

Charges against the crops include manual and horse labour, rent, manure, seed, twine and use of machinery, and in each case represent the cost of the crop in the granary, loft, root house or silo, as the case may be.

COST OF PRODUCTION OF FIELD CROPS, OTTAWA.

Crop.	Number of years.	Average yield per acre.		Cost to Produce.		
				Per acre.	Per ton.	Per bushel.
		Tons. Lb.	Bush. Lb.	\$ cts.	\$ cts.	cts.
Oats.....	10		45 33	14 14		30.8
Hay (first year).....	10	3 231		12 65	4 06	
Hay (second year).....	10	2 1779	711 03	11 90	4 12	
Turnips.....	6	20 1598		38 85	1 86	5.4
Corn.....	4	14 1271		25 19	1 72	

SHALLOW PLOUGHING AND SUBSOILING VERSUS DEEP PLOUGHING.

This experiment has now been under way for ten years. Two four-year rotations, differing only in the above-mentioned methods of preparation for hoed crop, were laid down in 1904.

ROTATION 'S' (SHALLOW PLOUGHING AND SUBSOILING.)

First year.—Corn or roots. Field manured at rate of 24 tons per acre. Ploughed out of sod previous August, 4 inches deep, subsoiled to a depth of 8 or 9 inches and ridged up in late autumn. The land is ploughed shallow or cultivated in preparation for the grain which follows.

Second year.—Grain. Seeded down with 10 pounds red clover and 12 pounds timothy, per acre.

Third year.—Clover hay. Cut twice in the season, and the aftermath left on the field.

Fourth year.—Timothy hay. Broken in August and prepared for corn or roots, as indicated above.

ROTATION 'P' (DEEP PLOUGHING.)

This rotation differs from rotation 'S' only in the treatment of the timothy hay field in preparation for corn or roots. It is manured and ploughed in August, 7 inches deep, top-worked, and ploughed again in late fall, 7 inches deep.

The average returns for the ten years show a very slight advantage in favour of the deep ploughing. If there is taken into consideration the fact that where subsoiling is practised a single plough must be used, whereas a two-furrow riding plough may be operated under the deep-ploughing method, the higher cost of operation in the former method would reduce the actual net profits still more. This experiment will be continued, as the results have not as yet shown any decided advantage in favour of either method.

COMMERCIAL FERTILIZERS.

In 1913 there were completed five years of experiments designed to supply information concerning the relative fertilizing merits, in regular farm rotation, of:—

1. No manure or fertilizer of any kind, but pastured one year in four (records kept in 1913 only).