possible, and leaving all the leaves they could. He did not care about the bine bleeding if they left plenty of branches and leaves. A few days since he was walking on the farm of Mr. White, when he saw a striking proof of what he had stated in regard to the action of sap, and the altered quality of that which descends to the root. He came across a young ash tree, 15 or 20 years old, round which some one had cut a ring in the bark, thus exposing the stem of the tree. The ring was cut some four or five years ago, perhaps, and now the part of the tree above the ring was totally different to the lower part. The bottom portion of the bark was healed up, and the tree below the ring was 17½ inches in circumference, and 21 or 22 inches above. Now, if the ascending sap had made the tree, and was as good as the descending sap, why did not the bottom part grow the largest? With regard to the tinting power of the pale or brown hops, he had always thought the brown hops, from the gum in the petal being entirely dry and consequently more difficult to dissolve, would produce a paler ale than the green hop, in which the gum was more readily affected by solution. With regard to the weight of the hop, it was the lupuline that increased the quantity of weight, and also the quality. The petal was of no more use than the shell of an oyster. Mr. Barling then concluded by remarking that his object was to see their plantations keep up their standard, and not be beaten by the foreigner, which would certainly be the case if the English farmer continued to cut the bine before the hop was ripe."

A few Hints on Growing Indian Corn.

To the Editor of THE CANADA FARMER:

SIR,—I am pleased to observe a growing interest among the farming community, in this excellent grain, and expect should I live ten years more to find it cultivated to a large extent. I remember the period when Indian corn formed a principal crop all through Upper Canada, where it was relied upon as a surer and more profitable crop than wheat. But since the plough has come to be so universally used, the cultivation of corn has given place to other cereals. Until within a few years wheat has been considered the only grain upon which a farmer could depend to meet his liabilities. A course of deficient culture—the neglect of a system of rotation of crops, has, however, deteriorated the fertility of the soil, and in many places the average of wheat has declined from 30 or 40, to 10 bushels per acre. The Canadian farmer has through his own negligence allowed his rich and grateful fields to become so poor that he can no longer hope successfully to raise wheat, and he is now more likely to listen to suggestions on cultivating some other paying crop. Now I do consider that Indian corn can be raised almost in every portion of Upper Canada to profit, and when fairly tried, I am certain that a great many who now think but little about it, will come to esteem it as renumerative, and very advantageous. Having raised it more or less for some 40 years, I will offer a few hints that may be useful to new beginners. The soil best adapted for Indian corn is warm rich loam. Choose the lightest soil with a south or eastern exposure. Manure it well with barn yard or any other manure. If not ploughed in the fall, plough as early in the spring as you can, and let it remain until you are ready to plant, when you can plough it again, and harrow it level. If the field is rich, have your hills 4 feet each way, if not very rich, 2 feet 6 inches or 3 feet 9 will do. To make the hills at right angles, some drag a chain lengthwise and across. Some take a scantling 12 feet long, and put wooden pins the requisite distance apart, and attach it to a horse. Which ever way is adopted, try and have the hills in straight rows, and at right angles to each other, as in addition to its neat appearance, it facilitates weeding and hoeing. When the field is thus gone over, open a small hole at the angles about 1½ inches deep, a boy can follow with corn, and drop 4 or 5 grains in a hill, and in every other hill and every other row drop a pumpkin seed, another boy can cover, but the latter should begin at the far end, after a row has been planted, so as to draw the earth towards himself. For seed corn, choose from trees carefully preserved, the best eight-rowed ears that are plump and full, break off the top end about 1 or 2 inches, shell out, and if you are late in planting, and the ground is dry and the weather warm, you may pour scalding water on it, and let it remain all night. You require from 6 to 8 quarts for an acre. The best time for planting is from the 5th, to the 20th of May. In the valley of the St. Lawrence, about the 10th of May, is a good time; on the table lands, which are more subject to spring frosts, from the 15th to the 20th May, does better. If you plant early, and the ground is damp and cold, by no means soak the seed, and be careful not to bury deep. Germination is very easily destroyed by moisture, and the plant will not thrive on cold damp land. When it is up about 3 or 4 inches high, go through the rows each way with a horse and scuffler when the weather is dry, so as to cut up and destroy the weeds; then with the hoe clear away the weeds around the hill, and replace by fresh earth what was scraped away. In about three weeks after, you will require to repeat the operation, and may continue it a third or fourth time if the ground is weedy. By no means make a hill around the plants until the last hoeing, about the 10th or 15th of July. Then it is considered useful to support the stocks from falling over. In olden times this was considered indispensible, but there is now a difference of opinion, respecting the utility. Of late years I have not hilled up my corn, and I have found it do pretty well. Still I am of the opinion that the practice would be rather beneficial than otherwise. The chief prejudice against raising corn by farmers who have formerly raised it, is the vast amount of hard work connected with it. This is somewhat reduced by the scuffler, and abandonment of the hilling-up system.

Many recommend guano, ashes, and artificial manures being applied while planting, all of which I have no doubt are excellent for producing a good crop; but I do not approve of the plan on account of the labour involved in it. I prefer having the field for corn manured in the ordinary way, and in raising a crop of corn, the ground is little injured, and is in prime condition for wheat. Corn will do well on the same ground for several years, but like all other crops is better of change. There is a difference of opinion as to the wisdom of breaking off the suckers, or allowing them to remain. I have tried both ways but cannot say which is best. I have latterly adopted the plan of an old Vermonter, whose advice I had asked respecting them. Said he, "if the ground'll bear 'em, let 'em grow" I prefer the yellow corn as being the most nutritious, and yielding the best return. The small white variety will however, ripen earlier, and may answer in some localities, but I would not raise it where I can raise the yellow. If you wish to plant different varieties, you must plant them apart from each other, else they will inoculate one another, and your crop will be part of each. Change your seed occasionally, and if possible procure it from a more northern locality When you obtain a good variety, do not part with it until you have obtained a better. Perhaps there is no crop raised, that seems to benefit so much from attention to tillage as corn; every time it is hoed it seems to rejoice, and manifest its gratitude by stretching out. It does best in moderately dry warm seasons, and will ripen in favourable seasons, and good localities, in about three months. Farmers, try a patch, and my word for it, if you attend to it you will continue to raise it.

J. E.

Rockland, March 1865.

Cultivation of Flax.

As information from those who have been long practically conversant with the cultivation of flax is valuable, we are induced to give the following extracts from a letter on the subject which was lately put into our hands by the gentleman to whom it was addressed. We may state that the letter was not originally intended for publication, but, coming as it does from an experienced flax grower resident in the neighbourhood of Omagh, we are glad to be allowed to bring it under the notice of our readers:—

"The first thing you have to look to is your soil. What is recommended by eminent flax growers is a sound, dry, deep loam. I have had the experience of two sorts of soil this season: the hill and the low ground on opposite sides of water The hill, as you are aware, is sharp, gravelly soil, and produced flax twice as good in quantity and quality as that sown on the low ground, which is deep loam. With regard to the preparation of the land, there are many and varied opinions. How I treated the hill last season was by ploughing about this time of the year with the intention of grubbing again before sowing, but when I saw that no weeds appeared upon the surface, I prepared by the harrows for the seed, and it did well. There is another system in this country which appears to be taking the lead, that is ribbing; it keeps the land dry and warm, besides rotting the stubble. This I believe to be the proper way to keep it until from three to six weeks of sowing the seed; then plough, and finish by harrowing and rolling. You cannot give it too much of the harrows before sowing, as it requires but one double tine after the seed. This is exactly how I intend preparing my own this season.

"Riga is now generally sown upon all soils as the most productive to the farmer. I have sown Riga, Dutch, and English upon the same soil, and Riga is what I would by far recommend for any soil. The time to determine upon for pulling is the most particular part of flax cultivation. If pulled too soon, although the fibre is fine, the great waste in scutching renders it unprofitable, and if too late, the additional weight does not compensate for the coarseness of fibre. The proper time to pull is when the seed begins to change from a green to a pale brown colour, and the stalk to become yellow for two-thirds of its height from the ground. If you are for saving your seed, let the handfuls of pulled flax be placed diagonally across each other, so as to be ready for rippling. The best method is to save it at home by spreading upon lofts and turning twice a day; finish upon a corn kiln, taking care to keep a slow fire. By this plan of slow drying the seed has time to imbibe all the juices that remain in the husk. If it be taken from the field and dried hurriedly upon the kiln these juices will be burned up, very little nutritious matter remaining. Flax ought not be allowed to remain, if possible, the second day in the field; it should be rippled as pulled, and at once got into the steep for this process. River water is the best. If spring water must be used, let the pond be filled some weeks before the flax is put in, that the sun and air may soften the water; the best size of steep pool is from 12 to 18 feet broad and 3½ to 4 feet deep. Steep your flax with the roots down, the top sloped a little off from the man who puts it in; have it laid very regularly, so that it may water evenly; cover the flax with moss sods on a stiff old lea, cut thin, laid perfectly close. It generally takes from 8 to 14 days in the pool, according to the heat of the weather and nature of the water; after fermentation subsides take out some stalks, and break them in the centre about 8 inches apart; catch the broken bit of wood, and if it will pull freely out downwards for that length without breaking or tearing the fibre, and with none of the fibre adhering to it, it is ready to take out. Select, if possible, short, thick, pasture ground for spreading; mow down and remove any weeds that rise above the surface of the sward; lay the flax evenly in rows on the grass, and spread thin and very equally. If well watered, the less time after 3 or 4 days on the grass the better. This is the best information I could possibly give you; it is exactly what I have done and intend doing myself. There are far more expensive modes, but this I believe to be the best."—*Irish Farmers' Gazette.*

PLANTING PEAS DEEP.—Deep planting is not generally resorted to, under the impression that the seed will rot in the ground. This is a mistake. Peas covered six or eight inches deep, will produce twice as much as those covered but an inch, they will continue flowering longer, and the vines are more vigorous, and do not lie down, as is often the case when shallow plantings are made. We have tested this matter, and therefore know from experience, that if it is desired to get a large crop, the seed must be buried deep in the soil. A suitable piece of ground, which had been enriched the previous year, was deeply ploughed in the fall, and again in the spring, and put in fine tilth. One-half of the piece was marked out in drills, and the seed covered two inches deep. On the other half the plough was sunk beam deep, and the seed scattered at the bottom of the furrow. In this way one-half the piece was gone over and afterwards merely leveled, leaving the seed at least eight inches below the surface. The peas that were ploughed in were a little longer in making their appearance, but they shot ahead of the others, the vines were thrifty and vigourous, and produced treble the quantity of those in the two inch drills by their side. The seed used was of the same lot, the Champion of England variety, the soil, time of planting, and culture, (except the manner of putting in) were precisely the same for both places. This experiment convinced us that peas flourish best in deep planting, and we have repeatedly had our attention called to the fact, in observing different crops, and learning the manner of culture.—*Utica Herald.*