ages show Narragansett leading with an average of 1.5 tons per acre, DuPuits second with 1.4 tons, Ladak 1.4 tons, and down at the lower end were Grimm (eighth in average production of varieties on trial) with 1.3 tons and Ranger ninth with 1.3 tons.

In the Dickinson grass fertilizer trials it was found that a 50 pound application of nitrogen fertilizer on old crested wheatgrass sod increased forage yields by about 1,200 pounds of hay per acre. An additional 50 pounds of nitrogen added another 768 pounds in yield, but a third 50 pounds brought only 472 pounds more of forage yield. The first 50 pound application is the economically justified limit, considering cost of fertilizer and decreased increment from additional applications.

In a new tillage trial at the Dickinson branch station, it was learned that production on stubble land which was plowed with a moldboard plow was 34 per cent better than on stubble land which had been double disked and 20 per cent better than the stubble land which had been worked with the one way disk.

At the Hettinger Branch Station, workers compared offspring of Suffolk and Hampshire rams when bred to Columbia ewes, finding in 1955 trials that the Suffolk-Columbia cross resulted in lambs averaging 14 pounds more weight apiece at market time than lambs from the Hampshire-Columbia cross.

From Hettinger experience it is believed that early (March) lambing is more desirable in southwestern North Dakota than late (April and May) lambing, since earlier lambs utilize farm labor before field work begins, gives lambs a lead over parasites, gives them some growth before they are exposed to predators and dogs, gets them eating grass when grass is at its highest nutrient value, permits early and most profitable marketing of lambs and thus leaves more late pasture for the ewe flock.

## NORTH DAKOTA PIG CROP UP

The number of pigs raised in North Dakota in the fall of 1955 (June 1 to December 1) was placed at 121,000 head, 12 per cent more than the similar period in 1954 and 15 per cent more than the 10-year (1944-1953) average, reports C. J. Heltemes, statistician at Fargo for the Department of Agriculture's Agricultural Marketing Service.

The record fall pig crop was in 1943, when 287,000 pigs were raised and the smallest in 30 years was the 79,000 produced in 1953. Fall farrowing in the fall of 1955 was placed by Heltemes at 18,000, largest number since 1945. The average size of litter was 6.71 pigs, exceeded only in 1952 and 1954. Largest litter size on record was 6.81 in 1952 and second largest the 6.74 in 1954

Hog production in 1955 was 793,000 head, up from 676,000 in 1954 and largest number since 1946. Largest North Dakota hog production was in 1943, when 1,949,000 head were raised—more than twice the 10-year average.

The agricultural statistician predicts farrowing of 91,000 sows in the spring of 1956, a number equal to 94 per cent of the spring farrowing in 1955 and 84 per cent of the 10-year average.

## TEAMWORK AMONG FERTILIZERS

In a trial at the Hettinger, N. D., Branch Station in 1955, comparing effects of nitrogen and phosphorus fertilizers on yield of wheat grown on corn ground, it was found that phosphorus alone at 35 pounds per acre increased the wheat yield by 3.7 bushels per acre, whereas 20, 30, 40 or 50 pounds of nitrogen per acre in addition to the 35 pounds of phosphorus resulted in yield increases of 6.9, 7.4, 9.4 and 11.4 bushels per acre, respectively. The test weight of the wheat was not affected, either favorably or adversely, by fertilizer application.