

Fertilizers, Farming Practices and Rotation

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Sugar beets harvested from the 1951 crops to date in the Nampa-Nyssa District produced an average yield of 21.65 tons per acre and the yield for Canyon County was 23.54 tons per acre.

This yield is obtained by good farming practices, proper rotation and the application of dry and green manure and commercial fertilizers to take advantage of the long growing season.

The commercial fertilizers used in almost every field are phosphate and nitrogen. The average application is 80 pounds to 100 pounds of available phosphate and from 60 pounds to 80 pounds of available nitrogen. However, top tonnage growers are using considerable more nitrogen and some additional phosphate.

Prior to 1940 a very large percentage of the farm land in this area was used in producing feed crops with no application of commercial fertilizer. This practice reduced the original phosphate supply very materially and to a great extent nitrogen was far below the requirements for most row crops.

Since 1937 the trend has been toward row crops with the establishment of better farming practices and the application of fertilizers, but only in recent years have the farmers been convinced of the need for more commercial fertilizers and at this time they would use more if it were available.

The usual practice of high tonnage growers in producing a beet crop at this time is for them to use an application of barnyard or green manure at least once during their rotation plus phosphate and nitrogen annually.

Fall plowing is commonly practiced and in many cases where organic matter is to be plowed down the commercial fertilizers are broadcast prior to plowing, but in other cases it is broadcast on the plowed land and worked into the soil with seed bed tools. This method has advantages from the standpoint of getting an early growth on the leaves.

When lesser amounts of commercial fertilizer are broadcast most farmers apply additional material with side-dressing equipment, usually when beets are three to six inches high.

On the heavier soils in the area fall plowing is almost a must and on lighter soils, except in sand, it is very desirable. However, some growers on lighter soils prefer to clean out feed lots in late winter or early spring and use spring plowing for a better cover on manure and fertilizers applied.

Many farmers are feeding beef or dairy herds hoping, of course, to make a profit on their cattle, but basically to produce manure for their row crop lands. Also the use of green manure crops is becoming quite common.

The most popular green manure crops are alfalfa, first cutting plowed under for late potatoes or third cutting plowed under for beets the following year, Hubam clover planted with grain to plow under with the stubble and pea vines plowed under after green pea harvest for late lettuce or seed potatoes.

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A very large percent of the beet growers are using beaters to remove the beet leaves at harvest time. These machines reduce the leaves to fine particles evenly distributed over the ground and they have proven to be a very valuable organic fertilizer.

Some canning corn growers also work their shredded green stalks into the soil as soon as the crop is mechanically harvested. These stalks are valuable as green manure.

Local growers usually will not plant beets more than three consecutive years on the same land and at the end of this period other crops are grown from two to four years before the land goes back to beets.

This practice is encouraged by the Amalgamated Sugar Company for the purpose of maintaining organic matter *in* soils and also as a means of combatting a possible infestation of sugar beet nematode which has never yet been found in the Boise Valley, but we believe that if and when it appears a good rotation program will help in preventing a rapid spread.