

A STUDY OF FARM TENANCY IN KANSAS  
WITH SPECIAL REFERENCE TO THE  
CROP-SHARE-PLUS-CASH  
LEASE

by

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## INTRODUCTION

Tenancy is an important institution in Kansas agriculture. Approximately 37 percent of all farm operators in Kansas were tenants according to the Census of 1945. An additional 22.3 percent were part-owners. Nearly 55 percent of the farm land in Kansas in 1945 was operated under a landlord-tenant arrangement. An understanding, then, of such an institution as tenancy is necessary for one who is interested in proposing a program designed to benefit agriculture as a whole.

Personnel of the Extension Service frequently report that they find themselves facing a difficult obstacle when they attempt to carry a program to tenant farmers. This indicates that many of the conditions which surround tenancy at the present time make good husbandry difficult and sometimes impractical from the individual operator's viewpoint.

It is generally agreed that some tenancy is necessary and desirable if a satisfactory land tenure system is to be achieved. The amount of tenancy that would be desirable has never been agreed upon by people who have studied the subject, but it would seem that this is not of major importance so long as the land provides a satisfactory living to those who till it and is at the same time conserved.

Owner-operatorship of family-sized farms has been the goal advocated by many students of the problem. However, the increasingly large capital requirements necessary to operate the modern farm have made ownership impractical for many people in the farming profession. This has led many to the conclusion that tenancy itself needs to be improved. These students feel that the correction of some of the undesirable conditions that surround tenancy would aid agriculture to achieve some of its goals better than would the abolition of tenancy and the encouragement of a policy which would have as

its goal a higher percentage of owner-operatorship. It must be borne in mind that if anyone proposes less tenancy, he should have in mind some superior form of tenure as a replacement.

Understanding is a prerequisite to the advocacy of any proposal designed to correct or improve tenancy. It is the object of this thesis to aid in such understanding. An attempt was made to describe and analyze the crop-share-plus-cash lease as it actually works on Kansas farms. Customary provisions of the lease were studied and described. Description by itself was not thought to be adequate, however. An attempt was made to determine just what effect the established provisions of the lease would have on the action of the landlord and tenant as they performed their various functions.

When it was established that the lease commonly used in Kansas had certain undesirable characteristics, suggestions were made for improvement. However, the primary purpose of the thesis was not to propose changes but to describe, analyze and to indicate where and why changes were necessary.

The crop-share-plus-cash lease was used for this study for a number of reasons. It is the lease most frequently used in Kansas. As a result it was possible to collect considerable data relating to this type of lease. The crop-share lease is very similar to the crop-share-plus-cash lease in many of its provisions. Because of this the study of either would yield much that could be applied to the other and as a result much of the discussion might be said to have a dual purpose. The livestock-share lease has received rather intensive study in Kansas by other individuals. For this reason it was thought that attention directed toward another lease would be helpful.

The materials used to accomplish this purpose were of two general types. Data were collected to describe the crop-share-plus-cash lease. Much of the data were collected by the mail questionnaire method. Information collected

previously by other individuals was also used to indicate trends or changes in certain provisions of the leasing arrangements. The second approach used was deductive in nature. Economic theory was used as a tool to explain the influence of leasing arrangements on the behavior of lessor and lessee. The individual firm analysis under competitive conditions was applied to farm leasing systems.

The procedure was to use both empirical data and economic theory in conjunction. Empirical data were used to describe tenancy in general and to discuss customary leasing arrangements. Economic theory was used to explain observed phenomena and to indicate the effects of different alternatives.

#### REVIEW OF LITERATURE

In reviewing the literature appropriate to this thesis it was discovered that the subject could be divided logically into two parts. One part pertained to that literature which described the collection, analysis and interpretation of farm tenancy data. The other related to the theoretical treatment of farm leasing systems.

##### The Collection, Analysis, and Interpretation of Farm Tenancy Data

The majority of this section pertains to studies which have been conducted at the Kansas Agricultural Experiment Station. The reason for confining much of the review of literature to Kansas was that a number of studies of this type which had been done in various parts of the country were similar in content and procedure. For this reason only certain general and specific work prepared outside of Kansas will be reviewed.

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Tenancy Studies in Kansas. In 1919 W. E. Grimes prepared a bulletin which was the first Kansas Experiment Station publication on the subject of tenancy.<sup>1</sup> The data used in this study were obtained from 14 counties in Kansas in the years 1914, 1915, and 1916. Grimes noted that there were four types of leases in common use in Kansas. These leases were the cash-lease, the crop-share lease, the share-cash lease and the stock-share lease. The similarity of the share-cash and the crop-share leases was noted. He observed that cash leasing probably produces more objectionable conditions than any of the other methods in use. Although the stock-share lease was the least common of the four, the study showed that this lease produced the most desirable conditions. It was also noted that the stock-share lease had limited application.

The following recommendations for the improvement of tenancy in Kansas were given by Grimes:<sup>2</sup>

1. A wider adoption of the stock-share lease.
2. Elimination of absentee ownership of land.
3. Provision of better methods of maintaining soil fertility on farms rented for cash or for a share of the crops.
4. Improved credit facilities and the provision of better opportunities for acquiring ownership.

Theodore Macklin collected farm tenure data from farmers by means of a statewide mail survey.<sup>3</sup> The purpose of this study was to determine how farmers in Kansas attained and attempted to attain farm ownership. The results showed, among other things, that 67.6 percent of the farmers studied

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<sup>1</sup>W. E. Grimes, "Farm Leases in Kansas," (Kansas Agricultural Experiment Station Bulletin No. 221), (Manhattan, Kansas, 1919).

<sup>2</sup>Loc. cit.

<sup>3</sup>Theodore Macklin, Unpublished Data, Kansas State College Experiment Station (Manhattan, Kansas, 1919).



had previously been tenants.

Eric Englund in cooperation with the United States Department of Agriculture in 1923 made an intensive study by personal interview in Jewell and Jackson counties.<sup>1</sup> The purpose of this survey was similar to the one previously completed by Macklin.

Harold Larson in 1930, utilizing further the data made available by Macklin and Englund,<sup>2</sup> presented facts regarding land tenure with special emphasis on conditions in Kansas and considered the criticisms of the institution of tenancy. He noted that a crop which had a quick turnover, a small investment in working capital, and a ready market was the one which was emphasized by the tenant. The wheat belt in Kansas at that time had the highest rate of tenancy of any of the farming areas.

He observed that one means of improving the institution of tenancy was the adoption of satisfactory leases. He listed the following requirements of a desirable lease:<sup>3</sup>

1. One which insures the tenant the farm for a number of years.
2. One that will pay the tenant for improvements which he makes.
3. One which insures the tenant a fair profit.
4. One which will insure the owner that the tenant does not carry on an exploitative type of farming.

In 1930 W. E. Grimes prepared a Kansas Agricultural Experiment Station Circular entitled "The Stock Share Lease".<sup>4</sup> Grimes mentioned the limitations

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<sup>1</sup>Eric Englund, Unpublished Data, Kansas State College Experiment Station (Manhattan, Kansas, 1923).

<sup>2</sup>Harold Larson, "Certain Economic Aspects of Farm Tenure in Kansas". Unpublished Master's Thesis (Kansas State College, Manhattan, Kansas, 1930).

<sup>3</sup>Op. cit.

<sup>4</sup>W. E. Grimes, "The Stock-Share Lease". Kansas Agricultural Experiment Station Circular No. 155 (Manhattan, Kansas, 1930).

of the stock-share lease, but reported that Kansas conditions were such that its adoption should be more widespread. The use of this lease was thought by Grimes to be one method of correcting some of the evils of tenancy. Grimes supplied instructions for the drawing of the lease and indicated the necessary provisions.

In 1942 McCoy prepared a thesis concerning the contributions of the landlord and tenant under provisions of the stock-share lease.<sup>1</sup> He used data from the farm account books of the Kansas Farm Management Associations. The stock-share lease circular was revised in the same year by McCoy and Grimes. Sections on the factors affecting the contributions of the landlord and tenant, the equitability of the stock-share lease, the customary arrangements of the stock-share lease, and a test of fairness were added. The circular was again revised by McCoy in 1948 with a number of new additions.

During 1939 and 1940 considerable information was collected on farm tenancy in Kansas by the Experiment Station. Two manuscripts resulted from these data -- a thesis by Hilding Anderson<sup>2</sup> and a mimeographed report by Harold Howe.<sup>3</sup> Both writers were interested in presenting a factual picture of farm tenancy in Kansas. In connection with these above two studies, 200 personal interview schedules were obtained in four counties -- Anderson, Ford, McPherson and Smith. During that same year 5,000 questionnaires were mailed to farmers throughout the state and approximately 875 replies were received. In 1940 an additional 23,000 questionnaires were mailed to farmers throughout the state and approximately 3,000 replies were received. The mailing lists were secured

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<sup>1</sup>John H. McCoy, "Contributions of Landlord and Tenant under the Stock-share Lease". Unpublished master's thesis, Kansas State College, Manhattan, Kansas, 1942.

<sup>2</sup>Hilding Anderson, "The Farm Tenancy Situation in Kansas". Unpublished master's thesis, Kansas State College, Manhattan, Kansas, 1940.

<sup>3</sup>Harold Howe, "Facts on Farm-Tenancy in Kansas". Agricultural Economics Report No. 30, Kansas Agricultural Experiment Station, (Manhattan, Kansas, 1945).



from county agents, and the number of questionnaires mailed was based upon the number of tenants in the county according to the 1935 census. In addition to the material used from the questionnaires both manuscripts were supplemented by United States Census data for 1930 and 1935.

Anderson gave as his purpose an attempt to present a factual picture of the farm tenancy situation in Kansas as it then existed together with trends and developments of preceding periods. A definite relationship between the type of farming and rate of tenancy was noted. At that time 51 percent of the cash grain farms were operated by tenants. Fruit farms had the lowest rate of tenancy with 19.3 percent of this type of farm being operated by tenants. He observed that there were four principal types of leases in Kansas — cash, crop-share, share-cash, and stock-share. The share-cash lease was found to be most popular. It represented 49.4 percent of all leases. The cash lease and the stock-share lease were of minor importance relative to the share-cash and the crop-share leases. Thirty-five percent of Kansas tenants were found to live on the same farm not more than one year while 41 percent remained on the same farm for five years or more. Anderson said that 47 percent of the leasing contracts in the state were in writing. The written lease was relatively more important in eastern than in western Kansas.

Howe, using some of the same data as Anderson, supplemented it with additional material secured from landowners throughout the state. Questionnaires were mailed to 9,440 individual and corporate landlords. From the total of 3,326 landowners responding, 3,070 of them were individual owners and 256 were corporate owners. The objective of Howe's report was to present a general picture of the tenancy situation. The study consisted of a

discussion of the general characteristics of tenure in Kansas; the tenant, the landowner, both individual and corporate, and the lease. The extent to which the various types of leases were used in Kansas was discussed. Of special interest was the inclusion of suggested lease forms for the crop-share plus cash lease, the crop-share lease and the cash lease.

In 1948 Anderson, together with Coolidge make a case study of long tenure farm leases in West Central Kansas.<sup>1</sup> The factors reported as being important to a long tenure lease were size of farm and adequacy of income, clear understanding and agreement as to all important aspects of the lease, equitable division of returns under a leasing arrangement adjusted to each farm, honesty and trustworthiness of both parties to the contract, and the ability of both landowner and tenant to cooperate.

Tenancy Studies Outside Kansas. In considering tenancy studies prepared outside Kansas, the writer made no attempt to review all literature. It has been estimated that prior to 1941 approximately 160 studies had been undertaken to investigate tenancy in some form.<sup>2</sup> For this reason certain publications were selected as being representative or descriptive of work done elsewhere.

In 1932 Case and Ackerman prepared a bulletin entitled "Farm Leases for Illinois."<sup>3</sup> In this publication they defined the four most widely used leases

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<sup>1</sup>Norris J. Anderson and John H. Coolidge, "Factors in Stabilized Farm Tenancy", Department of Agricultural Economics Contribution No. 146 (Manhattan, Kansas, 1948).

<sup>2</sup>Joseph Ackerman, "Status and Appraisal of Research in Farm Tenancy", Journal of Farm Economics, XIII, No. 1, February, 1941.

<sup>3</sup>H. C. M. Case and Joseph Ackerman, "Farm Leases for Illinois", University of Illinois Agricultural Experiment Station Circular No. 503, (Urbana, Illinois, 1940).

in Illinois as: the cash lease, the crop-share-cash lease, the livestock-share lease and the manager-operator agreement. As a basis for analyzing these leases Case and Ackerman studied 70 farm leases from life insurance companies, farm manager, and farm owners. They secured information on the following points:

1. Reservations of landlords.
2. Guarantees and contributions of tenants.
3. Settlement of debt.
4. Operations and cultural practices required of the tenant.

Hanson and Myers discussed the status of tenancy in South Dakota and pointed out that tenancy had been steadily increasing since 1910 and that 75 percent of the farmers in South Dakota leased all or part of the land they farmed.<sup>1</sup> The location of various leases in South Dakota was considered and certain suggestions regarding possible changes in leasing arrangements were made. In addition, each type of lease was considered separately as to the following points: advantages, disadvantages, basis for making an equitable lease, and termination problems.

Publications similar to that mentioned above are available for a majority of the states in the Nation. Ackerman, in describing and evaluating tenancy studies, used the following tables in his classification of these studies:<sup>2</sup>

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<sup>1</sup>H. P. Hanson and Max Myers, "Leasing and Leases in South Dakota", South Dakota State College Extension Service Circular No. 363, (Brookings, South Dakota, 1939).

<sup>2</sup>Ackerman, op. cit. p. 277.

Table 1. Classification of tenancy studies by type and source of data prior to 1933.

Types	: Survey	: Census	: Questionnaire	: All Three	: Misc.	: Experimental
Description	18	6	2	-	-	-
Effects on tenure	6	4	1	1	2	-
Effects of tenure	10	3	-	2	2	1
	34	13	3	3	4	1

Table 2. Classification of tenancy studies by type and source of data 1933 to date.

Types	: Survey	: Census	: Questionnaire	: Census & other	: Miscellaneous
Description	4	7	2	18	9
Effects on tenure	3	-	-	10	3
Effects of tenure	6	2	1	16	2
Recommendations	1	-	1	7	10
	14	9	4	51	24

Prior to 1933 considerable emphasis was placed on description. Since that time the trend has been toward analysis and interpretation. However, a certain amount of description will always be necessary if the economy remains dynamic.

In 1948 Pine attempted to determine the net income to land.<sup>1</sup> Although situations in Kansas were used, the principle involved in this dissertation

<sup>1</sup>U. H. Pine, "Methods of Classifying Kansas Land According to Economic Productivity". Unpublished Ph. D. thesis (University of Minnesota, Minneapolis, Minnesota, 1948).

had general application. The budget method was employed to arrive at the net income to land. Long-time prices and standards were considered in preparing the budget. Before the net income to land was calculated, allowance was made for certain fixed expenses such as building expense and land taxes the landlord must meet. The significance of this work as applied to farm tenancy is that it was an attempt to arrive at the true productivity of the land. An important step has been made for arriving at an equitable lease if the productivity of land and buildings is known.

#### The Economic Theory of Farm Leasing Systems

Alfred Marshall stated that the common leasing arrangement of his day (1890-1920 in England) was between two partners -- a sleeping partner, the landlord; and a working partner, the tenant.<sup>1</sup> He observed that if the tenant paid a fixed annual payment, the Ricardian theory of rent did not apply.

Marshall made the point that although the share rent does not change, the actual rent may differ in other ways. This may be accomplished by varying the duties that are normally attendant to one or the other of the parties. If the tenant's contract was only for one year then he might be forced to apply more labor and capital to the land in order to keep the land for another year. Marshall added, however, that custom is a protective force against any sudden or violent change in contractual rent. Marshall made a distinction between the "metayer" system of the Old World and the share system of the new

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<sup>1</sup>Alfred Marshall, Principles of Economics, Book VI, Chapter 10, 8th Edition (London: Macmillan and Company, 1947).

world and contrasted both these plans with the English system. The strict metayer system was characterized by the share going to the landlord being just one-half, although it later was relaxed to include other shares. In the new world the landlord's share was not only one-half but also other shares as well. The following statement might be cited as evidence of his belief that the English system was superior:

"For, when the cultivator has to give to his landlord half of the returns to each dose of capital and labor that he applies to the land, it will not be to his interest to apply any doses the return to which is less than twice enough to reward him."<sup>1</sup>

The metayer system, however, according to Marshall, was advantageous when the holdings are small, when the tenant is poor, and when the landlord is not averse to taking much trouble about small things.

In closing the chapter Marshall pointed out that the English system had the advantage of protecting the tenant for any improvements he might have made. This provision is a part of English law.

In 1941 Schickele, approaching the problem from the standpoint of the individual firm as did Marshall, considered the effects of tenure on the efficiency of the farm.<sup>2</sup> The problem was analyzed from the standpoint of the owner-operator, the cash tenant, the crop share tenant, and the stock-share tenant. Briefly his analysis was as follows:

The owner operator's point of optimum intensity will exactly coincide with the point of optimum intensity for the entrepreneur. His certainty of occupancy enables him to equalize his returns from his durable and non-durable factors.

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<sup>1</sup>Ibid., p. 644.

<sup>2</sup>Rainer Schickele, "Effects of Tenure Systems on Agricultural Efficiency", *Journal of Farm Economics*, XXIII No. 1, February, 1941.



When land is operated under the crop-share system of tenancy, the point of optimum intensity and maximum efficiency is seldom reached. When the tenant receives only his share of the marginal product, he will produce at a smaller output than he would if he were the owner-operator. Since the tenant's length of stay on the farm is an unknown quantity, he has difficulty in getting equi-marginal returns on all his capital invested. This is true since he will be reluctant to invest in those enterprises such as fruit trees, dairy cattle, and beef cattle which are of semi-permanent nature.

Schickele suggested some adjustments that might be made to improve the tenancy situation. Compensation for unexhausted improvements would reduce the effect of dual control over the durable and non-durable factors of production. Security of tenure would facilitate the balancing of long-run and short-run production plans. He pointed out, however, that the tenant should not be unduly protected from competition. Long term leases are not essential to security of tenure. Compensation for unexhausted improvements and certain other rights of occupancy could establish a reasonable degree of tenure security as the English system indicates.

Earl O. Heady in 1947 made a contribution to the theory of farm leasing systems.<sup>1</sup> His method of approach was to first consider the perfect leasing system and then to study actual leasing systems and thereby see in what ways they were inadequate.

He pointed out that if production were carried to the point of optimum output, under the crop-share system as determined by the cost-price relationships of the market, the landlord must share in the cost of the variable

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<sup>1</sup>Earl O. Heady, "Economics of Farm Leasing Systems", Journal of Farm Economics, XXIX No. 3, August, 1947.

factors of production as he would in the total product of the farm. Heady observed that when the crop-share-plus-cash lease was used, emphasis would be placed upon grain crops if the cash paid for hay and pasture crops is higher than the productivity of these crops would warrant.

He also considered the stock-share lease and reported that the points of equi-marginal returns and optimum output were more nearly reached with this type of lease than with any other. Heady added, however, that all imperfections grew out of practices surrounding the lease rather than from imperfections inherent in the lease itself.

#### DESIGN OF SAMPLE

Most of the data used in this thesis were collected by the use of a mail survey in July and August, 1948.<sup>1</sup> The mailing lists of tenant farmers were compiled with the cooperation of the Production and Marketing Administration and the Kansas State College Extension Service. County agents were asked to cooperate with the local PMA offices and select every tenth full tenant and part-owner in the files of the PMA office. Ninety-six of the 105 counties responded with mailing lists.<sup>2</sup>

Questionnaires were mailed during the latter part of July and the first part of August. Two reminder cards were mailed, one within 10 days after the original questionnaire was mailed and the other within 15 days.

A total of 6,659 questionnaires was mailed to tenants, some of which were

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<sup>1</sup>A copy of the questionnaire used is included in the appendix.

<sup>2</sup>Counties not responding with mailing lists: Coffey, Doniphan, Ellsworth, Greeley, Lincoln, Marshall, Pottawatomie, Smith and Wabaunsee.

part-owners. Approximately 1,400 questionnaires were returned constituting a 21 percent response.<sup>1</sup> Of the returns, 1131 or 17 percent of the original 6,659 were usable. In Kansas, according to the 1945 census, there were 88,152 tenants including part-owners. The 1,131 usable questionnaires constituted slightly more than a one percent sample of the universe. Of the 1,131 mentioned, 546 were full tenants. Only data from full tenants were used in this thesis. The discussion was limited to full tenants because it was thought there might be differences in the behavior of tenants and part-owners as they operated under the various leases.

The method of collecting the data might have two criticisms: (1) because the mailing list was compiled by various individuals in the counties, control of the sample was lost; and (2) the use of the mail questionnaire usually introduces response bias. An attempt was made to indicate the amount of bias due to the mail survey and the direction in which it might lie.

In order to indicate the bias which might have occurred under such circumstances, the sample was compared with a feeder-cattle wheat survey made in the spring of 1948. This survey was conducted by the personal interview method and was drawn at the Iowa State Statistical Laboratory at Ames, Iowa for the Bureau of Agricultural Economics.<sup>2</sup> In drawing Sample I, the state was divided into a large number of segments containing approximately four farms each. A random sample of the segments was drawn and each farmer included

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<sup>1</sup>A list of counties with the number of mailed questionnaires and the responses from each is included in Table 13, Appendix. In interpreting the plates that follow it may be borne in mind that some one county may have a high concentration of dots due to a heavy response from that county. For the state as a whole, however, uneven response was the exception rather than the rule.

<sup>2</sup>It will be referred to throughout this section as Sample I. The tenancy study conducted by mail questionnaire will be referred to as Sample II.

was interviewed personally. Of the 791 farmers interviewed 243 were tenant farmers. These 243 farms were compared with Sample II on the basis of total acres.

Statistically, there was no significant difference between the arithmetic means of the two samples.<sup>1</sup> This is shown by the information which follows.

	Total acres per farm	
	Sample I	Sample II
Arithmetic mean	375	398
Standard deviation	409	391

An additional comparison was made between Sample I and Sample II. This comparison is illustrated in Table 3.

Table 3. A comparison of Sample I and Sample II by size groups.

Total acres :	Number of farms :		Per cent of farms :		Expected no. of farms
per farm :	Sample I :	Sample II :	Sample I :	Sample II :	in Sample II <u>/1</u>
0-179	84	129	34.6	23.6	189
180-359	81	215	33.3	39.4	182
360-539	37	97	15.3	17.8	84
540-719	19	46	7.8	8.4	42
720-899	10	21	4.1	3.9	22
900-1079	4	10	1.6	1.8	9
more than 1000	8	28	3.3	5.1	18
TOTAL	243	546	100.0	100.0	546

/1 On the assumption Sample I gives the true distribution

The difference in the two groups of data occur principally in the first two size groups. This was partially expected since the larger farmers tend to respond better relatively than do smaller farmers. If Sample II were to follow Sample I the number of occurrences for each size group in column 3 should have been the same as those in column 6. Sample II would have been more nearly correct had the number of farms in group 1 been larger and the

<sup>1</sup>George W. Snedecor, Statistical Methods, Chapter 4, 3rd Edition, (Iowa State College Press, Ames, Iowa, 1940).

number in group 2 been smaller. Any significant bias that might occur would probably lie in the first two size groups.

The data for Sample II could have been adjusted for bias according to the amount that it differed from Sample I. It was decided, however, that this would not be done because of the small number of farms in Sample I.

In the discussion that follows, the data from Sample II were used as they were taken from the schedules. When considering any of these data, one should bear in mind that the data were probably biased upward. It was thought, however, that it was the best information available on the subject to be discussed.

#### GENERAL DESCRIPTION OF TENANCY IN KANSAS

The purpose of this section was to give some of the general characteristics of tenancy in Kansas and to establish a background for the discussion of the crop-share plus cash lease which is to follow later.

##### Types of Leases

Much of the data in this thesis were presented on the basis of type-of-farming areas. Division of the state into type-of-farming areas has received considerable emphasis from certain individuals.<sup>1</sup> It was thought that this division of the state would make possible the comparison of more homogeneous farms. Fig. 1 shows the various type-of-farming areas in the state.

The four principal types of leases have been compared in this section. The leases were classified according to the following definitions:

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<sup>1</sup>J. A. Hodges, "The Principle of Comparative Advantage Applied to Farm Organization as Found in Type-of-Farming Areas in Kansas". Unpublished Ph. D. thesis, p. 141, (Harvard University, Cambridge, Massachusetts, 1938).

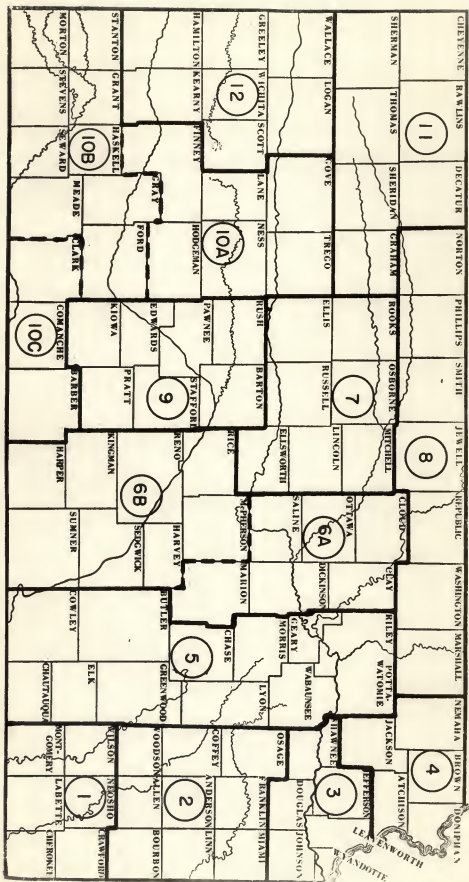


Fig. 1. Type of farming areas in Kansas



1. Crop-share-plus-cash---Any arrangement in which the landlord receives as contractual rent a share of any crop plus a cash payment for either buildings, pasture or cropland or for any combination of these contributions.
2. Crop-share---Any lease in which the landlord receives only a share of the crop as contractual rent for his land, buildings and pasture.
3. All cash---Any lease in which the landlord receives as contractual rent a fixed annual payment for his contribution of land, buildings and pasture.
4. Stock-share lease---Any lease in which the landlord owns part of the livestock and all or part of the contractual rent is represented by receipts from that livestock.

Table 4 indicates that the crop-share-plus-cash lease was the most common type of lease both for the State as a whole and also for each of the types-of-farming areas. Fig. 2 shows that this type of lease was concentrated in southcentral and northeast Kansas. The highest percentage of this type of lease occurred in southeast Kansas in Area 1. The percentage also was high in Areas 6b and 8. In areas 10, 11 and 12, however, the percentage of crop-share-plus-cash leases decreased sharply. Wheat is the principal crop in the western part of Kansas, and the crop-share lease is simple and customary. Because wheat is the leading crop, there is a minimum of buildings and pasture for which cash might be paid.

Considerable variation occurred in the usage of the crop-share lease. The percentage of the crop-share lease varied from 8.9 percent in Area 2 to 85.7 percent in Area 10b. Plate I, Fig. 3 shows that it was in use throughout the State. This lease is adapted to cash-grain farming where little participation in farming affairs is demanded of the landlord. Twenty-nine percent of the leases in the sample were crop-share leases.

Of the 549 tenants who reported, only 22 were operating under the livestock-share lease. This was probably an insufficient sample from which to draw many conclusions. An additional 34 leases were father-son arrangements

Table 4. The percentage distribution of farm leases according to type-of-lease, for Kansas type-of-farming areas, 1948. 1

Type of lease	Type-of-farming area															
	1	2	3	4	5	6a	6b	7	8	9	10a	10b	10c	11	12	Total
Crop-share-plus-cash.....	69.6	63.0	40.6	60.9	47.3	60.6	65.0	30.5	65.0	57.8	19.4	10.7	33.3	52.6	28.6	52.8
Crop-share.....	19.6	2.7	15.6	15.2	27.0	18.2	30.0	53.8	22.5	25.6	25.5	85.7	55.6	36.8	71.4	59.0
Livestock-share.....	—	4.3	9.6	2.7	8.1	6.1	2.5	—	—	2.2	6.4	—	—	—	—	4.0
All cash.....	4.3	2.7	12.8	2.2	2.1	9.0	1.2	—	7.5	2.2	22.3	—	11.1	5.3	—	7.1
Father-son.....	4.3	13.1	15.6	13.0	9.5	6.1	1.3	7.7	5.0	2.2	6.4	3.6	—	5.3	—	6.7
Miscellaneous.....	2.2	2.2	—	—	—	—	—	—	—	—	—	—	—	—	—	4

1 Source: Sample mail questionnaire.

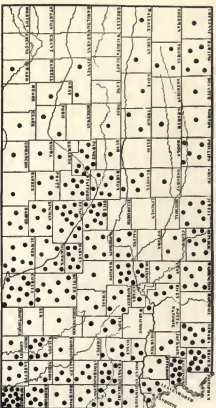


Fig. 2.

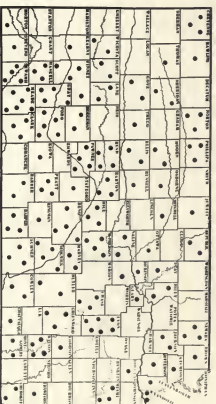


Fig. 3.

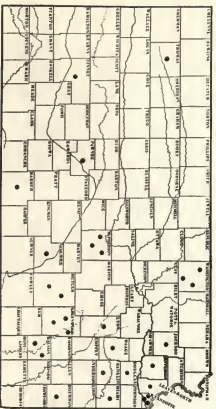


Fig. 4.

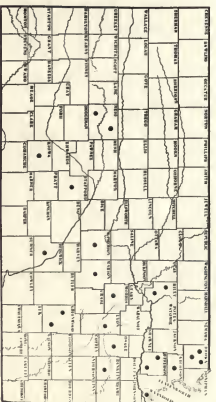


Fig. 5.

and many of these might have been classified as livestock-share leases. Type-of-farming areas 3 and 4 had the largest percentage of livestock-share leases. It was expected that the livestock-share lease would decline in importance from the Flint Hills Area westward.

The all-cash lease represented approximately six per cent of the leases reported. There was a tendency for the cash leases to decline in number from east to west. As was true of the livestock-share lease this was not thought to be a sufficient number from which to draw any specific conclusions regarding the location of the leases.

Certain tendencies were noted, however, regarding the distribution of leases. The crop-share lease was used throughout the state but the percentage increased from east to west. The livestock-share lease and the cash lease were not represented by enough cases to apply the results to any particular part of the state. The use of the crop-share-plus-cash lease occurred the most frequently of any of the leases. This lease was relatively more important in the eastern and central portions of the state although it was used throughout the state.

#### Length of Occupancy

A comparison of the various types of leases on the basis of length of occupancy revealed no significant differences. Again the difficulty of having an insufficient sample of all-cash and livestock-share leases to make precise comparisons and to draw definite conclusions was encountered.

The all-cash lease had the shortest length of occupancy of any of the leases. (Table 5) When the leases were compared for any individual year, there was considerable variation. However, a comparison of the leases on the

Table 5. Cumulative percentage frequency distribution according to the length-of-occupancy by type of lease for Kansas, 1948. 1

Years of occupancy	Crop-share-plus-cash	Crop-share	All cash	Livestock-share	Total
1	8.3	3.8	13.3	4.6	7.0
2	18.6	22.8	30.0	22.8	20.2
3	34.5	37.2	50.0	41.0	36.5
4	44.8	44.1	60.0	45.5	45.4
5	53.8	52.3	66.7	54.6	54.0
6	59.0	57.3	66.7	59.2	58.8
7-9	70.1	66.7	76.7	68.3	69.2
10-12	79.7	76.1	90.0	91.0	79.6
13-18	89.3	84.3	93.3	95.5	88.2
19-24	95.9	93.7	100.0	100.0	95.6
more than 24	100.0	100.0	100.0	100.0	100.0

1 Source: Sample mail questionnaire.

Table 6. Frequency distribution according to the length of occupancy by type-of-farming areas for the crop-share-plus-cash lease in Kansas, 1948. /1

Length of Occupancy in years	Type of farming areas												Total	
	1	2	3	4	5	6a	6b	7	8	9	10	11		12
1-3	18	15	3	10	11	8	12		6	9	2	5	1	100
4-6	6	7	4	14	11	2	11	1	8	2	4		1	71
7-9	4	1	3	1	4	4	7		3	4	1			32
10-12	2	1	0	0	4	1	10	1	2	4	2	1		28
13-15	0	5	1	1	1	0	4	1	1	3	2	2		19
16-18	1		0	0	1	1	0	2	2	1	1	1		9
19-21	1		2	1		0	2		3	1	1			11
22-24					1	2	1		1	2		1		8
25-27					0	0	2							2
28-30					1	1	0			1	1			4
31-33					1	1								4
34-36							1							1
37-39								1						1

/1 Source: Sample mail questionnaire.



length of occupancy for five years or less showed a more uniform result. The crop-share-plus-cash and the crop-share leases had similar distributions throughout their range. (Table 5)

The crop-share-plus-cash lease was considered separately because the following section was devoted exclusively to it. Table 6 shows the length of occupancy by type-of-farming areas. When presented in this way, the numbers for many of the types-of-farming areas were so small that it is difficult to draw conclusions from the results. In nearly all type-of-farming areas the greatest concentration was in the first two class intervals. This would indicate that the lease in most instances was made on a year-to-year basis and was not continued for a considerable number of years. There did not seem to be any marked indication that the length of occupancy varied according to the geographical location.

It was difficult to obtain an accurate measure of central tendency with a distribution of this type. It was thought that more than one such measurement should be presented to give a more complete picture. The following data were presented to show a comparison of the arithmetic mean and the medians of the length of occupancy for the four principal types of leases.

	Arithmetic Mean in years	Median in years
Crop-share-plus-cash	8.0	5.8
Crop-share	12.6	6.1
All cash	6.0	4.0
Livestock-share	6.6	5.5
All leases	8.0	5.8

The information above indicates that the greatest variation in the results occurred when the means of the various distributions were compared. The crop-

share lease had the highest median and an arithmetic mean which was considerably greater than any of the others. The cash lease ranked lowest in this measure of central tendency. This might indicate less security of tenure for the cash lease.

#### Extent of Written Leases

One measure of security of tenure is the presence of a written lease. The four types of leases were compared on this basis, and the results are given in Table 7.

The all-cash lease was characterized by having the greatest percentage of written leases. Although the cash lease is simple in nature, the fact that a cash payment is involved may induce certain individuals to ask for a written lease. The livestock-share lease ranked next in the percentage of written leases. The complexity of the livestock-share lease makes a written lease helpful and in some cases mandatory.

The small number of observations for the all-cash and the livestock-share leases made interpretation difficult. Sample bias might have affected this item since the operators of larger farms tend to respond to mail questionnaires more frequently than do the operators of small farms.

There was a substantially higher percentage of written leases for the crop-share-plus-cash lease than there was for the crop-share. The cash payment might make the use of a written lease desirable. Because of the simplicity of the crop-share lease, there may be a temptation to use an oral agreement. The crop-share lease is well adapted to areas where one crop is emphasized and the practices are standardized. As agriculture becomes more complex, however, the need for a formal written lease to which each party may refer becomes more necessary.

Table 7. The occurrence of written leases by type of lease for Kansas, 1948. <sup>1</sup>

Type of lease	Total no. of leases	Number written	Percent written
Crop-share-plus-cash..	290	109	37.6
Crop-share.....	159	34	21.4
All-cash.....	30	16	53.3
Livestock-share.....	22	10	45.4
TOTAL.....	501	169	33.7

<sup>1</sup> Source: Sample mail questionnaire.

#### THE CROP-SHARE-PLUS-CASH LEASE

##### Relation of Economic Rent to Share Rent

Economic rent is a payment attributable to land for its function in production. The economist defines land as being the natural environment, and it follows that rent is a payment attributable to the owners of property rights in the natural environment because of its contribution to production.

Economic rent would not arise unless land was scarce: If all the components of our natural environment were so plentiful as to be free, then no one part could command a return because another identical portion of nature could be substituted for the original portion.

Rent arises because of this scarcity of our land resources. However, since our land resources or our natural environment is a gift of nature, it is frequently said that economic rent is an unearned return. The argument is one that is difficult to refute when economic rent is considered from the standpoint of society as a whole. However, the economic rent that goes to the individual landowner may or may not be an unearned income. If the landowner paid the future economic rent and capitalized the amount correctly when he purchased the land, then his income is merely a return on his investment. Of course, if cost-price relationships change in such a way as to

increase the value of the land after the present landowner has purchased it, then he would be the receiver of economic rent.

Contractual rent may be defined as the return that is actually paid to the landowner. It may or may not contain economic rent. The rent actually paid to the landowner might merely be a portion of the original investment returned to him. This would be the case if an exploitative type of farming were followed and the value of the land were reduced by the amount of the return. Contractual rent will equal economic rent under competitive conditions. In the absence of such conditions it may be less or it may exceed economic rent. Contractual rent, then, may include return to capital, land, and a portion of the invested capital.

Throughout this discussion share rent represented part of the contractual rent to the landowner. Since most of the land that was discussed was improved land, the contractual rent also included a return to the landowner for his investment in buildings, fences, fertilizers, terraces, and other improvements. In many cases the value of these improvements may have exceeded the value of the land.

#### Share Renting

The Theory of Share-Renting. The problem of farm leasing systems was approached from the standpoint of the individual firm under competitive conditions. Other individuals have used this approach and have contributed much of the material presented in this section.<sup>1</sup> The contribution of the present author was largely that of refinement and extension of techniques developed by other individuals.

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<sup>1</sup> Review of Literature -- Section on Theory of Farm Leasing Systems. Marshall, Schickele and Heady.

The application of the theory of leasing to the crop-share-plus-cash lease made certain assumptions necessary. A theoretical model of the lease was assumed and was used as a basis for the analysis. It was recognized that the assumed lease may not be exactly represented in the real world. Because of this, results must be applied to the real world with caution. After an analysis has been completed, the original assumptions may be relaxed and the effects of this relaxation taken into account. This approach made possible an analysis which otherwise would not have been possible.

The crop-share-plus-cash lease that was used as a theoretical model had the following characteristics:

1. A share of the crop is given by the tenant to the landowner as rent for the land used in the production of the crop.
2. A cash payment is made by the tenant to the landowner for other land and buildings.
3. The lease is for one year's duration and all production plans must be made upon that basis.
4. The landowner furnishes all land and buildings together with all major repairs or expenses connected with either.
5. All movable equipment, labor and livestock and the expenses attached to each are furnished by the tenant. In addition, all expenses connected with the seeding, tilling and harvesting of the crop are borne by the tenant.
6. Both the landlord and the tenant are motivated purely by economic considerations.

An additional assumption of competitive conditions was made.

In actual use the lease described above has certain important effects upon the intensity of operation. This change in the intensity of operation results

from the fact that the control of the various resources is divided.

The tenant is faced with a situation in which the land and buildings are given. To these fixed factors he will apply units of variable factors of production. He receives only a portion of the resulting product, and as a consequence does not carry the application of the variable factors to the point that he would if he were to receive the entire product.

This phenomenon is illustrated in Fig. 6. An entrepreneur who is in full control of all factors of production would receive the full product and have an output of  $OP$  (Fig. 6). At this point marginal cost and marginal revenue would be equated. However, the tenant, operating under the lease just described, must give a share of the product as rent (in this case, one-third). This will affect the number of units of variable factors applied and hence the level of output.  $MR'$  represents the tenant's marginal revenue curve.  $OD$  is two-thirds  $OA$  and represents the tenant's portion of each unit produced.<sup>1</sup> It was previously assumed that the tenant furnished all variable costs necessary to the production of the crop. If this is true, then the marginal cost curve is completely under the influence of the tenant since marginal cost is derived from variable cost. The tenant will equate marginal cost and marginal revenue at point  $H$  and an output of  $ON$  will result. As a consequence a farm operated under these conditions will be operated less intensively.

When the farm is operated at an output of  $ON$ , the profitability of the farm is affected. If the marginal revenue and marginal cost of the firm are equated at an output of  $OP$ , then any other output must be less profitable.

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<sup>1</sup>The result is the same whether the tenant receives two-thirds of the total product and sells it at the current price or if he gets two-thirds of the revenue of each unit produced. Both methods of division are practiced in actuality.



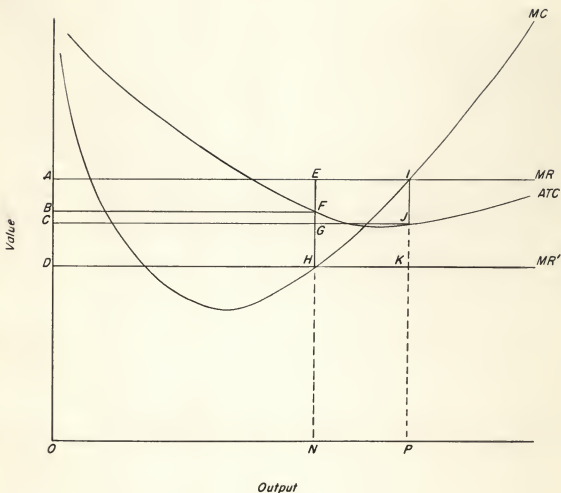


Fig. 6. The output and profit of the crop-share tenant as contrasted to the output and profit of the owner-operator under certain assumed conditions. (MR' = tenant's marginal revenue, ATC = firm's average total cost, MR = firm's marginal revenue, MC = firm's marginal cost.)

The area of the rectangle ACJI is larger than AEMF. This will always be the case when rectangles are determined by marginal and average total cost curves of this relationship. When this situation occurs, some method of producing an output of O P and dividing the additional profit should be devised.

The Sharing of Certain Variable Costs. A number of methods may be used to bring forth the more profitable level of output. The problem would not arise under a system of owner-operatorship, and neither would it arise if the land were leased for cash. A cash payment would be in the nature of a fixed cost and output would not be a function of this rent payment, therefore, the tenant's optimum level of intensity would coincide with the optimum for the firm.

The difficulty, however, is not inherent in the crop-share-plus-cash or the crop-share lease. A rational manner of sharing certain variable costs would do much to overcome the obstacle. This was shown by the following assumed data:

Units of fertilizer	Total product	Marginal product
1 . . . . .	60 . . . . .	
2 . . . . .	80 . . . . .	20
3 . . . . .	98 . . . . .	18
4 . . . . .	113 . . . . .	15
5 . . . . .	127 . . . . .	14
6 . . . . .	140 . . . . .	13
7 . . . . .	152 . . . . .	12
8 . . . . .	163 . . . . .	11
9 . . . . .	173 . . . . .	10
10 . . . . .	181 . . . . .	8
	Cost of fertilizer:	\$10.00 per unit.
	Price of product:	\$ 1.00 per unit.

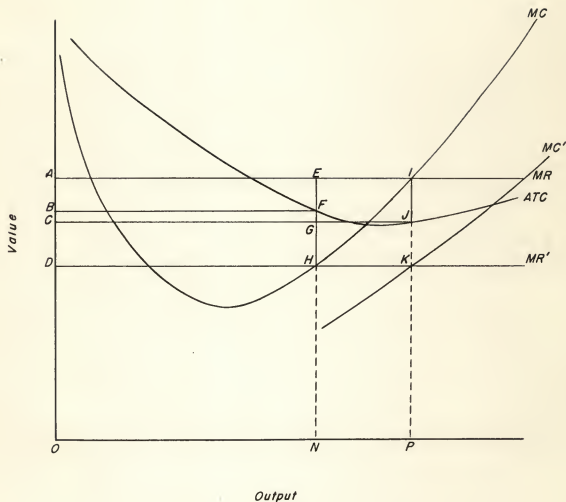


Fig. 7. Output and profit of the crop-share tenant when he pays all variable costs contrasted with the output and profit when the owner shares in certain variable costs. ( $MR'$  = tenant's marginal revenue,  $ATC$  = firm's average total cost,  $MR$  = firm's marginal revenue,  $MC'$  = tenant's marginal cost,  $MC$  = firm's marginal cost.)

An entrepreneur faced with this situation would have equated marginal cost and marginal revenue by applying nine units of fertilizer. If, however, a tenant (or landlord) had to give half the product to someone else, he would only apply two units because it is here that marginal cost and his marginal revenue are equal.

The principle involved is the same as that referred to previously. The landlord need not share in all the variable costs to get the optimum output. (Fig. 7). If by agreement or custom the tenant will apply inputs sufficient to produce output  $O N$ , then the landlord by sharing in the remaining variable costs will induce the tenant to produce output  $O P$ . In Fig. 7 it may be seen that when units of a variable factor are applied which would produce an output  $O N$  and the landlord began to share in the marginal cost in the same proportion in which he shared in the product, then the tenant's marginal cost curve changed from  $M C$  to  $M C'$ .  $M C'$  will intersect  $M R'$  at the same output that  $M C$  intersects  $M R$  and this is the optimum output for the firm.

When the tenant has applied a sufficient number of variable factors to produce an output of  $O N$ , these variable costs become fixed to him within the one-year time span here assumed. Therefore, if some method is devised whereby he may produce additional units the revenue from which is greater than the additional cost it will be a profitable method for him to use. He will produce until his marginal cost equals his marginal revenue. In the assumed situation it will coincide with the optimum for the firm.  $M C'$  is so constructed that at any point it is two-thirds the distance from the horizontal axis to  $M C$ . Since  $O D$  is two-thirds  $O A$ ,  $M C'$  must intersect  $M R'$  at  $K$ .

In those areas where intensive culture is not practiced or where practices are fairly well standardized this tendency of the tenant to curtail production under the crop-share lease is probably not pronounced. It can be observed

Table 8. Portion of cost borne by tenant for the application of fertilizer under provision of the crop-share-plus-cash lease by Kansas type-of-farming areas, 1948.  $\Delta$

Type-of-farming-areas :	Number of tenants contributing various portions (percent)				: No. tenants contributing same as crop-share		
	0	33	40	50		66	100
1	-	-	-	21	-	1	9
2	3	-	-	8	-	2	13
3	2	-	1	5	1	1	7
4	4	1	-	11	2	3	11
5	1	-	-	4	1	10	15
6a	1	1	-	3	-	5	6
6b	4	-	-	7	-	6	9
7	0	-	-	-	-	3	-
8	1	-	-	2	-	5	1
9	-	-	-	-	-	3	-
10a	-	-	-	-	-	1	-
10b	-	-	-	-	-	1	-
10c	-	-	-	-	-	1	-
11	-	-	-	-	-	-	-
12	-	-	-	-	-	3	-
Total	16	2	1	61	4	41	53
Percent of total	9	1	1	34	2	23	30

$\Delta$  Source: Sample mail questionnaire.

that in the real world those crops which are cultivated intensively are not grown to any extent under the crop-share lease where the tenant furnishes all the variable costs. Examples are cotton, tobacco and sugar beets.<sup>1</sup>

Data were collected on the sharing of the cost of fertilizer in Kansas for those tenants operating under the crop-share-plus-cash lease. These data are presented in Table 8. Forty per cent of the leases were so constructed that the landowner and tenant shared in the cost of the fertilizer in the same way they shared in the product. It has previously been illustrated that any arrangement other than this will result in a level of intensity that is not the most profitable for the firm as a whole. Thirty-nine per cent of the leases were so arranged that either the landowner or the tenant bore all of the cost of the fertilizer.

Share of Crop Given in Kansas under Provisions of the Crop-Share-Plus-Cash-Lease. The data showing the share of crop given as rent were collected from farms where the landlord did not pay any of the expense of the seed. It was thought that the results would be more comparable if this were done.

In type-of-farming Areas 1, 2 and 3 one-third was the predominant share of wheat given as rent (Table 9, Plate II). In area 4 the common rent was two-fifths of the crop. One-third was the predominant share in the remainder of the state, however, with the exception of Area 12 where the one-fourth share was equally important. The share of wheat given as rent has increased since 1940.<sup>2</sup> Raising wheat has been more profitable since 1940 and the competition of tenants for land has become more intense. As a consequence the share of wheat given as rent has risen.

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<sup>1</sup>U. S. Census, op. cit.

<sup>2</sup>Hilding Anderson, op. cit., pp. 27-30.



Table 9. Share of crop given as rent by type-of-farming area for various crops in Kansas, 1943.  $\Delta$   
(Number reporting for each share)

Crop	Share	Type-of-farming area															
		1	2	3	4	5	6a	6b	7	8	9	10a	10b	10c	11	12	
Wheat	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	33	30	25	3	1	20	14	40	5	18	23	5	2	3	8	1	1
	40	0	0	9	4	3	5	0	3	0	0	0	0	0	0	0	0
Corn	50	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	33	30	7	0	0	15	10	22	0	6	8	2	1	1	5	4	4
	40	0	21	5	1	9	6	3	0	14	0	0	0	0	0	0	0
Grain Sorghum	50	0	0	2	7	3	0	0	0	0	0	0	0	0	0	0	0
	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	33	23	14	2	0	19	11	23	3	10	17	4	2	4	1	1	1
Sorghum	40	0	1	1	0	5	1	5	0	1	0	0	0	0	0	0	0
	50	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0

$\Delta$  Source: Sample mail questionnaire.

Table 10. Per cent reporting each share of crop given as rent for various crops in Kansas, 1943.  $\Delta$

Crop	Share	Type-of-farming area														
		1	2	3	4	5	6a	6b	7	8	9	10a	10b	10c	11	12
Wheat	25	0	0	0	0	0	0	0	0	0	0	0	0	0	11	50
	33	100	100	100	9	80	82	89	100	86	100	100	100	100	89	50
	40	0	0	0	82	16	18	11	0	14	0	0	0	0	0	0
	50	0	0	0	9	4	0	0	0	0	0	0	0	0	0	0
Corn	25	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0
	33	100	25	0	0	56	62	88	0	30	100	100	100	-	100	100
	40	0	75	71	12	33	38	12	0	70	0	0	0	-	0	0
	50	0	0	29	88	11	0	0	0	0	0	0	0	-	0	0
Grain sorghum	25	0	0	0	0	0	0	0	-	0	0	0	0	0	0	50
	33	100	93	50	0	76	85	82	-	30	100	100	100	100	100	50
	40	40	0	7	25	0	20	8	18	70	0	0	0	0	0	0
	50	0	0	25	100	4	7	0	-	0	0	0	0	0	0	0

$\Delta$  Source: Sample mail questionnaire.

The common share of corn given as rent in Area 1 was one-third. (Plate III) In area 2 it was two-fifths with one-third being given in some cases (Table 10, Plate III). Area 3 was characterized by two-fifths of the corn crop being given as rent while in Area 4 one-half was the customary share. One-third was the common share for the remainder of the state with the exception of Area 8 where two-fifths was customary.

Grain sorghum is another important crop grown throughout the state. One-third was reported as being the common share rent throughout the state with the exception of two areas (Plate IV). In Area 4 one-half was the modal share while in Area 12 one-third and one-fourth were of equal importance.

It is to be expected that the share rent would decrease from east to west across Kansas. Yields tend to decrease in this same direction. Tenants are willing to give a higher share of the crop on land that will yield more with the same amount of labor and capital expended on it. Landowners are aware of this differential and are in a position to demand a higher contractual rent. The purchase price they had to pay for the land may have reflected this difference in productivity.

The results which are summarized above and presented in Table 10 and Plates II, III and IV may have had limited validity due to the smallness of the sample. These data should be interpreted as being indicative of the share rent given rather than as an absolute measurement.

#### Cash Payments

Cash payments made under provisions of the lease considered are usually for the use of buildings, for pasture or for both. This may be a desirable practice to the extent that it allows the landlord a return on the investment made on the improvements. Under the simple crop-share lease, the landowner's

EXPLANATION OF PLATE II.

Number of farmers reporting share of wheat given as rent in Kansas, 1948,  
as indicated by sample mail questionnaire.

Fig. 8 - One-third

Fig. 9 - Two-fifths

(In addition, there were two farmers reporting one-fourth share given, and  
two farmers reporting one-half share. Each dot represents one farmer  
reporting a share.)

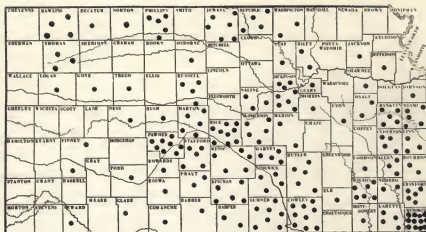


Fig. 8.

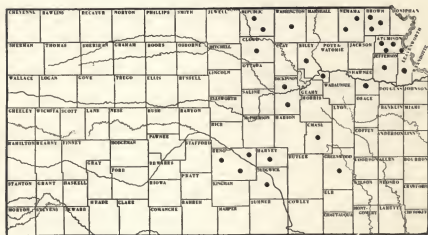


Fig. 9.

EXPLANATION OF PLATE III.

Number of farmers reporting various shares of corn given as rent in Kansas,  
1948, as indicated by sample mail questionnaire.

Fig. 10 - One-third

Fig. 11 - Two-fifths

Fig. 12 - One-half

(Each dot represents one farmer reporting that share)



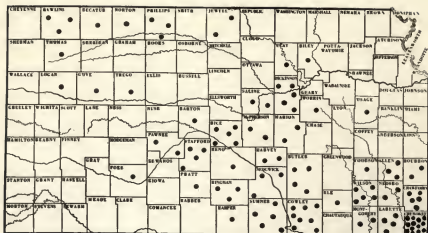


Fig. 10.

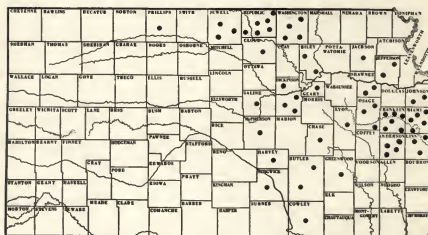


Fig. 11.

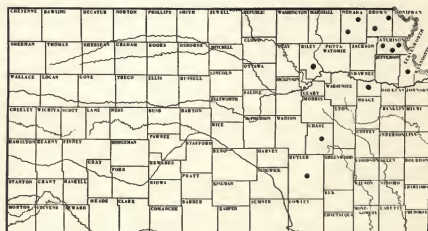


Fig. 12.

EXPLANATION OF PLATE IV.

Number of farmers reporting various shares of grain sorghum given as rent in Kansas as indicated by sample mail questionnaire.

Fig. 13 - One-third

Fig. 14 - Two-fifths

Fig. 15 - One-half

(In addition, there were two farmers reporting one-fourth share given. Each dot represents one farmer reporting that share.)

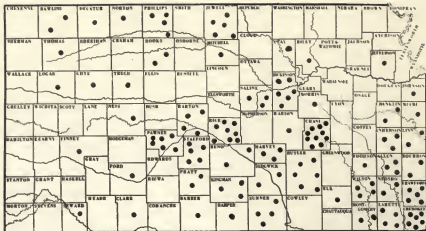


Fig. 13.

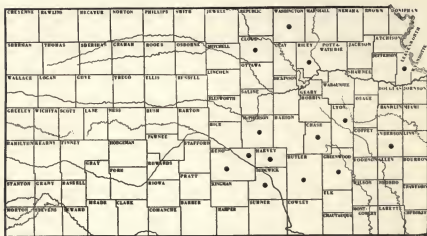


Fig. 14.

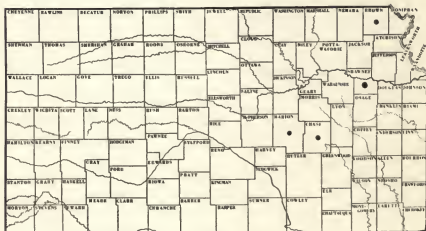


Fig. 15.

return is in terms of the crop products alone, and any investment made in building improvements will not increase his share of the product except that it may attract a better tenant.

If, however, the cash payment exceeds the true productivity of the buildings or the pasture, the tenant may then emphasize crops at the expense of livestock. He may want to plow up pasture and put it into crops on which the rent is not so high. If the rent charged for buildings and pasture is too low, a different situation may result. The landowner will not be willing to make investments in improvements for which he is not being compensated adequately.

The rate of pasture rent decreased from east to west, with the exception of southeast Kansas. (Table 11) The highest pasture rent was reported for Area 3 and the lowest was in Areas 10, 11 and 12 which were grouped together because of the smallness of the sample in those areas. Area 5, which represents the Bluestem area, reported an average rate of \$2.07 per acre with a range of \$ .73 to 5.00. The range was presented for each type of farming area since considerable variation was shown in some of the results.

The cash payment for buildings alone ranged from a low in Area 9 of \$20.00 per farm to a high in Area 1 of \$141.11. The small number of observations in many of the areas may give the results limited validity.

Many of the farmers reporting did not indicate the amount of the cash payment due to buildings and pasture individually but reported the sum as one payment. In practice it may be paid in a lump sum.

This payment ranged from a high in Area 9 of \$235.00 to a low in Area 3 of \$76.25 per farm. Areas 4, 7 and 8 had no farms which were reported as being in this category.

Custom may play a very important part in the determination of the cash payment to be made under provisions of the crop-share-plus-cash lease. A farm that has always brought the landlord a certain cash rent in addition to his share of the crop may be expected to continue to rent for that amount. In most cases it is doubtful if any attempt is made to pay for the buildings on the basis of their contribution to the productivity of the farm. Under competitive conditions, the price of the buildings would equal their productivity.

A comparison of Tables 10 and 11 showed that the cash rent paid for buildings and pasture has increased since 1940. This indicates the high price period for the intervening years had increased the competition among tenants and had forced cash payments upward. Competition may, in the short run, force the rent above the productivity of the buildings and pasture.

It was impossible from the data available to ascertain if the increased payments for buildings and pasture were made on the basis of increased productivity of those items or whether it was a privilege rent due to the increased profitability of grain farming. If custom was sufficiently rigid to prevent the share of crop given as rent from reflecting the current productivity of the land, then the cash payment might have been the adjusting device. Share rents did increase from 1940 to 1948 but not to any great extent. Both custom and competition probably have an effect on the amount of cash actually paid.

#### The Relation of Length of Occupancy to the Principle of Equi-Marginal Returns

According to the principle of equi-marginal returns an entrepreneur will expand resources upon his various enterprises to the point where the marginal returns from each are just equal. This principle will determine the number and

Table 11. Cash payment made by the tenant to the landlord under share-cash leasing by farming areas in Kansas, 1940. (Information was obtained from replies by tenants to questionnaires prepared by the Bureau of Agricultural Economics, U.S.D.A., and the Kansas Agricultural Experiment Station)  $\Delta_1$

Farming areas	Landlord		Pasture lease		Pasture & buildings		Buildings only	
	No. of acres	No. of Payment per acre	No. of acres	No. of Payment per acre	No. of acres	No. of Payment per acre	No. of acres	No. of Payment per acre
I	368	2.42	1919	1.01	4372	1.61	15	33.06
II	471	2.76	8803	1.00	6064	1.46	37	36.62
III	186	3.17	855	1.02	2099	2.28	9	64.00
IV	598	2.91	1610	1.01	3129	2.51	12	55.83
V	487	2.04	13282	0.85	3523	1.29	22	45.00
VIa	600	2.77	4053	1.00	3012	1.63	22	54.91
VIb	1333	2.74	4548	1.11	1834	2.82	20	52.35
VII	821	1.98	10960	0.69	3254	1.32	5	62.60
VIII	1141	1.71	9739	0.73	4809	1.47	27	34.20
IX	714	2.16	4846	0.84	821	1.92	20	77.75
Xa	1490	0.83	5321	0.38	821	0.62	7	71.43
Xb	252	0.60	363	0.39	116	1.38	0	0.00
Xc	292	1.39	2197	0.50	611	0.77	2	45.00
XI	646	1.78	9314	0.39	400	1.06	7	77.14
XII	236	0.42	5596	0.32	150	0.27	3	115.00

$\Delta_1$  Source: Hilding Anderson, op. cit., p. 67.

$\Delta_2$  Some of the replies indicated a combination payment for pasture and buildings, and the average paid was calculated on basis of pasture acreage.

$\Delta_3$  Payments for buildings alone were calculated on the average amount per lease.



size of enterprises in the organization.

Table 12. Cash payments for pasture and buildings for crop-share-plus-cash leases in Kansas, 1948. 1

Type-of-farming area	Pasture			Buildings		Building & pasture	
	No. of observations	Ave. Rent per acre	Fence	No. of observations	Average payment	No. of observations	Average Payment
1	13	.20-2.50	1.08	9	141.11	10	134.50
2	18	1.00-4.00	1.71	5	115.00	10	89.50
3	4	5.00-5.35	5.04	-	-	4	76.25
4	20	1.00-7.50	3.25	-	-	-	-
5	20	.73-5.00	2.07	6	101.67	8	154.38
6a	11	1.00-3.00	2.06	2	75.00	5	167.00
6b	32	1.00-4.00	1.89	19	112.79	10	141.50
7	4	1.00-1.90	1.12	1	75.00	-	-
8	22	.50-8.00	1.87	2	41.00	-	-
9	17	.50-5.00	1.08	5	20.00	5	235.00
10,11,12	21	.17-2.00	.77	3	107.00	1	175.00

1 Source: Data from sample mail questionnaire.

The typical tenant farmer does not, however, react to this principle in the same way as the owner-operator. The tenant can not be sure of a sufficiently permanent tenure so that he can receive full returns from all enterprises. According to data presented in Table 4, 53 per cent of all the crop-share-plus-cash leases had a length of occupancy of 5 years or less. Such conditions are not conducive to the adoption on tenant operated farms of such enterprises as dairy herds, fruit trees, or a beef-cow herd. Conversely, those enterprises that will yield a return in a short period of time will be those that will be emphasized. In Kansas these enterprises would be wheat, corn and hogs. In normal times the latter group will be in oversupply while the former group are relatively more scarce.

The effects of insecure tenure may be far reaching in nature. The emphasis on one year enterprises leads not only to overproduction of certain commodities but also to an exploitative type of farming. It is difficult to apply soil-

conserving practices when great emphasis is placed upon such crops as corn and wheat. Livestock are an important part of soil conservation programs in most parts of Kansas, and it has already been pointed out that it may be to the advantage of the tenant to de-emphasize livestock production.

In addition to the purely economic aspects of insecure tenure on tenant farms there are a host of sociological effects on rural communities that should be considered. The local school, government and church are all affected by a large proportion of insecure tenants in the community. The economic effects of insecure tenure may not be so serious in the western parts of the state where one-crop farming is common. However, the sociological effects continue to be present. Tenancy itself is not to blame for this situation. Insecure tenure is not unique with the crop-share-plus-cash lease but is typical of all tenancy in Kansas. This need not continue, however, to be true.

Many suggestions have been made by various writers as to means of encouraging longer tenure. It is not possible to give credit for the original idea but the present author has summarized the opinions and suggestions which follow:

1. The leasing arrangement should be written to prevent misunderstanding and dispute. All important provisions that relate to the operation of the farm should be included in the written lease. Provision for settling any dispute which might arise is also a desirable addition.
2. The type of lease should fit the type of farms and the individuals concerned and should divide the product according to the contributions of each.
3. Regardless of the type of lease adopted, any custom or practice that would prevent the farm from attaining its maximum profitability

should be modified, changed or eliminated.

The farm unit should be of sufficient size to provide the tenant with a satisfactory standard of living and for the landlord to attract a satisfactory tenant.

5. Compensation for unexhausted improvements and for disturbance has long been recognized as an important point in the attainment of longer term leases.

The observance of the above points should improve the security of tenure on rented farms. The fifth point is especially important because both landowner and tenant tend to lose by frequent movement of the tenant. Security of tenure or a reduction of the uncertainty which now faces the tenant farmer is necessary if he is to allocate his resources as cost-price relationships would dictate.

#### SUMMARY AND CONCLUSIONS

According to data collected from a statewide survey in Kansas there were four principal types of leases in use. Listed in terms of numerical importance these leases are the crop-share-plus-cash, the crop-share, the all-cash, and the livestock-share.

The crop-share-plus-cash lease was used throughout the state. This lease was relatively more important in the northeastern and central portions of the state. The crop-share lease was of greater relative importance in the western part of the state. The all-cash lease was used more frequently in the eastern portion of the state. This was also true of the livestock-share lease.

The relation of length of occupancy to type of lease was studied. The crop-share lease had a greater average length of occupancy than the other leases. The all-cash lease had the shortest average length of occupancy. The variation

among the leases was not great, and it was difficult to draw any clear-cut conclusions. Fifty-four per cent of all leases had an average length of occupancy of five years or less. The all-cash lease exceeded the average with 67 per cent of the leases having an average length of occupancy of five years or less. The other type of leases had distributions remarkably near the average distribution.

The number of written leases was thought to be a significant point of comparison for the various types of leases. The all-cash lease had 53 per cent of its leases written with the highest percentage of any type of lease. Twenty-one per cent of the crop-share leases were written. This was the lowest percentage of written leases for any type-of-lease. Thirty-four per cent or about one-third of all leases were written.

Theoretical treatment indicated that the point of optimum intensity for the crop-share tenant may not be the same as the optimum for the firm if it were operated by an owner-operator. This results from dual control of resources. This is not inherent in crop-share leases but occurs as the lease is used in actuality. The sharing of certain variable costs in proportion to the way the product is shared would eliminate this difficulty. Neither would the situation occur if the farm were operated by the owner or the land was leased for cash.

One variable cost that might be shared is the cost of fertilizer. According to the data collected 40 per cent of crop-share-plus-cash leases were so constructed that the landlord and tenant shared in the cost of fertilizer in the same way they shared in the product. Theoretically, any arrangement other than this would result in a level of output which would be less profitable for the firm as a whole. Thirty-nine per cent of the leases were so arranged

that either the landowner or the tenant bore all the cost of the fertilizer.

The share of wheat usually given as share rent decreased from east to west. In northeastern Kansas the predominant share was two-fifths. The extreme western portion of the state was characterized by some one-fourth crop shares being given as rent. In the remainder of the state one-third was the predominant share. Grain sorghums followed this pattern closely except that one-half was given in some instances in the northeastern portion of the state. Corn shares varied from one-half in the northeastern portion of the state to one-third in the more westerly portions of the state.

Under provisions of the crop-share-plus-cash lease, the cash paid is usually for pasture or for buildings. To the extent the cash payment represents the productivity of these items it is a desirable practice. In the absence of a payment the landowner has little incentive to make or repair improvements. If the payment is too small or less than the productivity of the improvements, the landowner may still have little incentive to improve his land. If, however, the payment exceeds the productivity of the buildings and pasture, the tenant may be discouraged.

Data were collected to establish the typical rate of cash payment for buildings and pasture. The average pasture rent varied from an average of \$.77 per acre in the western portion of the state to \$5.04 in the eastern portion. The average payment for buildings varied from \$20.00 in Type-of-Farming Area 9 to \$141.00 in Type-of-Farming Area 1. The amount of cash rent both on a per farm and per acre basis had increased from 1940. Custom and competition both may play an important part in the establishment of a cash rent. Cash rent may be varied rather than share rent when it is thought the

share is inadequate or if it is held relatively fixed by custom.

The typical tenant farmer who rents his farm on a year to year basis has little security of tenure. This influences his farming operations. He will emphasize those enterprises that have short production periods. This may result in an exploitative type of farming and may accentuate overproduction problems in certain commodities. In addition there may be certain undesirable sociological effects resulting from insecure tenure.

The crop-share lease, as used in Kansas, may have certain undesirable characteristics. These undesirable characteristics are not an inherent result from the landlord receiving rent as a share of the crop but result from customs and practices commonly associated with the lease. It is thought that improvement of the lease itself is more desirable than its abolition and the advocacy of any other one type of lease as a universal panacea.



## ACKNOWLEDGMENT

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## APPENDIX

Co-operative Extension Work  
in  
Agriculture and Home Economics  
State of Kansas

Kansas State College of Agriculture  
and Applied Science and United States  
Department of Agriculture Cooperating

Extension Service  
Agricultural Specialists

Manhattan

July 19, 1948

Dear Cooperator:

If you will fill out this questionnaire it will be your part in a cooperative survey of leasing arrangements in Kansas to determine customary leasing practices. Information concerning individual leases will be treated confidentially. Your answers will be summarized with many others. This information from all counties of the State will be helpful in developing better leases and in solving some of the problems of farm tenancy. Your answers to the questions below will help tenants and landowners all over the State.

A self addressed envelope which requires no postage is enclosed for your convenience in returning this questionnaire.

Appreciating your early cooperation, I am

Very truly yours,

J. H. Coolidge  
Extension Economist

Your County \_\_\_\_\_ Your Township \_\_\_\_\_

Total acreage farmed by you (both rented and owned) \_\_\_\_\_  
(acres)

How much land rented from others is cultivated? \_\_\_\_\_  
and how much is grass? \_\_\_\_\_ (acres) \_\_\_\_\_ (acres)

From how many landlords do you rent? \_\_\_\_\_. If you rent from more than one landlord kindly apply the following questions to the (one) lease which is most common in your community.

1. How long have you rented from this landlord? \_\_\_\_\_ years.
2. Do you have a written lease? \_\_\_\_\_
3. If so, for how many years is the lease written at one time? \_\_\_\_\_

4. Indicate the type of lease or rental agreement which you have with your landlord. (Check one.)
- a. Crop-share \_\_\_\_\_ d. Livestock-share \_\_\_\_\_  
 b. Crop-share plus cash \_\_\_\_\_ e. Father-son \_\_\_\_\_  
 c. All-cash \_\_\_\_\_ f. Other \_\_\_\_\_
5. If some cash rent is paid, how much per acre (a) for cropland? \_\_\_\_;  
 (b) for pasture? \_\_\_\_; (c) for hay meadow? \_\_\_\_.
6. How much is paid per year for the use of buildings? \_\_\_\_\_  
 If cash rent is not paid for buildings, what is your agreement concerning pay for the use of buildings? \_\_\_\_\_
- 
7. Do you have electricity in your house? \_\_\_\_; other buildings? \_\_\_\_  
 Do you have running water in the house? \_\_\_\_\_. Who paid for the installation of these conveniences? (Landlord or tenant) \_\_\_\_\_
- 
8. Indicate the landlord's share of crops harvested and his responsibility for furnishing seed in each of the following:

	Share of crop to landlord (per cent)	Seed furnished by landlord (per cent)
a. Cash crops:		
Wheat	_____	_____
Corn	_____	_____
Grain sorghums	_____	_____
Alfalfa hay	_____	_____
Prairie hay	_____	<del>XXXXXXXXXXXX</del>

- b. If alfalfa is dehydrated, what is the division of receipts?

Per cent to landlord \_\_\_\_; per cent to tenant \_\_\_\_.

When seed is purchased for a new stand of alfalfa, with the understanding that one or more crops are to be dehydrated, who pays for the seed?

---

- c. What is the landlord's share of cash income from each of the following:

	Per cent to landlord		Per cent to landlord
Cattle	_____	Poultry and eggs	_____
Hogs	_____	Dairy products	_____
Sheep	_____	Govt. payments (AAA)	_____

d. Does the landlord receive cash income from wheat pasture? \_\_\_\_\_

If so, what per cent goes to the landlord? \_\_\_\_\_

9. How is the cost of each of the following items divided on this farm?

	Per cent paid by tenant	Per cent paid by landlord	Remarks
Tractor fuel, oil and grease	_____	_____	_____
Commercial fertilizer	_____	_____	_____
Custom combining	_____	_____	_____
Hay baling hired	_____	_____	_____
Corn shelling hired	_____	_____	_____
Silo filling hired	_____	_____	_____
_____	_____	_____	_____

COUNTY BOARD  
1912



Table 13. Number of questionnaires mailed to and the responses from each county in Kansas for the sample mail questionnaire. (1948)

	No. mailed	No. responses:		No. mailed	No. responses
Allen	83	12	Linn	41	5
Anderson	13	6	Logan	33	4
Atchison	75	17	Lyon	110	15
Barber	43	8	McPherson	130	20
Barton	111	18	Marion	71	10
Bourbon	50	6	Marshall		
Brown	114	23	Meade	40	10
Butler	146	26	Miami	96	22
Chase	40	10	Mitchell	55	6
Chautauqua	51	7	Montgomery	89	7
Cherokee	144	21	Morris	67	10
Cheyenne	59	12	Morton	15	2
Clark	30	7	Nemaha	134	25
Clay	88	11	Neosho	42	8
Cloud	92	12	Ness	55	9
Coffey/1			Norton	68	14
Comanche	28	3	Osage	92	16
Cowley	155	33	Osborne	49	10
Crawford	100	15	Ottawa	60	7
Decatur	51	9	Pawnee	95	28
Dickinson	120	18	Phillips	90	13
Doniphan/1			Pottawatomie/1		
Douglas	82	5	Pratt	56	14
Edwards	43	3	Rawlins	41	10
Elk	58	6	Reno	178	37
Ellis	63	4	Republic	110	13
Ellsworth/1			Rice	100	29
Finney	51	11	Riley	58	12
Ford	61	13	Rooks	79	4
Franklin	165	32	Rush	62	10
Geary	31	3	Russell	88	14
Gove	26	7	Saline	78	10
Graham	46	6	Scott	27	7
Grant	11	1	Sedgwick	174	29
Gray	25	8	Seward	56	10
Greeley/1			Shawnee	103	19
Greenwood	95	20	Sheridan	33	9
Hamilton	17	4	Sherman	21	1
Harper	90	22	Smith/1		
Harvey	114	22	Stafford	65	11
Haskell	25	5	Stanton	13	0
Hodgeman	36	5	Stevens	33	2
Jackson	78	13	Sumner	165	24
Jefferson	51	14	Thomas	30	6
Jewell	100	11	Trego	44	8
Johnson	35	6	Wabaunsee/1		
Kearny	27	4	Wallace	11	1
Kingman	100	16	Washington	114	16
Kiowa	34	9	Wichita	11	1
Labette	88	6	Wilson	121	21
Lane	33	8	Woodson	55	6
Leavenworth	95	18	Wyandotte	26	10
Lincoln/1			Total	6659	1131

/1 No mailing list received.

Table 14. Types of leases according to type-of-farming areas in Kansas, 1948. /1

Type of lease	Type-of-farming areas												Total			
	1	2	3	4	5	6a	6b	7	8	9	10a	10b		10c	11	12
Crop-share-plus-cash	32	29	13	28	35	20	52	5	26	26	6	3	3	10	2	290
Crop-share.....	9	4	5	7	20	6	24	7	9	16	11	24	5	7	5	159
Livestock-share.....	0	2	3	4	6	2	2	0	0	1	2	0	0	0	0	22
All-cash.....	2	4	6	1	6	3	1	0	3	1	1	0	1	1	0	30
Father-son.....	2	5	5	6	7	2	1	1	1	1	2	1	0	1	0	34
Miscellaneous.....	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2

/1 Source: Sample mail questionnaire.

Table 15. Frequency and percentage distribution of leases in Kansas type of farming areas, 1943.  $\bar{1}$ 

Length of Occupancy	Number of occurrences			Per cent of occurrences			Total	
	Crop-share-plus-cash share	Crop-share share	All cash	Crop-share-plus-cash share	Crop-share share	All cash		
1 - 3	100	59	15	183	34.5	37.1	50.0	36.5
4 - 6	71	32	5	112	24.5	23.1	16.7	18.2
7 - 9	32	15	3	52	11.0	9.4	10.0	9.1
10 - 12	23	15	4	52	9.7	9.4	13.3	22.7
13 - 15	19	5	1	26	6.6	3.1	3.3	4.6
16 - 18	9	8	0	17	3.1	5.0	0	0
19 - 21	11	13	1	25	3.8	8.3	3.3	0
22 - 24	8	2	1	12	2.7	1.3	3.4	4.5
25 - 27	2	4	0	6	.7	2.5	0	0
28 - 30	4	3	0	7	1.4	2.0	0	0
31 - 33	4	1	0	5	1.4	.6	0	0
34 - 36	1	1	0	2	.3	.6	0	0
37 - 39	1	0	0	1	.3	0	0	0
40 - 42	0	1	0	1	0	.6	0	0
Total	290	159	30	501	100.0	100.0	100.0	100.0

$\bar{1}$  Source: Sample mail questionnaire.

Table 16. Frequency distribution of the length of occupancy by type-of-lease in Kansas, 1948. <sup>1</sup>

Years of occupancy	Crop-share-plus-cash	Crop-share	All cash	Livestock-share	Total
1	24	6	4	1	35
2	30	27	5	4	66
3	46	26	6	4	82
4	30	11	3	1	45
5	26	13	2	2	43
6	15	8	0	1	24
7 - 9	32	15	3	2	52
10 - 12	28	15	4	5	52
13 - 18	28	13	1	1	43
19 - 24	19	15	2	1	37
more than 24	12	10	0	0	22
<b>Total</b>	<b>200</b>	<b>159</b>	<b>30</b>	<b>22</b>	<b>501</b>

<sup>1</sup> Source: Sample mail questionnaire.

Table 17. Percentage frequency distribution of the length of occupancy by type-of-lease in Kansas, 1948. <sup>1</sup>

Years of occupancy	Crop-share-plus-cash	Crop-share	All cash	Livestock-share	Total
1	8.3	3.8	13.3	4.6	7.0
2	10.3	17.0	16.7	18.2	13.2
3	15.9	16.4	20.0	18.2	16.3
4	10.3	6.9	10.0	4.5	8.9
5	9.0	8.2	6.7	9.1	8.6
6	5.2	5.0	0	4.6	4.8
7 - 9	11.1	9.4	10.0	9.1	10.4
10 - 12	9.6	9.4	13.3	22.7	10.4
13 - 18	9.6	8.2	3.3	4.5	8.6
19 - 24	6.6	9.4	6.7	4.5	7.4
more than 24	4.1	6.3	0	0	4.4

<sup>1</sup> Source: Sample mail questionnaire.

ABSTRACT

of

A Study of Farm Tenancy in Kansas  
with Special Reference to the  
Crop-Share-Plus-Cash Lease

by

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## ABSTRACT OF THESIS

The purpose of the thesis was to describe and analyze the crop-share-plus-cash lease as it is used in Kansas. The description was based upon empirical data collected by a sample mail survey. Economic theory was used to analyze the lease and to indicate the effects of different alternatives which might be suggested as improvements.

The mailing list for the mail survey was compiled with the cooperation of the Production and Marketing Administration and the Kansas State College Extension Service. The county agricultural agents in all counties were asked to select every tenth tenant from the files of their local PMA office. Mailing lists were received from 96 of the 105 counties in Kansas. A total of 6,659 questionnaires were mailed to tenants and 1,131 were returned in useable condition. This constituted a 17 per cent response. This sample was compared with another sample as a check for bias. The check sample was drawn by the Iowa Statistical Laboratory at Iowa State College in cooperation with the Bureau of Agricultural Economics. The farmers drawn in this sample were interviewed personally. There was a smaller percentage of farmers with small acreages responding to the mail survey than there was in the check sample. This type of bias is usually encountered when a mail survey is used since larger farmers tend to respond to mail questionnaires. No attempt was made to adjust for this bias because of the small size of the check sample.

The author drew upon others for their contributions to the theory of farm leasing systems. Economic theory was used as a tool to determine the actions of the lessor and lessee as they operated under the terms of the lease in question.



According to data collected from the statewide mail survey there were four principal types of leases in use in Kansas. Listed in terms of numerical importance these leases are the crop-share-plus-cash, the crop-share, the all-cash, and the livestock-share.

The crop-share-plus-cash lease was used in all parts of the state. This lease was relatively more important in the northeastern and central portions of the state than in Western Kansas. The crop-share lease was of greater relative importance in the western part of the state. The all-cash lease was used more frequently in the eastern portion of the state. This was also true of the livestock-share lease.

The crop-share lease had a greater average length of occupancy than the other leases. The all-cash lease had the shortest average length of occupancy. The variation among the leases was not great, and it was difficult to draw definite conclusions. Fifty-four per cent of all leases had an average length of occupancy of five years or less. The all-cash lease exceeded the average with 67 per cent of the leases having an average length of occupancy of five years or less. The other types of leases had distributions near the average distribution.

The all-cash lease had 53 per cent of its leases written with the highest percentage of any type of lease. Twenty-one per cent of the crop-share leases were written. This was the lowest percentage of written leases for any type of lease. Thirty-four per cent or about one-third of all leases were written.

Theoretical treatment indicated that the point of optimum intensity for the crop-share tenant may not be the same as the optimum for the owner-operator's firm. This results from dual control of resources. This difficulty is not inherent in the crop-share type of leasing but occurs as the lease is

used in actuality. The sharing of certain variable costs in proportion to the way the product is shared would eliminate this difficulty. Neither would the situation occur if the farm were operated by the owner or the land were leased for cash.

One variable cost that might be shared is the cost of fertilizer. According to the data collected 40 per cent of crop-share-plus-cash leases were so constructed that the landlord and tenant shared the cost of fertilizer in the same way they shared in the product. Theoretically, any arrangement other than this would result in a level of output which would be less profitable for the firm as a whole. Thirty-nine per cent of the leases were so arranged that either the landowner or the tenant bore all the cost of the fertilizer.

The common share of wheat given as share rent decreased from east to west. In northeastern Kansas the predominant share was two-fifths. There were some one-fourth crop share leases in the extreme western portion of the state. In the remainder of the state one-third was the predominant share. Grain sorghums followed this pattern closely except that one-half was given in some instances in the northeastern portion of the state. Corn shares varied from one-half in the northeastern part of the state to one-third in the more westerly portions of the state.

Under provisions of the crop-share-plus-cash lease, the cash rent paid is usually for pasture or for buildings. To the extent the cash payment represents the productivity of these items it is a desirable practice. In the absence of such a payment the landowner has little incentive to make or repair improvements. If the payment is too small or less than the productivity of the improvements, the landowner may still have little incentive to improve his land. If, however, the payment exceeds the productivity of

the buildings and pasture, the tenant may be discouraged from the growing of livestock.

Data were collected to establish the typical rate of cash payment for buildings and pasture. The average pasture rent varied from an average of \$0.77 per acre in the western portion of the state to \$5.04 in the eastern portion. The average payment for buildings varied from \$20.00 in Type-of-Farming Area 9 to \$141.00 in Type-of-Farming Area 1. The amount of cash rent both on a per farm and per acre basis had increased from 1940. Custom and competition both may play an important part in the establishment of a cash rent. Cash rent may be varied rather than share rent when it is thought the share is inadequate or if it is held relatively fixed by custom.

The typical tenant farmer who rents his farm on a year-to-year basis has little security of tenure. This will cause him to emphasize those enterprises that have short production periods. This may result in an exploitative type of farming and may accentuate overproduction problems in certain commodities. In addition there may be certain undesirable sociological effects resulting from insecure tenure.

The crop-share-plus-cash lease, as used in Kansas, may have certain undesirable characteristics. These undesirable characteristics do not ensue from the landlord receiving his rent as a share of the crop but have resulted from customs and practices surrounding the lease. It is thought that improvement in the lease itself is more desirable than its elimination and the advocacy of any other one type of lease as a universal panacea.