

marketed at various weights up to 260 pounds. The number of hogs marketed above 260 pounds is small and the greater part of these hogs are marketed during spring months when prices were generally higher.

Summary

1. No single weight group received the highest price throughout the year. The 200 to 220 pound group was the most consistent (fig. 1).
2. The weight at which hogs are marketed is an important factor in the return over feed and production costs.
3. Preliminary data indicate the best weight range to market hogs is 200 to 220 pounds.



COVER STORY

WILD OATS infestation can be a serious problem. There is no quick or easy way to get rid of them. But it is possible to clean up a field by following good rotation and tillage practices. The most reliable ways for small grain farmers to eliminate the weed are those based on getting the seed to sprout and then to destroy the plants before they reseed. You should know the basic facts about wild oats. It's to your economic advantage to control them. Ask your county extension agent for NDAC Circular A-276, "Controlling Wild Oats."

TREND

ONE of the dominant characteristics of North Dakota agriculture is continued change. With bigger and more efficient farm machinery, improved plants and animals, and increased use of fertilizers and other agricultural chemicals, farmers produce much more than formerly in each hour of work. With increased prices for materials and equipment adding to their costs, farmers are finding it essential to increase the size of their business to maintain a satisfactory income.

The agricultural census of 1954 indicates some of the adjustments North Dakota farmers are making. Family-sized farms that provided an adequate income only a few years ago are being replaced by larger units. The trend is not as pronounced in North Dakota as it is in such states as Wyoming, and the decrease in number of farms is greater in both South Dakota and Minnesota. However, North Dakota exceeds South Dakota and Minnesota in the percentage increase in the average size of farms. (figure 1)

In North Dakota the number of farms of 1,000 acres and over increased from 8,775 in 1950 to 9,925 in 1954. As a substantial number of large farms become larger, the number of medium and small farms decline. The 500 to 999 acre farms decreased only slightly from 22,086

¹Associate Agricultural Economist.

²Statistical Clerk.

S IN NORTH DAKOTA AGRICULTURE

By Walter Wilson¹ and Reuben Engelking²

to 21,999. The 100 to 499 acre farms decreased from 31,949 to 27,630 and the 10 to 99 acre units decreased from 1,999 to 1,632. The number of farms of under 10 acres increased from 592 to 757. (figure 2) Farmers are operating larger farms as a means of increasing efficiency and reducing costs per unit of output.

A higher proportion of farms received the major part of their income from the sale of field crops and dairy in 1954 than in 1950. (figure 3) However, farms are classified by type on the basis of income source. What appears to be a trend toward increased specialization in field crops and dairy may be due

solely to price differences in the two periods. A farm is classified as being a field crop farm, dairy farm, etc., if half or more of its sales are from one of these groups of products.

Figure 4 shows the distribution of farms by economic class in 1950 and 1954. Farms are classified by the census as follows:

COMMERCIAL FARMS:

Class	Value of products sold
I	\$25,000 or more
II	10,000 to \$24,999
III	5,000 to 9,999
IV	2,500 to 4,999
V	1,200 to 2,499
VI	250 to 1,199*

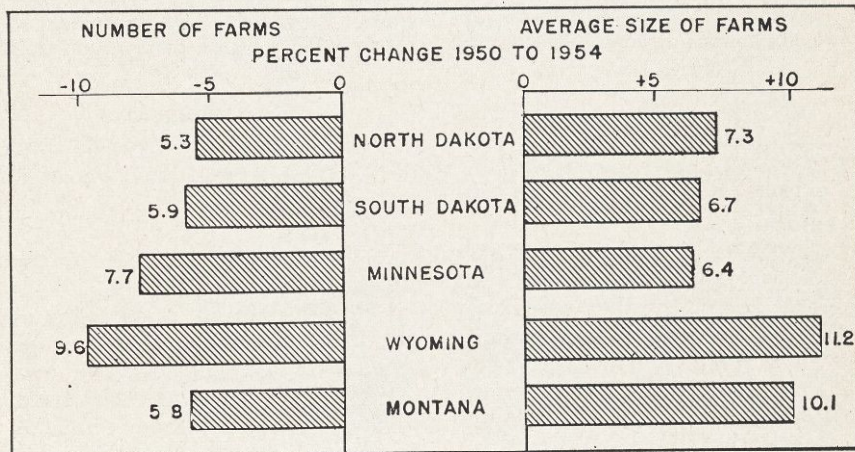


Figure 1.—Decreases in numbers and increases in size of farms in five states, 1950 to 1954.

*Provided the farm operator worked off the farm less than 100 days and provided the the income the farm operator and members of his family received from nonfarm sources was less than the value of all farm products sold.

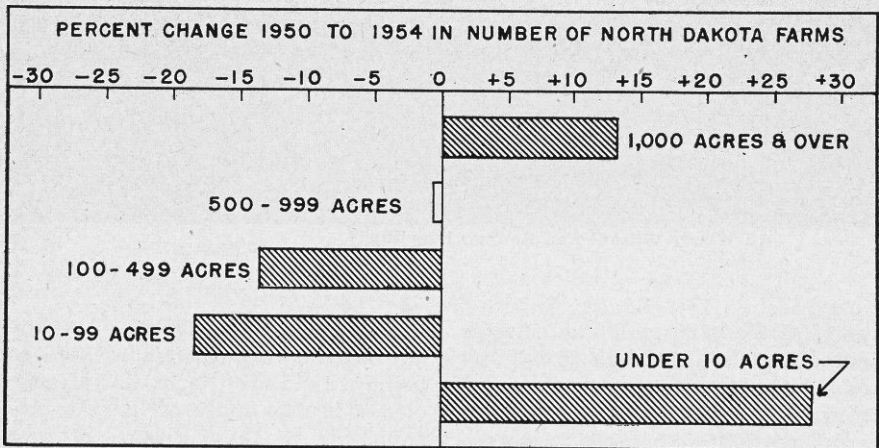


Figure 2.—Changes in number of farms by size, 1950 to 1954.

OTHER FARMS:

Part time—Farms with a value of sales of farm products of \$250 to \$1,199, provided the farm operator reported (1) 100 or more days of work off the farm, or (2) the non-farm income received by him and members of his family was greater than the value of farm products sold.

Residential farms—All farms except abnormal farms with a total

value of sales of farm products of less than \$250.

Abnormal farms—Public and private institutional farms, community enterprises, experiment station farms, grazing associations, etc. (Small number, not shown in chart.)

The most significant increases are in the categories of class III farms with a value of products sold from \$5,000 to \$9,999 and the class IV farms with a value of products sold

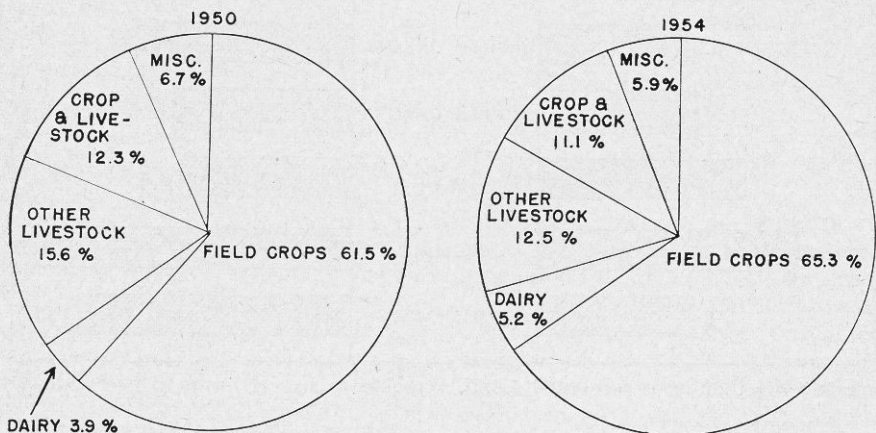


Figure 3.—Percent of different types of farms in North Dakota, 1950 and 1954.

of \$2,500 to \$4,999. There was a slight increase in the highest category of \$25,000 or more, and all other categories showed declines from 1950 to 1954.

The proportion of North Dakota farms by tenure of operator changed slightly from 1950 to 1954. (figure 5) The percentage of full owners decreased, and the percentage of part owners increased, making them the largest group in 1954. The increase in the part owner group was

due to renting of additional land by owners and the purchase of land by tenants. The proportion of tenant operators decreased slightly as a result of tenants leaving farms or becoming part owners.

Slightly less North Dakota farm operators worked off their farms in 1954 than in 1950, and less worked 100 days or more off their farms. This indicates a decline in the number of operators doing seasonal or irregular off-farm work and also a

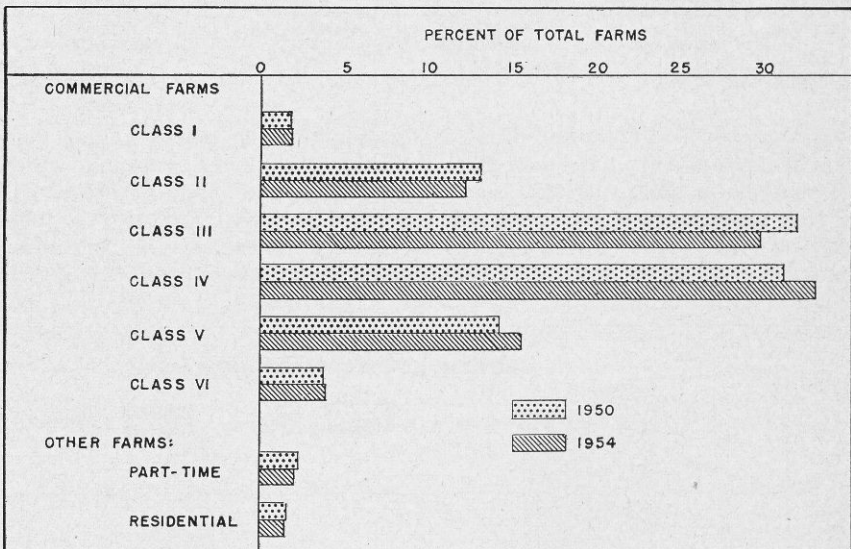


Figure 4.—Percent of total farms by kind and class, North Dakota, 1950 and 1954.

decline in those working full time off their farms during the winter months. Some farmers who have previously supplemented their income by working off their farms have apparently left the farm for full time nonfarm occupations, increased their size of business to utilize more of their time or simply have less off-farm opportunities than formerly. (figure 6)

The increasing capital require-

ments of farming is evidenced by the expanded use of mechanized equipment. North Dakota farmers continue to use more standard items like trucks, tractors, autos and grain combines, and are rapidly acquiring such newer items as pick-up balers, field forage harvesters and electric pig brooders. This equipment enables farmers to expand their business and to improve the timeliness and efficiency of their

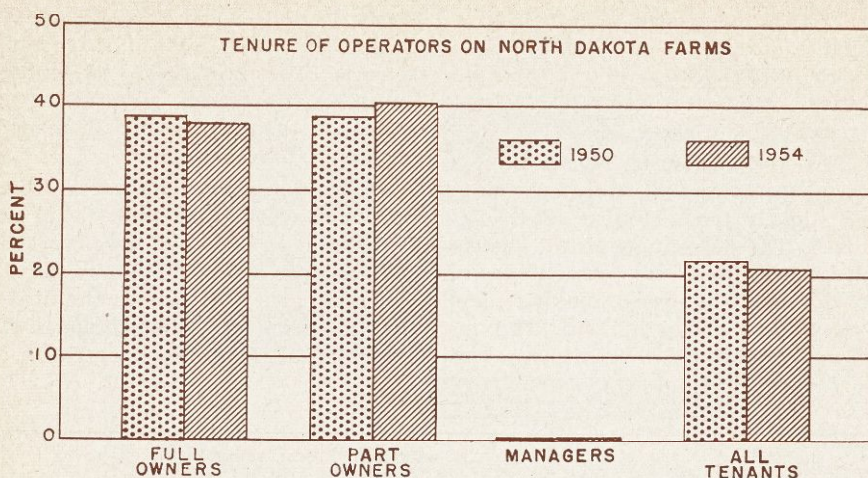


Figure 5.—Percent of farms by tenure of operator, North Dakota, 1950 and 1954.

work. Figure 7 shows the proportion of farms having indicated equipment items in 1950 and 1954.

This trend toward greater mechanization and labor saving also extends to the farm home. The pro-

portion of farm homes having electricity, telephones, running water, television and home freezers increased sharply from 1950 to 1954. (figure 8) These services and appliances contribute to comfortable farm

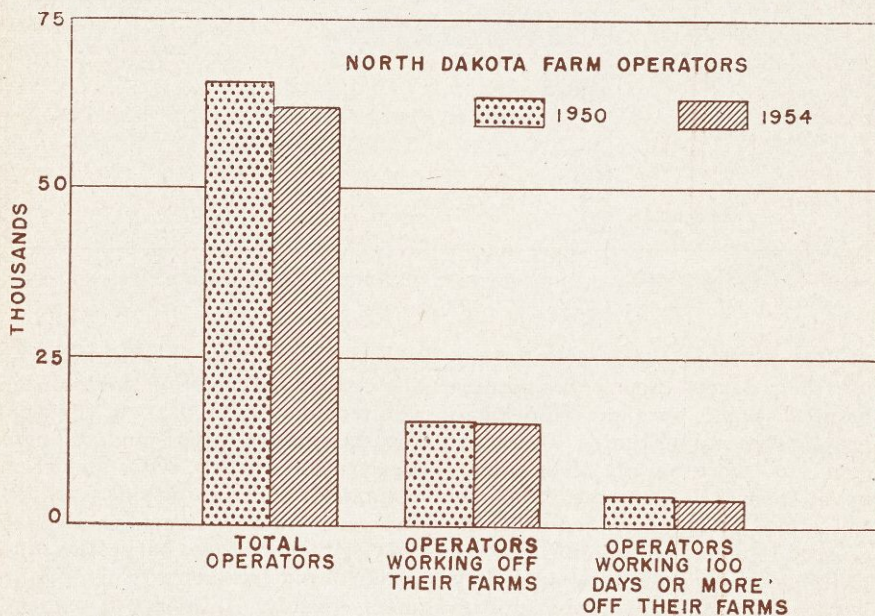


Figure 6.—Total farm operators and numbers working off farms, North Dakota, 1950 and 1954.

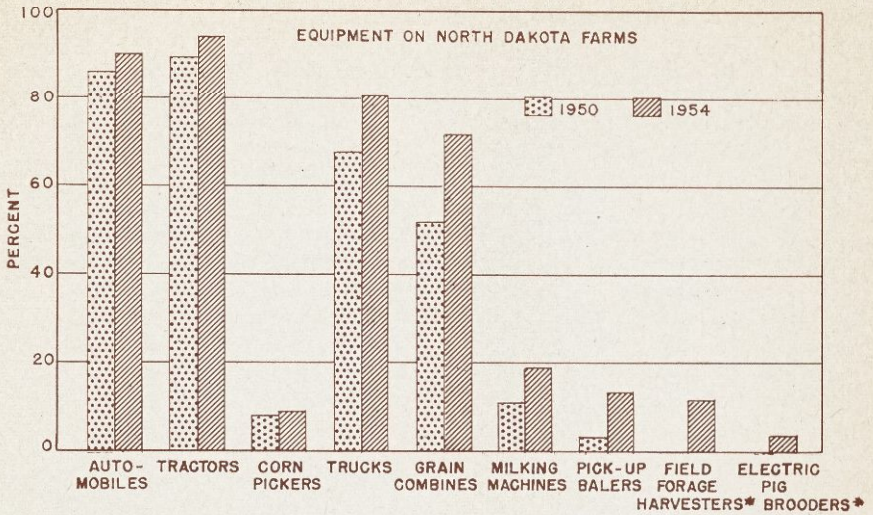


Figure 7.—Percent of farms having stated types of equipment, North Dakota, 1950 and 1954.

living. They help to create higher standards of living for all the farm family.

These trends indicate that fewer, larger, better equipped and more specialized farms, manned by fewer workers, are a result of persistent

economic forces. Change in the pattern of agricultural production and organization is a part of the process of economic development or progress. It enables us to create higher and higher levels of material welfare.

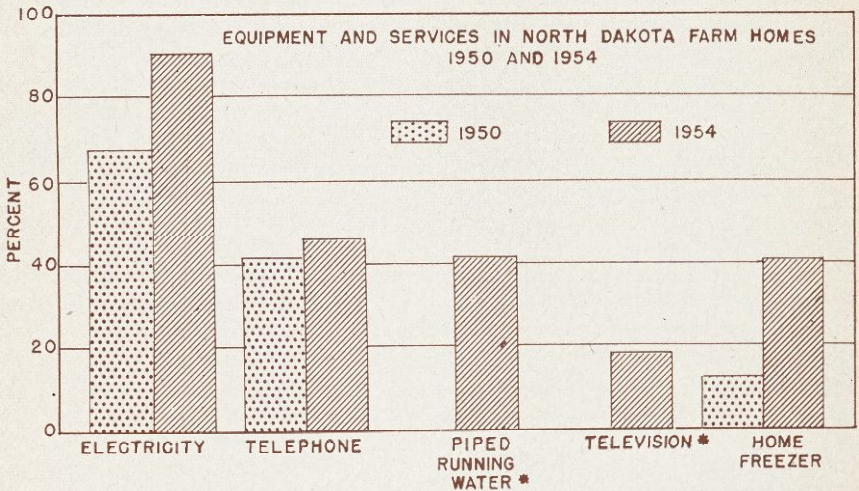


Figure 8.—Percent of farms having stated services and appliances, North Dakota, 1950 and 1954.

AS poults and chicks reach the age when they no longer require artificial heat to maintain their own body temperature, they are moved from the brooder to the range.

This move is important to the young bird and to the producer. Moving young birds from a heated unit to the outside subjects that bird to many stress factors. The outside temperature may fluctuate over wide ranges. There may be rain, hail, or even snow, to cause problems to the poults or chicks. The waterers may be of a different type and the feeders are different.

The temperature changes are of definite importance, but the changes in the feeders and waterers are often of more importance. Both chicks and poults have trouble in changing types of feeders and waterers. It is surprising the number of chicks and poults that die of starvation from lack of water or feed when the feeding and watering systems are changed.

When the change from brooder to range is made be sure to use some of the older equipment so that all birds will get both feed and water during the change over period. Another point to consider is housing. Birds in a brooder don't have the problem of housing. Birds on range with a shelter may not find the shelter. They may pile up in some corner of the lot and the death losses may be heavy.

During the first few days after changing from brooder to range, see that all birds get into the range shelter at night and that there is no "piling". It is often advisable to use low wattage lights in the range shelters to control the distribution of the birds.

Certain disease hazards also must be considered when birds are moved from brooder to range.

Brooder-to-Range *Hazards*

By D. F. Eveleth¹

• • • •

The first and probably the most important of these disease problems is coccidiosis. Usually, brooders of the battery type can be cleaned so that the problem of coccidiosis is of no concern. On the range the situation is different. The ground is contaminated with *coccidia* and the young birds pick up infection during the first few days. There are several coccidiostatic agents that will prevent clinical coccidiosis and it may be good practice to use them. Use these coccidiostatic materials only on the advice of your veterinarian, or the experiment station of your state.

On some farms, blackhead of poults is a serious problem which occurs year after year. Several products on the market will hold this disease in check. Use them with caution if you have evidence of blackhead in your flock.

The diseases of bacterial origin, such as pullorum and paratyphoid, are not likely to occur in range flocks. Fowl cholera and erysipelas often occur in range flocks of turkeys. Vaccination and treatment can give effective control of these diseases.

There are other diseases, such as blue comb and Newcastle disease, but these should be considered on an individual flock basis.

In general, the handling of the range flock should take into consideration all the general practices of poultry sanitation with the use of the established medical agents when indicated.

¹Veterinarian.