

order to be of service manure must not be much exposed to the action of the atmosphere. What good farmer would allow manure to lie bleaching on the surface of the ground? Is it more sensible to cross-plough clover sod? And how is it possible to get rid of couch grass when we plough up half-rotten sod? The mode now pursued in the best wheat districts of New York, is to plough down clover in the middle or end of July, it is *turned over to the depth of three inches* with the "gang-plough," an implement with four small ploughs fastened to a beam resting on two wheels. This beam can be raised or lowered to the depth required, and the implement is regulated by a pole to which the horses are attached. *Unlike the cultivator, it turns effectually the whole surface* of the ground. It is drawn by three horses abreast. After the first working, should any grass appear, the land is again gone over with the "gang-plough." Before seeding it is harrowed well. The wheat is sometimes drilled or sown broadcast and then covered over with the "gang-plough." I have seen a great deal of land managed in this way during the present season in the State of New York, which, as a bed for wheat was far superior to that which was ploughed three or four times."

We prefer, both on scientific and practical grounds, the Scottish four course rotation long since recommended by "A Farmer in the District of Montreal," to any of those referred to by Mr. Christie, though it must be admitted that they are good, and in some respects well suited to the country. The difficulties in the culture and storing of root crops referred to are no doubt real, but may be met by improved implements and management, as we shall endeavour to show in following up the article on these crops on another page. The remarks on wheat culture are well worthy of the attention of farmers, though they refer to what we must consider a defective system of rotation.

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On Hedges.--By George Lesslie, Toronto.

Hedges, or live fences being the subject for discussion at the first meeting of this club, I beg leave to give you an idea how hedges are managed in the old country; being brought up in a country where there was little else used for fences, but hedges, and being practically engaged in planting, trimming and managing some of the very finest hedges in Scotland.

Beech and Thorn mixed, were the only plants used for outside fences. Our mode of preparing the ground was as follows:—We dug a ditch 3 feet wide, and threw it all up one side, and levelled thoroughly from one end of the line to the other, we then set

our line, and planted our Quicks in the face of the bank, half slope; then took the shears or hedge bill and cut them all to one length out of the ground: a breadth of 2 feet inside was dug once a year—this hoed and kept clean.

On large estates there is a scientific man kept, and goes by the name of hedger. He takes great pride in cutting and trimming his hedges, and tries with all his might to excel his neighbour. It requires a good deal of practice and taste to switch hedges neatly. In Canada, I have had but little to do with hedges; I am satisfied, however, that the time has arrived in the old settlements of this country, to look out for a plant that will make a permanent, substantial fence. The thorn has been tried in many parts of America and abandoned. I have given it a fair trial myself, and gave it up, at least for the present, on account of its diseases and attacks of insects, yet I would recommend further trial of the thorn, as I believe that the disease has not been as bad as it was three or four years ago.

Osage Orange, the best hedge plant I know, I have tried in my nursery several times, and find that it is altogether too tender, for this part of Canada at least.

Rhamnus Catharticus, *Buckthorn*, so much recommended by the late Mr. Downing, is a strong, quick, growing plant, and is perfectly hardy; makes a very good close hedge properly cut, and looks well; it has this advantage too.—insects will not touch it, and cattle will not browse on it at any season of the year. Very easily grown on any kind of soil, on account of its fibrous roots. I have been selling plants of it for three or four years past, and in every instance it has given great satisfaction; a specimen hedge may be seen at the nursery, 4 feet high. I have reason to believe, and say with Mr. Downing, that the *Buckthorn* will be the great hedge plant of America.

Privet, makes a beautiful ornamental hedge, grows rapidly in good soil, and almost an evergreen; good specimens of this may be seen in some of the gardens about Toronto.

Honey Locust, or *Three Thorn Acacia*, has long been recommended by the Americans for a farm hedge; but I have not seen a good specimen of it in all my travels. I have tried to make a hedge of it in the nursery, and find that it gets a good deal winter killed, and does not stand cutting; however I would advise a fair trial of it on dry, sandy land.

Japan Quince, makes a fine ornamental hedge for pleasure grounds; it is quite hardy, and when in flower, is magnificent in appearance.

Beech, is much used for hedges in the old country, but is too hard to transplant, and don't stand evenly. It is better mixed with thorn—makes good shelter on account of retaining its foliage all winter.

American Cedar, for an evergreen ornamental hedge, is very valuable, or for a

screen to protect gardens and orchards, &c., there is no plant so suitable. It makes a superb hedge, and is of rapid growth—stands any amount of cutting; altogether the best evergreen hedge plant I know. There is a specimen to be seen in the nursery.

Hemlock.—Of all the ornamental plants for an evergreen hedge, the hemlock has no rival; the only thing against it is, that it is too tedious to start evenly, and hard to transplant even out of the nursery bed. I may here remark, and take the credit to myself, that I was the first in America to try the Hemlock as a hedge plant. I had succeeded so well after a few years trimming, that Mr. Barry of Rochester took notice of it, and wrote to Mr. Downing and other horticultural writers in the States, about the hemlock as a hedge plant, and the beautiful specimen of it to be seen at the Toronto Nursery; the result is, that now thousands of yards are planted every year by gentlemen in the States, and nurserymen are growing it from seed for that purpose.

Red Cedar.—Treated as a hedge plant, makes a beautiful evergreen hedge, equal I think to the hemlock; but I have not had much experience with it as yet. On Long Island, near New York, I have seen splendid Red Cedar hedges. I intend to experiment on it this spring. I have some thousands of fine plants for sale.

There are several plants that might be used for low ornamental hedges, such as *Barberry Tree*, *Honey-suckle*, *Euanimus*, or *Strawberry tree*, *Dwarf Golden Willow*, *American Holly*, &c.

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Rural Economy of the British Isles.

Cattle.

I shall now proceed to show how rich English agriculture is in cattle as well as sheep. England possesses the finest milch cow race in those beautiful, intelligent, gentle-looking animals, which go under the name of Alderney, and in the Scotch Ayrshire—that charm race of cows, whose graceful forms, speckled hides, quiet dispositions, large udders, and rich luxuriant supply of milk, realize the idea of pastoral life. She possesses also, the short-horned Durhams—animals which may be fattened as two years old, and attain, at that age, a weight which no other breed can arrive at so soon. Their heads, legs and bones, have been reduced to such small proportions, and the more fleshy parts of the body so largely developed, that nearly three-fourths of their weight is meat.

After the Durham short-horn, which, among cattle, is what the Dshley breed is among sheep, come the Hereford and Devon breeds, which, in their turn may be compared to the Southdowns and Cheviots. The Hereford breed follows closely upon the Durham, and is even more generally sought after, as offering almost an equal precocity, and the same aptitude for fattening, but with greater hardiness. The county of Hereford,