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Cover Crops in the Orchard*

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COVER crops and their value in orchard practice is one of many important operations in orchard management which should receive more attention if we hope to produce fruit economically. The three methods of culture usually recommended are: First—The cover crop method; Second—The clean culture method; Third—The sod mulch method. There are some who advocate growing trees in sod but this is an unwise method. It is adaptable only to very exceptional conditions, and should not be recommended.

The cover crop method briefly is to cultivate the ground from early spring until the first of July, sufficient to keep a fine earth mulch on the surface, and at the time of the last cultivation seed to a cover crop which will produce a good mat of vegetation to work under either in the late fall or the following spring. The clean culture method is similar to the above except that no cover crop is grown and the ground is left bare, or to be occupied by an occasional weed after the last cultivation early in July.

The sod mulch method is to mulch, usually with manure, the area occupied by the tree sufficient to prevent great evaporation from the soil, and to keep all grass or weeds cut, not allowing them to grow taller than six inches and letting this material also remain as a mulch. This practice is advisable if conscientiously followed especially on hilly, rocky or very open gravelly soil, but what some growers

practise and call the sod mulch method I would call the large hay crop method.

If the clean culture method is followed some means must be adopted to get humus into the soil. Without humus our soils become unproductive. Humus not only

these lowly forms of life are large factors in rendering a soil productive.

Commercial fertilizers do not add humus to the soil. They can be used most economically only on a soil not deficient in humus for otherwise a continuous supply of available food material is not within reach of the plant. I do not mean to say anything against the use of commercial fertilizers for they can be used to advantage by the orchardist. But what I want to impress upon you is that humus in some form is essential, and if the clean culture method is followed, stable manure or litter of some sort, must be used to furnish it. Manure is not available for many growers and, besides, if cover crops can be grown in the orchard to supply the humus, and not be a detriment but rather an advantage to the growing tree or ripening fruit, why not make use of it?

Many orchards are located on hillsides and if cultivated a serious washing may occur during the fall or early spring rains if not prevented by means of a cover crop of some sort.

Nitrogen, one of our most costly elements of fertility, may be largely supplied through a leguminous cover crop and the purchase of fertilizers confined to the potash and phosphate manures. If clean cultivation is followed this free nitrogen cannot be secured. The above reasons are, I think, sufficient to warrant one in advocating the cover crop method of orchard cultivation.

RIPENING THE WOOD

Another phase of the subject, is the proper ripening of the wood for winter.

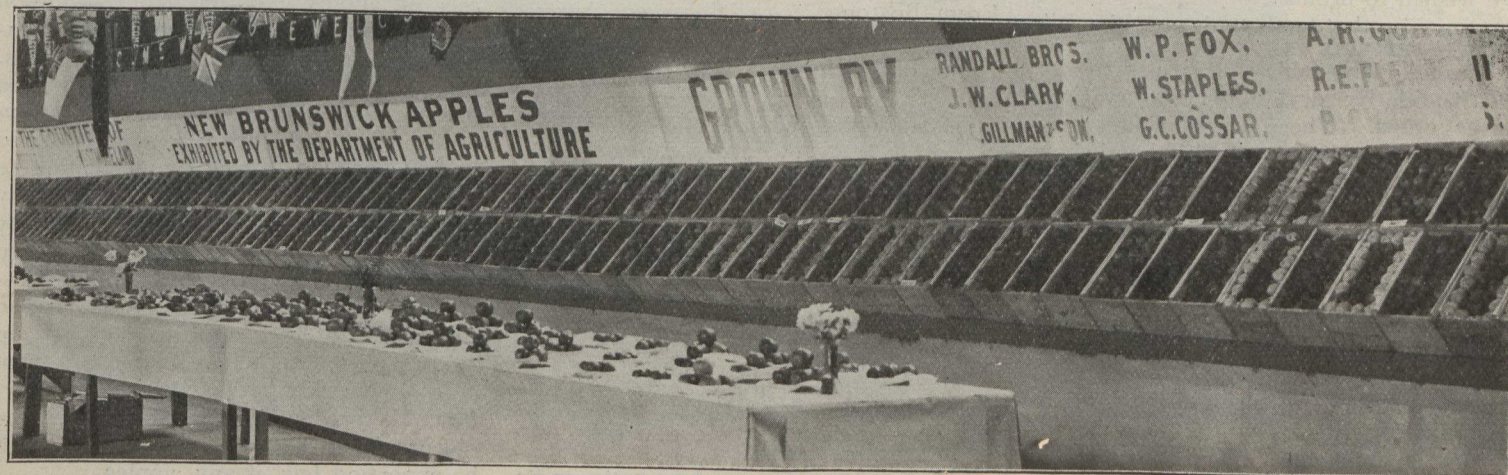
The Challenge of the West

British Columbia has challenged the provinces in Eastern Canada to hold a "National" Apple Show. What is the East going to do about it? Our Eastern growers claim to have more extensive areas of land adapted to growing apples of high quality than can be found in British Columbia. They profess to grow apples of better quality. British Columbia growers now say, "Prove it."

The challenge falls properly at the feet of Ontario fruit growers. Granted that we have the fruit districts and the fruit, have we got the men who can "prove it"? The apple producing and consuming districts of the world await the answer.

aids in conserving moisture but gives as well a better mechanical texture to the soil. It lightens up heavy soils and makes an open soil more compact. Humus in the soil assures an ever present supply of nitrogen, and prevents the leaching from soils of potash and phosphoric acid. Bacterial life in the soil is largely dependent upon humus and we must not forget that

*Extract from a paper read at the annual convention in Toronto last month of the Ontario Fruit Growers' Association



An Evidence of what New Brunswick can do in the Production of High Grade Apples. A portion of the Display at the Recent Exhibition at St. John, N. B.