Farms in subregion 105 had the highest total investment per man, the highest investment in machinery per man, the largest number of crop acres per man, but the lowest investment in machinery per crop acre. These measures of level of efficiency do not vary greatly among the other three subregions, although for farms in subregion 89 the investment per man and crop acres per man are somewhat lower than for farms in the other two subregions.

Comparisons of measures of level of efficiency by economic class indicate a decrease in total investment and crop acres per man from Class I to Class VI farms, whereas, machinery investment per acre increased from the large to small farms. There was some decline in investment in machinery per man from Class I to Class VI farms but the decline was not nearly as sharp as that for total investment per farm or crop acres per man. This explains perhaps one of the more significant reasons for low net income (gross sales less specified expenditures) on these farms as a minimum amount of machinery is required even for a small acreage. A second significant reason for low incomes on the Class VI farms is the low yields per acre in 1954. In all four subregions, the farms with larger gross income had significantly higher yields per acre.

OTHER TYPES OF FARMING IN THE HARD RED SPRING WHEAT REGION

Other types of farming in the hard spring wheat region are of interest. In the Red River Valley (subregion 89), there were 3,601 dairy farms and 3,213 general farms. On these farms, feed crops were emphasized more than wheat and more livestock were kept than on cash-grain farms.

In subregions 90 and 91, there were 8,942 general farms. These were similar to the cash-grain farms in the same area. Wheat was the major crop on tilled land but the general farms had more pastureland and livestock than the cash-grain farms. No doubt some of these general farms would have been classified as cash-grain farms if wheat yields had been normal.

In subregion 105 in southwestern North Dakota and Montana there is much land not suitable for cultivation. Farmers who have a large acreage of grassland keep more cattle or sheep than wheat farmers. In this subregion there were 6,336 livestock farms. Among these are many that are very similar to wheat farms but with enough income from livestock in 1954 to be classified as livestock farms. Among the farm units classified as livestock are many ranches that have the same characteristics as those in the nearby range livestock areas. These units usually are characterized by large acreages in grass and little cropland.

Although flax was once grown more widely, it is now produced mainly in three States—North Dakota, South Dakota, and Minnesota. In 1954, nearly 80,000 farmers reported a total of 5 million acres with a production of 34 million bushels of flax in these three States (see table 56). North Dakota is by far the leading flax-producing State. Acreage allotments for wheat undoubtedly influenced the acreage of flax. As grain sorghum provides a cash-grain alternative to winter wheat in the southern part of the Great Plains, so flax offers alternative opportunities in the northern Great Plains and Minnesota.

Flax production is closely associated with wheat production, for many farmers grow both crops. Most flax is grown by farmers who raise only small quantities. In 1954, 92 percent of the producers harvested less than 1,000 bushels each; 20 percent harvested less than 100 bushels each.

Table 56.—Acreage and Production of Flax in the Three Leading Producing States: 1954

[Data are estimates based on reports for only a sample of farms]

Item	North Dakota	South Dakota	Minnesota
Number of farms in the State	61, 808	62, 350	165, 324
Number of farms producing flax	42, 171	16, 238	29, 491
Acreage in flax	3, 126, 185	944, 306	978, 315
Number of farms reporting by acres harvested:			
Under 25 acres	8, 117	4, 444	15, 368
25–49 acres	11, 166	4, 828	8, 410
50–99 acres	12, 437	4, 501	4, 362
100 acres and over	10, 451	2, 465	1, 351
Production—bushels	20, 032, 677	5, 467, 435	8, 228, 230
Farms reporting by number of bushels harvested:			
Under 100 bushels	7, 239	3, 163	7, 317
100–499 bushels	21, 155	9, 795	17, 922
500–999 bushels	8, 724	2, 443	3, 362
1,000 bushels and over	5, 053	837	890

THE WHITE WHEAT REGION (SUBREGION 110)

This area, located in northwestern United States (see fig. 9), has long been known for its specialized, large-scale farming. Even before modern tractor power was available, it was known for its large farms and big machines pulled by large teams of horses. It has continued to have large farms and a labor-extensive type of farming. Although some hard winter wheat and some hard spring wheat are grown in the western, more arid part of subregion 110, the soft white wheat predominates. Small quantities of white wheat are also grown in Michigan and New York.

Figure 9.