during the third week Gratiot county agents did likewise as did the Macomb agents the fourth week. This four week rotation continued throughout 1958.

At the end of each week of recording questions, each county copied all the questions in triplicate on small file cards. Each copy included

one question as asked by the individual, the date of the week, and the name of the county.

The county kept the original copy and sent the other two copies to the bulletin office at Michigan State University. The second copy was filed in the bulletin office. The third copy was forwarded to the Office of Information, USDA.

A question classification form was used to tabulate all the questions. A copy of the question classification form used by the USDA was used as a guide to set up the question classification form used in this study. This was done in the following manner.

1. The USDA form was taken to the state extension project leaders in the various departments. Each leader was asked to make any changes in those question classification areas that would pertain to his or her department. The changes made were used in constructing a revised question classification form that would be adaptable to the type of questions asked in Michigan.

2. Using the revised form as a guide the questions were classified. Some of the categories had to be omitted because there were no questions. Other categories had to be changed to adapt to the questions. Some categories were added. No changes were made where the questions and categories were homogeneous. Using this procedure it was evident that the questions determined the categories.

3. Question categories were grouped under specific subject areas, which in turn were grouped under major subject areas. For example, the question, "What variety of corn should I plant?" was tabulated under varieties and strains, a question category. Since the question involved

corn, the question category was grouped under corn, a specific subject area. Corn was grouped under grain crops, a major subject area (See Table 13 on page 41).

The questions were classified originally by months and county. The results of this classification showed such a scattering of questions that little could be done in summarizing.

It was decided that the questions would have to be grouped by seasons and counties. The first season is Winter and includes the months of January and February. The second season is Spring and includes March and April. The third season is summer and includes May, June, and July. The months that were grouped together in each season were similar in number of questions asked in all major areas for those particular months.

The significance of each question category was measured on the basis of the average number of questions asked per month. By arbitrary reasoning the following significance groups were defined by the average number of questions asked per month.

<u>Average number of questions asked per month</u>	<u>Significance group</u>
No questions	No questions asked
1 to 2 questions	Few questions asked
2 to 7 questions	Some questions asked
7 or more questions	Many questions asked

To apply this measurement of significant questions to the seven month period, the average number of questions per month in each question category was multiplied by seven. This gave the following table that was used to measure the significance of each question category during the seven month period.

<u>Total number of questions asked</u>	<u>Significance group</u>
0 - 6	No questions asked
7 - 13	Few questions asked
14 - 48	Some questions asked
49 - and over	Many questions asked

To be considered significant each question category must have a total of seven or more questions for the seven month period. If lower than seven the questions were regarded as insignificant.

Seasonality of each question asked was measured by the direct change from one significance group to another during the change in successive seasons. Each question category must have a total of seven or more questions (significant) before being analyzed for seasonality.

The following table was used as a basis for determining seasonality.

<u>Significance group</u>	<u>Number of questions asked by seasons</u>		
	Winter	Spring	Summer
No questions asked	0-1	0-1	0-2
Few questions asked	2-3	2-3	3-5
Some questions asked	4-13	4-13	6-20
Many questions asked	14-more	14-more	14-more

Seasonality of a question may be measured by one of four possible methods.

1. No seasonality (NS) - no change in significant groups by seasons.
2. Low seasonality (LS) - change from one significant group to the next higher or lower group.
3. Some seasonality (SS) - change from one significant group to another, skipping the next higher or lower group.
4. Much seasonality (MS) - change in either direction from the significant groups "no questions asked" and "many questions asked."

Question categories in the significant group "no questions asked" were not discussed in the analysis. Only some and much seasonality was indicated for any question category if it existed.

2. Procedure and Method of Analyzing the Publications

The problem of measuring the effectiveness of the extension publications was very complex. Each question would have to be read and the answer if available in extension publications would have to be found. With the assistance of Richard Bell, Assistant Director, Michigan Cooperative Extension Service, the publications were scanned to find the answer for each question category.

There were certain publications that could answer several questions. This was especially true with bulletins and other larger publications. The smaller publications, especially folders, farm building circulars, and a few of the special bulletins dealt with a specific area of information. For example, folder 247, described how to recognize and control black knot of plum and cherry; a very specific area. The spraying calender, extension bulletin 154, contains information for spraying many fruits and vegetables, a very broad area. Such a bulletin had information applicable to several question categories.

The list of available publications was made from three sources: (1) Catalog of available publications, January 1958, (2) Bulletin Office inventory, August 1, 1958, and (3) Richard Bell, Assistant Director, Michigan Cooperative Extension Service.

Using this source, a list was made of all available publications as of August 1, 1958. This date was selected because the questions in

the study were recorded up to this date. Thus a more realistic picture was obtained on the publications made available at the time the questions were asked.

3. Procedure and Method for Analyzing Those Who Asked the Questions

No information was recorded about the persons who asked the questions. At the time this study was started, questions had been recorded for five months. Because of this situation, it was impossible to describe all the people, how and if their questions were answered, how they used extension information, and their reaction to the extension program.

In order to get this information a personal interview of people who asked questions in two sample counties was formulated. Gratiot and Macomb counties were selected because of their different population make-up and the type of agriculture represented.

The agents in Macomb and Gratiot were asked to record all the names and addresses of those people who asked questions during one week in June. The agents were willing to cooperate but pointed out that the extra time required would interfere with the recording and answering of the questions.

So as not to interfere with the agents job of answering questions, the agents were asked to select a sample of only 15 people who asked questions during their week in June. The agents then recorded the names and addresses of the 15 people. The goal was to interview at least ten people.

The author went to Macomb and Gratiot counties in late June and early July of 1958. There were 22 personal interviews made, 11 in each county. All of the interviewees cooperated and expressed themselves freely. At times they answered many questions without the interviewer asking them.

The interviews and the method of sampling have too many errors and biases for any concrete conclusions or generalizations. However, they provided sufficient information for formulating assumptions important to this study.

CHAPTER IV

Analysis of the Data

1. Introduction to Question Analysis

Table 12 shows the number of questions by major question areas and counties. The numerical order was based on the total number of questions in each area. The area with the highest number of questions was first.

Analysis of all the questions in this manner was very limited. It does not show seasonality in the specific type of questions asked. Therefore, the only analysis made was a measure of relative importance.

TABLE 12

Number of Questions by Major Areas and Counties

Major Question Area	Order by total number of questions asked	Total of four counties	Total number of questions asked by counties			
			Arenac	Berrien	Gratiot	Macomb
I. Grain crops	4	160	23	26	105	6
II. Forages	12	91	41	19	15	16
III. Vegetables	13	72	9	41	1	21
IV. Fruits	6	124	5	78	1	40
V. Nursery stock and home grounds	10	105	10	24	1	70
VI. Livestock	3	183	40	72	38	31
VII. Insects, diseases, parasites, weeds and other pests	1	868	28	495	113	232

TABLE 12 - continued

Major Question Area	Order by total number of questions asked	Total of four counties	Total number of questions asked by counties			
			Arenac	Berrien	Gratiot	Macomb
VIII. Marketing, farm policy, govt. agen- cies, & farm & home service organiza- tions	9	111	29	55	5	22
IX. Soil and water con- servation and manage- ment, forestry and wildlife	2	416	63	157	104	92
X. Farm management	5	128	46	41	39	32
XI. Farm buildings and mechanical equip.	5	128	55	13	39	31
XII. House & surroundings	7	119	46	29	20	24
XIII. Home management & family economics	17	6	3	0	1	2
XIV. Clothing	8	113	26	41	26	20
XV. Foods and Nutrition	11	93	11	36	15	31
XVI. Health, family life and safety	15	38	16	7	3	12
XVII. Community develop- ment & public affairs	14	62	10	14	23	15
a. with extension and 4-H included		(175)	(24)	(65)	(48)	(38)
XVIII. Miscellaneous	16	8	3	3	0	2
Total		2938	478	1204	534	722

Over half of the questions in major area XVII involved extension organizations, programs, and 4-H club work. While it was important to

consider these questions in total, they were not involved in further analysis.

The total number of questions classified during the seven month period was 2,938. The number of questions by counties was as follows:

Arenac County	478
Berrien County.	1204
Gratiot County.	534
Macomb County	<u>722</u>
Total	2938

The number of questions by seasons was as follows:

Winter	780
Spring	1,015
Summer	<u>1,143</u>
Total.	2,938

Analysis of the Questions by Major Subject Areas.

Analysis of the questions was made by discussing each major question area using the following procedure.

1. The question was classified according to question categories by county and season (found in table form).
2. The significant question categories and seasonality were noted.
3. Analyze each major question area based on the information found in steps two and three.

In the following portion of the text the narrative for each major subject area has immediately preceded the table it described as well as a statistical analysis of the significant questions.

1. Grain Crops

This major area was fourth in number of questions asked with 160. Gratiot county recorded about two-thirds of these questions.

Of the total number of questions, 117 dealt with varieties and strains of grain crops, of which over half of these, 60, involved corn varieties and strains. Questions on oat and field bean varieties and strains ranked second and third. All of these particular questions had seasonality. Except for a few questions on corn planting and soybean varieties and strains the other question categories were considered insignificant.

There were many questions on varieties and strains, but there were few dealing with the problems of planting crops. It was expected that these questions would have been very close in the number of questions recorded especially in the spring.

Possible explanations might be that (1) the people who asked the questions were well accustomed to the problems involved in planting but not accustomed to problems involving varieties and strains; (2) the questions on planting could have been some of the "easy" questions the agents forgot to record.

Another peculiarity was the small number of questions from Gratiot county concerning soybeans and field beans since those two crops were grown extensively in that county. As a possible explanation the Gratiot county farmers were probably able to handle such problems or the agents could have failed to record the questions.

Statistical Analysis of Grain Crops - 160 questions

Few questions

- a. corn planting
- b. soybean variety and strains - SS

Some questions

- a. oat varieties and strains - MS
- b. fieldbean varieties and strains - SS

Many questions

- a. corn varieties and strains - SS

TABLE 13

**CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958**

Classification of the Questions Asked			Number of Questions Asked														
	Publications for questions	Total Questions	Total by Season (a)			Arenac County			Berrien County			Gratiot County			Macomb County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
I. GRAIN CROPS (Total questions and by seasons)		160	35	78	47												
A. Wheat																	
1. Planting	1	1	1								1						
2. Varieties and strains	1	2	2							2							
3. Harvesting, storing	2	5	3	2			1	2		2							
4. Publications request		2			2			2									
B. Corn																	
1. Planting		13	2	3	8					2				3	8		
2. Varieties and strains	2	60	3	47	10					1	3		2	44	10		
3. Harvesting, storing and drying		3	1	2						1				2			
C. Oats																	
1. Seedbed preparation		2			2			2									

(a) The three seasons used are:

Winter (W) January and February included
Spring (Sp) March and April included
Summer (Su) May, June, and July included

Table 13 - Continued

Classification of the Questions Asked	Publications for questions	Total Questions	Number of Questions Asked														
			Total by Season (a)			Arenac County			Berrien County			Gratiot County			Macomb County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
C. Oats (continued)																	
2. Planting		1			1			1									
3. Varieties and strains	1	25	10	14	1			1	6	3		3	11			1	
4. Legume and grass seedlings, mixtures, and methods		4			4			4									
5. Seeding in corn		1			1					1							
D. Barley																	
1. Varieties and strains	3	2			2			1								1	
2. Germination tests		2	2					2									
E. Rye																	
1. Planting		2	2					2									
2. When to plow under		1			1											1	
F. Soybeans																	
1. Planting		1			1											1	
2. Varieties and strains	1	11	4	7				1	2			6			2		
3. Field Management		1			1								1				
G. Field beans																	
1. Planting		3	1		2			1				1				1	
2. Varieties and strains	1	14	4	1	9			1				4			9		
H. Grain crops in general																	
1. Varieties and strains	1	3			1												
2. Harvesting, storing and drying		1			1						1						

II. Forages

This major area was in twelfth position with 91 questions. A little less than half of the questions, 41, came from Arenac. The balance of the questions asked was evenly divided for the most part among the other three counties.

All but 11 of the questions in this major subject area were concerned with "hay, silage, and rotation forages." Of these, 63 questions dealt with varieties and strains, and rates of seeding. The other questions were considered insignificant.

There was no seasonality in this major subject area. A peculiar situation is noted in the specific categories rates of seeding, and varieties and strains of hay, silage, and rotation forages. Here 25 questions were recorded in the winter while only 22 were recorded in spring and summer. No explanation was made for the unusual occurrence of spring-type questions asked in the winter months.

Statistical Analysis of Forages - 91 questions

few questions

- a. hay, silage, and rotation crops; harvesting and storing

some questions

- a. hay, silage, and rotation crops; rates of seeding
- b. hay, silage, and rotation crops; varieties and strains

TABLE 14

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications or Questions	Total Questions	Number of Questions Asked														
			Total by Season			Arenac County			Berrien County			Gratiot County			Macomb County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
III. FORAGES		91	35	32	24												
(Total questions and by seasons																	
A. Hay, silage, and rotation forages																	
1. Seedbed preparation	1	2			2												2
2. Rates of seeding	1	23	14	4	5	9	2	1	2			3	2			2	
3. Varieties and strains	3	24	11	7	6	4	4	2	6			1	3	2		2	
4. Harvesting and storing	1	11	2	5	4	1	3	2	2	1					1		
5. Efficient work methods	1	5	3	2		3	1										
6. Seed germination tests	2	1	1			1			1								1
7. General production	1	2	1	1		1										1	
8. Crop use and management	4	3	3	1		1			2								
9. Buying seed	4	3	1			1						2				1	
10. Unidentified crop problems	3	3			3												3
B. Pasture																	
1. Seeding	1	1	1						1								
2. Varieties and selection	3	3	3			3											
3. Pasture management	1	3	2	1		1						1			1		1
C. Cover Crops and Seed Production																	
1. Seedbed preparation	1	1	1												1		
2. Seeding	1	3			3									3			

III. Vegetables

This area had 72 questions and was fourteenth in total number of questions. Berrien recorded 42 of the questions asked. Macomb had 21 while Gratiot and Arenac had almost a negligible number.

As was expected most of the questions were asked in Berrien and Macomb counties where large acreages of vegetables were grown. But it was surprising that no questions were asked in Gratiot County about potatoes and sugar beets, which were important crops in that county. Even Arenac had only two questions on sugar beets and none on potatoes. The people in those counties might have been accustomed to the problems involved with those crops. For this reason some of them probably did not ask questions involving such problems. Also some of the people could have taken their questions to someone other than the county agent.

In analyzing by subject matter, 21 questions dealt with commercial vegetable plant growing. Most of the other questions were insignificant. Many of the questions in the plant growing area dealt with melons, asparagus, cucumbers, and tomatoes.

Because of the wording it was difficult to tell if many of the questions should be tabulated under home garden or commercial garden. If the words "home garden" appeared in the question it was classified under home garden. Otherwise the questions were classified under commercial garden.

Except for three questions seasonality could not be measured. This was due to the small number of questions in each category. If

more questions were recorded it was believed that they would probably have been in the spring and the summer and might have shown some seasonality.

Statistical Analysis of Vegetables - 72 questions

Few questions

- a. vegetable crops commercial; varieties and strains
- b. vegetable crops; commercial; publication request - SS

Some questions

- a. vegetable crops commercial; plant growing - SS

TABLE 15

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN AREMAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications For Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
III. VEGETABLES		72	24	21	27									
A. Sugar beets														
1. Seedbed preparation	1	1	1											
2. Publications	2	2					2							1
B. Potatoes														
1. Varieties and strains	1	2	2						2					
2. Publications	1	1	1						1					
3. Buying seed potatoes	1	1	1						1					
4. Results of potato growing research or tests	1	2	2					2						
C. Vegetable crops, commercial														
1. Seedbed preparation	9	6	3	3		3			2					1
2. Planting	6	4		4					3					1
3. Plant growing	9	21	4	1	16		1		3	9				1
4. Varieties and strains	8	10	6	3	1				5	3	1	1		
5. Harvesting and storing (no equipment)	4	2	1	1		1								1
6. Buying seed or plants	3	5	3	1	1	1			2	1	1			
7. Publications	7	7	1	6					1	1				5
8. Other questions	1	1	1						1					

TABLE 15 - Continued

Classification of the Questions Asked	Publications For Questions	Total Questions	Number of Questions Asked				
			Total by Season	Arenac County	Berrien County	Gratiot County	Macomb County
			W Sp Su	W Sp Su	W Sp Su	W Sp Su	W Sp Su
D. Vegetable crops, home garden							
1. Seedbed preparation	4	1	1				1
2. Planting	3	1	1		1		
3. Plant growing	2	2	1 1				1 1
4. Varieties and strains	2	1	1	1			
5. Publications		2	1		1		1

IV. Fruits

This major area of questions was sixth in total questions asked with 124. Most of these questions dealt with tree fruits.

As expected, a large number of questions came from Berrien and Macomb Counties, 78 and 40 respectively, where fruit was a major part of the counties' income. Arenac and Gratiot had very few questions recorded. However, fruit is not an important enterprise in these two counties.

In both tree and small fruit area, 78 questions dealt with some kind of growing practice, such as thinning, pruning, chemical thinning, and similar questions. The questions were very specific and each was identified with a type of fruit. Samples of questions in this section were, "Is now the time to prune my apple trees?", "What causes resetting in apples?" and "Shall I let all the weeds and grass grow up in the rows of a young peach orchard to slow down the growth of the trees and get them to mature their wood earlier?"

There was an increase in seasonality in most of the question categories. This was expected because fruit trees and small fruit demand more time and attention in the spring and summer months, therefore many problems had arisen during those seasons.

The question categories of varieties and strains had very few questions. This was much lower than the number of questions in the same category under grain crops, forages, and commercial vegetables. Most fruits are perennial. Thus the grower only needed to worry about the variety and strain of fruit when he set out new plants or trees.

Statistical Analysis of Fruits - 124 questions

Few questions

- a. tree fruits; publication request - SS**

Some questions

- a. small fruits; pruning, thinning, and general plant care - SS**
- b. Tree fruits; growth regulators and chemical thinning**
- c. tree fruits; other cultural operations, pruning, training, identifying growth problems**

TABLE 16

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications Top Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
IV. FRUITS														
(Total questions and by seasons)		124	29	41	54									
A. Small fruits														
1. Plantbed preparation and planting	6	5	1	1	3				1	1				3
2. Varieties and strains	6	3	2	1					2					1
3. Irrigation		4	1	3					1	3				
4. Harvesting and yield	3	1	1						1					
5. Pruning, thinning, and general plant care	8	17	1	5	11		1		2	7		1	1	2
6. Publications		6	1	4	1		1		1				3	1
B. Tree fruits														
1. Selection of proper site and soil	4	5	3	1	1				1	1	1			2
2. Nursery stock selection and planting	4	6	2	3	1				2	3	1			
3. Varieties and strains	3	6	4	2					4	2				
4. Growth regulators; chemical thinning	4	23	3	20			1	1		17			2	2
5. Other cultural operations; pruning, training, identifying growth problems														
6. Efficient work methods & Management	7	38	12	11	15				9	6	11		3	5
7. Publications	1	3	1	2					1					2
	7	7	7				1							6

V. Nursery Stock and Home Grounds

This seasonal area ranked tenth in number of questions with 105. Most of these questions, 70, came from heavily urbanized Macomb County. Another 24 questions came from another growing urban county, Berrien. The two agricultural counties, Arenac and Gratiot, had a small number of questions.

All but 11 of the questions dealt with home grounds and ornamental plants around or in the home. As a comparison there were more questions recorded in this major area than in forages or vegetables. This was significant to the extension program since these questions were not concerned with the typical agricultural product. These questions involved only the beautification of the home.

Though the source of these questions cannot be checked, it was believed that most of these questions came from the urban population. This statement was supported by the analysis of the county interviews made later in this study.

These questions were very seasonal, with only nine recorded in the winter and 96 recorded during the spring and summer. The reason was that more people were involved with home grounds during the latter two seasons.

Statistical Analysis of Nursery Stock and Home Grounds - 105 questions

Few questions

- a. floriculture and nursery stock; management
- b. home grounds; shrubs - 33
- c. home grounds; garden flowers

Some questions

- a. home grounds; lawns - SS
- b. home grounds; trees - SS

TABLE 17

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Total Publications	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
V. NURSERY STOCK AND HOME GROUNDS (Total questions and by seasons)		105	9	49	47									
A. Floriculture and nursery stock														
1. Management	1	7	3	2	2	1			2	2	1			1
2. Legal aspects		4	2	2					2	1				1
B. Home grounds														
1. Lawns	2	33	15	18		1	3		4	1		1		10 13
2. Trees	3	25	13	12		2			3	1				10 9
3. Shrubs	3	17	9	8		2			5					4 6
4. Home garden flowers	3	14	1	7	6	1			1					1 6 5
C. House plants														
		1	1						1					
D. Potted plants														
		2	1	1										1 1
E. Hot beds														
		2	1	1										1 1

VI. Livestock

This area ranked third in total questions asked with 183. Berrien County was the main source of the questions with 72. Arenac, Gratiot and Macomb followed with 50, 38 and 37 respectively.

In analysis by subject matter, livestock feeding and management questions were asked more often than any other type of question. Among the most frequently asked questions were those on cattle feeding and swine management.

Feeding questions dealt with the problems on feeding practices and comparison of different types of available feed on hand. Very few questions dealt with purchasing of feed.

Management questions dealt with most anything on management of the particular type of livestock. Though there were relatively few questions in number, breeding and care of bred livestock seemed important.

There were many livestock questions asked in the winter and spring. The summer season had very few. Probably the farmers had turned their attention to those things that can only be done in the summer; such as taking care of the crops.

However, several unusual conditions had arisen in this major area. Though Berrien County had a strong dairy enterprise, only 15 of its 72 questions dealt with dairy. Beef and hog questions were more numerous. Another unusual condition was the fact that Berrien County had no livestock questions recorded during the summer. Part of this situation could be due to the sudden loss of the agricultural agent at that time.

Gratiot County, strongly agricultural in livestock, especially swine, had relatively few questions compared to the number of questions

from Macomb. Though Macomb actually had fewer questions than Gratiot, it certainly was not as involved in livestock as the number of questions seemed to indicate, or as Gratiot County was involved.

The livestock questions from Gratiot County were mostly repeated questions. For example the question, "What should I feed my hogs?" was recorded word for word four times. It was doubtful that these questions were asked in an identical manner. It was assumed that this wording was chosen by the agent to facilitate recording of basically similar questions.

It was possible that the number of questions recorded was an estimate of the number of questions, not an accurate count. Probably many of these repeated questions were underestimated because of the high percent of questions missed in Gratiot County. This might explain the low number of livestock questions from Gratiot.

Statistical Analysis of Livestock - 183 questions

Few questions

- a. cattle feeding; management
- b. hogs; methods of feeding, supplements, & drugs
- c. sheep feeding
- d. dairy feeding systems and arrangements
- e. dairy; labor and housing management
- f. dairy production records

Some questions

- a. cattle feeding, feed additions, and supplements
- b. hog management practices - SS

TABLE 18

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications or Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
VI. LIVESTOCK (Total questions and by seasons)		183	85	77	21									
A. Beef cattle feeding														
1. Outlook		6	5	1	5									1
2. Kind of cattle to buy & buying		5	3	2	3									2
3. Feeding, feed additions, supplements	3	25	8	12	5	3	3	3	4	8		1	1	2
4. Management	1	10	4	4	2	4	2	4		4				
B. Beef cattle breeding program														
1. Herd improvement		3	3						3					
2. Herd health through feeding	2	4	2	2					2			1		1
3. Source of breeding stock		4	3	1					3					1
C. Swine														
1. Outlook	1	3	2	1		1			1			1		
2. Methods of feeding, supple- ments and drugs	2	9	5	4					1			4	4	
3. Management practices	2	26	17	4	5				13	1		4	3	5
4. Sources of breeding stock		6	4	2					3			1	2	
5. Home butchering	1	1	1											1

TABLE 18 - Continued

Classification of the Questions Asked	Publications on Questions	Number of Questions Asked									
		Total by Season		Arenac County		Berrien County		Gratiot County		Macomb County	
		W	Sp Su	W	Sp Su	W	Sp Su	W	Sp Su	W	Sp Su
D. Sheep											
1. Outlook	4	2	2			2				2	
2. Source of breeding stock	1	4	1	3		3		1		1	
3. Management problems	1	1						1			
4. Feeding	2	14	5	9		9		5			
E. Dairy											
1. Selection and breeding	1	6	2	4	1	1	2			2	
2. Feeding	2	3	3		3						
3. Feeding systems and arrangements	1	10	4	5	1	1	3	1	1	1	1
4. Feeds and Nutrition	1	1	1			1					
5. Labor and Housing Management	1	10	3	6	1	1	3	2		3	1
6. Dairy production records	1	14	6	8	4	4	3	2		1	
F. Laying flocks											
1. Incubation	2	2								2	
2. Brooding and rearing	3	2	1	1						1	1
3. Feeding	2	1	1							1	
4. Management	3	1	2			2				1	
5. Setting hens	2	2								2	
H. Rabbits and ducks											
	3	1	2							1	2
I. Other livestock	3	1	1							1	

VII. Insects, Diseases, Parasites, Weeds and Other Pests

This section had the highest number of questions, 868, and accounted for 29.6 percent of all the questions recorded. This was larger than the combined total of 630 questions from the major areas of grain crops, forages, vegetables, fruits, and livestock; which were important major subject matter areas. Certainly this area was very significant to the extension program.

Over half of these questions came from Berrien County. As expected from this fruit county, most of these questions dealt with fruit pests. Like Berrien, this section accounted for the highest number of questions recorded in Macomb and Gratiot Counties. However, Arenac's 38 questions were eighth in the total number of questions recorded in that county.

This was a very seasonal section. As the spring and summer seasons approached the questions increased. No doubt the pest problems had increased at the same time.

Because of the complexity in this section, there were two different analyses made; (1) by the type of pest and (2) by the product or subject involved.

Disease control questions were recorded 360 times. One hundred forty-one questions dealt with insect control and 105 involved weeds. Various other pests accounted for the remaining 262 questions. More than two-thirds of the disease questions came from Berrien County.

In analysis by pest, the specific area G in the tables was omitted. The 29 questions recorded there involved control for insects,

diseases and weeds all at the same time. No distinction could be made as to the single type of pest involved.

In terms of analysis by the product or subject involved, five groups were made, (1) fruits, (2) homegrounds and household, (3) vegetables, (4) general weed control and undesirable growth, and (5) animals. Each group was discussed in order of the highest number of questions asked.

Fruit pests accounted for 347 questions. Of that total 233 involved diseases, 99 involved insects, and 15 involved weed control.

The non-farming questions of homegrounds and household pests had 119 questions recorded. Of these, 71 dealt with diseases of trees, flowers and shrubs, and 34 involved mostly wood chewing insects in the household area and trees. The small balance of questions dealt with weed control in the lawn.

Of the 80 pest control questions on vegetables, 50 dealt with insect control. The balance dealt with disease and weed control.

The fourth most important area with 63 questions dealt with general weed control and other undesirable growth. The weeds were usually identified by the questioner when he asked the question. It was the control measure that was requested. For example, "Will 2-4-D kill poison ivy?" and "What should I use to kill all vegetation around my barn?"

The fifth area, with 53 questions, involved animal pests. Of this total, 43 dealt with disease identification and control mostly for sheep, swine, and poultry. Dairy and beef were a little less important.

The above area included 662 of all the questions asked. There were 206 other questions that could not be grouped in the five preceding groups. But certainly they were no less important to the agent or the individual who asked the question. Because they could not be grouped together they were tabulated in separate question categories, specific subject areas, and major subject areas shown in the following tables.

Statistical Analysis of Insects, Diseases, Parasites, Weeds and Other Pests - 868 questions

Few questions

- a. nematode control
- b. insect control; identification
- c. stinging and bloodsucking insects affecting man - SS
- d. wood chewing insects in household areas
- e. insect control on hogs
- f. field corn insects
- g. diseases affecting vegetable crops - commercial
- h. diseases, insects, and weeds in forestry - SS
- i. general spraying for tree fruits

Some questions

- a. tree insects - SS
- b. sheep diseases
- c. field bean weed control - SS
- d. commercial vegetable weed control
- e. small fruits; weed control
- f. diseases, insects, and weeds in home grounds - SS
- g. insects affecting vegetable crops, commercial - SS
- h. insects affecting small fruit - SS
- i. diseases affecting dairy cattle
- j. corn; weed control - SS
- k. cost of insecticides & fungicides & application - SS

Many questions

- a. insects affecting tree fruit
- b. diseases affecting small fruits - MS
- c. diseases affecting tree fruits - SS
- d. diseases affecting trees on home grounds - SS
- e. control of general weeds and undesirable growth
- f. disease control on tree fruits after 1½ inch rainfall - MS

TABLE 19

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications For Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
VII. INSECTS, DISEASES, PARASITES, WEEDS AND OTHER PESTS (Total questions and by seasons)	868	63 219 586												
A. Nematodes control	1	7	4	2	1				4	2	1			
B. Beekeeping	2	6	1	5					4				1	1
C. Earthworms (problems and raising)	1	1	1											1
D. Insect control														
1. Identification (not identified with classification below)	3	7	2	1	4			1	2	1		1		2
2. Affecting Man														
a. Non-stinging (flies, bugs, etc.)	1	6			6					1				5
b. Stinging and blood sucking (wasps, bees, mosquitoes, etc.)	1	10		1	9			1		1				8
3. Affecting household areas (inside and outside)														
a. Roaches, ants, etc.	1	5	1	1	3								1	1
b. Fabric pests	4	4	1	2	1					2		1		1
c. Pantry pests	1	1			1					1				

TABLE 19 - Continued

Classification of the Questions Asked	Publications for Questions and Answers	Total by Season	Number of Questions Asked											
			Arenac County			Berrien County			Gratiot County			Macomb County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
4. Woodchewing insects	2	12	2	6	4	2	3	3	1	1		2		
e. Mites, spiders, others	1	6	4	2								4		
f. Lawn insects	6	2	4											
g. Houseplants and shrubs insects	3	3												
h. Tree insects	2	17	1	16								1	1	5
4. Affecting animals														
a. Hogs	8	4	2	2					3	2	2			
b. Pigs	2	2												
5. Affecting crops														
a. Field corn	2	8	5	3								2		
b. Soybeans	1	1	1									1		
c. Field beans	1	3	1	2										
d. Hay and silage	1	1												
e. Vegetables, commercial	3	46	1	3	42							3	1	22
f. Vegetables, home gardens	3	4	1	3								1		
g. Small fruit	3	33	3	30								2	2	
h. Tree fruit	3	60	2	5	53							2	4	47
E. Diseases														
1. Affecting crops														
a. Wheat	1	1	1											
b. Field corn	1	3	3									1		
c. Field beans (including seed treatment)	1	1	1											
d. Vegetables, commercial	3	13	3	4	6	1						2	2	5
e. Small fruits	8	57	1	18	38							1	15	30
f. Tree fruits	8	126	3	58	65							2	52	59
						1						2	1	3

TABLE 19 - Continued

Classification of the Questions Asked	Total Publications	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
2. Tree fruits after 1½ inch rainfall	2	50		50						50				
2. Affecting animals & animal health														
a. Cattle feeding (beef)	5	3	3									3		
b. Dairy	21	8	5			1	1		4	1		4	3	3
c. Laying flock	3	2	1											2
d. Sheep	16	6	3	7					3		7			
3. Home ground areas														
a. Flowers and shrubs	1	3		3						1				2
b. Trees	3	68	10	58					6	40		1		4
F. Weeds														
1. Affecting crops														
a. Corn	2	29	3	26				1		2			20	1
b. Oats	2	5	2	3						2				5
c. Field beans	2	20		20									20	
d. Grain crops in general	2	1		1				1						
e. Vegetables, commercial	2	12	3	9					2	2			6	1
f. Vegetables, home garden	2	1		1										1
g. Small fruits	2	15	4	8	3				3	8	1		2	1
2. General weeds and undesirable growth	4	63	9	17	37									
3. Weed killing chemicals	1	4		4					1	9	4	1	10	12
G. Diseases, insects, and weeds														
1. Crops														
a. Sugar beets	1	1		1										1
b. Potatoes	1	3		3						2				

VIII. Marketing, Farm Policy, Government Agencies, and Farm and Home Service Organizations

This section of 111 questions ranked ninth. Berrien recorded 55 questions while Arenac and Macomb had 29 and 22 respectively. Gratiot had an insignificant number of questions. Many of the questions were scattered among the question categories.

The specific subject area, commodity outlook and marketing information, accounted for 44 questions. However, only a few questions were recorded in each category, seven of the nine being classified as insignificant.

Another 26 questions dealt with the specific area of farm policy and government agency programs. Though few questions were recorded in each specific category, most of the questions asked for an explanation of a particular agency or program. It appeared that the people understood something about the agency or program in their question but seemed to want to know more. It was rather strange that the people asked the county agent rather than the agency involved for such information.

Statistical Analysis of Marketing, Farm Policy, Government Agencies,
and Farm and Home Service Organizations - 111 questions

Few questions

- a. marketing and purchasing organizations; program and service
- b. commodity outlook and marketing information; vegetable crops - commercial
- c. commodity outlook & marketing information; tree fruit
- d. preparing tree fruit for market - SS

Some questions

- a. general agricultural information about Michigan - MS

TABLE 20

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications or Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
VIII. MARKETING, FARM POLICY, GOVERNMENT AGENCIES AND FARM AND HOME SERVICE ORGANIZATIONS (Total questions and by seasons)		111	73	25	13									
A. Marketing and purchasing organizations														
1. Organization's program & service	4	7	4	2	1	3			1	1				1
2. Feed & equipment dealer's service		3			3									3
3. Credit institutions		1	1			1								
B. Farm policy and government agency programs														
1. A.S.C. programs		3	2	1		1			1					1
2. County agricultural agencies		1	1											
3. Soil bank and conservation reserve program		6	2	4		1	4		1					
4. Parity		2	2						2					
5. Price supports	1	1	1						1					
6. Crop allotments		5	2	2	1		1		1			1		2
7. Government production programs and regulations		2	2						2					
8. Soil bank - forestry program		2	2			2								
9. Government forestry programs		4	1	3		1			1					2

TABLE 20 - Continued

Classification of the Questions Asked	Number of Questions Asked											
	Publications	Total by Season	Arenac County			Berrien County			Gratiot County			Macomb County
			W	Sp	Su	W	Sp	Su	W	Sp	Su	
G. Livestock marketing												
1. Beef breeding (methods of marketing)		1	1									1
2. Beef feeding (time to sell)		5	2	2	1	2	2	1				
3. Sheep (time to sell)		1	1						1			

IX. Soil and Water Conservation and Management, Forestry and Wildlife

This section was second in the total number of questions asked with 416. As recorded in each county this section ranked first in Arenac, second in Berrien and Macomb, and third in Gratiot.

A little over two-thirds of these questions, 288, dealt with fertilizer and lime recommendations for specific crops only. In terms of the number of questions by question categories small fruit had 39 questions recorded, corn had 37, and home grounds had 34.

Following the first three categories in numerical order were field beans, commercial vegetable gardening, soybeans, wheat, tree fruits, forages, and on down to question categories with very few questions. In analysis by counties the questions came from Berrien, followed by Macomb, Gratiot, and Arenac.

The fact that 337 questions were recorded on fertility diagnosis and recommendations has made these specific areas a strong point interest. Special attention has been placed on the question that involved fertility recommendations only. Alone, this subject accounted for 303 questions, a strong second to the 360 disease questions analyzed in Section VII.

This was a very seasonal section. As expected most of the fertility questions were asked in the spring, the time when most fertilizer and soil amendments were bought and applied.

**Statistical Analysis of Soil and Water Conservation and
Management, Forestry and Wildlife - 416 questions**

Few questions

- a. fertilizer and lime recommendations; forages - SS
- b. fertilizer and lime recommendations; potatoes - SS
- c. mulching
- d. ponds for fish; construction and management - SS
- e. soil amendments and recommendations (no specific use mentioned) - SS
- f. forestry planting
- g. forestry selection of specific Christmas trees - SS

Some questions

- a. fertilizer & lime recommendations; wheat - SS
- b. fertilizer & lime recommendations; soybeans - MS
- c. fertilizer and lime recommendations; tree fruits
- d. soil testing
- e. fertilizer and lime recommendations;
 - 1. corn - MS
 - 2. field beans
 - 3. vegetable, commercial
 - 4. small fruits
 - 5. home grounds (lawns, trees, shrubs and garden flowers) - SS
- f. general fertilizer recommendations
- g. forestry; buying seedlings and management

TABLE 21
 CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
 IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
 1958

Classification of the Questions Asked	Publications of Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
IX. SOIL AND WATER CONSERVATION AND MANAGEMENT, FORESTRY AND WILDLIFE (Total questions and by seasons)		416	84	193	139									
A. Soil management	1	3	1	2	1				1			1		
1. Land use														
2. Fertility diagnosis	2	26	16	4	6	2			9	3		2	1	
a. Testing														
b. Classification	2	7	6	1		1			1					
c. Publications		1	1						1					
3. Fertilizer & lime recommendations														
a. Wheat	3	15	7	6	2	1			3	4	2	1	1	3
b. Corn	3	37	1	29	7				1	1		28	5	
c. Oats	3	2		2					1					1
d. Soybeans	3	17	1	16					1	3		13		
e. Field beans	3	29	2	12	15	5						2	12	9
f. Field crops in general	3	1		1		1								
g. Forages (hay, silage, and rotation crop productions	3	11	4	7		2			3			1		5
h. Potatoes	3	9		8	1				8					1
i. Vegetables, commercial	4	25	4	13	8				2	3	9	4	1	4
j. Vegetables, home garden	4	4	1	2	1				1	1			1	1

TABLE 21 - Continued

Classification of the Questions Asked	Publications For Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			S	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
k. Small fruits	1	39	4	23	12	2			4	20	10			3
l. Tree fruits	1	15	4	5	6				4	5	6			
m. Home grounds (lawn, trees, shrubs, garden flowers)	1	34	13	21		1	4		9	1		2		3
n. Nursery stock	2	2							2					14
o. Fertilizer recommendations (no specific crop mentioned)	2	39	6	16	17	1	2		5	4		1	11	4
p. Soil amendment recommendations (no specific crop mentioned)	1	9	1	4	4				1	1	4	1		2
4. Cover crops	1	1		1							1			
5. Soil improvement crops	1	2	1	1					1					1
6. Minimum tillage	1	1	1						1					
7. Crop rotations	1	2		2			2							
8. Mulching	1	7	6	1					2			1		3
9. Government agency programs	1	1	1											1
10. Athletic field seedings	1	1	1			1								
B. Water management														
1. Water use rights		1	1			1								
2. Water supply and storage	3	1	1	1					1	1				1
3. Drainage and tiling	2	2	2			1						1		
4. Irrigation	2	2	1	1					1					
5. Surveying	1	1	1			1								
C. Forestry														
1. Planting	3	8	5	3		5				1				2
2. Buying seedlings & management	4	22	7	11	4	6	1	3	1	4				6

X. Farm Management

Most of the 128 questions in this fifth ranked area were evenly distributed among Arenac, Berrien, and Macomb Counties. Gratiot had too few questions recorded to discuss. Income tax and social security was the only specific area that had any strong significance. Most of these questions dealt with very specific problems of completing income tax returns or farm business accounting, primarily on computation of depreciation on equipment and buildings.

Most of the questions were asked in the winter. Two situations probably influenced this occurrence.

During the winter farmers were planning the coming season's work that probably involved making or changing large capital investments. In any event, they had asked extension for assistance in formulating part of their plans.

Secondly, the filing of income taxes had forced the farmer to do his accounting during the early part of the year in order to file his return on time.

Though most of the other question categories had an insignificant number of questions recorded they did show the different types of information that people were seeking.

Statistical Analysis of Farm Management - 128 questions

Few questions

- a. analysis and requests for assistance on farm records - SS
- b. developing a farm plan - SS
- c. buying or renting a farm
- d. leases, family operating agreements, incorporations - SS
- e. laws & regulations in regard to the farm business - SS

- f. farm outlook in general
- g. wills, property settlement, etc. - SS

Some questions

- a. income tax, social security - SS

TABLE 22

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked			Number of Questions Asked														
	Publications for Questions	Total Questions	Total by Season			Arenac County			Berrien County			Gratiot County			Macomb County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
X. FARM MANAGEMENT (Total questions and by seasons)		128	70	44	14												
A. Farm records (analysis and requests for)	5	12	12			4			8								
B. Developing a farm plan	2	7	2	5					2	3							2
C. Business analysis and planning	2	2	2														
1. Size of business	1	1		1								2					1
2. Livestock program		3	3							3							
3. Relation of inputs to outputs		6	4	2		1			2	2		1					
4. Changing investments																	
D. Developing supplement sources of income and renting for profit	2	3	2	1									1		2		
E. Obtaining tenure and use of credit	1	1	1												1		
F. Buying and/or renting a farm	1	13	5	3	5	2	2	2	1	1			1		2		2

XI. Farm Buildings and Mechanical Equipment

This major area had the same number of questions, 128, as the preceding area. Arenac had recorded the most questions with 55 followed by Macomb and Gratiot with 31 and 29 respectively. Berrien recorded 13.

Most of the questions dealt with planning and construction problems which involved mostly dairy buildings and equipment. No questions were recorded in Berrien County, which was strong in dairy farming, about dairy buildings and equipment.

Questions that involved buildings were recorded mostly during the winter and spring. Most of the questions that dealt with equipment were recorded during the spring and summer.

Statistical Analysis of Farm Buildings and Mechanical Equipment - 128 questions

Few questions

- a. planning and construction of dairy buildings - SS
- b. planning and construction of swine buildings
- c. selection and construction of farm building
equipment for;
 - 1. milk production and handling equipment - SS
- d. selection of chemical sprayers - SS

Some questions

- a. planning and construction of milking parlors,
stanchions, etc. - SS
- b. silage

TABLE 23

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked			Number of Questions Asked														
	Publications for Questions	Total Questions	Total by Season			Arenac County			Berrien County			Gratiot County			Macomb County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
XI. FARM BUILDINGS AND MECHANICAL EQUIPMENT (Total questions and by season)		128	41	61	26												
A. Planning and construction of farm buildings																	
1. Dairy	3	9	1	7	1	1	4					2	1		1		
2. Milking parlors, stanchions, etc.	2	16	4	11	1	2	7					1	3		1	1	1
3. Beef	3	2		2			2										
4. Sheep	2	1	1									1					
5. Swine	2	7	2	2	3					1		1	2	3			
6. Poultry	3	3	1	1	1					1				1			
7. Machinery sheds	1	1			1												1
8. Farm buildings and materials	10	6	4	2		3	2					1					
B. Remodeling or repairing farm buildings																	
1. Dairy	1	1	1									1					
2. Swine	1	2	2									2					
3. Poultry	3	3		3								3					
4. Other livestock buildings	1	1	1									1					
5. Green houses and storm centers	5	5		5								1		3			1

TABLE 23 - Continued

Classification of the Questions Asked	Publications or Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
C. Selection and construction of farm building equipment														
1. Milk production & handling equipment	6	8	4	4		4						1		3
2. For silage	2	19	9	7	3	5	6	2				1	1	3
3. For hay	1	6	5	1							1			
4. Refrigeration, ventilating, drying, heating	6	4	2	2			1		1					
5. Incubation		2	1	1									1	1
6. Workshop areas	1	2	1	1		1								1
7. Mechanical feeders		2	2			1			1					
D. Mechanical equipment (used outside farm buildings)														
1. Selection of farm mechanical equipment														
a. Chemical sprayers	1	11	1	10			1							1
b. Preservatives, paint	2	3		3			3							
c. Harvesting	1	4	4				4					1		1
d. Fencing		3	3				1							
2. Use, care, and repair of farm mechanical equipment	1	2	2									1	1	
E. Non-farm equipment		1	1	1										1
F. Sewage (farm)		2	2						2					
G. Electrical equipment	1	2	2						2					

XII. House and Surroundings, Furnishings and Equipment

This section of non-seasonal questions accounted for the seventh highest number of questions. Arenac County had 46 of the 119 asked in this area. The rest of the questions were evenly divided among the other three counties.

Most of the questions were in two specific areas, the house with 54 questions and home furnishings with 41 questions. More specifically these questions included planning, repairing and remodeling of the house and its furnishings.

The number of landscaping questions were negligible. This was because most landscaping questions were tabulated in major area V. The questions recorded in this section involved beautification and had nothing to do with the growing and care of plants.

It was rather surprising to see so few questions that dealt with household equipment. It was a well known fact that a great variety of home appliances could be found in almost every home. If a problem had arisen with household equipment the dealer from whom it was purchased was probably contacted. Some gas and electric companies as well as many dealers have service departments for such problems. Probably extension is the last place a person would expect to call for assistance.

Statistical Analysis of House and Surroundings, Furnishings and Equipment - 119 questions

Few questions

- a. improving the kitchen - SS
- b. selection, care and use of slipcovers - SS
- c. selection, care and use of window treatments
- d. upholstering

Some questions

a. house planning, repairing, and remodeling - SS

TABLE 24

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications for Questions	Total Questions	Number of Questions Asked											
			Total by Season		Arenac County		Berrien County		Gratiot County		Macomb County			
			W	Sp Su	W	Sp Su	W	Sp Su	W	Sp Su	W	Sp Su	W	Sp Su
XII. HOUSE AND SURROUNDINGS, FURNISHINGS AND EQUIPMENT (Total questions and by seasons		119	23	55 41										
A. House														
1. Planning, repairing, remodeling	3	18	12	6	11	6	1		3	3				
2. Improving the kitchen	2	11	7	4	2	1	2		1					
3. Improving the bathroom		2	2		1					1				
4. Improving storage space		3	1	2	2									
5. Water system (including softeners and heaters)	1	3	2	1			1						1	1
6. Sewage systems	1	6	5	1	1	1	4							
7. Wiring		6	6				6							
8. Moisture, air control, & heating	1	5	5		5									
B. Landscaping plans for the home grounds	2	3	2	1			1						1	1
C. Home equipment (other than sewing equipment)														
1. Selection, use and care of:	1	3	3					3						
a. Washers														

XIII. Home Management and Family Economics

This was the lowest number of questions recorded in any major area. There were too few to be significant.

When this area was originally set up there were 32 question categories. Included were such categories as home budget, insurance, home finance, work simplification, effective use of the body, etc. The six questions recorded reduced the original categories to four.

Because there were so few questions no concrete analysis can be made. But it can be assumed that people did not expect extension to have information in the original suggested area.

The questions that were asked though insignificant in terms of this study involved housekeeping, insurance, family business, and taxes.

TABLE 25
CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications For Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
XIII. HOME MANAGEMENT AND FAMILY ECONOMICS (Total questions and by seasons)		6	4	1	1									
A. Human resources	4	1	1											1
1. Housekeeping														
B. Material resources														
1. Insurance	1	1	1									1		
2. Family business	3	1	1											1
3. Tax		3	3			3								

XIV. Clothing

This section ranked eighth with 113 questions of which forty-one came from Berrien County. The balance of the questions were evenly divided among the other counties.

Two categories were significant in this area, (1) sewing with today's fabrics and basic clothing construction problems and (2) laundering problems, both accounted for 66 questions. The remaining questions were scattered among the other categories.

The specific area of construction had 56 questions, about half of the total questions recorded. Extension information on clothing construction has been part of the extension program for many years. The people have become aware of this and expected extension to have information in this area.

Many questions were recorded in the spring. This might be due to the common urge to sew at this time of the year. Coupled with this was the change from winter's more difficult-to-construct clothing to the more simply constructed and laundered clothes of summer and spring.

Statistical Analysis of Clothing - 113 questions

Few questions

- a. grooming - SS

Some questions

- a. sewing with today's fabrics and basic construction problems - SS
- b. care of clothing; laundering - MS

TABLE 26

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications For Questions	Total Questions	Total by Season				Number of Questions Asked							
			W	Sp	Su		W	Sp	Su		W	Sp	Su	
XIV. CLOTHING (Total questions and by seasons)		113	34	62	17									
A. Grooming		9	9					9						
B. Buymanship														
1. Accessories (shoes, hose, etc.)	1	1	1			1								
2. Fabrics for sewing	4	2	2			1		1					2	
3. Garment labels	1	1				1								
C. Construction														
1. Sewing with today's fabrics and basic construction problems	1	42	13	25	4	4	10	2	1		4	8	1	5
2. Choosing and using a commercial pattern		4	4			2					1			1
3. Making dresses	2	8	3	5		1	2		1		1	1		1
4. Making suits and coats	2	2	1	1		1			1		1			
D. Care of Clothing														
1. Laundering	3	24	19	5					18	4	1	1		
2. Stain removal	11	5	6						3	3	2	2		1
3. Storage	1	1						1						
4. Millinery	1	1				1								

TABLE 26 - Continued

Classification of the Questions Asked		Number of Questions Asked										
	Publications For Questions	Total Questions	Total by Season		Arenac County		Berrien County		Gratiot County		Macomb County	
			W	Sp Su	W	Sp Su	W	Sp Su	W	Sp Su	W	Sp Su
E. Sewing equipment and sewing centers												
1. Using sewing machines												
2. Care of sewing machines												

XV. Foods and Nutrition

This major area ranked eleventh with 93 questions. Berrien and Macomb recorded most of the questions compared to the few from Gratiot and Arenac. Many of the questions were asked in the winter and summer making this a seasonal major area.

The specific area of meal planning and food preparation had 42 questions. Most of these questions were recorded during the winter and summer in all four counties.

The specific area of food preservation, especially canning and freezing, had 40 questions. These too, were asked mostly in the winter and summer. Most of the winter questions dealt with problems of supplies and utensils used in freezing. The summer questions on food preservation requested information on how to preserve certain foods as well as more questions about supplies and utensils used in freezing.

The most unusual result of tabulation in this section was the lack of questions recorded in the spring. This might be related to the high number of spring questions recorded in section XII and XIV, "House and surroundings, furnishings, and equipment" and "Clothing". Most of the homemakers must have devoted their time to subjects in these major areas during the spring.

With the coming of fresh foods for canning and freezing and the more enjoyable weather for picnic, barbecues, and the like, the homemaker's attention in the summer was focused on foods and nutrition.

There was a negligible number of questions recorded in the nutritional area. This probably was due to the people understanding the problems of nutrition or their lack of interest in nutrition.

Statistical Analysis of Foods and Nutrition - 93 questions

Few questions

- a. meal planning and food preparation**
 - 1. barbecues**
 - 2. fruit - SS**
 - 3. vegetables - SS**

Some questions

- a. canning - SS**
- b. freezing - SS**

TABLE 27

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications for Questions	Total Questions	Number of Questions Asked									
			Total by Season		Arenac County		Berrien County		Gratiot County		Macomb County	
			W	Sp	W	Sp	W	Sp	W	Sp	W	Sp
XV. FOODS AND NUTRITION												
(Total questions and by season)		93	46	4	43							
A. Selecting food												
1. Foods other than meat	1	3	2	1			1				1	1
B. Meal planning, food preparation, recipes												
1. Barbecues	1	8		2	6			1		1		2
2. Group meals	3	3	2	1			2	1				4
3. Breads, cereals, etc.	2	1	1						1	1		
4. Dairy products (butter, milk, cheese)	2	4	2	2		1			1	1	1	
5. Fruits	3	8	8				8					
6. Meat and eggs	1	3		3		1		1				1
7. Vegetables	1	8		8					1		7	
8. Desserts and sweets	1	1	1						1			
9. Special foods for parties, etc.	1	5	3	2		1	1		1	1	2	
10. Maple syrup and vinegar	2	2	1	1		1					1	
C. Food Preservation												
1. Canning	2	16	9	7	5		4	5		1		1

TABLE 27 - Continued

Classification of the Questions Asked		Number of Questions Asked															
	Publications For Questions	Total Questions	Total by Season			Arenac County			Berrien County			Gratiot County			Macomb County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
2. Freezing	1	21	2	19				1			7		6		2		5
3. Meat cutting and curing	1	3	3						2						1		
4. Spoilage questions		1	1												1		
D. Improving diets																	
1. General nutrition	4	1	1						1								
2. Nutrition elements	3	3	2	1					1	1					1		
3. Special diets	3	1	1					1									

XVI. Health, Family Life and Safety

This major area was fifteenth with only 38 questions. Arenac and Macomb Counties had the highest number of questions recorded while Berrien and Gratiot had very few.

The category with some significance in this area dealt with "hobbies and individual interests." Extension had probably been considered a source of such information through the crafts and hobbies used in 4-H camps and similar programs.

Statistical Analysis of Health, Family Life and Safety - 38 questions

Few questions

a. hobbies and individual interests

TABLE 28

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1953

Classification of the Questions Asked	Publications for Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
XVI. HEALTH, FAMILY LIFE AND SAFETY (Total questions and by seasons)		38	21	12	5									
A. Health		3	2	1										
1. Sanitation practices & facilities														
2. Health education leading to a physical examination by a physician		2	2			1			1					
3. General health education	3	2	1	1		1				1				
4. Allergies		1	1										1	
B. Family life														
1. Child development	2	1	1			1								
a. Age														
Preschool		1	1						1					
School age		1	1						1					
b. Guidance	1	4		4			1							3
2. Recreation for children	1	1		1				1						
3. Family responsibility	1	2	2						1					1
4. Hobbies and individual interests	3	13	8	2	3	6	2	3	2					
5. Family and group activities		3	3									3		
C. Fire prevention (farm and home)	1	4	4											4

XVII. Community Development and Public Affairs

The total number of questions gave this area an impressive number of 175. However, the 113 questions in the categories "all youth service organizations" and "all other extension programs" were not analyzed. This left only 62 questions asked in this major area that were analyzed in this study.

Though the two question categories discounted were important to the study for the total number of questions asked, the type of information requested involved an area of the extension program that was not related to this study.

As a matter of clarification, youth service organizations included 4-H and other extension youth activities. All other extension programs included those programs and activities that were not related to this study. Certainly the number of questions recorded in those two areas was not considered in any way as a measure of their importance.

Of those questions analyzed, Gratiot had the most with 23. The balance was divided evenly among the other three counties.

The only category with any significance dealt with zoning, and all 19 questions came from Gratiot County. It was unusual that no questions came from Macomb and Berrien, two counties that were feeling the effects of rapid urbanization, which would certainly have involved zoning. These two counties had well organized groups to govern and administrate zoning. Such problems were probably asked of those groups.

**Statistical Analysis of Community Development and Public Affairs -
175 questions**

Few questions

- a. community problems**
 - 1. recreation programs and facilities**
 - 2. education out of school - SS**

Some questions

- a. zoning - SS**
- b. adult extension programs - MS**

TABLE 29

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications for Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
XVII. COMMUNITY DEVELOPMENT AND PUBLIC AFFAIRS														
(Total questions and by seasons)	175	47	40	38										
A. Citizenship responsibilities and functions of government	1	1										1		
B. County and community improvement clubs, councils, committees for program planning & special purposes	3	2	1	1	1	1	1	1	1					
1. All youth service organizations	89	45	34	10	3	9	2	18	9	3	14	7	4	10
2. All other extension programs	24	23	1					21						2
C. Community problems														
1. Health facilities, services and programs	1	1										1		
2. Schools	2	1	1				1							
3. Land use	1	1												1
a. Zoning	19	10	9									10	9	
b. Business	2	4	4				3							1
c. Roads	2	2	2											2
d. School	2	2	2											2

TABLE 29 - Continued

Classification of the Questions Asked		Number of Questions Asked															
	Publications For Questions	Total Questions	Total by Season			Arenac County			Berrien County			Gratiot County			Macomb County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
4. Churches		2			2												
5. Neighborhood relations		3			2						2			2			1
6. Parliamentary procedure	1	1			1												1
7. Community centers	5	1			1			1									1
8. Recreation programs & facilities	10	7	3	1	3	1	1	1			1				2	2	2
9. Education out of school		13	11		2			1		10			1				1
D. Regional or area development work		1			1												1

XVIII. Miscellaneous Questions - 8 questions

Each question was studied before being placed in this area.

If a question could not be classified under any major area it was placed under the miscellaneous section. No discussion will be made on this major area as the questions classified are self explanatory.

TABLE 30

CLASSIFICATION AND NUMBER OF QUESTIONS ASKED SEASONALLY OF COUNTY EXTENSION AGENTS
IN ARENAC, BERRIEN, GRATIOT, AND MACOMB COUNTIES
1958

Classification of the Questions Asked	Publications for Questions	Total Questions	Number of Questions Asked											
			Total by Season			Arenac County			Berrien County			Gratiot County		
			W	Sp	Su	W	Sp	Su	W	Sp	Su	W	Sp	Su
XVIII. MISCELLANEOUS		8	7	1										
	A. When is Arbor Day	1		1										1
	B. Weather	3	3			1			2					
	C. How to contact the press	1	1											1
	D. List of bulletins	1	1	1		1								
E. Unclear questions		2	2			1			1					

Conclusion to the Analysis of Questions by Major Subject Areas

The preceding analysis was made of the questions recorded and tabulated. Some categories with few or no questions recorded would have increased in number of questions as the year continued. These questions would have dealt with harvesting, marketing, and storing; the so-called questions of the fall season.

Some questions were caused by an unusual or unpredicted circumstance, i.e. the $1\frac{1}{2}$ inch rainfall that caused fruit farmers to ask about fruit spray recommendations. These types of questions could have occurred in any season and become more or less significant depending on the influencing conditions each time they occurred.

Questions influenced by existing or more permanent situations were likely to be repeated every year. A question on weed control was an example of a problem caused by the existing questions.

2. Analysis of the Questions by the Nine Areas of Extension Responsibility

The questions reflected the type of information people expected the Cooperative Extension Service to have available. The public was probably unaware of the many other areas of extension information.

Through extension's resources of research and planning, there were new areas of information that were considered "related to agriculture and home economics."²² They were considered related because of the

²²Amended Smith-Lever Act, Op. cit.

many changing and new situations that have a definite effect upon the extension program.

The Cooperative Extension Service Today, a special report made by the subcommittee on scope and responsibility, defined the changing situations that affected agriculture and home economics.²³ Based on the analysis of these situations the committee recommended nine major areas of responsibility for extension's educational program.

The suggested areas had been developed through sound thinking and planning by members of the Extension Service. The questions in this study come from the other direction, the recipients of extension information. The questions were compared with the nine areas recommended by the subcommittee. It is shown in Table 31 that the people did not seek all the information in those areas that were recommended for the extension program.

The major area, efficiency in agricultural production, accounted for 70.2 percent of all the questions asked. This included all the questions on crops, livestock, buildings, fertility and pests.

Far below the first was the area on family living with 352 questions. Most of these questions dealt with the home and the family skills of clothing and foods.

The area on public affairs was very low. The area on leadership was negligible.

Certainly this analysis was not a criteria of the value of the scope report. It was more accurate to have assumed that the people were

²³ Subcommittee on Scope & Responsibility, Op. cit.

TABLE 31

Tabulation of the Questions Asked in Four Michigan Counties
by the Recommended Nine Areas of Extension's Responsibility
from the Report "The Cooperative Extension Service Today"²⁴

Recommended Area	Number of Questions Asked
I. Efficiency in Agricultural Production	2063
II. Efficiency in Marketing, Distribution and Utilization	85
III. Conservation, Development, and Use of Natural Resources	94
IV. Management on the farm and in the home	135
V. Family Living	352
VI. Youth Development	97
VII. Leadership Development	1
VIII. Community Improvement and Resource Development	184
IX. Public Affairs	29
Unclassified	8
Total questions asked	2938

not aware of the information that the extension service could offer in all of these areas. If the people were expected to use this type of information they must be taught that it is available. This would not guarantee that the people would use this information. But at the time of this study they may not have been aware of its existence.

3. Analysis of the Publications Used.

Table 32 shows the types of publications used in the study, the number actually used to answer the questions, and the number available to be used to answer the questions.

²⁴Subcommittee on Scope & Responsibility, Op. cit.

TABLE 32

Publications Used To Answer Questions

Type of publication	Number used to answer questions	Number available to answer questions
Extension bulletin	78	90
Folder	123	148
Circular	17	20
Tourist and resort	12	16
Farm building circular	14	20
Circular extension	6	7
Special	35	60
Miscellaneous series	3	3
Park Management series	7	7
North central regional	2	2
Farm account books	4	4
Other	<u>1</u>	<u>1</u>
Total publications	302	378

Of the 378 publications available, 302 were recorded in 238 of the 386 question categories. In relative terms 79.9 percent of the available publications answered or partially answered 61.7 percent of the different question categories. There were no questions in the study that could be answered by the remaining 76 publications. The 148 remaining question categories not answered by publications were mostly insignificant in so far as this study was concerned.

Most of the publications were tabulated in those categories that had a large number of questions. Therefore publications answered the more significant questions. It was believed that some of the publications that were not tabulated would have answered questions that would have occurred in the months not included in this study.

Each number in the "publications used" column in the tabulation tables referred to the number of different publications used to answer all the questions in that category. In many cases a single publication was tabulated for several different categories. Usually these were closely related categories. For example questions on tree insect control and small fruit insect control could be answered by one spraying bulletin.

In terms of the above analysis it was shown that the publications available had information to adequately answer the more significant questions. Most of the insignificant question categories had few or no publications tabulated. Since these insignificant questions seldom were asked this further enhanced the effectiveness of the publications.

4. Analysis of Who Asked the Questions

Based on 22 personal interviews made in Gratiot and Macomb Counties, the following limited analysis was made. Some of the results were not analyzed because of their unimportance, the type of answer received, and administrative errors in making the interviews.

All the people interviewed in Gratiot County were men. There were five women and six men interviewed in Macomb.

All the people in Gratiot County had personally contacted the two agricultural agents. All the people in Macomb County had contacted the office by phone and talked only with the secretary. In Gratiot County the interviewees knew the agents by their full name. No one in Macomb County knew the agents by name. This certainly showed a lack of a strong personal contact between the agents and the people in the sample interviewed in Macomb County.

When asked why they contacted the extension office for information, people in both counties indicated that they expected to get help. Another reason in Gratiot was that they "liked the agent."

People in Gratiot County contacted the extension office for an average of eight times a year and those in Macomb average two and one-half times per year. Three of the Macomb County people said this was their first contact.

Based on this information one person in Gratiot County was responsible for eight questions asked each year. One person in Macomb County was responsible for two or three ($2\frac{1}{2}$) questions asked each year.

Of a fixed number of questions asked in Gratiot and Macomb Counties, fewer people were represented in Gratiot than were represented in Macomb. For example it was assumed that Gratiot and Macomb Counties each recorded 1,000 questions during a period of one year. Since one person in Gratiot was responsible for an average of eight questions a year, the 1,000 questions recorded in Gratiot represented 125 different people. In Macomb County, where one person represents two and one-half questions, the 1,000 questions recorded represented 400 different people. Therefore, for a fixed number of questions recorded in both counties, a

larger clientele was represented by the number of questions asked in Macomb County.

It was difficult for most of the people in Gratiot to recall exactly how they learned of the extension service as a source of information. However, most of them stated it was through some extension activity many years ago. People in Macomb were quick to note that they learned of the extension service through a friend or neighbor just recently.

It was generalized that many urban people had learned of the information available through other people even though the people in an urban county have not had much contact with the extension agents. The extension service in an urban county has a larger clientele to serve. As the people became more aware of the existence of the extension office, the agents could expect more requests for information.

When asked if they had contacted some other source of information about their specific problem only four people in Gratiot said yes. But seven people in Macomb listed other sources. The higher response in Macomb was probably due to the fact that they had been unaware that they could contact the extension office for needed information. These other sources for information in Macomb were neighbors and friends.

Seven people in each county thought they got a complete answer to their question, regardless of the person to whom they talked or the type of information received.

A publication was used to answer all eleven questions asked in Macomb County, yet only five people requested a publication. The other six were sent publications as part of the answer to their questions. A

publication was sent to only four people in Gratiot County. The rest of the questions were answered without a publication.

The last question in the interview was to determine what type of information the people expected the extension service to have. The nine areas of extension's responsibility were used.²⁵ Each area was described separately. The interviewee was asked to imagine that he had a problem in each area. Then he was asked if he expected extension to have the information that would help him with his problem. The names of any extension programs were not used to describe each area. For example the name 4-H was not used to describe youth development. It was believed that the use of the names of extension programs in describing each area would have influenced the interviewee's answer.

There was only one person who indicated that extension would have or could get information for any problem in all nine areas. He lived in Macomb County.

Few people expected extension to have information in area VIII, community improvement and resource development, and IX, public affairs.

A little over half of the people expected extension to have information in area II, efficiency in marketing, distribution and utilization; III, Conservation; V, family living; and VII leadership development.

Area I, efficiency in agricultural production; IV, management on the farm and in the home; and VI, youth development had a sufficient number of affirmative responses to be called well known areas of extension information.

²⁵Ibid.

TABLE 33

Areas of Expected Information from the Report
on the Nine Areas of Responsibility as
Indicated by Twenty-two Interviewees

Recommended areas of Extension's Responsibilities	Number of people by counties indicating expected informa- tion from extension	
	Gratiot (n-11)	Macomb (n-11)
I. Efficiency in agricultural production	11	11
II. Efficiency in marketing distribution & utilization	6	8
III. Conservation, development and use of natural resources	6	11
IV. Management on the farm and in the home	11	7
V. Family living	7	5
VI. Youth development	11	9
VII. Leadership development	9	6
VIII. Community improvement and resource development	7	2
IX. Public affairs	4	2

CHAPTER V

Conclusion and Recommendations

The conclusion and recommendations in this chapter were formulated through the study of (1) related research, (2) the analyses of the questions, (3) the analyses of extension publications, and (4) the generalizations made from 22 personal interviews.

It is believed that this is the most reliable information available from which to base the following conclusions and recommendations.

The Questions Asked

Questions that dealt with pest control and soil fertility accounted for about one-third of all the questions asked. The publications "Spraying Calendar," "Fertilizer Recommendations for Michigan Crops," and their supplements answered, at least in part, every significant question that dealt with pest control and soil fertility.

Though not as numerous as the pest control and fertility questions, many questions were recorded about varieties and strains of grain crops, forages, and vegetables. Several bulletins and folders were available to answer most of these questions.

Questions on care of home grounds were numerous in those counties with growing urban and suburban populations. These homeground problems dealt with general care, fertility, and pest control.

The high number of questions involving homeground problems is of special interest to the extension program for three reasons.

First, this is an area that normally has not been considered agricultural. If extension is to become active in this area, extension personnel must be trained to supply such information. This has been done in a few counties to a limited extent.

Secondly, the people that asked the questions were from the growing urban and suburban counties. An increase in the number of questions is expected as the population increases. Extension must plan an educational program to meet this increase.

Thirdly, half of the people who asked these questions were women. The extension program must be disseminated through those channels of communication that would reach the men as well as the women.

It was shown in the analysis that livestock questions did not represent the number or type of livestock in the county where the questions were recorded. The people with livestock problems probably consulted other sources of information if their problems were beyond the scope of extension's responsibility, such as veterinary medicine.

In all the questions recorded, the problems were usually identified and the information requested was limited and specific. For example in the question "How do I control rose chaffers?" the problem of rose chaffers was identified. The information requested, how to control rose chaffers, was limited as to the type of insect and specific as to what the person wants to do with the problem.

Thus the extension agent, when answering the question, should give the exact information requested. A long and wordy answer can

confuse the individual and needlessly waste his and the agent's time.

Many of the more frequently asked questions had seasonality. The extension agent, knowing when these questions will occur, could plan a program to meet the flood of questions during the season when they are expected. Various channels of communication may have to be used to communicate the information.

The Publications

Publications are used by at least one-half of all the people as a source of extension information. Over two-thirds of the farmers use publications for the same reason.

There were 386 different question categories, of which 81 were measured as significant. Of these, 74 were answered with the use of publications. Therefore, it is easy to see that the publications answered the more important questions.

However, of the remaining 305 insignificant categories, over one-half could not be answered with any of the publications. This does not mean that publications were ineffective. Moreover, it has shown that publications were used to answer the least asked questions.

It has been proven that the publication is an effective source of information. Therefore, to answer the insignificant questions, a similar but less expensive form of information should be used; such as mimeographed letters and pamphlets.

Because certain questions are so insignificant, it would be better to put the needed information in the hands of the county agent and let him use it as resource material only when those questions occur.

Those Who Asked the Questions

As shown by this study, the extension service is expected to have the answers to many and varied questions. The county agent must be sufficiently trained to handle competently the requests for information and assistance. In some counties the agent must be a specialist in a certain subject matter area.

According to the interviews, people in Gratiot County received answers to their questions from the county agent. People in Macomb county received their information from the office secretary. However, the same number of people in each county were satisfied with the information they received.

The point to be emphasized here was the value of a secretary as she helped to answer some of the questions. By doing this the secretary has allowed the agent to apply his time to other responsibilities. There are many routine questions that an office secretary can handle. Those questions that she is unable to handle can be referred to the proper agent.

If the secretary has handled a question, the agent has not made a personal contact. But the person who asked the question has learned that the extension service was a source of the needed information.

Application of The Study to the State of Michigan

This study was representative of the types of problems encountered throughout the lower peninsula of Michigan. Since the growing season is shorter in the northern part of the state different agricultural questions

are expected in that area. The sample counties represent the more densely populated areas of the lower part of the state. In this lower part live the largest number of people who use extension information. For these basic reasons this study can only be applied to the lower part of the state of Michigan.

Though limited as to the area it represents this study can be used in forming an extension program in the following ways. (1) The information disseminated in an extension program must be specific. (2) Programs can be planned to meet the flood of questions that are expected during certain seasons of the year. (3) The intensity and scope of the information needed can be determined by analyzing the number of questions that have been asked in previous years. (4) The area or counties in which the information is needed is determined by the number of questions from each county. (5) The number of questions in each category determines the feasibility of using publications to answer the questions asked.

The author believes that the above values of this study can increase the effectiveness of the extension publication as well as the extension educational programs. Should these values be successful in making more effective use of publications, it is imperative that similar surveys be made periodically in the future to determine the type of information that is requested.

BIBLIOGRAPHY

U. S. Congress, Amended Smith-Lever Act, Public Law 85, 83rd Congress, Chapter '57 - 1st session. S 1675

Elgin M. Cornett, A Study of Public Concepts Related to the Role of the Cooperative Extension Service (Unpublished Master's Thesis), Department of Extension Personnel Development, Michigan State University, 1958.

Emilie T. Hall, et al, Homemakers' Opinions of an Extension Bulletin. Extension Work in Agriculture and Home Economics, State of New York, May 1956.

Office of Information, USDA, Awareness and Use Among Illinois Farmers of USDA and State Agricultural Publications, mimeo. April 1958.

Subcommittee for the Study of Diffusion of Farm Practices, How Farm People Accept New Ideas, North Central Regional Publication 1. Agricultural Extension Service, Iowa State College, November 1955.

Subcommittee on Scope and Responsibility, the Cooperative Extension Service, ... Today. Special Report, April 1958.

James N. Young and C. Paul Marsh. The Adoption of Recommended Farm Practices and Sources of Farmers Information. University of Kentucky, Agricultural Experiment Station, Lexington, Ky., Progress Report 40, October 1956.

Interview with Donald E. Gregg, Publications Editor, Michigan Cooperative Extension Service.

Letter from Larry E. Sarbaugh, Office of Information, United States Department of Agriculture, June 30, 1958.

Michigan Cooperative Extension Service, Budget Report for Fiscal Year 1957 - 1958, July 1, 1958.

| Lang, Charles Louis

A Study of the Questions Asked of
County Extension Agents in Four
Michigan Counties and the Publi-
cations Available to Answer the
Questions.

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