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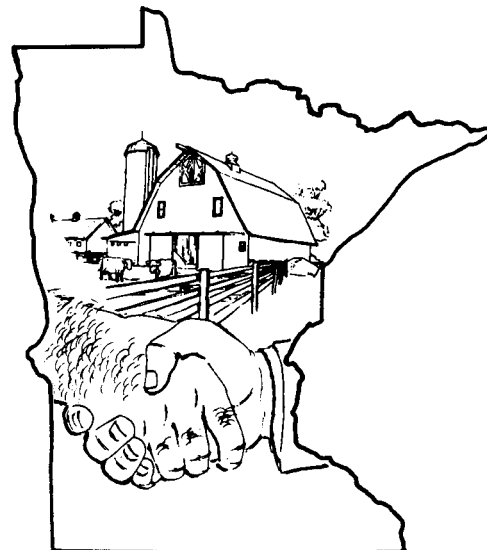
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Land Rental Arrangements in Minnesota



Paul R. Hasbargen and Kenneth H. Thomas
Extension Economists in Farm Management
Nick Rolfes, Graduate Research Assistant

Agricultural Extension Service
Department of Agricultural & Applied Economics
University of Minnesota
St. Paul, Minnesota 55108

INTRODUCTION

Rental arrangements remained fairly stable during the sixties. Then, beginning with the large increase in farm commodity prices in 1973, Minnesota land prices and cash rents more than doubled during the 1973-77 period. Because of the marked changes occurring in 1973-74 a survey of rental rates in Minnesota was made in late 1974 and the results were published in a 1975 report.*

The purpose of this publication is to update and to add to the earlier report. The 1974 survey schedule was re-designed and mailed to an expanded sample in late 1976. An excellent response (161 respondents) was obtained from county extension directors, credit agency people (FmHA, FLB and PCA), adult vo-ag instructors and professional farm managers. In this publication we report recent rental changes, describe 1977 rental agreements and make some observations on probable 1978 changes based on decisions with a 10 percent subsample of the original respondents. This report includes the following sections: (1) some general observations on rental arrangements in Minnesota, (2) cash and flexible cash rental arrangements, (3) crop share rental arrangements, (4) custom farming, (5) hay and pasture rental rates and (6) farm building rentals.

SOME GENERAL OBSERVATIONS ON RENTAL ARRANGEMENTS IN MINNESOTA

In this section we shall briefly review (1) the importance of land rental in various areas of Minnesota, (2) the relative amount of risk assumed by tenants and landowners under various types of rental arrangements, (3) the effect of land prices on types of rental arrangements used in an area and (4) what is happening to lease terms.

Good, Equitable Arrangements Important To State's Agriculture

Continuation of a strong agriculture in many areas of Minnesota depends to a marked degree upon good relationships between landowners and tenants. In 1974 about 44 percent of the state's farmers rented all or part of their farms; rented land accounted for 31 percent of the farm acreage. In heavy rental areas, such as southwestern Minnesota, almost 60 percent of the farmers rent part or all of their farms, with 40 to 50 percent of the land being rented (see figure 1).

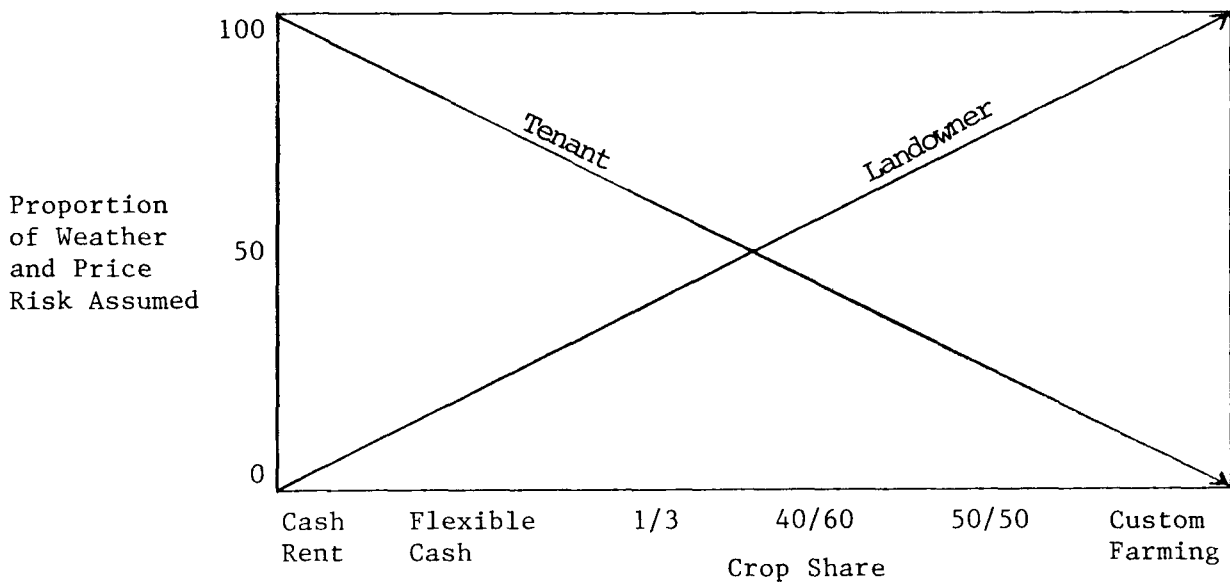
An equitable lease is an important factor in making for a profitable farm operation, plus contributing much towards good landowner-tenant relationships. Such a lease is one in which each party shares income proportionate to his contributions. However, with the recent rapid changes in land values, crop prices, costs and variable crop yields, many tenants and landowners are finding their

* Thomas, Kenneth H., Land Rental Arrangements In Minnesota: Survey Report of Current Status, Implications, Guidelines and Procedures. Agricultural Extension Service, University of Minnesota, Farm Management Series FM 660, March 1975.

leases out of date or unsuited to current conditions. Three adjustment alternatives are open: (1) the parties can modify the provisions of a given type of lease to make it more equitable (eg. change the annual cash rent payment), (2) they can shift to another type of lease (eg. from cash to share rent) or (3) they can seek new rental partners. Conditions are changing rapidly enough so that all three adjustment alternatives are being resorted to in varying degrees.

Rish Characteristics Of Rental Arrangements Vary

Today's crop farmers face greater risks than in the past because of increased size of business, increased dependence upon world markets and unpredictable weather patterns. Therefore, in selecting rental arrangements, it is important to recognize that they vary in terms of the relative amount of risk assumed by the tenant and landowner. As can be seen in the diagram below, cash rent involves the greatest amount of risk for the tenant, whereas with custom farming the landowner assumes the greatest amount of risk. Share arrangements involve varying amounts of risk for both tenant and landowner, depending upon the specific arrangement used.



Shifts in kinds of leases used, thus, tend to vary with the nature of the times. For example, during periods of relatively stable yield, price and cost conditions, such as the 1950's and 60's, a polarization tends to take place. Tenants are willing to assume greater risks while seeking the greater profit potential of cash rent. At the same time landowners consider custom farming; some even try it! A gradual erosion in the numbers of crop share arrangements thus tends to take place. Longer term leases are often negotiated.

Then come unusual years like the bonanza year of 1973, and many landowners with cash leases begin to clamor for a piece of the action which they had previously gladly given up. However, after the great price and yield variability of the past two years, it is expected that there will likely be a gradual shifting back toward crop share or flexible cash lease arrangements, particularly in higher risk areas.

Land Values Affect Types Of Rental Arrangements Used

Table 1 shows the relative importance of the different types of rental arrangements according to land value classifications as implied by average cash rental rates. The proportion of cash rent stays near one-half in all but the highest rent category, but the landowner's share in the crop share leases shifts from one-third to one-half as land values increase.

Respondents reported that the relative number of cash rental arrangements increased sharply in all areas of the state since 1973. However, there was evidence of some desire now to shift away from cash rents, particularly in the drought area of the state. Cash rent is more prevalent in low risk and heavy cash crop areas compared with higher risk and livestock-oriented areas (see figure 4).

Table 1. Effect of Land Values (Cash Rental Rates) on Type of Rental Arrangement Used in Minnesota, 1977.

Land Value Class	Type Of Rental Arrangement						
	Cash	1/3-2/3	2/5-3/5	1/2-1/2	Lvstk.	Flexible	Custom
cash rent	----- percent -----						
\$20-\$30*	41	38	1	9	1	1	--
\$30-\$40	47	25	11	8	--	5	1
\$40-\$50	52	15	18	11	2	1	1
\$50-\$60	49	2	22	18	5	3	1
\$60-\$70	59	3	16	17	2	3	1
\$70-\$80	48	2	16	29	2	2	1
over \$80	77	--	--	20	1	2	--

* In the low value land area where cash rental rates average \$20-\$30, the 1/4-3/4 share rent accounts for 9% of total rental arrangements. In the \$30-\$40 range it accounts for 3%.

Note: Numbers are rounded to nearest whole number.

In the \$20-\$40 cash rent areas, the 1/3-2/3 crop share is the dominant crop share arrangement. (Actually, where cash rents were around \$20 per acre, the 1/4-3/4 arrangement was most common.) With cash rents of \$40-\$60 per acre, the 2/5-3/5 crop share was the most common. In the \$60-\$70 cash rent range, it was a toss-up between 2/5-3/5 crop share and the 50/50. With cash rents over \$70 per acre, the 50/50 arrangement was most common.

Most Leases Are On A Short Term Basis

Responses to some general questions on lease terms indicate that about one-half of all leases are for only one year, about a third are automatically renewed unless one of the parties asks for some changes, and the remainder are for longer terms. The proportion of longer term leases is lower in the "high rent" district

with only 12 percent reported in the over \$80 rent area compared to 20 percent in the less than \$40 rent area. It was encouraging to note that about two-thirds of all leases were thought to be in writing. The majority of all lease arrangements are made during the August to November period.

The use of shorter term leases is generally desirable during periods of uncertainty and rapid change. Lease arrangements, particularly cash leases, can be kept up to date more readily. The increased use of the practice of renting from several landowners reduces the likelihood that the tenant will lose a significant portion of his land base in any given year.

CASH AND FLEXIBLE CASH RENTAL ARRANGEMENTS

Cash Rental

The cash rental arrangement has become increasingly popular in Minnesota over the past decade. Survey respondents indicate that about one-half of all land rental arrangements in the state in 1977 were cash rentals. This arrangement gives the renter greater operational flexibility, while assuming a larger amount of weather and price risk than any of the other rental arrangements (see diagram on page 2). The renter has the potential for the greatest loss under this arrangement, such as occurred in the drought areas of the state in 1976. He also has the potential for the greatest gain--as occurred in the good yield-good price year of 1973. Because he is taking more of the production-price risk, the renter should pay a little less net rent through time under the cash rent than under the share rent. Also, the landowner should be willing to take less in cash rent since he (1) usually gets at least half the payment in advance, (2) has no money tied up in input costs and (3) puts in less management time. However, because of the recent decline in grain prices, cash rents in 1977 and again in 1978 will in many cases be higher than crop share rents.

Cash rental rates have increased as land values have continued to climb. Figure 2 shows iso-cash rent lines for "average value land" for 1977 as well as the averages by counties of the cash rent for "high value land" and "low value land". The iso-cash-rent lines for average value land in 1977 were quite similar to those found for high value land two years ago. Respondents reported that the rent on average value land increased over 20 percent from 1975 to 1977. It increased about 25 percent on land that rented for less than \$60 in 1977 and it increased by 10 to 20 percent on land that rented for more than \$60 in 1977. The major part of this increase occurred in 1976. The year-to-year percentage increase was about 17 percent in 1975-76 on average land renting for less than \$60 in 1977, but only about 6 percent per annum for 1976-1977. Cash rental rates on high value land increased even less in 1977, with some respondents reporting no increase and, in a few cases, some decrease.

For 1978, average cash rents are expected to remain at the 1977 levels as shown in figure 2 in all areas except the primarily small grain production ones where a slight decline is expected. Most respondents in the subsample interviewed in September, 1977, expected some decline in high rental rates but some increase in the lower rental rates in 1978. Also, because of the low returns projected for 1978 under current cash rents, increased interest was reported in shifting to crop share or flexible cash rents.

What is a fair cash rent for my farm? There are at least three ways of arriving at a first estimate of such a figure. First, is the market approach. The 1977-78 cash rental rates shown in figure 2 provide a basis for determining what is going on in the market in your area. However, since land productivity varies greatly in many areas, local cash rental should be carefully studied before deciding upon a fair cash rent for a particular farm.

Two other approaches to determining a fair cash rent are discussed below.

The cost or desired return approach is shown in form A on page 20. This involves two key determinations: conservative market value on land, and the interest rate to be used. Figure 3 shows the contour lines of Minnesota land values as of July, 1976. A comparison of the rental rates in figure 2 with the values in figure 3 indicates that in 1977 land rented for 5 to 6 percent of its market value at the beginning of the lease agreement. The percentage rate of return appears higher on the lower priced land in northern and southeastern Minnesota, but this is because the rental rate map shows rental rates for tillable acres whereas the land value contours are based on the average value of all farmland. Thus, 1977 rental rates were about 5 percent of average cropland value in most areas. Taxes and other minor landowner expenses run about 1 percent of market value, reducing annual returns to land investment to 4 percent in 1977. (Landowners renting on a crop share basis received even lower returns.) Landowners are satisfied with this low return because of their expectation that land will continue to inflate in value more rapidly than the general inflation rate. During the past 10 years, Minnesota farmland increased in price at an average rate of 15 percent per year compared to a general inflation rate of 6.7 percent per year in consumer prices. Therefore, land is looked upon as a "growth stock" as well as one giving annual dividends.

For 1978, cash rent as a percent of land value may be somewhat lower since land prices increased 10 to 20 percent from mid-1976 to mid-1977 while average cash rents for 1978 are expected to hold at 1977 levels.

The third approach is the income or breakeven approach. Form B-1 can be used by tenants and landowners to determine the relative desirability of being on a cash or share basis. Use of this form for 1978 will probably suggest that crop share rents will net lower returns to land than will cash rents. Form B-2 can be used by the tenant to determine the residual return to land and, in turn, the maximum rent he can afford to pay. This analysis will likely indicate that the maximum he can pay is less than going cash rents in the area. Therefore, the tenant will likely end up "snitching" cash from other parts of the business to pay the going rent. Both parties will eventually have to resort to bargaining to arrive at an agreed upon rental figure.

Flexible Cash Leases

Flexible or variable cash rents involve arrangements which permit the cash rent actually paid in a given year to vary with changes in prices and/or yields of the crop being grown. Upper and lower limits as to the amount of rents paid are often included in the arrangement.

As noted in table 1, flexible cash leases are not very common in Minnesota. Interest in this type of land rental arrangement increased with the commodity price jump in 1973. Landowners wanted an opportunity to share in such windfall profits, yet stay away from a crop share arrangement. However, since yields vary as well as prices, the idea never really caught on, particularly in the western portion of the state where year-to-year yield variations are greater. To adequately adjust for both price and yield usually requires a percent of the crop approach. Since share arrangements are more common in the western area, they generally shifted from cash to share, rather than taking the intermediate step to a flexible arrangement.

Use of the flexible cash lease has increased slightly since 1973, particularly in the areas of the state where cash rent is now over \$50 per acre. Some individual farm managers in the eastern half of the state reported quite heavy usage of this type of lease. Over 50 percent of all respondents in southeastern Minnesota reported that the flexible lease was being used in their area. By contrast, only 30 percent of the respondents in southwestern Minnesota reported any use of it. However, another surge of interest in this type of lease came after grain prices dropped in 1977. This time more renters are looking at either the flexible cash lease or the crop share lease as a lower cost alternative than cash rent for 1978.

The most popular flexible lease seems to be one which allows for price adjustment only. With this arrangement, the following formula is typically used.

$$\text{Adjusted Rent} = \frac{\text{Base Cash Rent}}{\text{Base Market Price for Crop (bu.)}} \times \text{Actual Market Price Per Bushel}$$

Thus, when the lease is drafted and signed, the landowner and tenant must agree on a per acre "base cash rent", a "base bushel price", and how the actual market price is to be decided: where and when. If they also want to set limits on the degree of adjustment, they will need to agree on the minimum and maximum cash rent per acre.

Another popular price adjustment lease is one in which base rent is expressed in dollars per acre with a price adjustment clause. Several examples are: (1) for average land \$40 per acre plus \$2 per acre for each 10¢ the corn price exceeds \$2 per bushel, (2) \$60 per acre base rent plus \$5 per acre for each 15¢ increment above \$2 per bushel and (3) \$60 per acre plus a 10 percent increase for each 25¢ increment above \$2.50 per bushel.

Under current conditions, adjustments for yield and price would seem the more realistic flexible arrangement for most areas. A simple approach, which might be called a modified share rather than a flexible cash, would be a percent-of-crop arrangement. For example, on land capable of producing 100 bushels of corn, the percent of crop for the landowner might be 30 percent on corn and possibly 35 percent on beans. The landowner would contribute only the land. The percentage share might be up to 35 percent for both beans and corn on the highest value land in south central Minnesota and down to 25 percent on the lower value land in northeastern Minnesota. To arrive at such a figure for your farm, use

worksheet C, page 21. Calculate the respective contributions of the landowner (land related costs only) and the tenant and, thus, determine the percent of the crop the landowner should receive. Maximum and minimum limits might be included to protect the landowner on the down-side and provide incentive to the tenant on the up-side. It should be noted that this arrangement puts all the risk of variation in input prices upon the tenant.

A variation of the percent-of-crop lease would be to have the tenant pay one-half of the normal cash rental rate as cash at the beginning of the cropping year. The other portion of the rent would be settled on a one-half of the percent-of-crop basis at the end of the period--say 15 percent of the crop.

Another yield/price adjustment approach, representing more of a flexible cash arrangement, would involve the following formula:

$$\text{Adjusted Rent} = \frac{\text{Base Cash Rent}}{\text{Base Crop Mkt. Price}} \times \frac{\text{Actual Yield}}{\text{Base Yield}} \times \text{Actual Market Price}$$

Again, the parties must agree beforehand as to the various items and how they are to be arrived at.

Another adjustment possibility would be a so-called "disaster provision" or adjustment for yield only. Under this scheme the parties might agree that if yields were reduced by an amount greater than 1/4 to 1/3, that cash rent would be reduced by 1/2 the reduced yield times the base price. This protects the tenant on the down-side. It could also be utilized in the same fashion on the up-side should a bumper crop come along.

CROP SHARE ARRANGEMENTS

Like cash rental rates, the type of crop share arrangement typically found in a given area is determined largely by the market value of the land (table 2). For example, in areas where cash rents range from \$20 to \$40 per acre, the 1/3-2/3 (1/3 of the crop going to the landowner) predominates. The 40/60 share arrangement is most common in the \$40 to \$60 cash rent land; the 50/50 arrangement predominates in areas with rents above \$60 per acre.

Table 2. Type of Crop Share Lease Used in Area as a Percentage of Total Crop Share Leases Used According to Cash Rent Iso-Lines.

Land Value Class	Type Of Rental Arrangement			
	1/4-3/4	1/3-2/3	2/5-3/5	1/2-1/2
cash rent				
\$20-\$30	15	67	1	17
\$30-\$40	--	57	24	19
\$40-\$50	--	34	41	25
\$50-\$60	--	5	53	42
\$60-\$70	--	8	45	47
\$70-\$80	--	5	34	61
over \$80	--	--	2	98

The heavy lines in figure 4 show the general break points among areas of the state where each of the three most common share arrangements predominate. The 50/50 share is most common in the south-southeast portion of the state. The 40/60 share dominates the remaining portion of the lower 1/3 of the state. The 1/3-2/3 is most common in the northern 2/3 of the state, where small grain production has historically been more common than the corn and beans of southern Minnesota.

In comparing the results in figure 4 with a similar map developed for 1975, two observations can be made: (1) the line showing the area of the state where the 50/50 crop share predominates has not moved significantly since 1975 and (2) the 40/60 crop share area has exhibited a significant northward movement.

However, as can be noted in table 2 and figure 4, no one type of share arrangement is used exclusively in any given area. This likely reflects differences in land values within an area and local tradition, as well as the transition effect as one approaches the boundaries of a given major area. Also, by adjusting the way in which operating costs are shared, any of the major crop share lease types can be made to fit a particular farm (use form C).

Share arrangements in a specific locality tend to be evolutionary. The tenant and landowner often want to retain a given percentage share arrangement that is common to their area. But as costs, prices and bargaining positions change, rather than change the share of the crop they may first change their respective contributions. If the changes are great enough, they may eventually shift to a new percentage share, say from a 1/3-2/3 to a 40/60 arrangement. The following are guidelines as to how expenses tend to be shared under the three major types of share leases (1/3-2/3, 40/60, 50/50). However, as just indicated, considerable variation in contributions made can occur within a given type of lease in a given area.

The 50/50 Crop Share

The 50/50 crop share predominates over other share arrangements in southeastern and south central Minnesota. (The cash arrangement accounts for over one-half of all rentals.) Under the 50/50 crop share arrangement the landowner's share of expense is typically as follows:

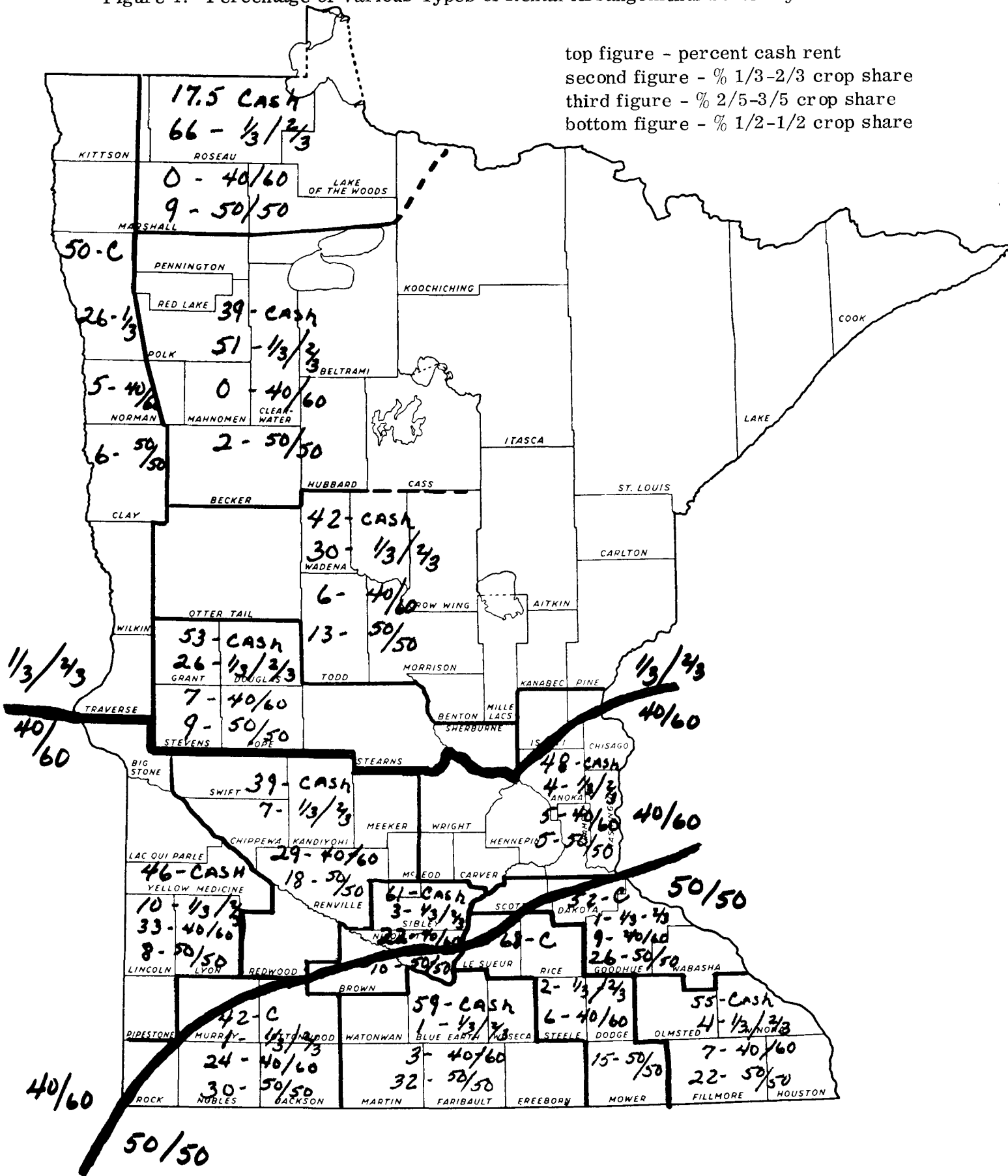
Seed: The landowner usually pays for one-half the seed costs.

Fertilizer: The landowner usually pays for one-half of the fertilizer costs. If the fertilizer is applied by a custom operator, the landowner also shares application costs.

Herbicides and Insecticides: These costs are also shared on an equal basis.

Harvest Cost: The sharing of harvest costs tends to vary somewhat between areas in the 50/50 region. In the south central area where cash rents are highest, most reports indicate that the tenant usually pays for all harvest costs. Moving to the southeastern area where cash rental rates are somewhat lower, the sharing of harvest costs increases in frequency. In southeastern Minnesota, the landowner generally pays a portion of the costs of harvest when the corn is custom combined or combined by the tenant. The landowner usually pays no harvest cost when the corn is picked, though several respondents mentioned that the landowner helps cover shelling costs.

Figure 4. Percentage of Various Types of Rental Arrangements Sorted by Similar Areas



Drying Costs: The landowner usually pays for his share that is dried. This arrangement appears to hold whether drying takes place on the farm or in town. The amount paid will vary from merely covering fuel and power costs to the normal drying charge in town.

Hauling of Grain: The landowner pays his share of transportation costs from storage to market or if the crop goes directly from field to market. But, if the grain is stored on the farm the tenant usually pays for hauling cost.

Combination 50/50 and 40/60 Crop Share

As one moves toward the southwest corner of the state, land values and cash rental rates tend to be somewhat lower. In this area a transition-type share arrangement has developed. The corn crop is still shared on a 50/50 basis as are the related operating costs, excepting harvest cost, which is assumed entirely by the tenant. With beans and small grains, however, the crop and expenses are shared on a typical 40/60 basis. The larger share of beans and grain going to the tenant is an attempt to compensate the tenant for harvest costs on all crops. This mixed arrangement has evolved to adjust for the lower land values in this area relative to the south central area where crop yields are higher.

The 40/60 Crop Share

The 40/60 share predominates among share rental arrangements in the central and southwestern counties. With this arrangement the landowner's share of expense differs somewhat from the 50/50 crop share arrangement. Following is a summary of the survey findings relative to the 40/60 share:

Seed: The landowner generally pays no seed cost. This is not absolute though; several respondents reported that some contracts still share seed cost on a 40/60 basis. This will likely occur in poorer land areas or where cash rents are on the lower end of the \$40-\$60 per acre range.

Fertilizer: All respondents reported that fertilizer expenses are normally shared on a 40/60 basis. Most of the time this also includes custom application.

Herbicide: Expenses shared in a like manner to that of fertilizer.

Harvest: The tenant usually handles all harvest expenses whether for corn, soybeans or small grain. Custom hired harvesting does not seem to alter this pattern. Only a couple of respondents stated that harvest cost was still shared on a 40/60 basis.

Drying Costs: Drying expense is normally shared on a 40/60 basis. If the tenant dries the landowner's share, the going custom drying rate is the usual charge. If the corn is delivered wet to the elevator, the landowner pays his share (40 percent) of the elevator drying charge.

Hauling Expense: There does not appear to be a set pattern as to whether the landowner pays his share or the tenant pays all hauling expenses. The tenant usually assumes all hauling expenses when the crop is stored on the farm. When it's delivered to town, about 50 percent of the respondents reported that the

landowner pays 100 percent of his share. The other 50 percent of the respondents said the tenant pays all hauling expenses. It is possible that the difference in this practice is related to the distance to market, with the landowner more apt to pay if the farm is more than a few miles from town.

The 1/3-2/3 Crop Share

The predominate crop share arrangement in northern Minnesota is the 1/3-2/3 crop share. However, a 1/4-3/4 crop share arrangement is still used on some of the lower priced lands in the extreme northern and northeastern counties. This area also plants more small grain and specialty crops which tends to shift the relative amounts of expenses or contributions associated with the crop. The following practices were reported for the 1/3-2/3 crop share:

Seed: The tenant usually pays all seed costs. In some cases, small grain seed cost is shared according to the share of the crop.

Fertilizer: Fertilizer expenses are normally shared in the same proportion as the crop is shared.

Herbicide: The majority of respondents reported that herbicide costs are shared according to the crop share. A few reported that the tenant pays all these costs.

Harvest: All but one respondent stated that the tenant pays all harvest costs. This seems to be the consistent response no matter what the crop or the harvesting method.

Drying Expenses: There appears to be no set pattern for sharing drying expenses. There were a few more reports stating that the tenant pays all such costs than there were responses of sharing this expense on a 1/3-2/3 basis. The variation in responses may well be related to the type of crops grown, since small grain and most specialty crops usually do not require drying whereas corn does.

Hauling Expense: The share of hauling expenses followed a similar pattern to that in the 40/60 area (see previous section).

The 1/4-3/4 Crop Share

The 1/4-3/4 share is found only in low cash rent areas. However, it may not be too different in net return to the landowner than the 1/3 share since the landowner often does not share in any operating costs in the 1/4 share.

Determining An Equitable Crop Share Lease

Tenants and landowners can use form C to determine how well their present sharing of contributions square with their present share of crop received. In transitional areas, they may find that they will have to shift to a different percentage of sharing of the crop to make for an equitable arrangement.

A second method for determining an equitable share arrangement for a given situation is called the fixed contribution approach. Here, the tenant and landowner determine the respective annual use cost or value of their contributions of land, labor and management, and machinery. Income and variable expenses are then shared in this proportion. Such a determination can be made using form D.

CUSTOM FARMING

Custom farming is even less common than flexible cash leases, accounting for less than 1 percent of all rental arrangements (see table 1). Custom farming is attractive only to those landowners who can and want to assume greater responsibility and risk in their farming operations. In a sense, these owners become farm operators--or at least farm managers--in that they make the decisions on what to produce and then arrange for all the field work to be done by custom operators.

The small number of respondents who did report on custom operation rates in their areas gave costs for corn of \$35 to \$75 per acre. For beans the reported range was from \$22 to \$60.

The potential for this type of operation is often limited by (1) a lack of available custom operators willing to do all the field operations from plowing through combining and (2) the generally poor performance by operators who might be available. These limitations stem from the fact that, unless he specializes in the sale of custom services, the custom operator is likely to handle the landowner's acreage after he does his own field work. Also, the good operator will probably prefer to rent land than to sell his services at going custom rates which are often below full-cost levels.

HAY AND PASTURE RENTAL RATES

Survey respondents were asked to provide information on hayland rental arrangements when hayland was part of an overall land lease as well as when it was rented on a stumpage basis.

When hay was rented on a crop share basis, the costs were shared in the same manner as for other crops. But, often when there is hayland involved in a crop share arrangement, the tenant pays cash rent for the hay acreage since the landowner has no use for the hay.

When rented on a cash basis along with the rest of the farm, hayland rental rates for tame hay did not seem to vary significantly from the row-crop rental rates per acre in 1976-77. This was especially true for the lower and middle ranges of cash rent, as one can observe in table 3. In the land quality range above \$70 average cash rent per acre, hay rental rates appeared to be somewhat below the average cash rent for tillable acres.

The cash rents, especially the stumpage rents, shown in table 3 are higher than one might normally expect because of the shortage of pasture and hay in 1976. Rental rates for 1978 are expected to be down by about 20 percent.

The average cash rent for "wild or poor quality" hayland was less than half that for "tame or good quality" hayland in the areas where average cash rents were less than \$50. In the higher land value areas there was less of a percentage discount on the "wild or poor quality" hay but about an equal dollar discount per acre.

Table 3. Average Cash Rent per Acre and per Bale for Tame and Wild Hayland by Land Value Categories and by Type of Rental Arrangement, 1976-77

Cash Rent Category	Rented As Part Of Farm		Rented As Stumpage			
	Tame or Good Hay	Wild or Poor Hay*	Tame Hay	Wild Hay	Tame Hay	Wild Hay
	- - \$ per acre - -		- - \$ per acre - -		- - \$ per bale - -	
\$20-\$30	\$24.11	I.D.**	\$38.79	\$18.70	\$.52	\$.24
\$30-\$40	35.83	\$16.40	57.00	17.50	.63	.34
\$40-\$50	47.53	20.00	58.38	22.10	.84	.59
\$50-\$60	58.68	45.00	77.50	46.67	.88	.75
\$60-\$70	65.50	35.00	87.90	50.83	.85	.54
\$70-\$80	68.13	40.00	91.25	45.00	1.08	.69
over \$80	75.00**	40.00**	**	**	**	**

* Reports on wild or poor hay were very sketchy. Most respondents indicated that very few acres of wild hay remained.

** Insufficient data to place much reliance on the averages.

Hayland rented on a stumpage basis had significantly higher rental rates per acre than the average row-crop rates in the same area. This is to be expected since the tenant doesn't have to consider establishment costs and associated risks such as stand failure, freeze-out, etc. The tenant can also evaluate crop potential more closely prior to setting the price. Also, 1977 stumpage rates, as indicated above, were likely higher than normal because of the drought-related 28 percent drop in Minnesota hay production in 1976.

Respondents were also questioned regarding per-bale rental rates. The last two columns of table 3 show average bale rates reported for 1976-77 according to cash rental (land value) categories. (Rates per bale will be lower in 1978 in most areas of the state because of lower hay prices.) Reported rates had a wide range in each area, probably reflecting the influence of hay quality and weight per bale. More surprising, however, was the wide difference in per bale rates among areas, with the average rate being considerably higher in the high rent areas than in the low rent areas. Differences in hay yields, hay quality, relative supply and demand conditions, and transportation costs to high demand livestock areas probably account for most of these differences. Hay yields are normally lower in the northern part of the state where most of the low cash rent category acreages are found. Per bale rates should be somewhat less on low yielding hayland than on high yielding hayland since production costs per bale increase as yields decline. Stumpage rates are lower on poorer quality hay since the final product has a lower feeding value. Northern Minnesota is also a surplus hay producing area so transportation costs to hay deficit areas tend to depress the rental rates on hay stumpage in that area.

Whether the stumpage payment on a per-acre or per-bale basis is a better financial deal will depend largely upon the yields that are obtained. If a per acre rate is established early in the year and the yield is below expectations, the renter will have a relatively poorer bargain than expected. Conversely, if yields are above expectations, the renter will be better off than expected. Assuming about 40 bales per ton, the comparative rates shown in table 3 suggest a typical yield expectation of only about 2 tons per acre on the tame hay.

Hay is sometimes put up on shares. In determining an equitable share arrangement, costs of the two parties should be compared. Hay harvest costs will range between 30¢ and 50¢ per bale. Since land costs and hay establishment costs can vary greatly, the value of the hay crop after harvest can be estimated and the landowner paid a share of the crop that represents that portion over and above harvest costs. For example, if the hay bales are expected to be worth 80¢ per bale, a 50/50 share would be appropriate--given a 40¢ harvest cost. But, if the hay is expected to be worth \$1 per bale, a 40/60 share would be appropriate.

Pasture Rent

No specific question on pasture rent was asked in the survey. However, information available suggests that pasture rental rates vary considerably in Minnesota depending upon location in the state, quality of pasture, and what is included in the pasture charge. Figure 5 shows average 1977 pasture rents obtained in a recent USDA survey along with average cropland cash rents and land values as obtained in the same survey.

Rental rates can be on a per head of livestock or on a per acre basis. If the pasture is tillable cropland, the charge might best be on an acre basis. The rates shown for hayland in table 3 can be used as a supplement to the cropland rates shown in figure 5 for establishing per acre pasture rental rates.

If non-cropland pasture is rented, a per cow per month charge is often used. This charge varies from a low of \$3 or \$4 per cow per month in northeastern Minnesota (note that the \$6 per head rate reported for crop reporting district number 2 in figure 5 appears to be an error) to \$6 to \$8 per month in southern Minnesota. The difference is due to the relative supply and demand for pasture in the different areas. Charges for younger animals are proportional to their weights relative to that of mature animals.

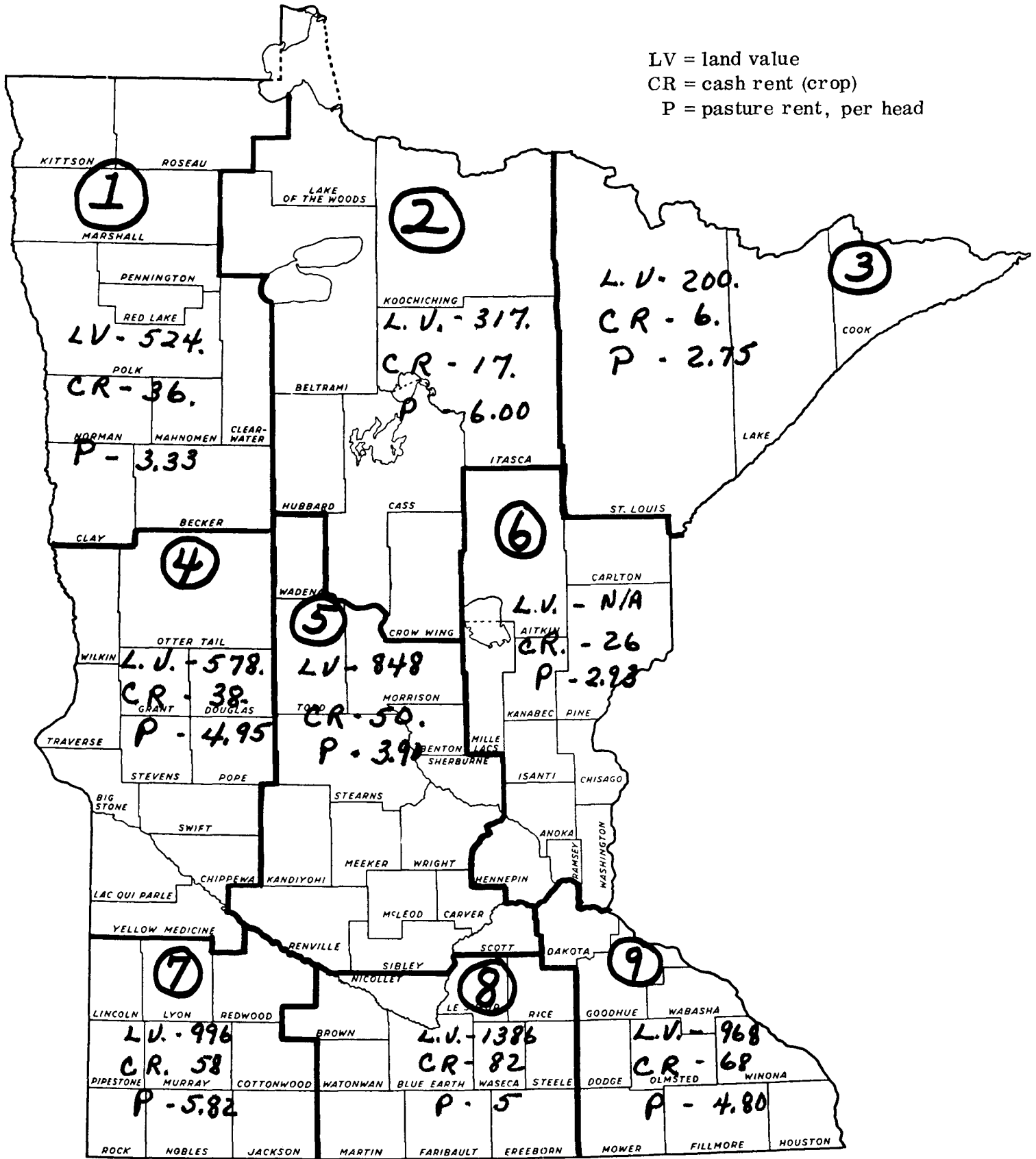
If power costs to pump water or and other service costs are provided by the landowner, the rental rate may go up by at least \$2 per cow per month.

FARM BUILDING RENTAL

The primary method of renting existing farm buildings to a tenant is to include them with the rental of the property. A "package deal" was the typical response to the survey. That is, there was no extra charge for farm buildings--they went with the acreage rental. This is especially true when the land is rented on a cash basis, or the landowner does not have much invested in the out-buildings. In cases where the landowner charged extra for the buildings, reports varied significantly as to type of arrangement and rental rates. No set patterns were observed by area of the state. Rather, the varying rates reflected the kind, amount and condition of the facilities.

Rental rates were obtained from farm houses of three different qualities. The ranges given for each quality of house did not seem to vary as to the area of the state when located away from a larger city. However, the rental rates did tend to be somewhat higher on average or better houses that were rented to someone other than the tenant operator. Most respondents indicated ranges within the following bounds:

Figure 5. 1977 Land Values, Average Cash Rents and Pasture Rents per Head



<u>Type of Housing</u>	<u>Rented to Operator</u>	<u>Rented by Third Party</u>
	- - - - - \$ per month - - - - -	
Modern - Good Condition	\$100 - \$150	\$100 - \$175
Average Condition	\$50 - \$125	\$75 - \$125
Poor Condition	\$25 - \$75	\$25 - \$75

When located near a larger city, these rates increased significantly--by \$25 to \$50 in each category. Garages were most frequently rented for \$20 per month when rented to someone other than the farm operator.

The range of the rates that were reported for existing out-buildings was between \$250 to \$3,000 per year. Production potential seemed to play the major role in determining these rates. If the hog barn or dairy barn was in good shape the tenant sometimes paid an annual rental charge based on depreciated value. Tenants are in a fairly strong bargaining position on these rates because out-buildings have few alternative uses. When buildings were not well suited for production, there was either no charge or there was a flat rate per year for all out-buildings on the farmstead of between \$200 and \$750. In such cases the tenant used them for machine storage, hay and grain storage and open cattle sheds. The tenant maintained the buildings in such arrangements with the landowner paying for materials.

The survey also had a question asking how investments and rental rates were handled on new buildings. Such investments by landowners did not seem to be a popular arrangement. Most respondents reported that these were handled as private long-range deals between the tenant and landowner. If such transactions were undertaken the most common arrangement for annual rental rates was 10 percent of the new building investment costs. Another arrangement mentioned was for the tenant to construct the building and deduct the depreciation off the rent. The depreciation rate was on a straight line, 10-year life, after which it belonged to the landowner.

ALTERNATIVE PROCEDURES FOR CALCULATING CASH RENT

Form A - Cost Or Desired Return Approach

	<u>Your Farm</u>
Interest: Land Value \$ _____ x _____ %	_____
Taxes	_____
Repairs and Improvements	_____
Building Depreciation and Insurance	_____
	<u>Per Acre</u>
Total Landowner "Costs" . . . \$	\$ _____

Form B1 - Breakeven Approach: Cash Versus Crop Share

<u>Gross Income</u>			<u>Normal</u>		<u>Total</u>		<u>Price/</u>		<u>Total Farm</u>	<u>Landowner's</u>
<u>Crop</u>	<u>Acres</u>		<u>Yield</u>	=	<u>Production</u>	x	<u>Unit</u>	=		<u>Share</u>
_____	_____	x	_____	=	_____	x	\$ _____	=	\$ _____	\$ _____
_____	_____	x	_____	=	_____	x	_____	=	_____	_____
_____	_____	x	_____	=	_____	x	_____	=	_____	_____
_____	_____	x	_____	=	_____	x	_____	=	_____	_____
_____	_____	x	_____	=	_____	x	_____	=	_____	_____
Total	_____		xxx		xxx		xxx	(A)	\$ _____	\$ _____

<u>Variable Expenses</u>						<u>Acres</u>		<u>Total Farm</u>	<u>Landowner's</u>	
<u>Crop</u>	<u>Seed</u>	<u>Fert & Chem</u>	<u>Other</u>	<u>Total</u>			=		<u>Share</u>	
		(per acre)								
_____	\$ _____	\$ _____	\$ _____	\$ _____	x	_____	=	\$ _____	\$ _____	
_____	_____	_____	_____	_____	x	_____	=	_____	_____	
_____	_____	_____	_____	_____	x	_____	=	_____	_____	
_____	_____	_____	_____	_____	x	_____	=	_____	_____	
_____	_____	_____	_____	_____	x	_____	=	_____	_____	
	xxx	xxx	xxx	xxx		_____	(B)	\$ _____	\$ _____	
Return over variable expenses (A - B)								(C)	\$ _____	\$ _____
Other rental income (hay, pasture, etc.)								(D)		\$ _____
Total farm rent (C + D)								(E)		\$ _____
Less risk adjustment: total farm rent \$ _____ x _____ %								(F)		\$ _____
Breakeven cash rent (E - F)								(G)		\$ _____
									<u>Per Acre</u>	\$ _____

Form B2 - Maximum Rent Approach - Tenant

A. Return over variable expenses - total farm (C above) . . .	\$ _____
B. Machinery and equipment costs . . .	\$ _____
C. Labor and management charge . . .	\$ _____
D. Total overhead costs (B + C)	\$ _____
E. Maximum cash rent tenant can afford to pay (A - D) . . .	\$ _____
	<u>Per Acre</u>
	\$ _____

Form C - Using Desired Share Of Crop As Basis For Determining Contributions Of
Tenant And Landowner

	<u>Landowner</u>	<u>Tenant</u>
Desired Percent Share of Crop	_____	_____
<u>Land and Buildings</u>		
1. Interest (4-6% of valuation)	_____	_____
2. Real Estate Tax	_____	_____
3. Cash Rents (paid to owner by tenant) ^{a/}	- _____	+ _____
<u>Buildings, Fences, Etc.</u>		
4. Depreciation (2-4% of replacement)	_____	_____
5. Repair (1-2% of replacement)	_____	_____
6. Insurance	_____	_____
<u>Power and Machinery</u> ^{b/}		
7. Interest (6-8% orig. cost plus salvage + 2)	_____	_____
8. Depreciation (10-15% of replacement cost less salvage)	_____	_____
9. Repair (3-5% of original cost)	_____	_____
10. Insurance	_____	_____
11. Fuel, Oil	_____	_____
12. Machine Work Hired	_____	_____
<u>Labor and Management</u>		
13. Supplied by Tenant	_____	_____
14. Supplied by Landowner	_____	_____
15. <u>Other Overhead Expenses</u>	_____	_____
16. <u>Total Fixed Contributions</u>	_____	_____
<u>Operating Expenses</u>		
17. Seed	_____	_____
18. Fertilizer, Lime	_____	_____
19. Chemicals	_____	_____
20. Harvesting, Combining ^{c/}	_____	_____
21. Hauling ^{c/}	_____	_____
22. Grain Drying ^{c/}	_____	_____
23. _____	_____	_____
24. _____	_____	_____
25. <u>Total Operating Expenses</u>	_____	_____
26. <u>Total Fixed and Operating Expenses (16 + 25)</u>	_____	_____
27. Percent Supplied by Owner/Tenant (should approximate desired share of crop)	_____	_____

a/ Subtract from landowner only if related charges were included at lines 1, 2, 4, 5 and 6.

b/ Include only that portion which should be attributed to crop production on this farm.

c/ Include charges or adjustments only if not considered in lines 7 - 12 above.

Form D - Using Fixed Contributions Of Tenant And Landowner As A Basis For Dividing
Income And Operating Expenses On A Crop-Share Rented Farm

	<u>Landowner</u>			<u>Tenant</u>		
	<u>Value</u>	<u>Rate</u>	<u>Value of Annual Contrib.</u>	<u>Value</u>	<u>Rate</u>	<u>Value of Annual Contrib.</u>
<u>Land and Buildings</u>						
1. Interest (4-6% of valuation)	_____	_____	_____	_____	_____	_____
2. Real Estate Tax	_____	_____	_____	_____	_____	_____
3. Cash Rents (paid to owner by tenant) ^{a/}	_____	_____	_____	_____	_____	_____
<u>Buildings, Fences, Etc.</u>						
4. Depreciation (2-4% of replacement)	_____	_____	_____	_____	_____	_____
5. Repair (1-2% of replacement)	_____	_____	_____	_____	_____	_____
6. Insurance	_____	_____	_____	_____	_____	_____
<u>Power and Machinery^{b/}</u>						
7. Interest (6-8% original cost plus salvage + 2)	_____	_____	_____	_____	_____	_____
8. Depreciation (10-15% of replacement cost less salvage)	_____	_____	_____	_____	_____	_____
9. Repair (3-5% of original cost)	_____	_____	_____	_____	_____	_____
10. Insurance	_____	_____	_____	_____	_____	_____
11. Fuel, Oil	_____	_____	_____	_____	_____	_____
12. Machine Work Hired	_____	_____	_____	_____	_____	_____
<u>Labor and Management</u>						
13. Supplied by Tenant	_____	_____	_____	_____	_____	_____
14. Supplied by Landowner	_____	_____	_____	_____	_____	_____
15. Other Overhead Expenses	_____	_____	_____	_____	_____	_____
16. Total Fixed Contributions	_____	_____	_____	_____	_____	_____
17. % Supplied by Landowner/Tenant ^{c/}	_____	_____	_____	_____	_____	_____

^{a/} Subtract from landowner only if related charges were included at lines 1, 2, 4, 5 and 6.

^{b/} Include only that portion which should be attributed to crop production on this farm.

^{c/} Share income and operating expenses in this percentage.