

AN ANALYSIS OF FACTORS ASSOCIATED WITH NET FARM INCOME
OF FARMERS IN SOUTHEAST KANSAS

by

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A MASTER'S THESIS

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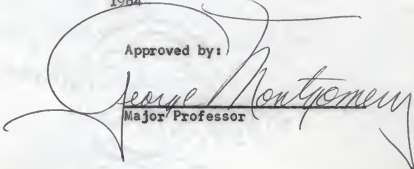
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CHAPTER I

INTRODUCTION

I. PURPOSE

The purpose of this study was to identify and analyze some of the factors associated with successful farming in Southeast Kansas.

II. STATEMENT OF THE PROBLEM

In Southeast Kansas some counties rely more heavily on agriculture than any other industry. Throughout its history Southeast Kansas agriculture has been one of diversity. No single crop predominates; no single livestock enterprise is exclusive. In the period 1932-50, yield variability in these counties was low compared with those counties in the western half of the state.¹

The nine counties included in this study area embrace 6.5 per cent of the state's land area. This 6.5 per cent of the land produced 7.6 per cent of the total value of Kansas farm production in 1959. The 7.6 per cent of the state's agricultural product was distributed among about 12.3 per cent of the state's farmers, indicating that as a group, the farms of this area have incomes below the state average.²

In Southeast Kansas some farmers seemed to be successful, while

¹Area Development, Kansas State University, Manhattan, Kansas. Southeast Kansas Survey Results, December, 1961, p. 27.

²Ibid., p. 27.

others were barely existing. The problem which was the focus of this study relates to the factors that could be associated with the adoption of improved agricultural practices which resulted in successful farming among those few farmers who are receiving satisfactory incomes.

III. BACKGROUND

Neosho County, in Southeast Kansas (Figure 1), is in the second tier of counties from the eastern boundary of the state and in the corresponding tier from the southern boundary. The county is in the prairie plains section of Southeast Kansas. It is part of a plain of low relief, the product of long time erosion of a series of sedimentary rocks, mainly shales, with thin beds of limestones and sand stones.¹

The climate is characterized by wide seasonal variations. The greater part of annual rainfall occurs during the growing season.²

In many seasons an excess of moisture during late spring and early summer seriously interferes with planting and cultivation of spring crops, as well as with wheat harvest, and periods of drought frequently follows.

Corn, wheat, oats, flax, sorghums, alfalfa and prairie hay are the principal crops grown.

¹H. H. Layton, R. W. O. Hovra and C. E. Dornberger. Soil Survey of Neosho County, Kansas. (Bureau of chemistry and soils in cooperation with Kansas Agricultural Experiment Station) Series 1930, No. 33, June 30, 1930, p. 1.

²Ibid.

Soil: The more one knows about the characteristics of his soil, the better he can use the soil, both to make more productive and to conserve it.

More than 70 per cent of land is tillable and the rest is rough, stony land and creek and river bottoms, part of which is in pasture.¹ The tillable land is topographically well suited to farming and allows the use of labor saving machinery. Small areas of forest land occur on which hickory, walnut, elm and other trees grow.

IV. DEFINITION OF CONCEPTS

1. Southeast Kansas as used in this study. Includes Neosho County and adjacent townships in eight adjoining counties, i.e., Bourbon, Crawford, Allen, Cherokee, Labette, Woodson, Wilson, and Montgomery.

2. Successful Farmer. Refers to those farmers in the sample whose income is above the median income of the group surveyed.

3. Less Successful Farmer. Refers to those farmers in the sample whose income is below the median income of the group surveyed.

4. Education. Refers to the number of years of formal schooling completed.

The high education group is that group whose years of formal schooling is above the median of the entire group studied.

The low education group is that group whose years of

¹Ibid., p. 10.

formal schooling is below the median of the group.

5. Size of farm. Refers to the number of acres of farms.

Larger farms include those farms in which size in acres is above the median of the group.

Smaller farm refers to the size of farm in acres which is below the median of the group.

6. Age. Refers to the age of the farmers included in the survey.

Older age group is that group whose age in number of years is above the median of the group surveyed.

Younger age group is that group whose age in number of years is below the median of the group.

7. Amount of Information Through Magazines Read and Used. Refers to the number of farmers above and below the median income, using information from magazines in making management decisions.

8. Amount of Contact with Agricultural Agencies. Refers to the number of farmers contacting County Agricultural Agents and Vocational Agricultural Teachers for assistance in making management decisions.

9. Amount of Contact with Publications of Agricultural Experiment Station and Extension Service. Refers to the number of farmers contacting publications of experimental station and extension service.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this chapter is to record a brief summary of the literature related to the topic. Books, bulletins, theses and other materials related to Extension, Rural Sociology, Agriculture have been reviewed.

No attempt had been made so far to conduct such a study concentrating on Neosho County and Southeast Kansas. The study by James H. Copp,¹ formerly assistant agricultural economist, Kansas Agricultural Experiment Station, Manhattan, now assistant professor, Department of Rural Sociology, University of Wisconsin, Madison, embraced a reasonably typical cross-section of beef producers in Wabaunsee County in the Flint Hills grazing area of Kansas to find out the personal and social factors associated with the adoption of recommended farm practices. A complete enumeration of all cattlemen with five or more head of beef cattle six months of age or older was conducted in this area. In this study 157 cattlemen were interviewed during the late fall of 1954.

The "typical farmer" (as measured by the median) in this sample was about 50 years old, had an eighth-grade education, operated a little more than one half section of land, had between 25 and 30 cattle, and obtained

¹James H. Copp. Personal and Social Factors Associated with the Adoption of Recommended Farm Practices Among Cattlemen. Technical Bulletin by Agricultural Experiment Station, Kansas State College of Agriculture and Applied Science, September, 1956.

a gross farm income a little under \$6,000. The range, however, was quite large for each of these factors. For instance, 10 of the operators had gross farm incomes under \$1,500 and 11 operators had gross farm incomes of \$25,000 or more. The individuals in this study appeared to be more heterogeneous in economic characteristics than the populations sampled in other studies of the adoption of recommended farm practices.¹

Copp's research project was designed to study the adoption of recommended farm practices as a general behavioral predisposition rather than as a set of independent behaviors. The objective was not to explain why farmers did or did not adopt a certain practice, but to explain why some farmers adopted a large number of practices and other farmers scarcely any.

It was hypothesized that farmers with low-adoption rates did not view the agencies and media promoting better farming as sources of challenges to their present farming methods.² Copp found that some basic factors, influencing the adoption of practices, in his study were as follows:

1. Gross farm income.
2. Total acreage operated.
3. Number of cattle.
4. Degree of acceptance of professional and scientific values in farming.
5. Flexibility of the farmer's mental approach to problems of farm operation.

Factors (1), (2) and (3) might be viewed as an expression of either managerial ability or intensity of operation. Factors

¹Ibid., p. 6.

²Ibid., p. 2.

(4) and (5) were dimensions isolated by means of the socio-psychological research technique, scale analysis and refer to personality characteristics of the farm operators.¹

Lionberger referred to the unpublished data from a Missouri study² that revealed that the greatest differences in farm practice adoption levels occurred between operators of relatively small farms (less than 140 acres) and those operating middle-sized and larger ones. Size of the farm was nearly always positively related to the adoption of new farm practices.³

Everett M. Rogers,⁴ in his study on "Adoption Process" while reviewing the literature mentioned that much research by rural sociologists on the diffusion of innovation, dated from the 1920's. He stated that Hoffer, in his investigation of the rejection of new disease-control sprays by Dutch celery growers in Michigan, found that celery grower's value on frugality was an important barrier to their adoption of new sprays. This research was sponsored by the Agricultural Experiment Station in Michigan, with a view toward improving the effectiveness of Michigan Extension Service.

Rogers found that there were five stages in the adoption process. These are stated below.

¹Ibid.

²Herbert F. Lionberger, "Adoption of New Ideas and Practices," (The Iowa State University Press, Ames, Iowa, 1960), p. 101.

³Ibid.

⁴Everett M. Rogers, "The Adoption Process," cited in Journal of Cooperative Extension, Vol. 1, No. 1, Spring, 1963, p. 17.

1. Awareness stage -- the individual is exposed to innovation but lacks complete information about it.
2. Interest stage -- the individual becomes interested in a new idea and seeks additional information about it.
3. Evaluation stage -- the individual mentally applies the innovation to his present and anticipated future situation and then decides whether or not to try it.
4. Trial stage -- the individual uses the innovation on a small scale in order to determine its utility in his own situation.
5. Adoption stage -- the individual decides to continue full use of the innovation.¹

Research findings indicated much about the personality characters that are assumed to be one of the factors responsible for the adoption of new ideas and practices namely age, education and mental flexibility.

Elderly farmers seemed, somewhat less inclined to adopt new farm practices than younger ones.² Lionberger reported that Wilson and Gallup concluded after a series of studies that elderly people were not enough less receptive to preclude effective extension programming directed to their special needs.³ The younger farmer is supposed to be interested in getting ahead, while the elder operator is supposed to be more interested in preserving whatever security he has attained.

While generally sharing the basic belief that education can cure most ills of society, farmers have not always felt that schooling beyond

¹Ibid., p. 19.

²Lionberger, op. cit., p. 46.

³Ibid., p. 47.

the eighth grade is needed for farming.¹ One view was that too much schooling was useless or even detrimental because it made a person impractical. On the other hand schooling had been valued as a means of increasing knowledge about new farm technology.

Lionberger concluded: "More than eight years' schooling is almost always associated with higher adoption rates than lesser amounts."²

Copp, in his study mentioned before, pointed out: "There was a substantial linear association between the adoption index and the amount of formal education. Professional orientation towards farming was also associated with high adoption rates."³

He further defined this quality in terms of contacts with the County Agent, attendance at Feeder's Day Conferences, favorability toward the College of Agriculture and the Extension Service and willingness to try new farm practices before trial by neighbors.

Communication media also have influence on the adoption scores by the farmers. An intensive study, relating exclusively to radio as an educational medium in the diffusion of farm information by the Department of Agriculture, Bureau of Agricultural Economics⁴ reported a high interest on the part of farm people in farm information programs. Farm magazines and to a lesser extent newspapers, also served a very useful function of

¹Ibid., p. 97.

²Ibid.

³Copp, op. cit., p. 14.

⁴Lionberger, op. cit., p. 45.

instruction. They supplied information about the nature of the change, how it worked and the results achieved or likely to be achieved.

In most recent years the major trend in diffusion research have been to investigate the adoption of new ideas in traditional cultures. Excellent studies have been completed and are under way in the Netherlands, India, Pakistan and Columbia.

The researcher was particularly fortunate in, that sufficient research had been conducted on the adoption of farm practices to outline roughly the range of factors possibly associated with the success of farming in Southeast Kansas.

I. THE SIGNIFICANCE OF THE STUDY

With a background of the research reports pertaining to the area of adoption or diffusion of new ideas and practices this study probed into some of the reasons and facts associated with success in farm operations in Neosho County. The purpose of this study was to explain avenues of success for all farmers in Southeast Kansas.

CHAPTER III

OBJECTIVE OF THE STUDY AND HYPOTHESIS

The objective of this study was to define and analyze some of the factors associated with success in farming in Southeast Kansas. The factors considered were:

1. Size of the farm.
2. Age.
3. Education.
4. Amount of information; magazines read and used.
5. Extension publications used.
6. Amount of contact with agricultural agencies.

I. HYPOTHESIS

An hypothesis for this study was developed to give direction to the study and to serve as a guide in analyzing and summarizing of data. The writer used the null hypothesis in this study. The reason for the use of the null hypothesis approach is given in the following statement:

This negativistic approach to acquiring knowledge about a universe by formulating null hypotheses and then rejecting them on the basis of evidence seems almost the equivalent of setting up straw men merely to shoot them down. Yet in so doing, certain logical possibilities are eliminated and the range of remaining possibilities is narrowed. It is a cautious way of proceeding as are most scientific procedures.¹

¹Margaret J. Hagood and Daniel O. Price, *Statistics for Sociologists* (2nd ed. rev., New York: Henry Holt and Co., 1952), p. 238.

The hypothesis was based on the literature review and objectives of this study. The following null hypothesis was developed.

There is no positive association between success in farming in Southeast Kansas and:

1. Size of farm.
2. Age.
3. Level of education.
4. Farm magazines read and used.
5. Use of publications from Agricultural Experiment Stations and Extension Service.
6. Amount of contact with agricultural agencies.

CHAPTER IV

SCOPE AND PROCEDURE

Selltiz et al. define research as "the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevances to the research purpose with economy in procedure."¹

They point out that research design differs according to each specific research purpose. They state:

Each study, of course, has its own specific purpose. But we may think of research purposes falling into a number of broad groupings: (1) to gain familiarity with a phenomenon or to achieve new insights into it, often in order to formulate a more precise research problem or to develop hypotheses; (2) to portray accurately the characteristics of a particular individual, situation, or group (with or without specific initial hypotheses about the nature of these characteristics); (3) to determine the frequency with which something occurs or with which it is associated with something else (usually but not always, with a specific initial hypothesis); (4) to test an hypothesis of a casual relationship between variables.²

The study was designed as a "Descriptive Study," involving the situation and normative survey. From the normative survey conclusions could be drawn.

¹Claire Selltiz et al., "Research Methods in Social Relations" (New York: Henry Holt & Co., Inc., 1959), p. 50.

²Ibid.

Selltiz et al. state that a considerable array of research interests have been grouped under the heading of descriptive studies. These were grouped together because, from the view of research procedures, they share certain important characteristics.¹ They state further:

The investigator must be able to define clearly what it is he wants to measure and must find adequate methods for measuring it. In addition, he must be able to specify who is to be included in the definition of a "given community" or a "given population." In collecting evidence of this sort, what is needed is not so much flexibility as a clear formulation of what and who is to be measured, and techniques for valid and reliable measurements.²

I. SOURCE OF DATA

The data used in this study were collected through the Area Development Project. This project is a broad interdisciplinary research-extension project conducted by the Kansas Agricultural Experiment Station and Kansas Cooperative Extension Service. This project had chosen to study the problems of development within the framework of three disciplines. Agriculture was one of the areas of study under this project.

The project has the following broad objectives, expanded under various sub-projects developed by the specialists under whose subject matter they fall:

1. To ascertain changes that have transformed Great Plains

¹Ibid., p. 66.

²Ibid.

agriculture and technology with recent years and changes likely in the foreseeable future.

2. To ascertain the impacts of these changes on farm organization and income, on service agencies and industries, including those related to agriculture, on government units and revenues, on area power structures, and on area social patterns.

3. To ascertain the goals and aspirations of the people studied and the extent to which they are attending the goal.¹

II. THE UNIVERSE OF THE STUDY

The universe of the study included farmers living in Neosho County and townships adjacent to Neosho County.

III. HOW THE SAMPLE WAS CHOSEN

A random sample of sixty-five farmers was selected from a list of all farmers in the area specified above. These names for the interviews were drawn from the official County Assessor's record.

IV. COLLECTION OF DATA

The data used in this study were gathered by means of personal interviews, made by a team of researchers from Kansas State University. The appointments were made with the farmers. The interviewer talked to the farmer on the spot if possible. If this was not possible an

¹Kansas Agricultural Experiment Station, Manhattan, Kansas, Area Development Bulletin 440, October, 1961, p. 5.

appointment was made to return at a later time.

The information was recorded in the field on a prepared form which was later coded and processed by I.B.M.

V. LIMITATIONS OF THE STUDY

The study was limited to an area of Southeast Kansas composed of Neosho County and adjoining townships in eight adjacent counties: Bourbon, Crawford, Cherokee, Allen, Labette, Woodson, Wilson, and Montgomery.

CHAPTER V

ANALYSIS OF THE DATA

In Chapter II under review of literature a brief sketch of work done by Lionberger, Copp, and Rogers in the area of adoption of innovations by farmers had already been cited. The present study seeks to explore and reveal some of the factors associated with the adoption of new ideas and practices as they influence farm income in Neosho County and the adjacent townships in the adjoining eight counties. Personal factors such as level of education, age; size of farm; social factors such as contact with County Agricultural Agents and Vocational Agricultural Teachers, contacts with publications of Agricultural Experiment Stations and Extension Service, and farm magazines were assumed to be some of the factors associated with the success in farming.

I. PROCEDURE

The data in the study were organized for the purpose of testing the null hypothesis. The hypothesis was as follows:

There is no positive association between success in farming in Southeast Kansas and

1. Size of farm.
2. Age.
3. Level of education.
4. Farm magazines read and used.
5. Publications from Agricultural Experiment Station and

Extension Service.

6. Amount of contact with County Agricultural Agents and Vocational Agricultural Teachers.

The data were shown and analyzed in tables and figures. Regression analysis was used for testing the relationships between the success of farming and size of farm, age and level of education.

II. HYPOTHESIS

It is hypothesized that there is no positive association between the success in farming, in Southeast Kansas and

(a) Size of farm.

The testing of this part of the hypothesis was accomplished by presenting the data in Table I and Figure 2. Regression analysis was used to accept or reject the (a) part of hypothesis.

The size of farms, varied from 50 acres to 1095 acres, as indicated in Table I. Figure 2 indicates the variation of income related to the size of farm.

The farmers earning \$1900.00 or less had an average size of farm of 190.7 acres. This was much less than the average size of farm of 335 acres held by the group of farmers having incomes of \$2000.00 to \$16,553.00

Figure 3 and Table II also show that the farmers with incomes of \$1900.00 or less, having eighth grade education, operated an average of 170 acres. Farmers having same level of education with income of

TABLE I
 SIZE OF FARM OPERATED BY EACH FARMER

Identification number	No. acres	Identification number	No. acres
24211	40	21296	174
27275	50	24215	175
21292	61	21301	194
24207	65	25241	210
24216	70	28343	218
24203	75	25249	221
21291	75	23325	227
24201	80	27273	240
24206	80	21299	240
25242	80	24218	240
25245	85	23323	246
27277	94	26332	265
25246	100	24217	266
25247	110	23322	275
25243	112	20261	280
24221	120	25248	288
27274	122	28342	300
27276	124	24213	310
25244	125	20262	320
24214	125	20263	350
24202	127	24210	375
24208	130	24212	385
24219	150	27272	407
21298	155	24220	430
21300	158	24715	450
24209	160	23321	459
26331	160	24205	478
28344	160	21295	480
23324	160	23326	600
24204	160	25250	720
21297	160	24725	775
21294	160	28341	953
27271	173	21293	986
		21302	1095

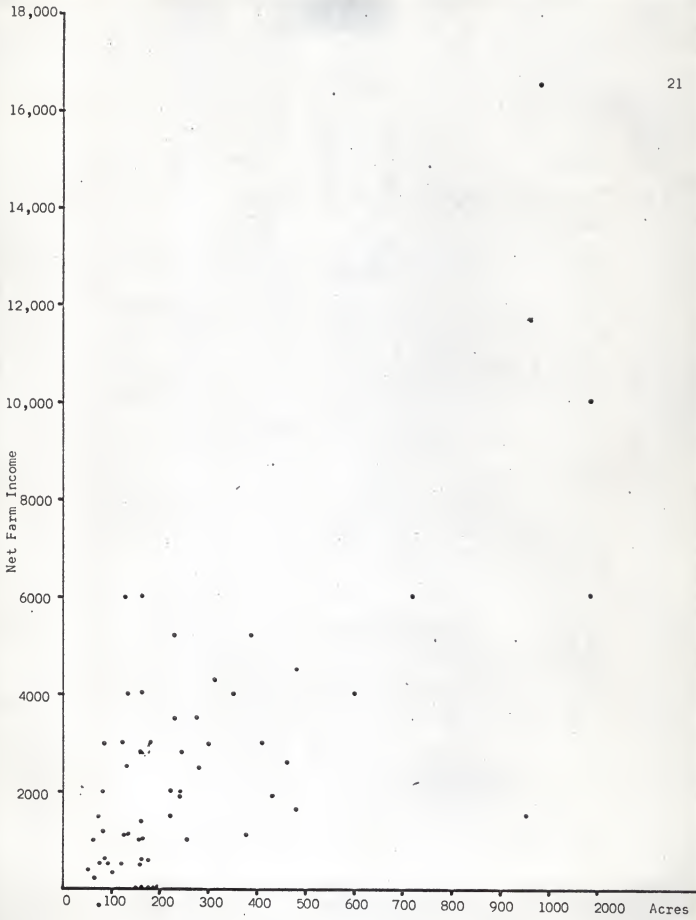


FIGURE 2

NET FARM INCOME AND SIZE OF FARM

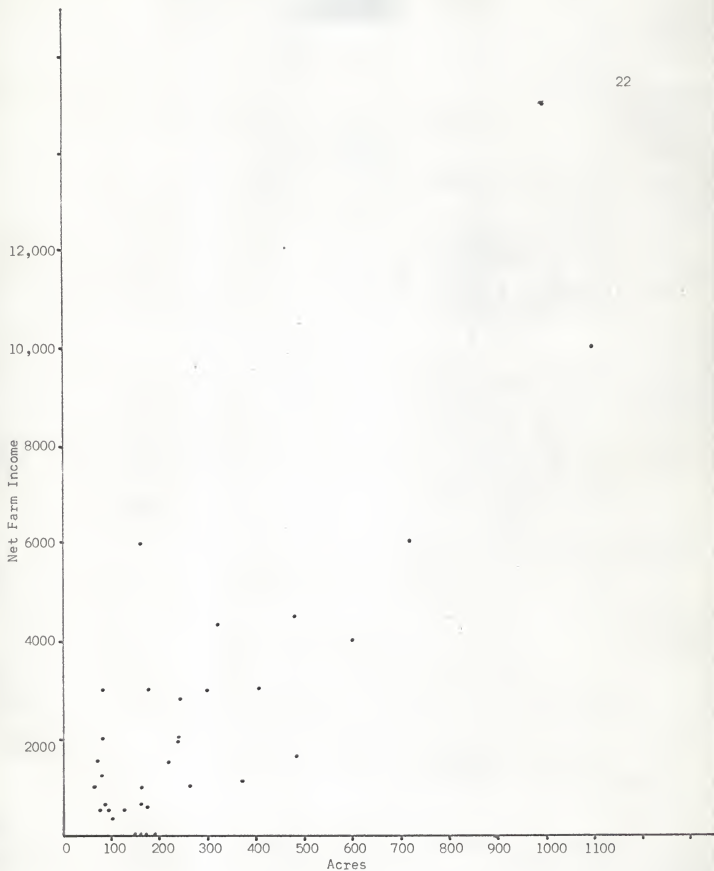


FIGURE 3

NET FARM INCOME AND SIZE OF FARM OF THIRTY-EIGHT FARMERS
HAVING EIGHT YEARS OR LESS EDUCATION

TABLE II

NET FARM INCOME RELATED TO THE SIZE OF FARM AND EDUCATIONAL
LEVEL OF THE FARMER (8TH GRADE)

Income	Vs.	Size of farm
0		150
0		173
0		160
0		194
300		100
500		112
500		94
500		75
549		174
600		85
600		160
1000		266
1000		61
1000		158
1100		375
1200		80
1500		210
1500		70
1640		478
1900	Average size 170.75	240
2000		80
2000		240
2800		246
3000		80
3000		300
3000		407
3000		175
4000		600
4300		310
4500		480
6000		160
6000		720
10000	Average size 376.38	1095

two thousand dollars or more had an average size of farm of 376 acres.

Regression analysis (Figure 4) of the data revealed that there was a positive correlation between the size of the farm and amount of net income. This analysis indicated that for every 100 acres increase in size of a farm the income increased by \$928.00. The degree of the relationship (b) between size of farm and net farm income appeared to be significant at one per cent level of probability. Therefore the (a) part of the hypothesis is rejected.

(b) Age of the Farmer.

Research findings of other studies reveal much about the personality characteristics that are supposed to be factors promoting the adoption of new ideas and practices resulting in increase of farm income. Age is one of the personal characteristics that has association with the farm income in this study also.

The younger farmers are supposed to be interested in getting ahead, while the older operators tend to be more interested in preserving whatever security that has been attained.

The (b) part of the hypothesis was tested by analyzing the data in Table III and Figure 5. Regression analysis (Figure 6) was used to reject or accept the (b) part of hypothesis.

The ages of the farmers varied between twenty-two and seventy-seven years, as indicated against the incomes of farmers in Table III. Figure 5 shows the following:

A group of 31 farmers having incomes of \$1900.00 or less ranged in

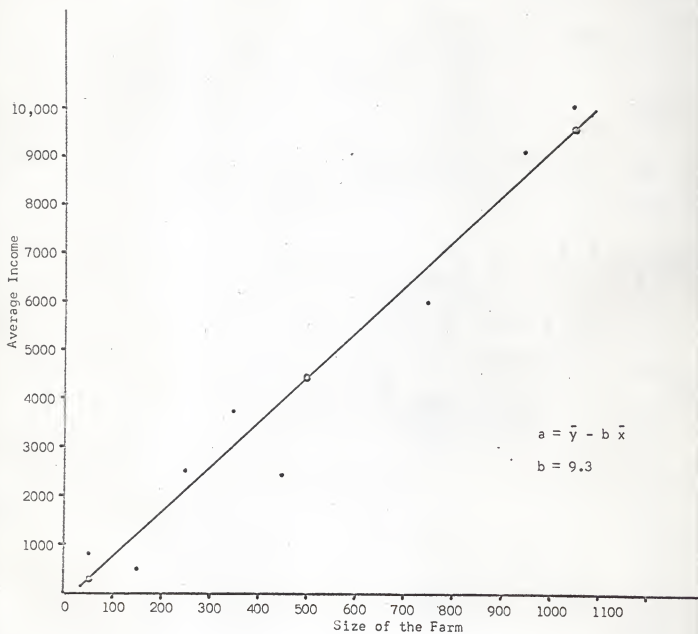


FIGURE 4
RELATIONSHIP BETWEEN NET FARM INCOME AND THE SIZE OF FARM

TABLE III
AGE AND INCOME OF THE FARMERS

Identification number	Income	Age
24203	-350	53
24219	0	46
27271	0	49
21294	Broke even	61
21301	0	47
24202	None above expenses	57
24207	200	35
25246	300	67
27275	400	25
25243	500	58
27277	500	71
21291	500	45
21297	500	37
21296	549	76
25245	600	72
26331	600	60
21298	1000	65
24217	1000	70
26332	1000	44
21292	1000	58
21300	1000	58
24214	1069	53
24210	1100	51
24201	1200	51
27276	1200	71
24209	1400	48
28341	1500	77
25241	1500	60
24216	1500	72
24205	1640	48
24220	1900	22
21299	1900	49
25242	2000	60
27273	2000	48
28343	2000	22
20261	2500	
23321	2614	30
23323	2800	40
28344	2808	40
24206	3000	66

TABLE III (continued)

Identification number	Income	Age
28342	3000	49
27274	3000	36
27272	3000	48
24215	3000	61
23322	3500	51
23325	3500	42
23324	4000	35
20263	4000	42
23326	4000	55
24208	4000	56
24213	4300	54
21295	4500	63
24212	5200	37
25249	5200	60
25244	6000	33
24204	6000	57
25250	6000	69
21302	10000	60
21293	16583	47

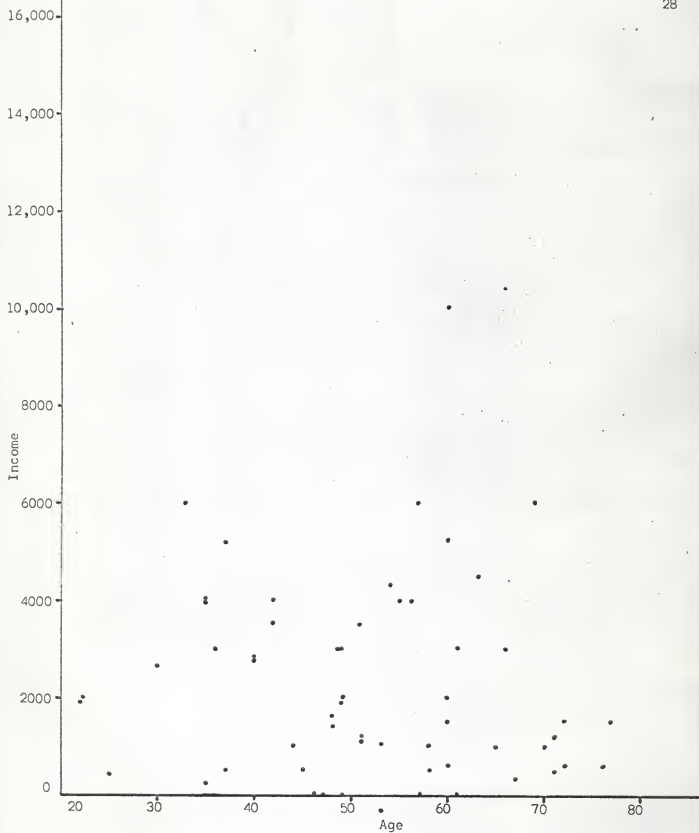


FIGURE 5

NET FARM INCOME AND AGE OF THE FARMERS

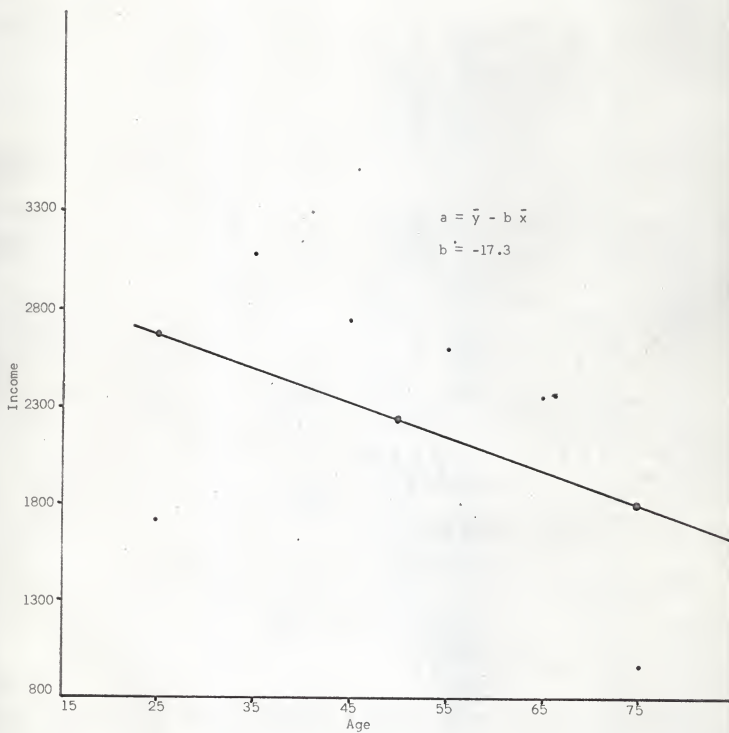


FIGURE 6

RELATIONSHIP BETWEEN NET FARM INCOME AND THE AGE OF FARMERS

age 22 to 77 years. Their average age was 56.9 years. The group of 27 who had incomes of \$2000.00 or more ranged in age from 30 to 68 years. The average age of this group was 47.5 years.

The data were further analyzed in Table IV to determine the relationship between age and income.

Regression analysis (Figure 6) of the data showed that as the age increased the farm income decreased, which is in agreement of the observations derived from Figure 5 and Table III. The regression analysis further revealed that for every 10 years of increase in age there was a decrease of \$173.00 in farm income. The F test further suggested that the regression coefficient (b) was not significant at five per cent probability. However the histogram (Figure 7) and Table IV show that the farm income increased as the age increased up to the range of 31-40 years of age and then the income decreased as the age increased.

On the basis of the information furnished and testing the (b) part of the hypothesis is rejected with a further conclusion that the income increased up to a particular age range of 31-40 years and it decreases as the age increases.

(c) Level of education.

This part of hypothesis was tested by examining the data in Tables V through IX and Figures 8 and 9. Net farm incomes of the 65 farmers ranged from \$-350.00 to \$16,583.00 annually. Of these 65 farmers, seven responses were noted as NA which indicated "no answer." Net farm income of each farmer was related to his level of education (Table V).

TABLE IV
AVERAGE NET FARM INCOMES OF FARMERS BY AGE GROUPS

Age groups	No. of farmers	Average incomes
1. 21-30 years	4	\$1729.00
2. 31-40 years	8	3064.00
3. 41-50 years	14	2752.00
4. 51-60 years	18	2612.00
5. 61-70 years	8	2350.00
6. 71-82 years	6	975.00

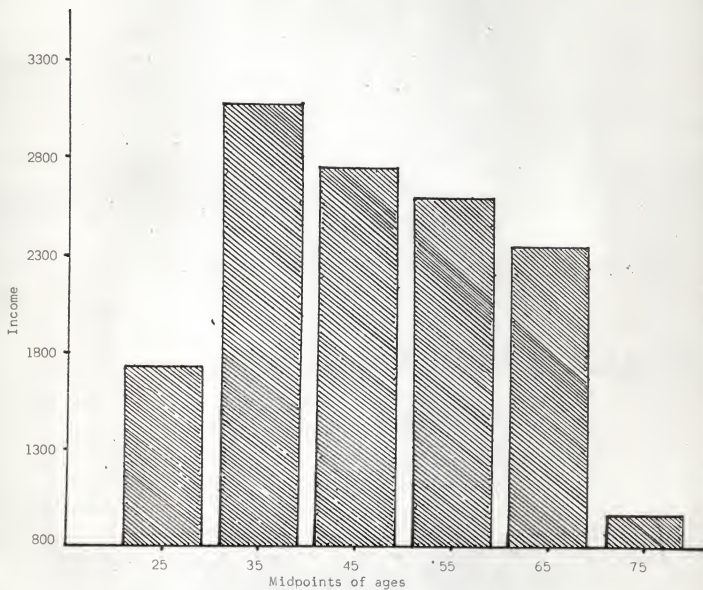


FIGURE 7

NET FARM INCOME AND THE AGE OF THE FARMERS

TABLE V
NET FARM INCOME AND EDUCATIONAL LEVEL

Identification number	Income	Education
24203	-350	11
24219	0	8
27271	0	8
21294	Broke even	8
21301	0	8
24202	None above expenses	12
24207	200	11
25246	300	8
27275	400	12
25243	500	8
27277	500	8
21291	500	8
21297	500	12
21296	549	8
25245	600	8
26331	600	8
21298	1000	12
29217	1000	8
26332	1000	10
21292	1000	8
21300	1000	8
24214	1069	13
24210	1100	8
24201	1200	8
27276	1200	14
24209	1400	13
28341	1500	13
25241	1500	8
24216	1500	8
24205	1640	8
24220	1900	12
21299	1900	8
25242	2000	8
27273	2000	8
28343	2000	11
23321	2614	12
23323	2800	8
28344	2808	10
24206	3000	8
28342	3000	8

TABLE V (continued)

Identification number	Income	Education
27274	3000	12
27272	3000	8
24215	3000	8
23322	3500	13
23325	3500	12
23324	4000	12
20263	4000	12
23326	4000	8
24208	4000	12
24213	4300	8
21295	4500	8
24212	5200	12
25249	5200	10
25244	6000	12
24204	6000	8
25250	6000	8
21302	10000	8
21293	16583	11

Regression analysis of data revealed that there was no positive association between level of education and increase in the incomes. The regression coefficient (b) for the relationship between level of education and income was \$-187.04 (Figure 8). Further analysis by F Test (Snedecor, 1956)¹ suggested that regression coefficient (b) was not significant at five per cent level of probability. This is contrary to the general understanding that as the standard of education increases the income increases.

The examination of data in Table VI shows the average income of farmers at their different levels of education. This suggests that there is a positive association between the level of education and increase in income up to a particular point, i.e., 11th grade after which the income decreased.

To find out the explanation why the farmers having 12th grade education or above have lesser incomes the data were further analyzed in Tables VII through IX. Additional information with regard to the other sources of incomes than the net farm incomes is also furnished against the net farm income of each farmer and his identification number.

Table VII reveals that five farmers in addition to their farm operations either worked as carpenter, or owned oil wells or had other sources of income, which increase the total family income.

¹G. W. Snedecor, Statistical Methods (Iowa State College Press, Ames, Iowa, 1956), p. 246.

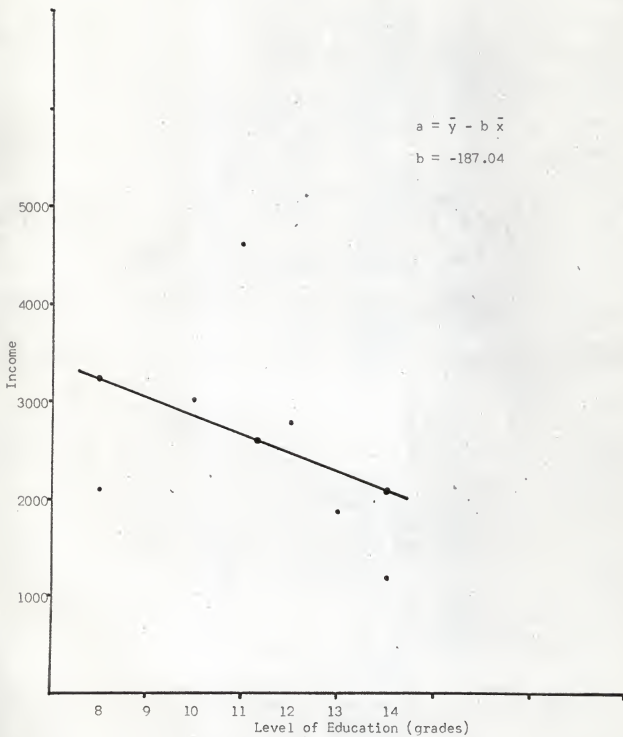


FIGURE 8

RELATIONSHIP BETWEEN NET FARM INCOME AND THE LEVEL
OF EDUCATION OF FARMERS

TABLE VI
AVERAGE NET INCOMES OF FARMERS BY THEIR EDUCATIONAL LEVELS

Educational level	No. of farmers	Average income
8th grade	33	\$2091.00
10th grade	3	3003.00
11th grade	4	4608.00
12th grade	13	2778.00
13th grade	4	1867.00
14th grade	1	1200.00

TABLE VII
 OTHER SOURCES OF INCOME OF FARMERS WITH
 HIGHER EDUCATION (12TH GRADE)

Identification number	Income	Other incomes
24202	0	2500
27275	400	4079 (work as carpenter)
21297	500	4072 (Kansas Power and Light)
21298	1000	----
24220	1900	----
23321	2614	----
27274	3000	7000 (construction cement mason)
23325	3500	----
23324	4000	----
20263	4000	----
24208	4000	10000 (oil wells)
24212	5200	----
25244	6000	----

Three farmers having 13th grade education (Table VIII) had additional sources of income through their wives or their own separate operations.

Table IX indicates that the only farmer who had 14th grade level education had not only an additional source of income through his wife but he himself is in a retirement age of 71 years.

The above explanation is indicative of the fact that the increased level of education did not adversely influence the net farm income but the diversity of farm business decreased the dependence on the net farm income.

These data were also presented by figure. Figure 9 shows the levels of education, i.e. eighth grade to fourteenth grade and the net farm income of each farmer.

Eighth grade education. For the thirty-three farmers with eighth grade education the income ranged from zero to \$10,000.00 with twenty farmers having income of \$1900.00 and less.

Figure 3 indicates incomes of thirty-three farmers with eighth grade education only with reference to their sizes of farms. This figure indicates that as the size of the farm increased the income decreased. Table II shows differences in average size of farms held by two categories, i.e. one drawing \$1900.00 and less and the other drawing \$2000.00 and above. Farmers with 8th grade education, having incomes had an average size of farm as 170.7 acres as compared to 376.8 acres operated by the farmers who earned \$2000.00 and above.

Ninth grade education. There was no farmer with this qualification.

TABLE VIII
OTHER SOURCES OF INCOME OF FARMERS WITH
HIGHER EDUCATION (13TH GRADE)

Identification number	Income	Other incomes
24214	1069	3600 (wife works as secretary)
24209	1400	3800 (truck driver)
28341	1500	----
23322	3500	2244

TABLE IX
OTHER SOURCES OF INCOME OF FARMERS WITH
HIGHER EDUCATION (14TH GRADE)

Identification number	Income	Other incomes
27276	1200	2224 (wife works)

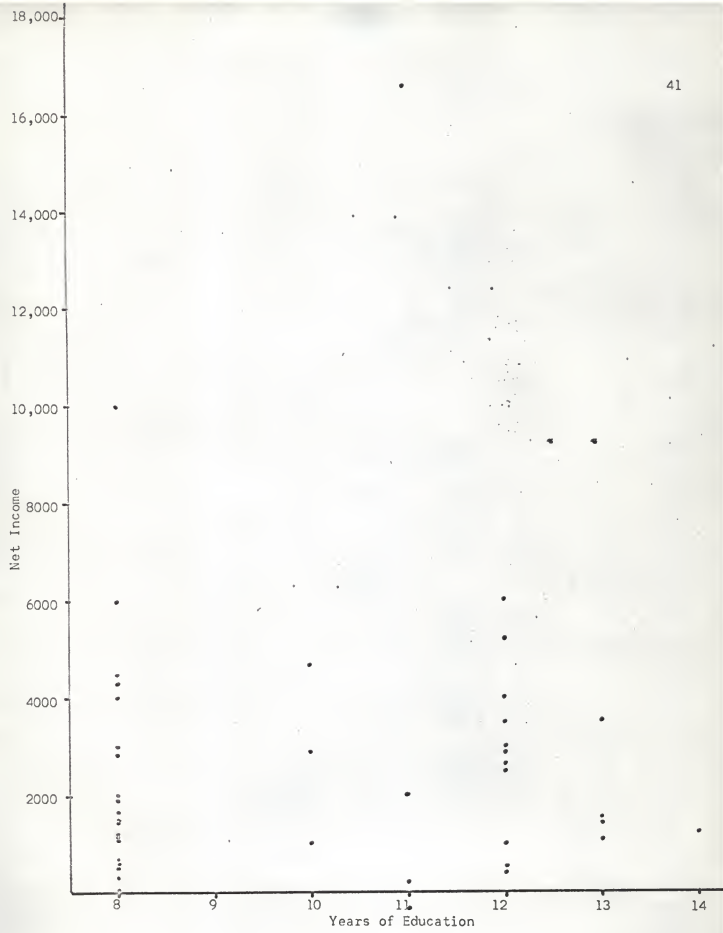


FIGURE 9

NET FARM INCOME Vs LEVEL OF EDUCATION

Tenth to fourteenth grade education. There were 10 or 40 per cent of the 25 farmers whose incomes were \$1900.00 or less as compared to 20 or 60.6 percent of 33 farmers in the 8th grade level who had a similar range of income.

There were 14 or 56 per cent of the 25 farmers with 10 to 14 years schooling, whose incomes were between \$2000.00 to \$6000.00. Twelve or 36.3 per cent of 33 farmers with eight years of schooling had the same range of income.

The highest income in this group was \$16,583.00 whereas it was \$10,000.00 in the group having eighth grade education.

In regard to adoption rates, related to success Lionberger in his study concluded: "More than eight years schooling is almost always associated with higher adoption rates than lower amounts."¹

The observations from Figure 9 and Table VI are in agreement to Lionberger's conclusion.

Conclusion: The regression analysis of the data has given the result, contrary to the previous findings and general beliefs due to the following facts.

a. The farmers included in the study had diversified enterprises although they had higher level of education (12th grade to 14th grade) as shown in Tables VII through IX. Some included in the study were not bonafide farmers.

b. Few of the farmers, with 13th and 14th grade education

¹Lionberger, op. cit., p. 97-98.

(Table VIII, IX) were retired.

In the light of the above facts examined in Tables VI through IX, and Figure 9 there is not adequate basis for accepting the (c) part of the hypothesis although the regression analysis provided information in support of the hypothesis.

(d) Farm magazines read and used.

The testing of this part of hypothesis was accomplished by examining the data in Tables X and XI.

Table X shows the income and opinion of each farmer against his identification number. The farmers' opinions about the farm magazines are scaled as "None," "Some," and "A Lot." This table divides the farmers in three groups with 14, 28 and 16 farmers distributed in the three groups. It indicates the majority of farmers, i.e. 44 out of 54 or 75.8 per cent of the farmers stated that farm magazines were useful to them for improving their agricultural operations as "Some," or "A Lot" when compared to 14 or 29.1 per cent of farmers who scaled as "None."

Table XI indicates the incomes of all the farmers under three groups who expressed their opinions "None," "Some," and "A Lot." The average incomes of each group are as follows:

Group 1 (who scaled "None")	\$1893.00
Group 2 (who scaled "Some")	2236.00
Group 3 (who scaled "A Lot")	3119.00

Farmers in group 3 had highest income among the three groups, and

TABLE X
NET FARM INCOMES AND OPINIONS OF FARMERS

Identification number	None	Some	A Lot	Income
20263			X	\$4000
21291		X		500
21292			X	1000
21293		X		16583
21294	X			Broke even
21295		X		4500
21296		X		549
21297		X		500
21298			X	1000
21299			X	1900
21300			X	1000
21301	X			0
21302			X	10000
23321		X		2614
23322	X			3500
23323			X	2800
23324		X		4000
23325			X	3500
23326	X			4000
24201	X			1200
24202			X	0
24203		X		-350
24204			X	6000
24205		X		1640
24206		X		3000
24207	X			200
24208		X		4000
24209		X		1400
24210		X		1100
24212		X		5200
24213	X			4300
24214		X		1069
24215		X		3000
24216		X		1500
24217	X			1000
24219		X		0
24220		X		1900
25241		X		1500
25242		X		2000
25243		X		500

TABLE X (continued)

Identification number	None	Some	A Lot	Income
25244	X			\$6000
25245	X			600
25246		X		300
25249			X	5200
25250			X	6000
26331	X			600
26332			X	1000
27271		X		0
27272			X	3000
27273		X		2000
27274			X	3000
27275		X		400
27276		X		1200
27277			X	500
28341	X			1500
28342	X			3000
28343		X		2000
28344	X			0
	14	28	16	

TABLE XI

INCOMES OF FARMERS ACCORDING TO OPINIONS ON USE OF MAGAZINES

None	Some	A Lot
\$2500	\$ 500	\$4000
0	16583	1000
0	4500	1000
3500	549	1900
4000	500	1000
1200	2614	10000
200	4000	2800
4300	-350	3500
1000	1640	0
6000	3000	6000
600	4000	5200
600	1400	6000
1500	1100	1000
3000	5200	3000
0	1069	3000
	3000	500
\$28,400	1500	
	0	\$49,900
Average Income \$1893.33	1900	
	1500	Average Income \$3118.75
	2000	
	500	
	300	
	0	
	2000	
	400	
	1200	
	2000	
	\$62,955	
	Average Income \$2235.89	

group 2 had the higher income than group 1.

Examination of the data in Table XI and the differences in average incomes of the farmers who had the varied views about the use of farm magazines indicate that the more farm magazines that were read and used the more influential they were to the readers in improving their ability to increase their farm incomes.

Based on the information and adequacy of data the (d) part of the hypothesis is rejected. It is concluded that there is a positive association between the increase of farm income and the reading and use of the information from farm magazines.

(e) Use of Publications of Extension Division and Agricultural Experiment Station.

The testing of this part of the hypothesis was done by examining and analyzing the data in Tables XII and XIII.

Table XII shows the net farm income of each farmer and his opinion under three scales; "None," "Some," and "A Lot." There were 22, 25 and 11 farmers who considered that the publications of Extension Division and Agricultural Experiment Station helped them "None," "Some" and "A Lot" respectively to improve their managerial ability to increase income.

These data were further analyzed in Table XIII wherein the incomes of each group were listed in the columns headed as "None," "Some" and "A Lot." The average income of each group was as follows:

Group 1 (whose opinions were recorded as "None")	\$2646.00
Group 2 (whose opinions were recorded as "Some")	1966.00

TABLE XII

NET FARM INCOMES AND OPINIONS ABOUT PUBLICATIONS OF AGRICULTURAL
EXPERIMENT STATION AND EXTENSION SERVICE

Identification number	None	Some	A Lot	Income
20263		X		\$2000
21291	X			500
21292			X	1000
21293	X			16583
21294	X			Broke even
21295		X		4500
21296		X		549
21297		X		500
21298		X		1000
21299	X			1900
21300		X		1000
21301	X			0
21302			X	10000
23321	X			2614
23322	X			3500
23323			X	2800
23324		X		4000
23325		X		3500
23326	X			4000
24201	X			1200
24202	X			0
24203	X			-350
24204	X			6000
24205		X		1690
24206		X		3000
24207		X		200
24208		X		4000
24209		X		1400
24210		X		1100
24212		X		5200
24213	X			4300
24214		X		1069
24215		X		3000
24216			X	1500
24217	X			1000
24219		X		0
24220			X	1900
25241			X	1500
25242	X			2000
25243	X			500

TABLE XII (continued)

Identification number	None	Some	A Lot	Income
25244	X			\$6000
25245		X		600
25246			X	300
25249			X	5200
25250			X	6000
26331	X			600
26332		X		1000
27271		X		0
27272		X		3000
27273		X		2000
27274	X			3000
27275		X		400
27276			X	1200
27277			X	500
28341		X		1500
28342	X			3000
28343	X			2000
28344	X			0
	22	25	11 =	58

TABLE XIII

AVERAGE NET FARM INCOMES ACCORDING TO OPINIONS ON THE
USE OF PUBLICATIONS FROM EXTENSION SERVICE
AND AGRICULTURAL EXPERIMENT STATION

None	Some	A Lot
\$2500	\$4000	\$1000
500	4500	10000
16583	549	2800
0	500	1500
1900	1000	1900
0	1000	1500
2614	4000	300
3500	3500	5200
4000	1640	6000
1200	3000	1200
0	200	500
-350	4000	
6000	1400	\$31,900
4300	1100	
1000	5200	Average Income \$2900.00
2000	1069	
500	3000	
6000	0	
600	600	
3000	1000	
3000	0	
2000	3000	
0	2000	
\$61,547	400	
	1500	
Average Income \$2645.00	\$48,158	
		Average Income \$1966.30

Group 3 (whose opinions were recorded as "A Lot") \$2900.00

It is obvious from the data analyzed in Table XIII that the farmers who were using the publications and considered them to be useful as "A Lot" have the highest average income, i.e. \$2900.00 as compared to \$1966.00 and \$2646.00 for groups 2 and 1, respectively.

The above observation suggests that there is positive association between the increase of income and the amount of contact with publications from Agricultural Experiment Station and Extension Division, hence the (e) part of hypothesis is rejected.

(f) Contact with County Agricultural Agent and Vocational Agricultural Teacher.

To measure the opinions of the farmers it was necessary to group the opinions into three areas, i.e. "None," "Some," and "A Lot." This was done in order to determine the relation between the success of farming and the amount of contact of the farmers with County Agricultural Agents and Vocational Agricultural Teachers.

Table XIV and XV show the distribution of farmers in three groups (Table XIV) and the incomes of the farmers in their respective areas (Table XV).

Table XIV shows that 22.4 per cent of the farmers, i.e. 13 out of 58, considered the contact with County Agricultural Agents and Vocational Agricultural Teachers were not useful (or "None") in improving their managerial ability for increasing their incomes. Seventy-seven and one-half per cent of the farmers reported "Some" or "A Lot." In the group

TABLE XIV

NET FARM INCOMES AND USEFULNESS OF CONTACT WITH COUNTY
AGRICULTURAL AGENTS AND VOCATIONAL
AGRICULTURAL TEACHERS

Identification number	None	Some	A Lot	Income
20263	X			\$4000
21291	X			500
21292			X	1000
21293		X		16583
21294		X		Broke even
21295		X		4500
21296			X	549
21297		X		500
21298		X		1000
21299			X	1900
21300		X		1000
21301		X		0
21302		X		10000
23321		X		2614
23322	X			3500
23323		X		2800
23324		X		4000
23325		X		3500
23326		X		4000
24201	X			1200
24202	X			0
24203		X		-350
24204		X		6000
24205	X			1640
24206		X		3000
24207		X		200
24208			X	4000
24209			X	1400
24210		X		1100
24212		X		5200
24213		X		4300
24214		X		1069
24215		X		3000
24216			X	1500
24217			X	1000
24219			X	0
24220		X		1900
25241		X		1500

TABLE XIV (continued)

Identification number	None	Some	A Lot	Income
25242		X		\$2000
25243	X			500
25244	X			6000
25245	X			600
25246		X		300
25249			X	5200
25250			X	6000
26331		X		600
26332			X	1000
27271		X		0
27272		X		3000
27273	X			2000
27274	X			3000
27275		X		400
27276		X		1200
27277		X		500
28341		X		1500
28342	X			3000
28343		X		2000
28344	X			2808
	13	34	11 =	58

TABLE XV

AVERAGE NET FARM INCOMES ACCORDING TO OPINIONS ON THE
USEFULNESS OF CONTACT WITH COUNTY AGENTS AND
VOCATIONAL AGRICULTURAL TEACHERS

None	Some	A Lot
\$2500	\$16583	\$1000
4000	0	549
500	4500	1900
3500	500	4000
1200	1000	1400
0	1000	1500
1640	0	1000
500	10000	0
6000	2614	5200
600	2800	6000
2000	4000	<u>1000</u>
3000	3500	
3000	4000	\$23,549
<u>2808</u>	-350	
	6000	Average Income \$2141.00
\$31,248	3000	
	200	
Average Income \$2232.00	1100	
	5200	
	4300	
	1069	
	3000	
	1400	
	1500	
	2000	
	300	
	600	
	0	
	3000	
	400	
	1200	
	500	
	1500	
	<u>2000</u>	
	\$88,916	
	Average Income \$2615.17	

twenty-four per cent farmers expressed their opinions as "A Lot."

Further analysis of data in Table XV indicates that the farmers in group 2 (who reported "Some") had higher average income, i.e. \$2615.00 as compared to \$2232.00 and \$2141.00 of groups 1 and 3. Group 2 and 3 who considered the contact with County Agricultural Agents and Vocational Agricultural Teachers useful as "Some," or "A Lot" had an average income, i.e. \$2507.00 when compared to \$2232.00 of the first group who reported that contacts with County Agricultural Agents and Vocational Agricultural Teachers were of no value.

The above data and observations are not adequate to accept the (f) part of the hypothesis. Therefore it is concluded that there is some association between the contacts with County Agricultural Agents and Vocational Agricultural Teachers and the ability to earn more through the agricultural operations.

III. THE INFLUENCE OF EDUCATIONAL LEVEL ON THE CONTACTS WITH DIFFERENT SOURCES OF INFORMATION

Farmers use many sources of information in making management decisions. In this study an effort was made to find out the effect of educational level on the usefulness of different sources of information available for management decisions of farmers in Southeast Kansas.

1. Farm magazines.
2. Publications of Extension Service and Agricultural Experiment Station.
3. County Agricultural Agents and Vocational Agricultural

Teachers.

Table XVI groups the farmers according to educational level and their appraisal of three sources of information. It reveals that:

As the educational level increased, the percentage of farmers increased who reported "Some" in case of

- a. The contact with County Agricultural Agents and Vocational Agricultural Teachers, i.e. from 51.4 per cent to 60 per cent.
- b. The reading and use of farm magazines by 45.9 per cent to 60 per cent.
- c. The contact with publications of Extension Service and Agricultural Experiment Station by 37.8 per cent to 60 per cent.

Table XVII shows how the percentages of the farmers who reported opinions of "Some or A Lot" increased as the level of education increased.

In case of number two and three in first column (Table XVII) 80 per cent of the farmers believed that number three and one were useful to them as "Some or A Lot." This group had 13-15 years of schooling.

In case of number one and number two (first column, Table XVII) 93.3 per cent and 66.6 per cent of the farmers, who had 12 years of schooling, gave the opinion that number one and two were helpful to them as "Some or A Lot," compared to the substantially lesser percentages of farmers who considered as "None" and who had lesser level of education.

The above observations indicate that there is a positive correlation

TABLE XVI

EDUCATIONAL LEVEL OF FARMERS ACCORDING TO THE SOURCES OF
INFORMATION USED IN MAKING DECISIONS

	8 years		9-11 years		12 years		13-15 years	
	#	%	#	%	#	%	#	%
County Agr. Agents, Voc. Agr. Teachers								
None	10	27.0	2	22.2	4	26.7	1	20.0
Some	19	51.4	5	55.6	9	60.0	3	60.0
A Lot	8	21.6	2	22.2	2	13.3	1	20.0
Farm Magazines								
None	11	29.7	3	33.3	1	6.7	2	40.0
Some	17	45.9	4	44.4	9	60.0	3	60.0
A Lot	9	24.3	2	22.2	5	33.3	-	-
Publications of Ex- tension Service								
None	15	40.5	5	55.6	5	33.3	1	20.0
Some	14	37.8	3	33.3	8	53.3	3	60.0
A Lot	8	21.6	1	11.1	2	13.3	1	20.0

TABLE XVII
 EDUCATIONAL LEVEL OF FARMERS ACCORDING TO THE SOURCES OF
 INFORMATION USED IN MAKING DECISIONS

Sources of information	Educational level			
	8 years %	9-11 years %	12 years %	13-15 years %
Farm Magazines				
None	29.7	33.3	6.7	40.0
Some or A Lot	70.2	66.6	93.3	60.0
Publications of Experimental Station and Extension Service				
None	40.0	55.6	33.3	20.0
Some or A Lot	59.4	44.4	66.6	80.0
County Agricultural Agents and Vocational Agricultural Teachers				
None	27.0	22.2	26.7	20.0
Some or A Lot	73.0	77.8	73.3	80.0

between the level of education of farmers in Neosho County and adjacent townships and the use of different sources of information, available to help farmers in making management decisions for increasing the net farm income.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The purpose of this study was to identify and analyze some of the factors associated with the net farm income of the farmers in Southeast Kansas.

The objective of this study was to determine if there was an association between the successful farming in Southeast Kansas and (a) size of farm, (b) age of farmer, (c) level of education, (d) farm magazines read and used, (e) publications from Extension Service and Agricultural Experiment Station, and (f) contact with County Agricultural Extension Agent and Vocational Agricultural Teachers.

The study was limited to an area of Southeast Kansas composed of Neosho County and adjacent townships in the adjoining eight counties.

The data used in this study were collected through an Area Development Project Study sponsored by the Kansas Agricultural Experiment Station and Kansas Cooperative Extension Service.

The technique used for the collection of data was personal interview by the Kansas State University research team. The data were presented in the form of tables and figures. The analysis of data was done by the examination of tables and figures. Regression analysis and observations of results from the analyzed data, were used to accept or reject the null hypothesis, developed from the objective.

Summary of Findings:

1. There was a positive association between size of the farm and the increase in net farm income.
2. There was a positive association between net farm income and increase in age of farmer.
3. There was a positive association between increase in net farm income and the level of education.
4. There was a positive association between increase in net farm income and the use of information from farm magazines.
5. There was a positive association between increase of net farm income and the amount of use with publications from Agricultural Experiment Station and Extension Service.
6. There was some positive association between increase in net farm income and the amount of use with County Agricultural Agents and Vocational Agricultural Teachers.

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APPENDIX

GF. 12 The following information is needed on your farm business. Fill in the appropriate items for the year you started farming (for example, 1937) as well as all items for 1961 and the appropriate items for 1971. Note acres owned and rented for all years, then the value (using that year's market value) of land, livestock etc. you owned in the year started to farm, and all items for 1961. Note the value of the designated items you expect to own by 1971. NOTE ANY MARKED CHANGES between time periods, such as big increases in land owned, debts, living costs etc.

	Started Farming Year _____	Anticipated 1971 USE 1961 VALUES
Croplands:		
Owned acres	_____	_____
Rented acres	_____	_____
Pasture land:		
Owned acres	_____	_____
Rented acres	_____	_____
Assets:		
Land owned	_____	_____
Farm buildings	XXXXXXXXXXXX	XXXXXXXXXXXX
Farm house	XXXXXXXXXXXX	XXXXXXXXXXXX
Livestock	_____	_____
Machinery & Equipment		
Irrigation Equipment	XXXXXXXXXXXX	_____
Cash on hand	XXXXXXXXXXXX	XXXXXXXXXXXX
Other real estate	XXXXXXXXXXXX	XXXXXXXXXXXX
Value of stocks & bonds	XXXXXXXXXXXX	XXXXXXXXXXXX
Money owed to you	XXXXXXXXXXXX	XXXXXXXXXXXX
Other assets	XXXXXXXXXXXX	XXXXXXXXXXXX
Total	XXXXXXXXXXXX	XXXXXXXXXXXX
Debts:		
Farm real estate	_____	_____

	Started Farming Year	1961	Anticipated 1971 USE 1961 VALUES
Other real estate	XXXXXXXXXXXX		XXXXXXXXXXXX
Machinery			
Irrigation equipment	XXXXXXXXXXXX		
Livestock			
Other notes	XXXXXXXXXXXX		XXXXXXXXXXXX
Total	XXXXXXXXXXXX		XXXXXXXXXXXX
Net Worth	XXXXXXXXXXXX		XXXXXXXXXXXX
Inheritance			
Income			
<u>Net farm income</u>			
Other income			
(describe)			
Living costs			

KANSAS STATE UNIVERSITY
 Kansas Extension Service
 And the Experiment Station

Household Schedule _____
 Date _____
 Enumerator _____
 Edited by _____

RURAL ECONOMIC DEVELOPMENT RESEARCH PROJECT, 1961

I. HOUSEHOLD CENSUS:

1. What is the household head's name and address _____
 (Name, head of household)

_____ (Town or city) _____ (Telephone)

2. Please give us the following information on each of the persons living in this household now. That is, sons, daughters, uncles, aunts, hired hands, etc. Fill in all the information on each person. # (Check in the margin which person is responding to the question.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Years of formal fulltime educ., in 14 yrs. or older	Occupation* (See below) Type of work each employed person does for major part of his income	Employment status (Owner-op., leasor, renter, mngr, foreman, employee or other)	Relation to head of h-hold at	Years lived	
Head of H-hold							Town where each employed person works
Wife	F						Wife
(1)							

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Years of formal fulltime educ.; persons in 14 yrs. or older	Occupation* (See below) Type of work each employed person does for major part of his income	Employment status (Owner-op., leasor, renter, mngr, foreman, employee or other)	Relation to head of h-hold (eg. son, daughter, etc.)	Years lived at this address	Town where each person works
(2)							
(3)							
(4)							
(5)							
(6)							
(7)							
(8)							
(9)							
(10)							

*State exactly what the individual does for the major part of his income, such as farmer, typist, roughneck, hired farm hand, etc.

GF 26. In general, how much does each of the following help you make better management decisions in your farming? FILL IN "HOW" ONLY IF "A LOT" IS CHECKED.

	None	Some	A Lot	How?
<u>Television and radio</u>				
<u>Newspapers</u>				
<u>Salesmen and dealers</u>				
<u>Co. Agnts., Voc.Ag. Teachers & Ag.School Representatives</u>				
<u>Government people</u>				
<u>Truckers, Custom Operators and Route Drivers</u>				
<u>Neighbors and relatives</u>				
<u>Prof. farm managers</u>				
<u>Bankers & Lending agents</u>				
<u>Auctions</u>				
<u>Demonstrations, Meetings and Lectures</u>				
<u>Publications of Exp. Sta. and Extension Service</u>				
<u>Farm Magazines</u>				
<u>Publications of farm organ.</u>				
<u>Formal schools</u>				
<u>Mail advertising</u>				
<u>Past experiences</u>				
<u>Trial and error on whole farm</u>				
<u>Experimentation on a limited scale</u>				

None Some A Lot How?

Watching others

Thinking things out in your
head

Writing things out on paper

Keeping records

DIFFERENT SOURCES OF INFORMATION WHICH HELP
THE FARMERS MAKE BETTER DECISIONS
BY THEIR EDUCATIONAL LEVEL

	0-4 years		5-7 years		8 years		9-11 years		12 years		13-15 years	
	#	%	#	%	#	%	#	%	#	%	#	%
TV and Radio												
None	1	100.0	-	-	12	32.4	1	11.6	3	20.0	4	80.0
Some	-	-	-	-	18	48.6	7	77.8	11	73.3	-	-
A Lot	-	-	-	-	7	19.9	1	11.1	1	6.7	1	20.0
Newspapers												
None	1	100.0	-	-	12	32.4	1	11.1	3	20.0	1	20.0
Some	-	-	-	-	20	54.1	7	77.8	12	80.0	4	80.0
A Lot	-	-	-	-	5	13.5	1	11.1	-	-	-	-
County Agr. Agents, Voc. Agr. Teachers												
None	1	100.0	-	-	10	27.0	2	22.2	4	26.7	1	20.0
Some	-	-	-	-	19	51.4	5	55.6	9	60.0	3	60.0
A Lot	-	-	-	-	8	21.6	2	22.2	2	13.3	1	20.0
Professional Farm Managers												
None	1	100.0	-	-	28	75.7	8	88.9	13	86.7	4	80.0
Some	-	-	-	-	7	18.9	1	11.1	2	13.3	1	20.0
A Lot	-	-	-	-	2	5.4	-	-	-	-	-	-
Demonstrations, Meet- ings & Lectures												
None	1	100.0	-	-	17	45.9	3	33.3	6	40.0	1	20.0
Some	-	-	-	-	14	37.8	5	55.6	9	60.0	3	60.0
A Lot	-	-	-	-	6	16.2	1	11.1	-	-	1	20.0
Farm Magazines												
None	1	100.0	-	-	11	29.7	3	33.3	1	6.7	2	40.0
Some	-	-	-	-	17	45.9	4	44.4	9	60.0	3	60.0
A Lot	-	-	-	-	9	24.3	2	22.2	5	33.3	-	-

	0-4 years		5-7 years		8 years		9-11 years		12 years		13-15 years	
	#	%	#	%	#	%	#	%	#	%	#	%
Publications of Ex-												
tension Service												
None	1	100.0	-	-	15	40.5	5	55.6	5	33.3	1	20.0
Some	-	-	-	-	14	37.8	3	33.3	8	53.3	3	60.0
A Lot	-	-	-	-	8	21.6	1	11.1	2	13.3	1	20.0

AN ANALYSIS OF FACTORS ASSOCIATED WITH NET FARM INCOME
OF FARMERS IN SOUTHEAST KANSAS

by

MOHAMMAD WALIULLAH

B. V. Sc., Osmania University, India, 1952

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

School of Education
(Extension)

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1964

The purpose of this study was to identify and analyze some of the factors associated with the net farm income in Southeast Kansas.

The objective of this study was to determine if there was an association between successful farming in Southeast Kansas and the following factors:

1. Size of farm.
2. Age of farmer.
3. Level of education.
4. Farm magazines read and used.
5. Use of publications from Extension Service and Agricultural Experiment Station.
6. Contact with County Agricultural Agents and Vocational Agricultural Teachers.

A null hypothesis was used for guidance in study, which was developed from the objective, is as follows:

There is no positive association between success in farming in Southeast Kansas and

1. Size of farm.
2. Age of farmer.
3. Level of education.
4. Farm magazines read and used.
5. Contact with the publications from Extension Service and Agricultural Experiment Station.
6. Contact with County Agricultural Agents and Vocational Agricultural Teachers.

This study was designed as a descriptive study involving the situation and normative survey. The universe of the study included farmers living in Neosho County and the adjacent townships in the adjoining eight counties.

A random sample of sixty-five farmers was selected from a list of all farmers in the area specified above. These names were drawn from the official County Assessor's record.

The data used in this study were collected through an Area Development Project Study sponsored by the Kansas Agricultural Experiment Station and Kansas Cooperative Extension Service. The technique used for the gathering of data was personal interviews by the Kansas State University research team.

The study was limited to an area of Southeast Kansas composed of Neosho County and adjacent townships in the adjoining eight counties: Bourbon, Crawford, Cherokee, Allen, Labette, Woodson, Wilson and Montgomery.

The data were presented in the form of tables and figures. The analysis of data was done by the examination of tables and graphic presentations and through the testing of null hypothesis. Regression Analysis and the observation of results from different analyzed data in tables and figures were used to accept or reject the null hypothesis.

Based on the observations and results of this study the following conclusions were reached.

1. There was a positive relationship between the size of the farm and amount of the net farm income and for every 100 acres increase in

size of farm the income increased by \$928.00. The degree of this relationship appeared to be significant at one per cent level of probability.

2. There was a positive association between the increase in age and the amount of net farm income and for every ten years of increase in age there was a decrease of \$173.00 in farm income. The income increased up to a particular range of 31-40 years and it decreased as the age increased. The degree of relationship did not appear to be significant at five per cent probability.

3. There was a positive association between the level of education and the increase in the net farm income. Regression coefficient (b) was not significant at five per cent level of probability. The diversity of farm business decreased the dependence on the net farm income.

4. There was a positive association between the increase of farm income and the reading and use of the information from farm magazines.

5. There was a positive association between the increase of net farm income and the amount of contact with publications from Agricultural Experiment Station and Extension Service.

6. There was some association between the contacts with County Agricultural Agents and Vocational Agricultural Teachers and the ability to earn more through the agricultural operations.

The above conclusions revealed that there was a positive association between increase of net farm income and the

1. Size of farm.
2. Personal factors (age, level of education).
3. Social factors (use of farm magazines, publications of

Extension Service and Agricultural Experiment Station
and contact with County Agricultural Agents and
Vocational Agricultural Teachers).

There was agreement of the findings of this study and the studies
of Lionberger and Copp dealing with adoption of improved practices.