

acres of waste land, two thirds to be planted within the first forty years. It is estimated that probably

£15,000,000 will have to be invested in the project over a forty year period.

## Farming Muck Lands

### Some Practical Suggestions Applicable to Clay-belt Development in Ontario and Quebec.

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In these days of movements to make the extensive peat bogs of the Dominion useful for fuel and to provide for the settlement on farms of returned soldiers, it is of interest to inquire also into the agricultural possibilities of these muck lands.

The first thing to realize is that such lands are a specialty and a specialized study of their nature and their requirements must precede the attempt at farming them. They are a rich resource if properly treated, but without this proper, special knowledge enormous waste of human energy may be experienced in futile attempts to farm them. Attempts at settlement on these lands without that knowledge may prove a disaster.

The United States Department of Agriculture has lately brought together information on this subject in a bulletin\* The information is simply a record of actual happenings, not of theories or scientific investigations. While the experiences may perhaps not be immediately translated for use in the clay belt, for instance, they are suggestive as to the difficulties and the possibilities of such farming.

An analysis of the results of 140, muck-land farms in Southern Michigan and Northern Indiana leads to the following summary:

1. The muck soil of this region is well suited to the growing of celery, onions, peppermint, cabbage, corn, and hay, and, when properly fer-

tilized or manured, is fairly well adapted to oats, wheat, and rye.

2. The use of fertilizer, especially potash, on muck soils is very profitable, the yields being increased in most cases from 50 to 200 per cent. Manure also gives excellent results.

3. Celery and onions require an enormous amount of man labor as compared with corn, oats, and hay. Peppermint, cabbage, and potatoes occupy an intermediate position with regard to man labor.

4. The gross acre value of intensive crops is high, but the value of these crops per day of man labor is not as high as in the case of extensive crops.

5. The average labor income for 28 celery farms was \$394; for 23 onion farms, \$1,732; for 10 peppermint farms, \$1,519; for 39 grain and stock farms, \$1,056; and for 7 of the more successful grain- and -stock farms, \$1,994.

6. Grain and stock farming is a much safer type of farming than any intensive type, although the profits per acre may be much less.

7. A small muck farm, even though operated intensively will usually return only a moderate labor income.

8. Tile drains were used on most of the muck farms studied. The best results have been obtained with 5 or 6 inch laterals laid 5 to 12 rods apart and at a depth of 3½ to 4 feet, although small open ditches are very satisfactory in some cases, especially on the celery farms.

9. The growing season on muck land is considerably shorter than on other land in the same region, on account of later frosts in the spring and earlier frosts in the fall.

\*Farmers' Bulletin No. 761, U. S. Dept. Agr., 1916, pp. 26. Management of Muck-Land Farms in Northern Indiana and Southern Michigan, by H. R. Smalley.