ating the chief manuring elements from gas-liquor, by saturating it with common salt, and then filtering it through a layer of powdered peat-charcoal, mixed with two-thirds its quantity of dried clay, ground. Mr. Tuckett at the same time offered a suggestion, that search should be made on the north coast of Africa, especially in Tunis, for deposites of nitrates of potash and soda. He thought the present time was favourable for such inquiries in districts under the Mohammedan rule; and he cited various extracts from Dr. Shaw's travels in those regions, showing the natural fertility that had from time immemorial subsisted in certain districts, from no other apparent cause than that of the strong nitrous impregnation to which the soil was constantly subjected.—The President took that opportunity of communicating the following statement, transmitted to him by Mr. Dyce Nicol, to whom it had been addressed by that gentleman's overseer in Kincardineshire:—

"The land on which the following experiment was made was a peat bog reclaimed in 1850, thoroughly drained, and six inches of clay applied over the whole surface; the only crops raised upon it had been oats, turnips, and again oats sown out with grass. In March last I sowed on one portion of the new grass 2 cwt. of nitrate of soda with 1 cwt. of salt; on another portion 4 cwt. of guano, and on the remainder of the field no manure was applied.

| | | | |
|---|---|---|---|
| The nitrate gave per imperial acre 300 stones of hay, at 9d. per stone of 22lbs..... | £11 | 5 | 0 |
| Guano gave 270 stone, value.. | 10 | 2 | 6 |
| Nothing gave 140 stones, value | 5 | 5 | 0 |

"Independently of the increase of weight of hay from nitrate, I prefer that manure for either new or old grass, as it appears to require little moisture to put it down to the roots of the plants. A strong dew in the course of one night appeared sufficient for that purpose, and in about thirty-six hours after its application the grass turned to a luxuriant dark green colour, whereas the guano requires a good shower of rain to put it down; unless it gets such fall of rain, it does little good. My trial of nitrate on oats and barley last year leads me to prefer guano for these crops. I applied 1½ cwt. of nitrate on one portion and 3 cwt. of guano on another, but the oats top-dressed with nitrate kept a bluish colour throughout the season, and did not ripen equally, and the ear soft; while those which had guano ripened equally, had a harder, crisper ear, and weighed better. The land upon which that experiement was made had not been previously cropped, and was of a mossy loam with a mixture of clay."

*Mortality among Lambs.*—Communications were read from Mr. Dorrien, in Sussex, and Mr. Creswell, in Leicestershire, on the subject of mortality among their lambs. The case of Mr. Dorrien was considered to be an ordinary one, but that of Mr. Creswell new both to the shepherds and to Professor Simonds. The following statement was read from Mr. Creswell, and Professor Simonds was directed to inspect these lambs, and make a report upon the circumstances under which the mortality was taking place, and might in the best mode be prevented.

"*Ravenstone, Ashby-de-la Zouch,* March 20, 1854.

"I have been sadly puzzled by my sucking lambs having sore mouths; the affection begins generally in the roof of the mouth and gums, and becomes so bad that the lambs will not suck, but in a few days die. I lost three in one night. My lambs are high-bred Leicesters, and of course are very valuable. In some instances the mother's udder catches the complaint, and I have lost one of them. I have tried alum and borax, but without any good result: I am now trying nitric acid, diluted with water. In a *post mortem* examination, we find the covering round the heart very much deseased, and the lungs partially so. Of course we drench the lambs with milk frequently, and I have dosed them all with castor oil."

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How to make the Butter Come.—The cream is put into tin pans, and placed on the stove with a moderate fire; I then commence stirring it slowly in order to have it warmed alike in all parts of the pan. As soon as it feels neither hot nor cold, by putting in the finger, pour into the churn. In 5 to 15 minutes the butter will come. I have tried this plan for the two last winters and it has not failed once to bring the butter in the above time.

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### TO THE FARMERS OF THE EASTERN TOWNSHIPS.

Gentlemen.—Whilst recently in Ireland, my attention was drawn to the great advantage accruing to agriculturists wherever the growing of oleaginous plants had been introduced, and the belief that it may be equally or more advantageous here induces me to address you on the subject.

The most generally grown of these plants is flax, and although, taking everything into consideration, I do not consider it the most remunerative, I shall first advert to it.

When the production of seed in abundance, together with a coarse fibre suitable to the manufacture of cordage and coarse cloths is desired, (and I am inclined to think this the most valuable flax crop for Canada, as we may allow the seed fully to ripen, and the straw may be scutched without steeping) one bushel of seed should be sown to the acre, on good land, as when thinly sown the plant puts forth vigorous branches, and bears more than three times the quantity of seed. This description of flax crop would answer very well on a newly burned fallow; the results would probably be about twenty-five bushels of seed and six hundred weight of clean fibre to the statute acre, worth—

| | | | | | |
|---|---|---|---|---|---|
| Seed, 25 bushels, at 5s..... | | | | £6 | 5 0 |
| Fibre, 6 cwt., at 40s..... | | | | 12 | 0 0 |
| | | | | £18 | 5 0 |
| *Expenses.* | | | | | |
| Clearing an acre....£3 | 0 | 0 | | | |
| Sowing & Harrowing | 0 | 12 | 0 | | |
| Mowing and Drying.. | 0 | 12 | 6 | | |
| Threshing..... | 0 | 12 | 6 | | |
| Scutching..... | 3 | 3 | 0 | | |
| Other expenses, Cartage, &c..... | 1 | 0 | 0 | £9 | 0 0 |
| Net profit per acre.. | | | | £9 | 0 0 |

We shall, moreover, by sowing a few pounds of grass seed with the flax, enjoy the additional advantage of converting the forest into meadow land.

In the rotation system flax may succeed oats, but much labor must be expended in freeing the stubble from weeds, and the land would require two ploughings and harrowings. It is therefore that I recommend newly burnt land, as there we are not likely to be annoyed by weeds.

But almost on any land rape may be grown. It yields a much larger amount of seed, seldom producing less (when well attended to) than forty-five bushels to the acre; and as this plant draws its sustenance in a very unusual degree from the atmosphere, the crop is not an exhausting one. It has been found that by returning the thrash and the crushed seed, after the oil had been extracted each successive crop of rape was more luxuriant, and the land became more fitted for the growth of other grains.

I was under the impression that the turnip fly would prevent the cultivation of this most valuable crop in Canada. I, however thought it worth a trial, and sent instructions that a quarter of an acre should be sown broadcast. The result has very much gratified me, as the fly has not in any case touched the young plants. Although some Irish farmers sow reap broadcast, the plan is not at all approved. Two methods are adopted with much better success.

*In undrained land, the Ridge System.*—The field is divided into seven feet ridges, a furrow of one foot wide being formed between them; the plants are dibbled into the ridges; the holes being opened with an instrument furnished with several teeth, so that at one stroke it opens half across the ridges. In this system the rows of plants are twelve inches asunder across the ridges.

*In drained land, the Drilled System.*—After the field has been ploughed the drills are lined two feet apart, and the plants inserted six inches asunder. The plants should be nearly of a size, about double that of a good cabbage, for transplanting, short in stem and root, and free from bulbous excresences about the root; as small a portion as possible should be taken up at a time; they should be wrapt in as large bundles as can be conveniently carried in both hands. The crop at one period requires a