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Important Aspects of Minnesota Agriculture

1. Land Use
2. Investments
3. Tenancy
4. ACP Payments
5. Population Changes 1940-1950



County Data - 1954

Source - U. S. Census and State Agricultural Stabilization and Conservation Data

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1. Land Area in Farms
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* ACP = Agricultural Conservation Payments

Figure 1

- Note:
1. The proportion of the total land area which is in farms in Minnesota varies from 0.6 percent in Cook County to 98 percent or more in Waseca, Pipestone and Martin counties.
 2. Over 90 percent of the total land is in farms in all of Southern and in most of West Central Minnesota.
 3. Less than one-fourth of the total land is in farms in the cut-over forest area of Northeastern Minnesota.

Proportion of Total Land Area in Farms - 1954
Percent

Minnesota - 63.0

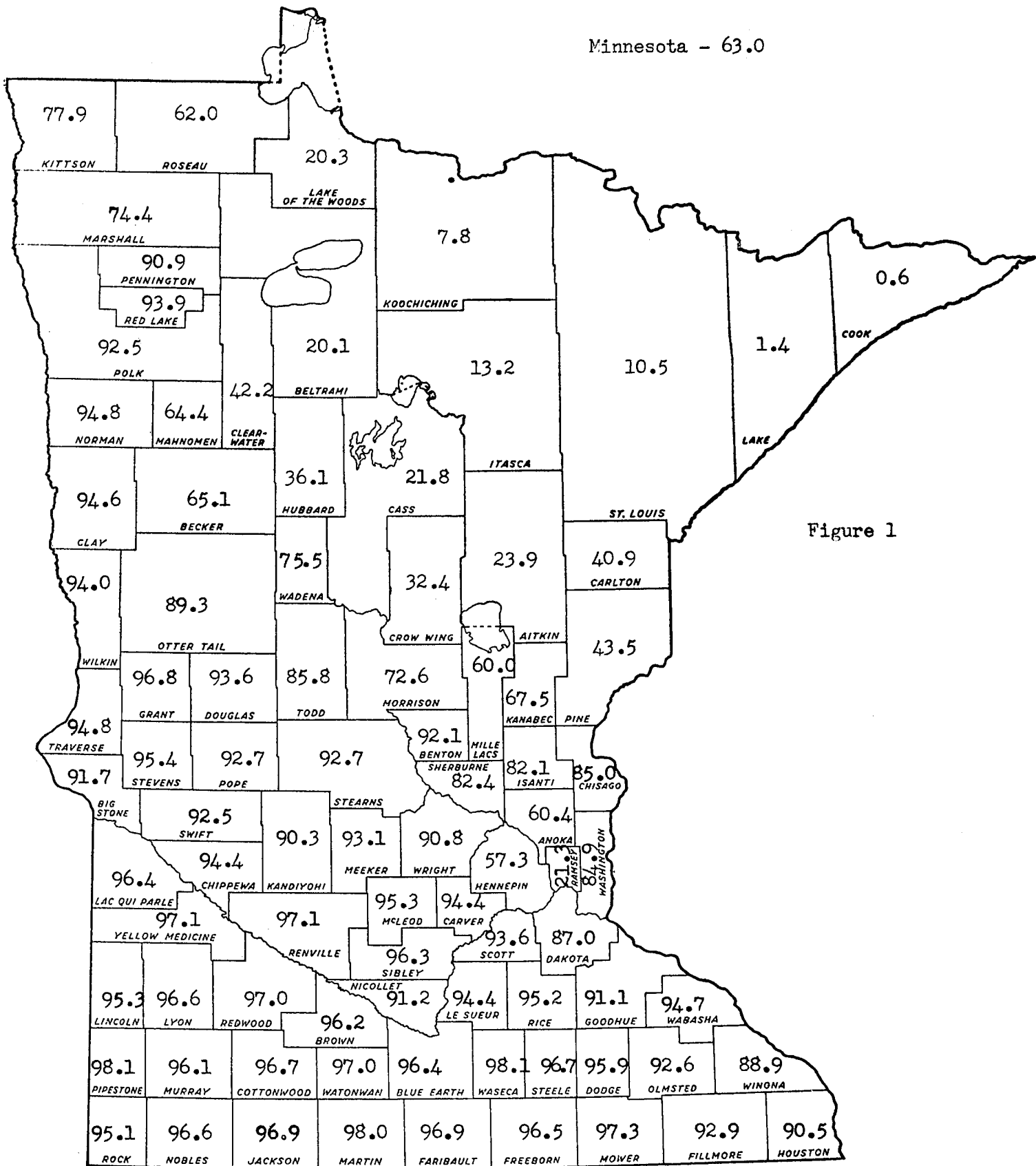


Figure 1

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Figure 2

- Note:
1. The largest farms are in the Red River Valley, varying from about 300 acres to over 400 acres per farm.
 2. The smallest farms with an average of less than 150 acres are in Northeastern Minnesota and near the Twin Cities. In Northeastern Minnesota dairying is the main enterprise. Around the Twin Cities vegetables and dairying constitute the major enterprises.
 3. Minnesota farms increased in size by an average of 12 acres from 1950 to 1954. The only counties in which the average size of the farms did not increase during this time were Anoka, Dodge, Lake of the Woods, Mower, Pipestone and Rock.
 4. The increase in the size of farms reflects the continued trend toward farm mechanization. The investment cost of many farm machines is very high. To be efficient and operate such machines at a comparatively low cost it is required that the machines be used on many acres and for many hours. This provides the urge to add some acres to the family farm unit if at all possible.

Size of Farm - Total Number of Acres - 1954

Minnesota

1954 - 195.4 acres

1950 - 183.6 acres

1945 - 175.4 acres

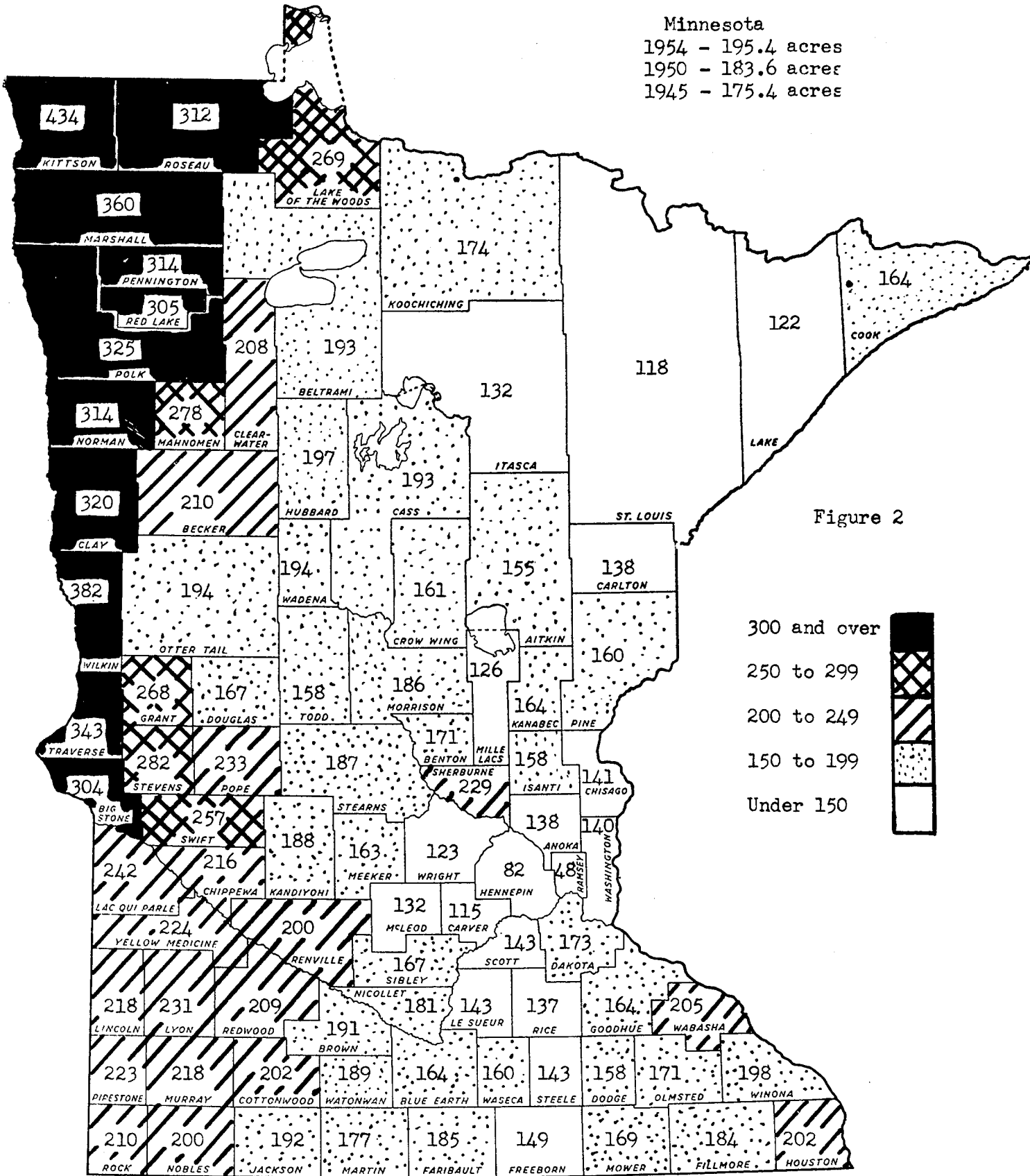


Figure 2

300 and over
 250 to 299
 200 to 249
 150 to 199
 Under 150

← Notes of explanation on opposite page.

Figure 3

- Note:
1. The number of acres of cropland per farm was considered to be a better basis for comparing the size of the farm unit than the total acres in the farm.
 2. There is a wider variation in the number of acres of cropland per farm between Northeastern Minnesota and the rest of the state than the variation in the total acres per farm. (Compare figures 2 and 3). The comparatively small number of acres of cropland per farm in Northeastern Minnesota and in some of the other areas, such as parts of Southeastern Minnesota, is the result of purchasing a standard unit such as 80 acres, 160 acres, etc. of which a substantial portion is not usable for cropland. More attention to an efficient operating unit at the time of purchase (the proper size of the farm in terms of cropland) would prevent some of the problems of a low net income in some of the farming areas of the state and especially in Northeastern Minnesota.
 3. The 13 northern counties of Minnesota averaged 53 acres of cropland per farm (including Aitkin, Beltrami, Carlton, Cass, Clearwater, Cook, Crow Wing, Hubbard, Itasca, Koochiching, Lake, Lake of the Woods, and St. Louis). The rest of the counties in the state had an average of 136 acres of cropland per farm.

Size of Farms - Total Acres of Cropland* - 1954

Minnesota
 1954 127 acres
 1949 119 acres
 1944 105 acres

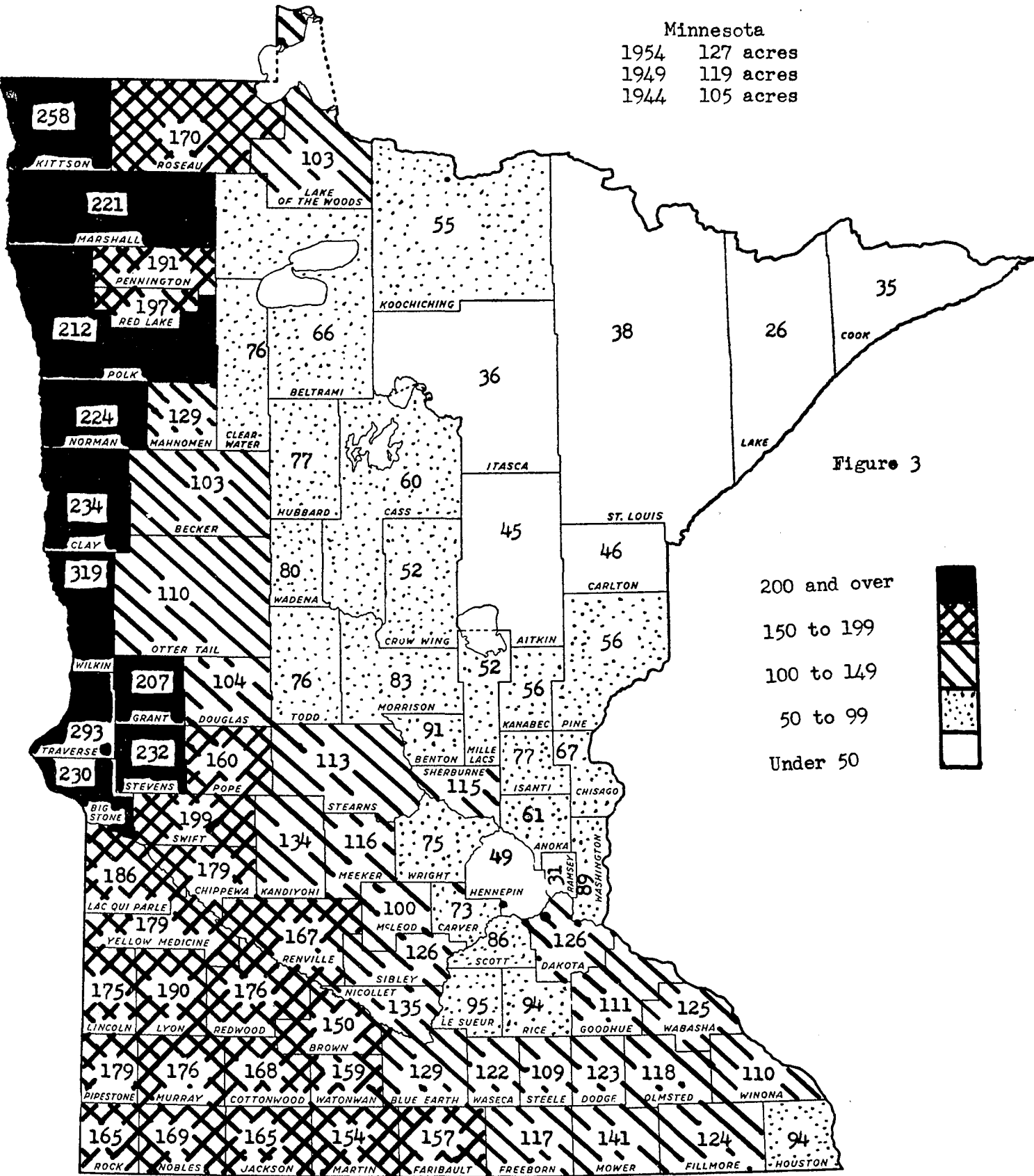


Figure 3

200 and over
 150 to 199
 100 to 149
 50 to 99
 Under 50



* Includes cropland harvested and pastured. Hay grown on cropland is included in cropland harvested.

← Notes of explanation on opposite page.

Figure 4

- Note:
1. There was a 1.1% decrease in Minnesota in the number of acres of cropland harvested or pastured from 1949 to 1954.
 2. The decrease in the number of acres of cropland was the largest in Northeastern Minnesota where land formerly used for crops has been turned back to forest, or remains idle.
 3. Land which was in farms in Anoka, Ramsey and Hennepin counties has been used for urban development.
 4. The acres of cropland harvested or pastured increased in Northwestern Minnesota and the central part of Southern Minnesota. In Northwestern Minnesota this was the result of drainage and the breaking of new land. In the South Central area of Minnesota, it was the result of ditching and tiling. Mechanization and the use of heavy machinery for land clearing, breaking, ditching and tiling was an important factor, in increasing the acres of cropland.

Changes in Total Cropland* - per County
 Percent increase or decrease from 1949 to 1954

Minnesota 1.1 percent

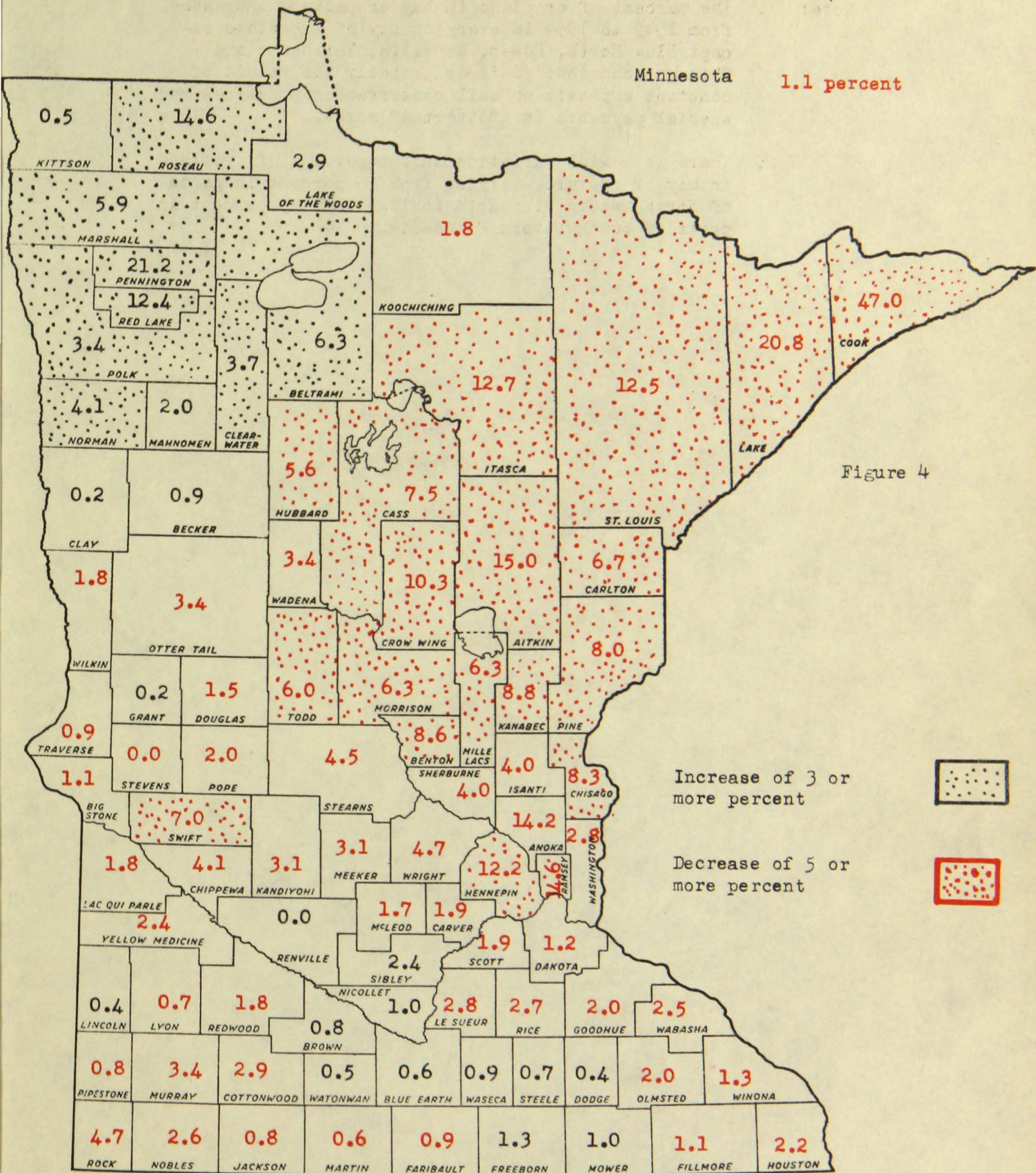
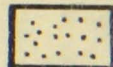


Figure 4

Increase of 3 or more percent



Decrease of 5 or more percent



* Includes cropland harvested and pastured. Hay grown on cropland is included in cropland harvested.

← Notes of explanation on opposite page.

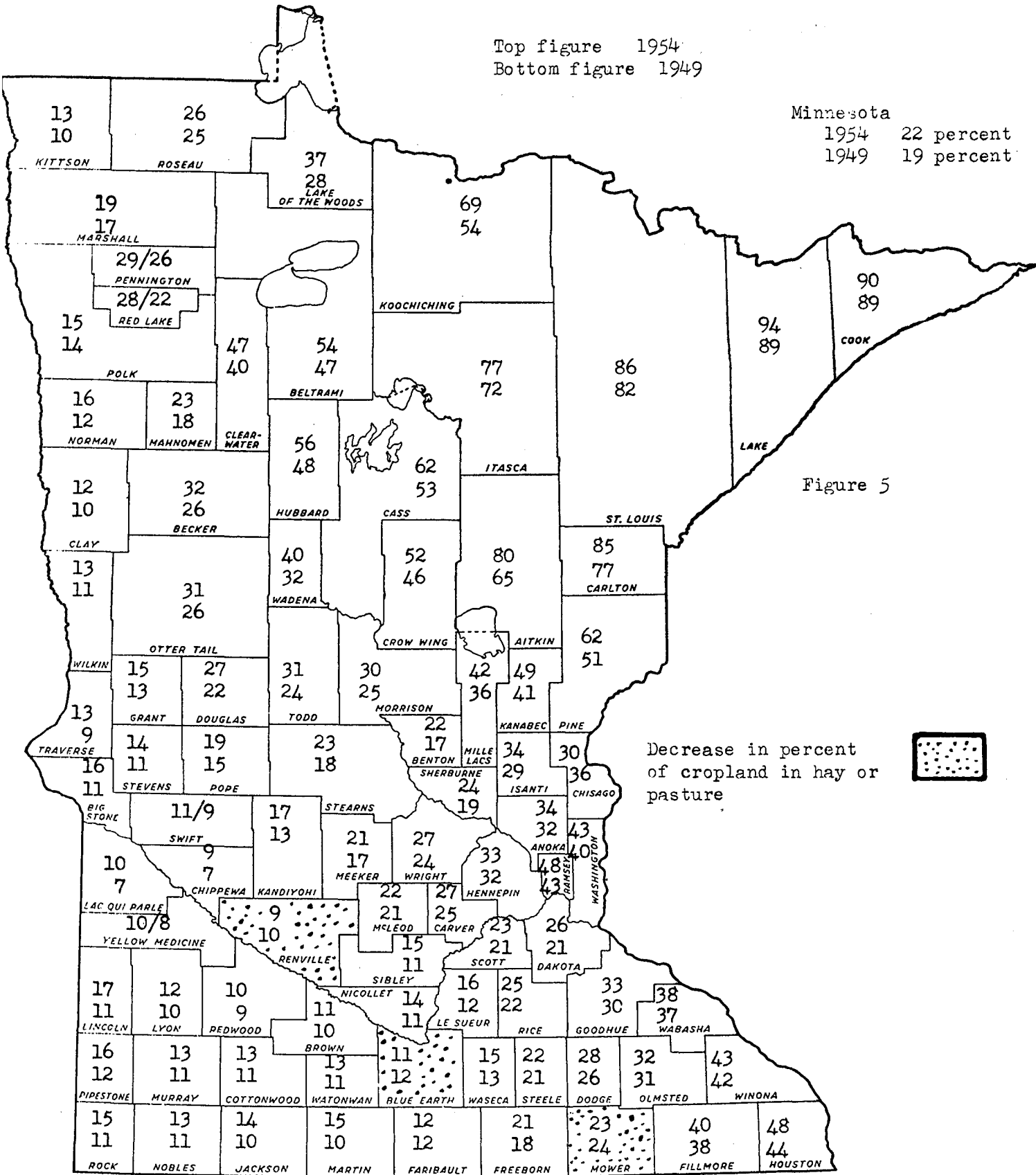
Figure 5

- Note: 1. The percent of cropland in hay or pasture increased from 1949 to 1954 in every county of the state except Blue Earth, Mower, Renville, Faribault and Chisago counties. This is probably the result of constant emphasis on soil conservation practices and special payments for "diverted" acres.
2. There is a wide variation in the percent of cropland in hay or pasture, varying from 75 percent in parts of Northeastern Minnesota to less than 15 percent in parts of Southwestern Minnesota.

Cropland in Hay and Pasture* - 1949 and 1954
Percent of Total Cropland

Top figure 1954
Bottom figure 1949

Minnesota
1954 22 percent
1949 19 percent



Decrease in percent of cropland in hay or pasture



* The figure for hay and pasture includes hay harvested, grass silage harvested and cropland used for pasture. Does not include wild hay or small grains and annual legumes harvested for hay.

← Notes of explanation on opposite page.

Figure 6

- Note:
1. The investment per farm in land and buildings in 1954 varied from around \$6000 in some of the northeastern Minnesota counties to over \$40,000 in some of the southern Minnesota counties.
 2. The investment per farm in land and buildings in 1954 was over \$30,000 in 14 counties of Minnesota.
 3. The investment per farm in land and buildings in Minnesota is not directly related to the size of the farm. (Compare Figures 2 and 3) A larger investment is required per farm in southern Minnesota than in other areas:
 - (1) because the land is more productive and of higher value than in other areas of Minnesota, and
 - (2) livestock farming which predominates in this area requires more buildings than are required in the general farming and grain farming areas of West Central and Northwestern Minnesota.

Value of Land and Buildings - Average Per Farm - 1954
Thousand Dollars

Minnesota

1954 - 21.0 thousand dollars

1950 - 15.7 thousand dollars

1945 - 9.7 thousand dollars

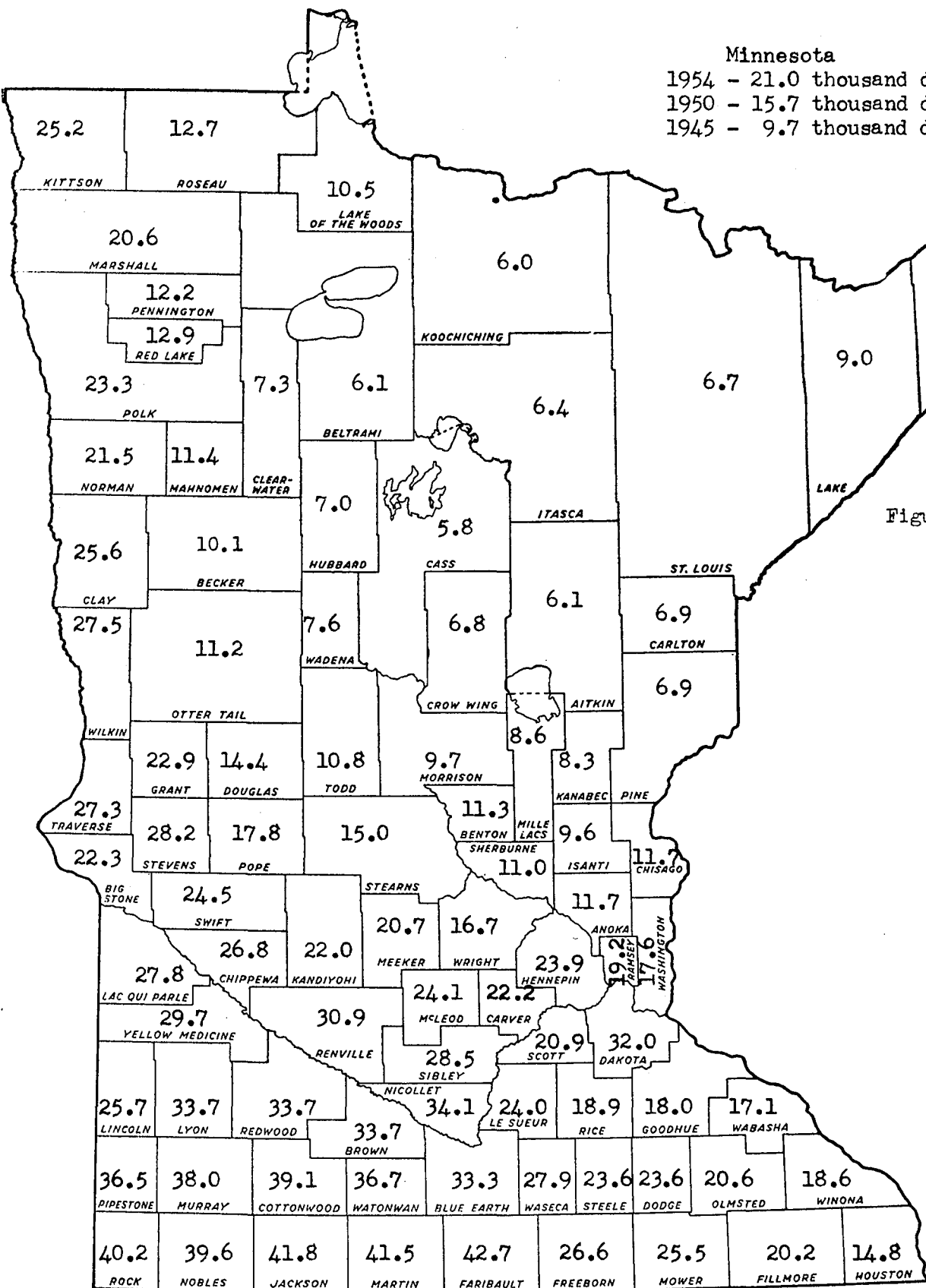


Figure 6

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Figure 7

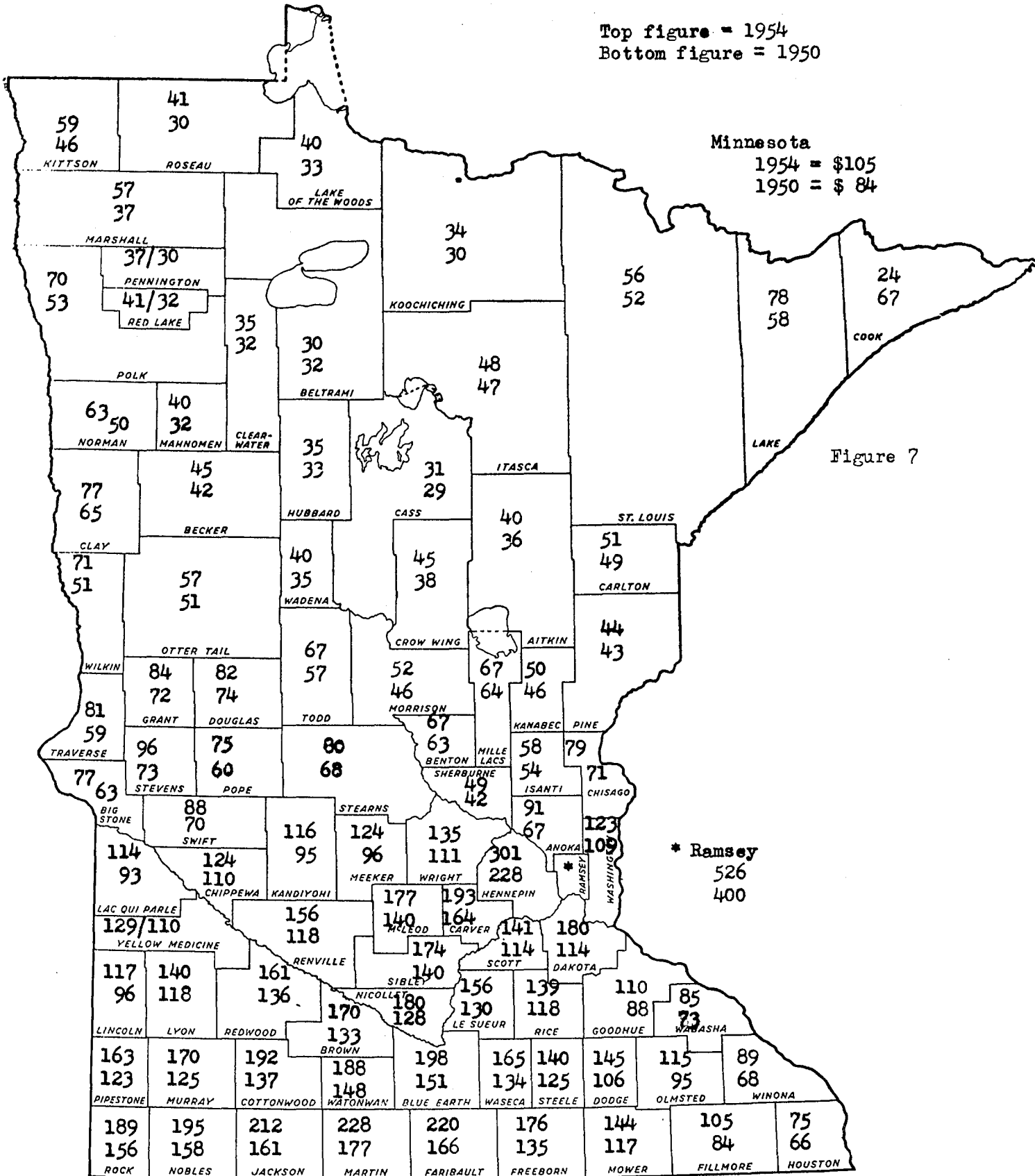
- Note:
1. The per acre value of land and buildings in 1954 varied from an average of less than \$50 in 18 northeastern and northern Minnesota counties to more than \$200 in three of the southern Minnesota counties.
 2. The per acre value in Hennepin and Ramsey counties are not typical of farm land and buildings because they are strongly influenced by the prospects that the land will be used for urban residential construction, and industrial purposes.
 3. The per acre value of land and buildings increased 6.8 percent in the 13 northeastern counties from 1950 to 1954. The total value decreased by 5.6 percent. This was the result of 9.7 percent decrease in the total acres of cropland.
 4. The per acre value of land and buildings for the rest of Minnesota (exclusive of the northeastern area) increased 25.0 percent from 1950 to 1954. The total value increased by 23.7 percent.

Value of Land and Buildings - Average per Acre - 1950 and 1954
(Dollars)

Top figure = 1954
Bottom figure = 1950

Minnesota
1954 = \$105
1950 = \$ 84

Figure 7



Notes of explanation on opposite page.

Figure 8

- Note: 1. About 1/5 of the farms (land) were operated by tenants in 1954.
2. The proportion of tenancy in 1954 varied from very low percentages in Northeastern Minnesota to over 40 percent in eight southwestern Minnesota counties. In Rock county the proportion of tenancy was over 50 percent.
3. The proportion of tenancy in the state of Minnesota decreased from 20.9 to 19.8 percent from 1950 to 1954. During the period of 1950 to 1954 decreases in tenancy occurred in a total of 76 counties. The following counties had the largest decreases in tenancy when related to the total number of farmers in the county:

<u>Counties</u>	Percent in <u>1950</u>	Percent in <u>1954</u>
Hubbard	7.6	2.9
Washington	10.1	5.7
Wright	15.7	11.4
Sibley	25.0	20.9

The following counties had slight increases in tenancy:

	<u>Counties</u>	Percent in <u>1950</u>	Percent in <u>1954</u>
Southwestern Minnesota	Pipestone	41.1	43.2
	Lyon	44.7	46.3
	Rock	52.6	53.4
	Cottonwood	37.0	37.4
	Blue Earth	30.1	30.5
	Murray	41.4	41.6
Northern Minnesota	Clearwater	5.3	5.9
	Lake of the Woods	4.4	5.1
	Koochiching	3.3	4.4
	Itasca	3.5	3.8

Proportion of Tenancy - 1950 and 1954

Top figure - 1954
Bottom figure - 1950

Minnesota
1954 - 19.8
1950 - 20.9

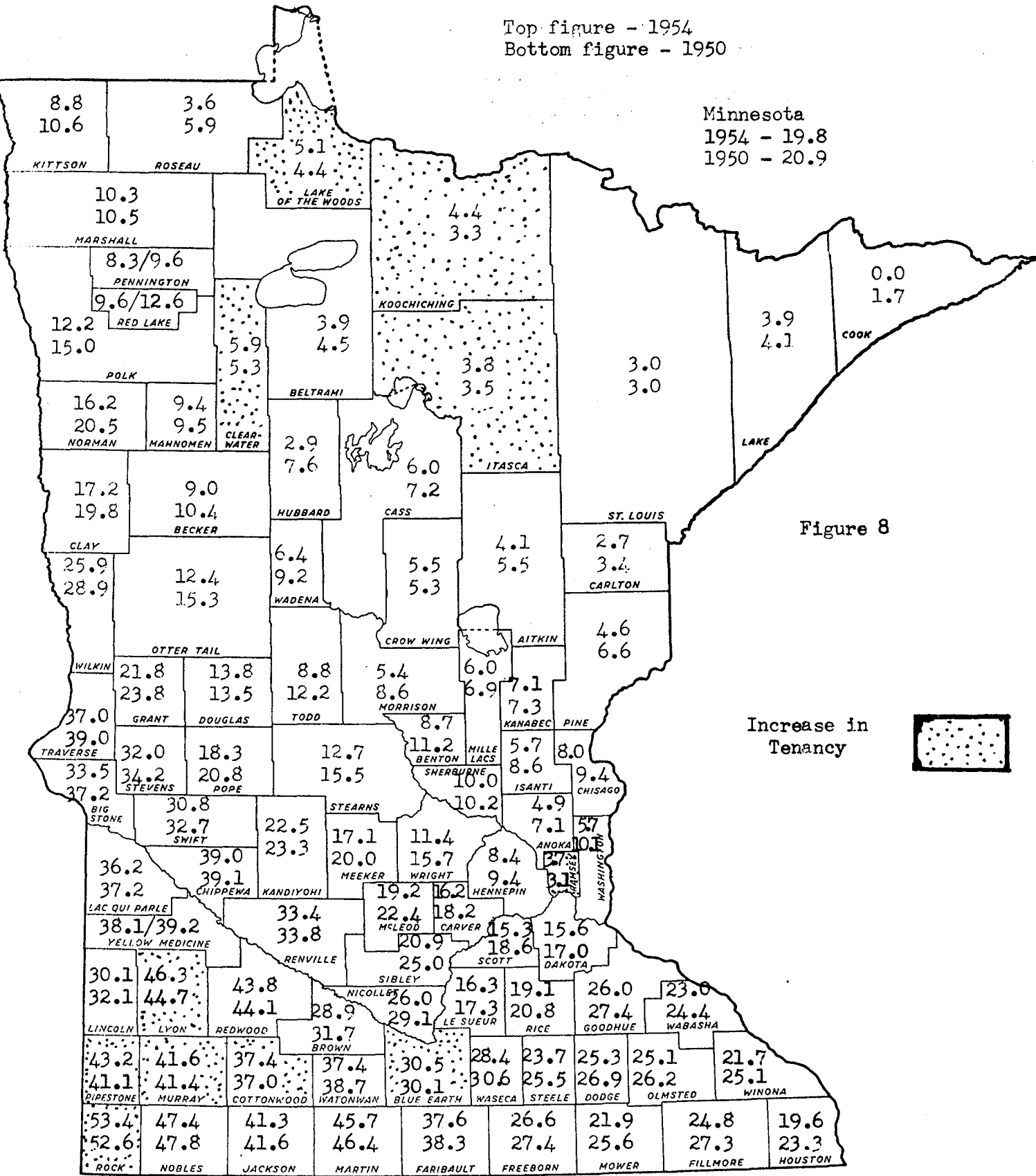
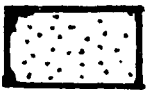


Figure 8

Increase in Tenancy



← Notes of explanation on opposite page.

Figure 9

Note: There was a wide variation in the ACP payment and costs from one county to another ranging from nearly 106 thousand dollars in the highest county (Marshall) to less than 25 thousand in a number of northern and northeastern Minnesota counties.

ACP Payments and Administrative Costs per County - 1954
 Thousand Dollars

Minnesota
 3,577.7 thousand dollars

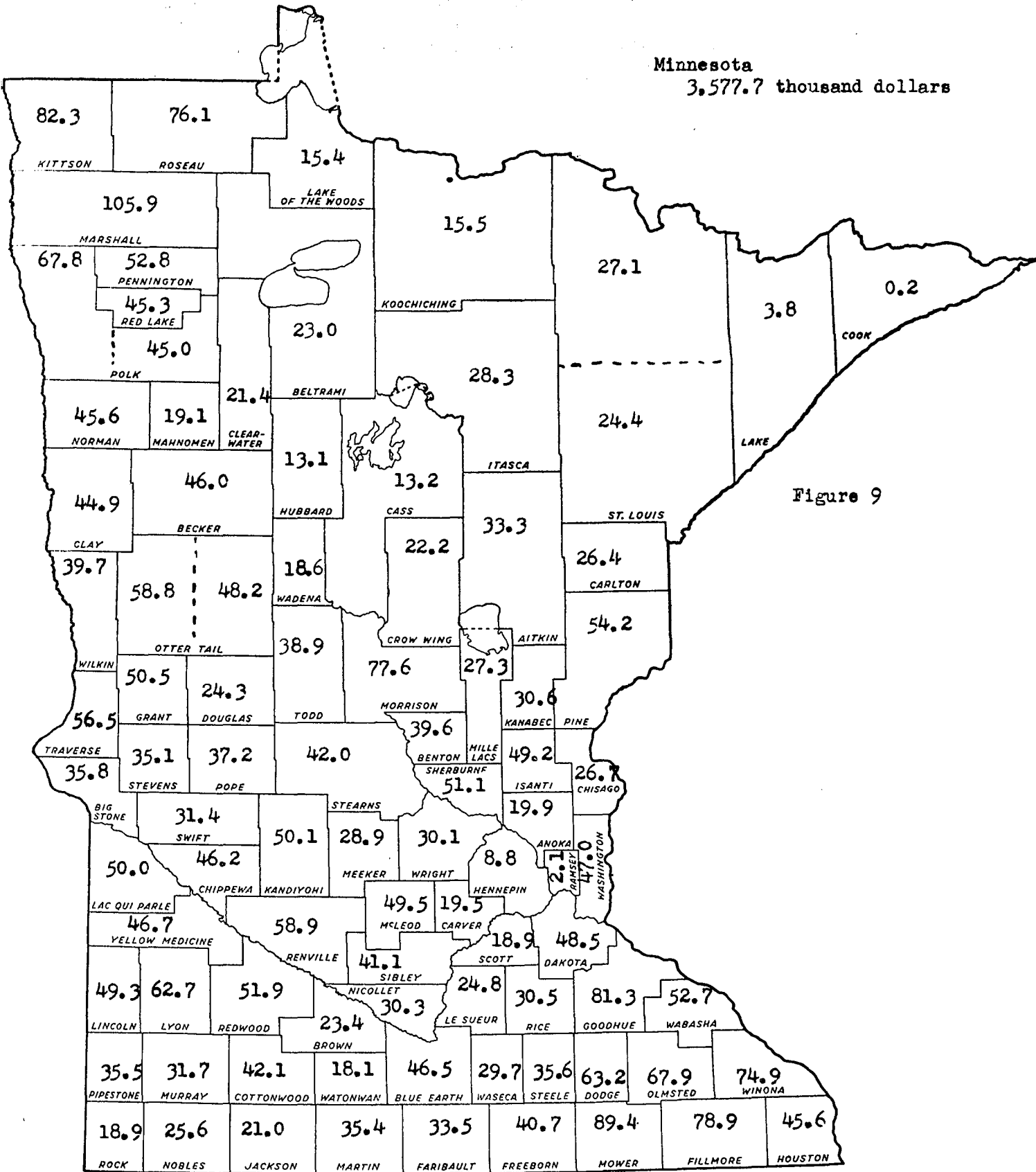


Figure 9

← Note of explanation on opposite page.

Figure 10

Note: The average Agriculture Conservation Payment per participating farm varied considerably from one county to another, but did not vary significantly from one area to another.

Average Agriculture Conservation Payment per Farm Participating - 1954
(Dollars)

Minnesota
\$70

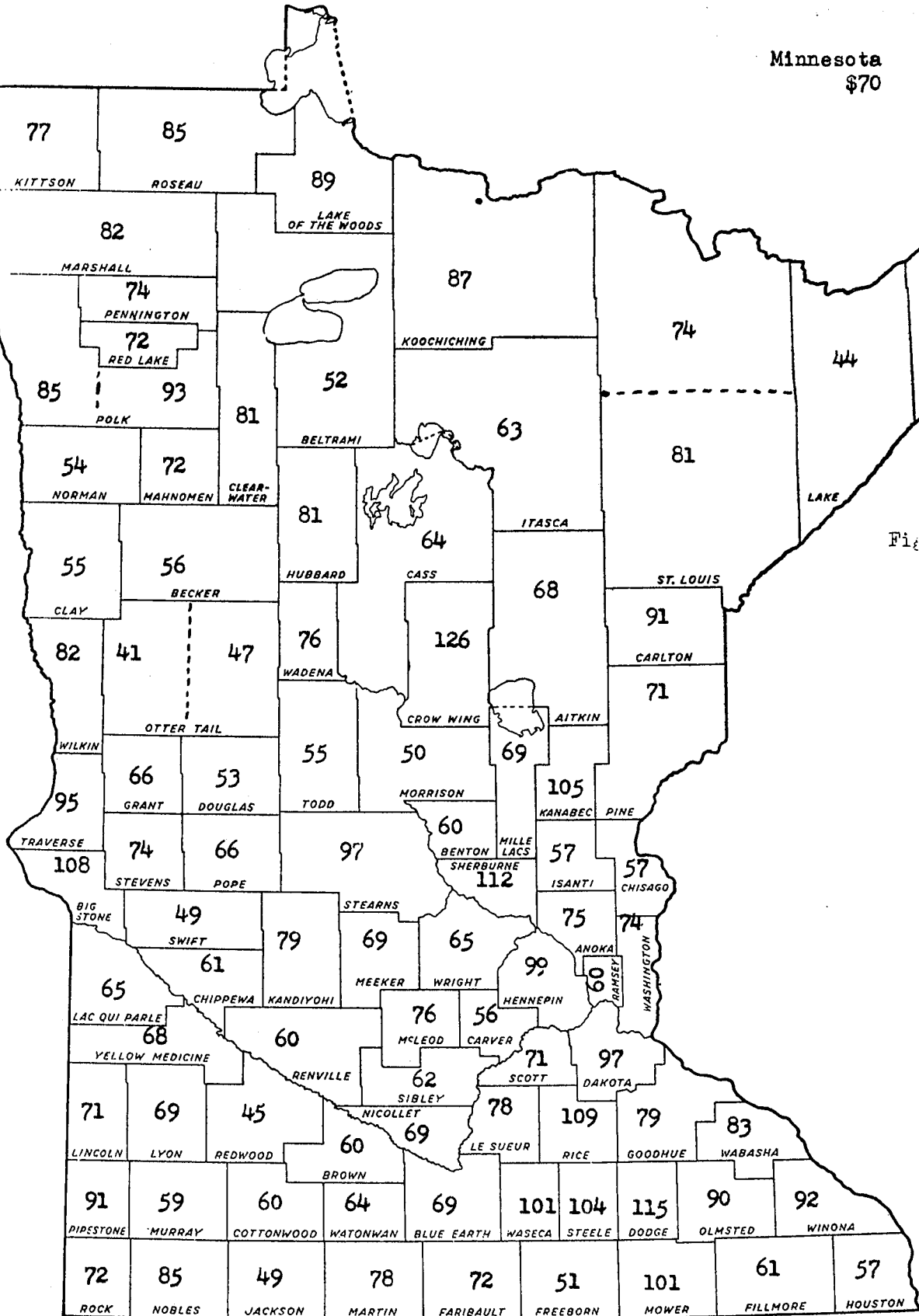


Figure 10

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Figure 11

- Note: 1. There was a wide variation in ACP payments and administration costs, per acre of total cropland in participating farms, from considerably over one dollar in Northeastern Minnesota to less than 40 cents in most of the counties along the western border.
2. The areas with smaller farms received more per acre of cropland than did the areas with larger farms. (Compare with Figure 3)
3. The areas with a high percent of cropland in hay and pasture received more per acre than did areas with a small percent of cropland in hay and pasture (Compare with figure 5).

ACP Payments and Administrative Costs per Acre of Total Cropland in Participating Farms - 1954

Dollars

Minnesota \$.44

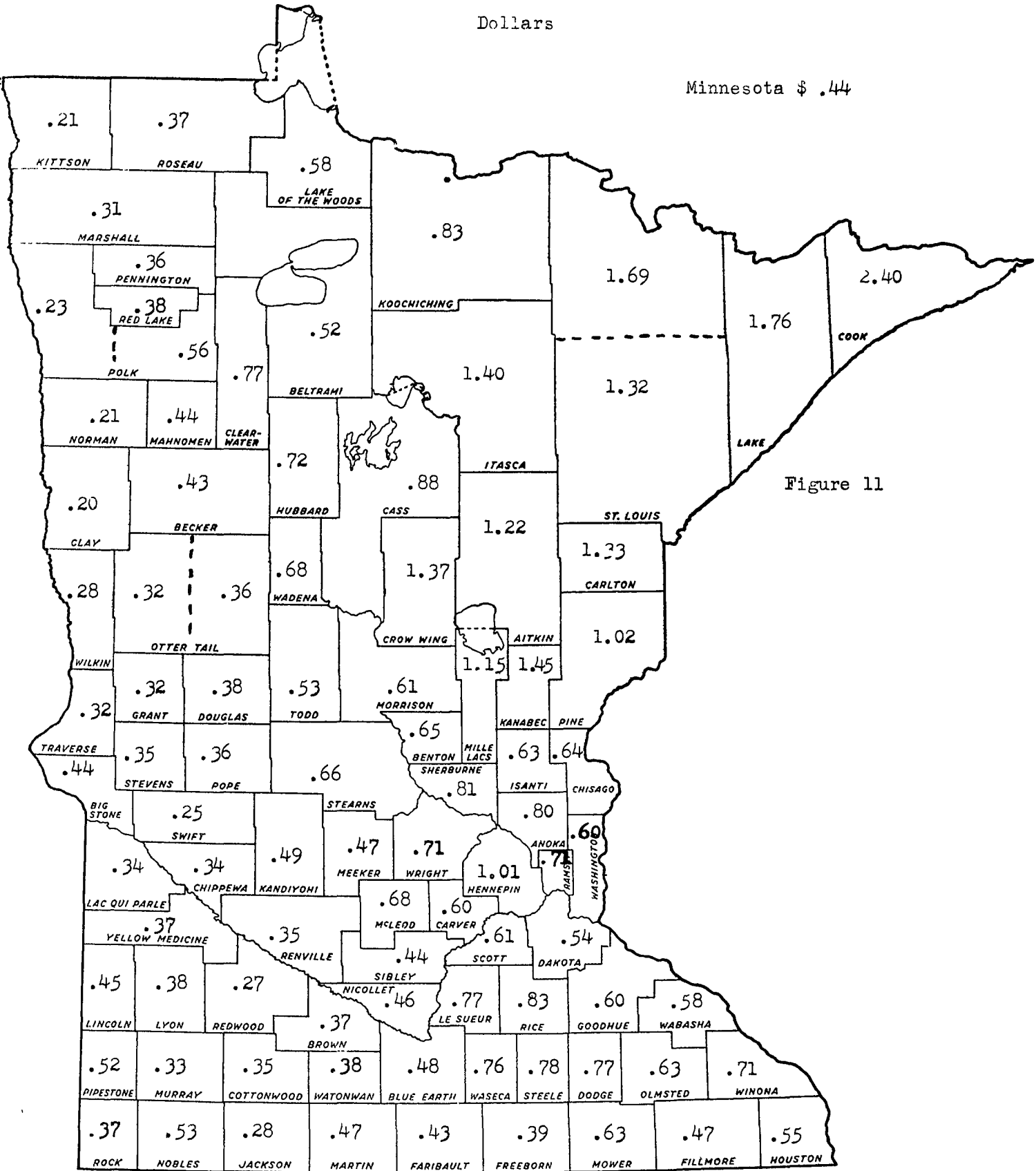


Figure 11

← Notes of explanation on opposite page.

Figure 12

- Note:
1. The ACP payments and administrative cost per acre of total cropland was the lowest in Southwestern Minnesota and the highest in Northeastern Minnesota.
 2. A larger proportion of cropland in Northeastern Minnesota is used for forage production and pasture because grain crops are not well adopted to this area. (See Figure 4) This qualifies a larger proportion of the total cropland for participation in the ACP program.

ACP Payments and Administrative Costs per Acre of Total Cropland in Each County -
1954

Dollar

Minnesota \$.17

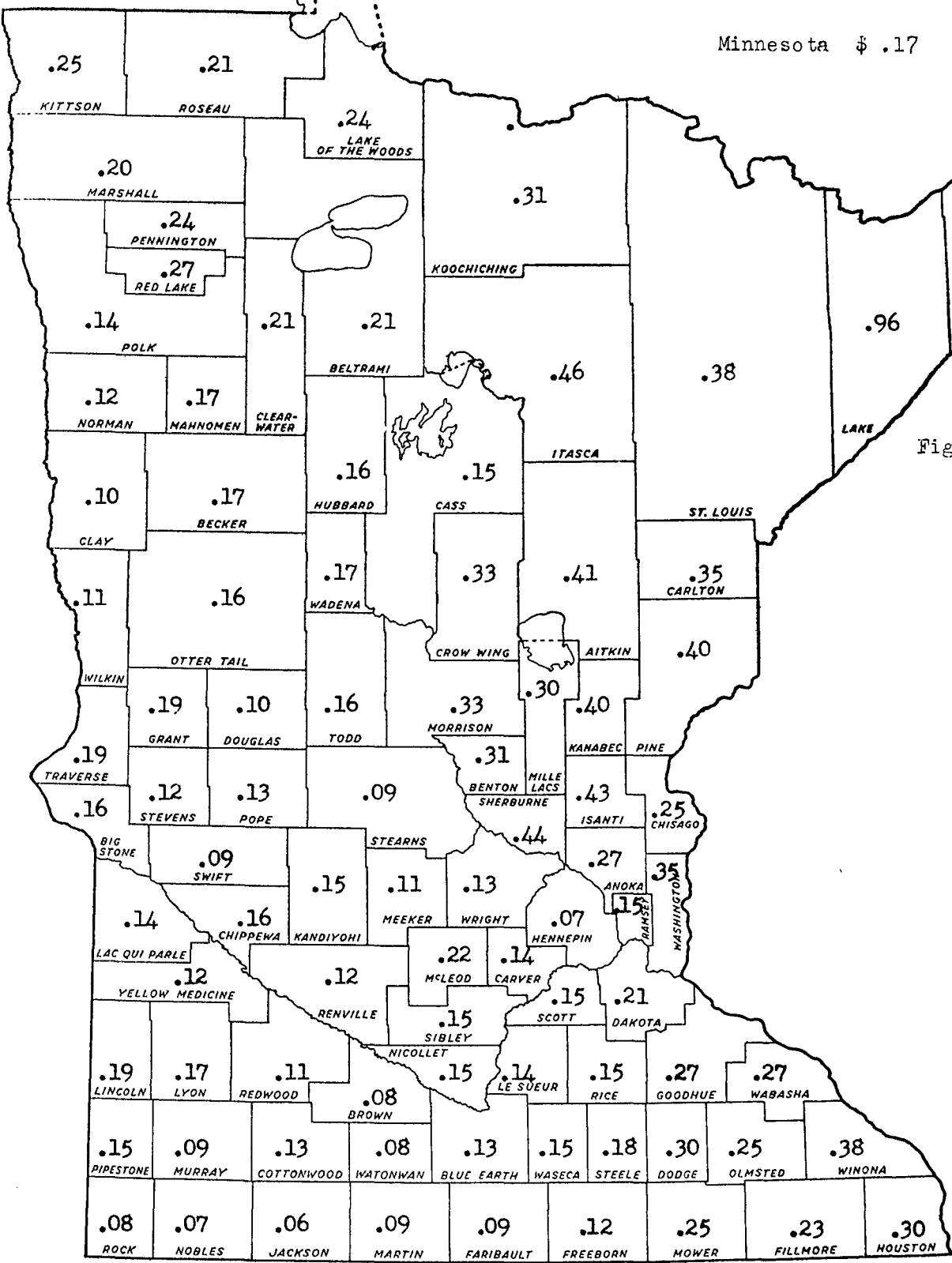


Figure 12

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Figure 13

- Note: 1. The ACP data for the total number of farms in 1953 were used in preparing these figures.
2. There is a rather close relationship between size of farms and the proportion of farms participating in the ACP program. Generally speaking the counties with larger farms had a much higher proportion of the farms participating in the ACP program. Other factors which apparently determined the extent of participation in the ACP program were the type of farming and the topography in an area. The following examples indicate the differences:

Area	Counties	Acres per Farm (Figure 2)	Percent of Farms in ACP Program
Large Red River Valley Grain Farms	Kittson	434	77
	Norman	314	34
	Marshall	360	35
	Pennington	314	39
	Red Lake	305	50
	Polk	<u>325</u>	<u>25</u>
	Average	341	37
Southwestern Minnesota Beef, Hog & Corn Area	Pipestone	223	26
	Rock	210	18
	Murray	218	22
	Nobles	200	11
	Jackson	192	17
	Cottonwood	<u>202</u>	<u>31</u>
Average	206	20	
Central Minnesota Dairy & General Livestock Area	Carver	115	17
	McLeod	132	25
	Wright	123	11
	Meeker	163	14
	Stearns	187	9
	Kandiyohi	<u>188</u>	<u>22</u>
Average	156	15	
Southeastern Minnesota Dairy Area (Hilly land)	Fillmore	184	38
	Houston	202	41
	Winona	198	39
	Olmsted	171	29
	Wabasha	205	35
	Goodhue	<u>164</u>	<u>31</u>
	Average	184	35

3. The financial position of the farmer probably affects the participation in ACP. The ACP payments cover only part of the costs of the practices and these payments are made after the practice has been completed. Consequently, it is difficult for farmers with little cash or a low credit rating to carry out the ACP practices. This may account for the comparatively limited participation in the ACP program in the lower income area of Northeastern Minnesota.

Proportion of Farms Participating in ACP - 1954
Percent

Minnesota
1954 24 percent

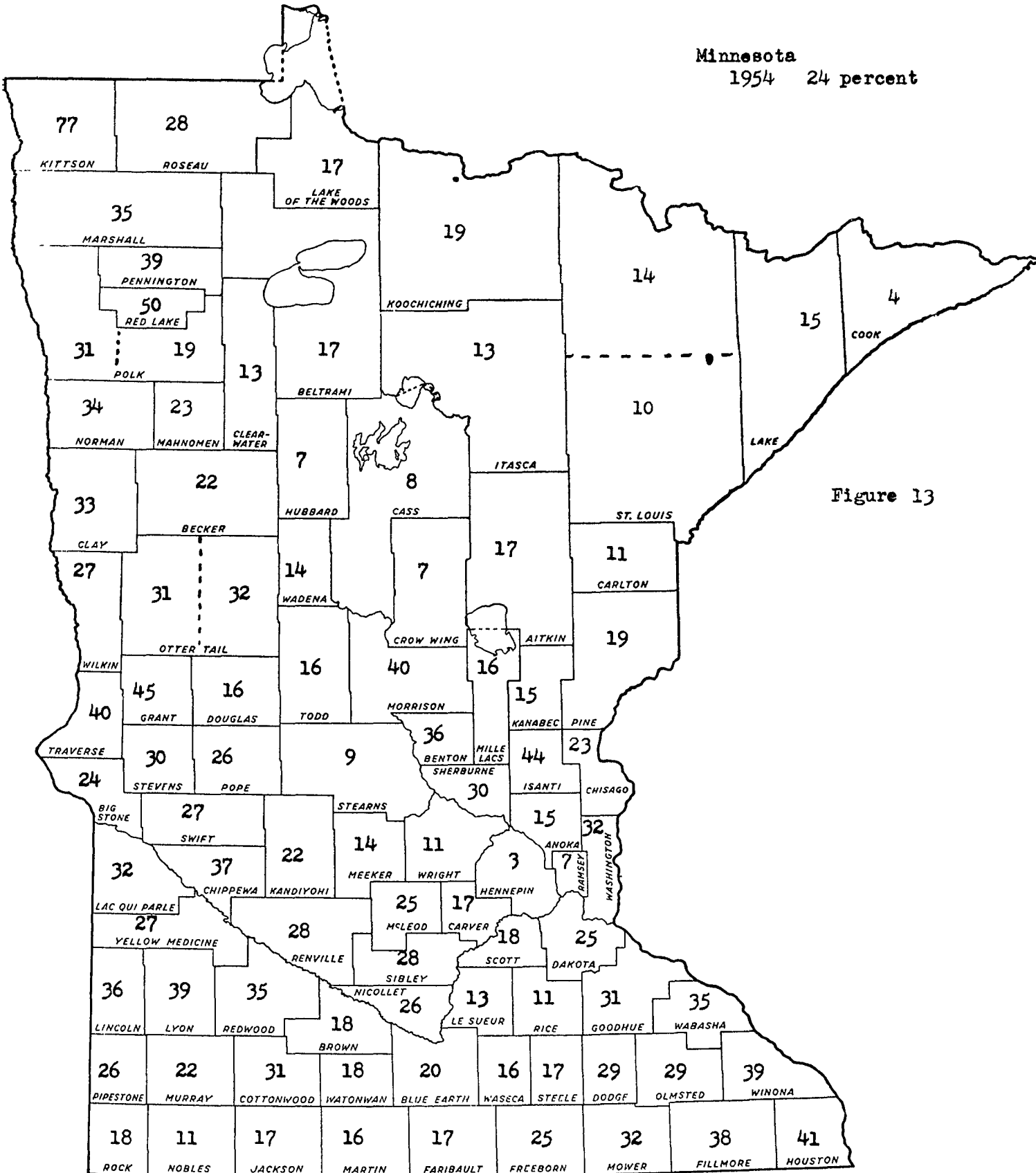


Figure 13

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Figure 14

Note: The farmers participating in the ACP program had farms which were considerably larger than the average in all of the counties in the state. In Roseau county the ACP farms were more than twice the average size of farms in the county. In many counties of central Minnesota they were 1-1/3 to 1-1/2 times the average size and in southern Minnesota about 1-1/6 times the average.

Size of Farms Participating in ACP - 1954
 Index = Average Size of All Farms in Each County = 100

Minnesota

1954 - 137

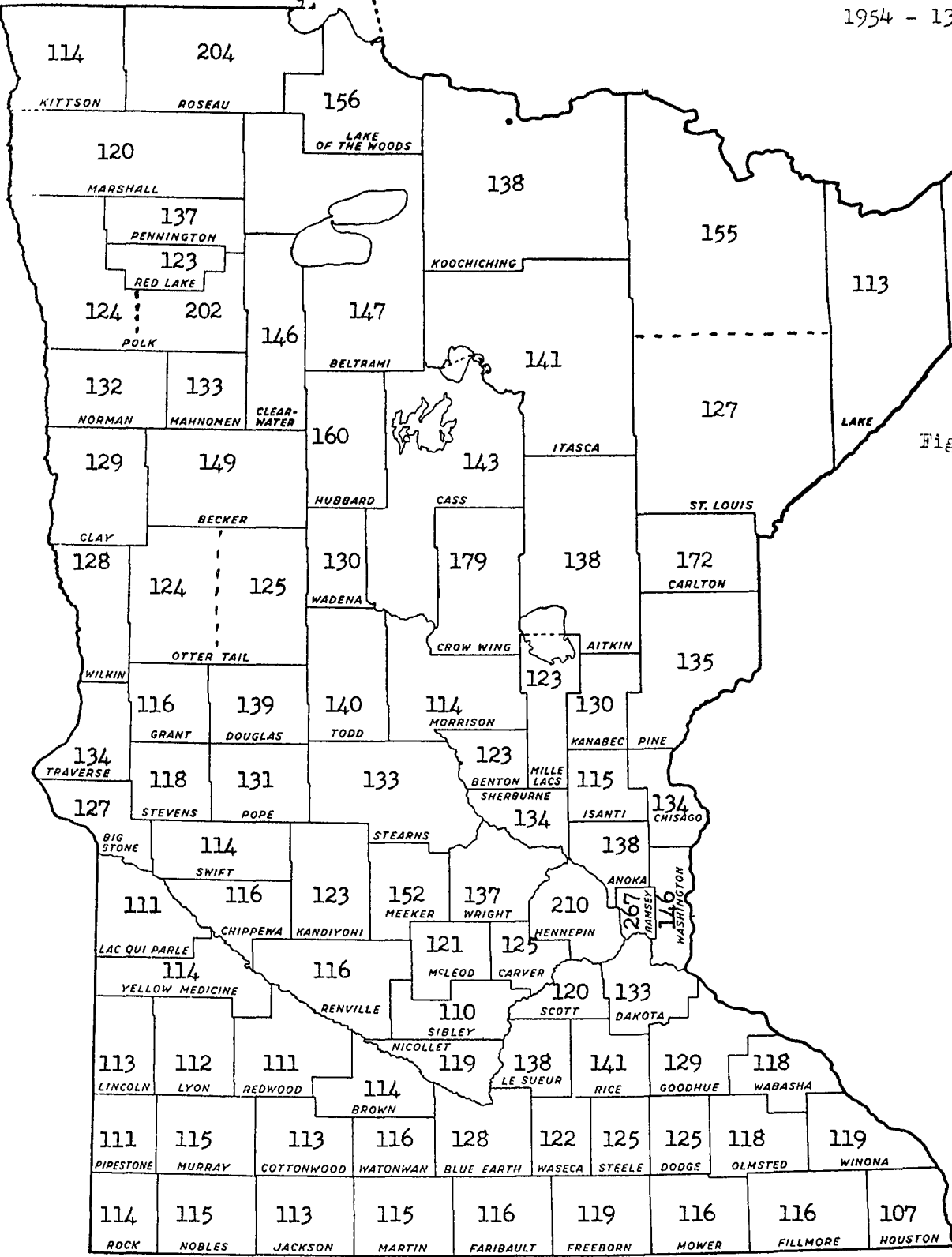


Figure 14

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Figure 15

- Note: 1. In the 13 Northeastern Minnesota counties the population decreased 1.6 percent from 1940 to 1950 while in the rest of the state, it increased 8.3 percent.
2. There was a large movement of population to the larger urban centers during the forties. Generally, the counties having a decrease in population did not have any large cities within the county and were not near large cities.
3. The counties showing an increase in population usually had large cities in the county or had large cities somewhere near.

City	County	Percent change 1940-1950
Twin Cities	Anoka	+ 58.5
	Washington	+ 30.7
	Dakota	+ 23.6
	Hennepin	+ 18.9
	Ramsey	+ 14.6
Winona	Winona	+ 5.4
Rochester	Olmsted	+ 13.1
Mankato	Blue Earth	+ 5.9
	Nicollet	+ 14.5
Austin	Mower	+ 17.1
Albert Lea	Freeborn	+ 8.6
Fargo-Moorhead	Clay	+ 19.8
St. Cloud	Stearns	+ 5.2

Population Changes* - 1940 - 1950
Percent increase or decrease

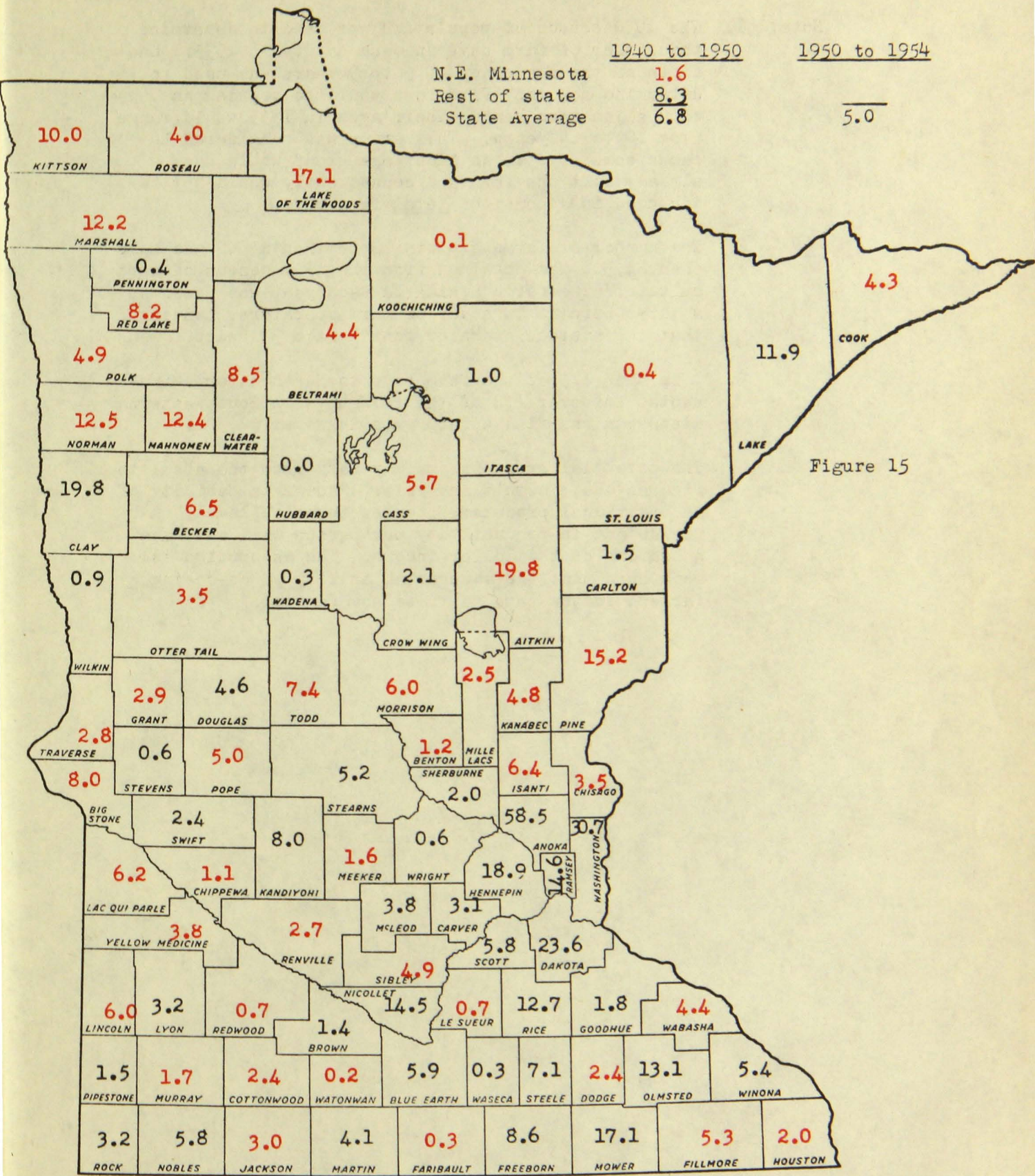


Figure 15

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* This includes the total population in each county, rural and urban.

Figure 16

- Note:
1. The 1950 census of population was used to determine the number of farm boys in each county in 1955. One-fifth of the age group of 5 to 9 years was used to determine how many farm boys would be seeking an occupation each year. Their ages in 1955 would range from 10 to 14 years. This group was considered because some boys in an older age group would have already left the farm and consequently would not be included in a count of total farm boys.
 2. The number of farms grossing more than \$5000 and more than \$2,500 was obtained from the 1954 census of agriculture. The farms available each year was based on a three percent turnover of farm operators, meaning that the average operator runs a farm 33 years.
 3. Less than 1/5 of the farm boys in Northeastern Minnesota, but over 1/2 of the farm boys in Southwestern Minnesota can find a farm grossing over \$2,500.
 4. The potential gross income may vary from the absolute figures used in this analysis. Managerial ability of an individual producer, changes in price level, in yields and in productivity per person will all have a bearing on the dollar income. The assumption is made here that the managerial ability of on-coming farmers is the same as those now farming.

Farming Opportunities* - 1954

Top figure - Percent of farm boys who can start farming and can probably expect a gross income of over \$5000.

Bottom figure - Percent of farm boys who can start farming and can probably expect a gross income of over \$2500.

Minnesota
26 percent
41 percent

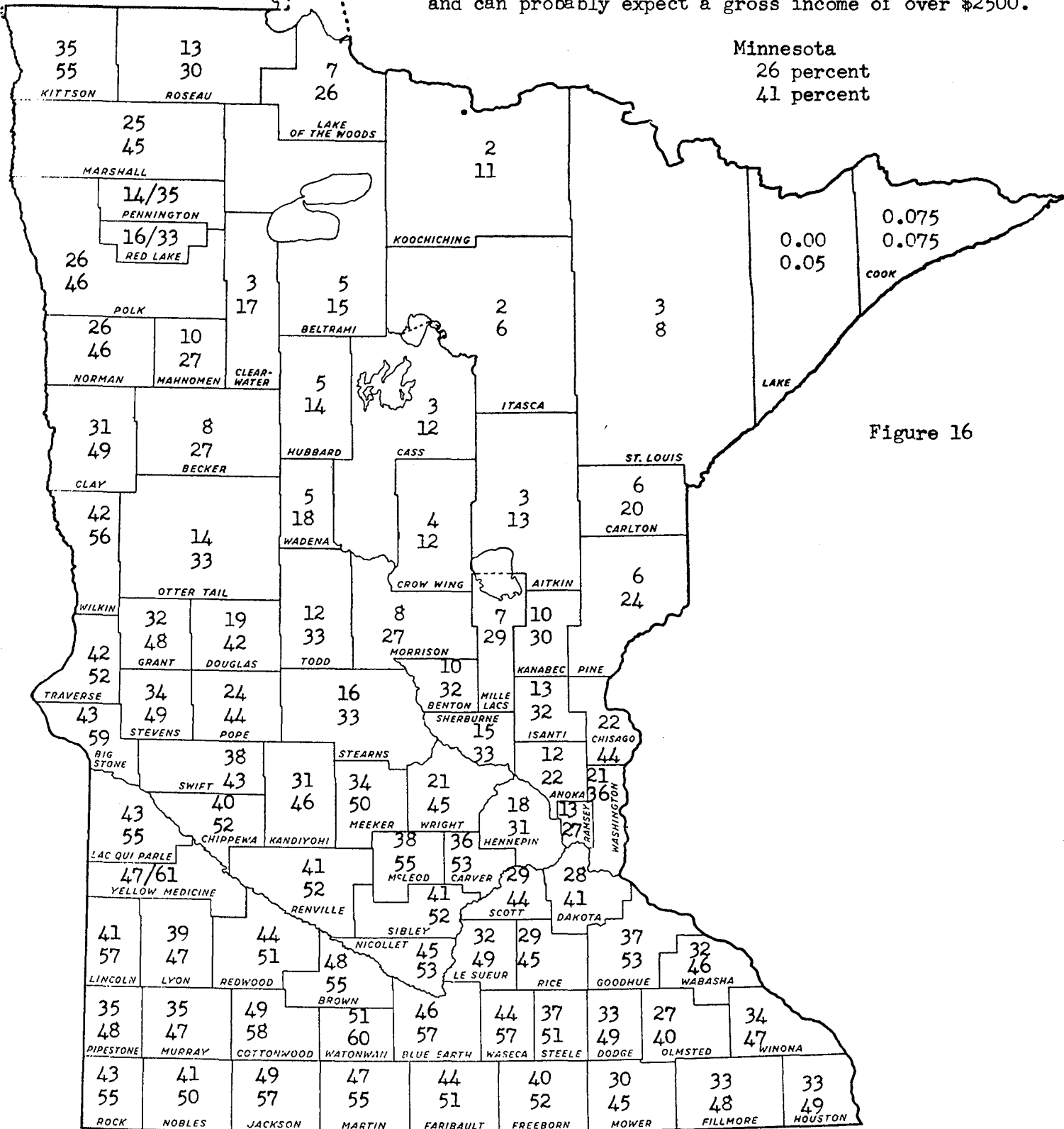


Figure 16

* Total opportunities for owning or renting a farm.

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