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## The Field.

### Familiar Talks on Agricultural Principles.

#### PEAS.

THE pea belongs to what are called *leguminous plants*, which are thus named from their bearing legumes, or pods, as beans, peas, tares, &c. They are an extensive order of plants, containing a great variety of useful and beautiful species, highly valued in practical agriculture. Beside these plants which are strictly leguminous, this class embraces a wide range of enriching or ameliorating crops, such as clover, lucerne, sainfoin, &c. These last are of course less exhausting to the soil than those first named, not only because they seldom mature their seeds, but also because they borrow their food largely from the atmosphere.

Chemical analysis of the pea shows the following results: 1,000 parts of peas yielded 501 parts of starch, 22 of saccharine matter, 35 of albuminous matter, and 16 parts of extract. The ashes obtained by burning the pea plant when in flower, when subjected to analytical tests, gave for 100 parts of ashes: soluble salts, 49.8 parts; earthy phosphates, 17.25; earthy carbonates, 6; silica, 2.3; metallic oxides, 1; and loss, 24.65 parts. From the ashes of the ripe plant, the following results have been obtained: soluble salts, 34.25 parts; earthy phosphates, 22; earthy carbonates, 14; silica, 11; metallic oxides, 2.5; and loss, 17.25 parts. The straw of the pea contains large quantities of lime, and hence this fertilizer, or composts containing it, are suitable applications to this crop. The grain is highly nutritious, containing a large proportion of farinaceous and saccharine matter, and the straw, if harvested in good condition, is thought by some to be scarcely inferior to meadow hay.

In England, peas are considered rather an uncertain crop, but in this country they seldom fail. As a cleanser of foul land they are very useful, their dense growth mulching the ground, smothering down weeds and grass, and rendering the soil moist and mellow. They should never be sown year after year on the same land, though they may follow any farm crop in the rotation. Drawing largely on the soil, they should not be grown often. They do best on a rich, light, friable loam, but will flourish on most soils, except the two extremes of very stiff clay or very light sand. Coarse barn-yard manures are not adapted for this crop, as they make the haulm grow rank without a corresponding yield of grain. Fine, well-rotted composts or ashes, plaster or lime, are the best fertilizers for the pea. It is best, however, not to manure the land immediately for peas, but to let them follow a crop which has been liberally dressed. A single deep ploughing, followed by the

harrow, is considered sufficient preparation for sowing peas. Like all grain, the preferable method of sowing is with the drill, but they do well sown broad-cast. Some mix them with oats, and obtain a fine yield. Rolling with a heavy field roller is advisable when it can be done. Peas are sometimes grown as a green forage plant, and also as a green manure crop to plough under. When allowed to ripen, they are cut and gathered in small heaps with the scythe, hauled to the barn, and thrashed, usually with the flail.

The pea is very liable to attack from a species of weevil, commonly known as the pea-bug. This insect deposits its eggs in the pod just as the pea is swelling. The mischief is done at night or in cloudy weather. As soon as it is hatched, the grub makes its way into the young pea, and remains there till toward the close of the next winter, when it leaves its abode, after having changed into a pupa and cast its skin. A smooth round hole gives evidence of its long sojourn. Generally, if not always, this insect leaves the germ uninjured, so that seed infected by it will germ, though of course the grain is diminished in value by its depredations. There seems no effectual way of preventing the attacks of this insect. Some recommend very early sowing, and others very late sowing, but this troublesome little creature lives in other plants, so that its destruction is well-nigh an impossibility. Professor Dawson is an advocate of early sowing, and remarks that it is worthy of enquiry whether, by sowing betimes, peas may not be harvested soon enough in the season to take a crop of buckwheat from the same ground. If this is not practicable, a sowing of buckwheat might follow peas, and be ploughed in to enrich the soil for a crop of something else the following year.

### Flax Culture.

To the Editor of THE CANADIAN FARMER:

Sir,—That flax culture is largely on the increase in this country, is beyond a doubt; but we are yet far short of what might be done, when it is freely acknowledged from the few trials that have been made to be a paying crop; and to those who may have doubts on this subject, I would say, go and enquire for yourselves of your brother farmers, from whom I have taken my information. Among others, I would first introduce you to a well-known agriculturist in the county of York, Col. R. L. Denison, intimately connected with the Board of Agriculture ever since its formation in Upper Canada. He will tell you he pulled from one acre, last year, *three tons* of flax. This, you will observe, was from the Riga seed, imported by the Government. He received for his crop the handsome sum of \$48, or, at the rate of \$16 per ton; this, too, out of the stock, before he had entered on taking off any of his other crops. At Bradford, in the county of Simcoe, Mr. Cross raised a similar

quantity per acre. In several instances, in the neighbourhood of Mr. Brown's mills, near Woodstock, parties have realized this amount; in fact there are few localities where scutching mills have been established, that you will not find a number of farmers who produce this quantity per acre. But in order to make a safe estimate, I have always put down two tons per acre as an average, and at from \$12 to \$15 per acre, it is a paying crop, and a good substitute where wheat has failed, to the extent it has of late years.

We had some ten or twelve thousand acres last year, but what is this when we look at the extent of agricultural operations in Canada? It is not over a sixth of a township. Let us compare this with other flax-growing countries—Ireland for instance. There we find, in 1864, the number of acres amounting to 301,942, enough to cover five of our townships, allowing 60,000 acres to a township, and all arable. Yet the manufacturers in the north are heavy importers from all other flax farming countries, and there is no reason why we should not export from Canada with prices ranging as they are there, from 11s. to 16s. sterling per stone of 14lbs.

It is to be hoped the samples of Canadian flax sent to the Paris Exhibition will claim attention. Many of them were fine, and evince a marked improvement in quality during the last two years. One sample of dew-retted flax from the mills of Col. Mitchell, Norval, was a very superior article, and no doubt will be much admired. The value of seed alone is sufficient to induce our farmers to grow it more extensively, the price being at present \$2 per bushel for the American market, in the face of all the duty the Americans put on; neither should it be forgotten that only 56lbs is the bushel; 4lbs less than wheat; on a large quantity quite an item. From 6 to 8 bushels is a common yield to the ton—quite sufficient of itself to encourage any farmer to grow more or less. Suppose each farmer would put in two acres on each 100, what a quantity would be produced in Canada! If it exhausts the land as we are told by some it does, he could afford to lose a little; but on the contrary, the finest crops of both fall and spring wheat have been grown immediately after flax. Ask this question of the farmers near Norval, from whom I have taken this information.

Complaints are constantly heard in all large cities and towns—Toronto not excepted—of the number of idlers of all classes seen on the streets. Now, if a company were organized to start a Linen manufactory, say with a capital of even ten or fifteen thousand pounds, employment would be created for perhaps a thousand hands; the services of the boy or girl from 10 years of age, and upwards, can be made available, and they are not only furnished with sufficient wages to keep them, but they learn a trade sufficient to make provision for them for life. This