

rental of a stocked farm at \$5 per acre and the valuation of the manure at \$1 per load, he found that in the case of putting on the manure by top dressing his outlay and returns in four years would be :

Land, 4 years at \$5.....	\$20
Manure, 50 loads at \$1.....	50
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	\$70
Hay, 5 tons at \$10.....	\$50
Balance loss.....	20
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	\$70

Or an annual loss of \$5 per acre.

Taking the outlay and yield under the rotation he proposed, balancing the straw against the cost of cultivation and harvesting :

Land 6 years at \$5.....	\$ 30
Manure, 50 loads at \$1.....	50
Cost hoeing roots, 3 men, 3 horses, hoeing	10
Bal. profit.....	75
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	\$165

Oats, 40 bushels, at 50c.....	\$ 20
Roots, say turnips, 700 bushels, at 10c.....	70
Barley or wheat.....	30
Hay, 4½ tons, at \$10 per ton.....	45
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	\$165

Or an annual profit per acre of \$12.50.

This excludes many minor outlays and value on both sides, but these will, roughly speaking, balance each other. This further enables the necessary quantity of manure to be raised to maintain and even increase fertility and admits of a much larger quantity of hay being raised on the farm and of a much higher and therefore more marketable quality.

Hon. D. McCurdy fully believed in rotation as opposed to simple hay growing, but enquired how it could be explained that the manure put under the soil would give so much larger returns than manure used as top dressing.

Col. Laurie, in reply, stated this must be accounted for largely by the surface manure evaporating much of its ammonia and also by the rain washing off the land rather than into it.

Mr. Hart gave his opinion that by ploughing in manure with the grain, afterwards top-dressing the young grass all on well drained land, he had been able to maintain his grass land, cutting from two and a half to three tons to the acre for ten or twelve years.

A general discussion took place on the best way of saving manure, most of the farmers present stating they could not obtain manure enough to put one-sixth of their arable land under manure, and the advantages of growing soiling crops such as red clover, and Southern corn, and feeding under cover and bedding animals on substances such as clay, spent tan bark, or sawdust were much dwelt upon.

Mr. John Ross raised the question whether farming on such a scale could be justified by the returns obtained, whether it indeed paid to put capital into farming,

whilst Mr. McGilvray wished to know, as a subject of more general interest, how the farmer without capital could make farming pay.

To the latter enquiry the answer was given that the man, starting entirely without capital, could at best only expect to make a living, and that he was certainly in a more independent position as a farmer on his own land than as a labourer working for others, and that, although he might not obtain large cash returns, by the improvement of his land he was gradually acquiring capital; while to Mr. Ross's questions, as to whether the returns of farming justified the investment of capital the only answer could be—that we were nearer markets, and could obtain the English prices for our goods; that we could raise as much to the acre as other places; and that land and labor were as cheap as elsewhere. Hence, the cost of producing was no greater, and the produce fetched as good a price. So, if farming paid elsewhere, it must do so here, if properly carried on.

The increase of value, also, of a well-worked farm was also a matter to be remembered.

Sheriff Dunlop said farming suffered largely from the want of steady industry on the part of its votaries. He compared the ploughman rising at four o'clock in Scotland, and doing a solid day's work the year round, with the easy-going way in which our farmers laid hold of their work; insisted on it that a rotation was necessary: that deep ploughing must come into fashion; that if a man wanted to get work done he must do it—it would not do itself. He also dealt at length on the advantages of draining.

By request of Colonel Laurie, Professor Lawson then addressed the meeting on the various subjects that had come up in the discussion. He explained that it was not from the manure that the plant obtained its food, but from the soil when the manure became incorporated with it. Hence the superior results obtained by mixing the manure with the soil instead of applying it on top. He gave as his experience that, especially in first laying down the land, it paid well to take two successive root crops off the land, manuring each, and that the land would then stand much longer, as it would be so thoroughly mixed up and enriched. In considering the question of farming paying as an investment of capital, he should say that in bringing a farm into order it must be looked on for a time as an absorbent of capital eating up the profits, but in so doing increasing its value, and if preserved in, its productiveness. He then answered questions on subjects pertaining to agricultural chemistry, and replied at length, giving much valuable information. On the application of lime he warned the

farmers against leaving it in heaps, and letting it re-absorb the carbonic acid gas from the air, by so acting its utility would be entirely destroyed. Top-dressed on land it was of little value. To be serviceable it should be mixed and thoroughly incorporated with the land as soon as slacked.

After a vote of thanks to the Chairman and to Professor Lawson the meeting adjourned about 10.45, with a general feeling that such meetings should be held oftener and are productive of great good.

### PROF. SHELDON'S IMPRESSIONS OF NOVA SCOTIA.

In accordance with a wish expressed by His Excellency, the Marquis of Lorne, Professor Sheldon, who has been on a tour of agricultural observation through Canada and the United States, visited "the Dyke Lands of Nova Scotia,"—and reports as follows in the London *Live Stock Journal*,—for which we are indebted to Mr. James W. Stairs :—

The dyke lands of Nova Scotia are found in the Annapolis valley, along the banks of the tidal rivers, and on the shores of the inlets of the Bay of Fundy. As the name suggests, they are dyked in from the sea, from which they have been from time to time reclaimed. In many cases marsh grass is cut from saline swamps, which have not yet been dyked, and over which the high tides, for which the Bay of Fundy is noted, still continue to flow. The grass is made into hay in the best way possible under the circumstances—on the ridges of higher land, on platforms, etc.—and is stacked on a framework which is raised several feet above the land, supported on piles; and it is a curious sight to see the water flowing under stacks and in and about the piles when the tide is at its height. In one case I counted, near to the town of Annapolis, upwards of 140 of these stacks each of them containing a ton or so of hay. They are put up in this manner hurriedly, and are fetched into the farm yards in winter as they are wanted, to use along with ordinary hay, with straw and with roots, to which they are found to form a tolerable though coarse addition. But the dyke lands proper are so fenced in from the water by a strong bank of earth thrown up some six or eight feet high, with a broad and substantial base, that the land within them is firm and solid, of excellent quality, and covered with a thick sward of coarse, though vigorous and nutritive grass. The fertility of these reclaimed soils is unusually high; they are never manured, but they cut on average upwards of two tons of hay to the acre—a yield which has been sustained for many years, and shows no