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Cover Crops for the Orchard

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A FEW years ago the idea of a cover crop in the orchard was comparatively new to most farmers. For a decade or more a good tough blue grass sod was considered about all that was necessary under the apple trees. One would get apples anyhow, whether the ground received any care or not. This may have been quite true in the earlier days when our soils were richer, and we had a greater rainfall, and the country was less windswept so that the orchard always held a good coating of snow during the winter.

But the day is past when farmers are persuaded that they can raise two good crops on the same piece of ground at the same time. The soil may be rich enough, but the smaller amount of moisture available must result in both crops being stunted. It is impossible to raise a good crop of apples, and a hay or grain crop on the same piece of ground except in cases where we have a wet summer season or the subsoil is particularly moist. Those who have kept close to the apple growing business will readily note the dry texture of the apple grown where the orchard is in sod or grain, and the luscious, juicy texture of the one grown under proper cultivation.

In the mixed farming districts of Ontario where practically no care is yet given to the orchard, the amount of growth of the trees per season is, in many cases, less than half of that in orchards that are well cultivated and pruned. This largely marks the difference between those stunted, thick, close-headed trees that are so common everywhere over Ontario, and those vigorous, clean-barked, big-foliaged orchards that are to be found in our apple districts. The one is the product of neglect—the other that of intelligent care.

The cover crop has a five-fold purpose in the orchard. The clean cultivation of April, May and June allows the tree to forge ahead at a rapid rate, but the growth of the cover crop a little later has the same effect as dry weather, for by drawing the moisture from the soil, and thus from the roots of the tree, it checks excessive or late growth, and in this manner the wood is more fully ripened. This is of supreme importance in

view of the severe winter killing of apple trees during the past few winters. This reduction of soil moisture is of much importance farther north in securing a better color in the fruit.

Again, the cover crop is one of the cheapest means of adding humus, one of the essentials both of our light and our heavy soils. On the light soils, especially the sands of Southern Ontario, this humus is absolutely necessary. On the clay soils, the plowing under of a cover crop is much the same as the application of manure, making the soil much more friable. At the same time the roots of a cover crop hold much plant food, which would otherwise leach away, while the roots of the trees lie dormant. On rolling land it prevents washing, and in exposed districts and in districts of light snowfall, it holds the covering much better than a clean sod, or soil on which there is no plant growth at all.

COVER CROPS PROTECT

Peach trees killed by root freezing during the past few years have largely been those with no cover crop or other protection to hold the snow about their roots. Moreover, the cover crop forms a clean mat in the orchard for the handling of the fruit in the fall.

Cover crops are of two kinds—the

leguminous and non-leguminous. The former are those with the power of gathering nitrogen from the air, and storing it in the little knots on the roots. The leguminous crops used for this purpose are clovers (such as mammoth, red and crimson), cow peas, common field peas and hairy vetch. As nitrogen is the great energizer of plant life a legume should be used where trees lack vigor and vitality. Rye, buckwheat, rape, and oats are the chief non-leguminous ones used in the orchard.

CROP SELECTED

As to what cover crop one should sow depends upon a great many different conditions, such as the age of the trees, the nature of the soil, and the location in the province. Fruit growers who for the first time have broken up the sod under their old trees will find that one of the legumes will give them the best results in stimulating renewed youth in the old trees. In a richer soil where a heavy pruning has been given any of the other cover crops can be used to good advantage, the main point being that whatever is used, it should make a fairly rapid growth during the summer months to take up the excess of moisture, leave the orchard with a clean mat for handling the fruit in the fall, and at the same



Intercropping with Factory Beans in Young Orchard of S. Souden, Simcoe, Ont.