

APRIL, 1951

RESEARCH BULLETIN 472

UNIVERSITY OF MISSOURI

COLLEGE OF AGRICULTURE

AGRICULTURAL EXPERIMENT STATION

J. H. LONGWELL, *Director*

Sources and Use of Farm and Home Information
by Low-Income Farmers in Missouri

HERBERT F. LIONBERGER

Department of Rural Sociology



(Publication authorized April 6, 1951)

COLUMBIA, MISSOURI

TABLE OF CONTENTS

	Page
I. Scope and Purpose	3
II. The Farmers Interviewed	4
III. Sources of Farm and Home Information	5
1. Personal Sources	6
County Extension Agents	6
Neighbors and Friends	7
Agricultural Adjustment Administration (PMA) Office	8
Other Personal Sources	9
2. Impersonal Sources	9
A. The Printed Page	9
Newspapers	9
Farm Journals	10
Farm Bulletins	12
Books	13
Other Reading Sources	13
B. The Radio	15
IV. Use of Approved Farm and Home Practices	18
V. Summary of Findings	23
VI. Some Implications	28
Appendix	33

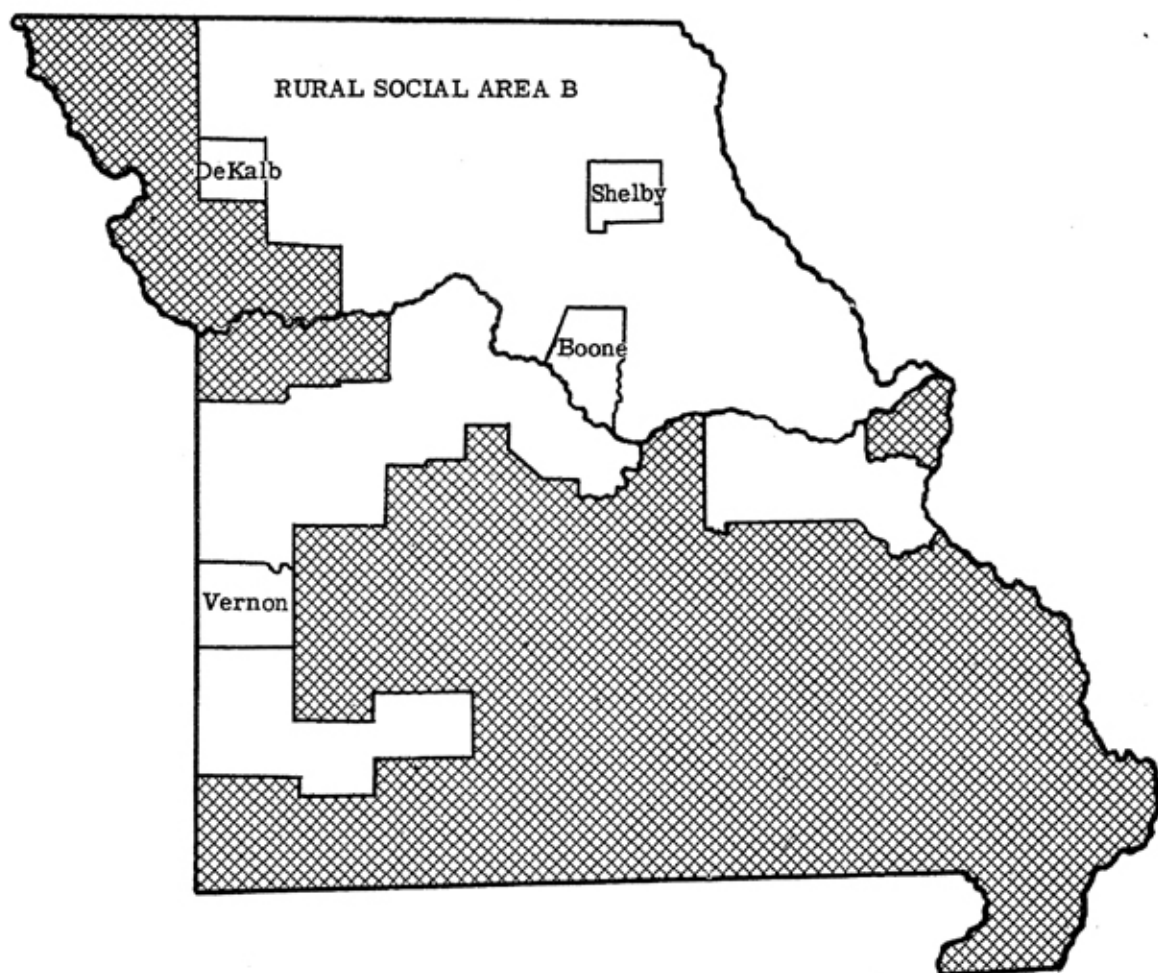


Figure 1.—Rural Social Area B, State of Missouri, 1940, and Counties Selected for Sampling Low-Income Farm Operator Population.

Sources and Use of Farm and Home Information by Low-Income Farmers in Missouri

HERBERT F. LIONBERGER¹

I. SCOPE AND PURPOSE

Although a wealth of usable information is available through the College of Agriculture, many farmers still use outmoded farm and home practices. Scientific research done by the colleges of agriculture and by the United States Department of Agriculture is essential but it does not insure better farm living. Today, the state of technical knowledge is far ahead of farm practice on most Missouri farms. Furthermore, it is increasingly apparent that low-income farmers who need information most actually get less than their more prosperous neighbors. It is therefore imperative that more attention be directed to effective methods of reaching farm people with educational materials.

The few studies to date bearing on the acceptance and use of farm and home information by low-income farmers have localized the problem far more than is warranted by setting specific low-income figures to designate low-income status. By so doing attention has been unduly directed to "so-called" problem areas. It is here assumed that low-income farmers may be found in the good farming communities as well as in the poor, and that low-income status within a community is related to the acceptance and use of scientific farm and home information. It is held that low income in relation to one's neighbors is much more important as a barrier to the acceptance and use of farm information than low income in relation to more prosperous farmers living in areas removed from the immediate locality. For that reason attention is directed to farmers who have low-income status in comparison to their neighbors irrespective of the amount of that income.

Since there is often an inclination to view low-income farmers as inevitable products of poor land, farmers for interview were selected from all major soil types in a relatively homogeneous socio-cultural area where the conditions of farm life are known to be above average for the state of Missouri and where the possibilities of improving farm life are considerable.

¹The writer gratefully acknowledges the continual assistance of Professor C. E. Lively under whose general supervision this study was conducted.

The area selected is referred to as Rural Social Area B by Lively and Gregory². (See Figure 1.) Since natural conditions of rainfall, climate, soil resources, and location are favorable to high farm productivity and to a high level of living in the area, low-income status and its attendant social and economic consequences are more likely the product of limiting human and cultural factors than of limited natural resources. It therefore follows that increased human productivity should find expression in better farm living.

Thus, the problem is essentially one of finding more effective means of reaching low-income farmers with educational materials. The major objective of this study is to make a contribution toward this end. However, the attainment of this objective requires a knowledge of pertinent characteristics and attitudes of low-income farmers, what contacts they have with the available means of farm and home information, and what sources of information they recognize as useful, as well as the general state of farm and home practices prevailing on the farms. A description of these conditions is a secondary objective of this study³. A detailed description of the characteristics and attitudes of the 459 farm operators and wives interviewed and the contacts which they had with the available means of farm and home information has been published in previous bulletins⁴. This bulletin is directed primarily to the sources which the survey farmers considered useful, the state of farm and home practices prevailing among them, and to the implications of the entire study.

II. THE FARMERS INTERVIEWED

The farmers interviewed were almost exclusively native white, essentially localistic in origin, and relatively immobile on the land. They had completed about the same amount of schooling as all Area B farmers but were somewhat older. The median age reported was 56 years. Almost one-fourth of them were 65 years of age or over, the expected age of retirement for many occupations. It follows that some of the older farmers once had higher incomes. It is also very likely that some of the younger ones had not reached maximum productivity. Many of them will likely

²Lively, C. E., and C. L. Gregory, *Rural Social Areas in Missouri*. Columbia, Research Bulletin 305, Agricultural Experiment Station, College of Agriculture, University of Missouri, 1939, pp. 8-11; also Lively, C. E., and C. L. Gregory, *Rural Social Areas in Missouri as Determined by Statistical Analysis of County Data, 1940*. Columbia, Research Bulletin 413, Agricultural Experiment Station, College of Agriculture, University of Missouri, 1948.

³For a detailed description of the method used in conducting this study, see Chapter II of *Reception and Use of Farm and Home Information by Low-Income Farmers in Selected Areas of Missouri*, written by Herbert F. Lionberger, and available through the University of Missouri Library.

⁴Lionberger, Herbert F., *Low-Income Farmers in Missouri: Situation and Characteristics of 459 Farm Operators in Four Social Area B Counties*. Columbia, Research Bulletin 413, Agricultural Experiment Station, College of Agriculture, University of Missouri, 1948; also, Lionberger, Herbert F., *Low-Income Farmers in Missouri: Their Contacts with Potential Sources of Farm and Home Information*. Columbia, Research Bulletin 441, Agricultural Experiment Station, College of Agriculture, University of Missouri, 1949.

attain incomes which will remove them from the lower economic third. Certain others of middle age probably had reached maximum productivity and still were in the lower economic third.

By definition and selection, they had lower incomes than other farmers living in the immediate locality. Their median gross income was \$763. This was somewhat less than half the median gross receipts of all farmers in Rural Social Area B as reported by the Agricultural Census of 1945. Livestock provided their chief source of income. They were bound to the soil by tradition and sentiment. A majority of them had been farming for a median of 30 or more years at the time of interview. Only one in 7 had farmed less than 10 years. In 19 cases out of 20 their fathers had been farmers before them and the same proportion said they like to farm. Seventy-five per cent of them would choose farming again if they had the choice to make over. One-half of the operators considered "being one's own boss" the chief advantage of farm life. About one-fourth thought "raising one's own living" was the chief advantage. Health conditions were rated third in importance. The majority of them would not consider moving to the city for monetary considerations. A wide variety of reasons were given for the choice of farming as an occupation but those who made the choice for positive reasons were more successful financially than those who chose to farm for negative reasons.

Although underprivileged from an economic standpoint, they were staunch in the traditional American faith in education. At least 75 per cent recommended a high school or college education for boys who expect to farm. About two-thirds of them considered vocational agriculture valuable training and 89 per cent viewed 4-H Club work in the same light. This faith in education for farming found concrete expression in the schooling of their sons and daughters. Low-income farm youth who were no longer in school had actually completed more years schooling than all urban youth in the state, who were out of school in 1940, the last date when such information was available. Furthermore, the operators themselves were often receptive to new ideas about farming. Sixty per cent of them expressed a desire for more information of the type they could use.

III. SOURCES OF FARM AND HOME INFORMATION

A previous publication is devoted to an analysis of the contacts which low-income farmers and their wives had with the available means of farm and home information⁵. The section of this publication which follows is concerned with sources of farm and home information used by the survey farmers and their wives. Sources of information are simply those contacts which these operators and wives found useful as a means of obtaining farm and home information. The definition of usefulness was left exclusively to them for it is they alone who decide what is useful to them. Personal sources of information refer to those dependent upon personal contact for

⁵Op. Cit., Research Bulletin 441.

the transmission of knowledge whereas impersonal sources refer to those dependent upon the transfer of ideas by means of the radio or the printed page.

1. Personal Sources

County Extension Agents. Although the Agricultural Extension Service is the best organized system in existence for supplying farmers with technical agricultural information, only one household in three got help directly from county agricultural and home agents. Twenty-six per cent of the operators and 15 per cent of the wives received help in this manner. The higher the income and the greater the amount of schooling the more likely both operators and wives were to seek the assistance of county agents. Nearly four times as many operators with incomes of \$1,000 and over got help from county agents as those with gross incomes under \$500. (See Figure 2.) Twice as many wives from the upper income households as from lower income households found county agents helpful. (See Figure 3.) Age of operators and wives was little related to the proportion receiving such assistance. However about twice as many owner-operators as renter-operators got help from agents during the survey year. Tenure status was of little consequence in the case of the wives.

About 70 per cent of the households in DeKalb County got help directly from county agents, but in the other three counties only about one-fourth of the households reported such assistance. Furthermore, there was little relationship between the supply of agents and the proportion of low-income farmers who used them. In DeKalb County there was a county agent or assistant agent for each 564 farm households in the county. In Boone County the comparable number was 515. Shelby and Vernon counties

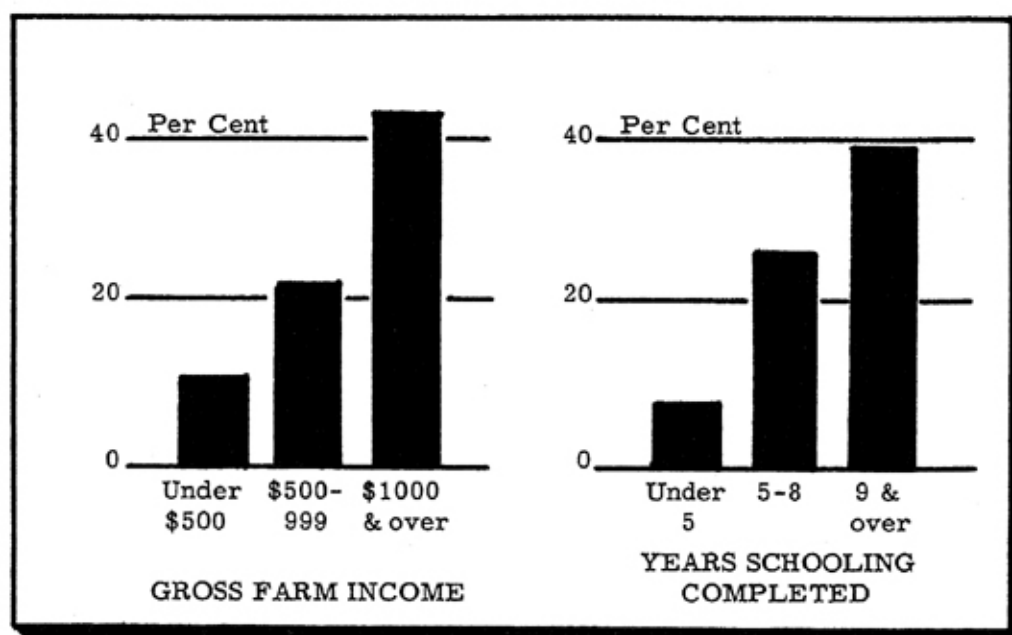


Figure 2.—Percentage of Farm Operators Receiving Farm Information Directly From County Agents, by Income and Schooling.

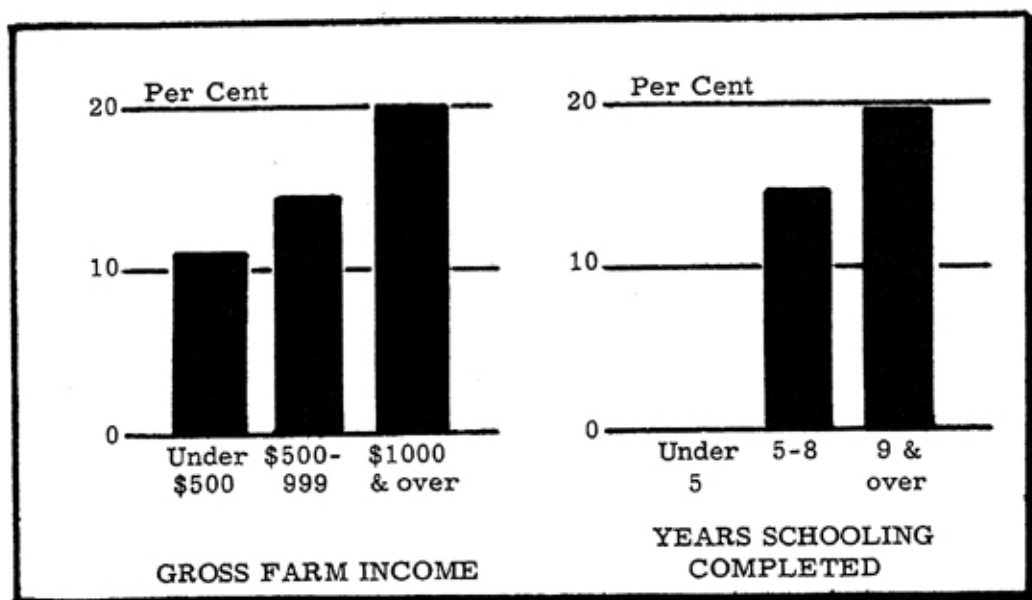


Figure 3. —Percentage of Farm Wives Receiving Home Information Directly From County Agents, by Income and Schooling.

were not so well supplied. These counties had a county agent or assistant county agent for each 830 and 948 farm households, respectively.

In a majority of the cases neither the operator nor the wife had ever met a county agent or home demonstration agent. Yet over 90 per cent of the households reporting contacts with them found their services useful. Percentages for operators and wives were 86 and 95 per cent, respectively. Operators with the higher gross incomes more often found these contacts useful than those with lower incomes. With wives no such variation existed nor was there any evidence that years schooling of either the operator or wife was an important factor in the proportion who found contacts with county agents or home demonstration agents useful. Certainly there remains much that might be done in making favorable acquaintances with low-income families. It seems reasonable to believe that additional favorable acquaintances with agents would open the road to a wider use of the services provided by the local extension office.

Neighbors and Friends. The most universally recognized personal source of farm and home information by both operators and wives was friends and neighbors. Sixty-four per cent of the operators and 58 per cent of the wives or a total of 70 per cent of the households recognized this source. The percentage of both operators and wives receiving useful information in this manner was smaller by a substantial margin in Vernon County than in the other three counties studied. Differences by tenure status were very small, but differences by years schooling completed by the operator, and differences by farm income above and below \$500 were quite apparent. (See Figure 4.) On the other hand, years schooling completed by the wife seemed to be little related to the proportion who got information from friends and neighbors. Variation by schooling and income for both operator and wife was much less than for the other personal sources considered in this study. This, of course, is to be expected. The

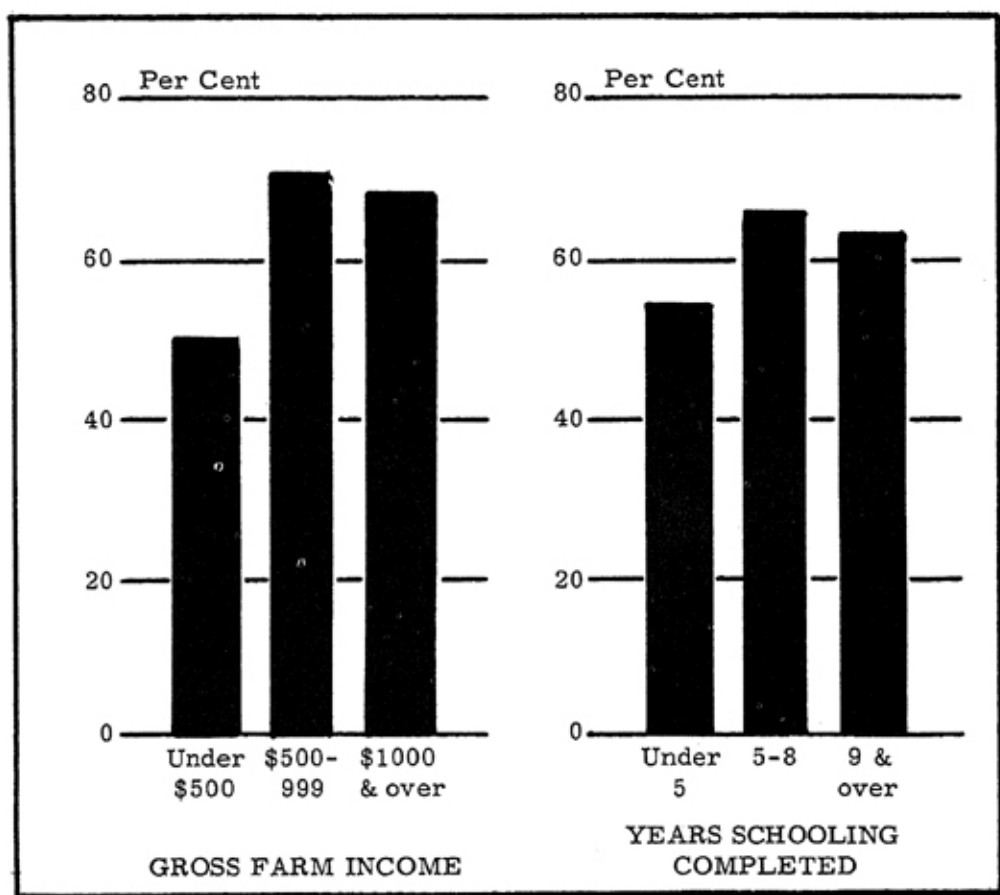


Figure 4.—Percentage of Farm Operators Receiving Farm Information From Neighbors and Friends, by Income and Schooling.

relative importance of friends and neighbors as a source of information to low-income farmers suggests the possibility of facilitating useful contacts through community organization.

Agricultural Adjustment Administration Office. The AAA office (now the Production and Marketing Administration) was recognized as a direct source of farm information by 30 per cent of the farm operators. Percentages for DeKalb and Shelby counties were 65 and 58, respectively. The much lower percentages of 13 and 15 for Boone and Vernon counties, respectively, may be an understatement of the degree to which the AAA office is recognized as a source of information in these counties⁶. It is, however, significant that as many as 65 per cent of the farm operators in any county recognized the AAA office as a useful source of information. Differences by tenure status were very small, but differences by years schooling of operator and by farm income were considerable. More or less than 5 years schooling of operator, and farm income in excess of and less than \$500

⁶Although it is believed that the data regarding own children, farm meetings, and the AAA office as a recognized source of information may represent an understatement of fact, their general relationship to tenure status, farm income, and years schooling of operator is not appreciably changed when data from these two counties are excluded.

marked critical points in the variations which occurred. Differences ranged from 14 per cent, for operators with farm incomes under \$500, to 44 per cent for operators in the \$1,000 and over group. Differences by schooling ranged from 19 per cent, for farm operators completing less than 5 years, to 37 per cent for those who had completed 9 or more years. In view of the limited contacts with which wives have with the AAA office it is not surprising that only 6 of them got information from this source.

Other Personal Sources. About 14 per cent of the households got farm and home information from their children. One farmer in nine admitted getting information from farm meetings. About 6 per cent of the wives got household information in this manner. This represented about 15 per cent of the households. As with previous sources, income and schooling of operator were positively related to the proportion obtaining useful information. Also about twice as many owner-operators as renters got information through farm meetings.

Forty of the farm operators were FSA cooperators. Thirty-four of these considered the assistance of the farm supervisor helpful. Thirty-eight of the 40 wives viewed the home supervisor in the same light.

Total Personal Sources⁷. Operators and wives reported an average of 1.4 personal sources per household. Those in Boone and Vernon counties reported slightly less than one while in DeKalb County an average of 3.1 sources was reported. The median for Shelby County was 1.7. Considerable variation by farm income, years schooling of operator and ownership and non-ownership of an automobile or truck was also in evidence, but tenure status, age of operator, and location on or off an all-weather road did not prove to be important associated factors.

Two out of five households recognized no personal source exclusive of friends and neighbors. However, seven-eighths of those admitting no personal source got farm and home information by reading and 54 per cent got such information by means of the radio. About 20 per cent of the households reported 3 or more personal sources. These households were disproportionately concentrated in the upper income group and among households headed by operators with more than a grade school education. Over half of the entire number were concentrated in DeKalb County where personal sources were generally reported in the greatest number.

2. Impersonal Sources

A. The Printed Page.—Newspapers. Newspapers led the list as a recognized source of farm and home information. Ninety-five per cent of the households subscribed to at least one newspaper and the operators or wives of 78 per cent of the households said they received useful farm or home information from them. Sixty-four per cent of the operators and 71 per cent of the wives got information in this manner. In 4 out of 5 households subscribing to newspapers either the operator or wife found them useful as a source of information. Slightly more middle-aged operators

⁷For content of total personal sources see Appendix.

and wives got help from newspapers than either the older or younger ones. About 10 per cent more households with gross incomes in excess of \$500 than with incomes under that figure got help in a like manner. The most significant associated factor, however, was schooling. About 20 per cent fewer operators and wives with less than 5 years schooling got useful information from newspapers than those who had completed 5 or more years. (See Figure 5.) However, schooling in excess of 5 years did not appear to be a requisite to obtaining information from newspapers. As a rule, renters were as likely to get help from newspapers as farmers who owned their farms.

Farm Journals. Farm journals were second only to newspapers in the universal manner with which they were recognized as a source of farm and home information. Seventy-three per cent of the households found them useful as a source of farm and home information. This figure exceeded the number of households subscribing to such journals by a margin of 4 per cent. In all counties 63 per cent or more households got useful farm and home information from them. Variation by tenure status and age was small. However, farm operators and wives over 65 years of age made less use of farm journals for informational purposes than the younger ones.

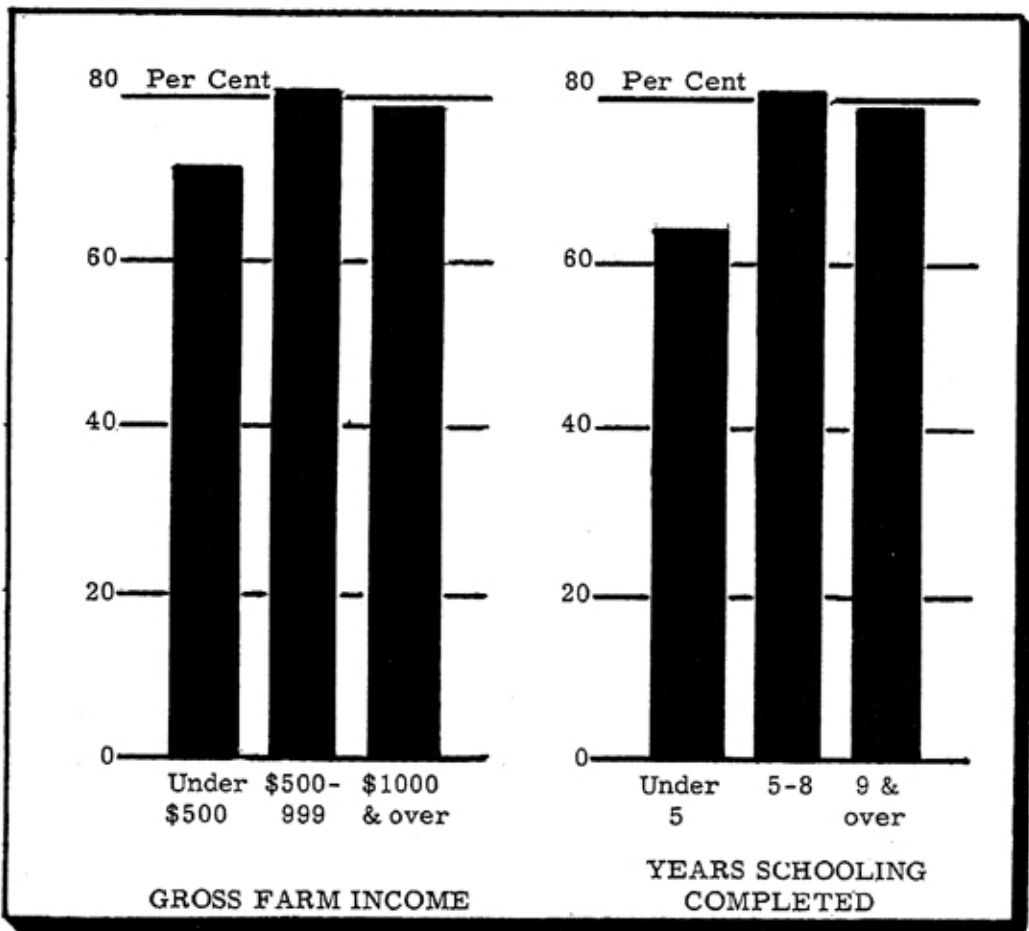


Figure 5.—Percentage of Farm Households Receiving Farm and Home Information From Newspapers, by Income and Schooling of Operator.

The proportion of households getting help from farm journals increased with farm income (see Figure 6) but in a less marked manner than was the case with the more direct personal sources of information. Variation by schooling of operator in the proportion of households getting farm and home information from farm journals amounted to about 19 per cent. However, differences were much greater when the experience of operators and wives were considered separately. About 42 per cent of the farm operators with less than 5 years schooling found farm journals useful compared to about two-thirds of those in the two higher educational groups. Only about 36 per cent of the wives with less than 5 years schooling got help from farm journals compared to 65 and 73 per cent of those in the middle and highest educational groups, respectively.

The universality with which operators and wives got help from farm journals is almost equaled by the proportion who made extensive use of information articles appearing in these publications. Half of the farm operators and almost two-thirds of the wives said they read such articles regularly. One-fourth of the former and 18 per cent of the latter said they read them occasionally. Only one-fourth of the operators and 17 per cent of the wives failed to read such articles at least occasionally. The proportion of both operators and wives who regularly read information

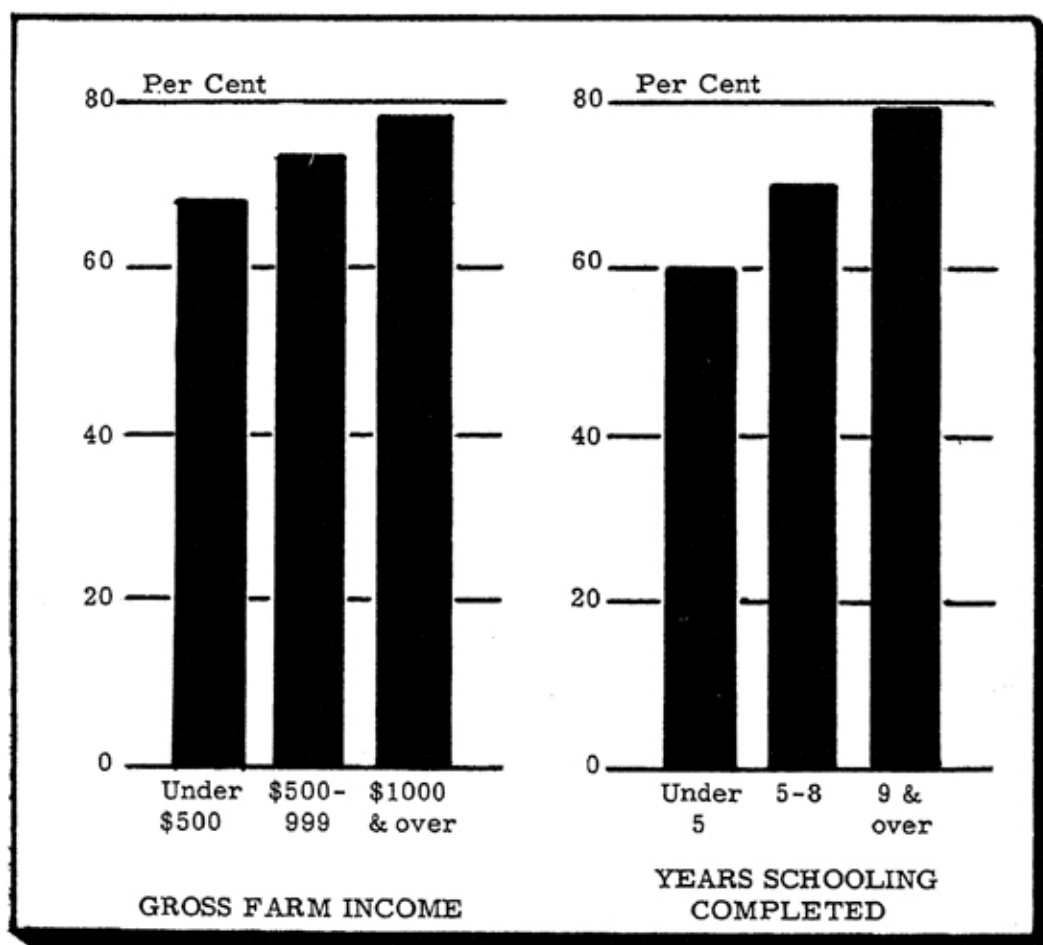


Figure 6.—Percentage of Farm Households Receiving Farm and Home Information From Farm Journals, by Income and Schooling of Operator.

articles increased sharply with years schooling completed and noticeably with farm income. Only 27 per cent of the operators with less than 5 years schooling read farm and home information articles in newspapers and magazines regularly compared to 61 per cent of those with 9 or more years schooling. For wives corresponding percentages by educational groups from lowest to highest were 36, 63, and 70, respectively. About 37 per cent of the farm operators with incomes less than \$500, regularly read such articles compared to 61 per cent of those with farm incomes of \$1,000 and over. The proportion for the middle income group was 48 per cent. Corresponding percentages for wives by income groups were 55 for the lower group, 66 for the middle, and 69 per cent for the upper group.

Farm Bulletins. One-fourth of the operators and one-fifth of the wives representing 31 per cent of the households obtained useful farm and home information from farm bulletins published by the United States Department of Agriculture or by the State College of Agriculture. Three-fourths of the households receiving bulletins found them useful. As might be expected, more operators and wives who requested bulletins got help from them than those who got them through no effort of their own. Percentages were 68 and 53 respectively for operators and 55 and 30 respectively for wives. Although these differences are considerable, the relatively large number of both operators and wives who got help from bulletins sent by others is, perhaps, more significant.

Profitable use of farm bulletins as a source of farm and home information was subject to the greatest variation by county, farm income, and years schooling of operator and wife than any other reading source considered in this study. DeKalb County led the list with 60 per cent of the households obtaining information from bulletins. Vernon County was lowest with 22 per cent. Percentages for Shelby and Boone counties were 32 and 24, respectively. Differences by farm income ranged from 18 per cent for households with gross incomes under \$500 per year to 40 per cent of the households in the highest income group. (See Figure 7.) In only 15 per cent of the households headed by farm operators with less than 5 years schooling did either the operator or wife get useful information from farm bulletins. The percentage for the 5-8 group was 29, that for the 9 and over year group marked the peak of 55 per cent. The same general relationship held without exception in all four counties.

The relationship of years schooling of operator and of wife to their respective experiences with farm bulletins reveals an even more impressive association between these two factors. Only 12 per cent of the operators with less than 5 years schooling got useful farm and home information from bulletins compared to 42 per cent of the operators with some high school training. Twenty-three per cent of those with 5-8 years schooling found bulletins useful. With wives the corresponding range was from 9 per cent of those who had less than 5 years schooling to 29 per cent of those who had completed 9 or more years. Sixteen per cent of the wives with 5-8 years schooling said they got information from farm bulletins. Thus it is that educational attainment is an important factor in seeking,

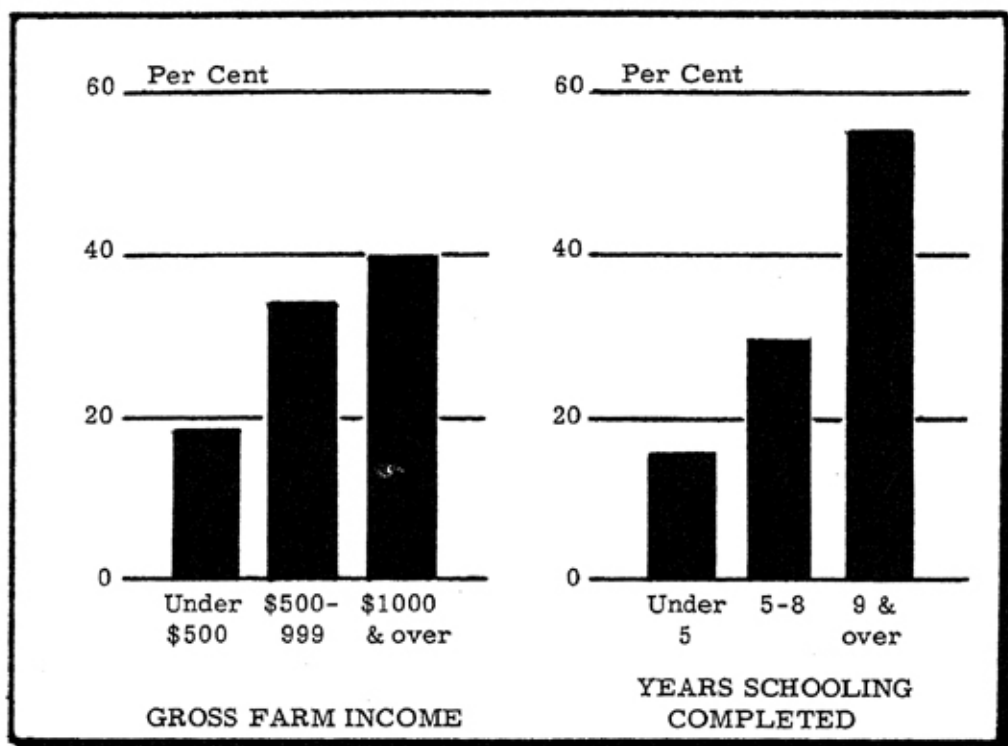


Figure 7.—Percentage of Farm Households Receiving Farm and Home Information From Farm Bulletins, by Income and Schooling of Operator.

reading, and understanding farm bulletins. Tenure status and age of operator on the other hand was of much less importance. About 5 per cent more owners than renters got help from bulletins. The entire range by age of operator amounted to only about 12 per cent. There was a slight tendency for middle aged operators to make greater use of bulletins than either the younger or older farmers.

Books. Books were less used as a source of farm and home information than the other printed matter here considered. A total of only 7 per cent of the households got farm and home information in this manner. More operators with farm incomes of \$500 or more made use of books than did those with gross farm incomes of less than \$500. The most marked differences, however, were those associated with years schooling of operator. In 4 per cent of the households headed by operators with less than 5 years schooling either the operator or wife got useful farm and home information from books. The percentage for the 5-8 year group was only one point higher, but for households headed by operators with 9 or more years schooling the percentage was 18. Tenure status and age under 65 years were relatively unassociated factors. However, after age 65, the number of households getting useful information from books declined somewhat.

Other Reading Sources. A total of 49 operators mentioned seed companies as a source from which they received help during the survey year. One-fourth of the Shelby County operators and one-sixth of those in Vernon County mentioned this source compared to a total of only 4 persons

in Boone and DeKalb counties. Ten wives mentioned booklets obtained from fruit jar companies and 8 mentioned hatcheries.

Total Reading Sources^s. The farm operators and wives interviewed in the study recognized an average 3.9 reading sources of useful farm and home information per household. Households with farm incomes under \$500 recognized an average of 3 reading sources compared to 4.1 for those with incomes of \$500 or more per year. There was very little variation above the \$500 figure in the average number of reading sources recognized. County figures considered separately show essentially the same thing. Differences were greatest on an educational basis. Households headed by operators with less than 5 years schooling found an average 2.5 reading sources useful, whereas, those headed by operators with 5-8 and 9 and over years got help from 4.0 and 4.4 sources, respectively. In all counties, years schooling above the fourth grade was associated with a recognition of decidedly more reading sources of information than 4 years schooling or less. Significant differences by years schooling remain when farm income is held constant.

County averages ranged from 3.4 sources in Boone County to 4.3 sources in DeKalb County. The corresponding figure for both Shelby and Vernon counties was 4.1. Households headed by operators under 35 years of age and those headed by operators 65 years of age and over found fewer reading sources of information useful than those headed by operators from 35 to 64 years of age, inclusive. Medians for the under 35 and over 64 age groups were 3.8 and 3.6, respectively. For the intervening age groups, medians ranged from 4.0 to 4.1. Owner-operator households recognized an average of 4.0 reading sources, compared to 3.9 for renter-operator households.

One household in 12 was without a recognized reading source of farm and home information. This condition existed in 6 per cent of the survey households in both DeKalb and Vernon counties. In Boone and Shelby counties 12 and 7 per cent of the survey households, respectively, recognized no reading source. The proportion admitting no reading sources decreased appreciably with increased farm income and greatly as years schooling of operator increased.

Contrary to expectations, only 5 per cent of the renter-operators were without a recognized reading source of information, compared to 9 per cent of the owners. Part of this difference may be attributed to the relatively older age of owner-operators and the relatively large number of farm operators over 65 years of age, who found no reading source of information useful. Ten per cent of the households headed by operators 65 years of age and over reported no reading source of information, while percentages for the younger operators ranged from 6 to 9. Almost half of the households recognized 4 or more reading sources from which either or both the operator and wife received useful information on farming and homemaking. The vast majority of these households were headed by operators who had 9 or more years schooling and farm incomes of at least \$500.

^sFor content of total reading sources see Appendix.

B. The Radio. About 52 per cent of both farm operators and wives, representing 62 per cent of the households, obtained farm and home information by means of the radio. By county, household figures ranged from 78 per cent in DeKalb County to 51 per cent in Shelby County. Corresponding figures for Boone and Vernon counties were 56 per cent and 65 per cent, respectively. The proportion increased sharply with farm income and with schooling in excess of four years. Forty-seven per cent of the households with farm incomes under \$500 got information in this manner, compared to 65 per cent with farm incomes of \$500-999, and 71 per cent of those with farm incomes of \$1,000 and over. (See Figure 8.) Differences by income, however, were cut in half when only households with radios in operation were considered. A little over 46 per cent of all households headed by farm operators with less than 5 years schooling got information over the radio, compared to 64 per cent of the 5-8 group and 62 per cent of the 9 and over group. The proportion of wives who obtained farm and home information over the radio increased consistently with years schooling completed. With operators, differences were smaller and not entirely consistent. A few more operators with 5-8 years schooling got farm and home information by radio than in the other educational

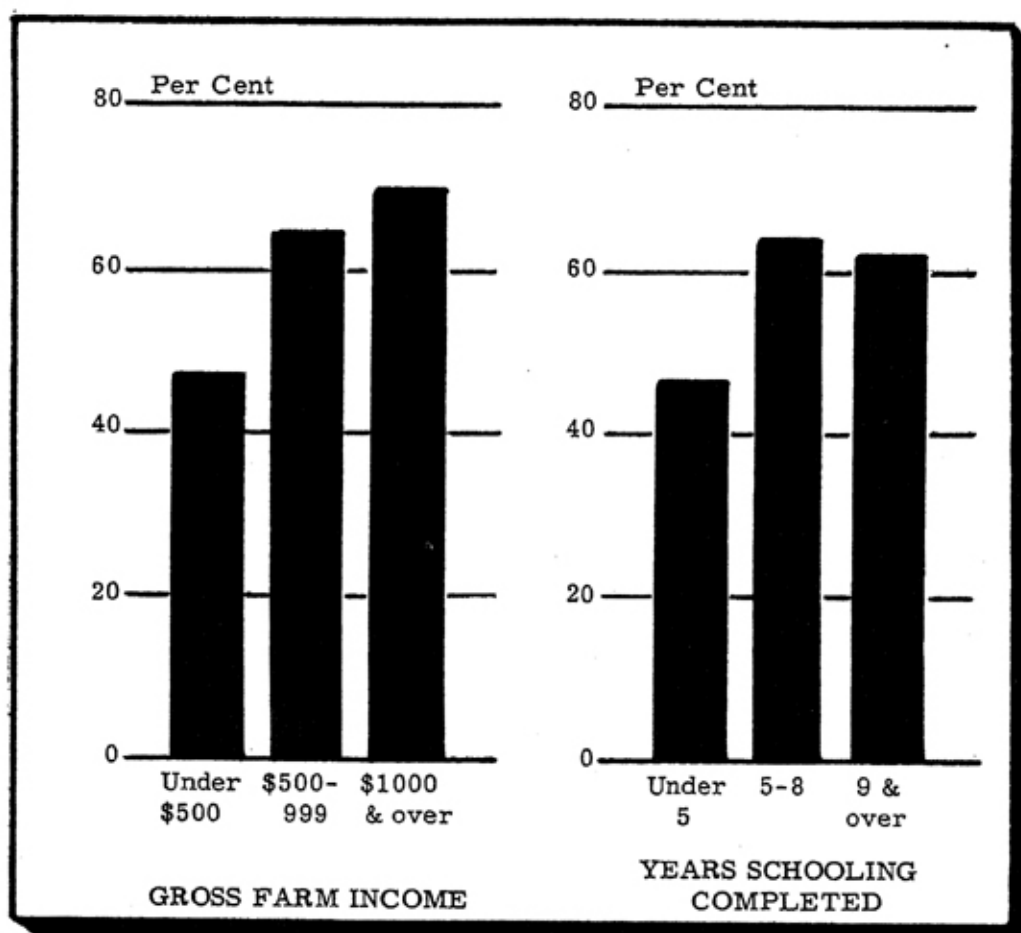


Figure 8.—Percentage of Farm Households Receiving Farm and Home Information by Radio, Classified by Income and Schooling of the Operator.

groups. Both in the case of operators and wives the greatest differences were marked by the 5-year level of schooling.

Broadcasting Stations Recognized as Sources. Local stations were more frequently recognized as sources of information than the more distant ones. In DeKalb County almost half of the farm operators got useful farm information from KMBC, Kansas City, Missouri. One-third got useful information from KMA at Shenandoah, Iowa, and 11 per cent from KFEQ, St. Joseph, Missouri. Less than 8 per cent of the operators got information from all other stations. Exactly 52 per cent of the wives got home information from KMA, 16 per cent from KMBC, and 7 per cent from KFNF, Shenandoah, Iowa. Less than 3 per cent got information from other stations.

In Shelby County, 13 per cent of the operators got farm information from WHO, Des Moines, Iowa, 7 per cent from WHB, Kansas City, Missouri, and an equal number from KMA. Other stations named by more than 3 per cent of the operators were KMBC, KFEQ, WDAF, Kansas City, Missouri, and WIBW, Topeka, Kansas. The wives found KMA the most popular station with 29 per cent reporting home information from that source. However, no other station was mentioned by as many as 7 per cent of the wives.

In Boone County, KFRU, Columbia, Missouri, was by far the most frequently mentioned station. Percentages for farm operators and wives were 38 and 36, respectively. Thirteen per cent of the operators and 4 per cent of the wives mentioned WDAF. Four per cent of both mentioned WIBW, Topeka. Less than 2 per cent mentioned any other station.

The number of stations used by Vernon County farm operators and wives were more diverse. Twenty-three per cent of the operators got farm information from KMBC, 22 per cent from WIBW, 14 per cent from KWTO, 12 per cent from WDAF, and 3 per cent from KOAM, Pittsburg, Kansas. About 28 per cent of the wives got home information from WIBW, 16 per cent from KMBC, 15 per cent from KWTO, Springfield, Missouri, and 7 per cent from KOAM.

Radio Programs Considered Outstanding as Sources. Favored farm and home information programs were evident in each of the survey counties. In DeKalb County 31 of the 75 housewives considered Leanna Driftmier's "Kitchen Klatter" broadcast daily by KMA at 3:15 p. m. outstanding as a source of home information. On this program such subjects as cooking, canning, housecleaning, and party games were discussed in a friendly, conversational manner. Listeners were made a vital part of the program by using suggestions of one person to answer the questions of another. In short, the program operated as a clearing house for home and household ideas. Ten wives mentioned other farm and home information programs broadcast by KMA and 7 mentioned the Betty Crocker program.

Forty of the 85 farm operators in DeKalb County mentioned the Phil Evans programs of KMBC as outstanding, 20 mentioned the Frank Field programs of KMA, and 7 the Earl May programs broadcast by the same station. Phil Evans spoke each week day from the KMBC experimental

farm at 6:15 a. m. and 12:20 p. m. Accounts were given of experiments under way on the experimental farm and of the progress of farming operations, as well as timely talks on subjects of current interest to farmers. The Frank Field program, which was broadcast at the somewhat less convenient hours of 7:15 and 11:15 a. m., consisted mainly of answering questions on farming sent in by listeners and of talking personally with individuals who visited the station to discuss farm problems of current interest. The Earl May programs broadcast at an early morning hour and during the noon hour consisted mainly of weather reports, farm news, market reports and comments, and an occasional interview with notables in the field of farming.

In Shelby County, 10 of the 73 wives specifically mentioned Leanna Driftmier's "Kitchen Klatter" and 10 more mentioned KMA with no designation concerning which of their programs they considered outstanding. No other program was mentioned by more than 3 persons. Seven of the 84 farm operators mentioned WHO, Des Moines, Iowa, with no designation as to specific programs considered outstanding. No other station or program was mentioned by as many as 3 persons. An understatement of the programs considered outstanding is suspected, due to a somewhat limited interpretation of the word "outstanding" by the interviewers who worked in the county.

By far, the most frequently mentioned program in Boone County was the MFA Neighbors program heard over KFRU, Columbia, Missouri, each week day from 1:00 to 1:15 p. m. Twenty-six of the 122 wives and 31 of the 145 operators mentioned this program. An additional 11 wives specifically mentioned talks made by the county home demonstration agent. Six of the farmers merely mentioned KFRU. This program is devoted primarily to casual interviews with farm people who chance to be in the MFA store at time of broadcast and, secondarily, to supplying timely farm and home information. The farmers who appear on the program are sometimes questioned about current farm problems and about plans for farm and home improvement which they may have in process. Material and personnel from the Missouri State College of Agriculture and the local County Extension office were also used occasionally on these programs. No more than 3 farm operators or wives from the 145 households mentioned any other information program.

Farm operators and wives in Vernon County gave much more diverse answers to the question concerning what farm information programs they considered outstanding than in the other survey counties. Thirteen of the 134 wives mentioned the Phil Evans programs; 12 mentioned Henry's Exchange broadcast by WIBW; 8 the Farm Forum broadcast by KWTO, Springfield, Missouri; 9 the Betty Crocker program; and 6, Reuben Corbin of WDAF. Ten simply mentioned WIBW and 9 KMBC. Twenty-four of the 145 farm operators mentioned Phil Evans, 7 named Reuben Corbin, and 8 named the Farm Forum broadcast by KWTO. Eight additional ones simply referred to station KWTO which carried only the one farm infor-

mation program. An equal number also referred to KMBC with no designation as to specific programs considered outstanding.

Desire for More Information by Radio. One-half of the farm operators and 70 per cent of the wives receiving farm and home information by radio expressed a desire for more educational programs of this kind. This amounted to 40 per cent of all operators and one-third of the wives. Wives of the lowest income group showed just as much interest in more farm and home information by radio as those in the highest income group. Farm operators with gross incomes under \$500 showed only slightly less interest than those in the higher income groups. Differences by years schooling amounted to about 15 per cent for the operators and 5 per cent for the wives. Of the operators desiring more information, 61 per cent stated preferences for noon programs and 71 per cent for evening programs. Only 11 per cent mentioned the early morning hours. Sixty-one per cent of the wives desiring more home information programs preferred afternoon hours, 37 per cent the early morning hours, 18 per cent the noon hour, and 13 per cent the evening hours. Both operators and wives often stated more than one preference.

IV. USE OF APPROVED FARM AND HOME PRACTICES⁹

A check list of 8 approved farm and home practices was used in this study to determine the general state of farm and home practices prevailing on the survey farms and the extent to which technical knowledge was being translated into practice. Items were selected which state extension specialists believed were most satisfactory for this purpose. The section which follows is devoted to a description of the use which the survey farmers made of these practices and the relationship of use to certain socio-economic factors which appear to condition the acceptance of them.

1. Relating to the Home

Extension specialists recommended the growth of 20 or more vegetables in the home garden as a desirable goal for farm families. Only 14 per cent of the survey households met or exceeded this standard. County figures ranged from 4 per cent for DeKalb County to 20 per cent for Shelby County. The corresponding percentages for Boone and Vernon counties were 12 and 19, respectively. Differences by farm income and tenure status did not exceed 7 per cent and differences by years schooling of operator amounted to only 9 per cent. However, such differences as did occur consistently favored schooling and farm ownership as factors positively associated with attainment of the garden production standard. Accomplishment of this practice showed practically no relationship to age of operator.

State extension specialists recommended the canning of 30 quarts of tomatoes or tomato juice per person as a good housekeeping practice for farm families. One-fifth of the survey households met this standard. Differences by county ranged from one-fourth of the survey households in

⁹See Figure 9 for graphic summary of practices used.

Shelby County to 14 per cent of the households in Vernon County. Corresponding figures for DeKalb and Boone counties were 22 and 23 per cent, respectively. Differences by tenure status and farm income were less than 5 per cent. However, there was a small positive relationship between farm ownership and high income and compliance with the tomato canning standard. Differences by years schooling were also small and, furthermore, inconsistent. The greatest differences were by age of operator. Only 10 per cent of the households headed by operators under 45 years of age attained this standard, compared to 26 per cent of those headed by operators 55 years of age and over. The corresponding figure for the 45-54 age group was 19 per cent. It is likely that this practice, more than any other considered, is traditional with farm people, who in the general farming areas, place a premium on growing their own food and canning ample amounts for winter use.

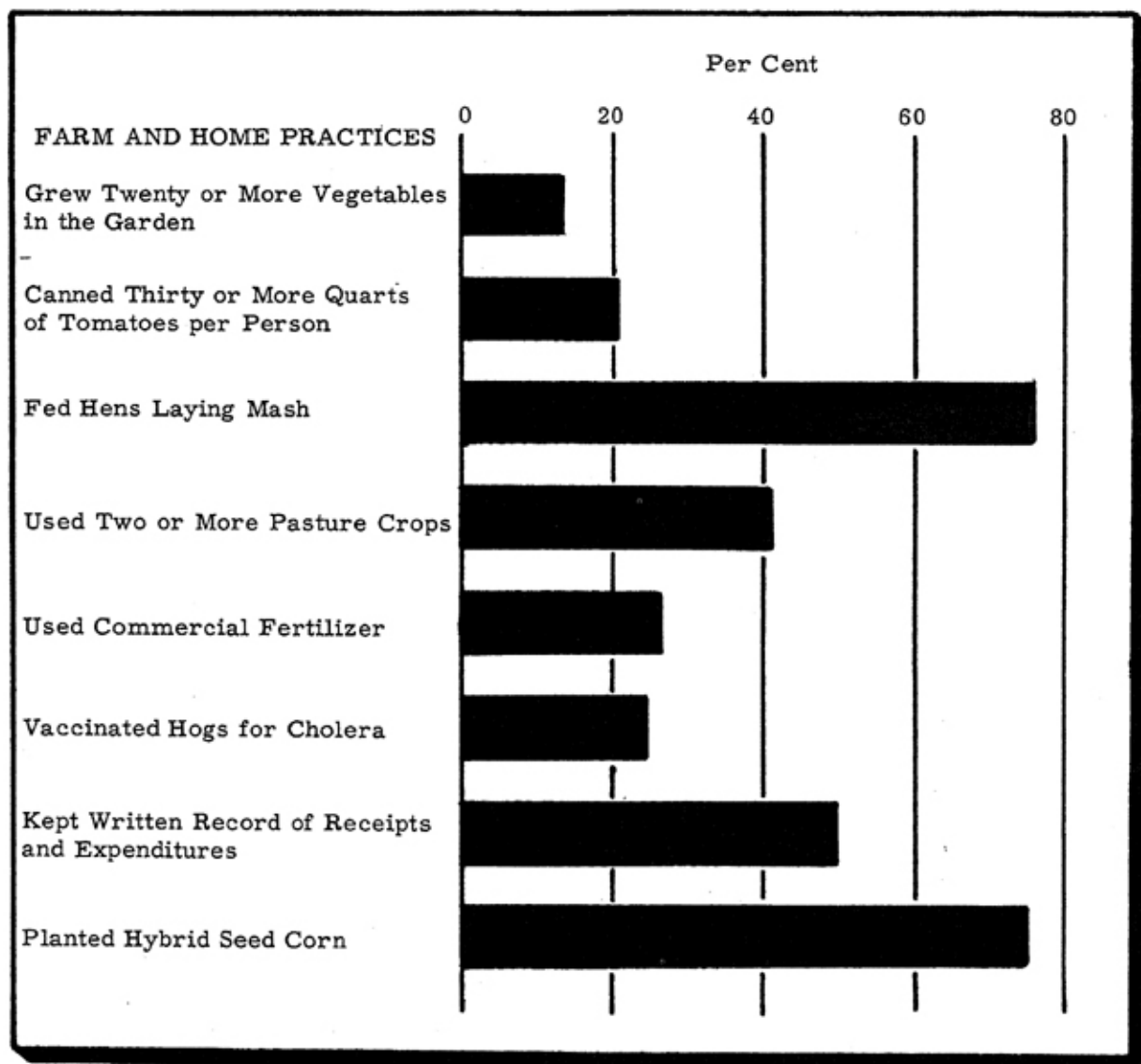


Figure 9.—Percentage of Farm Households Following Certain Approved Farm and Home Practices.

2. Relating to Farm Production

The practice of feeding laying mash to hens has long been considered a part of good poultry management by poultry production specialists. Exactly 76 per cent of the survey farmers complied with this approved practice. The percentage complying was high in all survey counties. Vernon County, with 68 per cent attainment, was lowest. All other counties rated above the 4-county average. Differences by farm income and years schooling of operators were sizable. Sixty-three per cent of the operators with farm incomes under \$500 fed hens laying mash, compared to 86 per cent of those with farm incomes of \$1,000 and over. Sixty-five per cent of the operators with less than 5 years schooling followed the practice, compared to 82 per cent of those with 9 or more years schooling. A little over three-fourths of the operators with 5-8 years schooling followed the practice. By tenure status, figures were 66 per cent for renters and 80 per cent for owners. Variation by age of operator was less than 10 per cent and was somewhat inconsistent. However, existing differences tended to slightly favor operators under 35 years of age.

A good pasture system in Area B requires the use of at least two pasture crops. Three are recommended. Two-fifths of the survey farmers used two or more pasture crops in their pasture systems. In DeKalb County, 61 per cent met this standard. For owners and renters, the percentages were 47 and 27, respectively. The usual difference by farm income was evident. For the three income groups from low to high, the percentages were 33, 36, and 51, respectively. Differences by years schooling were erratic. Per cents for the under 5 year group and the 9 and over group were 46 and 49, respectively, whereas, the corresponding percentage for the 5-8 year group was 38. Variation by age was inconsistent and amounted to less than 7 per cent.

Conditions of soil fertility in Area B makes the use of commercial fertilizer on many crops desirable. Yet only 26 per cent of the farm operators interviewed made any use of commercial fertilizer during the survey year. The proportions ranged from 39 per cent in DeKalb County to 13 in Shelby County. Thirty-seven per cent of the Vernon County survey farmers and 16 per cent of those in Boone County used commercial fertilizers. Differences by farm income and years schooling of operator were marked. By farm income groups, from low to high, percentages were 13, 27, and 35; by educational groups in the same order percentages were 15, 25, and 41, respectively. Percentages for owners and renters were 28 and 22, respectively. There was some inclination for more farmers under 55 years of age to use commercial fertilizers than farmers above that age.

Although vaccination of hogs for cholera is a recommended precautionary measure, only about 24 per cent of the low-income farmers, who had hogs, took that precaution. In DeKalb County almost half of the farmers, who had hogs, followed this practice, compared to only one in twelve in Boone County. Corresponding percentages for Shelby and Vernon counties were 18 and 28, respectively. A few more farm renters than owners followed this practice. By farm income, the range was from 13

per cent for the under \$500 group to 31 per cent for the \$1,000 and over group. One-fourth of the farmers with \$500-999 incomes vaccinated their hogs for cholera. Differences by years schooling of operators ranged from 17 per cent for operators with less than 5 years schooling to one-third of those who had completed 9 or more years. The proportion following this practice decreased consistently with age ranging from 37 per cent for operators under 35 years of age to 17 per cent of those 65 years of age and over.

The productive superiority of hybrid seed corn over open pollinated seed has been well demonstrated by scientific investigation. Although the use of hybrid seed is a relatively new innovation in American agriculture, 75 per cent of the low-income farmers of this study planted it during the survey year. The proportion following this approved practice was highest in DeKalb County where 93 per cent of the survey farmers planted hybrid seed corn, and lowest in Vernon County where only 48 per cent used such seed. Both Shelby and Boone counties ranked near the top with 88 and 85 per cent, respectively using hybrid seed. As usual, differences by farm income and years schooling were considerable. Six out of 10 farm operators with less than \$500 gross income used it. However, for those with farm incomes of \$1,000 and over, the proportion was approximately 9 out of 10. Almost three-fourths of the farmers with farm incomes of \$500-999 planted this kind of seed. Sixty-five per cent of the farm operators, who had less than 5 years schooling, planted hybrid corn. Seventy-five per cent of the ones with 5-8 years schooling and 82 per cent of those with 9 or more years schooling did likewise. Tenure status was of very little consequence as a determining factor with respect to this approved practice. A few more operators under 35 years of age used hybrid corn than those in any other age group, but the greatest differences did not exceed 10 per cent. Furthermore, there was no tendency for a proportionate decline in use, with age of operator, after 35 years of age.

Some kind of record of cash receipts and expenditures is indispensable to good farm management, yet only half of the farmers interviewed, kept records. Proportions by county ranged from four-fifths of the households in DeKalb to one-third of those in Boone County. Corresponding percentages for Shelby and Vernon counties were 63 and 37, respectively. Again, differences by farm income and years schooling of operator were marked. Only about one-fifth of the survey farmers with farm incomes under \$500 kept such records, compared to three-fourths of those with farm incomes of \$1,000 and over. The percentage for the \$500-999 group was 44. About 35 per cent of the operators with less than 5 years schooling kept records, compared to 62 per cent of those with 9 or more years schooling. Just under half of those with 5-8 years schooling kept records. About 7 per cent more owner operators than renter operators kept farm records. Such differences as did occur by age favored middle-aged operators. There was a tendency for fewer farm operators under 35 years of age and fewer over 55 years of age to keep records than those of the intervening ages. This was especially true of farm operators past 65 years of age.

Thus, of the factors considered, differences by farm income and years schooling were more consistent and greater than variation by tenure status and age of operator. In most cases, more farm operators than renters followed the approved practices considered. However, tenure differences were generally not great. Although slightly fewer farmers in the older age groups kept records, used commercial fertilizer, planted hybrid seed corn, and fed laying mash than younger farmers, and, although differences were more marked with respect to the practice of vaccinating hogs, there is no reason to believe that the older farmers were unwilling to adopt new farming practices. The number of households meeting the tomato canning standard of the Agricultural Extension Service was three times as high for farm households headed by farm operators 65 years of age and over as for those headed by farm operators under 35 years of age.

3. The Relationship of Use to Selected Socio-economic Characteristics of Low-income Farmers.

Composite approved practice ratings were prepared for each survey household in order (1) to facilitate the study of relationships between approved practice behavior and selected socio-economic factors and (2) to present a better composite picture of the state of farm and home practices which prevailed. Varying credits were assigned to varying degrees of compliance with each of the approved practices. Household ratings were computed by totaling the credits earned by each household¹⁰. The average household rating was 11.5, or slightly less than half the possible attainment. DeKalb County topped the list with an average rating of 15. Vernon County was lowest with a 9.7 average. Ratings for Shelby and Boone counties were 13.2 and 11.1, respectively. There were sharp differences by both farm income and years schooling of operator. However, because of their mutual interdependence a close positive association between income and approved practices is almost inevitable. Households with incomes under \$500 had an average rating of 9.1, compared to ratings of 11.3 and 13.5 for those with farm incomes of \$500-999 and \$1,000 and over, respectively. For households headed by farm operators with less than 5 years schooling, the rating was 9.7. Comparative figures for the 5-8 year and 9 and over groups were 11.3 and 13.4, respectively. Significant differences remain when schooling and income are alternately held constant. Differences by tenure status and by age did not exceed one point.

Only 8 per cent of the households had ratings of 5 or less and these were highly concentrated in households headed by operators with less than 5 years schooling and those with gross incomes under \$500. Approximately two-fifths of the households had ratings of 13 or more and, as might be expected, were highly concentrated in the households headed by operators with the greater amounts of schooling and with the higher incomes. Pronounced differences remained when income and schooling were alternately held constant.

¹⁰See Appendix for a more complete description of the method of computation.

The basic need of increasing the number of recognized sources of farm and home information available to low-income farmers is demonstrated by the study. A correlation of 0.47 between number of sources of farm and home information and approved practice rating was obtained. The correlation between number of contacts and approved practice ratings was equally high. However, it appeared that some sources were more effective in bringing about desired changes than others. The correlation between approved practices and number of personal sources of farm and home information was 0.45, whereas, correlations with reading and radio sources were 0.38 and 0.28, respectively¹¹. This seems to indicate that personal contacts with recognized sources of farm and home information may have been more convincing than contacts with either reading or radio sources. Although the margins of differences are too small to be conclusive, this finding is borne out by other studies¹².

There was considerable difference in the relative number of different kinds of sources of information recognized by the survey operators and wives. Relatively low inter-correlations between the number of reading, radio, and personal sources of information recognized per household suggests the need for a multiple approach in reaching low-income farmers with educational materials¹³. This recommendation is further substantiated by the fact that the median number of recognized sources of information per household was greater in cases where operators and wives complied with each of the 8 specific approved practices than where they did not. The same was generally true for personal, reading, and radio sources of information recognized by the households.

V. SUMMARY OF FINDINGS

(1) **A very high percentage of the operators and wives who had contacts with the available means of farm and home information found them useful as sources of information.** In 91 per cent of the households where either the wife or operator had contacts with county agents, one or both of them found their services useful. All subscribers to farm journals found them useful as sources of farm and home information. Seventy-eight per cent of the newspaper subscribers got useful farm and home

¹¹The chances are 97 to 100 that the differences between the correlation of personal sources and approved practices and the correlation of radio sources and approved practices is not due to chance. The chances of the difference between the correlation of personal sources and approved practices and the correlation of reading sources and approved practices are due to chance is less than one in 1,000.

¹²Bryce Ryan and Neal C. Gross, "The Diffusion of Hybrid Seed Corn in Two Iowa Communities," *Rural Sociology*, 8:20-21, March, 1943; also Paul F. Lazarsfeld, Bernard Berelson and Hazel Gaudet, *The People's Choice: How the Voter Makes Up His Mind in a Presidential Campaign*, pp. 150-158.

¹³The correlation between number of reading and personal sources of information per household was .31. Correlations between number of reading and number of radio sources per household and between the number of personal and number of radio sources per household were .30 and .27, respectively.

information from them; 73 per cent of the households receiving farm bulletins during the survey year found them useful; and 83 per cent of the households listening regularly to radio stations from which farm and home information could be obtained found these contacts useful for the purpose under consideration.

(2) **Farm operators and wives recognized more impersonal than personal sources of farm and home information¹⁴.** Ninety-two per cent of the households recognized one or more reading sources, 62 per cent one or more radio sources, compared to 59 per cent who recognized one or more personal sources, excluding friends and neighbors, and 70 per cent who mentioned friends and neighbors. Seven-eighths of those admitting no personal source outside of the local primary group said they received farm and home information from reading sources, 54 per cent from radio sources, and about one-half of them from both reading and radio sources. Over twice as many households got useful information from newspapers and farm journals as obtained it directly from county agents, and almost twice as many got farm and home information by radio. More households reported receipt of farm and home information from farm journals, newspapers, and radio broadcasting stations than from friends and neighbors, the most frequently mentioned personal source. The rank order of the more important sources of farm and home information recognized by low-income farm households were newspapers, farm journals, neighbors and friends, radio broadcasts, county agents, PMA (AAA) office, and farm bulletins. **Obviously, however, farm bulletins and county agents are the indirect source of much of the information read by low-income farmers in newspapers and farm journals, listened to over the radio, and talked about by friends and neighbors.**

(3) **Far more low-income farm operators and wives obtained information through commercialized channels of communication than directly from public agencies including the College of Agriculture.** Seventy-eight per cent of the households got farm and home information from newspapers, 73 per cent from farm journals, and 62 per cent from radio broadcasts. On the other hand, 34 per cent got help directly from county agents, 32 per cent directly from the AAA office, 9 per cent directly from the FHA office, 2 per cent from vocational agriculture teachers, and 32 per cent from farm bulletins.

(4) **Radio information broadcasts were generally viewed with favor by low-income farm operators and wives as sources of farm and home information.** Fifty per cent of both operators and wives claimed to have received useful farm and home information in this manner.

(5) **The number of reading sources of farm and home information recognized by the survey operators and wives was more closely associated with educational attainment than with any of the other factors considered.** By schooling of operator the number of reading sources recognized ranged from an average of 2.5 for households headed by operators with less than

¹⁴For a graphic summary of sources of information used, see Figure 10.

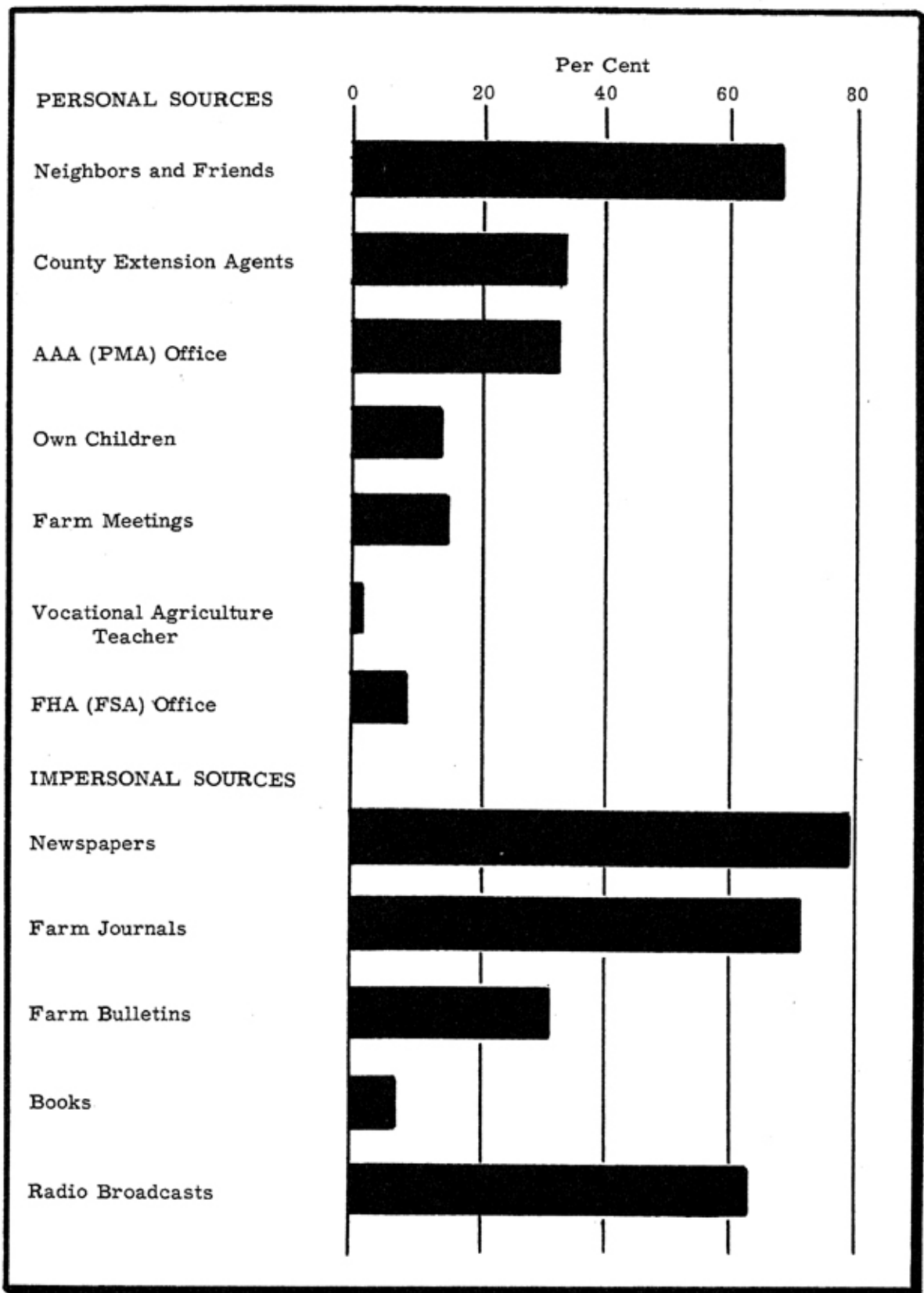


Figure 10.—Percentage of Farm Households Using Indicated Sources of Farm and Home Information.

5 years schooling to 4.4 for households headed by operators with 9 or more years schooling. The range by income was marked by an average of 3 sources for households with farm incomes of less than \$500 and by 4.2 sources for those with incomes of \$1,000 and over. Differences by tenure status, age of operator, location on or off an all-weather road, and ownership or non-ownership of an automobile or truck were negligible.

(6) **Formal education of the operator was more closely associated with the proportion of households obtaining useful farm and home information from farm bulletins than with any of the other reading sources considered.** For newspapers and farm journals, differences by educational groups amounted to 17 and 18 per cent, respectively, while the corresponding range for farm bulletins was 39 per cent. Only 15 per cent of the households headed by farm operators with less than 5 years schooling obtained useful farm and home information from farm bulletins compared to 55 per cent of those headed by operators with 9 or more years schooling. The corresponding proportion for households headed by operators with 5-8 years schooling was 29 per cent. Thus, it appears that if any large percentage of those who have less than 8 years schooling are to be reached with bulletins, they must be more simply and attractively written.

(7) **Personal, reading, and radio sources of farm and home information were not equally utilized by all households.** The intercorrelations between number of personal, reading, and radio sources of farm and home information per household were 0.31 or less in all cases. This indicates that the households which recognized the larger number of personal sources were not necessarily the ones which recognized the greater number of reading and radio sources.

(8) **Locality differences were apparent in the use made of various sources of farm and home information.** Although DeKalb, Shelby, Boone, and Vernon counties were selected from a relatively homogeneous social area, some variation in farm income, level of living, and other conditions of farm life did exist. In general, DeKalb County held the most favored position with respect to these factors with Shelby, Boone, and Vernon counties following in descending order. The same order was generally apparent with respect to the proportion of operators and wives using the various sources of farm and home information considered. There is also reason to believe that agricultural extension history in these counties has been an important factor in the differential use made of the various sources of farm and home information considered in this study.

(9) **The extent to which farm and home information was translated into action fell far short of recommended standards.** Either the operators and wives failed to receive the information they needed or they were not convinced by it. Only 14 per cent of the households attained or exceeded the vegetable growing standard set by the Agricultural Extension Service and only one-fifth of them met the tomato canning goal. About three-fourths of the operators fed their hens laying mash, two-fifths used two or more pasture crops, one-fourth used some commercial fertilizer during the survey year, 24 per cent of those who had hogs vaccinated them for

cholera, three-fourths of them planted hybrid seed corn, and almost half of them kept some kind of written record of cash receipts and expenditures. In the aggregate, compliance with the eight recommended practices as measured by the approved practice rating was about 50 per cent short of the recommended standard.

(10) **The adoption of approved practices varied greatly with farm income and education of operator.** The median approved practice rating ranged from 9.1 for households with farm incomes under \$500 to 13.5 for those with incomes of \$1,000 and over. The median for the \$500-999 group was 11.3. By schooling of operator differences ranged from 9.7 for households headed by operators with less than 5 years schooling to 13.4 for those headed by operators who had some high school training. The median for the 5-8 year group was 11.3. Differences by age of operator and tenure status did not exceed one point.

(11) **Advanced age presented no serious barrier to new practice acceptance.** Of those 65 years of age and over three-fourths planted hybrid seed corn, 73 per cent fed hens laying mash, 39 per cent used two or more pasture crops, 40 per cent kept records, 25 per cent used commercial fertilizer, 17 per cent of those having hogs vaccinated them for cholera, 23 per cent met the tomato canning standard and 14 per cent grew 20 or more vegetables in their gardens. Although slightly fewer farm operators in the older age groups used commercial fertilizer, planted hybrid seed corn, and fed laying mash than younger farmers and although differences were more marked with respect to the practice of vaccinating hogs, there was no conclusive evidence that older farmers are less willing to adopt new farming practices than the younger ones. The number of households meeting the tomato canning standard was 3 times as high for households headed by farm operators 65 years of age and over as for those headed by farm operators under 35 years of age. However, it is barely possible that compliance with this standard represents adherence to tradition rather than acceptance of a new practice.

(12) **The importance of primary group association as a means of disseminating farm and home information is demonstrated by this study.** Neighbors and friends provided the most universally recognized personal source of information. Sixty-four per cent of the operators and 58 per cent of the wives or a total of 70 per cent of the households recognized this source. Only 59 per cent of the households recognized one or more personal sources of farm and home information outside of the local primary group. Furthermore, there was a high degree of uniformity with which low-income farmers got farm and home information from friends and neighbors that was not characteristic of other personal sources. The percentage of farm operators and wives getting useful farm and home information from neighbors and friends varied less than 12 per cent with educational attainment of operators and wives. There was no measurable difference by tenure status in the proportion of households getting information in this manner. On the other hand, differences by farm income were considerable. The range amounted to 19 per cent for both operators and wives. In both

cases the proportion recognizing this source of information increased with farm income. These differences by farm income and the sizable proportion of both operators and wives who did not recognize neighbors and friends as a source of information suggests the existence of social-cultural barriers and/or personality traits which limit the diffusion of information and the adoption of improved practices.

(13) **The basic need for increasing contacts with recognized sources of farm and home information as a prerequisite to farm practice improvement is demonstrated by this study.** Correlations obtained between contacts and the number of recognized sources of farm and home information per household on the one hand and approved practices on the other support this conclusion. The correlation between contacts and approved practice ratings was 0.48. The correlation between sources and approved practice ratings was 0.47. Furthermore, farm operators and wives who had complied with each of the 8 approved practices recognized more sources of farm and home information than those who did not comply with these practices. The same held true, without exception, for the average number of personal, reading, and radio sources of information recognized by operators and wives who did and did not comply with each of the 8 approved practices considered.

(14) **The theory that personal sources are more convincing than impersonal ones is supported by this study.** A higher correlation between personal sources of information and approved practice ratings than between either reading or radio sources and approved practice ratings suggests that personal sources of information may be more effective in influencing the adoption of approved practices than either reading or radio sources¹⁵. Although differences were too small to be conclusive, they are in accord with the findings of other investigators who have found personal sources of information to be more convincing than the impersonal.

VI. SOME IMPLICATIONS

Low-income farmers of Rural Social Area B are bound to the soil by tradition and sentiment. They are prepared to farm and are not likely to do as well at anything else without special training for which they seem to possess no motivation. Efforts to improve their situation are likely to prove most effective if directed to improving conditions on their farms. For a number of reasons the possibilities for doing this are good. In the first place, many of the operators are actually living on the better land in one of the more productive farming regions of the state. They cannot be viewed as inevitable products of poor land. Existing land resources, if properly managed, will permit increases in farm production to support a much higher level of living than they now have.

¹⁵The correlation between personal sources and approved practice ratings was 0.45. The correlation between reading sources and approved practice ratings was 0.38 and the correlation between radio sources and approved practice ratings was 0.28. See footnote number 11 for a statement concerning the significance of these differences.

In the second place, Area B low-income farmers are favorably disposed to education for farming. They not only said that farm boys should have a high school or college education for farming but they gave their sons more schooling than the average for all youth of comparable age in the state. The great majority of them recognized the value of vocational agriculture and of 4-H Club work as training for better farming.

In the third place, a sizable number recognized important farm problems of the day including the problems of declining soil fertility and the need for soil conservation measures. There was little evidence in their thinking of greatly over-simplified rationalizations as in years past when farmers alternately blamed the railroads, the middle-man, and "dear money" for their troubles. It appears that considerable support may be obtained among them for action programs directed to a number of important farm problems of the day.

In the fourth place, low-income farmers appear to be anxious for more useful information on farming and homemaking. Three-fifths of those desiring more information believed that it can best be supplied through the College of Agriculture. Thus the value of the College as a source of farm information is recognized even though many make little direct use of the services offered. Failure to make use of these services may be partly a function of the magnitude of the practices recommended, and partly to shyness in making the necessary contacts. There is a likely need for recommendations specifically adapted to the needs of small producers who are generally realistic enough to know they can't risk much for fear of losing all.

Correlations between approved practice ratings on the one hand and contacts with the available means of farm and home information and with the recognized sources of information on the other indicate a need for increasing contacts with farm and home information as a prerequisite to change in farm practices. Although those who complied with each of the 8 approved farm and home practices recognized more reading, radio, and personal sources of information than those who did not, there is some indication that personal sources may be more convincing than either radio or reading sources. This observation seems to be borne out by certain other studies. The problem of increasing sources of information seems to be largely one of increasing contacts with the available means of farm and home information since a very high proportion of the operators and wives who have experienced such contacts found them useful. This applies generally to all the major available means of information including the county agent, farm bulletins, newspapers, magazines, and the radio.

The importance of primary group association as a potential source of farm and home information is demonstrated. Although 64 per cent of the operators and 58 per cent of the wives recognized neighbors and friends as sources of information, a considerable number of operators and wives did not. This condition plus sizable differences by farm income in those who did and did not recognize neighbors and friends as valuable sources of information suggests the presence of social-cultural barriers which limit

and condition the diffusion of farm and home information on a person-to-person basis. In order to minimize the possible influence of such barriers, action agencies working with low-income farmers should be doubly careful to secure the support and cooperation of those whom such farmers regard as influential.

Low-income farm households vary greatly in their dependence on personal sources, reading sources, and radio sources of farm and home information. However, compliance with each of the approved practices is positively associated with the number of personal, reading, and radio sources of information recognized by the households. This indicates the desirability of a multiple approach to the problem of reaching low-income farmers with educational materials. The universality with which these farmers are reached by the media of mass communication suggests the need for greater immediate effort directed to improving and extending the use of such media as a means of conveying useful farm and home information to them. The efforts of the College of Agriculture and its agencies to supply local newspapers, farm journals, and radio broadcasting stations with timely bits of farm and home information is well rewarded by the number of people reached in this manner. These avenues of mass communication have the advantage of timeliness, repeated contact, and economy of effort. Further, it has been found that a high percentage of farm operators and wives regularly read articles in newspapers and farm journals carrying farm and home information.

The tendency for farm wives and operators to find farm bulletins helpful irrespective of whether they received them by request or not indicates that more effort might well be directed to printing and distributing such bulletins. However, bulletins should be simply written to be most effective. A much smaller proportion of operators and wives with less than 5 years schooling found farm bulletins useful than did those with more than 5 years schooling. A considerable proportion of operators and wives with less than 5 years schooling got useful farm and home information from farm journals and newspapers, but 5 years schooling seems to be a minimum requirement for reading and understanding bulletins of the Colleges of Agriculture.

Although reading and radio sources of farm and home information were more universally recognized by low-income farmers than personal sources, some households depend largely upon personal sources. Efforts to extend the influence of the available personal means of disseminating information could well be increased, particularly those which take advantage of the prestige of local influentials. Professional effort directed to group thinking and discussion in situations involving such influentials should pay substantial dividends in farm and home practice improvement provided, of course, the group thinking process is skillfully guided.

In view of the close association between farm income and the number and variety of recognized sources of information on the one hand and years of schooling completed on the other, increased effort to educate farm youth who wish to farm seems to be essential if they are to achieve the

success hoped for them. In 1940, ninety-six per cent of the farm youth of Missouri aged 20-24 were not attending school. Of this group only 26 per cent had completed high school. Thirty-eight per cent had not even completed the eighth grade¹⁶. On the other hand, many farm youth do not possess the qualities required for good farming and others will find it necessary to seek non-farm occupations because of limited economic opportunity on the farm. An extended educational and guidance program is needed to help these youth plan and prepare for occupations suited to their interests, needs, and capacities. For the low-income farmers of today, an eighth grade education or less must be accepted as the rule and educational programs planned accordingly. However, it is likely that as the educational level of the farm population increases more reliance can be placed on the radio, farm bulletins, and other reading sources of farm and home information and relatively less on more expensive personal service methods.

In view of the universality with which low-income farmers recognize newspapers and farm journals as valuable sources of farm and home information, the regularity with which they read articles dedicated to farm and home improvement, and the widespread use of the radio as a source of such information, these devices of communication might well be used more extensively as means of informing low-income farmers about new farm and home practices.

Local primary groups may be advantageously used as activating agencies. Effective use of locality groups for this purpose requires neighborhood and community organization and skillfully guided group discussion in which the farmers actively participate. It is in the intimate group situation that many important attitudes are formed and the impact of group opinion is brought to bear upon the individual. If the will to farm and home improvement can be made a reality through group action or otherwise, the demand for informational services will be greatly increased.

Although this study has shown that physical barriers have little influence upon the diffusion of farm and home information and the adoption of improved farm and home practices and that there is a close relationship between contacts and sources on the one hand and certain selected socio-economic factors on the other, many psycho-cultural factors remain undefined and their influence unassessed. This will require that attention be directed to a consideration of both generalized and specific attitudes toward cultural change. Receptivity to change of farm and home practices, levels of aspiration, and status accorded within the rural community to farmers who try new practices are other considerations of vital concern. These considerations are inextricably tied up with the status and value system of the rural community and must be studied both on a personal and community basis.

Further investigation into why farmers do not adopt approved practices is also needed. Inclusion of all income levels in future studies is

¹⁶Margaret Bright and C. E. Lively, *Farm Youth in Missouri*. Columbia, Bulletin 504, Agricultural Experiment Station, College of Agriculture, University of Missouri, June, 1947, p. 12.

desirable, but if investigation must be limited to the lower income groups, what is low should be determined on the basis of local income standards. Income differences which occur within neighborhoods have much more social significance than income differences between localities where incomes are generally low and other localities where incomes are uniformly high. No thoroughgoing study of the diffusion of information can be made separate and apart from associational patterns and no study of the latter can properly exclude natural areas of association. Therefore, neighborhoods or communities should be used as the basis for study, preferably the latter. The study of cliques and social class and the way in which they limit the dissemination of farm and home information cannot be neglected. Clique and social class barriers vitally influence contacts both with friends and neighbors who can be valuable sources of farm and home information and with the available means of information outside of the local primary groups. Until more is known concerning the extent and nature of social classes and cliques which operate in rural society there will be no way of knowing to what extent they limit contacts with the available means of farm and home information.

The problem of improving farm and home practices is one of social-cultural change. An understanding of the processes involved is essential for those who would change habits and practices. This requires an inquiry into the factors which condition the diffusion of culture traits. A trait must be communicated before it can be accepted, yet little systematic consideration has been given to their communicability. Effort could well be directed to determining which practices can best be demonstrated, which may be transmitted verbally, and which ones must come as by-products of a long series of planned action. Application of such knowledge should make the task of extending information and services easier. Compatibility of recommended practices with the existing culture is another important consideration. If, for example, farmers receive favorable recognition for planting straight rows of corn, they are less likely to accept contour farming which requires planned crooked rows. If the feeling locally is that irregular corn rows are unsightly and evidence of unsystematic work, this becomes a serious consideration in whether the recommended practice will be accepted or rejected.

The prestige of the group, person, or culture offering a new trait is always an important factor in the diffusion process. Valuable contributions can be made by defining patterns of influence and by evaluating the prestige of sources from which farmers ordinarily receive new ideas about farming and homemaking. The importance of studying attitudes and values bearing directly and indirectly upon the acceptance or rejection of new ideas about farming and homemaking has already been stressed.

These and other related problems must be investigated and their significance evaluated if colleges of agriculture are to be of maximum usefulness. Experience has shown that many farm people do not readily accept information and services offered by land grant colleges even though they may be had without direct cost and with the expenditure of little effort.

Educational effort which recognizes the cultural-social and psychological conditions of farm life is required.

APPENDIX

Method Used in Computing Composite Sources and Approved Practice Rating.

Personal sources of farm and home information found useful by low-income farm operators and wives. Each of the following were counted as one personal source of information in determining the composite number of personal sources of farm and home information found useful by farm operators and wives per household during the survey year:

- a. Farm operator or wife got useful farm information from the Agricultural Adjustment Administration office.
- b. Own children were reported to have been a useful source of information on farm and/or homemaking.
- c. Farm operator or wife received farm or home information from the vocational agriculture teacher.
- d. Operator received farm information from the county agricultural extension agents.
- e. Wife received home information from the county agricultural extension agents.
- f. Operator found the planning and supervision of the Farmers Home Administration supervisor a helpful source of farm information.
- g. Wife found the home management supervisor of the Farmers Home Administration office a helpful source of home management information.
- h. Operator got useful farm information from neighbors or friends.
- i. Wife got home information from friends or neighbors.
- j. Operator got farm information from own children.
- k. Wife got home information from own children.
- l. Operator got farm information from farm meetings.
- m. Wife got home information from farm meetings.
- n. All other personal contact sources mentioned by either operator or wife.

Reading sources of farm and home information found useful by low-income farm operators and wives. Each of the following were counted as one reading source of information in computing the total number of reading sources of farm and home information found useful by low-income farm operators and their wives per household during the survey year:

- a. Operator or wife read a book from which farm or home information was obtained.
- b. Operator obtained farm information from farm journals.
- c. Wife obtained home information from farm journals.
- d. Operator obtained farm information from one or more newspapers.
- e. Wife obtained home information from one or more newspapers.

- f. Operator obtained farm information from United States Department of Agriculture or College of Agriculture bulletins.
- g. Wife obtained home information from United States Department of Agriculture or College of Agriculture bulletins.
- h. All other reading sources mentioned by either operator or wife.

Approved practice rating. In computing the approved practice rating 3 or less points were assigned to varying degrees of compliance with each of the 8 approved practices listed below. A maximum of 24 credit points was possible. Credit points were assigned in the following manner:

- a. Number of vegetables grown in the garden
 - No credit for under 10 vegetables
 - One point for 10 to 14 vegetables
 - Two points for 15 to 19 vegetables
 - Three points for 20 or more vegetables, the number recommended by the Agricultural Extension Service
- b. Number of quarts of tomatoes and tomato juice canned per person
 - No credit for under 10 quarts
 - One point for 10 to 19 quarts
 - Two points credit for 20 to 29 quarts
 - Three points credit for 30 or more quarts, which is the number recommended by the Agricultural Extension Service
- c. Whether or not laying mash was fed to hens
 - A full three points credit was assigned if laying mash was fed
 - No credit was allowed if practice was not followed
- d. Number of crops pastured last year
 - No credit for one crop
 - Two points credit for use of two crops
 - Three points credit for use of three or more crops
- e. Use of commercial fertilizer
 - Two points credit for use on one crop
 - Three points credit for use on two or more crops
- f. Vaccination of hogs for cholera
 - A full three points credit was assigned if hogs were vaccinated
 - No credit was allowed if practice was not followed
- g. Keeping farm accounts
 - Three points credit was assigned if any account of receipts and expenditures was kept
 - No credit was assigned if the practice was not followed
- h. Planting of hybrid seed corn
 - Three points credit was assigned if hybrid seed corn was planted
 - No credit was allowed if they failed to do so.

In cases where information regarding specific practices was unknown or where compliance was known to be impossible as in the case of farmers who did not vaccinate hogs because they had no hogs, adjustments were made by assigning partial credit for missing items in the same proportion that the total earned score bore to the total possible score.