ASPECTS RELATED TO THE DIFFERENTIAL ADOPTION OF RECOMMENDED FARM PRACTICES IN RILEY COUNTY, KANSAS

by

BOB W. NEWSOME

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TABLE OF CONTENTS

INTRODUCTION

Almost every individual and group is concerned with influencing someone. Labor, management and civic organizations have their own public relations program. As individuals, we all try to influence the thought, feeling, and actions of others. Nearly all of us could improve our communication with others or educate others in a more efficient manner. We admit the need for improved methods.

Universities recognize the need for improved procedures in communications and education. They have contributed large amounts of research directed at analysing changes occurring in agriculture, and at the reasons for their acceptance. Researchers have contributed reports about the diffusion of farm information and the adoption of new farm practices.

The accumulated research in this field provides volumes of information from which conclusions and generalizations may be drawn. However, little of this research has been directed to how the county agent may apply the information in carrying out an overall well-balanced program. Studying a group of farmers in Riley County might provide clues that will give the agent information with which he could improve the efficiency of his program.

REVIEW OF LITERATURE

The Philadelphia Agricultural Society, organized in 1785, was the beginning of a national effort to provide an agricultural education program for the people. The Philadelphia Agricultural Society was the fore-runner of today's agricultural agencies. In 1853 a group of farmers in northern Illinois, lead by Jonathan B. Turner, outlined a proposal for a land grant college in each

state. They formed the Illinois Farmers League, which became very active and eventually was successful in getting a resolution adopted by the state legislature urging the grant of public land for the establishment of state universities. Turner was successful in getting the Morrill Act, or the Land Grant Act, through Congress in 1862. (It provided grants of 30,000 acres of public land for each Senator and Congressman in a state, for the establishment and support of Colleges for the teaching of Agriculture and Mechanical Arts).

Another cornerstone for building a sounder base for the Land Grant College system, and eventually for Extension Work, was the support given Experiment Station work under the authority of the Hatch Act adopted in 1887.

The Spirit and Philosophy of Extension Work by R. K. Bliss, pointed out that the first mention of extension work was in the proceedings of the Land Grant College Association, organized in 1888. E. B. Voorhees of New Jersey described what he said they were calling Agricultural Extension work, which began in 1886 and which consisted of six lectures on (1) soils and crops (2) feeding plants and (3) animal nutrition.

By 1900 Cornell University had established a Department of Extension, and in 1901 the University of Illinois organized an Extension staff, and other states followed rapidly.

In 1916, following the passage of the Smith-Lever Act, and the organization of the Extension Services in most of the States, there was a national conference of state Extension directors. They decided to name the local Extension Organization, Farm Bureau. The Federal Extension Service issued a publication in 1918, which outlined the functions of the county organization.

Kansas organized its first agricultural educational agency, the County

Farm Bureau, in 1912. The Kansas Legislature, in 1951, revised the Farm Bureau Law, and, by this revision, extension became a cooperative endeavor between the County Agricultural Extension Council and Kansas State University.

Since World War II agriculture has become more complex and the problems of adjustment more acute, and it has become increasingly important that Extension Workers know more about the educational processes which lead people to accept new ideas and adopt them. In studying the educational processes, one must take into consideration the diffusion process and the adoption process. By definition, the diffusion process is the mechanical process through which new ideas or practices are communicated from its source of invention to its ultimate users or adopters, and the adoption process is the process by which a user becomes aware of, gathers information about, and decides to use or not to use information.

Lionberger's[1] studies pointed out that people normally do not adopt a new practice or idea as soon as they hear about it. They may wait several years before trying the idea for the first time, and longer still before permanently adopting it. The final decision to use a new practice is usually the result of a series of influences operating through time.

For many practices, people appear to go through a series of stages:

(1) Awareness-the first knowledge about a new idea, product or practice;

(2) Interest-the active seeking of extensive and detailed information about the idea, to determine its possible usefulness and applicability;

(3) Evaluation-weighing and sifting the acquired information and evidence

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[1]Herbert F. Lionberger, Adoption of New Ideas and Practices. Iowa State University Press, Ames, Iowa, 1960.

in the light of the existing conditions into which the practice would have fit;

(4) Trial-the tentative trying out of the practice or idea, accompanied by acquistion of information on how to do it;

(5) Adoption-the full-scale integration of the practice into the on-going operation.

These stages are not necessarily a rigid pattern which people follow, nor a set of exclusive and discrete categories with no overlap. Rather, they represent sequences that can be clearly identified in adopting new practices.

All people do not adopt at the same time. There are always some persons who adopt first, some who adopt later. The rate of adoption in a community makes the classification of adopter groups very useful in disseminating information.

PURPOSE OF THE STUDY

The purpose of this study was to determine, within certain limitations imposed by the data, the relationship between the tendency to adopt recommended farm practices, and the participation in selected activities of an educational nature. The fact that people adopt new ideas or practices at different times means they can be classified in terms of their time in the adoption pattern. The classification may be as simple as early-late adopter groups, which means the early adopter accepts change sooner than the late adopter.

A classification system which divides farmers on the basis of time of adoption, relative to each other, is less confusing. The adoption of practices tends to follow a normal curve. Therefore, it is possible to classify persons

in groups and compare an individual's position in the adoption pattern.

It would seem that a clearer understanding of the adopter groups could result in a more rapid, effective and efficient diffusion of ideas so that farmers might benefit to a greater extent from technological research findings. Thus, further exploration of the characteristics which are associated with the various adoption categories should be useful, not only to agricultural personnel, but also to commercial concerns, salesmen and dealers.

THE ADOPTION OF CATEGORIES

Studies have identified the innovator as a person who adopts farm practices very early. He evidently is curious and inquiring about the world around him. Beal and Bohlen's study pointed out that the innovators are the first 2.5 percent to adopt a new farm practice. Research has shown that the innovator differs from the average farmer on such things as education, size of farm, readership of magazines and newspapers, amount of capital and attitude toward change. Because he is so different from the average farmer, he does not always make the best leader.

Innovators get their ideas directly from the experiment station and college. They will go directly to the research worker or agricultural specialist. Even though they get information direct from the experiment station and college, they will also obtain information from local agricultural agencies. Innovators know the local agricultural personnel and get many new ideas from this source.

Leading adopters seem to actually serve as leaders in the adoption of new practices to the extent that their adoption behavior is followed by other farmers. The position of the leading adopters seems to be earned by their

ability to be ahead of the average farmer but not so early that they are not respected. They are the people who provide a major portion of the leadership in community and county organizations. They read more papers, magazines, receive more bulletins, and have larger farms than the later adopter groups.

Majority adopters include the major portion of the number of farmers. They usually have slightly less formal education and lower socio-economic status than the earlier adopters. These people tend to associate mainly in their own community, and value highly the opinions their neighbors and friends hold about them.

Late adopters have less education and are older than the other adopter groups. They belong to significantly fewer organizations and read fewer papers and magazines than the other adopter groups.

THE SAMPLE

Interviews were conducted in August 1961 with 100 farm operators in Riley County, Kansas.

The determination of the size of the sample was an elusive problem, since the innovators were very limited. Because the research required that farmers in every category be included, it was decided that twenty-five innovators would be selected. Because this number is approximately the universe of innovators, little bias is introduced. It was felt that twenty-five farmers in each group would be large enough to measure the differences among the adopter groups.

The writer and Mr. Rex Kent, County Agricultural Stabilization and Conservation Office Manager, divided the 847 actively engaged farmers into the four adopter groups. Twenty-five farmers were chosen as innovators. Persons

classified as leading adopters, majority adopters, and late adopters were selected randomly until they had twenty-five in each group.

Each farmer was visited and a detailed personal interview conducted. The instrument was designed to secure data on age, formal education, farm income, size of farm, tenure status, level of living, sources of informal education, and adoption of farm practices.

METHODOLOGY

This research project was designed to point out the characteristic differences between adopter groups. The objective was not to explain why farmers do or do not adopt practices, but to identify characteristics of farmers who tend to adopt very early and those who adopt later. In other words, this study largely ignores the practical operational considerations farmers may weigh in adopting practices. This study is addressed to the general considerations of identifying the adopter groups within Riley County.

The writer used the chi-square test to determine whether the differences between the classified groups were real. The chi-square test for contingency was performed on each of the following tables: 1, 2, 3, 4, 5, 6, 8, and figures: 5, 6, 7, 8, 9. The hypothesis tested in each case is that the distribution over the variable of interest (age, tenure, etc.) is the same in the four classes of farmers. A large value of chi-square leads to a rejection of this hypothesis, and supports the conclusion that the observed differences between these classes are real. Differences reported as significant are at the .05 level.

RILEY COUNTY SITUATION

Riley County is irregular in shape, spreading about seventy-five miles from the southeast to the northwest corner and only averaging twenty miles wide. The land area consists of 399,360 acres, of which 84.8 percent is in farms.[2] Fifteen percent of the area is utilized for military reservation, flood control, roads, and towns. The area is divided into 829 family-type farms. The average farm family is dependent on a livestock or dairy program for a major portion of its income. This factor has influenced the diversion of the cultivated acres to feed grain production, leaving wheat as the only major cash income crop.

Statistics showing the gross value of all the field crops per Kansas commercial farms for the four year period of 1955-1958 show Riley County with an average of $4975.00.[3] The statistics indicate that Riley County ranks 71st in the state for field crop production.

Soil Conservation records show that approximately fifty-two percent of the conservation work in Riley County has been completed.[4] Conservation work seems to be an indicator in relationship to the rate of adoption of farm practices.

Census reports shows the 1959 population figure as 42,127 for Riley County.[5] The county has four major towns. These towns are: Manhattan,

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[2]Jasper R. Pallesen, Kansas Farm Facts, 1960. p. 17-57.

[3]Farm Management Study Number N*1357*2, Kansas State University, Manhattan, Kansas. p. 2.

[4]June 1961, Performance Records, Riley County Soil Conservation District, Manhattan, Kansas. p. 3.

[5]United States Census Population 1960. Final Report PC(1)-18B. p. 82

Riley, Leonardville and Ogden.

Manhattan is the county seat with a population of 22,993.[6] A large portion of the rural area does its trading in Clay Center, Junction City and Marysville. These conditions exist because of the geographic condition of the county and policies developed within the city of Manhattan.

Riley and Leonardville are small towns having populations of 557 and 365 respectively. These towns provide a large amount of the domestic commodities utilized in the rural area. Ogden has a population of 1,857 which depends almost entirely on Fort Riley for economic existence.

A large percentage of the rural homes in Riley County are modern. Ninety-eight percent have electricity, serviced by Rural Electric Cooperatives and the Kansas Power and Light Company. Approximately seventy-six percent of the homes have running water.

The highway system within the boundaries of the county are outdated, with the exception of U.S. 40 crossing the southern section. Construction is underway to up-grade U.S. 77 and U.S. 24. Kansas 13 is being completely rebuilt.

Riley County's influential factors are quite different from the average county in Kansas. We might briefly look at some of the factors which influence the rural attitudes.

The geographic area has a definite influence on the trade area. Most of the people in the northern part of the county trade in Clay Center and Marysville.

The policies developed in the city of Manhattan have created hostile

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[6]Ibid, p. 82.

rural attitudes. The policy on Tuttle Creek Dam created the open hostile attitude. Now, the Prairie Park policy is reviving the open bitter attitude of the rural areas toward Manhattan. Of course, the attitude dates back to the organization of the county with the creation of the pie-shaped county-commissioner districts which enables Manhattan to control each district.

The Farm Bureau is the largest farm organization within the county. The organization has very little influence on the average farmer. The Farm Bureau continues to have a large membership due to the fact that a farmer must be a member to purchase insurance.

The commodity groups, such as Co-op, have influenced local farmers reactions more than any other group. Of course, these organizations have stayed within the marketing fields.

Kansas State University is located within the county. Some farmers go directly to the university for information, but the number is not out of proportion to other counties.

Comparison of Age of Adopter Groups

Having selected the twenty-five farmers who were classified as innovators, additional farmers were obtained randomly and assigned to adoption categories by the writer and Kent according to knowledge of their adoption characteristics. Sampling continued until there were twenty-five in each classified group. The average age for the one-hundred farmers interviewed was 42 years. The youngest farmer interviewed was 24 years of age and the oldest was 78 years of age.

The average age of the twenty-five farmers in the innovator group was 39 years. The average age of the twenty-five in the leading adopters and the twenty-five in the majority adopters was 43 years. The twenty-five late

Table 1. Comparison of age of farmers surveyed by classified groups.

Classified Groups	Number in Group	Under 30	30 to 35	36 to 40	41 to 45	46 to 50	51 to 56	56 to 60	61 and over
Innovators	25	1	10	5	2	3	1	2	1
Leading Adopters	25	3	5	2	2	5	2	2	4
Majority Adopters	25	3	4	7	3	2	3		3
Late Adopters	25	1	1	1	2	6	2	6	6
Totals	100	8	20	15	9	16	8	10	14

adopters average age was 48 years.

The Chi-square test showed that the differences between the ages of the classified groups was significant.

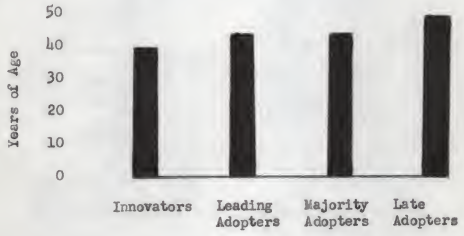

Fig. 1. Comparison of the average ages of the adopter groups, Riley County, Kansas, 1961.

The twenty-five farmers in the innovators category were several years younger than the other three groups. The leading adopters and majority adopters averaged the same age, while the late adopters were considerably older.

Lionberger[7] found that younger men were willing to accept new ideas and take greater risk. The study pointed out that older farmers tend to be more conservative and make fewer changes in farming. The needs of the older farmers are somewhat different than the younger farmers.

Reasons why farmers adopt farm practices more quickly at one time than another relate to the situation in which they find themselves when alternative courses of action become known. Although situational factors are many and varied, it seems the writer could expand Lionberger's finding by making a comparison of Paul and John Hopkins, father and son, who were included in the survey.

> John is married and has two pre-school children. He attended Oklahoma State University before engaging in farming. He is serving on the County Agricultural Extension Board. His wife has a high school education and is the Home Economics township representative. The family owns 160 acres and rents 400 acres.
>
> Paul (Father) is 56 years of age and farms 500 acres which he owns. He has continued to stay with the cow herd enterprise, while John has gone to the swine program. The father feels there is less risk in the cow herd. If prices fall, he can produce calves over a period of years and show a profit. John has entered the higher risk swine program to have a faster and greater return on his investment.
>
> John harvests his feed grains at a high moisture content and dries it mechanically. The risk of losing the grain at a lower moisture content is greater than the cost of drying. He realizes the banker will finance a livestock program if the feed is available. Paul harvests his feed grains at a lower moisture content. His financial stability and long time credit character enable him to take a greater risk in the loss of grain.
>
> The difference between the two farm enterprises are the financial situations the father and son finds themselves.
>
> The father encourages his son to accept new practices, which will enable him to meet the needs of his growing family. On the

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[7] Lionberger, op. cit., p. 96-97.

other hand, the father tends to accept fewer farm practices which requires large investments. The elder family feel their greatest needs are financial stability in retiring years. Expanding farming through new farm practices increases indebtness and creates instability in later years of life.

Comparison of Schooling

The average number of years of schooling for the one-hundred farmers interviewed was 12 years. Education is compared in Table 2. Fifteen of the one-hundred farmers had only 8 years, while one had more than 16 years of schooling.

Table 2. Comparison of years of schooling for farmers by adopter groups.

Classified Groups:	Number in Group	Years of Schooling									
		8	9	10	11	12	13	14	15	16	16+
Innovators	25					13	2	1	2	6	1
Leading Adopters	25	2	1	2		14	2		1	3	
Majority Adopters	25	3	1	3	2	15	1				
Late Adopters	25	10	3	3	3	5	1				
Totals	100	15	5	8	5	47	6	1	3	9	1

In comparing the average schooling of the groups, the innovators have 13 years, leading adopters 12 years, majority adopters 11 years and the late adopters 10 years of schooling. Twelve of the innovators have one or more years of advance schooling. The innovators and leading adopters average slightly higher than 12 years, while the majority adopters and late adopters average less than 12 years.

The Chi-square test showed significant differences between the schooling of the classified groups.

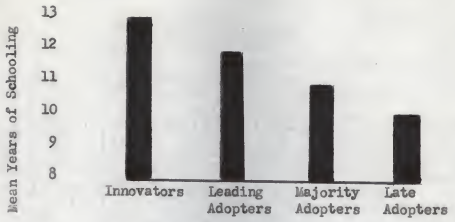

Fig. 2. Comparison of mean years of schooling for adopter groups, Riley County, Kansas, 1961.

The writer has observed that there is a distinct difference between the innovators' and late adopter' attitudes toward education. The late adopters' views are that too much schooling, "Book Farming", is useless or even detrimental because it makes a person impractical. The innovators look upon education as a means of increasing knowledge about new farm technology. The relationship between years of schooling and farm practices adopted may be indirect. Education may only create a favorable mental attitude for the acceptance of farm practices. Nevertheless, twelve years of schooling is associated with higher farm income in Riley County.

Comparison of Tenure

The tenure of farming for the individuals range from 2 years for the youngest to 53 years for the oldest farmer interviewed. The tenure for the average farmer interviewed was 21.8 years. A comparison of tenure is broken down in Table 3.

The innovators, being the youngest of the classified groups, averaged 17 years of farming, leading adopters 21 years, majority adopters 22 years, and

Table 3. Comparison of tenure of farming by classified groups.

Classified Groups	Number in Group	Years engaged in farming: 5 or Under	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 to over
Innovators	25	1	5	8	5	1	3	1	1
Leading Adopters	25	3	2	5	2	2	2	4	5
Majority Adopters	25	3	2	7	4		3	3	3
Late Adopters	25	1	3		3	3	5	1	9
Totals	100	8	12	20	14	6	13	9	18

the late adopters averaging 26 years.

The Chi-square test showed no significant differences in the tenure of farming between the classified groups.

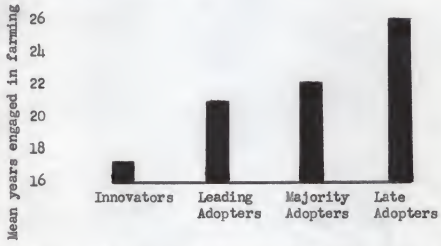

Fig. 3. Comparison of mean years engaged in farming of adopters groups, Riley County, Kansas, 1961.

Comparison of Size of Farm

The size of the farms varied from 80 acres to 2340 acres. Sixteen farms were less than 160 acres as compared to twenty-three farms having more

than 640 acres. Table 4 shows the comparison of size of farms operated by the classified groups.

Table 4. Comparison of cropland and pasture by classified groups.

Classified Groups	Number in Group	Cropland				Pasture			
		80 to 160	161 to 320	321 to 480	481 and over	80 to 160	161 to 320	321 to 480	481 and over
Innovators	25		13	9	3	5	3	5	10
Leading Adopters	25	4	13	6	2	3	6	4	9
Majority Adopters	25	6	14	3	2	6	10	4	3
Late Adopters	25	21	3	1		14	2		1
Totals	100	31	43	19	7	28	21	13	23

The Chi-square test showed significant differences in cropland and pasture between the classified groups.

In comparing the size of farm for each classified group, the innovators farm averages 585 acres, leading adopters 647 acres, majority adopters 500 acres, and the late adopters 227 acres. The innovators and leading adopters controlled more cropland and pastureland than the majority adopters and the late adopters. The leading adopters controlled a larger number of acres than the innovators. This fact is probably due to the longer tenure of the leading adopters.

This confirms other research previously mentioned: the late adopters are older and perhaps do not need the volume of business, since many of them have reared their family. They seem to feel that a smaller volume of business and standard of living is more satisfying than taking the risk of larger farms.

Through the writer's observations in working with farmers, size of farm

seems to be related directly to the adoption of new farm practices. Many technological advances requires large-scale operations and substantial capital resources for their uses. Also, use of improved farm practices produces economic benefits which permits expansion of farming operations, which in turn makes it economically possible to use more improved farm practices. Farms smaller than 240 acres in Riley County seem to curtail the adoption of new farm practices.

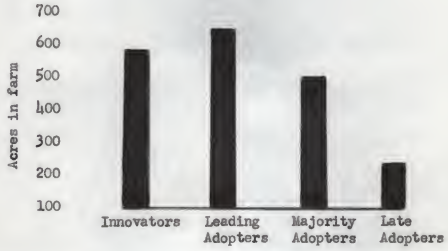

Fig. 4. Comparison of the average size farm for each classified group, Riley County, Kansas, 1961.

Comparison of Ownership

The ownership of land varied from none to 2340 acres. Fifty-eight of the farmers leased all or part of the land being farmed, in comparison to 42 farmers owning all of the land under their control. The average innovator owned 297 acres and leased 288 acres, the leading adopter owned 329 acres and leased 258 acres, the majority adopter owned 271 acres and leased 229 acres, and the late adopter owned 132 acres and leased 95 acres. Table 5 shows the comparison of land owned and leased by the classified groups.

Table 5. Comparison of acres owned and leased by each classified group.

Classified Groups	Number in Group	Ownership: 80 to 160	Ownership: 161 to 320	Ownership: 321 to 480	Ownership: 481 to 640	Ownership: 641 and over	Leased: 80 to 160	Leased: 161 to 320	Leased: 321 to 480	Leased: 481 to 640	Leased: 641 and over
Innovators	25	2	3	10	3	3	1	2	3	3	7
Leading Adopters	25	2	5	4	4	4	1	5	3	2	3
Majority Adopters	25	5	6	4	1	1	1	5	6	2	4
Late Adopters	25	3	11	1	1		1	6	3		
Totals	100	12	25	19	9	8	4	18	15	17	14

The Chi-square test showed significant differences between ownership of land among the classified groups, but did not show significant differences in land leased.

As was anticipated, the innovators owned a smaller percent of the total acres being farmed as compared to the other three groups farming operation. The average innovator owned 50.4 percent, leading adopter 59.5 percent, majority adopter 54.2 percent, and the late adopter 58.2 percent of the total acres managed by each group.

It appears that the tenure of farming and the need for a greater volume of business has an influence on the amount of land the innovators owns.

Innovator Characterized

The innovator may be typified by examining the Lyle Anderson family. They purchased a 160 acre farm after the war, with a G.I. loan. The family has continued to meet their payment, but have not paid in advance. The family has rented 320 acres adjoining their farm.

In the early 50's, they began to feel the price-squeeze. To counter-act the price-squeeze, Lyle increased the use of fertilizer and developed a larger cattle and hog program. In 1956, Lyle started

improving his equipment to handle additional livestock and grain production.

Lyle's farm business has grown rapidly in the last decade, even though his ownership of land has not increased as fast. He has increased his acreage through renting and is gradually becoming a fairly large livestock producer. Lyle is operating a larger business each year and his debts are increasing too. In fact, it seems he is constantly seeking more credit. Since his debts are expanding rather than being reduced and collateral is always minimal, the bank-examiners and officers often raise questions. Lyle always seems to anticipate these questions. While his debts are increasing, he has kept up-to-date financial statements ready to show that his networth is also increasing. He has bought a lot of new machinery and can always produce actual records to show that his costs are kept low by volume usage. He keeps records on each lot of cattle and hogs, and while he has had some unprofitable years, his records show they were due to highly unfavorable price changes and not his management.

Lyle makes it a point to discuss his decisions with his banker, even though the banker does not always agree, he admits that Lyle's reasons are always well-thought-out and backed up by figures on expected cots, prices, etc. Lyle is handy with a pencil. He uses a maximum of credit and always prepares a total budget of the years's credit needs and a schedule of expected repayment. The banker knows that he can expect Lyle to repay some of the crop loan when the wheat is sold. The cattle loan will be repaid in July, but another loan will be made in September. Weather and prices cause modifications in the plans, but the banker has come to know and respect Lyle and feels safe in lending him more on the same collateral than he could most farmers.

As already pointed out, there are important differences in the adopter groups' attitudes toward renting land and the use of credit. Through the writer's observation, the innovators and leading adopters have recognized the importance of the following points of credit.

1. Character of the borrower and moral attitudes toward repayment responsibilities.
2. Capacity to repay or an adequate business that is profitable and well managed.
3. Condition of the borrower's finances or an adequate net worth to insure repayment.
4. Collateral or guarantees through rights to tangible property through a mortgage.

Late Adopter Characterized

The late adopter may be typified by examining the Kenneth Johnson family. They purchased a 160-acre farm during the war. Other jobs were plentiful, but they were both farm-reared and it seemed the thing to do. Both hated to assume a large mortgage as they remembered their folks struggle with a mortgage in the 20's and 30's.

The farm was not large, but they had savings enough to operate it and prices were good. They believed a dollar saved is a dollar made and they could make effective use of used machinery. Kenneth was handy with tools and did all the improvement work himself and managed to keep the old buildings, fences and machinery useful with a lot of hard work. They did pretty well for several years during the 40's, with good prices and careful cost control. Whenever they had more left over, they made additional payments on their mortgage and looked forward to the day when they could have a debt-free farm.

Then the price-squeeze was felt in the early 50's. In 1958 dry weather reduced yields and in 1954 they were forced to go to the bank and get money to put in the crop which was a failure. In 1955, they borrowed more money and sold off part of their cows. Since 1956, weather and yields have improved. In 1958, they finally had to replace the tractor and some equipment and in spite of their hard work and saving, their operating debt continued to increase. This has been discouraging to the family, since their output has continued to increase.

The family farm unit is little larger than in the early 40's. Kenneth has been able to rent 80 acres of additional land, but it is of poor quality and a long distance from home. As their family grows older, living expenses increase and their income is not adequate to pay the living cost and retire the debt. The family is asking, in earnest, if off-farm employment will not meet their needs and provide more security.

Comparison of Income

The average gross income of all farmers surveyed was $17,949.00. A comparison of the classified groups shows that the innovators had an average of $23,080.00, the leading adopters $20,125.00, the majority adopters $19,247.00, and the late adopters $9,317.00.

Why should the innovators gross income be higher when the resources

are similar to the leading adopters and majority adopters? Two possible explanations are evident:

1. The best manager or innovators get more production per acre, per steer, per cow, etc.
2. The innovators diagnose their needs and resources. When some resources are quite limited, they select enterprises and plan their farm organization to get the most production (volume or gross income) from each unit of their limiting resources. For example, the innovator who is quite limited in capital, tends to emphasize higher turnover enterprises (such as hogs) or rent additional land. Figure 5 shows a comparison of average gross income for the classified groups.

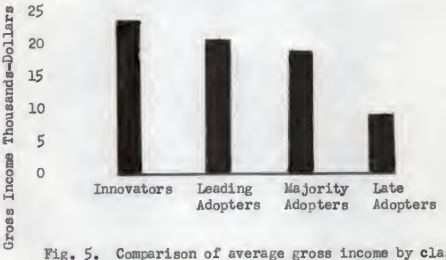

Fig. 5. Comparison of average gross income by classified groups, Riley County, Kansas, 1961.

The Chi-square test showed significant differences in gross income between the classified groups.

The average net income of all farmers survey was $4,327.50. The innovators showed an average of $5,788.00, the leading adopters $4,612.00,

the majority adopters $4,087.00, and the late adopters $1,583.00. A comparison of net income for the classified groups is shown in Fig. 6.

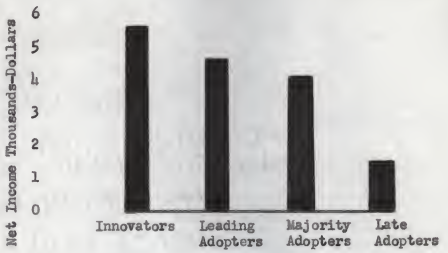

Fig. 6. Comparison of average net income by classified groups, Riley County, Kansas, 1961.

The Chi-square test showed significant differences in net income between the classified groups.

In comparing the net income with the gross income, the average innovator's net income was 25 percent of the gross income, leading adopter 22 percent, majority adopter 21 percent, and the late adopter 17 percent. It would appear from the percent of gross income that the average innovator does a better job managing his capital resources. This would relate to the fact that the innovator has a smaller percentage of his capital invested in fixed assets, such as land, than the other adopter groups.

Through the writer's observations of working with farmers, several explanations are evident of the difference in net income return from gross income.

1. The late adopter does no calculations to determine whether or not to buy a machine, for example.

2. The innovator knows what his income and costs are per acre, per cow, per steer, etc., through his use of records.
3. The innovator sets goals and strives for them.
4. The innovator makes written plans for future years. This gives him a well-organized efficient system and it is a catalyst to decisions.

Comparison of Employment

Comparison of each classified group shows one innovator is doing custom work and one working off-farm, the leading adopters category finds three doing custom work, majority adopters has seven doing custom work and two working off-farm, and the late adopters has five doing custom work and eleven working off-farm. This confirms that more than half of the late adopters are receiving income from outside employment. It appears the outside employment reduces the efficiency of the farmer's management. Table 6 shows the work load of the classified groups throughout the year.

Table 6. Comparison of farm employment of classified groups.

	Farm labor used throughout the year		
Classified Groups	Number in Group	Even	Unevenly
Innovators	25	12	13
Leading Adopters	25	13	12
Majority Adopters	25	12	13
Late Adopters	25	9	16
Totals	100	46	54

The Chi-square test showed no significant differences in labor between the classified groups.

It appears that slightly less than half of the farmers are employed full-time over a 12 months period. When we look at the reasons for the wide differences in farm employment, we find many. Volume or size of business seem to separate the late adopters from the other groups. The late adopters are older and perhaps do not feel that employment on the farm offers as much security as off-farm employment. The risk factor and the reception to new ideas may be directly related to off-farm employment in meeting the needs of declining years.

It is difficult to measure farm employment, since each farmer puts a different interpretation on full employment. The writer has observed the following characteristic pertaining to the classified groups, which provides some explanation of the farmer's time.

Innovators:

1. The innovator participates very little in government farm programs. He exploits his labor and resources for maximum production.
2. The innovators develop a livestock program which consumes labor in the winter months.
3. The innovator keeps detailed farm records.
4. The innovator spends time consulting with his lending agency about his farm program.
5. The innovator spends time seeking out information from all sources that are available.

Leading Adopters:

1. The leading adopter participates in government farm programs, when

it benefits his farm operations, such as using the feed grain program to rotate his land.

2. The leading adopter develops a livestock program which consumes his labor and resources to its fullest extent.
3. The leading adopter keeps some farm records, but does not spend as much time analysing the records as the innovator.
4. The leading adopter spends some time visiting with his banker but does not always make a special effort to inform the banker of his plans.
5. The leading adopter spends considerable time working with Agricultural Agencies and seeking out information.

Average Adopters:

1. The average adopter participates in government programs, such as the soil bank program, feed grain program, etc., to cut down financial risk. He is more interested in security, rather than utilizing his labor and resources for maximum production.
2. The average adopter spends considerably more time repairing equipment than the innovator and leading adopter.
3. The average adopter keeps poor records; it usually consists of keeping receipts and making notations on checks.
4. The average adopter spends some time working with agricultural agencies within the community.

Late Adopters:

1. The late adopter usually participates in government programs to the fullest extent of the law. The government program usually pays more per acre than he will produce.

2. The late adopter usually does not have a sound livestock program which will consume his labor. The program usually consists of a few cross-bred cows and a few chickens.
3. The late adopter keeps no records, except a minimum amount for income tax purposes.
4. The late adopter sees his banker only when he is in need of money.
5. The late adopter spends very little time seeking out information for any source.
6. The late adopter sends considerable time in town discussing the ill-fate of life and the world's problems.

Comparison of Sources of Information

In determing the sources of information which the classified groups use in adopting new farm practices, seven sources were used. The County Agent was the source of information most frequently used by all the groups. A source less frequently used was the commercial dealers or salesmen.

Lionberger[8] found that Agricultural Agencies are most used at the evaluation and trial stages. They head the list as sources of information for adopter groups for complex farm practices. Table 7 shows the comparison of sources of information used by the classified groups.

In comparing the classified groups, the innovators used the university as one of their main sources of information, which enabled him to adopt new practices. Even though the innovators get information direct from the university,

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[8] Lionberger, op. cit., p. 47.

Table 7. Sources of information used by classified groups.

Classified Groups	Number in Group	Sources of information						
		Commercial Dealers	Farm Magazines	University	County Agent	Person who tries new things	Friends and neighbors	Others
Innovators	25	5	22	20	23	10	14	8
Leading Adopters	25	5	12	8	22	9	18	11
Majority Adopters	25	9	15	11	18	12	12	6
Late Adopters	25	7	20	1	14	4	6	4
Totals	100	26	69	40	77	35	50	29

they also obtained information from the county agent and farm magazines. The leading adopters get more of their information from the county agent and neighbors, in comparison to the innovators. Through observations, the writer feels the leading adopter provides a disproportionate amount of the formal leadership in carrying out the agricultural program in the community. The majority adopters seem to use the seven sources more on a level than the other three groups. The late adopters use all sources less than the other three groups.

Comparison of New Practices

In comparison of the acceptance of new practices, twenty-two innovators showed new practices being used, thirteen leading adopters, ten majority adopters, and no late adopters. The practice most frequently mentioned was

the control of the corn root-worm, which caused heavy damage throughout the county during 1960. The county agent carried out an intensive educational program on the control of the corn root-worm during the winter months. Sixteen innovators listed the county agent as the source of information, while six listed the university, eight leading adopters listed the county agent, five listed the university, and 10 majority adopters listed the county agent. It appears this practice was accepted by a large number of the adopters because of the relatively inexpensive control, in comparison with the large return on their investment.

Comparison of Leisure Time

The comparison of leisure time reported by the adopter groups showed that the innovators spent an average of 13.4 hours per week for leisure time. The leading adopters spent 15.8 hours and the majority adopters spent 15.9 hours of leisure time each week. The late adopters reported the greatest amount of leisure time with 17.9 hours per week.

The leisure time probably corresponds directly to the nature of the classified groups. The innovator keeps more detailed records and is involved in producing a greater volume of business. He is active in community and affairs outside the community which leaves less time for leisure activities. In comparison, the leading adopter and majority adopter probably do less farm planning and do not take a leading role in activities outside the community. The late adopter does very little farm planning and takes a small interest in community activities, which leaves him more leisure time.

The writer has observed while visiting with farmers about leisure time away from home, they seem to fall into a characteristic pattern in relation

to recreation activities.

Innovators:

1. The innovator takes a vacation each year.
2. He usually stops at a point of interest related to farming, such as an experimental station, a large cattle feed lot, etc.
3. He spends some of his leisure time away from home attending conventions, such as civic organization, lodge, political, etc.
4. He usually spends less of his vacation time visiting relatives and friends than the other adopter groups.

Leading Adopters:

1. The leading adopter usually takes a vacation each year.
2. He spends more time seeing points of interest not related to farming, such as the Yellowstone Park, Washington Monument, etc., although he will stop at an experiment station if it has an interest related to his farm.
3. He spends more of his vacation time visiting relatives and friends than the innovator.
4. He usually includes a little fishing or hunting in his vacation.
5. He spends some of his leisure time away from home attending civic organization and lodge convention, but rarely ever attends a political convention.

Majority Adopter:

1. The majority adopter usually takes a vacation once every two or three years. He will usually take a 2 or 3 day trip each year visiting relatives and friends.
2. His main interest in taking one or two weeks vacation is to visit

relatives and friends. He will include points of interest that will not take him too far out of the way from his destination.

3. He will include more time for fishing and hunting than the leading adopter and innovator.
4. He rarely ever attends a convention away from home.

Late Adopters:

1. The late adopter usually never takes over 2 or 3 days vacation at one time. He usually takes a week or more vacation once every 5 or 6 years.
2. He usually spends his time away from home visiting relatives.
3. The late adopter will spend more time fishing and hunting at home than the other adopter groups.

Comparison of Informal Educational Activities

The comparison of the number of books read by the adopters shows that the innovators read more books than the other three groups. The number of books decline with each group with the late adopter reading only 3 books during the year. It was impossible to read each book and assign a value, so each was given equal value. The innovators read a total of 35 books during the year, leading adopters 15, majority adopters 11, and the late adopters, 3. It was interesting to note, of the 63 books reported read, "The Conscience of a Conservative" by Barry Goldwater was mentioned 23 times. This is probably consistent with the characteristic nature of the Conservative Republican Kansas Farmer.

The comparison of the quality of magazines read was tabulated by assigning value points to the level of educational value for each magazine. The magazine

read only occasionally was given only one-half the points as those those read regularly. It was impossible to give a realistic comparison between magazines read regularly and the ones read occasionally, so they were tabulated separately. The rating for the complete list of the magazines used may be found in the appendix.

The results showed that the innovators rated highest in this classification with the leading adopters and majority adopters following in order and the late adopters reading the least. Figure 7 shows the comparison of the average level for magazines read by the adopter group.

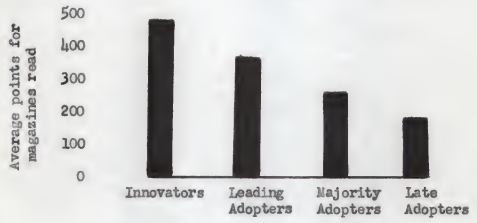

Fig. 7. Comparison of the average rating for magazines read by adopter groups, Riley County, Kansas, 1961.

The Chi-square test showed significant differences in the rating for magazines read between the classified groups.

Table 7 shows the comparison of the individual magazines read by the classified groups.

Comparison of the individual magazines read by the classified groups point to the fact that farm magazines are read by all groups in preference to other magazines.

Table 7. Comparison of magazines read by adopter groups.

Classified Groups	Saturday Evening Post	Farm Quarterly	Successful Farming	Kansas Farmer	Farm Journal	Newsweek	Life	Others
Innovators	9	6	6		9	6	3	10
Leading Adopters	7	1	12	4	11	4	1	11
Majority Adopters	4	1	5	12	13		2	10
Late Adopters	4		9	9	6	1	6	21
Totals	24	8	32	25	39	7	12	52

The comparison of the number of television programs shows that the late adopters viewed more regular programs than any other groups. The innovators viewed television less regularly than any other group. There was no comparison between television programs because most of the farmers interviewed receive only channel 13.

In comparison of the newspapers received by the classified groups, the innovators received 56, leading adopters 43, majority adopters 36, and the late adopters only 24. The results of the tabulation of newspapers read were almost parallel with the result of the magazines, with the innovators reading the largest numbers. Table 8 shows the comparison of the average newspapers read by the classified groups.

The Chi-square test showed significant differences in the total newspapers read by the classified groups.

Table 8. Comparison of newspapers read by the adopters groups.

Classified Groups	Topeka Capitol	Kansas City Star	Manhattan Mercury	Others	Totals
Innovators	24	8	16	8	56
Leading Adopters	17	5	17	4	43
Majority Adopters	13	3	17	3	36
Late Adopters	5	2	18	5	30

Comparison of the newspapers read by the classified groups shows the innovators subscribe to the largest number of state and regional papers, while the late adopters subscribe to the smallest number. Since the innovators have more formal and informal association outside the community than the other adopter groups, they have more need for potential sources of information. This is a partial answer to the question of why the innovators receive more state and regional papers.

The overall rating of the classified group's informal educational activities was computed by adding the average rating for magazines, books, and newspapers and dividing the total by 25. The comparison of the average rating for informal educational activities show the innovators with 5.6, leading adopters with 4.3, majority adopters with 3.8, and the late adopters with a rating of 2.9. Figure 8 shows the comparison of the average rating for informal educational activities for the classified groups.

The Chi-square test showed significant differences in the average rating of educational activities between the classified groups.

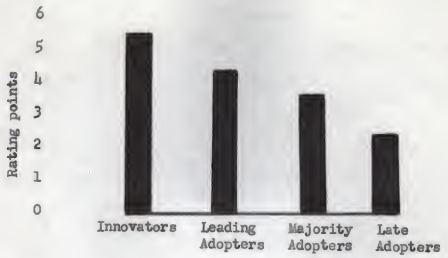

Fig. 8. Comparison of the average rating for informal educational activities for the classified groups, Riley County, Kansas, 1961.

The overall rating of the innovators is considerably higher than the other adopter groups which leads us to conclude that the innovators are more highly motivated to pursue educative activities. While we cannot claim that the innovator is always the wealthiest person in the neighborhood, the data does seem to suggest that the innovator is indeed more intellectually curious and inquiring person than his neighbors. This is particularly true of books and newspapers he reads. Although the leading adopter did not score as high as the innovator, he scored considerably higher than the majority adopter and late adopter. It would appear that the individual's informal educational activities fall in line with his classification of adopting new farm practices and ideas.

Comparison of Socio-economic Status

Socio-economic status was determined by considering the years of education, net income, and land owned and leased. The following scoring system was used:

One point for each one thousand dollars of income, one point for each year of schooling, two points for each one hundred acres of land owned, and one point for each one hundred acres of land rented.

The innovators averaged 28.0 points, leading adopters 26.5 points, majority adopters 22.4 points, and the late adopters received 15.3 points.

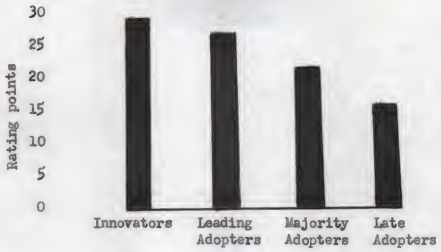

Fig. 9. Comparison of socio-economic status of the adopter groups, Riley County, Kansas, 1961.

The Chi-square test showed significant differences between the socio-economic status of the adopter groups.

SUMMARY AND CONCLUSION

Data were secured by personal interview from one-hundred farm operators residing in Riley County, Kansas. Twenty-five innovators were identified by the Riley County Agricultural Stabilization and Conservation Service Officer Manager, who has been a life long resident of the county, and the author, who has been County Agricultural Agent for two years. The remaining seventy-five farmers were selected by random sampling and classified as leading adopters,

majority adopters, and late adopters.

Information was obtained to compare the following: (1) age (2) formal education (3) tenure status (4) size of farms (5) standard of living (6) adoption rate of new practices (7) farm income (8) informal educational levels.

The following hypothesis was suggested: high schores on an educative activities index will be associated with innovators; average scores with leading adopters; below average with majority adopters; and low scores with late adopters.

The study replicates other studies done in rural diffusion: for example, those which investigated such factors as age, education, size of farm, and socio-economic status.

As agricultural problems become more complex and adjustment more acute, it will become increasingly important to be able to identify the leaders who will accept new ideas and speed-up the adjustment needed in the community and area. One of the major problems of the Agricultural Extension Service is identifying the individual and making a recommendation which he is capable of accepting and putting into practice. Identifying the individual will help extension people to give the individual information which he wants to know.

The comparison of the average age of the adopter groups was 39 years of age for the innovators, 43 years of age for the leading adopters, 43 years of age for the majority adopters, and 48 years of age for the late adopters. As was anticipated, the innovators were the youngest farmers with the leading adopters and majority a little older and late adopter being the oldest group.

The Chi-square test showed significant differences between the ages of the classified groups.

The comparison of the schooling showed the innovators averaged 13 years, leading adopters 12 years, majority adopters 11 years, and the late adopters 10 years. Twenty-five percent of the innovators have a college education.

The Chi-square test showed significant differences between the schooling of the classified groups.

The comparison of farm tenure for the classified groups showed the innovators had 17 years, leading adopters 21 years, majority adopters 22 years, and the late adopters had the longest with 26 years.

The comparison of the average size of farm for each classified group showed the innovators farmed 585 acres, leading adopters 637, majority adopters 500 acres, and the late adopters 227 acres.

The Chi-square test showed significant differences between ownership of land among the classified groups, but did not show significant differences in the land leased.

The comparison of the average gross income of classified groups showed the innovators had an average of $23,080.00, the leading adopters $20,125.00, the majority adopters $19,247.00, and the late adopters had $9,317.00.

The Chi-square test showed significant differences in gross income between the classified groups.

The comparison of the average net income for the classified groups showed that the innovators averaged $5,788.00, leading adopters $4,612.00, majority adopters $4,087.00, and the late adopters $1,583.00. In comparing the percent of net income with the gross income, the innovators had a 25 percent net income, leading adopters 22 percent, majority adopters 21 percent, and the late adopters 17 percent.

The Chi-square test showed significant differences in net income between

the classified groups.

The comparison of sources of information showed that the innovators used the university for a source of information more than any other group, the leading adopters used the county agent and neighbors the largest, the majority adopters seemed to use all of the sources on a level plain, rather than prefer any one source, and the late adopters used all of the sources less than the other groups. The county agent was the leading source of information for all of the classified groups.

The level of living, or socio-economic status, was determined by constructing an index from the following items: education, net income, land owned and land leased. The innovators averaged 28.0 points, leading adopters 26.5, majority adopters 22.4 points, and the late adopters 15.3 points.

The Chi-square showed significant differences between the socio-economic status of the adopter groups.

The comparison of the average rating for informal educational activities shows the innovators with the highest score of 5.6, the leading adopters 4.3, majority adopters 3.8, and the late adopters 2.9.

The Chi-square test showed significant differences in the average rating of educational activities between the classified groups.

Innovators are the first to adopt a new practice. This study has shown the innovators to be different from the average farm operator on such characteristics as education, readership of farm magazines and newspapers, and amount of capital used. Because they are so different from the average farmer, innovators probably do not serve as a model for the majority and late adopters.

The early adopters seem to actually serve as "leaders" in the adoption of new practices to the extent that their adoption behavior is followed by

other farmers. The position of the early adopters seems to be earned by their ability to be ahead of the average adopter but not so much earlier that they are not respected.

RECOMMENDATIONS

It is the belief of the author that adopter groups differ in personalities and habits. Other related studies should be made to identify personality and habit patterns in references to adopter groups. There is some evidence to indicate from the author's personal experience as county agent, that the adopter groups differ in such things as vacations, organization membership and interest of leisure time. An index, for example, which gives a rating to these items might provide some clue to the inter-personalities of the adopter groups.

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APPENDIX

Table 9. Comparison of age of farmers surveyed by classified groups.

Classified Groups	Number in Group	Years of Age: Under 30	30 to 35	36 to 40	41 to 45	46 to 50	51 to 55	56 to 60	61 and over
Innovators	25	1	10	5	2	3	1	2	1
Leading Adopters	25	3	5	2	2	5	2	2	4
Majority Adopters	25	3	4	7	3	2	3		3
Late Adopters	25	1	1	1	2	6	2	6	6
Totals	100	8	20	15	9	16	8	10	14

Table 10. Comparison of years of schooling for farmer by adopter groups.

Classified Groups	Number in Group	Years of Schooling: 8	9	10	11	12	13	14	15	16	16+
Innovators	25					13	2	1	2	6	1
Leading Adopters	25	2	1	2		14	2		1	3	
Majority Adopters	25	3	1	3	2	15	1				
Late Adopters	25	10	3	3	3	5	1				
Totals	100	15	5	8	5	47	6	1	3	9	1

Table 11. Comparison of tenure of farming by classified groups.

Classified Groups	Number in Group	5 or Under	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35	36 and over
Innovators	25	1	5	8	5	1	3	1	1
Leading Adopters	25	3	2	5	2	2	2	4	5
Majority Adopters	25	3	2	7	4		3	3	3
Late Adopters	25	1	3		3	3	5	1	9
Totals	100	8	12	20	14	6	13	9	18

Table 12. Comparison of cropland and pasture by classified groups.

Classified Groups	Number in Group	Cropland 80 to 160	Cropland 161 to 320	Cropland 321 to 480	Cropland 481 and over	Pasture 80 to 160	Pasture 161 to 320	Pasture 321 to 480	Pasture 481 and over
Innovators	25		13	9	3	5	3	5	10
Leading Adopters	25	4	13	6	2	3	6	4	9
Majority Adopters	25	6	14	3	2	6	10	4	3
Late Adopters	25	21	3	1		14	2		1
Totals	100	31	43	19	7	28	21	13	23

Table 13. Comparison of acres owned and leased by each classified group.

Classified Group	Number in Group	Ownership					Leased				
		80 to 160	161 to 320	321 to 480	481 to 640	641 and over	80 to 160	161 to 320	321 to 480	481 to 640	641 and over
Innovators	25	2	3	10	3	3	1	2	3	3	7
Leading Adopters	25	2	5	4	4	4	1	5	3	2	3
Majority Adopters	25	5	6	4	1	1	1	5	6	2	4
Late Adopters	25	3	11	1	1		1	6	3		
Totals	100	12	25	19	9	8	4	18	15	17	14

Table 14. Comparison of farm employment of classified groups.

Classified Groups	Number in Group	Farm labor used throughout the year	
		Even	Unevenly
Innovators	25	12	13
Leading Adopters	25	13	12
Majority Adopters	25	12	13
Late Adopters	25	9	16
Totals	100	46	54

Table 15. Comparison of gross income of classified groups.

Classified Groups	Number in Group	Gross Income - Dollars						
		5,000 and under	5,001 to 7,500	7,501 to 10,000	10,001 to 15,000	15,001 to 20,000	20,001 to 25,000	25,001 and over
Innovators	25				1	9	8	7
Leading Adopters	25				5	11	6	3
Majority Adopters	25		1	4	13	5	1	1
Late Adopters	25	10	5	5	5			
Totals	100	10	6	9	24	25	15	11

Table 16. Comparison of net income of classified groups.

Classified Groups	Number in Group	Net Income - Dollars						
		1,000 and under	1,001 to 2,000	2,001 to 3,000	3,001 to 4,000	4,001 to 5,000	5,001 to 6,000	6,001 to 7,000	7,001 and over
Innovators	25			3	6	7	3	3	3
Leading Adopters	25			5	6	8	3	3	
Majority Adopters	25		7	5	5	4	2		2
Late Adopters	25	8	14	2	1				
Totals	100	8	21	15	18	19	8	6	5

Table 17. Sources of information used by classified groups.

Classified Groups	Number in Group	Commercial Dealers	Farm Magazines	University	County Agent	Person who tries new things	Friends and neighbors	Others
Innovators	25	5	22	20	23	10	14	8
Leading Adopters	25	5	12	8	22	9	18	11
Majority Adopters	25	9	15	11	18	12	12	6
Late Adopters	25	7	20	1	14	4	6	4
Totals	100	26	69	40	77	35	50	29

Table 18. Comparison of leisure time of classified groups.

Classified Groups	Number in Group	Leisure Time - Hours/Week: 10 and under	11 to 15	16 to 20	21 to 25	25 and over
Innovators	25	8	12	3	2	
Leading Adopters	25	5	9	9	2	
Majority Adopters	25	4	8	8	5	
Late Adopters	25	5	2	13	3	2
Totals	100	22	31	33	12	2

Table 19. Comparison of magazines read by adopter groups.

Classified Groups	Saturday Evening Post	Farm Quarterly	Successful Farming	Kansas Farmer	Farm Journal	Newsweek	Life	Others
Innovators	9	6	6		9	6	3	10
Leading Adopters	7	1	12	4	11	4	1	11
Majority Adopters	4	1	5	12	13		2	10
Late Adopters	4		9	9	6	1	6	21
Totals	24	8	32	25	39	7	12	52

Table 20. Comparison of newspapers read by the adopters groups.

Classified Groups	Topeka Capitol	Kansas City Star	Manhatten Mercury	Others	Totals
Innovators	24	8	16	8	56
Leading Adopters	17	5	17	4	43
Majority Adopters	13	3	17	3	36
Late Adopters	5	2	18	5	30

MAGAZINES SCORED FOR INFORMAL EDUCATION ACTIVITIES INDEX

	Points for Regular Reading	Points for Occasional Reading
Farm Quarterly	6	3
Saturday Evening Post	4	2
Newsweek	4	2
True	2	1
Argosy	2	1
Life	2	1
Field and Stream	4	2
National Geographic	6	3
Farm Journal	4	2
Consumer Reports	6	3
Successful Farming	4	2
Reader's Digest	2	1
Astounding Science Fiction	2	1
Harpers	6	3
House and Garden	4	2
Popular Mechanics	6	3
Kansas Farmer	2	1
U. S. News and World Report	6	3
Look	2	1
The New Republic	6	3
True Detective	2	1
Male	2	1
Saturday Review	6	3

SCORING SYSTEM USED TO DETERMINE SOCIO-ECONOMIC STATUS

1 point for each one thousand dollars of income

1 point for each year of schooling

2 points for each one hundred acres of land owned

1 point for each one hundred acres of land rented

1 2 3 4

KANSAS STATE UNIVERSITY

Activities Survey

1. How old are you?_____

2. What is the highest level of schooling you have reached?

   School: 0 1 2 3 4 5 6 7 8 9 10 11 12

   College: 1 2 3 4

3. How many years have you been farming?____.

4. How many acres do you farm? Cropland____Grassland____.

5. Do you own, rent, or manage this farm?

   Owner-operator____(Acres)____.

   Leasor or renter____(Acres)____.

   Manager____(Acres)____.

6. Do you hold a part-time job during the year? (check)

   Custom work____

   Off-farm work____

7. How is your work distributed throughout the year? Evenly____or Unevenly____? Heaviest in winter____spring____summer____fall____?

8. About how many hours per week, on the average, would you say that you devote to such free-time activities as hobbies, sports, reading or listening to readio and television?_____hours.

9. For each of the practices which the farmer has tried or adopted during the past five years, determine where he got the idea? Check frequency.

From commercial dealers or salesmen____

From reading journals and farm magazines____

From visits to experimental station or state university____

From county agent____

From talking to friends and neighbors____

From watching a person who always tries new things____

From seeing that everyone else seemed to be using it successfully____

From independent experimentation of his own____

Other (specify)_____

10. Are you currently using a practice which is new to your area and is not being used to your knowledge by anyone else in the vicinity?

Yes____No____if the answer is "yes", please describe in a few sentences what the practice is:

Where did you get the idea for this?

11. Twenty-seven magazines are listed below. Please indicate how often you read each magazine by circling the appropriate letter.

"R" for those which you regularly read.

"O" for those which you occasionally read.

"N" for those which you never read.

Farm Quarterly	R	O	N	Astounding Science Fiction	R	O	N
Art and Culture	R	O	N	American Living	R	O	N
Saturday Evening Post	R	O	N	Harpers	R	O	N
Newsweek	R	O	N	House and Garden	R	O	N
True	R	O	N	Popular Mechanics	R	O	N
Argosy	R	O	N	Kansas Farmer	R	O	N
Life	R	O	N	U.S. News & World Report	R	O	N
Field and Stream	R	O	N	Look	R	O	N
National Geographic	R	O	N	The New Republic	R	O	N
Farm Journal	R	O	N	True Detective	R	O	N
The Reporter	R	O	N	Male	R	O	N
Consumer Reports	R	O	N	Saturday Review	R	O	N
Successful Farming	R	O	N	Fortune	R	O	N
Reader's Digest	R	O	N				

Any Other? Please list those which you regularly read:

12. If you had to choose only two magazines of those which you have circled or listed, which two would it be?

(1)_____

(2)_____

13. Thirty television programs available in your area are listed below. Please indicate how often you view each program by circling the appropriate letter.

"R" is for programs which you regularly view.

"O" is for programs which you occasionally view.

"N" is for programs which you never view.

G. E. College bowl	R	O	N	Chet Huntley	R	O	N
Twentieth Century	R	O	N	People are Funny	R	O	N
Insight	R	O	N	Paul Winchell	R	O	N
Loretta Young	R	O	N	Candid Camera	R	O	N
Bachelor Father	R	O	N	Witness	R	O	N
Faith for Today	R	O	N	Camera Three	R	O	N
Eyewitness to History	R	O	N	Michael Shayne	R	O	N
Phil Silvers	R	O	N	U.S. Steel Hour	R	O	N
Untouchables	R	O	N	Face the Nation	R	O	N
Closeup	R	O	N	Jack Benny	R	O	N
Polka Parade	R	O	N	Meet the Press	R	O	N
G. E. Theater	R	O	N	Dinah Shore	R	O	N
I Married Joan	R	O	N	Ed Sullivan	R	O	N
Continental Classroom	R	O	N	Checkmate	R	O	N
Hitchcock	R	O	N	CBS Reports	R	O	N

Any others which you regularly view?

14. About how many books do you usually read in a year's time?_____

15. Please list the last book you read and check how recently you finished it.

Author and Title_____

When did you finish the book? Within the last week_____Month____

over a month ago_____.

16. Approximately what is your net farm income?_____

gross income?_____

17. Please check the newspaper(s) which you read.

Topeka Capital____

Topeka Journal____

Kansas City Star____

Manhattan Mercury____

Any other? Please list.

ASPECTS RELATED TO THE DIFFERENTIAL ADOPTION OF RECOMMENDED FARM PRACTICES IN RILEY COUNTY, KANSAS

by

BOB W. NEWSOME

B. S., Oklahoma State University, 1951

AN ABSTRACT OF A MASTER'S THESIS

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Manhattan, Kansas

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The purpose of this study was to determine, within certain limitations imposed by the data, the relationship between the tendency to adopt recommended farm practices and participation in selected activities of an educational nature. Educative activities refer to reading magazines, books, newspapers and television viewing. Studies in rural diffusion have identified four categories of adopters: innovators; early adopters; early majority adopters; and majority adopters (and an additional category: non-adopters). A general association has been established between age, formal education, socio-economic status, and the tendency to adopt early, late, or not at all. One variable which has had little attention is that of participation in educative activities in adulthood.

For the purpose of this study adopters were classified as follows: (1) innovators, (2) leading adopters, (3) majority adopters, and (4) late adopters. The study suggests that innovators are most likely to be persons who are curious and inquiring. They get their ideas directly from the experiment station and college. Even though innovators get information direct from the experiment station and college, they will also obtain information from local agricultural agencies.

Data were secured by personal interview with 100 farm operators in Riley County, Kansas. Information was obtained to compare the following: (1) age, (2) formal education, (3) tenure status, (4) size of farm, (5) level of living standard, (6) farm income, (7) adoption rate of recommended practices, (8) source of informal education.

The comparison of the average of the adopter groups showed 39 years of age for the innovators, 43 years of age for leading adopters and majority adopters, and 48 years of age for the late adopters. The average age for the

one-hundred farmers interviewed was 42 years. The youngest farmer interviewed was 24 years of age and the oldest was 78 years of age.

The Chi-square test showed significant differences between the ages of the classified groups.

The comparison of the years of schooling showed that the innovators had 13 years, leading adopters 12 years, majority adopters 11 years and the late adopters 10 years of schooling. The average number of years of schooling for the one-hundred farmers interviewed was 12 years.

The Chi-square test showed significant differences between the schooling of the classified groups.

The comparison of tenure showed that the innovators had 17 years of farming, leading adopters 21 years, majority adopters 22 years, and the late adopters averaging 26 years. The tenure for the average farmer interviewed was 21.8 years.

The comparison of the size of farm showed that the innovators farm averages 585 acres, leading adopters 637 acres, majority adopters 500 acres, and the late adopters 227 acres. The average innovator owned 297 acres and leased 288 acres, the leading adopter owned 329 acres and leased 258 acres, and the late adopter owned 132 acres and leased 95 acres.

The Chi-square test showed significant differences between ownership of land among the classified groups, but did not show significant differences in land leased.

The comparison of the average gross income of classified groups showed that the innovators had an average of $23,080.00, the leading adopters $20,125.00, the majority adopters $19,247.00, and the late adopters $9,317.00.

The Chi-square test showed significant differences in gross income between

the classified groups.

The comparison of the net income showed that the innovators showed $5,788.00, the leading adopters $4,612.00, the majority adopters $4,087.00, and the late adopters $1,583.00. In comparing the net income with the gross income, the average innovator's net income was 25 percent of the gross income, leading adopter 22 percent, majority 21 percent, and the late adopter 17 percent.

The Chi-square test showed significant differences in net income between the classified groups.

The comparison of sources of information showed that the innovators used the university as one of his main sources of information. The leading adopters get more of their information from the county agent and neighbors. The majority adopters seem to use the sources more on a level than the other three groups, while the late adopters secured the least amount of information.

The comparison of leisure time reported by the classified groups showed the innovators spent an average of 13.4 hours per week, leading adopters 15.8 hours, majority adopters 15.9 hours and the late adopters 17.9 hours on recreation.

The overall rating of the classified groups's informal educational activities was computed by adding the average rating for magazines, books, and newspapers and dividing the total by 25. The comparison of the average rating for informal educational activities show the innovators with 5.6, leading adopters with 4.3, majority adopters with 3.8, and the late adopters with a rating of 2.9.

The Chi-square test showed significant differences in the average rating of educational activities between the classified groups.

The socio-economic status was determined by considering the years of

education, net income, and land owned and leased. The innovators averaged 28.0 points, leading adopters 26.5 points, majority adopters 22.4 points, and the late adopters 15.3 points. Thus, the high scores on socio-economic status were associated with the innovators, the next highest with leading adopters, below average with majority adopters and the low with the late adopters.

The Chi-square showed significant differences between the socio-economic status of the adopter groups.

The overall rating (considered to be an index to educative activities) of the innovators was considerably higher than that of the other categories. Although the leading adopters overall index rating is slightly lower than the innovators, they seem to actually serve as leaders in the adoption of new practices to the extent that their adoption behavior is followed by other farmers.