

Farm Leasing In North Dakota

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Renting land is important to many North Dakota farmers to acquire and control needed resources. About 60 per cent of the farm operators rent all or part of their land resources, and they operate almost three-fourths of the land in the state. Renting facilitates changes in farm size without purchase of land. Farm leasing provides the flexibility needed to adapt to constantly changing agricultural conditions.

Information in this report came from a mail survey of farm renters in six widely separated North Dakota counties. The 1973-74 study response was 704 questionnaires reporting on over 1,300 leasing arrangements. Fifty-seven per cent of the leases were crop-share, 41 per cent cash rent, and 2 per cent involved crop-share-cash arrangements. Map 1 summarizes the types of leases by the counties surveyed.

Crop-Share Leases

The crop-share lease was the most widely used lease type. Contract arrangements specify what crops are to be shared and the proportion of each

crop the landlord or tenant receives. It also lists the costs to be shared and the percentage to be paid by each party. The landlord receives a share of the crop as rental payment and the tenant receives use of the land and a specified percentage of the production.

The 75-25 lease, 2/3 - 1/3 lease, and 50-50 lease were the most common crop-share arrangements used (Map 2). The decision on which arrangement to use depends on the abilities of the landlord and the tenant to finance operating costs and their willingness to be involved in the management of the land. Bargaining positions of each party and local custom also affect their decisions.

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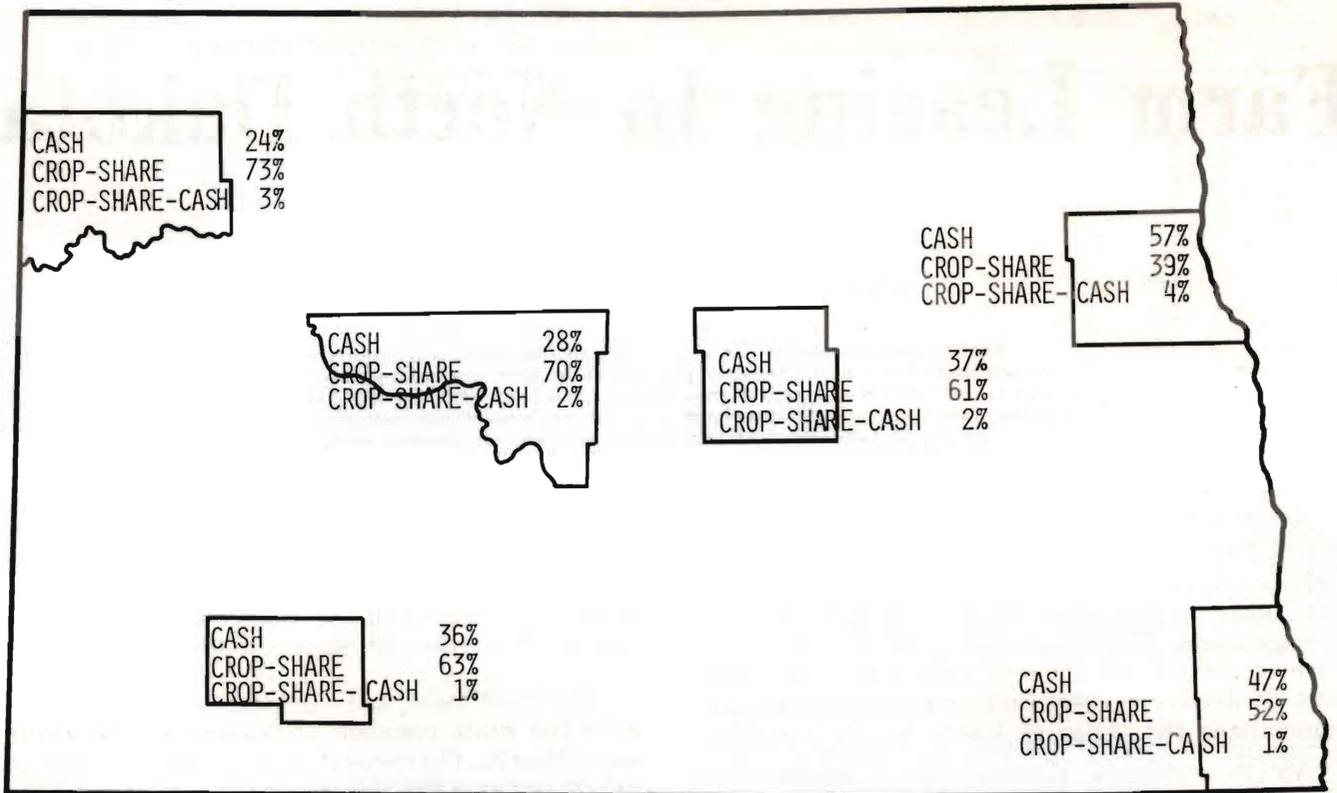
Arrangements for sharing expenses and returns are similar for crop-share and crop-share-cash leases. Information on the two lease types are combined in Table 1. Ninety per cent of the tenants

Table 1. Average tenant share of selected expenses for crop-share and crop-share-cash leases in 1973-74

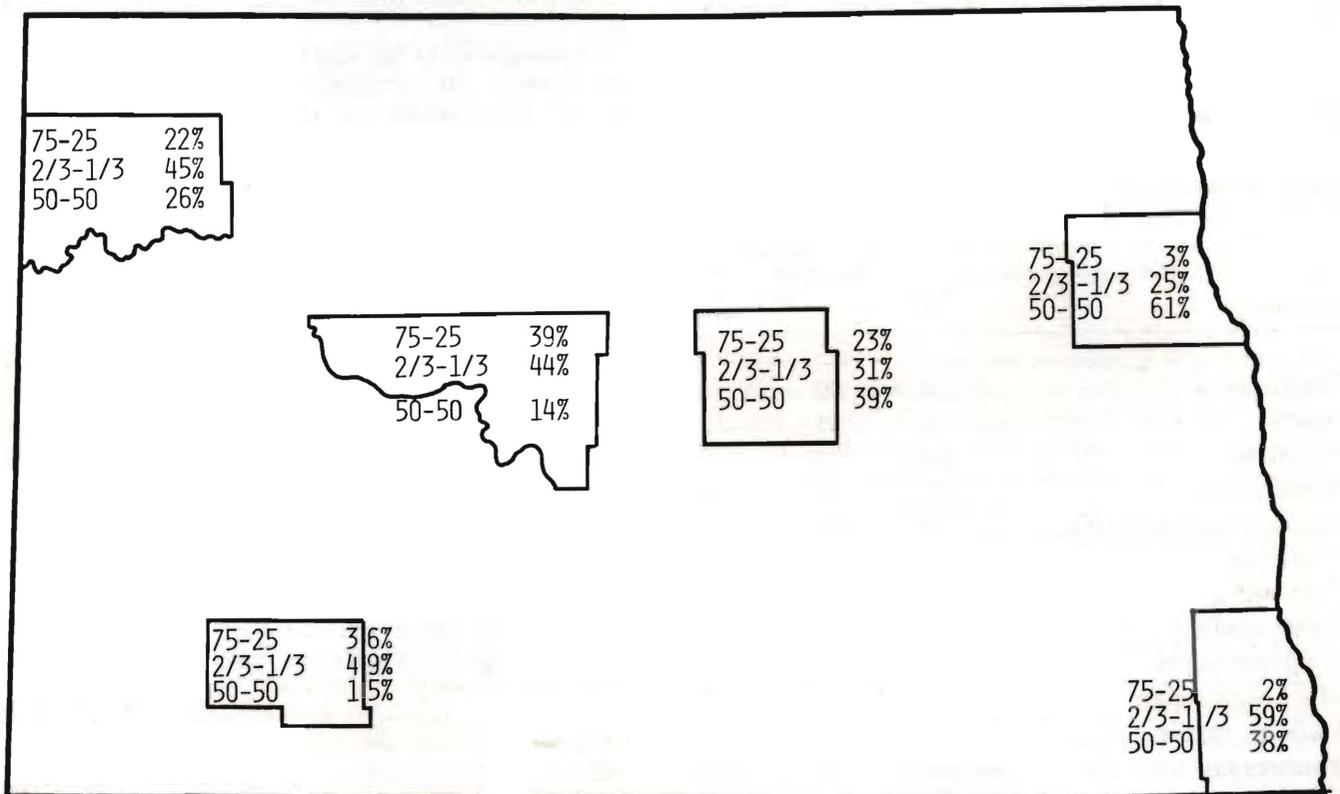
Expense	% of tenants on a 50-50 Lease that paid ^a			% of tenants on a 2/3 - 1/3 Lease that paid ^a			% of tenants on a 75-25 Lease that paid ^a		
	all	1/2	none	all	2/3	none	all	3/4	none
	----- per cent -----								
Fertilizer	6	90	4	58	40	*	94	5	*
Seed	7	14	79	97	2	*	98	*	*
Gasoline	96	3	*	99	*	*	100	0	0
Weed spray	21	68	9	76	22	0	97	3	0
Custom weed spraying	30	68	*	85	14	0	97	3	0
Swathing	72	25	*	96	3	*	100	0	0
Combining	25	64	0	95	3	0	99	0	0
Grain hauling	73	23	*	97	2	0	100	0	0
Crop insurance	33	65	1	58	39	*	81	17	0
Machinery repair	97	2	*	99	*	0	100	0	0
Building repair	31	6	63	73	1	25	86	0	10
Fence repair	72	5	23	92	0	8	95	0	3
Hired labor	98	1	*	99	0	0	99	0	0

^aTotal is less than 100 per cent in some cases because some tenants had a different share arrangement.

*Less than 1 per cent.



Map 1. Per cent of leases by types in use in 1973-74



Map 2. Per cent of crop-share leases in use in 1973-74

The total is less than 100% in some cases due to the presence of other share ratios.

using a 50-50 lease paid half of the fertilizer costs, 6 per cent paid all, and 4 per cent paid none of the cost. Fifty-eight per cent of the tenants using a 2/3 - 1/3 lease paid all of the fertilizer costs, 40 per cent paid two-thirds, and less than 1 per cent paid for none of the cost. For tenants using a 75-25 lease, 94 per cent paid all the costs of fertilizer, 5 per cent paid three-fourths, and less than 1 per cent paid none of the cost. Other expenses reported are summarized in a similar manner.

When the 75-25 leasing arrangement was used, the tenant typically paid all expenses other than taxes and received three-fourths of the receipts from crop sales. All counties reported similar arrangements for the 75-25 lease.

The tenant paid all expenses (other than taxes) under a typical 2/3 - 1/3 share lease. In Richland and Grand Forks counties, the landlord also paid one-third of the fertilizer expense. Landlords in Grand Forks county in addition paid one-third of the crop insurance costs.

Landlords with a 50-50 crop-share lease generally pay a larger share of the costs. Most landlords paid all seed, taxes and building repair costs, plus one-half of the costs of fertilizer, weed spray, custom weed spraying, combining and crop insurance. Averages for Williams county varied slightly because landlords paid one-half of the costs of swathing and grain hauling.

Cash Rent

Cash rent has become more popular in North Dakota. A tract of land available for cash rent facilitates a bidding process when demand is active.

Tenants have greater managerial freedom, which becomes increasingly important as farms become larger and land is rented from more than one landlord. Landlords may prefer cash rent because of the assurance of a fixed income from the property. The amount of cash rent paid varied according to the quality of the land, location in the state and demand. Maps 3 and 4 show the range of cash rents per acre for tillable and pasture land.

Cash rent is related to the market value of the land and is often negotiated as a percentage of a market value. Traditionally, this figure has ranged between 7½ per cent and 8½ per cent. In 1973, it ranged from 9 per cent to 12 per cent, and in 1974 from 9½ per cent to 13 per cent, reflecting a strong demand by farmers for additional land.

Is Your Lease Fair?

No two farming operations are exactly alike, so no two leases should be the same. Customary rental practices often fail to recognize fully the contributions of each party in a rental contract. This

is particularly true as new technologies are continually being adopted and input and product prices are changing. Leases continually need to be examined to see if the contributions of the two parties are equitable in the sharing of expenses and income.

Customary arrangements have become such an intrinsic part of crop-share leases, that often the lease parties have no idea if their contributions to the lease actually do fall in line with their share agreement. The remainder of this article deals with equity in crop-share leases.

A lease, to be fair, must compensate the landlord and tenant in the same proportion as each provides inputs of resources into the business. In simpler terms, the total of all receipts must be shared in the same proportion as they share in the total of all expenses.

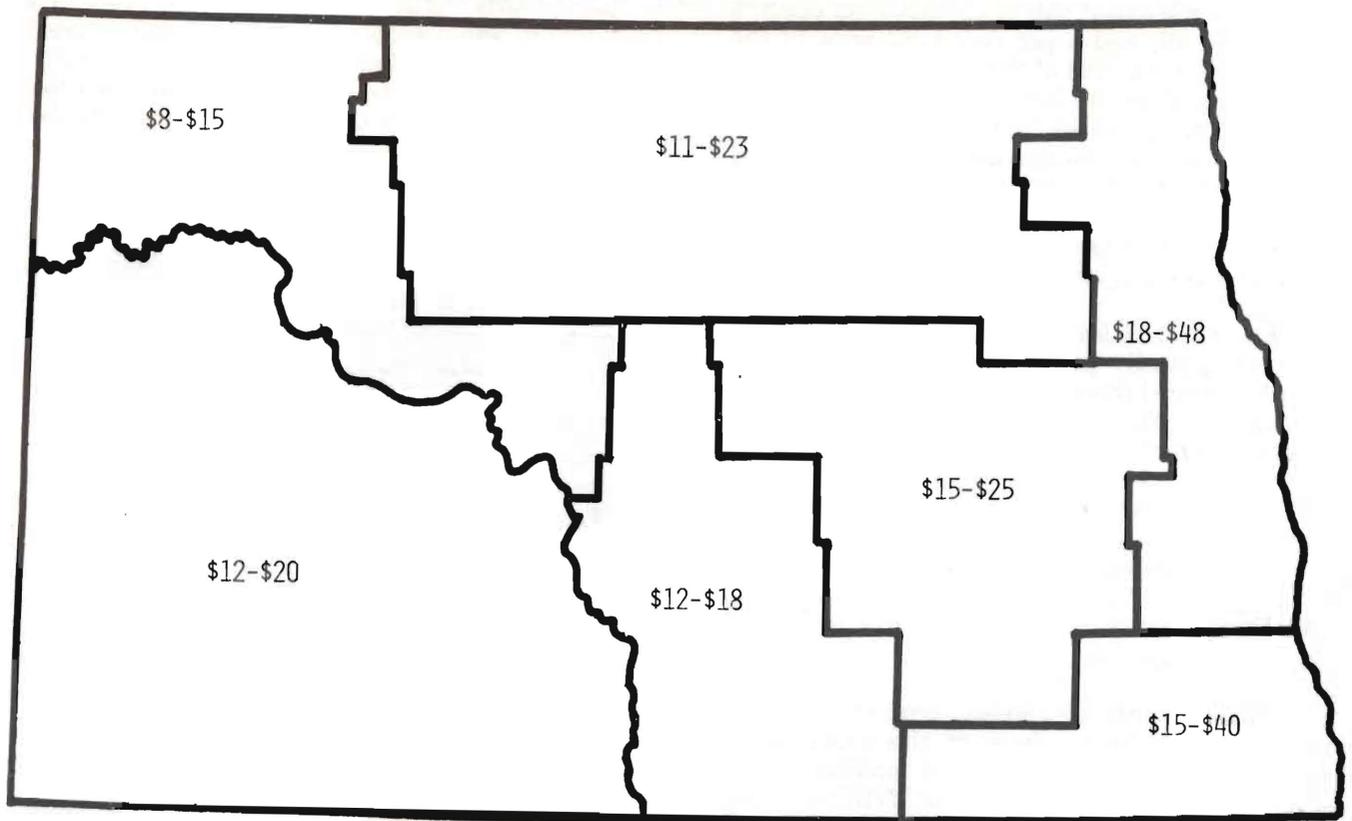
If your lease does not follow these rules, your farming operation is not producing at maximum economic efficiency and either the landlord or tenant is losing or gaining profits at the expense of the other.

Establishing an equitable lease would be simple if all contributions were in cash; however, problems arise in assigning monetary values to land, buildings, machinery and management. Judgment is necessary to arrive at these values and the values arrived at by the tenant may be entirely different than those determined by the landlord. Here are two methods for establishing an equitable crop-share lease:

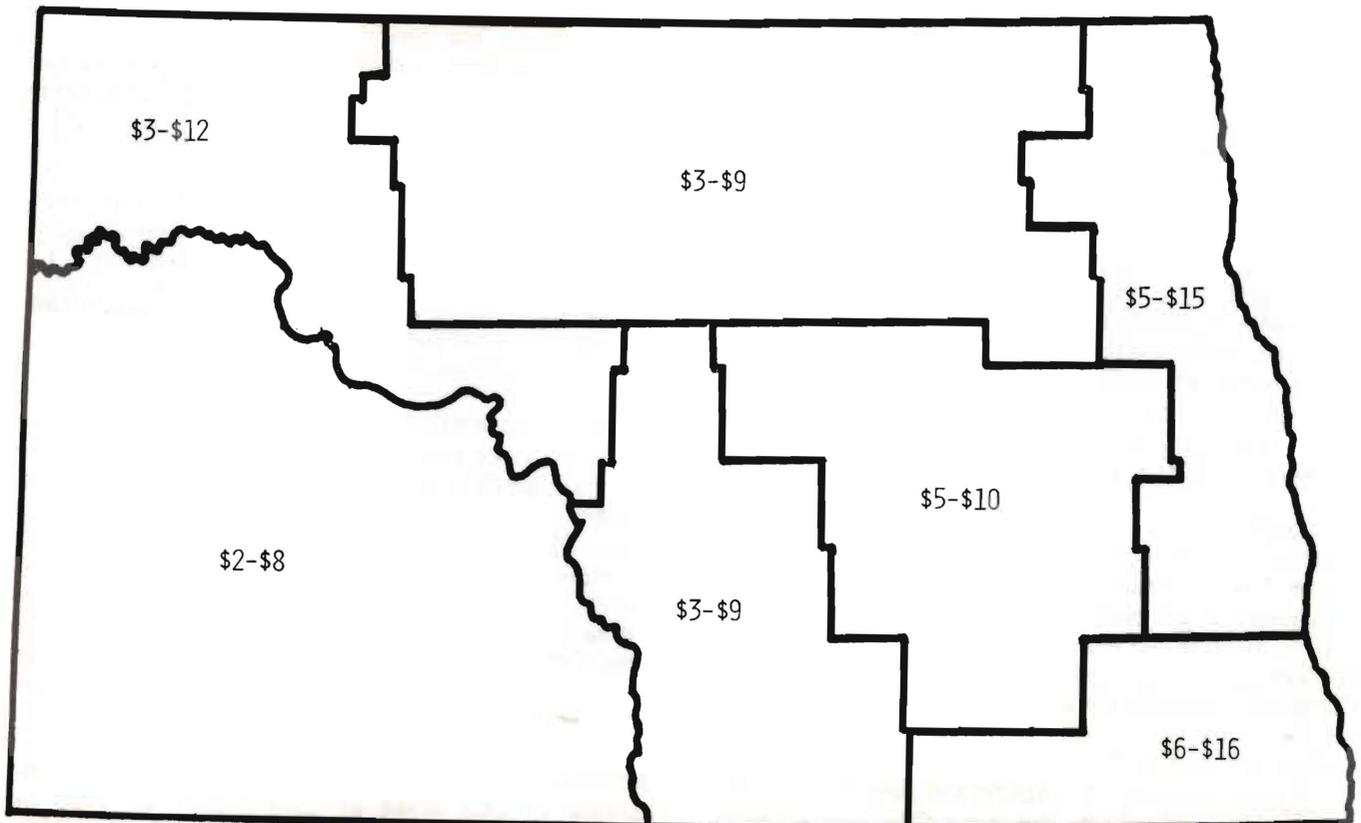
- Method I: Calculate the *fixed contributions* and then share variable costs and all crop income in the same proportion.
- Method II: Share income in the same proportion that the *sum of fixed contributions and variable expenses* are contributed.

Both methods use similar calculations and either can yield an equitable lease for your farming operation. In Method I all variable expenses must be shared in the same proportion as fixed contributions. Method II is longer but does not require all variable expenses be shared alike. Both methods are identical for the first 13 items of the contributions worksheet and are outlined below. An example is provided for each method and worksheets may be obtained through your county extension agent or from North Dakota State University.

Example: Assume an average size rented tract consisting of 960 acres of land (with 10 acres in farmstead) at \$275 per acre; \$60,000 of tenant's machinery; \$12,000 worth of buildings; and the



Map 3. Cash rent per acre — tillable land (1974)



Map 4. Cash rent per acre — pastureland (1974)

tenant furnishes all the labor. The farm is seeded entirely to wheat for simplicity in the example.

Item

1. Estimate the total value of the land. The value used should be the current market value as nearly as it can be estimated. It is the value arrived at in the sale of similar land and size of tracts in the area or the value a willing buyer and seller would agree upon. Enter in Column 2.

Interest is credited to the landlord to reimburse his farm investment at the same rate his money could be earning elsewhere. The rate should be similar to the going rate of interest for investments with similar risks and returns in the community. The interest rate paid on a sound real estate mortgage may be used as a basis for negotiation. Enter the rate you agree upon in Column 3. Multiply Column 3 by Column 4 to calculate the total annual use value for the land. Assign this value to the landlord.

- 2- 3. Estimate the current market value for all buildings and farm machinery used on the rented land. Only buildings and machinery actually used in crop production should be included. The tenant includes only the percentage of machine time used on this rented land if he operates land other than that owned by the landlord.

The interest rate for buildings is similar to the rate used for calculating the total annual use value for land. Machinery and equipment rates vary near that paid on a chattel mortgage and usually run slightly higher than that paid on a real estate mortgage.

Again, multiply the estimated total values by the interest rates to obtain their annual use values. Assign each to the contributing party.

4. Add Columns 4, 5 and 6 for Section A.
5. Place a value on the annual labor contributed to the farm operation. The going wage rate can be used as a basis with the wage paid to a good full-time hired man living on the farm used as a negotiation basis for valuing the tenant's labor.

Assign each expense to the party that contributes or pays it.

6. Calculate the annual charge for depreciation based on the estimated life for each item.
7. Figures entered for repairs should reflect an average annual repair cost over the lifetime of the building or machine. Cost studies indicate that repairs average 3 per cent per year for buildings and 5 per cent annually for machinery as a percentage of new costs.

Multiply the total estimated values determined in Section A by the appropriate repair percentage to calculate annual repair costs. Assign each repair cost to the contributing party.

8. Enter the annual amount of real estate taxes.
- 9-10. Enter the annual insurance premiums for land and buildings.
11. Management is very important to the farming operation, but again it is difficult to assign a monetary value to it. Both the landlord and tenant should be credited with the value of the actual management they perform. All management functions may be provided by the tenant or a substantial amount may be furnished by an active landlord.

Professional farm managers commonly charge 6 to 10 per cent of the farm's gross income as their management fee. This figure may be used as a basis for negotiation.

12. Add the figures in Section B.
13. Add Section I by adding the totals arrived at in Items 4 and 12.

Method I Divide the total annual contribution of the landlord by the total annual use-value of the farm (Item 13, Column 5 ÷ Item 13, Column 4). This figure is the percentage of fixed farm operating resources contributed by the landlord. Enter the tenant's total annual contribution (Item 13, Column 6) into the formula to determine his contributed percentage.

The percentages arrived at in Method I are the total annual fixed expense contribution that each lease party puts into the farming operation. This is the basis for sharing all variable expenses and all income in an equitable lease. Any division other than this percentage results in loss of income to one or both lease parties.

Method I's solution for the example reveals that the owner furnishes 42 per cent of the total use-value or fixed cost contributions for the operation, while the tenant furnishes 58 per cent. All income and returns must be divided on this basis. The landlord should pay 42 per cent of all variable costs and receive 42 per cent of the crop income. The tenant pays 58 per cent of the variable costs and receives 58 per cent of the crop income.

If either the landlord or the tenant is unwilling to divide all variable expenses in the same proportion (seed, fertilizer, fuel, etc.) — or if time, additional record keeping, and cost do not make it feasible — then the second method of establishing equity may be preferred.

WORKSHEET FOR CALCULATING YOUR CONTRIBUTIONS TO YOUR RENTED TRACT

Item of Expense (1)	Total Value (2) dollars	Estimated		Estimated Annual Cost		Tenant's Share (6) dollars
		Interest Rate (3) per cent	Total Annual Use-Value (4) dollars	Land- lord's Share (5) dollars		
I. FIXED EXPENSES						
A. Fixed Investment Expenses:						
1. Land	264,000	7	18,480	18,480		
2. Farm Buildings	12,000	7	840	840		
3. Machinery & Equipment	60,000	9	5,400			5,400
4. Total Section A	XXX	XXX	24,720	19,320		5,400
B. Fixed Operating Expenses:						
5. Labor						
a. Tenant's			8,000			8,000
b. Unpaid Family						
c. Landlord's						
d. Hired						
6. Depreciation						
a. Buildings			600	600		
b. Machinery & Equipment			6,000			6,000
7. Repairs						
a. Buildings			360	360		
b. Machinery & Equipment			3,000			3,000
8. Real Estate Taxes			3,300	3,300		
9. Building Insurance			175	175		
10. Machinery Insurance			360			360
11. Management			9,690			9,690
12. Total Section B			31,485	4,435		27,050
13. Total Section I (4+12)			56,205	23,755		32,450

Method I:

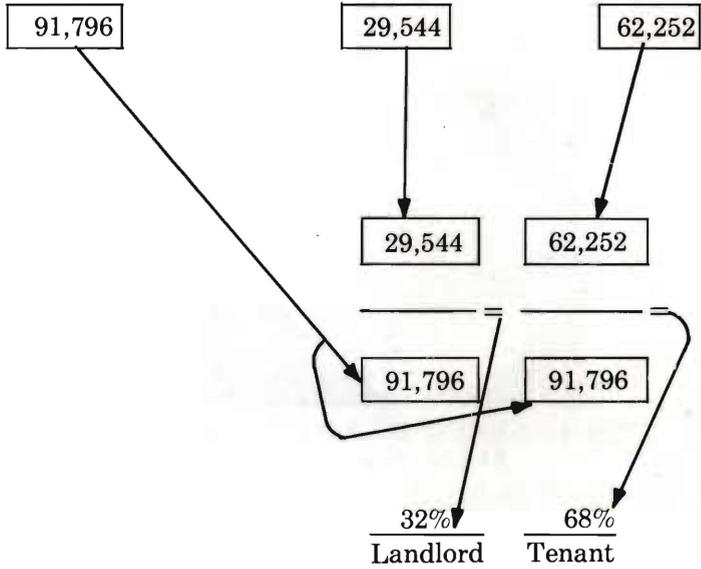
Per cent contributed by:

56,205	23,755	32,450
23,755	32,450	
56,205	56,205	
42%	58%	
Landlord	Tenant	

Method II: Combine Items 1-13 and 14-28.

	Total Annual Use-Value (4) dollars	Estimated Annual Cost Landlord's Share (5) dollars	Tenant's Share (6) dollars
II. VARIABLE EXPENSES			
14. Fertilizer	10,354	5,177	5,177
15. Seed	2,492		8,492
16. Gasoline	2,821		2,821
17. Weed Spray	950		950
18. Custom Weed Spraying			
19. Swathing	1,900		1,900
20. Combining	7,600		7,600
21. Grain Hauling	2,250		2,250
22. Crop Insurance	1,224	612	612
23. Machine Work Hired			
24. _____			
25. _____			
26. _____			
27. Total Section II	35,591	5,789	29,802

28. Grand Total (13+27)



Per cent contributed by:

$\frac{32\%}{\text{Landlord}}$ $\frac{68\%}{\text{Tenant}}$

Method II (utilizes the first 13 items, plus items 14-28).

14-26. Judgment again plays an important factor in estimating variable expenses. The landlord and the tenant must agree on which variable resources are to be used, what quantity of each will be used, their cost, and who is going to pay for them. A projected farm plan and past farm records may help establish what variable resources are needed and their respective quantities. The quantities estimated and current prices are used to calculate the total cost of each variable resource.

Assign the cost or percentage of cost to the appropriate contributors.

27. Add Section II.

28. Add Section I and Section II (13 + 27).

Calculate the resource contributions of each lease party. Divide the total annual contribution of the landlord by the total annual use-value of the farm (Item 28, Column 5 ÷ Item 28, Column 4). Substitute the tenant's total annual contribution (Item 13, Column 6) into the formula to determine his annual contributed percentage.

The percentages arrived at in Method II are the total annual resource contributions of each lease party. This is the proportion that all farm income and receipts must be divided if an equitable lease is to exist. Again, any division other than this percentage results in the loss of income to one or both lease parties.

The example in Method II is the same farming operation as Method I, but the landlord has agreed to pay one-half the costs of fertilizer and crop insurance. The first 13 steps in each example are identical.

Method II's solution for the example shows that the landlord furnishes 32 per cent of the total resources and the tenant furnishes 68 per cent. Each lease party, in an equitable situation, would receive that same ratio of income.

Put the Lease in Writing

Now that the equitable shares for contributions and receipts have been determined, put the lease in writing. A properly prepared lease could solve many landlord/tenant conflicts. A good farm lease contract must be written and should include:

1. Number of years the leasing contract will be in effect.
2. Automatic renewal on one-year leases.
3. A six-month cancellation notice if leasing rights will not be continued when contract ends.
4. A clause that pays tenant for unused improvements he made to the farm; i.e., summer fallow not used, fertilizer applied for the next year, fall plowing, drainage ditches, etc.

The most important aspect of developing an equitable lease is a willing spirit of cooperation between the landlord and tenant in establishing their respective contributions. Many questions and areas of opinion conflicts may arise, but the best time to solve these questions and conflicts is at the time the lease is being negotiated, not after it is in effect.



"DESIGNS FOR GLUED TRUSSES" BOOK REVISED

The "Designs for Glued Trusses" (MWPS-9) booklet has recently been revised by the Midwest Plan Service to suit new lumber grades, plywood changes and construction needs. The revised book is 80 pages, in a soft cover, and is fully illustrated.

The book helps a builder through the stages of selecting and building the proper wood trusses for a

clear span building. Chord, web and plywood gusset joint sizes are specified for some 3,000 different truss designs for spans from 20 to 60 feet wide. Specification tables include information on 2, 4, or 8 foot rafter spacings; roof slopes of 3/12, 4/12, or 5/12; 3 different web patterns; 12 psf to 24 psf snow loads; 3.5 psf to 15.5 psf dead loads; Douglas Fir, Southern Yellow Pine, or Hemlock-Fir lumber and lumber at 15 or 19 per cent moisture contents. Material selection, use, and joint configuration are discussed.

A step-by-step construction procedure is described. Truss erection, windbracing, and anchorage are explained. Also, recommendations about roof and ceiling construction are given.

Cost of the revised MWPS-9, "Designs for Glued Trusses," is \$2. The book is available from the Extension Agricultural Engineer, North Dakota State University, Fargo, North Dakota 58102, or through county extension agent offices.