The Farm

Timely Articles by the Ontario Department of Agriculture, Toronto

BENEFITS OF ROTATION

It Maintains Both the Humus and Nitrogen Supplies.

Too Frequent Grain Growing Exhausts the Soil — Rotation Will Help to Destroy Weeds, Insects, and Fungus Pests—Currants and Gooseberries.

(Contributed by Ontario Department of Agriculture, Toronto.)

Crop rotations will, if properly planned and practised, maintain the humus supply in the soil, will restore the nitrogen supply, will give the benefits resulting from alternating crops that have different food requirements and leave different root residues in the soil; will help in weed, insect and fungus disease control; will make business management possible, will distribute the labor and reduce the risk of the loss in poor crop years.

Grain Growing Exhausts the Soil.

Lands that are continually used for grain crops will in time show exhaustion of the humus supply, due to annual tillage creating conditions that favor oxidation. Lands that are given a rest from the action of plough, disc, and cultivator, for two years out of every four while growing a hay or pasture crop will not become depleted of humus material, since the roots of the clover and grass crops will during their period of growth increase the quantity of vegetable matter or humus making material.

The common food plants have quite different root systems, legumes and root crops go deep, the grasses and grains have fibrous roots and feed nearer the surface. The grains develop their feeding roots and are most active during the spring and early summer, while corn and the root crops draw the greater part of their food supply during the late summer.

Use the Soil as a Feeding Ground.

The point is to use the soil as a feeding ground for the various food plants in such a way as to employ all its resources during the rotation period, but not to overwork or exhaust any particular part of what the soil may offer. A soil that is subjected to the task of nourishing a surface feeding type of plant over a long period of years will become exhausted of the food elements within the range of the feeding roots. The same is true when a soil is subjected to supplying the same food elements in excess to classes of plants requiring the same elements.

Alternate Shallow and Deep Feeding Crops.

By planting a rotation that will call for a surface feeding crop one year, a deep feeding crop the next year, and a rest from tillage for two years the soil is not subjected to the same everlasting drain on its fertility that the one crop or no system imposes. The work that the soil is required to do is distributed over a longer period, the soil is given time to rest up while certain food elements are reaching a condition suitable for plant food in quantity large enough to be of use to a developing crop. When crops are alternated, weeds, insects and fungus pests, all of which like the sameness of conditions characteristic of the one crop system, are not given a chance to increase, but are rooted out and destroyed annually through the breaking up of conditions suitable to such pests by employing a suitable rotation system.—L. Stevenson, secretary Dept. of Agriculture, Toronto.

Currants and Gooseberries.

If a currant or gooseberry plantation is properly cared for, at least eight to ten crops may be expected before it becomes unprofitable because of its age. Productive fields over twenty years old are not uncommon in some sections. Although the number of years a plantation will continue in good bearing condition depends to some extent upon location and soil, the most important factor is the care which it receives. The period of productiveness of both currant and gooseberry plants is longer in northern regions than toward the southern limits of their culture and longer on heavy soil than on sandy soil.

In gardens where the available land is limited in extent, currants and gooseberries may well be planted among the tree fruits and left there permanently. The shade of the trees protects the fruits from sun scald, and the foliage is usually healthier in such locations than when grown where it is freely exposed to the sun.

A place with good air drainage is preferred for gooseberries. In low, damp places mildew attacks both fruit and foliage more severely than on higher sites where the air circulation is better. Currants, however, are seldom severely attacked by mildew. Therefore, when the site is a sloping one, currants may be planted on the lower parts and gooseberries above. As both fruits blossom very early in the spring, neither should be planted in low pockets where late spring frosts may kill the flowers.

Gooseberries ordinarily are propagated by mound layers. The plant from which layers are to be procured should be cut back heavily before it begins to grow in the spring. By July it will have sent out numerous vigorous shoots. It should then be mounded with earth half way to the tips of the shoots. By autumn the shoots will have rooted. Those with strong roots may then be cut off and set in the nursery, to be grown for one or two years before planting in the field. If the roots are not well developed, it will be better to leave the shoots attached to the parent plant for a second year.

Millet is a splendid smother crop and weed seed destroyer, especially when cut thickly for hay and cut early.

ANNUAL INVENTORY.

Keep a Record of What You Own and What It Is Worth.

The man on the land can learn much about his own farming operations by taking an inventory each year. No form of record will give so much information about the year's work as will an inventory properly taken at a definitely fixed date each year. The usual time for taking an inventory of the farm business is in March, when there is least feed and unsold produce on hand. The inventory of any ordinary farm can be taken in a half day, so there is no excuse on account of shortage of time. The information gleaned about the farm business through the study made possible by inventory taking is worth many times the expenditure of time and effort.

For convenience in keeping the farm inventory any blank record book with pages wide enough to permit spacing for a number of columns can be used, and if ruled to accommodate the entries for a number of years so much the better.—L. Stevenson, Secretary, Dept. of Agriculture, Toronto.

How to Select the Breeding Ram.

Select a ram that possesses scale, but not to the extent that he is lacking in quality. A well-developed ram as a rule transmits these characteristics to his offspring. He should be masculine in appearance, which is indicated by the carriage and boldness of head, short face, good width between the eyes, large open nostrils and an absence of feminine characters in general.

A ram should show good strength of back and depth of body, especially through the chest, with good width between fore legs and well sprung ribs. He should be closely made, that is, good depth, width of body, and short on legs.

The fleece should also be considered as to density, fineness and freedom from black fibres, with a skin that is pink in color, indicating that he is in good condition.

Purchase a pure-bred ram if possible, as blood will count and marked results will be seen in the quality of lambs. Breed character should be considered as it is very important, more especially in pure-bred flocks. Prices are relatively low and it pays to buy the best.