

earth, wood-ashes and guano, are among the most suitable manures either for flax or to follow it. Flax will flourish on almost any soil of average fertility, but especially delights in a calcareous soil, and hence is benefited by dressings of lime. It is not considered advisable to apply any description of rank manure to land preparing for an immediate sowing of flax, unless, indeed, the sole object be a large yield of seed. For fibre of the best quality, soil manured for a previous crop and in a thoroughly mixed and pulverised condition is best. While it succeeds well on a variety of soils, a lightish, friable loam is most suitable to it.

One great advantage of flax growing is that it cleanses the land; it is an extirpator of weeds. It cannot be grown to advantage except in soil either already freed from weeds or thoroughly weeded during the growth of flax itself. In countries where labor is cheap it is customary to weed it by hand, the work being chiefly performed by women and children. This, however, is not practicable in Canada, and the best course to be taken is to let flax follow a carefully-tilled hoed crop. Its growth is very dense, so that it smothers down any weeds that may be later in the field than itself, and it leaves the land in a very clean and mellow state for a succeeding crop.

From the shortness of the season required to perfect the flax crop, double cropping is practised in some parts of the world with great success. In Belgium, carrots are frequently sown in drills with it, and being carefully weeded along with the flax, they are in vigorous condition when the flax is removed, and come rapidly to maturity. In Ireland it is a common thing, after the harvesting of flax, to plough and harrow in a mixture of gypsum and guano, and sow with rape. The Patent Office Report for 1863 states that barley has frequently been sown with flax in the United States. In one instance two bushels of barley and one of flax were put into an acre, and the product, harvested together and machine-threshed, yielded thirty bushels of barley and fifteen of flax. Other land on the same farm, of about the same degree of fertility, yielded but thirty bushels of barley alone to the acre. In another instance a similar experiment was tried upon five acres, and fifteen bushels of seed per acre obtained without apparent injury to the main crop. These double crops are advantageous in saving labour and economising land. In a poor soil they would prove losing affairs, but in a thoroughly enriched soil, two crops may be grown at well-nigh the usual cost of one.

Flax requires a frequent change of seed, and in this country it has been found that either Russian or Dutch grown seed does best. That obtained from Riga, in the first-named country, is preferred. It is bad policy to grow one's own seed year after year. The result of this course will inevitably be short crops and poor returns.

Foreign flax seed is notoriously dirty, and it would seem that the Russians especially are slovenly seed-growers, needing very much an importation of good fanning-mills from the western world. All seed from abroad should be carefully sifted before sowing. A wire sieve, twelve bars to the inch, will be found suitable for the purpose. A single fact will show the importance and necessity of this. Professor Voelcker, in seeking for adulterations of linseed, found in one sample of refuse or cake, no fewer than twenty-nine different kinds of weed-seeds, among which are prominently named the common dandel, corn-cockle, (very hurtful to animals,) the pungent wild radish, wild grape, (a sort of mustard,) and charlock, or common wild mustard.

Flax may be used if desired as a seeding-down crop, and Belgian farmers are of opinion that the young grass and clover, so far from being injurious to the flax crop, are beneficial to it.

Flax culture, to be thoroughly profitable, of course requires to be pursued in the neighborhood of scutch mills, where sale can be readily had for the fibre. Happily these are now being established in many parts of the country, and as they multiply, increased facilities are being afforded for the raising of a crop which experience proves to be far less uncertain and exhaustive than wheat, while it is equally remunerative, if not even more so.

A Model English Farm.

THE FARM BUILDINGS.

To the Editor of THE CANADA FARMER :

SIR,—The accommodation for cattle, which may next be noticed, is very considerable. Down the centre of the farm are six double cattle-stalls, (separated from one another by horizontal wooden rails), on the one side, and pig-boxes built of brick on the other, besides four large cattle-boxes, which are generally occupied by young bulls. The cross building at the lower end is about 200 feet long, and has cattle-boxes on either side throughout its entire length—in all forty-four. Parallel with the centre building is the dairy house, which has boxes for ten beasts, and nine double stalls for young animals, besides pens for eight or ten calves. The boxes are occupied by the dairy cows in winter time, and are used also for them to calve in. At the lower end of the dairy house is the milking yard; it is surrounded by a shed, in which are fitted wooden hasps for confining the cows' heads during milking time. Beside this is another smaller yard, fitted up in the same manner, and adjoining it the bull's house. On the stable side of the centre building are four small yards covered at one end, and fitted with racks, cribs, &c., for the accommodation of calves and yearling beasts. Next to these yards is a building occupied by beasts fattening for show; it contains four or five roomy compartments and fodder house. All the buildings are well supplied with water, each of the cattle boxes and stalls being fitted with a tap and stone trough, and also with a wooden manger on which an iron-barred frame falls like a lid, to prevent the fodder from being wasted.

Facing the milking yard is the sheep yard. Here the ewes lamb in the spring, but during winter it is generally occupied by cows. The building adjoining it is kept entirely for sheep feeding for show; it is divided by low rail partitions into eight separate compartments—each of which is attached a small yard; the floor is made of narrow bars of wood, two inches wide and half an inch apart, so as to drain off the urine, and the building is well ventilated from above.

The piggeries consist of six roomy sties, with low brick walls and pig-yard, besides which are the four pig-boxes already mentioned, in which are kept fat pigs feeding for exhibition. All that remain now to be noticed are the stable and cart-lodges. The former is a long narrow building, divided into eight double stalls about twelve feet wide, with fodder house and harness room in the middle; it is entered by five sliding doors. For waggons and farming implements there are drill-house, tool-sheds, and four arched cavities hollowed out under the brick-yard, besides several large sheds situated on another part of the farm. The buildings are all thoroughly drained, and by means of a pump at one corner of the part marked V, on the plan, (beneath which the drains empty their contents) the liquid manure can either be raised for carting on to the land, or, by opening a trap-door at its foot, can be washed down with water on to a catch-meadow of some twenty or thirty acres.

THE ARABLE LAND.

The arable land, as has already been stated, comprises about 290 acres. Being chiefly what would be termed heavy land, it has to be treated accordingly. In cropping, the four course shift is followed as nearly as possible; but, with heavy manuring, it has pretty frequently to be departed from, to prevent the too great growth of straw in the grain crops. About one hundred and twenty acres are usually put in with wheat, fifteen with barley, thirty with oats, thirty with peas or beans, twenty-five with mangold, and thirty with Swedes, besides which are frequently some twenty-five acres or so of fall vetches, which are fed off with sheep in the spring. So large a proportion of the farm being permanent pasture, it is found unnecessary to bring clover, timothy, or other seeds into the rotation.

Wheat is nearly all put in in the fall; it is drilled in with a nine furrow drill—about two bushels to the acre—and then harrowed. If through bad weather

the drill cannot be got on, it is sown by hand. Sometimes it is ploughed in with a shallow furrow. Spring wheat is usually got in during the early part of March. As soon as the grain is in, water furrows are struck out, about thirty feet apart, to drain off the surface water.

The yield of wheat averages from thirty-six to forty bushels per acre. Beans and peas are put in as early as possible in spring; the land for them is ploughed and manured in the fall, and then loosened by the drags just before the seed is drilled. They are drilled in rows, twenty inches apart, about ten pecks to the acre. The bean used is the common field bean with long upright stem; it makes excellent feed for every sort of live-stock, and yields about thirty-six bushels to the acre. Oats and barley take from nine to twelve pecks of seed to the acre, and yields,—oats about sixty bushels, barley about forty bushels per acre. The average weight of wheat per bushel is about 62 lbs., of barley 53 lbs., of bean, and peas 62 lbs., and of oats 40 lbs. Swedes and mangold wurtzel are prepared for by one ploughing in the fall, manuring and a deep ploughing early in spring, followed by the roll, clodcrusher, drags, scarifier, or harrows, according as the land may require or the weather dictate. Mangold is put in about the first week, Swedes about the second or third week in May; the seed is drilled generally on the flat—three to four lbs. of Swedes, and about six lbs. of mangold per acre. From one to two cwt. of guano per acre is usually put in with them, mingled with water and drilled in with the water-drill, which deposits both the seed and liquid simultaneously.

The wheats and spring grains are for the most part rolled in March or April, and then hand-hoed at a cost of about eighty-five cents per acre; the beans and peas are both hand and horse-hoed,—if possible twice. The expense of hand-hoeing is about \$1.00 per acre. Swedes and Mangold are cut out about thirteen inches apart in the rows; this costs about \$2.75 per acre, the plants then receive two hand-hoeings, and two horse-hoeings, by which time their tops have pretty well covered the ground. The fly is sometimes very troublesome with the Swedes in spring, whole crops having been at times completely destroyed.

E. F. W.

Lime as Manure.—A Reply.

To the Editor of THE CANADA FARMER :

SIR,—In your issue of Feb. 1st, 1867, I find an enquiry about Lime as manure, to which I feel inclined to reply. All the machinery that is required for laying lime on land is a large box-cart, with the bottom boards running lengthwise, a good and tractable horse in the shafts, a good large lime shovel in the hands of a strong and active man, with knowledge how to use it.

My experience in the use of lime commenced early. In the memorable year, 1815, I lived as a boy with a gentleman farmer, on a large farm, on the banks of the beautiful river Coquet, Northumberland. From the practice there pursued, I take for example a field of twenty acres of oat stubble ploughed deep in the fall, and laid out as a part of the turnip quarter, on said farm. In the following season, during the winter, a sufficient quantity of barnyard manure was carted out and dumped up in a convenient part of the field, and thrown up in a square heap, seven or eight feet high, preparatory to future operations. Early in May this field was deeply cross-ploughed, well harrowed, rolled and harrowed again, and the couch grass raked into heaps, burned, and the ashes spread. The soil was a sandy loam, subsoil clay with splints of limestone occasionally turning up with the plough. This limestone was carted off to the bank of the limekiln, in a corner of the field. This limekiln burned lime for sale, at the rate of from twenty-five to thirty loads per day, twenty-four bushels to the load.

Now this is the point:—From this kiln lime was drawn and dumped up, at regular intervals over the field, in heaps of four loads each, and in the proportion of ten loads or 240 bushels per acre. Rain and a water-cart soon brought the lime into manure, when it was again filled into carts, and regularly spread over the field, and harrowed in, in its caus-