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EQUITABILITY OF MICHIGAN
FIFTY-FIFTY CROP AND
LIVESTOCK SHARE FARM LEASE

Thesis for the Degree of M. S.
MICHIGAN STATE COLLEGE

Wilbur John Lohr

1946

THESIS

This is to certify that the

thesis entitled

**"Equitability of Michigan Fifty-Fifty
Crop and Livestock Share Farm Lease."**

presented by

Wilbur J. Lohr

has been accepted towards fulfillment
of the requirements for

M. S. degree in Farm Management

E. B. Kief

Major professor

Date

June 1

EQUITABILITY OF MICHIGAN FIFTY-FIFTY CROP
AND LIVESTOCK SHARE FARM LEASE

By

WILBUR JOHN LOHR

A THESIS

Submitted to the Graduate School of Michigan
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requirements for the degree of

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Department of Farm Management

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THESIS

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ACKNOWLEDGEMENTS

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EQUITABILITY OF MICHIGAN FIFTY-FIFTY CROP AND LIVE-
STOCK SHARE FARM LEASE

Wilbur John Lohr

Introduction

Farm tenancy is apparently a permanent part of our agricultural system and for this reason satisfactory leasing agreements are important. The percentage of tenancy in Michigan is low compared with the high valued cornbelt land areas. The 1940 census shows that 17 percent of all Michigan farms were operated by tenants. The degree of tenancy varies greatly within the state ranging from 5 to 10 percent in the northern portion of Michigan, 10 to 20 percent in the central portion of lower peninsula, and 20 to 30 percent in the southern and eastern counties. Thus, it would seem that there is a direct relation between tenancy and the better type of soil and more thickly populated districts.

The 1940 census also shows that an additional 11 percent of all Michigan farmers rent part of the land in their farms. So long as practically every fourth farmer in Michigan rents land, the importance of farm leases cannot be overemphasized.

Many changes in Michigan agriculture have been brought about by the war. Older men, who continued to farm during the war, are turning over their farming to younger men. Many service men and war employed industrial workers, if they lose their jobs, are returning to farms. With the price of land high in most sections of the state most of these prospective farmers will prefer at first to rent land rather than to buy at inflated prices. Many farm leases now in use

are inadequate. Largely the outgrowth of customs in the community, they frequently are not adjusted to present conditions brought about in shifting from war to peace. To fit these changing conditions numerous farm leases need to be revised and new leases made.

A lease agreement serves as a good memorandum of understanding between the landlord and tenant. It enables the landlord and tenant to consider many features of rental such as division of receipts and expenses, and items to be furnished by each, before the farm is rented, rather than after, as is too often the case. Its use eliminates reliance on memory of verbal agreements. Although a written lease is desirable on a rented farm, no lease contract will assure a satisfied landlord and tenant if the farm is not productive and large enough to provide, when properly managed, adequate returns to the landlord and tenant.

A good lease is one which is drawn up in such a way, that both parties receive a just and equitable compensation for the labor and capital contributed, that a system of farming be maintained to keep the productivity at a high level, and as much assurance as possible to a good tenant that his lease will be continued through a period of years.

Different types of farm leases have been developed to meet the conditions found in the various type farming-areas in Michigan and on individual farms in those areas. The leases most commonly used are (1) Cash farm lease (2) Crop-share cash farm lease (3) Field leasing on the crop-share basis (4) Landlord's two-thirds share crop and livestock farm lease (5) Fifty-fifty crop and livestock share farm lease (6) Tenant's two-thirds crop and livestock share farm lease and (7) Father and son farm-partnership agreement.

The 50-50 crop and livestock share lease is the most common type of share lease in Michigan. With this in mind the purpose of this study is to determine the equitability of Michigan 50-50 crop and livestock share lease by comparison of landlord's and tenant's contributions and returns with 50-50 leases used on farm account farms in type of farming areas 1/ 1 and 5 for the years 1939 to 1944.

The study of the equitability of the 50-50 lease was divided into four parts (1) Explanation and use of 50-50 lease (2) Comparison of Michigan 50-50 lease with livestock share leases of other mid-western states (3) Comparison of landlord's and tenant's contributions and returns with 50-50 leases - Areas 1 and 5 for the years 1939 to 1944 inclusive, and (4) Comparison of 50-50 renter-operated farms with owner-operated farms in Areas 1 and 5 for the years 1939 and 1944.

As a means of comparing 50-50 leases used by farm account farmers the contributions, income, and expenses of both tenant and landlord was obtained. As a measure of equitability of 50-50 lease the returns of both tenant and landlord was analyzed to see if each is receiving a fair share in proportion to his contributions.

For the comparison of farm account farmers using 50-50 leases with owners, the size of business, organization of crop and livestock enterprises, and financial aspects was obtained.

1/Map of Michigan, page 4, showing type of farming areas 1 and 5.

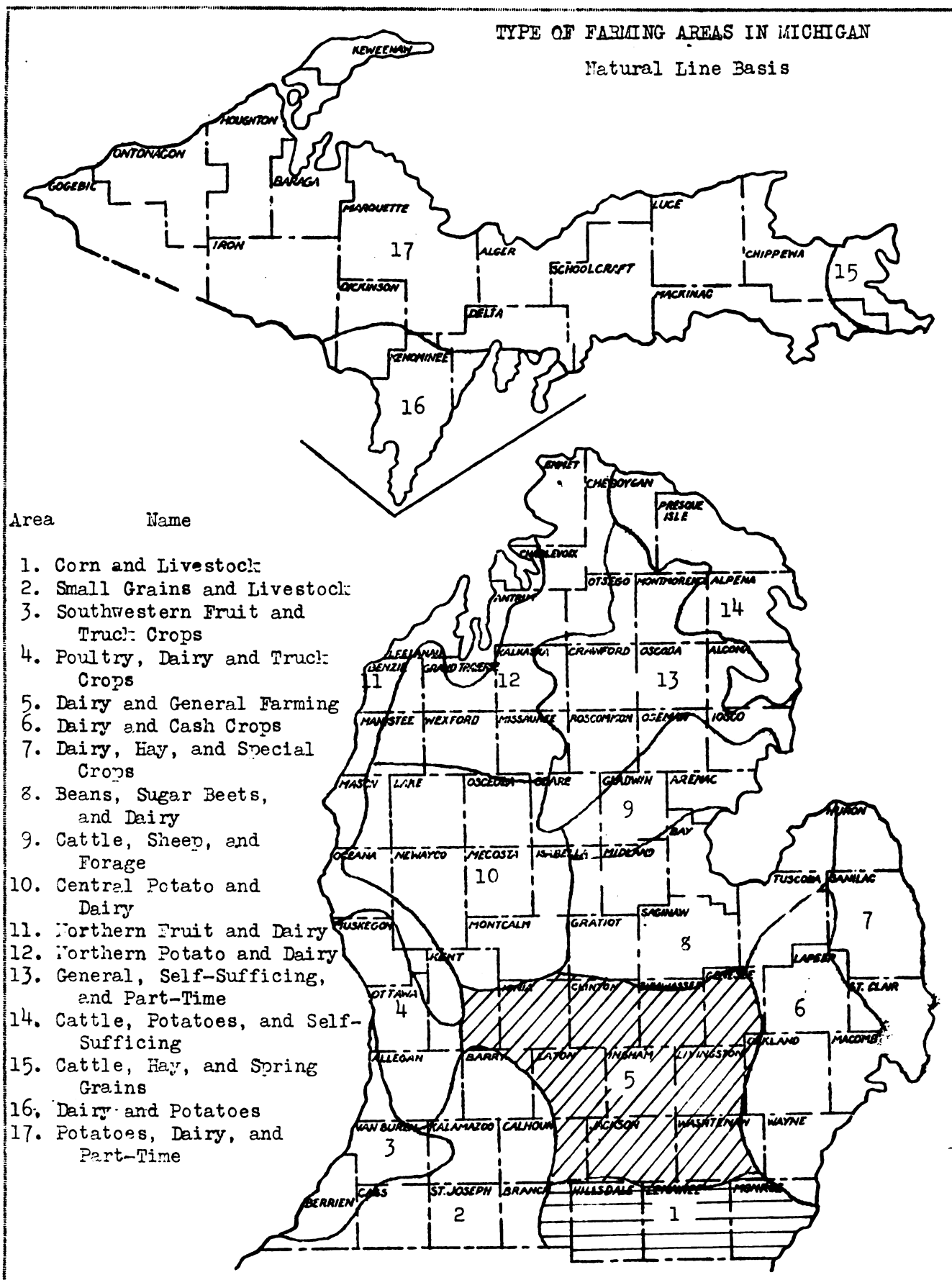
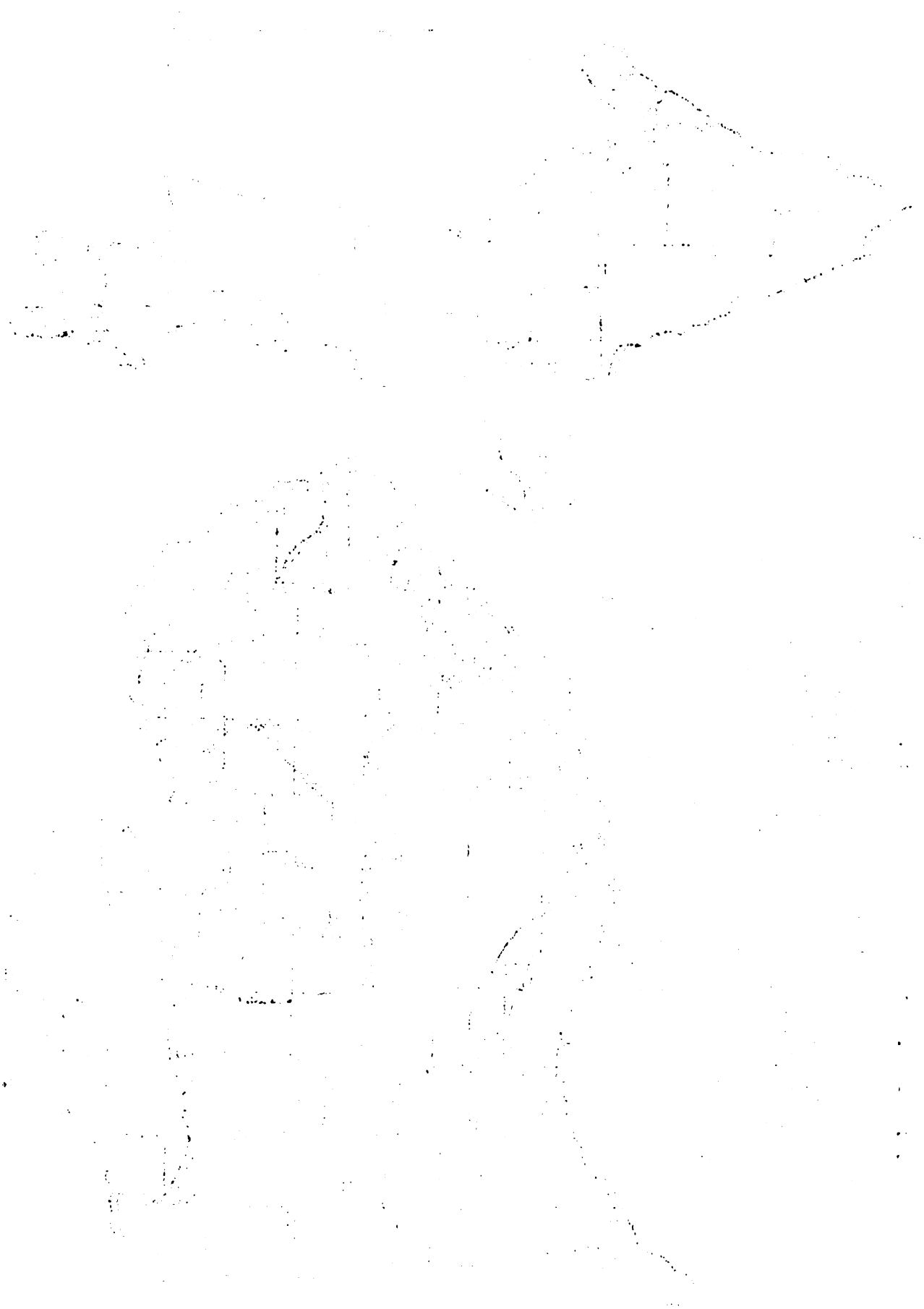


Figure 1 - Location of Type of Farming Areas 1 and 5.

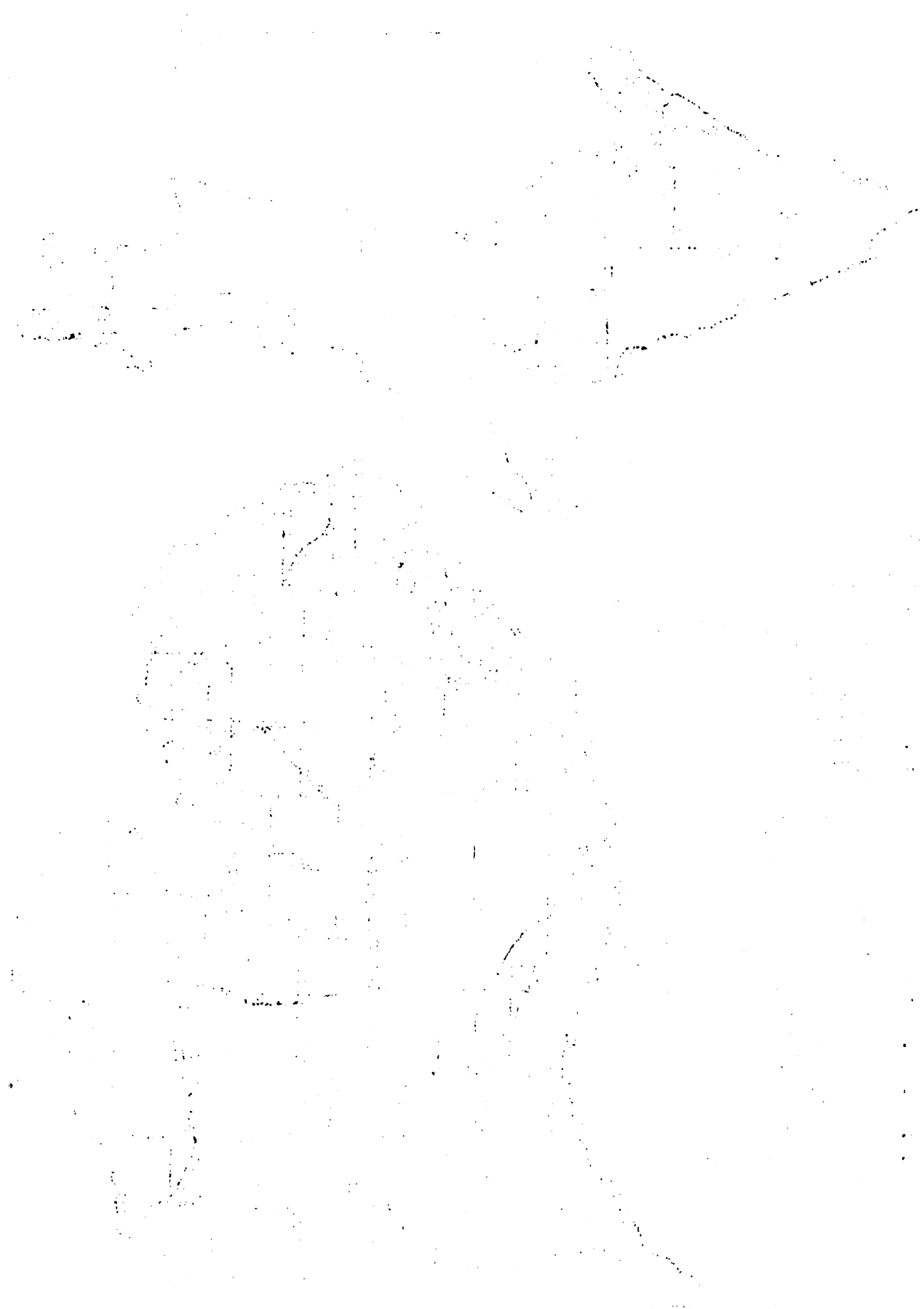


Fifty-Fifty Crop and Livestock Share Lease

The 50-50 crop and livestock share lease is the most common type of share lease in Michigan. The 50-50 type of lease is more satisfactory than other forms because the farm can be more adequately equipped, a greater interest is taken by each party and a more equitable distribution of risk between the two parties is possible than with the cash rent type.

The 50-50 lease meets the needs of tenants who want to engage in livestock farming but who either do not have sufficient capital to fully stock a livestock farm or do not want to assume all the risk involved in operating a livestock farm. This enables a tenant to gain experience in livestock farming under the guidance of a successful owner. The tenant owns his own equipment and is in a position to furnish the labor, half of the productive livestock and half of the operating capital for a livestock farm.

This lease also meets the needs of landowners who desire to exercise some control over the livestock enterprises in addition to the land use and cropping program on their farms and is willing to share the farm operating expenses, risks in fluctuating crop and livestock production and prices, farm income and management with the tenant. The sharing of investment and operating expenses make it possible to increase the number of livestock, which in turn furnishes an additional outlet for crops produced on the farm and also helps to maintain the productivity of the land. Since both parties have a share in the livestock they are mutually interested in all phases of the farm business. The landowner is more willing to make more permanent improvements.



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The following table gives the contributions of the tenant and landlord under the Michigan 50-50 lease:

Table 1. Contributions and Income of Tenant and Landlord under the Michigan 50-50 Crop and Livestock Share Lease

<u>Item</u>	<u>Tenant</u>	<u>Landlord</u>
<u>Investment expenses</u>		
Real estate		all
Machinery and Equipment	all	
Work animals	all	
Productive livestock*	$\frac{1}{2}$	$\frac{1}{2}$
Poultry	designated no.	
Feed	$\frac{1}{2}$	$\frac{1}{2}$
<u>Other expenses</u>		
Farm improvements		all
Lime	spreading	all
Machinery and equipment	all	
Tractor fuel and oil	$\frac{1}{2}$	$\frac{1}{2}$
Feed purchases	$\frac{1}{2}$	$\frac{1}{2}$
Livestock expense	$\frac{1}{2}$	$\frac{1}{2}$
Crop expense	$\frac{1}{2}$	$\frac{1}{2}$
Hired labor	all	
Taxes and insurance	own property	own property
Farm share electric and telephone	$\frac{1}{2}$	$\frac{1}{2}$
<u>Receipts</u>		
Livestock income	$\frac{1}{2}$	$\frac{1}{2}$
Poultry and eggs	all	
Milk sales	$\frac{1}{2}$	$\frac{1}{2}$
Crop sales	$\frac{1}{2}$	$\frac{1}{2}$

*Does not include poultry.

The tenant and landlord share the ownership of all productive livestock except poultry. Usually the tenant has the privilege of keeping for his own use, not to exceed a designated number of hens. All purchased feeds for such poultry would be paid for by the tenant. With the poultry enterprise as a major item the ownership is usually 50-50.

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The proceeds from crops, livestock and livestock products, other than dairy products and eggs (and poultry when all poultry is owned by the tenant) is divided equally between both parties. Returns from intensive crops, dairy products and eggs (when poultry is a sizable enterprise) which require a large amount of man labor for their harvest or production frequently are divided so that the tenant receives more than 50 percent of the income.

The Michigan fifty-fifty crop and livestock share farm lease sample is reproduced on the following pages.

FIFTY-FIFTY CROP AND LIVESTOCK SHARE FARM LEASE

This lease is entered into this ____ day of ____, 19 ____, between ____, landlord, of ____, and ____, tenant, of _____.

(A) Description of Farm

In consideration of the agreements and stipulations hereinafter set forth to be kept and performed by the tenant, to occupy and use for farming purposes his farm of about ____ acres situated in the County of ____, and the State of ____ and described as follows: _____

(B) Term of the Lease

The term of this lease shall be ____ years (s), from ____, 19 ____, to ____, 19 ____. This lease shall continue in effect from year to year thereafter until written notice of termination is given by either party on or before the ____ day of _____ (month) before the expiration of this lease.

(C) The Landlord Agrees as Follows:

1. Buildings, Fences, and Water Supply: To furnish materials for

normal maintenance and repairs, and for improvements to buildings, fences and wells; also labor for new fences and major repairs on buildings, fences, tile drains and wells.

The following repairs and improvements to the tenant house, other buildings, fences, and to the well or water supply system are deemed necessary and they shall be made and completed on or before the date indicated after each item: _____

2. Repairs by Tenant: The tenant may without further authorization from the landlord, purchase materials for necessary repairs and improvements in a total amount not exceeding \$_____, within each month, and not to exceed \$_____ at any one time or for any one repair job and deduct the cost from the landlord's share of the farm receipts.

3. Liming Materials: To furnish and deliver to the farm such liming materials as may be used on the farm. Exceptions, if any, are as follows: _____

(D) The Tenant Agrees as Follows:

1. Labor: To furnish all labor necessary to operate the farm efficiently, except contract labor on sugar beets and _____ in which case the landlord shall pay $\frac{1}{2}$ and the tenant $\frac{1}{2}$.

2. Power and Machinery: To furnish the work horses, tractor, and all the machinery, equipment and repairs thereon which are required to properly operate the farm. Exceptions, if any, are as follows: _____

The expenses and maintenance of any machinery or equipment such as a milking machine, etc., which may be supplied by the landlord, shall be paid by the tenant.

3. Hauling Materials: To haul all materials for the ordinary repair and improvements to buildings and fences. To haul all fertilizer. To spread lime or marl used on the farm. To haul to market the products to be marketed with the following exceptions: The costs of hauling livestock, sugar beets and _____ are to be paid $\frac{1}{2}$ by the landlord and $\frac{1}{2}$ by the tenant; the cost of hauling milk is to be paid _____ by the landlord and _____ by the tenant.

4. Maintenance of Improvements: To provide the necessary labor for normal maintenance of the buildings, fences, and other improvements and to keep them in as good repair as they were when he took possession, (loss by natural wear and depreciation, fire, or other unavoidable losses excepted), except that necessary skilled labor shall be furnished by the landlord.

5. Feed at the Beginning of the Lease: To purchase or provide at the beginning of the lease a one-half interest in the feed on the farm at that time. Exceptions, if any, are as follows: _____

6. Cropping program: To follow as closely as possible the following crop program: _____

7. Subletting, Right to Enter, Yielding Possession: (1) To not assign this lease or sublet any portion of the farm without the consent of the landlord. (2) To permit the landlord or his agent to enter the farm at any reasonable time for repairs, improvements, and inspection. (3) To yield possession of the farm at the end of

the term of this lease or any renewal or extension thereof.

(E) The Landlord and Tenant Mutually Agree As Follows:

1. **Ownership of Livestock:** Each party shall own a one-half interest in all livestock kept on the farm, except work horses and chickens. Should the parties agree to raise foals, the landlord is to acquire a one-half interest in the mares raising them and shall share equally in costs and proceeds of such enterprise. (If, at the beginning of this lease, there is an unequal ownership of livestock, other than horses and chickens, it is suggested that each party buy a one-half interest in the livestock owned by the other party in order that each may own an equal share.

The poultry flock shall be handled as follows: (a) The tenant to have the privilege of keeping for his own use not to exceed _____ hens and to raise not to exceed _____ chickens each year. All purchased feeds for such poultry to be paid for by the tenant, or (b) the poultry to be owned on a 50-50 basis. (Draw a line through the part which will not be followed in this agreement.)

Exceptions, if any, are as follows: _____

2. **Sales and Purchases:** The time and place where the farm products shall be sold shall be mutually agreed upon by the landlord and the tenant, but no sale or purchase for the joint or opposite party account exceeding \$ _____ per item or \$ _____ for any one month is to be made by either party before obtaining the consent of the other party.

3. **Expenses that are Shared:** The parties shall share equally in the following: Crop expenses such as purchased seed, fertilizers,

spray material, binder twine, etc.; machine costs for threshing, combining, silo filling, corn husking, hay baling and clover hulling; cost of tractor fuel and oil; livestock expenses such as breeding fees, veterinary and medicine; insurance on livestock and crops owned in common; electric light and power bill up to \$_____, the balance to be paid entirely by the tenant; farm share of the telephone; feed purchases, feed grinding and pasture rent. All livestock is to be fed out of the undivided feed. Exceptions, if any, are as follows:

4. Renting Additional Crop Land: The tenant shall obtain the landlord's consent before renting additional crop land. If such land is rented it shall be handled by one of the following methods: (a) In case the landlord is to share in the crops obtained on the additional crop land rented, he shall pay the cash rent and also share in the expenses in the same manner as is done on the "home farm." (b) In case the landlord is not to share in the crops produced on the additional crop land rented on either a cash or share basis, the tenant shall pay all the expenses, all the fuel and oil for tractor power and all feed for horses while working on such crops. If any of the feed crops so produced are to be used on the "home farm" the landlord shall pay the tenant for one-half of such feed.

5. Farm Records and Monthly Settlement: Farm inventory and cash records shall be kept and settlements as far as possible shall be made on the _____ of each month. An inventory statement showing numbers or amounts, values and ownership of the livestock, machinery, feed, growing crops, and supplies on the farm is to be made at the beginning of this lease agreement and at the end of each

year thereafter during the period of the lease and recorded in the account books of the respective parties.

(F) Division of Farm Income

1. Crops: The usual field crops produced, except those listed in Article 3 of this section and those used for seed or feed, shall be divided equally between both parties. It is agreed that the intensive crops such as potatoes, mint, tomatoes, snap beans, cucumbers, cantaloupes, onions and _____, which require a large amount of man labor for their production and harvest shall be divided as stated below: _____

2. Livestock and Livestock Products: The proceeds from livestock and livestock products, other than dairy products and eggs (and poultry when all poultry is owned by the tenant), shall be divided equally between both parties. The proceeds from the sale of dairy products shall be divided _____% to the landlord and _____% to the tenant; egg sales (from poultry owned in common) _____% to landlord, and _____% to tenant.

3. Farm Produce for Tenant: For the use of his own family and board for hired labor, the tenant may use such of the following as the farm affords: potatoes, garden truck, fruit, eggs, and milk. The tenant may cut from the dead timber or from trees designated by the landlord such wood as he may need for fuel up to _____ cords each year. Exceptions, if any, are as follows: _____

(G) Tenant's Right to Make Improvements and Receive Reimbursements

For Unexhausted Values

1. Growing Crops: (a) At the beginning of this lease the tenant

shall purchase a one-half share in the following acreages of growing crops on the farm at that time: Wheat____; rye____; barley____; spelt____. (b) At the end of this lease, the tenant shall be reimbursed by the landlord or his agents for his one-half share in the growing wheat, rye, barley or spelt. Settlement in each instance shall be made on the following basis per acre: plowing \$____; preparing seedbed and drilling \$____; seed at market value and fertilizer at cost. Exceptions, if any, are as follows:_____

2. Seedings, Sod, and Fall Plowing: Acreages at the beginning of this lease are as follows: Alfalfa, 1st yr.____, 2nd yr.____, 3rd yr. and over____; clover____; Mixed____; and fall plowing____. If the acreages of seeding, sod or of fall plowing at the end of the lease are more than at the beginning, the tenant shall be reimbursed for his share of the seed for the excess seeding, and he shall be reimbursed for his share in the excess of fall plowing at the rate of \$____ per acre. If the acreages of these items are less, the landlord shall be reimbursed.

3. Removing Temporary Improvements: The tenant may, at his own expense, put up fences or buildings of a temporary character upon the above described land for the purpose of confining livestock; storing feed, grain or hay; or housing livestock, tools, or machinery. He shall have the right to remove such buildings or other improvements at any time during the term of this lease.

4. Labor in Applying Lime or Marl: The tenant shall be reimbursed at the rate of \$____ per ton or yard for his labor expended in hauling and applying ground limestone or marl if a crop has not been harvested following the application of such material. If this lease

terminates after one crop has been harvested, the tenant shall be reimbursed at $\frac{4}{5}$ of the foregoing rate. If after two crops $\frac{3}{5}$ of the rate, etc.

(H) Liability of Tenant and Landlord

1. Willful neglect, failure, or refusal by either party to carry out any material provision of this lease shall give the other party the power to terminate the lease, in addition to the right to compensation for damages suffered by reason of such breach. Such termination shall become effective thirty (30) days after written notice of termination specifying the delinquency has been served on the delinquent party, unless during such thirty (30) day period the delinquent party has made up the delinquency. The landlord shall have the benefit of any summary proceedings provided by law for evicting the tenant upon termination under this paragraph, or at the end of the term.
2. This lease shall not be deemed to give rise to a partnership relation, and neither party shall have authority to obligate the other without written consent.

(I) Division of Property at End of Lease

1. Crops: At the end of the term of this lease an accounting shall be made between the respective parties hereto. The hay, corn fodder, grain, and farm produce upon said farm belonging jointly to the landlord and the tenant shall be equally divided, by measurement or through the proceeds from the sale thereof; the tenant having the right to remove his share from farm. The straw and manure are the property of the landlord and shall remain on the farm.

The landlord agrees to buy the tenant's share of the corn silage left on the farm at the end of the lease period. (As a

suggestion, a fair price per ton for corn silage may be considered to be 1/3 of the local price per ton of loose alfalfa hay.)

2. Livestock: The division of the livestock owned in common shall be made by either of the following methods: (a) The tenant shall divide each kind of livestock into two equal lots, as near as can be done, and the landlord shall have his choice of lots of each kind of livestock. This division shall be final and binding on both parties. If it is impossible to divide each kind of livestock into two equal parts (in the case of an odd number of animals or animals of unequal value), then a cash adjustment will be made to make the two lots of equal value. Or (b) the tenant shall divide the livestock into groups of two animals each of as near equal value as can be done. Each party will then alternate in having first choice from each successive group.

(J) Arbitration

The parties hereby agree to submit to arbitration all differences they themselves cannot settle which may arise under this lease. The arbitration hereby agreed to shall be made by a board of three men, one chosen by each party and the third by the two so chosen. The decision of a majority of the arbitrators shall be final and binding upon both parties to this contract except if a matter of law or a sum exceeding \$_____ is involved.

In Witness Whereof, the parties hereto have affixed their signatures the day and year first above written.

Witness

Landlord

Witness

Landlord

Tenant

Form Suggested by the
Farm Management Department
Michigan State College of
Agriculture and Applied Science
and

U. S. Dept. of Agriculture cooperating
R. J. Baldwin, Director of Extension Division

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Fifty-Fifty Crop and Livestock Share Leases in Midwestern
States

A comparison of the contributions, and sharing of the income of tenant and landlord under the 50-50 crop and livestock share lease in six midwestern states shows that the livestock share leases of each of the six midwestern states are very much alike. (table 2) A few relatively minor differences may be noted.

In the Michigan lease the tenant is allowed to keep a stated number of hens for his own use, and they can be fed out of undivided feed. With poultry a major enterprise, the flock would be treated 50-50. It is suggested in the Michigan lease that the tenant may receive more than 50 percent of the egg and milk sales, because of the large amount of labor involved on these enterprises.

In the Ohio lease the tenant is allowed to keep 50 hens and above that number the ownership is shared. In this lease the tenant also is expected to furnish all the tractor operating expense.

In the Indiana lease the landlord is supposed to furnish and pay for spreading the lime used on the farm. The poultry and dairy cattle are owned 50-50, however it is suggested that the tenant receive a larger share of the egg and milk sales because of the large amount of labor involved in these enterprises. The tenant usually pays for three-fourths of the combining and all costs for harvesting the hay and corn crops.

The Illinois lease has the landlord furnish the manure and lime spreaders and upkeep on them. The landlord also furnishes all the fertilizer, however the tenant applies it.

In the Wisconsin lease the tenant is allowed a stated number

Table 2 - Contributions and Income of Tenant* Under Livestock Share Leases of Midwestern States

	Michigan	Ohio	Indiana	Illinois	Wisconsin	Iowa
Investment expenses						
Real estate	T 0	0	0	0	0	0
Machinery & equipment	T all	all	all	all	all	all
Work animals	T all	all	all	all	all	all
Productive livestock	T $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Poultry	T maximum	50 hens			maximum	
Feed	T no. hens	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	no. hens	$\frac{1}{2}$
	T $\frac{1}{2}$				$\frac{1}{2}$	
Other expenses						
Farm improvements	T 0	0	0	0	0	0
Lime	T spreading	spreading		spreading		spreading
Machinery & equipment	T all	all	all	part	all	all
Tractor fuel and oil	T $\frac{1}{2}$	0	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Feed purchases	T $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Livestock expense	T $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Crop expense	T $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Hired labor	T all	all	all	all	all	all
Taxes and insurance	T own	own	own	own	own	own
Farm share electric and telephone	T property	property	property	property	property	property
	T $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Receipts						
Livestock income	T $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Poultry and eggs	T all	all	$\frac{1}{2}$	$\frac{1}{2}$	all	$\frac{1}{2}$
Milk sales	T $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Crop sales	T $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$

*Only the contributions of the tenant are shown.

of hens for his own use. The cost of lime is shared equally by landlord and tenant.

The Iowa lease has joint ownership of all productive livestock and the income is shared equally.

Landlord's and Tenant's Contributions and Returns with 50-50 Leases -
Areas 1 and 5 - 1939 to 1944

Some Organization Factors

The data for this study were obtained from farm account records kept by farmers in connection with the Farm Business Analysis Extension Project of the Farm Management Department. Data from the records of farm account farms using the 50-50 lease in type of farming areas 1 and 5 were used in this study. There was a total of 181 records studied, with an average of 25 to 33 records each year for the two areas.

The farms in this study averaged 180 acres in size for Area 1 and 191 acres in size for Area 5 (table 3). Over 75 percent of the farm land was tillable in Area 1 and 70 percent in Area 5. During the six years the tillable acres per farm for Area 1 showed a distinct tendency to increase starting at 131 tillable acres in 1939, and becoming 152 tillable acres in 1944. The tillable acres for Area 5 increased from 121 in 1939, to 138 in 1944, with two years 1941 and 1942 having 141 and 142 tillable acres respectively.

The crop yield index on the 50-50 crop and livestock share lease was 99 for Area 1 and 98 for Area 5 (table 3). The average of all farm account cooperators was 100 each year. Crop yields on the 50-50 lease farms were 1 to 2 percent below the average compared with all farms in the Farm Business Analysis Project in the two areas.

The farms studied in Area 1 had 38.2 productive animal units and in Area 5, 29.7 productive animal units. This amounted to about 29 percent more productive livestock kept in Area 1 than Area

5. There was 3.6 tillable acres per productive animal unit in Area 1 as compared to 4.5 tillable acres per productive animal unit in Area 5. Farms in Area 1 increased the productive livestock kept from 35.8 productive animal units per farm in 1939 to 40.2 productive animal units in 1944, however one year 1940 went up to 43.0 productive animal units. In Area 5 the productive animal units remained about the same, not varying over 2 productive animal units for any of the years studied.

Table 3 - Some Organization Factors on Farms Under 50-50 Leases* -
Areas 1 and 5 - 1939 to 1944 inclusive

	Area 1	Area 5
Number of farms**	83	98
Acres per farm	180	191
Tillable acres	136	135
Crop yield index#	99	98
Productive animal units	38.2	29.7
Total P.M.W.U.##	536	502
P.M.W.U. per man	341	299
Average no. of men	1.57	1.68

*See appendix table A for details

**Total number of farms for the years 1939 to 1944 inclusive.

#Average of all farm account cooperators was 100 each year.

##A productive man work unit is the average amount of work accomplished by one man with average labor efficiency in a ten hour day.

The farms studied in Area 1 averaged 536 productive man work units and in Area 5, 502 productive man work units. The average number of men was 1.57 for Area 1 and 1.68 for Area 5.

Labor efficiency was high in Area 1, averaging 341 productive man work units per man compared with 299 productive man work units per man in Area 5. The 42 less productive man work units per man seemed to be tied up with 8.5 less productive animal units in Area 5 thus making for less productive work. The amount of tillable acres and man equivalent was about the same for the two areas.

It would be desirable to increase the volume of business on these farms to get greater labor efficiency. No lease contract will assure a satisfied landlord and tenant if the farm is not productive and large enough to provide, when properly managed, adequate returns to the landlord and tenant.

Investments

The farms in this study with 50-50 crop and livestock share leases had an average total investment ^{1/} of \$20750 in Area 1 and \$18784 in Area 5 for the years 1939 to 1944 (table 4). The average investment per tillable acre was \$153 in Area 1 and \$139 in Area 5. The total investment per tillable acre increased 13 percent in Area 1 from 1939 to 1944. For Area 5 the total investment per tillable acre remained the same for the six year period.

Landlords in Area 1 contributed 79 percent of the total investment, and in Area 5, 80 percent (figure 2). During the six years the landlord's investment per tillable acre in Area 1 increased 3 percent while the tenant's investment per tillable acre increased 57 percent (figure 3). In Area 5 the landlord's investment per tillable acre decreased 3 percent from 1939 to 1944, while the tenant's investment per tillable acre increased 17 percent (figure 4).

The value of farm real estate per tillable acre was not allowed to increase on the farm account records studied, during the period of rising prices, while there was the tendency for farm personal property to increase in value. During the years 1939 to 1944 farm real estate values increased 46 percent according to the 1945 Annual Crop Report for Michigan. For the same period farm machinery values increased 17 percent, livestock values increased 70 percent, and feed crop prices 129 percent, according to the Agricultural Economics Department, Michigan State College.

Real estate investment made up two-thirds of the landlord's

^{1/} The value of the house was included in the total investment.

Table 4. Investment; Comparison of Landlord's and Tenant's Under
50-50 Leases* - Areas 1 and 5 - 1939 to 1944 inclusive

Item	Area 1		
	Total Farm	Landlord's	Tenant's
Real estate**(includes house)	\$13677	\$13677	0
Machinery and equipment	1993	266	1727
Horses	315	81	234
Productive livestock#	2730	1362	1368
Poultry	147	66	81
Feed	1888	926	962
Total	\$20750	\$16378	\$4372

Item	Area 5		
	Total Farm	Landlord's	Tenant's
Real estate**(includes house)	\$12768	\$12768	0
Machinery and equipment	1686	268	1418
Horses	303	52	251
Productive livestock#	2241	1137	1104
Poultry	90	37	53
Feed	1696	838	858
Total	\$18784	\$15100	\$3684

*See appendix table B and C for details

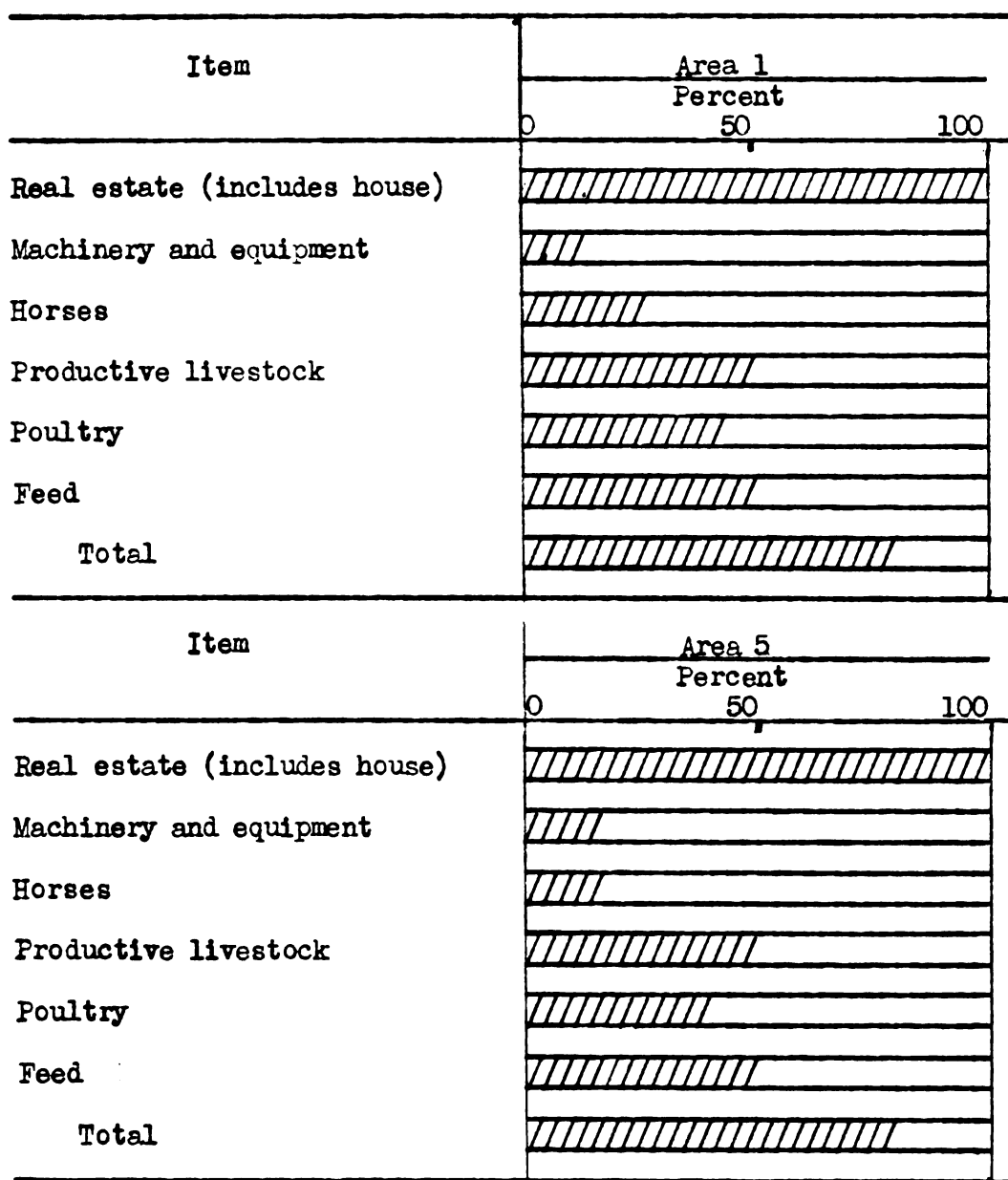
**The value of real estate per tillable acre has been held nearly constant on leases studied for the six years.

#Does not include poultry

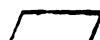
total investment with one-third in personal property (table 4).

The tenant's investment was entirely personal property in the leases studied. The landlord's investment per tillable acre remained the

same in all leases and the tenant's investment per tillable acre increased 37 percent from 1939 to 1944. This increase of the tenant's investment per tillable acre from 1939 to 1944 can be explained in the increase in value of farm personal property on the leases studied, while the landlord's main investment was in real estate which was left at a constant rate per tillable acre in the records.



Landlord's share



Tenant's share

Figure 2. Investments; percentage contributed by Landlord and Tenant Under 50-50 Leases-Areas 1 and 5-1939 to 1944 incl.

The machinery and equipment investment should be furnished entirely by the tenant under the 50-50 lease. In the leases studies in Area 1 the landlord contributed 13 percent and the tenant 87 percent of the machinery investment (figure 2). In Area 5 the landlord contributed 16 percent and the tenant 84 percent of the machinery investment.

Horses are intended to be furnished by the tenant under the 50-50 lease. In Area 1, the landlord contributed 26 percent of the investment in horses and the tenant 74 percent. In Area 5, the landlord contributed 17 percent of the investment in horses and the tenant 83 percent.

Productive livestock, except poultry, according to most 50-50 leases is to be owned by the landlord and tenant. In the farms studied this was the case.

The poultry enterprise is handled as agreed upon by the landlord and tenant. It is suggested in the Michigan 50-50 lease that the tenant be allowed to keep a stated number of hens for his own use, to be fed out of undivided feed. If the poultry enterprise is to be a major item, then the ownership is the same as the other productive livestock. Under the leases studied in Area 1 the landlord contributed 45 percent of the poultry investment and tenant 55 percent. In Area 5 the landlord contributed 41 percent and tenant 59 percent of the poultry investment. This indicates that most of the farms held a joint ownership of the poultry enterprise.

Feed investment is usually divided equally between both parties. For the leases studied 49 percent of the feed investment was contributed by the landlord and 51 percent by the tenant for the two areas.

The investment study shows that the landlord contributed \$347 in Area 1 and \$320 per farm in Area 5 as his investment in machinery and horses. In both Areas the landlord favored the tenant by sharing a part of the investment in machinery and horses. Productive livestock (except poultry) and feed investment were divided equally between the landlord and tenant. Poultry investment was contributed 56 percent by the tenant. This indicates that most of the farms held a joint ownership of the poultry enterprise.

Receipts

Receipts on the farms in this study averaged \$5350 in Area 1 and \$5046 in Area 5 for the six years 1939 to 1944 (table 5). The average receipts per tillable acre was \$39 in Area 1 and \$37 in Area 5. The total receipts per tillable acre increased 85 percent in Area 1 from 1939 to 1944. In Area 5 the total receipts per tillable acre increased 84 percent during the same period.

The greatest single factor contributing to the increased receipts over the period studied has been the rise in price of farm products. The price of farm products in Michigan has risen 105 percent from 1939 to 1944 according to the Agricultural Economics Department, Michigan State College.

Landlord's received 49 percent of the total receipts and the tenant's 51 percent in both Areas for the six year period (figure 5). During the six years the Landlord's total receipts per tillable acre for Area 1 increased 84 percent and the tenant's total receipts per tillable acre increased 85 percent (figure 6). In Area 5 the landlord's total receipts per tillable acre increased 92 percent and tenant's 77 percent from 1939 to 1944. The landlord's total receipts per tillable acre each year averaged about a dollar less per tillable acre than the tenant's for all the leases studied.

The livestock income other than dairy products and egg sales is usually divided equally under the 50-50 lease. For the leases studied livestock income was divided equally for both areas (figure 5).

The dairy sales may be divided with the tenant receiving more than 50 percent because of the large amount of labor involved

Table 5. Receipts; Comparison of Landlord's and Tenant's Under
50-50 Leases* - Areas 1 and 5 - 1939 to 1944 inclusive

Item	Area 1		
	Total Farm	Landlord's	Tenant's
Livestock income**	\$2260	\$1126	\$1134
Dairy sales	1612	805	807
Poultry income	464	208	256
Crop income	866	450	416
Miscellaneous income	148	20	128
Total	\$5350	\$2609	\$2741

Item	Area 5		
	Total Farm	Landlord's	Tenant's
Livestock income**	\$1475	\$ 732	\$ 743
Dairy sales	1877	929	948
Poultry income	254	111	143
Crop income	1188	585	603
Miscellaneous income	252	109	143
Total	\$5046	\$2466	\$2580

*See appendix table D for details

**Poultry is not included under livestock income

in the dairy enterprise. On the farms studied in Area 1 the dairy sales were divided equally for the six year period. In Area 5 the dairy sales were divided 49 percent to the landlord and 51 percent to the tenant for the same period.

Sharing of the poultry income depends on the ownership. The 50-50 lease suggests that the tenant be allowed to keep a designated number of hens for his own use, however, if the poultry

enterprise is a sizable item then the ownership is shared. Under the leases studied in Area 1 the landlord received 45 percent of the poultry income and the tenant 55 percent for the six year period. In Area 5 the landlord received 44 percent of the poultry income and tenant 56 percent for the years studied. This indicates that for most of the leases the poultry income was divided equally.

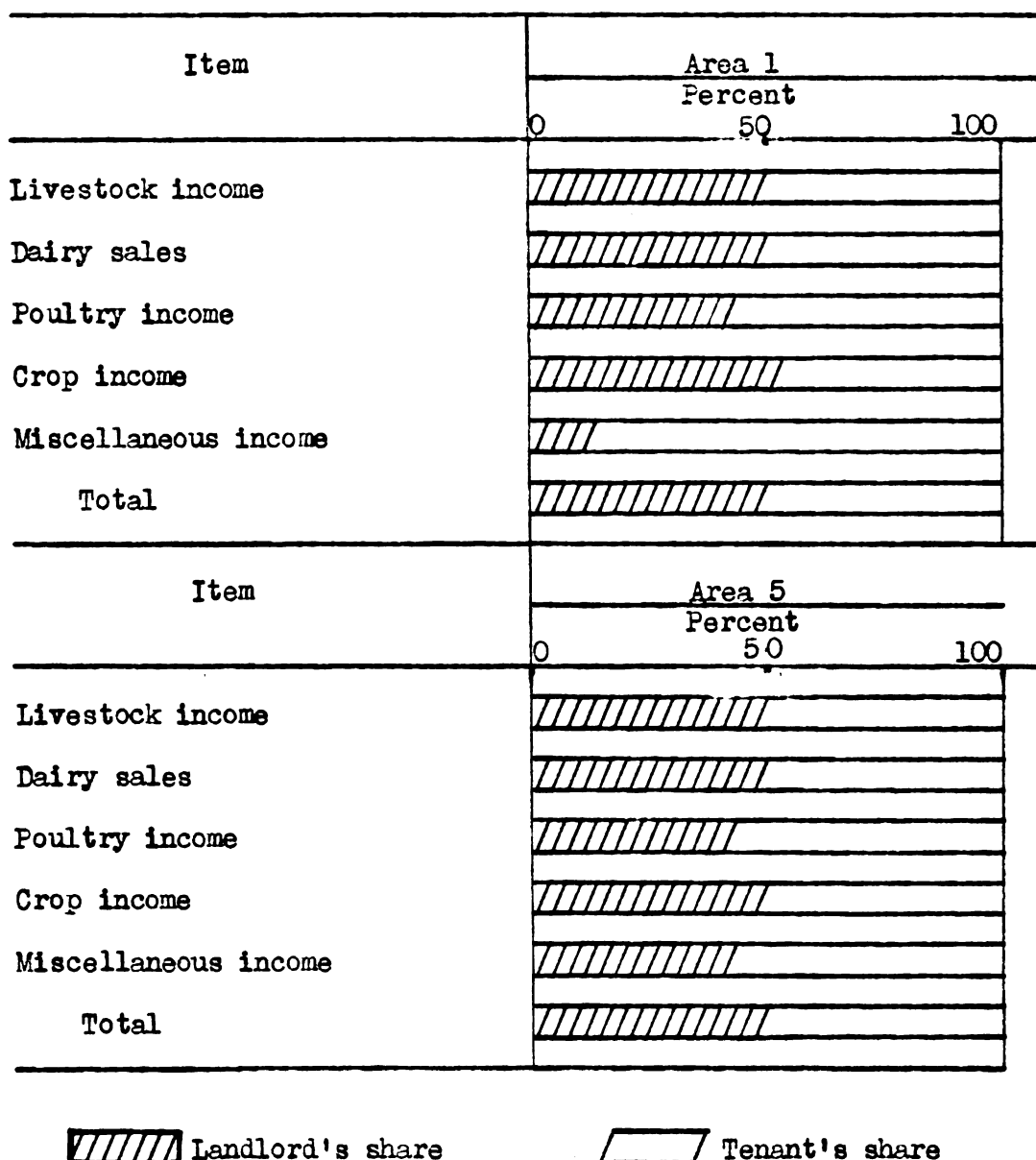


Figure 5. Receipts; percentage received by Landlord and Tenant

Under 50-50 Leases - Areas 1 and 5 - 1939 to 1944 incl.

Crop income is usually divided equally in the 50-50 leases, except for intensive crops which may favor the tenant because of intensive labor involved. In Area 1 the crop income for the years 1939 to 1944 was divided 52 percent to the landlord and 48 percent to the tenant. In Area 5 the crop income was divided 49 percent to the landlord and 51 percent to the tenant for the six years.

Miscellaneous income is divided according to the nature of the income. For the leases studied in Area 1 the landlord received 14 percent and the tenant 86 percent of the miscellaneous income during the six years. In Area 5 the miscellaneous income was divided 43 percent to the landlord and 57 percent to the tenant for the same period.

This study of the total receipts of farms using 50-50 leases shows that the landlord is receiving 49 percent of the total receipts and the tenant 51 percent for the years studied. The increase in receipts per tillable acre of 85 percent in Area 1 and 84 percent in Area 5 from 1939 to 1944 has been largely due to the 105 percent rise in price of Michigan farm products during this period.

Livestock and crop income was divided very well for the leases studied. Dairy sales were divided equally between both parties. Poultry income was divided 55 percent to the tenant for the six year period. This indicates that for most of the leases the poultry income was divided equally, although some tenants were allowed to keep a small flock for his own use. For both dairy and poultry the tenant was not favored with the greater proportion of the milk and egg sales as is suggested in the 50-50 lease. This suggestion takes into consideration the large amount of labor involved in caring for the dairy and poultry enterprises.

Expenses and Charges

Total expenses and charges averaged \$4199 in Area 1 and \$3847 in Area 5 for the years 1939 to 1944 (table 6). Total expenses include both regular farm expenses and charges for family labor, operator's labor and interest on both landlord's and tenant's investment at 5 percent. The total expenses per tillable acre averaged \$31 for Area 1 and \$29 for Area 5 during the six years. The total expenses per tillable acre increased 54 percent in Area 1 from 1939 to 1944. In Area 5 the total expenses per tillable acre increased 52 percent from the low year 1940 to 1944.

The charges for family labor, operator's labor and interest on investment at 5 percent comprised about 50 percent of the total expenses and charges in Area 1 and 52 percent in Area 5. The index of wages paid hired help increased 137 percent during the six year period according to the 1945 Annual Crop Report for Michigan. Interest on investment has been held at 5 percent.

The regular farm expenses other than the charges listed above comprise about 50 percent of the total expenses in Area 1 and 48 percent of the total expenses in Area 5 for the six year period. The prices paid by farmers for commodities used, taxes, and interest increased 36 percent from 1939 to 1944.

Landlord's contributed 44 percent of the total expenses in Area 1 and the tenant's 56 percent, from 1939 to 1944 (Figure 7). In Area 5 the landlord contributed 43 percent of the total expenses and the tenant 57 percent for the same period (Figure 8). During the six year period the landlord's total expense per tillable acre in Area 1 increased 34 percent and the tenant's 73 percent (Figure 9).

Table 6. Expenses and Charges; Comparison of Landlord's and Tenant's
Under 50-50 Leases* - Areas 1 and 5 - 1939 to 1944 incl.

Item	Area 1		
	Total Farm	Landlord's	Tenant's
Farm Improvements	247	243	4
Interest at 5%	1038	819	219
Taxes	113	108	5
Machinery and equipment	415	97	318
Horses	13	4	9
Operator's labor	857	-	857
Family labor	151	10	141
Hired labor	246	21	225
Feed purchases	691	344	347
Livestock expense	67	31	36
Crop expense	307	152	155
Miscellaneous expense	54	12	42
Total	\$4199	\$1841	\$2358

Item	Area 5		
	Total Farm	Landlord's	Tenant's
Farm Improvements	220	215	5
Interest at 5%	939	755	184
Taxes	106	105	1
Machinery and equipment	427	80	347
Horses	28	6	22
Operator's labor	835	-	835
Family labor	222	84	138
Hired labor	265	19	246
Feed purchases	371	186	185
Livestock expense	50	24	26
Crop expense	343	174	169
Miscellaneous expense	41	10	31
Total	\$3847	\$1658	\$2189

*See appendix tables E and F for details

In Area 5 the landlord's total expense per tillable acre increased 36 percent and the tenant's 66 percent from the low year 1940 to 1944. The landlord's total expense averaged from \$2 per tillable acre in 1939 to \$7 per tillable acre in 1944 less than the tenant's

total expense per tillable acre for all leases studied.

The tenant's total expenses per tillable acre have been rising faster than the landlord's over the six year period. This may be explained in that the tenant's contribution of operator's and family labor and machinery expense per tillable acre have risen 54 percent and 95 percent respectively during the six year period. The tenant's labor charge for operator's and family labor increased 78 percent from 1939 to 1944, however there was .25 less man equivalent handling 15 percent more tillable acres. Hired labor increased with the going rate. The landlord's main contribution of

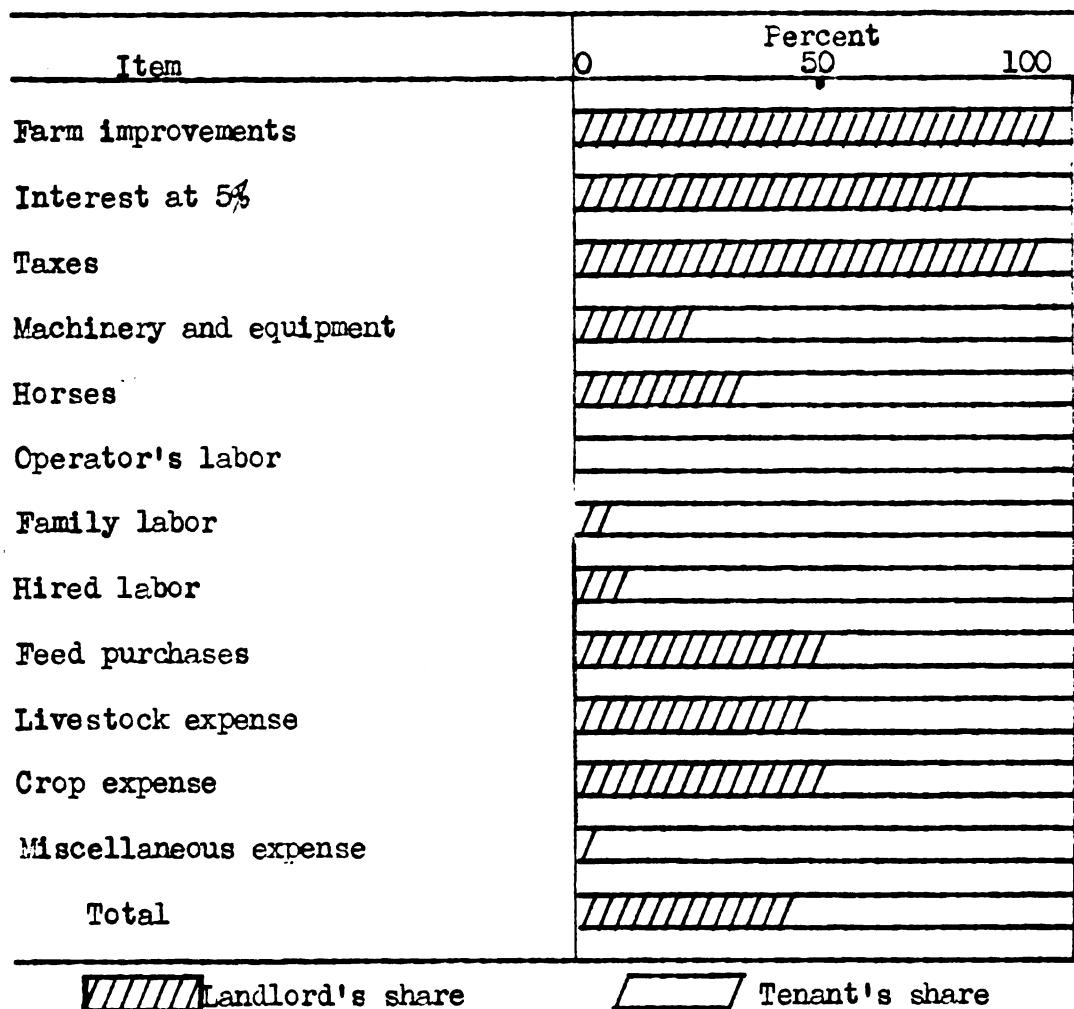


Figure 7. Expenses and charges; percentage contributed by Landlord and Tenant under 50-50 leases-Area 1 - 1939 to 1944 incl.

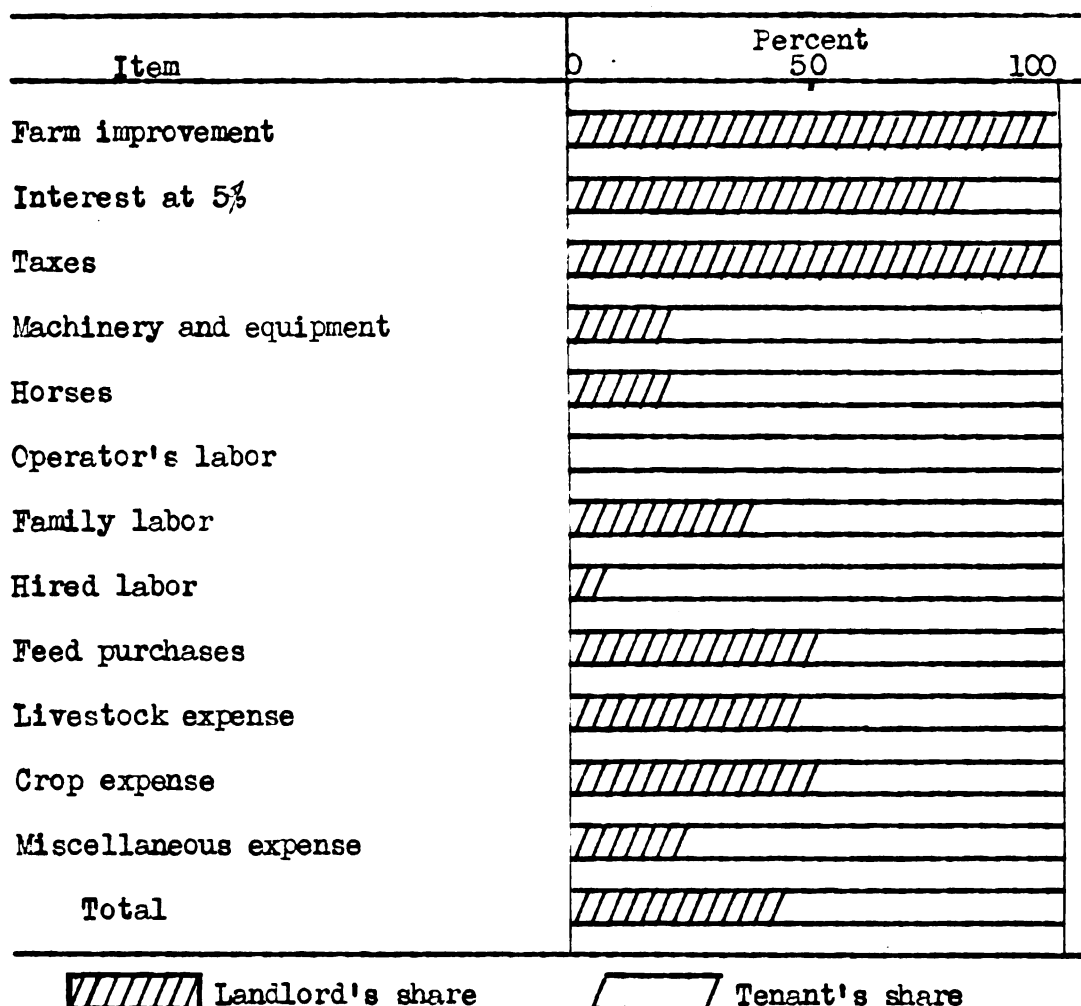


Figure 8. Expenses and charges; percentage contributed by Landlord and Tenant Under 50-50 Leases-Area 5 - 1939 to 1944 incl.

real estate has been held constant on the farm account records studied.

Farm improvement expenses are borne by the landlord in the 50-50 lease. The tenant usually contributes his labor for minor repairs on the improvements. In the leases studied the landlord contributed 98 percent of the farm improvement expense and the tenant 2 percent for both areas.

Interest on investment has been figured at 5 percent. For the leases studied in Area 1 the landlord contributed 79 percent of

the interest on investment and the tenant 21 percent. In Area 5 the landlord contributed 80 percent and the tenant 20 percent of the interest on investment. As pointed out before the landlord's investment per tillable acre for all leases studied from 1939 to 1944 remained the same because of real estate values per tillable acre in the farm account books being held the same. This interest on investment figure for the landlord would be low because of real estate values advancing 46 percent during this period.

Taxes on the real estate are to be paid by the landlord in the 50-50 lease. On the farms studied the landlords contributed about 96 percent in Area 1 and 99 percent in Area 5 for taxes. The rest was contributed by the tenant.

Machinery and equipment expenses are paid by the tenant under the 50-50 lease, with the exception that the landlord usually furnished one-half of the tractor fuel and oil. In this study the landlord contributed 23 percent of machinery and equipment expense and the tenant 77 percent in Area 1. In Area 5 the landlord contributed 19 percent of the machinery and equipment expense and the tenant 81 percent for the six year period.

Horses are supposed to be owned by the tenant in the 50-50 lease. In the leases studied in Area 1 the landlord contributed 29 percent and the tenant 71 percent of the horse depreciation. In Area 5 the landlord's contribution of the horse depreciation was 21 percent and the tenant's 79 percent.

Labor is the major contribution of the tenant under the 50-50 lease. All labor is to be furnished by the tenant unless the landlord contributes some of the labor cost for special crops. The total labor is divided up into hired labor and a charge for family

and operator's labor. In the leases studied in Area 1 the landlord contributed 9 percent of hired labor and the tenant 91 percent. In Area 5 the landlord contributed 7 percent of the hired labor and the tenant 93 percent. For family labor in Area 1 the landlord contributed 7 percent and the operator 93 percent. In Area 5 the landlord contributed 38 percent and the tenant 62 percent of all family labor. The operator's labor was furnished entirely by the tenant. Hired labor and family labor comprised about 30 percent of the total charge for labor.

Feed purchases is divided equally in the 50-50 lease, however the tenant is to stand all of the feed purchases for poultry owned entirely by him. In the leases studied from 1939 to 1944 feed expense was divided equally for both areas.

Livestock expense is divided equally in the 50-50 lease except for expense on horses or poultry owned entirely by the tenant. On the farms studied in Area 1 the landlord contributed 46 percent of the livestock expense and the tenant 54 percent. In Area 5 livestock expense was divided 48 percent to the landlord and 52 percent to the tenant.

Crop expense is usually divided equally between both parties in the 50-50 lease. In the leases studied in Area 1 the landlord and tenant shared equally the crop expenses. In Area 5 the landlord contributed 51 percent and the tenant 49 percent of the crop expense.

Miscellaneous expense is contributed by either party depending upon the nature of the expense. Usually the landlord and tenant share the farm share of electric and telephone. In the leases

studied the landlord contributed in Area 1, 2 percent and the tenant 98 percent of the miscellaneous expense. In Area 5 the landlord contributed 24 percent and the tenant 76 percent of miscellaneous expense.

This study of the total expenses and charges on farms using the 50-50 lease shows that the landlord contributed about 44 percent and the tenant 56 percent of the total expenses and charges during the six year period. During the period the landlord's total expense per tillable acre increased about 35 percent and the tenant's 69 percent. The landlord's total expense averaged from \$2 per tillable acre in 1939 to \$7 per tillable acre in 1944 less than the tenant's total expense per tillable acre.

The tenant's total expenses have been rising faster than the landlord's over the six year period. The tenant's main contribution of operator's and family labor and machinery expense have risen in the leases studied. Operators and family labor per tillable acre increased 54 percent and machinery expense 95 percent over the six year period. The landlord's main contribution of real estate has been held constant on the farm account records. The landlord's contributions of farm improvement expense and taxes per tillable acre increased 12 percent and 7 percent respectively. The other items of expense mainly feed purchases, livestock expense, and crop expense were divided equally between both parties.

Financial Summary

The ratio of prices paid to prices received by farmers in Michigan (table 7) grew more favorable each year increasing from 78 in 1939 to 125 in 1943, and falling off in 1944 to 117. This ratio was plotted in figure 10.

Labor incomes on all farms using 50-50 leases (table 8) for the six years studied increased rapidly for both areas reaching a high in 1942 (figure 10). Labor incomes fell off in 1943 and started up again in 1944. The labor incomes of the 50-50 lease farms averaged about \$50 more than the labor incomes of all cooperators in the two areas.

The return for management was used in this study to measure the equitability of the division of returns to the landlord and tenant. The return for management represents the net above all other charges and was found by subtracting the total expenses and charges from the total receipts (table 9). Expenses and charges included cash expenses, depreciation, and charges for operator's and family labor and interest on investment at 5 percent. The return for management differs from labor income in that the charge for operator's labor has been deducted.

It appears as if the management return should be equally divided between the landlord and tenant if each party is receiving a just return for his contributions. The contributions and returns of the landlord and tenant were analyzed to see if each party received a just return for his contributions.

The average management return in Area 1 for the six years was \$768 for the landlord and \$383 for the tenant (table 9). In

Table 7. Price Index Number for Michigan* - 1939 to 1944 inclusive.

Years	Price index no's*		
	Prices received	Prices paid	Ratio
1939	97	125	78
1940	106	126	84
1941	129	134	96
1942	161	152	106
1943	202	162	125
1944	199	170	117

*From Michigan Annual Crop Report - 1945

Table 8. Labor Income for all Farm Business Analysis Cooperators
and 50-50 Renter-Operated Farms - Areas 1 and 5 -
1939 to 1944 inclusive.

Years	Average all Cooperators		50-50 Lease Farms*	
	Area 1	Area 5	Area 1	Area 5
1939	\$1053	\$ 802	\$ 806	\$ 648
1940	1092	987	1023	1131
1941	2268	1973	2009	2595
1942	3056	2763	3175	2672
1943	2235	2222	2237	2368
1944	2719	2496	2801	2788

*See appendix Table G for details

Table 9. Financial Summary; Comparison of Landlord's and Tenant's

Under 50-50 Leases - Areas 1 and 5 - 1939 to 1944 incl.

Years	Item	Area 1		
		Total farm	Landlord	Tenant
<u>1939</u>				
	Receipts	\$3398	\$1671	\$1727
	Expenses and Charges*	<u>3181</u>	<u>1521</u>	<u>1660</u>
	Management	217	150	67
<u>1940</u>				
	Receipts	4141	2004	2137
	Expenses and Charges*	<u>3709</u>	<u>1749</u>	<u>1960</u>
	Management	432	255	177
<u>1941</u>				
	Receipts	4653	2284	2369
	Expenses and Charges*	<u>3244</u>	<u>1541</u>	<u>1703</u>
	Management	1409	743	666
<u>1942</u>				
	Receipts	6362	3124	3238
	Expenses and Charges*	<u>4147</u>	<u>1757</u>	<u>2390</u>
	Management	2215	1367	848
<u>1943</u>				
	Receipts	6236	2992	3244
	Expenses and Charges*	<u>5199</u>	<u>2114</u>	<u>3085</u>
	Management	1037	878	159
<u>1944</u>				
	Receipts	7313	3580	3733
	Expenses and Charges*	<u>5712</u>	<u>2361</u>	<u>3351</u>
	Management	1601	1219	382
<u>Average</u>				
	Receipts	5350	2609	2741
	Expenses and Charges*	<u>4199</u>	<u>1841</u>	<u>2358</u>
	Management	1151	768	383

Years	Item	Area 5		
		Total farm	Landlord	Tenant
<u>1939</u>				
	Receipts	\$3123	\$1478	\$1645
	Expenses and Charges*	<u>3068</u>	<u>1332</u>	<u>1736</u>
	Management	55	146	-91
<u>1940</u>				
	Receipts	3844	1820	2024
	Expenses and Charges*	<u>3305</u>	<u>1501</u>	<u>1804</u>
	Management	539	319	220
<u>1941</u>				
	Receipts	5482	2617	2865
	Expenses and Charges*	<u>3472</u>	<u>1651</u>	<u>1821</u>
	Management	2010	966	1044

* Charges include family labor, operator's labor and interest on investment at 5 percent.

Table 9. Financial Summary; Comparison of Landlord's and Tenant'sUnder 50-50 Leases-Areas 1 and 5-1939 to 1944 incl.(cont'd)

Years	Item	Area 5		
		Total farm	Landlord	Tenant
<u>1942</u>				
	Receipts	\$5583	\$2806	\$2777
	Expenses and Charges*	<u>3841</u>	<u>1660</u>	<u>2181</u>
	Management	1742	1146	596
<u>1943</u>				
	Receipts	5696	2849	2671
	Expenses and Charges*	<u>4495</u>	<u>1824</u>	<u>2671</u>
	Management	1201	1025	176
<u>1944</u>				
	Receipts	7313	3580	3733
	Expenses and Charges*	<u>4901</u>	<u>1983</u>	<u>2918</u>
	Management	1648	1240	408
<u>Average</u>				
	Receipts	5046	2466	2580
	Expenses and Charges*	<u>3847</u>	<u>1658</u>	<u>2189</u>
	Management	1199	808	391

*Charges include family labor, operators labor and interest on investment at 5 percent.

Area 5 the average management return of the landlord for the same period was \$808 and the tenant \$391. For the two areas the return for management for the landlord was twice that of the tenant.

Return for management to the landlord and the tenant for each of the six years is shown in Table 9, and presented graphically in Figure 11. The graph shows a fairly equal management return to the landlord's and tenant's for the first three years, 1939 to 1941 inclusive in both areas. The landlord, however, received slightly more each year for his management than the tenant. It would seem that in these three years the return for management of both tenant and landlord were reasonably equitable. In the years 1942 to 1944 inclusive the disparity in the return for management to the tenant and landlord increased. Indications are that some adjustment in the sharing of the income could well be made.

Before adjustments can be made it would be well to look at the major contributions of the landlord and tenant to see if their contributions are in line with rising prices during the six year period. The landlord's major contributions not shared with the tenant were interest on investment, improvement expense, and taxes on land. The landlord's investment per tillable acre remained about the same in the leases studied over the six year period.

Farm real estate values increased 46 percent from 1939 to 1944 (table 10). During the last three year period the landlord's real estate investment should be adjusted to allow for the rise in value of farm real estate. Farm improvement expense per tillable acre has increased about 12 percent from 1939 to 1944 for the leases studied. Tax expense per tillable acre has increased 7 percent for the same period.

Table 10. Farm Land*: Index of Estimated value per Acre and Index of Wages paid. Hired Help in Michigan-1939 to 1944 incl.

Years	Index of farm land** (1910-14=100)	Index of wages* (1910-14=100)
1939	92	126
1940	91	129
1941	93	164
1942	105	202
1943	115	258
1944	134	299

**All farm land with improvements

*From Annual Crop Report for Michigan

The tenant's main contributions not shared by the landlord were labor and machinery. The cost of labor in Michigan has gone up 137 percent from 1939 to 1944 (table 10). During these years the charge for operator's labor was \$600 for the first three years, \$960 for 1942 and \$1200 for the last two years in the farm account records. This charge for operator's labor was in line with using labor costs for each year except 1941 and 1944. Family labor is usually figured as man equivalent and the same charge per month as the operator is used. Hired labor has increased during this period with the going rate. The machinery expenses per tillable acre increased 95 percent on the leases studied.

The main contributions shared by both parties are productive livestock, feed, feed purchases, livestock expense, and crop expense. In the leases studied the above items were shared as near 50-50 as possible. Prices paid by farmers increased 36 percent over the six year period.

Receipts were divided 49 percent to the landlord and 51 percent to the tenant in the leases studied.

The adjustments in the return for management necessary are interest on investment for the landlord and labor for the tenant. The landlord's real estate investment was adjusted for the last three years of the study to keep in line with rising real estate values (table 10). The tenants charge for operators and family labor was adjusted for the years 1941 and 1944 according to the index of wages for those years (table 10). The operators and family labor charge for the other four years was in line with wage increases.

Table 11 shows the landlord's and tenant's returns for manage-

Table 11. Returns for Management; Adjusted Under 50-50 Leases - Areas 1 and 5 - 1939 to 1944 inclusive

Item	Area 1				
	1939	1940	1941	1942	1943
Landlord's					
Return for Management	150	255	743	1367	878
Additional Interest on Investment	0	0	0	89	159
Adjusted Return for Management	150	255	743	1278	719
Decrease in Dairy Sales	40	71	73	155	186
Proposed return for Management	110	184	670	1123	533
Tenant's					
Return for Management	67	177	666	848	159
Additional labor charge	0	0	195	0	0
Adjusted Return for Management	67	177	471	848	159
Increase in dairy sales	40	71	73	155	186
Proposed Return for Management	107	248	544	1003	345

Item	Area 5				
	1939	1940	1941	1942	1943
Landlord's					
Return for Management	146	319	966	1146	1025
Additional Interest on Investment	0	0	0	92	172
Adjusted Return for Management	146	319	966	1054	853
Decrease in Dairy Sales	37	58	71	195	252
Proposed return for Management	109	261	895	859	601
Tenant's					
Return for Management	-91	220	1044	596	176
Additional labor charge	0	0	206	0	0
Adjusted Return for Management	-91	220	838	596	176
Increase in Dairy Sales	37	58	71	195	252
Proposed Return for Management	-54	278	909	791	428

ment adjusted for higher real estate values and consequent higher interest on investment charge for the landlord, and the additional charge for the tenant's labor. The adjusted management returns for the last three years for Areas 1 and 5 (figure 12) seem more equitable now that the landlord's real estate and tenant's labor contributions were adjusted to rising prices.

Is the return for management, adjusted to price rises, as equitable as can be made under a 50-50 lease? It appears as if the tenant should be given a greater share of the receipts, especially during the last three years of the study.

The Michigan 50-50 lease suggests that the tenant may be given over 50 percent of the dairy sales to compensate for the large amount of labor involved in the dairy enterprise. In the leases studied the dairy sales were divided equally. How would the return for management to the landlord and tenant compare if the tenant had received more than 50 percent of the dairy sales? To this study, further, the tenant was given 55 percent of the dairy sales during the years 1939 to 1941 inclusive, and 60 percent for the last three years. The increase in income to the tenant was added to his return for management and subtracted from the landlord's return for management (table 11). The resulting return for management for each party is shown in figure 13. The return for management for both parties appears more equitable when the tenant was allowed 55 percent of the dairy sales from 1939 to 1944 inclusive and 60 percent of the dairy sales for the last three years.

Comparison of 50-50 Renter-Operated Farms with Owner-Operated Farms
in Areas 1 and 5 - 1939 and 1944

The purpose of the comparison of the 50-50 renter-operated farms with owner-operated farms was to see if there is any significant differences in size of business, organization of crop and livestock enterprises, and financial returns.

There was a total of 162 owner records in 1939 and 98 owner records studied in 1944. (table 12). There was a total of 31, 50-50 lease records in 1939 and 32 in 1944 used in the study.

The 50-50 renter-operated farms in the two areas averaged 135 tillable acres or 9 percent more than the owner-operated farms in 1939 and 1944. Both 50-50 renter-operated farms and owner-operated farms increased 16 percent in tillable acres from 1939 to 1944.

The 50-50 renter-operated farms averaged 494 productive man work units or 12 percent more than the owner operated farms in 1939. The total productive man work units on 50-50 renter operated farms increased 12 percent and owner-operated farms 16 percent from 1939 to 1944.

In 1939 the 50-50 renters and the owner-operators both operated their farms with the same degree of intensity, 3.9 man work units per tillable acre. In 1944 the 50-50 renters and owner-operators had 3.8 and 3.9 productive man work units per tillable acre respectively.

Labor efficiency was higher on the 50-50 lease farms. In 1939 they had 37 more productive man work units per man or 15 percent more than the owners. In 1944 the 50-50 renters had 48 or 16

Table 12. Fifty-Fifty Renter-Operated and Owner-Operated Farms -
 Some Organization Factors and Cropping Program -
 Areas 1 and 5 - 1939 and 1944

Item	1939		1944	
	50-50 rented	owner	50-50 rented	owner
<u>Organization Factors</u>				
Number of farms	31	162	32	98
Acres per farm	175	163	199	181
Tillable acres	125	115	145	133
Total P.M.W.U.	494	443	546	513
P.M.W.U. per man	279	242	357	309
Average no. of men	1.77	1.83	1.53	1.66
Percent having tractors	74	65	97	94
Operator's age	-	-	34	49
<u>Crops</u>				
Percent in legumes	32	32	28	27
Percent tillable acres in:				
Alfalfa hay	17	16	11	12
Other hay	12	11	10	11
Tillable pasture	17	20	17	19
Corn(grain & silage)	21	18	28	20
Oats and barley	14	14	14	12
Wheat	8	10	13	13
Beans	3	2	1	2
Beans-soy	2	1	2	4
Other	6	8	4	7
Crop yield index	91	-	99	98
Crop sales - total	\$712	\$523	\$955	\$1219
- landlord's	355	0	491	0

percent more productive man work units per man.

There were more tractors on the 50-50 lease farms. In 1939 there was 9 percent more tractors on 50-50 lease farms and in 1944, there was 3 percent more tractors than on owner farms.

The 50-50 renters averaged 34 years of age as compared to 49 years of age for owners in 1944.

There was very little difference in the cropping program of the 50-50 lease farms and the owner-operated farms. A greater difference is noted for the 50-50 rented and owner-operated farms between the years 1939 and 1944. The percentage of the tillable land in legumes for all farms lowered about 5 percent from 1939 to 1944. The percentage of the tillable acres for the 50-50 lease farms in alfalfa and other hay decreased 8 percent, miscellaneous crops decreased 3 percent, corn increased 7 percent and wheat increased 4 percent from 1939 to 1944. The percentage of the tillable acres for owner-operated farms in alfalfa lowered 5 percent, corn increased 2 percent, and wheat increased 3 percent from 1939 to 1944. There was very little variation in the other crops from 1939 to 1944.

The 50-50 renter-operated farms had 4.5 more productive animal units in 1939 than the owner farms (table 13). They had one productive animal unit for each 4.0 tillable acres compared with one for each 4.3 tillable acres on the owner farms. In 1944 the 50-50 lease and owner farms had 4.1 and 4.0 tillable acres per productive animal unit respectively. From 1939 to 1944 the 50-50 renters increased the productive livestock 7 percent while owners increased 17 percent.

Productive livestock income per tillable acre was about 3

Table 13. Fifty-Fifty Renter-Operated and Owner-Operated Farms -
 Livestock Program - Areas 1 and 5 - 1939 and 1944

Item	1939		1944	
	50-50 rented	owner	50-50 rented	owner
<u>Livestock</u>				
Productive animal units	31.5	27.0	35.4	33.2
Tillable acres per P. A. U.	4.0	4.3	4.1	4.0
Productive livestock income	\$2202	\$2094	\$5474	\$5665
<u>Cattle</u>				
No. of dairy cows	9.7	10.1	12.7	11.6
Dairy sales per cow	\$ 78	\$ 95	\$ 236	\$ 236
Dairy product sales	757	957	2999	2739
Cattle income (meat)	412	414	679	848
<u>Hogs</u>				
No. of sows	2.5	2.1	2.7	2.0
Pigs per litter	6.4	6.3	5.9	5.7
Hog income	\$ 339	\$ 295	\$1228	\$ 954
<u>Sheep</u>				
No. of ewes	24.1	17.7	23.4	13.1
Sheep income	\$361	\$ 157	\$ 226	\$ 214
<u>Poultry</u>				
No. of hens	109	106	89	133
Egg sales per hen	\$1.93	\$ 204	\$3.21	\$4.25
Egg sales - total	211	216	286	565
Poultry income (meat)	122	55	56	345

percent higher for owner farms in 1939 in spite of the renters having more stock. The returns per head were higher on the owner farms. In 1944 the owner farms productive livestock income per tillable acre was 13 percent higher than the 50-50 lease farms. The productive livestock income per tillable acre for owners increased 129 percent, and 50-50 farms increased 115 percent from 1939 to 1944.

The dairy enterprise consisted of 10 cows in 1939 for both 50-50 lease and owner farms, and increased to 12 cows in 1944. The dairy sales per cow for 50-50 lease farms was 22 percent lower than owner farms in 1939. The dairy sales per cow for 50-50 renters and owners was the same in 1944.

The hog enterprise was small consisting of from 2 to 2.7 sows on the average. The 50-50 lease farms had .4 more sows in 1939 and .7 more in 1944 than owner farms. Hog income was about 15 percent more for 50-50 renter farms than owners in 1939. In 1944 the hog income was 29 percent higher for the 50-50 lease farms.

Sheep enterprise had 6.5 more ewes in 1939 and 10 more ewes in 1944 on the 50-50 lease farms. Sheep income for 50-50 renters was \$11 per ewe in 1939 and \$9 per ewe in 1944. Sheep income for owners was \$9 per ewe in 1939 and \$16 per ewe in 1944.

The poultry flock averaged the same size for both groups in 1939. In 1944 50-50 renters had 45 less hens than owners. Egg sales per hen was about the same for 50-50 renters and owners in 1939 while 50-50 renters averaged about a dollar less egg sales per hen in 1944.

Fifty-fifty renter operated farms had an average investment of \$15640, and owner-operated farms had an average investment of

Table 14. Fifty-Fifty Renter-Operated and Owner-Operated Farms -
Financial Summary - Areas 1 and 5 - 1939 and 1944

Item	1939		1944	
	50-50 rented	Owners	50-50 rented	Owners
<u>Investment</u>				
Real estate (less house)	\$10609	\$9830	\$11897	\$11810
Machinery	1348	1512	2330	2709
Livestock	2352	2198	3444	3349
Feed	1332	1089	2248	2196
Total	15640	14629	19919	20064
<u>Receipts</u>				
Livestock	2202	2094	5475	5665
Crop sales	843	746	1215	1220
Miscellaneous	174	154	263	201
Total	3219	2994	6952	7086
<u>Expenses</u>				
Total	1449	1317	2865	3336
<u>Receipts less Expenses</u>	1770	1677	4087	3750
Family labor	182	203	191	455
<u>Net farm income</u>	1588	1474	3896	3295
Operator's labor	592	565	1172	1144
Return for invest. & mgt.	996	909	2724	2151
Percent on investment	6.37	6.21	13.68	10.82
<u>Net farm income</u>	1588	1474	3896	3295
Interest at 5 percent	782	731	996	1003
<u>Labor income</u>	806	743	2900	2292

\$14629 in 1939. In 1944 the average investment was \$19919 for 50-50 lease farms and \$20064 for owners. The average investment per tillable acre for 50-50 renters was \$125 and for owners \$127. In 1944 the 50-50 renters investment per tillable acre was \$137 and for owners \$151. The 50-50 renters investment per tillable acre increased 11 percent and owners 19 percent from 1939 to 1944.

Receipts per tillable acre were the same for 50-50 lease farms and owners in 1939. In 1944 the 50-50 lease farms had 10 percent less receipts per tillable acre than the owner-operated farms. Total receipts per tillable acre increased 86 percent for 50-50 lease farms and 100 percent for owners.

Expenses per tillable acre was the same for 50-50 renters and owners in 1939. In 1944 the 50-50 lease farms expenses per tillable acre were 27 percent lower than the owner operated farms. The 50-50 renter farms expenses per tillable acre increased 71 percent and owner operated farms 113 percent from 1939 to 1944. Net farm income was \$100 less for 50-50 renter-operated farms than the owner-operated farms in 1939. In 1944 the 50-50 rented farms had about \$600 greater net farm income than the owners. The greater net farm income in 1944 for the 50-50 lease farms may be explained that the expenses per tillable acre were 27 percent less and income only 10 percent less per tillable acre than owners.

The Rate earned on investment averaged slightly over 6 percent for 50-50 rented farms and owners in 1939. In 1944 the 50-50 rented farms earned 14 percent interest on the investment compared with 10 percent on the owner-operated farms.

Labor income was about the same for 50-50 lease farms and

owners in 1939. In 1944 the 50-50 lease farms had \$600 more labor income than owners.

The 50-50 renter-owner study shows that in 1939 there was no significant difference in farm organization, receipts, expenses, or earnings between the 50-50 rented and owned farms. The greater return on the 50-50 lease farms in 1944 may be explained that they kept the expenses per tillable acre 27 percent lower, while the receipts per tillable acre was only 10 percent lower than owner's. The 50-50 renters also had 9 percent more tillable acres.

Summary

The purpose of this study has been to determine the equitability of Michigan fifty-fifty crop and livestock share farm leases. This has been done by comparison of landlord's and tenant's contributions and returns on farms with 50-50 leases in the farm accounting project in type of farming Areas 1 and 5 for 1939 to 1944.

The farms in this study averaged 180 acres in size for Area 1 and 191 acres in size for Area 5. Over 75 percent of the farm land was tillable in Area 1 and 70 percent in Area 5.

The farms in this study with 50-50 leases had an average total investment of \$20750 in Area 1 and \$18784 in Area 5 for the years 1939 to 1944. The average investment per tillable acre was \$153 in Area 1 and \$139 in Area 5. Landlord's in Area 1 contributed 79 percent of the total investment, and in Area 5, 80 percent.

The price index of farm products in Michigan averaged 149 from 1939 to 1944. The price index ranged from 97 in 1939 to 202 in 1943 falling to 199 in 1944. This was an increase of 105 percent. The index of prices paid by farms averaged 145. The index of prices paid ranged from 125 in 1939 to 170 in 1944, or an increase of 36 percent. The ratio of prices paid to prices received by farmers grew more favorable each year increasing from 78 in 1939 to 125 in 1943, falling in 1944 to 117.

Receipts on the farms in this study averaged \$5350 in Area 1 and \$5046 in Area 5 for the six years 1939 to 1944. This was \$39 per tillable acre in Area 1 and \$37 in Area 5. Landlord's received 49 percent of the total receipts and the tenant's 51 percent in both areas for the six year period.

Landlord's total receipts per tillable acre in Area 1 in-

creased 84 percent and the tenant's 85 percent from 1939 to 1944. In Area 5 the landlord's total receipts per tillable acre increased 92 percent and tenant's 77 percent for the six years. The landlord's total receipts per tillable acre each year averaged about a dollar less than the tenant's for all leases studied.

Total expenses and charges averaged \$4199 in Area 1 and \$3847 in Area 5 for the years 1939 to 1944. This amounted to \$31 per tillable acre in Area 1 and \$29 in Area 5. Landlord's contributed an average of 43 percent of the total expenses in Areas 1 & 5 and the tenant's 57 percent during the years 1939 to 1944.

The landlord's major contributions, not shared with the tenant, were interest on his investment, improvement expense, and taxes on land. The landlord's investment per tillable acre remained the same, improvement expenses per tillable acre increased 12 percent, and the tax expense per tillable acre increased 7 percent in the leases studied from 1939 to 1944. Farm real estate values increased 46 percent from 1939 to 1944. During the last three years the farm real estate investment should be adjusted to allow for the rise in value of farm real estate.

The tenant's major contributions, not shared with the landlord were labor and machinery. Operator's and family labor charge per tillable acre increased 54 percent over the six year period. The cost of hired labor increased with the going wage rates. There was .25 less man equivalent on 15 percent more tillable land. Hired labor wages in Michigan have gone up 137 percent from 1939 to 1944. During these years the charge for operator's labor was \$600 for the first three years, \$960 for 1942 and \$1200 for the last two years

in the farm account records. This charge for operator's labor was in line with rising labor costs for each year except 1941 and 1944. Family labor was usually figured as man equivalent and the same charge made per month as for the operator. Machinery expense per tillable acre increased 95 percent on the leases studied.

The return for management was used in this study to measure the equitability of the division of returns to the landlord and tenant. The return for management represents the net above all other charges and was found by subtracting the total expenses and charges included cash expenses, depreciation and charges for operator's and family labor and interest on investment at 5 percent. It appears as if the management return should be divided equally between the landlord and tenant if each party is receiving a just return for his contributions.

There was a fairly equal management return to the landlord's, ~~and tenants~~ for the first three years 1939 to 1941 inclusive, in both areas. The landlord, however received slightly more each year for his management than the tenant. It would seem that in these three years the return for management for both landlord and tenant were reasonably equitable. In the years 1942 to 1944 inclusive the disparity in the return for management to the landlord and tenant increased. Indications are that some adjustment could well be made (1) for rising values of the landlord's real estate (2) rising wage rates for the tenant's labor, and (3) to provide for a more equitable sharing of the management return.

In the records the landlord's real estate had been left at the same value. His real estate investment has been revised keeping

in line with changes in real estate prices, and his interest on investment increased accordingly. The charge for tenant's labor was increased during the six year period but not in accord with hired wage rates for the years 1941 and 1944. Labor charges for these years were adjusted. The management return after making these two adjustments is more equitable but still the tenant received less than one-half of the management return.

It appears as if the tenant should be given a greater share of the receipts, especially during the last three years of the study. If to more nearly equalize the management return the tenant were given 55 percent of the dairy sales during the years 1939 to 1941 inclusive, and 60 percent for the last three years, the resulting return for management for both parties would be more equitable than a straight 50-50 division.

It is proposed that the landlord's real estate investment be kept in line with current market prices to influence his interest contribution. The tenant's labor charge should be in accord with hired wage rates. Further that when the hired wage rates are from 125 to 199 percent of 1910-1914 base period, the tenant gets 55 percent of dairy sales and when the index is 200 or more 60 percent.

The comparison of 50-50 renter-operated farms with owner-operated farms in Areas 1 and 5 for 1939 and 1944 showed that there was no significant difference in organization, receipts or earnings in 1939.

Fifty-fifty renter-operated farms in 1944 had \$600 higher labor income than owner operated farms. The 50-50 renter-operated farms also earned 14 percent interest on the investment compared with

10 percent on the owner operated farms. The greater return in 1944 of the 50-50 renter-operated farms seems to be in the 27 percent less expenses per tillable acre and only 10 percent less receipts per tillable acre. There was 9 percent more tillable acres on the 50-50 renter-operated farms.

APPENDIX TABLES

Table A. Some Organization Factors on Farms under 50-50 Leases - Areas 1 and 5 - 1939 to 1944 incl.

Area 1

Item	1939	1940	1941	1942	1943	1944	Ave.
Number of farms	11	8	12	17	18	17	83
Acres per farm	175	179	164	178	182	204	180
Tillable acres	131	141	130	138	135	152	136
Crop yield Index †	91	100	99	100	103	103	99
Productive animal units	35.8	43.0	35.5	36.1	38.5	40.2	38.2
Total P.M.W.U. ††	518	589	500	507	520	579	536
P.M.W.U. per man	294	342	369	340	335	369	341
Average No. of men	1.76	1.72	1.36	1.49	1.55	1.57	1.57

Area 5

Item	1939	1940	1941	1942	1943	1944	Ave.
Number of farms	20	20	13	15	15	15	98
Acres per farm	175	196	205	190	186	194	191
Tillable acres	121	141	142	134	131	138	135
Crop yield Index †	-	100	94	103	97	94	98
Productive animal units	29.2	31.3	31.4	28.3	28.0	29.9	29.7
Total P.M.W.U. ††	481	514	534	487	486	508	502
P.M.W.U. per man	270	266	286	316	312	343	299
Average No. of men	1.78	1.93	1.87	1.54	1.56	1.48	1.68

† Average of all farm account co-operators was 100 each year.

†† A productive man work unit is the average amount of work accomplished by one man with average labor efficiency in a ten hour day.

Table B. Investments: Comparison of Landlord's and Tenant's under 50-50 Leases - Area 1 - 1939 to 1944 incl.

Item	1939	1940	1941	1942	1943	1944	Ave.
Total both parties							
Real estate** (includes house)	\$ 13101	\$ 14428	\$ 12287	\$ 13199	\$ 13754	\$ 15305	\$ 13677
Machinery	1431	1877	1710	1968	2295	2676	1993
Horses	441	492	345	265	242	102	315
Productive livestock †	2006	2687	2115	2741	3435	3394	2730
Poultry	197	226	84	125	122	126	147
Feed	1310	1610	1491	1865	2524	2527	1888
Total	\$ 18486	\$ 21320	\$ 18034	\$ 20163	\$ 22372	\$ 24130	\$ 20750
Landlord's							
Real estate** (includes house)	\$ 13101	\$ 14428	\$ 12287	\$ 13199	\$ 13744	\$ 15305	\$ 13677
Machinery	394	300	257	234	236	176	266
Horses	103	146	94	63	54	23	81
Productive livestock †	1002	1343	1057	1365	1710	1693	1362
Poultry	98	113	39	54	46	43	66
Feed	654	805	746	917	1255	1178	926
Total	\$ 15352	\$ 17135	\$ 14480	\$ 15832	\$ 17055	\$ 18418	\$ 16378
Tenant's							
Real estate	0	0	0	0	0	0	0
Machinery	1037	1577	1453	1734	2059	2500	1727
Horses	338	346	251	202	188	79	234
Productive livestock †	1004	1344	1058	1376	1725	1701	1368
Poultry	99	113	45	71	76	83	81
Feed	656	805	747	948	1269	1349	962
Total	\$ 3134	\$ 4185	\$ 3554	\$ 4331	\$ 5317	\$ 5712	\$ 4372

** The value of real estate per tillable acre has been held nearly constant on leases studied for the six years.
† Does not include poultry.

Table C. Investments; Comparison of Landlord's and Tenant's under 50-50 Leases - Area 5 - 1939 to 1944 incl.

Item	1939	1940	1941	1942	1943	1944	Ave.
Total both parties							
Real estate** (includes house)	\$ 12425	\$ 13091	\$ 13061	\$ 12690	\$ 12727	\$ 12611	\$ 12768
Machinery	1303	1513	1788	1796	1780	1939	1686
Horses	375	413	344	264	230	191	303
Productive livestock †	1728	1946	2076	2183	2565	2949	2241
Poultry	91	81	79	71	115	104	90
Feed	1344	1532	1725	1725	1916	1933	1696
Total	\$ 17266	\$ 18576	\$ 19073	\$ 18729	\$ 19333	\$ 19727	\$ 18784
Landlord's							
Real estate** (includes house)	\$ 12425	\$ 13091	\$ 13061	\$ 12690	\$ 12727	\$ 12611	\$ 12768
Machinery	153	108	126	346	399	477	268
Horses	77	43	45	41	63	40	52
Productive livestock †	848	988	1057	1109	1332	1487	1137
Poultry	39	30	33	25	52	46	37
Feed	646	740	870	858	952	964	838
Total	\$ 14188	\$ 15000	\$ 15192	\$ 15069	\$ 15525	\$ 15625	\$ 15100
Tenant's							
Real estate	0	0	0	0	0	0	0
Machinery	1150	1405	1662	1450	1381	1462	1418
Horses	298	370	299	223	167	151	251
Productive livestock †	880	958	1019	1074	1233	1462	1104
Poultry	52	51	46	46	63	58	53
Feed	698	792	855	867	964	969	858
Total	\$ 3078	\$ 3576	\$ 3881	\$ 3660	\$ 3808	\$ 4102	\$ 3684

** The value of real estate per tillable acre has been held nearly constant on leases studied for the six years.

† Does not include poultry.

Table D. Receipts: Comparison of Landlord's and Tenant's under 50-50 Leases - Areas 1 and 5 - 1939 to 1944 incl.

Area 1

Item	1939	1940	1941	1942	1943	1944	Ave.
Total both parties							
Livestock income**	\$ 1276	\$ 1459	\$ 2012	\$ 2893	\$ 3123	\$ 2796	\$ 2260
Dairy sales	802	1460	1465	1546	1857	2593	1612
Poultry income	513	604	292	455	488	431	464
Crop income	682	522	772	1360	583	1278	866
Miscellaneous income	125	146	112	108	185	215	148
Total	\$ 3398	\$ 4141	\$ 4653	\$ 6362	\$ 6236	\$ 7313	\$ 5350
Landlord's							
Livestock income**	\$ 638	\$ 729	\$ 1005	\$ 1446	\$ 1555	\$ 1385	\$ 1126
Dairy sales	401	705	732	769	929	1292	805
Poultry income	258	302	136	178	190	184	208
Crop income	339	260	385	701	306	708	450
Miscellaneous income	35	8	26	30	12	11	20
Total	\$ 1671	\$ 2004	\$ 2284	\$ 3124	\$ 2992	\$ 3580	\$ 2609
Tenant's							
Livestock income**	\$ 638	\$ 730	\$ 1007	\$ 1447	\$ 1568	\$ 1411	\$ 1134
Dairy sales	401	705	733	777	928	1301	807
Poultry income	255	302	156	277	298	247	256
Crop income	343	262	387	659	277	570	416
Miscellaneous income	90	138	86	78	173	204	128
Total	\$ 1727	\$ 2137	\$ 2369	\$ 3238	\$ 3244	\$ 3733	\$ 2741

** Poultry is not included under livestock income.

Table D. Receipts: Comparison of Landlord's and Tenant's under 50-50 Leases - Areas 1 and 5 - 1939 to 1944 incl. (continued)

Area 5

Item	1939	1940	1941	1942	1943	1944	Ave.
Total both parties							
Livestock income**	\$ 1027	\$ 1164	\$ 1851	\$ 1791	\$ 1630	\$ 1390	\$ 1475
Dairy sales	732	1168	1429	1953	2521	3456	1877
Poultry income	236	181	244	195	424	243	254
Crop income	929	1143	1736	1331	845	1143	1188
Miscellaneous income	199	188	222	313	276	317	252
Total	\$ 3123	\$ 3844	\$ 5482	\$ 5583	\$ 5696	\$ 6549	\$ 5046
Landlord's							
Livestock income**	\$ 512	\$ 581	\$ 903	\$ 887	\$ 815	\$ 695	\$ 732
Dairy sales	364	555	701	965	1258	1728	929
Poultry income	132	71	108	86	160	109	111
Crop income	429	571	826	669	435	577	585
Miscellaneous income	41	42	79	199	181	114	109
Total	\$ 1478	\$ 1820	\$ 2617	\$ 2806	\$ 2849	\$ 3223	\$ 2466
Tenant's							
Livestock income**	\$ 515	\$ 583	\$ 948	\$ 904	\$ 815	\$ 695	\$ 743
Dairy sales	368	613	728	988	1263	1728	948
Poultry income	104	110	136	109	264	134	143
Crop income	500	572	910	662	410	566	603
Miscellaneous income	158	146	143	114	95	203	143
Total	\$ 1645	\$ 2024	\$ 2865	\$ 2777	\$ 2847	\$ 3326	\$ 2580

** Poultry is not included under livestock income.

Table B. Expenses and Charges: Comparison of Landlord's and Tenant's under 50-50 Leases - Area 1 -
1939 - 1944 incl.

Item	1939	1940	1941	1942	1943	1944	Ave.
<u>Total both parties</u>							
<u>Farm improvements</u>							
Interest at 5%	\$ 184	\$ 248	\$ 219	\$ 259	\$ 266	\$ 308	\$ 247
Taxes	924	1066	902	1008	1119	1207	1038
Machinery and equipment	190	111	114	110	121	124	113
Horses	267	353	304	376	569	619	415
Operator's labor	4	54	3	1	5	13	13
Family labor	599	591	600	960	1200	1200	857
Hired labor	127	133	51	200	232	166	151
Feed purchases	211	268	182	200	224	391	246
Livestock expense	498	546	543	598	920	1043	961
Crop expense	50	66	44	68	95	77	67
Miscellaneous expense	197	208	230	318	384	503	307
Total	<u>3181</u>	<u>3709</u>	<u>3244</u>	<u>4147</u>	<u>5199</u>	<u>5712</u>	<u>4199</u>
<u>Landlord's</u>							
<u>Farm improvements</u>							
Interest at 5%	\$ 176	\$ 246	\$ 217	\$ 259	\$ 266	\$ 298	\$ 243
Taxes	767	857	724	791	853	921	819
Machinery and equipment	99	107	103	105	119	119	108
Horses	101	88	69	86	100	134	97
Operator's labor	0	14	2	0	5	2	4
Family labor	0	0	0	0	0	0	0
Hired labor	4	12	18	34	7	51	21
Feed purchases	245	270	263	291	460	536	344
Livestock expense	24	30	19	31	43	36	31
Crop expense	97	107	115	152	187	254	152
Miscellaneous expense	8	18	11	8	14	10	12
Total	<u>1521</u>	<u>1749</u>	<u>1541</u>	<u>1757</u>	<u>2114</u>	<u>2361</u>	<u>1841</u>

Table B. Expenses and Charges: Comparison of Landlord's and Tenant's under 50-50 Leases - Area 1 -
1939 - 1944 incl. (continued)

Item	1939	1940	1941	1942	1943	1944	Ave.
<u>Tenant's</u>							
Farm improvements	\$ 157	209	178	217	266	286	\$ 219
Interest at 5%	1	4	11	5	2	5	5
Taxes	166	265	235	290	469	485	318
Machinery and equipment	4	40	1	1	0	11	9
Horses	589	591	600	960	1200	1200	857
Operator's labor	127	133	51	200	172	166	141
Family labor	207	256	164	166	217	340	225
Hired labor	253	276	280	307	460	507	347
Feed purchases	26	36	25	37	52	41	36
Livestock expense	100	101	115	166	217	340	225
Crop expense	22	47	41	41	50	51	42
Miscellaneous expense	1660	1960	1703	2390	3085	3351	2358
Total	\$ 1660	\$ 1960	\$ 1703	\$ 2390	\$ 3085	\$ 3351	\$ 2358

Table F. Expenses and Charges: Comparison of Landlord's and Tenant's under 50-50 Leases - Area 5 -
1939 - 1944 incl.

Item	1939	1940	1941	1942	1943	1944	Ave.
Total both parties							
Farm improvements	\$ 172	\$ 214	\$ 241	\$ 221	\$ 230	\$ 240	\$ 220
Interest at 5%	863	929	954	936	967	986	939
Taxes	92	98	100	89	119	138	106
Machinery and equipment	312	367	385	442	488	565	427
Horses	53	40	28	20	5	24	28
Operator's labor	593	592	585	930	1167	1140	835
Family labor	212	205	143	219	336	219	222
Hired labor	271	274	230	242	233	338	265
Feed purchases	193	253	357	317	460	647	371
Livestock expense	49	41	55	37	57	61	50
Crop expense	233	262	351	346	383	487	343
Miscellaneous expense	25	30	43	42	50	56	41
Total	\$ 3068	\$ 3305	\$ 3472	\$ 3841	\$ 4495	\$ 4901	\$ 3847
Landlord's							
Farm improvements	\$ 166	\$ 213	\$ 239	\$ 216	\$ 223	\$ 230	\$ 215
Interest at 5%	710	750	760	753	777	781	755
Taxes	92	98	100	89	118	136	105
Machinery and equipment	51	80	86	95	74	94	80
Horses	10	13	8	5	0	3	6
Operator's labor	0	0	0	0	0	0	0
Family labor	45	45	41	110	164	101	84
Hired labor	10	16	28	31	12	18	19
Feed purchases	101	121	175	166	225	327	186
Livestock expense	24	19	26	18	26	29	24
Crop expense	118	137	173	166	192	256	174
Miscellaneous expense	5	9	15	11	13	8	10
Total	\$ 1332	\$ 1501	\$ 1651	\$ 1660	\$ 1824	\$ 1983	\$ 1658

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and the role of the accounting department in ensuring the integrity of the financial data. It also highlights the need for regular audits and the importance of transparency in financial reporting.

2. The second part of the document focuses on the implementation of internal controls to prevent fraud and ensure the accuracy of financial statements. It outlines the key components of a robust internal control system, including segregation of duties, authorization procedures, and regular monitoring and evaluation.

3. The third part of the document addresses the challenges faced by organizations in managing their financial resources effectively. It discusses the importance of budgeting and forecasting, and the role of the accounting department in providing timely and accurate financial information to management for decision-making.

4. The fourth part of the document explores the impact of technology on the accounting profession. It discusses the benefits of automation and the use of data analytics in financial reporting, and the need for accountants to stay updated with the latest technological advancements.

5. The fifth part of the document concludes by emphasizing the importance of ethical behavior in the accounting profession. It discusses the role of accountants as trusted advisors and the need to adhere to the highest standards of professional conduct and integrity.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Table F. Expenses and Charges: Comparison of Landlord's and Tenant's under 50-50 Leases - Area 5 -
1939 - 1944 incl. (continued)

Item	1939	1940	1941	1942	1943	1944	Ave.
<u>Tenant's</u>							
Farm Improvements	\$ 6	\$ 1	\$ 2	\$ 5	\$ 7	\$ 10	\$ 5
Interest at 5%	153	179	194	183	190	205	184
Taxes	0	0	0	0	1	2	1
Machinery and equipment	261	287	299	347	414	471	347
Horses	43	27	20	15	5	21	22
Operator's labor	593	592	585	930	1167	1140	835
Family labor	167	160	102	109	172	118	138
Hired labor	261	258	202	211	221	320	246
Feed purchases	92	132	182	151	235	320	185
Livestock expense	25	22	29	19	31	32	26
Crop expense	115	125	178	180	191	231	169
Miscellaneous expense	20	21	28	31	37	48	31
Total	\$ 1736	\$ 1804	\$ 1821	\$ 2181	\$ 2671	\$ 2918	\$ 2189

Table 6. Financial Summary: Comparison of Landlord's and Tenant's under 50-50 Leases - Areas 1 and 5 - 1939 to 1944 incl.

Area 1

Item	1939	1940	1941	1942	1943	1944	Ave.
<u>Total both parties</u>							
Receipts less expenses	\$ 1857	\$ 2222	\$ 2962	\$ 4383	\$ 3588	\$ 4174	\$ 3197
Family labor	127	133	51	200	232	166	151
Net farm income	1730	2089	2911	4183	3356	4008	3046
Operator's labor	589	591	600	960	1200	1200	857
Return for inv. & mgt.	1141	1498	2311	3223	2156	2808	2189
Percent on investment	6.17	7.03	12.82	15.97	9.64	11.64	10.55
<u>Landlord's</u>							
Receipts less expenses	\$ 917	\$ 1112	\$ 1467	\$ 2158	\$ 1791	\$ 2140	\$ 1597
Family labor	0	0	0	0	60	0	10
Return for inv. & mgt.	917	1112	1467	2158	1731	2140	1587
Percent on investment	5.97	6.49	10.13	13.63	10.15	11.62	9.69
<u>Tenant's</u>							
Receipts less expenses	\$ 940	\$ 1110	\$ 1495	\$ 2225	\$ 1797	\$ 2034	\$ 1600
Operator's and Family labor	716	724	651	1160	1372	1366	998
Return for inv. & mgt.	224	386	844	1065	425	668	602
Percent on investment	7.14	9.22	23.75	24.59	7.99	11.69	13.77
<u>Net farm income</u>							
Landlord's	\$ 1730	\$ 2089	\$ 2911	\$ 4183	\$ 3356	\$ 4008	\$ 3046
Operator's	917	1112	1467	2158	1731	2140	1587
Interest at 5%	813	977	1444	2025	1625	1868	1499
Landlord's	924	1066	902	1008	1119	1207	1038
Operator's	767	857	724	791	853	921	819
Labor income	157	209	178	217	266	286	219
Operator's	806	1023	2009	3175	2237	2801	2008
Operator's	656	768	1266	1808	1359	1582	1240

Table 6. Financial Summary: Comparison of Landlord's and Tenant's under 50-50 Leases - Areas 1 and 5 - 1939 to 1944 incl. (continued)

Area 5

Item	1939	1940	1941	1942	1943	1944	Ave.
<u>Total both parties</u>							
Receipts less expenses	\$ 1723	\$ 2265	\$ 3692	\$ 3827	\$ 3671	\$ 3993	\$ 3195
Family labor	212	205	143	219	336	219	222
Net farm income	1511	2060	3549	3608	3335	3774	2973
Operator's labor	593	592	585	930	1167	1140	835
Return for inv. & mgt.	918	1468	2964	2678	2168	2634	2138
Percent on investment	7.04	7.90	15.54	14.30	11.21	13.35	11.38
<u>Landlord's</u>							
Receipts less expenses	\$ 901	\$ 1114	\$ 1767	\$ 2009	\$ 1966	\$ 2122	\$ 1647
Family labor	45	45	41	110	164	101	84
Return for inv. & mgt.	856	1069	1726	1899	1802	2021	1563
Percent on investment	7.12	7.13	11.36	12.60	11.61	12.93	10.34
<u>Tenant's</u>							
Receipts less expenses	\$ 822	\$ 1151	\$ 1925	\$ 1818	\$ 1705	\$ 1871	\$ 1548
Operator's and family labor	760	752	687	1039	1339	1258	973
Return for inv. & mgt.	62	399	1238	779	366	613	575
Percent on investment	2.01	11.16	31.90	21.28	9.61	14.94	15.63
<u>Net farm income</u>							
Landlord's	\$ 1511	\$ 2060	\$ 3549	\$ 3608	\$ 3335	\$ 3774	\$ 2973
Operator's	856	1069	1726	1899	1802	2021	1563
Interest at 5%	655	991	1823	1709	1533	1753	1410
Landlord's	863	929	954	936	967	986	939
Operator's	710	750	760	753	777	781	755
Labor Income	153	179	194	183	190	205	184
Operator's	648	1131	2595	2672	2368	2788	2034
Operator's	502	812	1629	1526	1343	1548	1227

BIBLIOGRAPHY

- (1) Case, H. C. M., and Ackerman, J.
1940. FARM LEASES FOR ILLINOIS. Ill. Agr. Expt. Sta.
Cir. 503, 55 pp., illus.
- (2) Clark, N.
1944. IMPROVING FARM TENURE IN THE MIDWEST. Ill. Agr.
Expt. Sta. Bul. 502, 26 pp., illus.
- (3) Clark, N.
1945. PREVENTING FARM LAND PRICE INFLATION IN THE
MIDWEST. Iowa Agr. Expt. Sta. Ext. Bul. p 72,
27 pp., illus.
- (4) Doneth, J. C., and Wright, E. T.
1942. FARM MANAGEMENT ASPECTS OF THE WAR. Mich. Agr.
Expt. Sta. Cir. Bul. 182, 39 pp., illus.
- (5) Falconer, J. I.
1921. METHODS OF RENTING LAND IN OHIO. Ohio Agr. Expt.
Sta. Bul. 308, 30 pp., illus.
- (6) Hannah, H. W., and Ackerman, J.
1940. LEGAL ASPECTS OF FARM TENANCY IN ILLINOIS. Ill.
Agr. Expt. Sta. Bul. 465, 275 pp., illus.
- (7) Harris, M. D., Thorp, M. M., and Turner, H. A.
1945. BETTER FARM LEASES. U. S. Dept. Agr. Farmers'
Bul. 1969, 41 pp., illus.
- (8) Hibbard, B. H., and McNall, P. E.
1940. THE FARM LEASE AND THE RENTAL CONTRACT. Univ.
of Wisc. Ext. Cir. 303, 24 pp., illus.
- (9) Hill, E. B.
1937. FARM TENANCY IN MICHIGAN. Farm Mgt. Dept. Mich.
State College, East Lansing, processed.
- (10) Hill, E. B.
1941. FARMS, MORTGAGES, TENANCY AND WAGES, 1940 CENSUS
MAPS. Farm Mgt. Dept. Mich. State College,
East Lansing.

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete each task.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves comparing the actual outcomes with the objectives and goals to determine the effectiveness of the project and identify areas for improvement.

- (11) Hill, E. B.
——. MICHIGAN FARM LEASES. Farm Mgt. Dept. Mich. State College, East Lansing, processed.
Field Leasing on the Crop-Share Basis.
Cash Lease for the Farm.
Crop Share Farm Lease.
Father and Son partnership agreement.
50-50 Crop and Livestock - Share Farm Lease.
Tenants' Two-Thirds Livestock - Share Farm Lease.
Landlords' Two-Thirds Share Crop and Livestock Farm Lease.
- (12) May, C. O.
1945. DO I WANT TO FARM. Mich. State College Ext. Bul. 267, 27 pp., illus.
- (13) McCord, J. E.
1934. FARM TENANCY AND LEASE FARMS IN PENNSYLVANIA. Penna. State College Ext. Cir. 151, 47 pp.
- (14) Minneman, P. G., and Hill, E. B.
1934. ORGANIZATION OF FARMS IN SOUTHEASTERN MICHIGAN. Mich. Agr. Expt. Sta. Spec. Bul. 254, 51 pp., illus.
- (15) Pond, G. A.
1941. FARM TENANCY IN MINNESOTA. Minn. Agr. Expt. Sta. Bul. 353, 56 pp., illus.
- (16) Riddell, F. T.
1927. FARM LEASE SYSTEMS IN MICHIGAN. Mich. Agr. Expt. Sta. Cir. Bul. 102, 18 pp., illus.
- (17) Robertson, L.
1944. PROFITABLE FARM ORGANIZATION IN NORTHERN INDIANA. Ind. Agr. Expt. Sta. Bul. 491, 35 pp., illus.
- (18) Schickels, R., and Norman, C. A.
1937. FARM TENURE IN IOWA. Iowa Agr. Expt. Sta. Bul. 354, 19 pp., illus.
- (19) Tyler, H. S.
1939. BUYING A FARM IN NEW YORK. Cornell Univ. Ext. Bul. 412, 36 pp.

- (20) Wright, K. T.
1943. DOLLARS AND SENSE IN FARMING. Mich. Agr.
Expt. Sta. Spec. Bul. 324, 44 pp., illus.
- (21) Wrigley, P. I.
1939. FARM TENANCY IN PENNSYLVANIA. Penna. Agr.
Expt. Sta. Bul. 383, 37 pp., illus.

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