

PERCENT OF FARMS REPORTING TRACTORS (OTHER THAN GARDEN). BY TENURE OF OPERATOR. COMMERCIAL FARMS, UNITED STATES AND REGIONS: 1954 AND 1950.

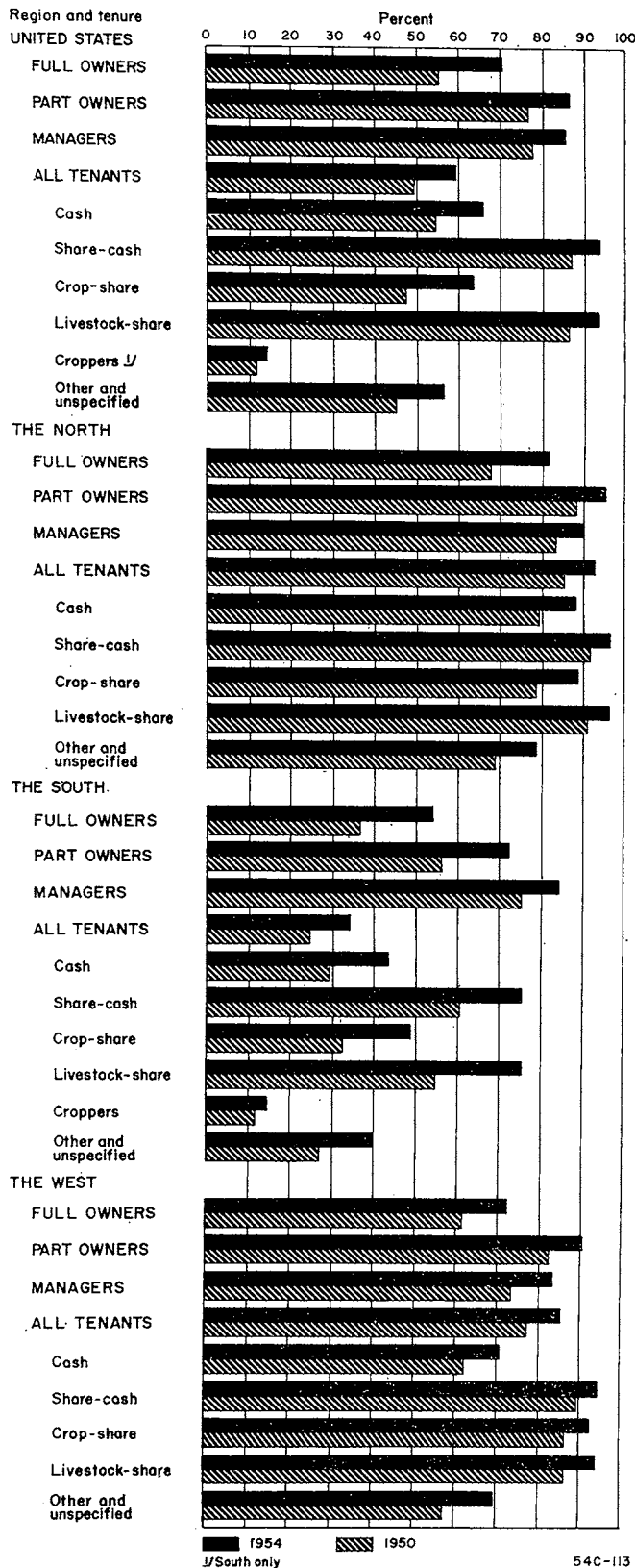


Figure 37.

EQUIPMENT AND FERTILIZER

A dominant characteristic of the recent changes in American agriculture is the rapid mechanization of commercial farms. There have been substantial increases in the number of tractors and also in the number of specialized machines such as pick-up balers, milking machines, and corn pickers. As farm numbers decrease and labor moves out of agriculture, greater farm production is being made possible partly from increased mechanization.

**Increase in power.**—One index of increased mechanical power applied to agricultural production is the number of tractors. The number of tractors on farms rose from 3,609,281 in 1950 to 4,692,341 in 1954. This 30.0 percent increase in numbers does not represent the only change in work capacity, however, for tractors have increased in horsepower and versatility. Tractor numbers now approximate the number of farms in the United States. Excluding the many small noncommercial units, the ratio of tractors to farms would be approximately 1¼ to 1. The geographic distribution of tractors, however, is not proportional to the number of farm units. (See figure 38.) The average number of tractors on commercial farms in the North Central Region, for example, is 1.6, whereas in the South the average is 0.8 per farm.

**Work power and tenure.**—Work power, as represented by the percent of farms reporting tractors (figure 37), is related differently by the form of tenure in different regions. In the North 92.6 percent of the commercial tenant farms and 81.6 percent of the commercial full-owner farms reported tractors (other than garden) in 1954. The percent of tenant farms in the West reporting tractors was 85.3, whereas 72.3 percent of the full-owner farms reported tractors. In the South, however, 34.3 percent of the tenants reported tractors compared with 53.9 percent reported by full owners. The low percent of tractors on southern tenant farms is perhaps partly a function of the relative difference in financial condition of northern and southern tenants. Many tenants in the North are tenants because they consider it is more profitable to invest in machinery and equipment rather than land, whereas a large proportion of tenants in the South do not have sufficient capital to invest in either equipment or land. This condition of relatively limited capital in the South may also account partially for the fact that between 1950 and 1954 the proportion of tenant commercial farms reporting tractors (other than garden) showed an increase of only 38.9 percent in this area, whereas full-owner farms reporting tractors increased 46.5 percent and part-owner farms reporting increased 28.8 percent. To a lesser extent, a similar pattern of increase was reported for the North and the West (figure 37).

Part-owner and manager farms, as may be expected by their tendency to be larger than tenant or owner-operated farms, reported the highest percentage of tractors in 1950 and 1954.

An important contribution to the increase of agricultural production was the substitution of petroleum for feed crops as a source of power. In general, the degree to which this transition has been effected is indicated in a comparison of farms with tractors and no horses or mules and farms with horses or mules and no tractor (figure 38).

**Specialized machines.**—The percent of farms reporting tractors is an indicator of the extensiveness of mechanization; whereas, the degree of intensity or thoroughness of mechanization may be inferred from the use of specialized machines. Figure 39 shows the percent of commercial farms using some specialized machines in comparison with the percent of farms reporting tractors.