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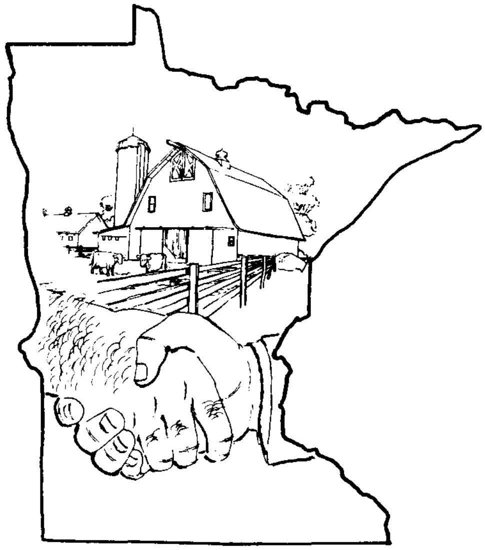
# Land Rental Arrangements for Minnesota Farmland



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# INTRODUCTION

Minnesota farmland rental arrangements and rates remained fairly stable during the fifties and sixties. Beginning with the sharp increase in farm commodity prices in 1973, Minnesota land prices and cash rents have more than tripled during the 1973-79 period. To provide landlords, tenants and others with up-to-date information on these rapidly changing rental patterns, surveys of rental rates in Minnesota were conducted by the Department of Agricultural and Applied Economics, University of Minnesota, in late 1974 and again in late 1976.1/

The purpose of this publication is to provide a further updating of changes in farmland rental patterns in Minnesota as reported in a survey conducted by the Minnesota Department of Revenue in early 1979. In 1978 and 1979, the Equalization Aids Review Committee circulated 3,050 questionnaires to individuals considered knowledgeable of farm rental arrangements in townships throughout the state.2/ In each year, more than half the questionnaires were returned for analysis, providing a very comprehensive picture of rental patterns statewide. Data processing and mapping services were provided by the Land Management Information Center of the State Planning Agency.

Much of the data presented on the following pages is based on the 1979 survey, although comparisons are made with the cash rental rates determined in the 1978 survey and with earlier surveys made by the University of Minnesota. This report includes the following sections:

- General Observations On Rental Arrangements In Minnesota
- Cash Rental Rates
- Crop Share Rental Arrangements
- Hay And Pasture Rental Rates

# GENERAL OBSERVATIONS ON RENTAL ARRANGEMENTS IN MINNESOTA

This section reviews (1) the importance of farmland rentals in various areas of Minnesota, (2) the importance of keeping rental arrangements adjusted to changing conditions, and (3) risk and other considerations in selecting and adjusting rental arrangements.

## Importance Of Farmland Rentals In Minnesota

According to the 1974 Census of Agriculture about 40 percent of the state's farmers rented all or part of their farms, and rented land accounted for 31 percent of all farm acreage in the state. In heavy rental areas, such as southwestern Minnesota, 50 to 60 percent of the farm operators rented part or all of their farms (see figure 1), with 40 to 50 percent of the land being rented.

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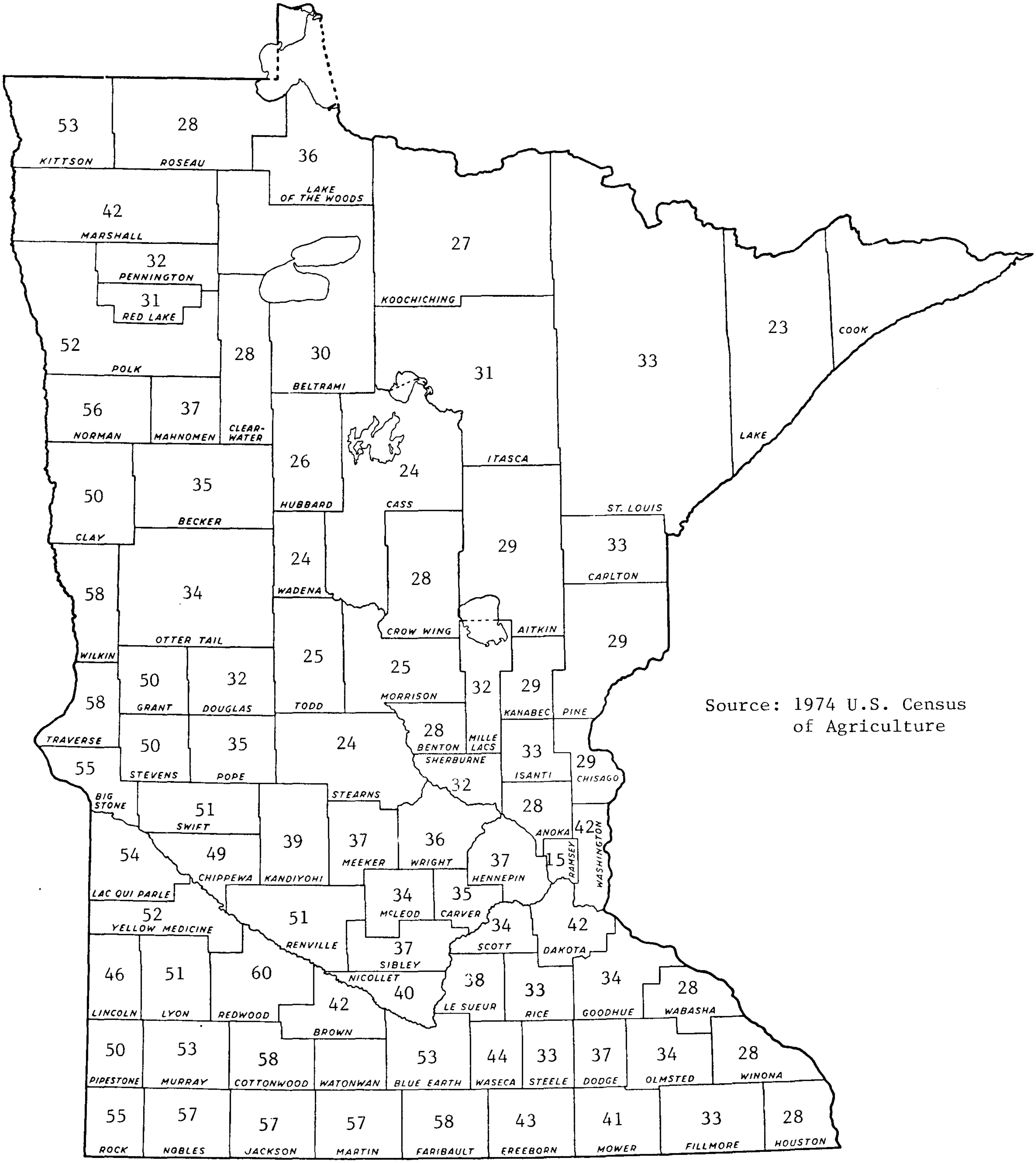
1/ See Land Rental Arrangements In Minnesota, Farm Management Series FM 660, March 1975; and Economic Report 77-7, October 1977.

2/ The basic purpose of this data collection effort was to verify cash rental values and crop share rental arrangements which along with farmland sale prices were to be used in valuing farmland for purposes of allocating state school aids.




Source: 1974 U.S. Census of Agriculture

Figure 1. Percent Of Farm Operators Who Rented Part Or All Of Their Acreage In 1974

Farmers retiring in recent years have shown increasing reluctance to sell their farms; choosing instead to rent their holdings. In instances when a farming career ends with death of the operator, the heirs have also shown reluctance toward selling farmland. Among the reasons for holding farmland beyond retirement and death, certainly sentimental and personal motives must rank high. However, desires to hold farmland as a store of wealth in expectation of further declines in the value of the dollar are also evident. Finally, current estate tax and income tax laws may encourage holding rather than selling.

Therefore, rental arrangements can be expected to increase in importance in coming years as more farmers retire and choose to retain ownership rather than sell. Census data suggests that about 40 percent of the state's farmers are over 55 years of age.

## Importance Of Keeping Rental Arrangements Adjusted To Changing Conditions

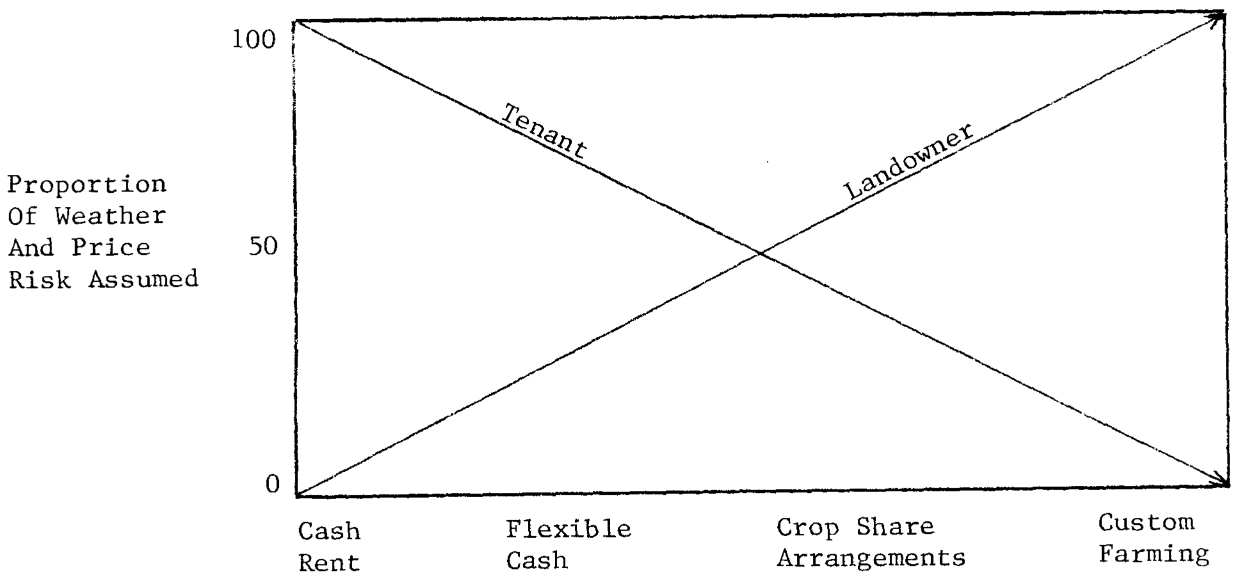
The continuation of a strong agriculture in many areas of Minnesota depends upon the preservation of sound, equitable rental arrangements between landlords and tenants. Such a lease is one in which each party shares income proportionate to contributions made and the degree of risk assumed. The basic contributions generally represent a trade-off between the landlord's land and facilities and the tenant's labor, management and machinery.

As changes occur in land values, crops raised, production costs, crop yields and prices, adjustments must occur in rental arrangements and rates if leases are to remain equitable. Keeping rental arrangements adjusted to changing conditions requires a knowledge of (1) what is happening in the rental market itself and (2) what is happening to the value of the respective contributions of the landlord and tenant in a given farm situation. This report is designed to provide you with insights as to what appears to be happening in the rental market in your area. But a careful analysis of your particular situation is the surest way of insuring that your rental arrangement is properly adjusted to your current farm conditions.

## Risk And Other Considerations In Selecting And Adjusting Rental Arrangements

Today's crop farmers face greater risks than in the past because of increased size of business, increased financing and increased dependence upon world markets--which results in more variable prices. Of course, the traditional risks of weather and pests also prevail. In selecting and adjusting rental arrangements, it is important to recognize the amount and type of risk assumed by the tenant and landlord. As can be seen in the diagram on the following page, cash rent involves the greatest amount of risk for the tenant, whereas with custom farming the landowner assumes the greatest amount of risk. Crop share arrangements involve varying amounts of risk for both tenant and landowner--depending upon the arrangement.

The kind of lease utilized often reflects the desire of tenants and landlords to assume more or less risk. For example, a landlord unwilling to expose his income to price and weather variations will probably desire a cash rental arrangement. Crop share arrangements usually involve greater risk to the landlord and require a closer relationship between tenant and landlord than cash rental agreements as the two may need to agree on particular farming practices and the particular production costs to be assumed by the landlord. The "material participation" test for earnings eligible for social security coverage is more apt to be met by a crop share lease than by a cash rent lease. Therefore, the crop share lease may be preferred by landlords prior to their retirement. However, after retirement, this same test has prompted some landlords to shift to the cash rental method so that social security payments are not reduced as total earnings exceed $5,000 (for age 65 - 71 in 1980).




The landowner involved in custom farming bears production and price risks on 100 percent of the crops to be produced. Individuals involved in custom farming may have small tracts, insufficient equipment, or physical disability keeping them from carrying out farming tasks. Undoubtedly some individuals choose custom farming for the amount of satisfaction they receive from staying closely involved in farming.

Tenants' preferences in rental arrangements may reflect a desire to shift some price and production risk to landlords under crop share arrangements, especially in areas of the state experiencing high yield variability. Beginning farmers may prefer crop share arrangements in order to reduce the amount of financing of crop inputs and to share price and production risks with the landlord. Other tenants may feel most comfortable operating with cash leases which allow them more freedom in planning and operating their farm business.

The information in table 1 shows the degree of involvement of the landlord under various rental arrangements. These rankings may prove helpful in selecting or adjusting a rental arrangement.

Table 1. Landowner Involvement Under Various Crop Land Rental Arrangements*

| | Method Of Operation | | | | |
|---|---|---|---|---|---|
| | Cash Rent | | Crop Share Cash | Custom Operated | Direct Operation |
| | Fixed | Flexible | | | |
| Capital Required: | | | | | |
| Machinery & Equipment | none | none | low | low | high |
| Operating Expense | none | none | mod | high | high |
| Management Involvement | none | none | mod | high | high |
| Market Responsibility | none | none | mod | high | high |
| Risk Assumed | low | low-mod | mod | high | high |
| Variability in Return | none | low | mod | high | high |
| Material Participation** | not usually | not usually | very likely | yes | yes |

* Adapted from Fixed And Flexible Cash Rental Arrangements For Your Farm, North Central Regional Extension Publication 75.

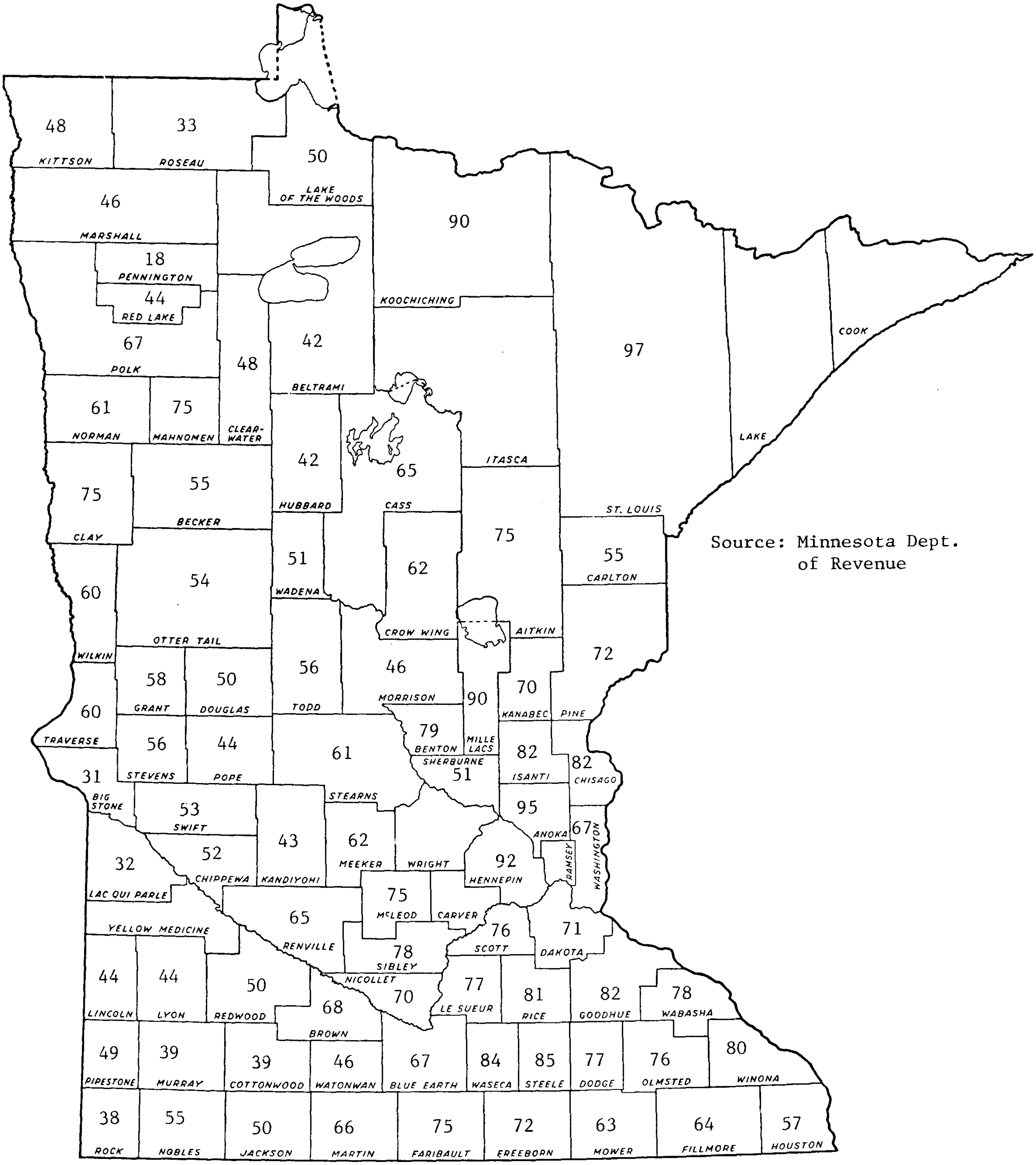
** Under present social security and federal estate tax laws owners may find themselves in a paradoxical situation. In order to draw social security payments, material participation must be avoided; but if current use value is to be used for estate tax purposes, some material participation may be necessary.

## CASH RENTAL RATES

The cash rental arrangement is the most popular lease in Minnesota (figure 2). 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. The renter has the potential for the greatest gain in years of good prices and yields. Therefore, this arrangement is usually preferred by the established farmer. However, the renter also has the potential for the greatest loss under this arrangement, such as occurred in the drought areas of the state in 1976. Therefore, the cash rent is not as desirable for the beginning farmer or the full-tenant-operator who has no land of his own over which to spread crop loss risks.

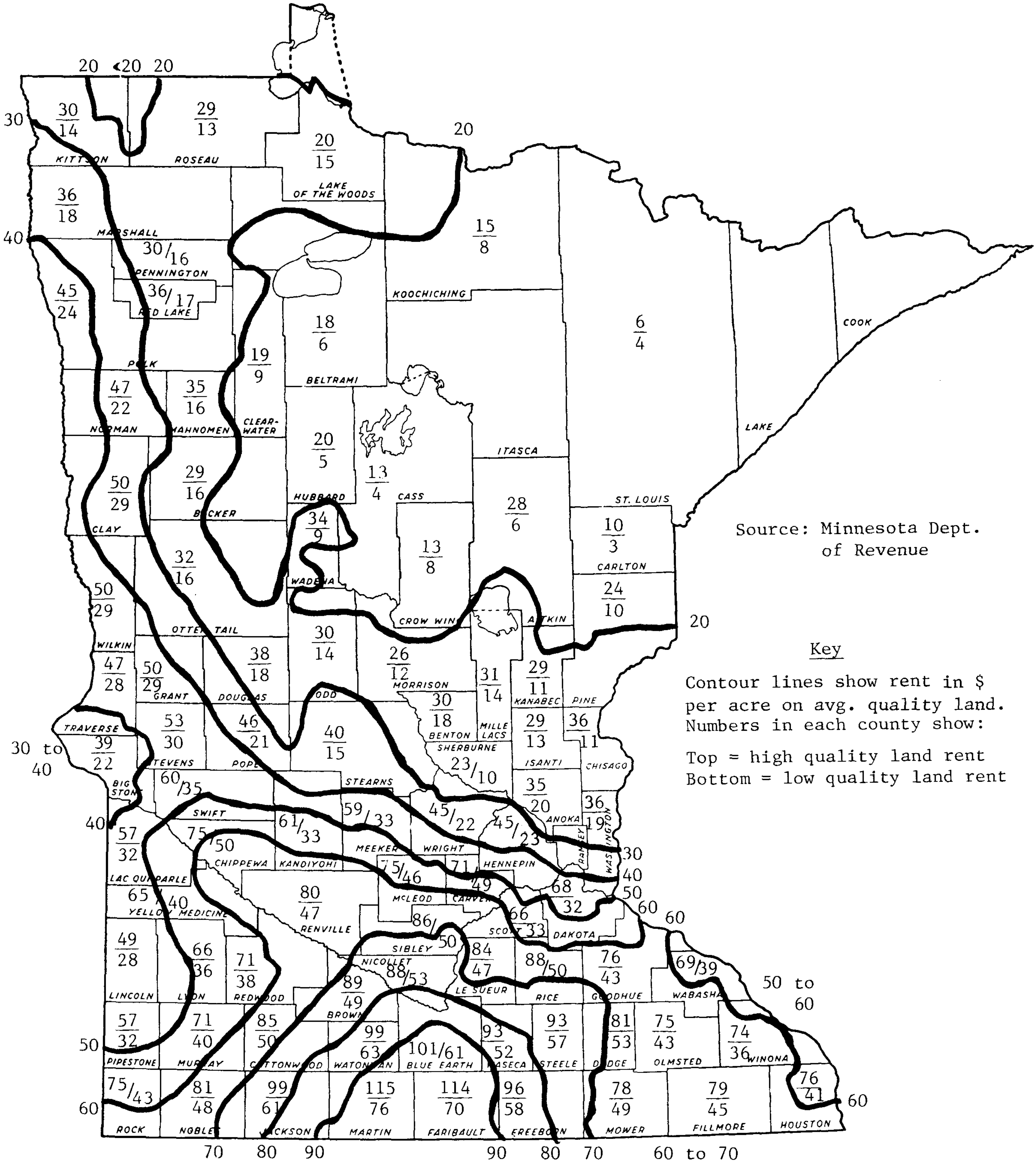
Because the renter is taking more of the production and price risk, he should logically pay a little less net rent through time under the cash rent than under the crop share. In addition, the landlord should be willing to take less in cash because he (1) usually gets at least half the payment in advance, (2) has no money tied up in input costs and (3) puts in less management time.

Cash rental rates increased sharply during the seventies with the increase in farm earnings, the jump in land values and the decrease in the value of the dollar. Figure 3 shows iso-cash rent lines for average quality tillable land in 1979. The two numbers in each county show the averages of the responses to questions as to the cash rent paid for "high quality" and "low quality" tillable land. Most counties show a wide range in rental rates because of land quality differences.




Source: Minnesota Dept. of Revenue

Figure 2. Cash Leases As A Percent Of All Rental Arrangements, By County, 1979




Source: Minnesota Dept. of Revenue

Key

Contour lines show rent in $ per acre on avg. quality land. Numbers in each county show:

Top = high quality land rent
Bottom = low quality land rent

Figure 3. Cash Rental Rates On Tillable Land (Dollars Per Tillable Acre)

For a discussion of procedures for establishing a fair cash rent for your farm or for developing a flexible cash arrangement, contact your County Extension Office and ask for North Central Regional Extension Publication 75, Fixed And Flexible Cash Rental Arrangements For Your Farm. A form for recording your cash lease--Cash Farm Lease form, North Central Regional Extension Publication 76--is also available.

## CROP SHARE RENTAL ARRANGEMENTS

Like cash rental rates, the type of crop share arrangement typically found in a given area is determined largely by the market value (inherent productivity) of the land. Table 2 shows the relationship between cash rental rates and the relative importance of various types of share rental arrangements. For example, in areas where cash rents range from $20 to $49 per acre, the 1/3 - 2/3 (1/3 of the crop going to the landlord) predominates. The 40/60 share arrangement is most common in the $40 to $69 cash rent range; while the 50/50 arrangement predominates in areas with rents above $70 per acre.

Table 2. Relationship Between Cash Rental Rates And The Relative Importance Of Various Types Of Share Arrangements In Minnesota, 1979.

| | Type Of Crop Share Arrangement - Landlord/Tenant | | | |
|---|---|---|---|---|
| Cash Rental Rate | 1/4 - 3/4 | 1/3 - 2/3 | 2/5 - 3/5 | 1/2 - 1/2 |
| $/tillable acre | percent | | | |
| less than $20 | 23 | 48 | 11 | 18 |
| $20 - $29 | 18 | 59 | 7 | 16 |
| $30 - $39 | 9 | 64 | 12 | 15 |
| $40 - $49 | 2 | 40 | 38 | 20 |
| $50 - $59 | 1 | 24 | 37 | 38 |
| $60 - $69 | -- | 11 | 45 | 44 |
| $70 - $79 | -- | 8 | 41 | 51 |
| $80 - $89 | -- | 6 | 31 | 63 |
| $90 and above | -- | 9 | 10 | 81 |

The type of crop grown also appears to be related to the type of share arrangement. Land suited primarily for small grain production commands a lower crop share for the landlord (1/4 or 1/3) since the per acre crop value is usually lower than that of row crops.

Figure 4 shows the predominate crop share arrangement by area of the state. With the exception of a small area of 1/4-3/4 share arrangements in northwestern Minnesota, the northern two-thirds of the state is a 1/3-2/3 crop share area. The west-southwest area of the state is generally a 40/60 share area, while the remaining south-southeast area is a 50/50 share area.

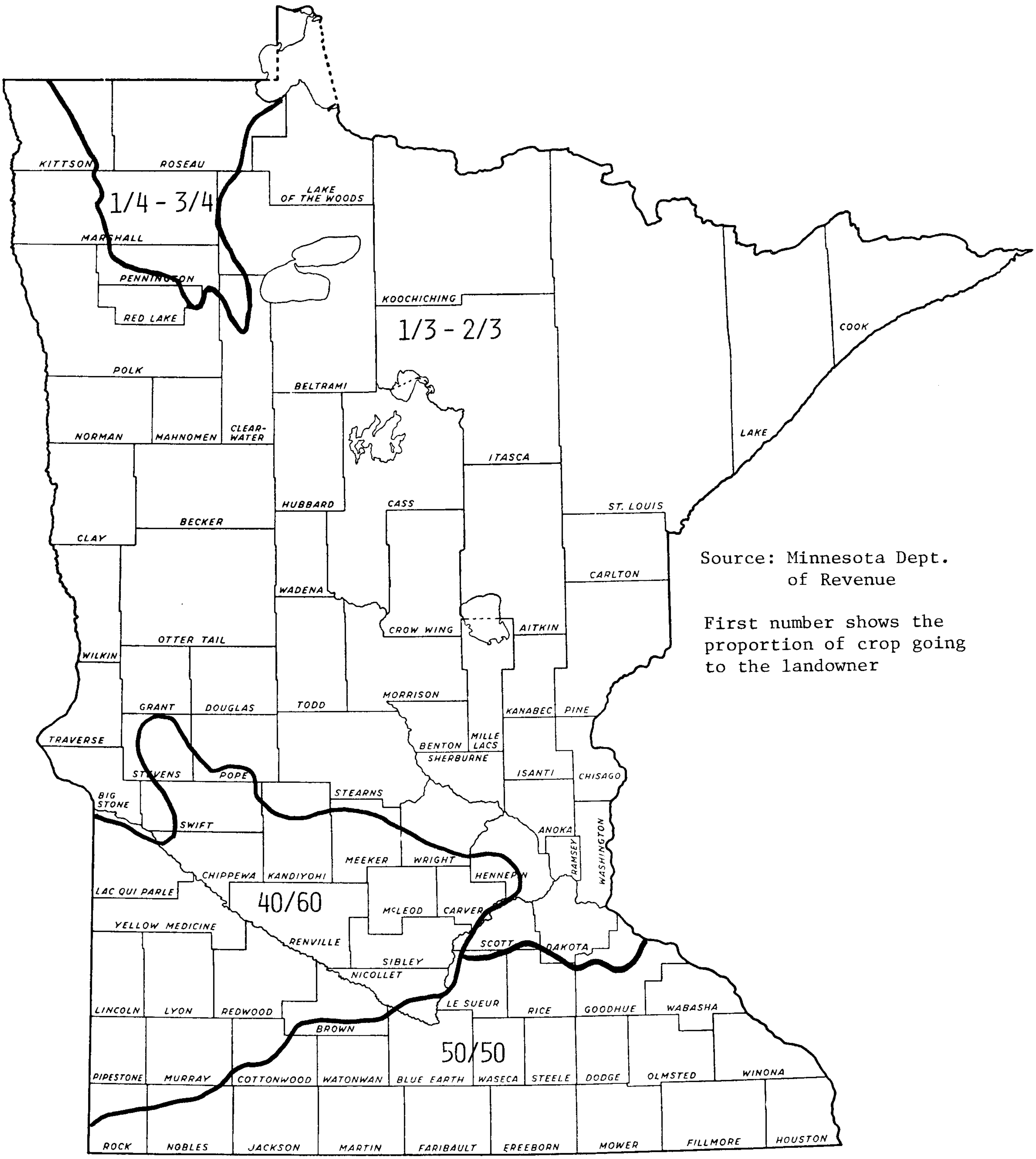



Figure 4. Predominate Crop Share Arrangement Areas

One cannot conclude, however, that other types of crop share arrangements will not be found within a particular crop share area. For example, some 1/3 - 2/3 arrangements may be found in the 40/60 area--and even in the 50/50 area. This may be due to variations in soil productivity, in crops grown and/or to adjustments made in the relative contributions of the landlord and tenant. A mixture of share arrangements can be expected to occur on or near the boundary lines between share regions (figure 4).

A fair crop share arrangement is one in which the landowner and tenant share the resultant crop in the same percentage as they value their contribution of land, labor, management, machinery, seed, fertilizer, etc. Tables 3, 4 and 5 show the proportion of landowners sharing in the listed operating expenses by crops and cash rent intervals for each of the major crop share regions (figure 4).

## The 1/3 - 2/3 Crop Share

Turning first to the input sharing in the 1/3 - 2/3 area (table 3) let us focus on wheat (a major crop in the area) and on the \$20 - \$40 cash rent interval (about two-thirds of the farms in this interval have 1/3 - 2/3 share arrangements). Here we see that very few landowners share in seed, harvesting costs or in trucking costs when the wheat is delivered from field to market. About one-third of the landowners pay fertilizer and herbicide application costs when this is custom applied and a like proportion pay drying costs and the cost of delivering grain from storage to market. However, a majority of the landlords do share in fertilizer and herbicide costs--62 percent pay a share of herbicide costs, while over 80 percent pay a share of fertilizer costs. (When costs are shared they are almost always shared in the same proportion as the crop is shared.)

Table 3. Proportion Of Landowners In 1/3 - 2/3 Share Area Sharing In Listed Expenses For Wheat And Corn By Cash Rent Intervals, Minnesota, 1979.

| | Wheat | | | Corn | | |
|---|---|---|---|---|---|---|
| Item | <\$20 | \$20-\$40 | \$40-\$60 | \$20-\$40 | \$40-\$60 | >\$60 |
| | --------percent of landowners sharing in expense---------- | | | | | |
| Seed | 17 | 15 | 10 | 13 | 12 | 12 |
| Fertilizer | 83 | 83 | 65 | 66 | 47 | 19 |
| Fertilizer Appl. | 42 | 37 | 27 | 26 | 30 | 12 |
| Herbicide | 42 | 62 | 47 | 44 | 38 | 12 |
| Herbicide Appl. | 17 | 35 | 20 | 21 | 35 | 6 |
| Harvest Hire | 8 | 11 | 2 | 10 | 8 | 6 |
| Dry-Tenant | 17 | 34 | 25 | 57 | 48 | 38 |
| Dry In Town | 25 | 44 | 29 | 64 | 62 | 56 |
| Field/Market[t] | 25 | 6 | 6 | 23 | 12 | 12 |
| Store/Market[t] | 42 | 30 | 27 | 47 | 48 | 38 |

[t] Trucking cost.

Note that on the higher priced land--as indicated by higher cash rents--the landlord does not share in as many production costs. For example, two-thirds of the landlords shared in fertilizer expenses in areas where land rent was only \$20 to \$40, while only 19 percent shared when land rent was over \$60. This type of adjustment is sometimes made rather than shifting to a 40/60 share as is more common in areas where cash rent is over \$60 per acre.

The 40/60 Crop Share

Table 4 shows how landowners tend to share expenses on corn and beans in the 40/60 share rent area. As noted earlier in table 2, the 40/60 arrangement is common in cash rent areas ranging from \$40 to \$80 per acre. The comments that follow will thus focus on sharing patterns in the \$40 - \$60 and \$60 - \$80 columns of table 4.

Table 4. Proportion Of Landowners In 40/60 Share Area Sharing In Listed Expense For Corn And Beans By Cash Rent Intervals, Minnesota, 1979.

| | Corn | | | | Soybeans | | | |
|---|---|---|---|---|---|---|---|---|
| Item | <\$40 | \$40-\$60 | \$60-\$80 | >\$80 | <\$40 | \$40-\$60 | \$60-\$80 | >\$80 |
| | ---------percent of landowners sharing in expense----------- | | | | | | | |
| Seed | 20 | 15 | 22 | 0 | 6 | 14 | 21 | 21 |
| Fertilizer | 87 | 89 | 93 | 60 | 75 | 80 | 66 | 57 |
| Fertilizer Appl. | 54 | 46 | 59 | 20 | 50 | 33 | 32 | 36 |
| Herbicide | 83 | 80 | 75 | 50 | 88 | 80 | 78 | 64 |
| Herbicide Appl. | 43 | 36 | 43 | 10 | 69 | 33 | 39 | 29 |
| Harvest Hire | 13 | 9 | 7 | 0 | 6 | 9 | 7 | 0 |
| Dry-Tenant | 67 | 71 | 73 | 40 | 38 | 44 | 25 | 36 |
| Dry In Town | 72 | 79 | 83 | 70 | 38 | 41 | 33 | 21 |
| Field/Market[t] | 17 | 12 | 7 | 0 | 0 | 6 | 6 | 0 |
| Store/Market[t] | 63 | 44 | 47 | 30 | 62 | 33 | 45 | 14 |

[t] Trucking cost.

With corn, landowners seldom appear to share in seed expense, harvest costs and the marketing of the crop if it is taken directly from field to market. On the other hand, they almost always pay their share (40 percent) of fertilizer and herbicide materials and drying costs, whether the crop is dried by the tenant or in town. About half of them pay a share of the custom application of fertilizer and for the cost of trucking their crop from storage to market, while around 40 percent share in commercial application of herbicides.

The sharing patterns on beans are quite similar to those on corn, with somewhat fewer landowners sharing in these expense items because total production costs are less for beans than for corn.

## The 50/50 Crop Share

Table 5 shows the expense sharing pattern of landowners in the 50/50 share area of Minnesota. The 50/50 share arrangement is common in areas with cash rents between $60 and $80 and dominant in areas with rents above $70 per acre. Therefore, we will focus our attention on these two columns. Practically all landowners share 50/50 on corn expenses such as seed, fertilizer and herbicide materials. Most pay their share of drying costs, while over half share custom application of fertilizer and herbicides and pay for the delivery of their grain from storage to market. About one-third of the landowners pay a share of harvest costs when they are custom hired, while about one-fourth pay for the delivery of their corn from field to market.

Table 5. Proportion Of Landowners In 50/50 Share Area Sharing In Listed Expenses For Corn And Soybeans By Cash Rent Intervals, Minnesota, 1979.

| | Corn | | | | Soybeans | | | |
|---|---|---|---|---|---|---|---|---|
| Item | <$40 | $40-$60 | $60-$80 | >$80 | <$40 | $40-$60 | $60-$80 | >$80 |
| | ----------percent of landowners sharing in expense---------- | | | | | | | |
| Seed | 87 | 93 | 93 | 93 | 80 | 86 | 90 | 89 |
| Fertilizer | 87 | 97 | 98 | 99 | 80 | 84 | 81 | 72 |
| Fertilizer Appl. | 56 | 68 | 66 | 55 | 60 | 35 | 43 | 20 |
| Herbicide | 73 | 93 | 95 | 96 | 80 | 92 | 92 | 91 |
| Herbicide Appl. | 46 | 61 | 57 | 49 | 80 | 57 | 42 | 46 |
| Harvest Hire | 44 | 44 | 44 | 20 | 60 | 40 | 37 | 18 |
| Dry-Tenant | 60 | 81 | 78 | 76 | 0 | 40 | 37 | 32 |
| Dry In Town | 67 | 92 | 90 | 77 | 20 | 51 | 47 | 35 |
| Field/Market[t] | 24 | 28 | 31 | 18 | 0 | 22 | 23 | 22 |
| Store/Market[t] | 60 | 69 | 73 | 46 | 80 | 59 | 60 | 46 |

[t] Trucking cost.

Bean expenses are shared the same as corn, though the proportion of landowners sharing tends to be slightly lower for most items.

## Determining An Equitable Crop Share Arrangement

Tables 3 - 5 merely show prevailing share arrangements which are usually closely tied to local custom. Development of a fair share rental for a particular situation requires that the relative contributions of the landowner and tenant be calculated and compared. Crop shares and production expenses like those noted in the tables would then be shared in the same percentages as the overhead contributions. Or, some adjustments in crop expenses can be made so that all expenses are shared in a more "traditional" 40/60 rather than some odd number such as 43/57.

For a discussion of and procedures for establishing a fair share rental arrangement for your farm, contact your County Extension Office for a copy of North Central Regional Extension Publication 105, Crop-Share Or Crop-Share-Cash Rental Arrangements For Your Farm. If you want a form to record your agreement, ask for the Crop-Share or Crop-Share-Cash Farm Lease form, North Central Regional Extension Publication 77.

## HAY AND PASTURE RENTAL RATES

Hay land is normally rented on a cash basis since the landlord usually has no use for the hay and does not want the job of marketing his share. Rental rates are about the same for tame hay land as for other crop acres. This is especially true for the lower and middle ranges of cash rent as can be observed by comparing the tame hay rental map (figure 5) with the earlier one showing cash rents on tillable land.

Wild hay commands much lower rental rates since both production and quality are expected to be lower than for tame hay. Average cash rental rates reported in 1979 for wild hay are shown by similar areas in figure 6. Note the decrease from over $30 per acre in south central counties to below $10 per acre in most northern counties.

When hay land is rented separately for a single year (rented as hay stumpage) the rent will vary with current hay prices, land productivity, quality of the stand and level of local demand.

Single year rental rates should be higher than rates on comparable quality crop land if the renter did not share in the costs of establishment. This will usually be the case in a dairy area where there is normally a fairly active market for hay. However, in a non-dairy area, even quality stands may not command a rental rate equal to the going rent for crop acres.

To avoid the problem of estimating yield potentials when establishing a rental rate for hay stumpage, a per bale basis is often used. Per bale rates should be lower on lower quality hay mixtures, in surplus hay producing areas, and for low yields. Transportation costs to hay deficit areas hold hay prices lower in surplus areas, and production costs per bale increase as yield decreases.

### Pasture Rent

Pasture rental rates are not well established in some areas of the state since pasture rent is less common than crop land rent. Because responses were limited from some counties, the accompanying map (figure 6) shows pasture rents by areas of the state rather than by counties.

Survey responses show that high quality pasture commands higher rental rates than low quality pasture even when based on an animal unit month basis (one cow for one month), although this basis should automatically take differences in carrying capacity into consideration. (The differentiation between "high quality" and "low quality" pasture was left to the discretion of the survey respondents.) Animal unit per month rates were mostly $2 to $5 in northern Minnesota and $5 to $8 in southern Minnesota.

Charges for younger animals should be based on their proportional weight relative to a 1,000 pound cow.

If other services are provided, such as power to pump water or labor to "watch cattle", rental rates should be raised accordingly.

When comparing rental rates on the acreage basis with those reported on an animal unit basis, acreage requirements per animal unit appear to be as follows:

| | High Quality Pasture | Low Quality Pasture |
|---|---|---|
| | -----acres required per cow---- | |
| Southern Minnesota | .8 | 1.2 |
| Northwestern and Central Minnesota | 1.0 | 2.0 |
| Northeastern Minnesota | 1.3 | 3.0 |

The number of responses to the different types of rent suggests that there is a difference between areas of the state in how pasture land is rented. Per acre rental arrangements are definitely preferred in the western third of the state. Rent on an animal unit month basis appears to be more common in the eastern half of the state. When a per acre rent is preferred by the landlord, the appropriate rate might best be estimated based on normal expected carrying capacity of the pasture.

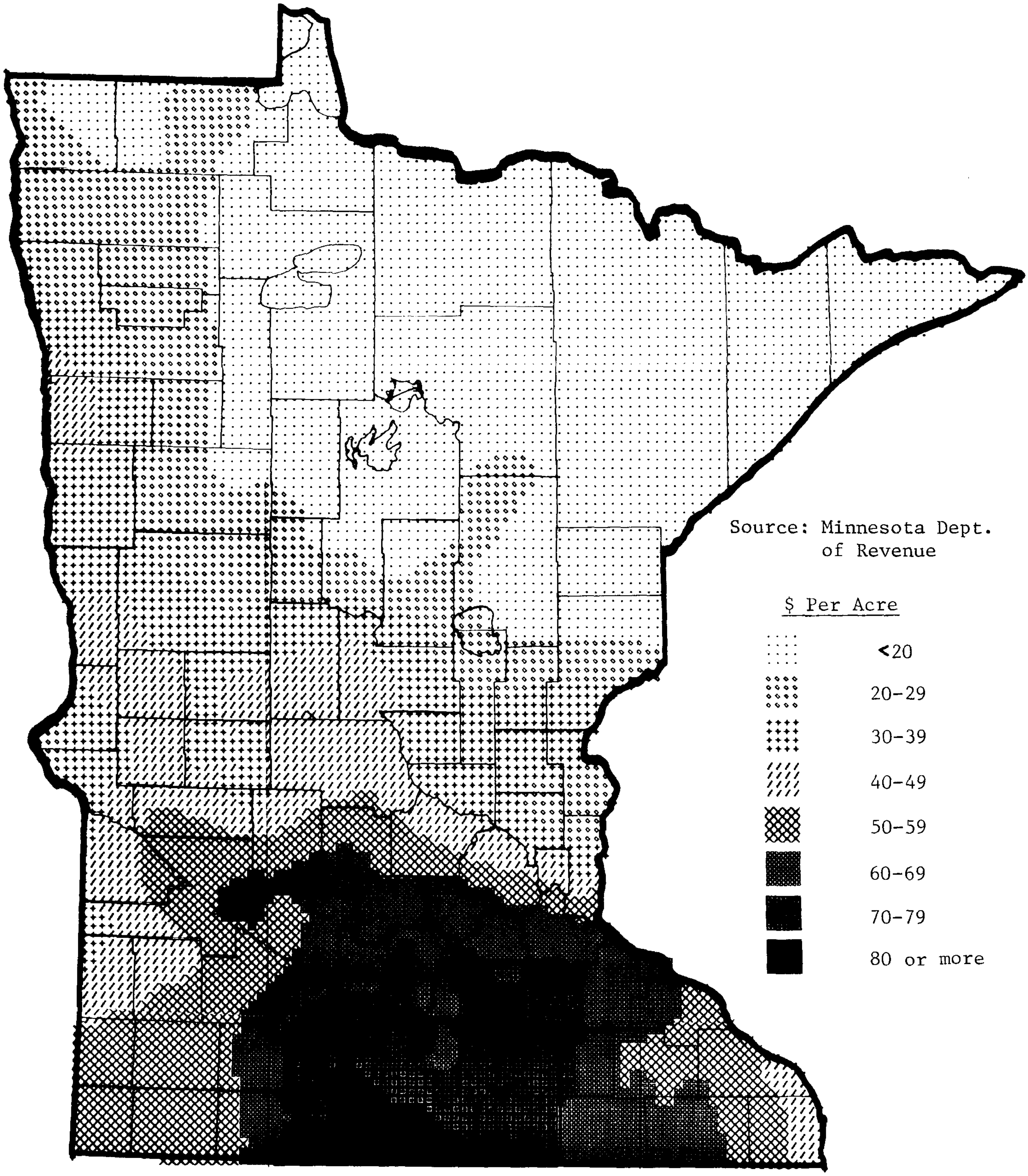



Figure 5. Cash Rental Rates On Tame Hay Land

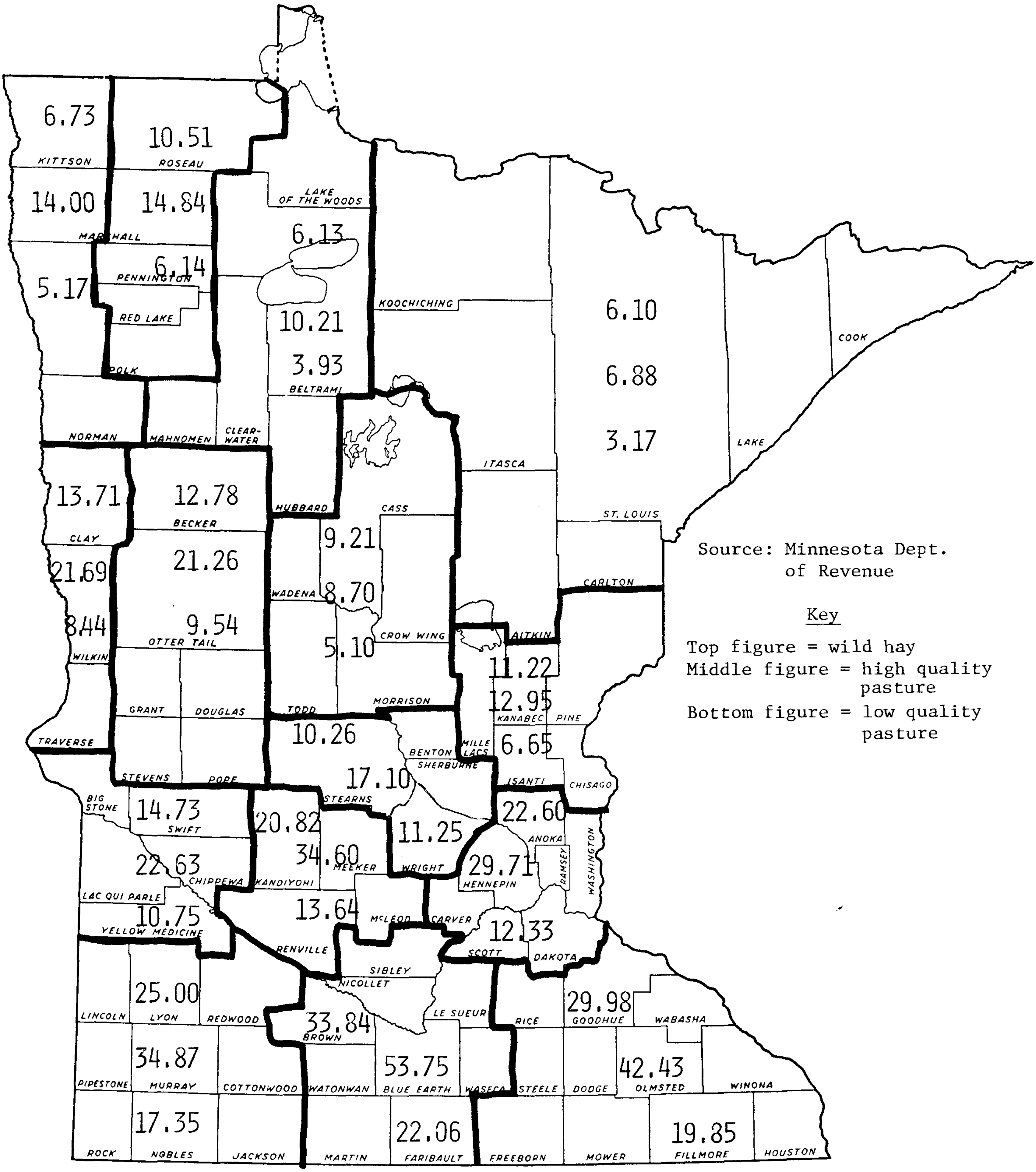



Figure 6. Cash Rental Rates Per Acre For Wild Hay, High Quality Pasture And Low Quality Pasture