

waving grain touch a vehicle on the public highway. Time will bring these improvements here. In regard to tree planting, read the article on the Larch in this number. Perhaps some of you may increase the value of your land eight-fold, and the value of the crop a hundred-fold. Money judiciously expended in planting, draining and improving farms will be found more profitable than entrusting it in the hands of some banks, societies and bubbles that will burst and leave but an aching, staring void.

Planting Fruit Trees.

What is the best season for planting fruit trees? is still an undecided question. With some planters, trees planted in the fall have thriven well, without one failure, while with others there have been failures, and those planted in the spring have done well. We are inclined to the opinion that success generally awaits those who do their work well, and that the failures have been caused, not so much from planting at the wrong season, as from doing the work in a hurried, careless manner. Each season of planting has its advantages and disadvantages. Trees, when properly planted in the fall, are prepared to profit by the earliest spring weather, having been already rooted in the ground, and their long roots established in the soil and extending all round the stem, imbibing the necessary food. By this means they are not forced to be wholly dormant at any time, and before the drought of summer they are prepared to resist it, especially if they get the aid of a seasonable mulching.

On the contrary, if the planting be not properly done, the transplanted trees have more to contend with than those planted in spring. The storms of winter may loosen and disturb them if not well planted, or planted and secured to stakes; and if so loosened they are apt to perish. Frost may penetrate the open earth and freeze the rootlets to death, or the spring thaws may make the earth about them a mass of slush. Either ice or slush proves fatal.

To those who have not already planted fruit trees, we would say: do not put it off till the fall or another season. A year's delay in planting, is a year later in gathering fruit; and no owner of a farm in Canada, no proprietor of one rood of land, should be without his own fruit. In selecting the site for an orchard, avoid a low damp situation. Spring frosts, so much to be guarded against, especially in this climate, are always more destructive on such situation. A high ground, if well sheltered by shade trees, is as good a site for a fruit garden as you can select. There the spring and June frosts will be less destructive and the soil will be less liable to retain stagnant water than if it were flat and lying low; and the free current of air, only broken off by the trees sheltering the ground on the points of the most injurious winds, will have a most salutary influence on the fruit trees, producing well-ripened wood and retarding premature blossoming in spring.

PREPARING THE SOIL.

In selecting the site for your fruit garden be sure that the soil is naturally dry; if not, its drainage should be the first thing attended to. Trees will not long flourish with their roots in cold, stagnant water. By draining the soil the air will have free access to the soil, its temperature will be thereby raised, the feeding and growing properties of the roots will be stimulated to greater activity. The drains in an orchard should not be less than four feet if a fall of that depth can be secured. If the depth be less, the roots will be likely in a short time to choke them. Drainage is not all that is necessary in the preparation of the ground for the orchard. It should be thoroughly cultivated the year before planting—it should be plowed deep-

and, if possible, subsoiled. It should also be well manured with a root crop, that it may be mellow, fertile and free from weeds. Belgian carrots, or, better still, parsnips, are a good preparatory crop, their long roots penetrating deep into the earth, separating its compact particles and quickening the inert elements of fertility. The value of these crops gives sufficient remuneration for the expenses of improvement; and their culture and growth always tend to the improvement of the soil—not merely the surface, but a depth of from one to two feet.

PROTECTING THE FRUIT TREES.

The protecting of the trees when planted, is as essential to success as care in preparing the soil and planting. It is necessary to protect them by screens or forest trees on those sides that are exposed to the prevailing winds. A good screen of evergreens will often prevent the entire or partial loss of the fruit of a whole season. The sharp, keen winds deprive the branches of the moisture needed for health and growth faster than it can be supplied by the ascending sap, and so they are killed—frozen to death.

The soil in which they are planted should be mulched, not only in winter against the frost, but also that it may retain the necessary moisture. Mulching not only prevents the rapid evaporation of moisture, but also serves to increase the fertility of the soil, and keeps down the growth of weeds.

The New Forage Plant—Prickly Comfrey.

Never was the attention of Canadian farmers directed so earnestly to stock feeding as it is at the present time. The increased demand in England for meat and the products of the dairy, added to the success of the attempts to transport Canadian beeves to European markets, has been productive of a change in the object and mode of agriculture with our best farmers. Beef, not wheat, is now to be the great Canadian staple; and the enquiry now is, how best to increase the produce of food for our stock by the improvement of culture, and introduction of new forage plants.

The prickly comfrey is not a new forage plant to the farmers of Great Britain. It was introduced into England in 1790, but it was not used as a forage plant until 1830. It was then recommended in the *Farmers' Journals*. Shortly afterwards we made trial of it, but not having obtained the Caucasian species, it did not fully realize our expectations. The solid-stemmed variety has but lately been introduced, and it is said to be much more valuable than the hollow-stemmed sorts previously grown, producing more food. This is full of gum and mucilage. The leaves have a rich, mucilaginous character, and grow to a great size, sometimes three feet long, the plant rising three or five feet from the ground before it comes into flower; that is, at the time when the leaves should be cut. The yield is estimated at from 60 to 100 tons of green fodder per annum. No animals take to feeding on it at once, but the taste for it is soon acquired, and, when once accustomed to it, they are very fond of it and thrive well on it.

The mode of propagation is by cuttings both from stem and roots, as the seed produced in England does not germinate. This makes the expense of planting more costly than if grown from seed, but the permanent character of the crop, being well nigh perennial, and its capability of enormous increase by division of the roots, ensures a rapid and easy extension of the crop—when once we have established a plot. Propagation can take place from the stem as well as the root; all that is necessary is to plant portions of the stem with two eyes and take care that the ground is kept moist. It

withstands both heat and cold, growing in the hottest climates and in as high latitudes as St. Petersburg. We would recommend that some of the roots be procured and experiments carefully made. It is a subject that should engage the attention of the Agricultural Department. If it merits half what is said in its favor, the introduction of it into the country would be a means of adding no little to the agricultural resources of the Dominion.

An analysis of the plant by Dr. Voelcker has demonstrated its great richness in flesh-forming substances and heat and fat-producing matters. Highly as this comfrey is spoken of as a forage plant, we recommend its introduction into Canada only as an experiment, and that experiment to be made by the Department of Agriculture.

The Potato Bug on Its March.

The potato bug, now so well and unfavorably known in this Western Peninsula, has made but brief halt in his onward march. Eastward he still pursues his way, and it is evident that the whole of North America will be subject to his ravages. It is reported that they have reached the Ottawa Valley. Any attempt to arrest their progress would be futile, and farmers must be content to fight them in every part of the Dominion. Happily our familiarity with their habits enables us to contend with them successfully, and though we cannot wholly prevent their ravages we can mitigate them in a great measure. Every precaution that could be devised has been taken in Europe to keep them away. Trading vessels between Europe and America have been carefully examined lest they might be concealed among the freight, and some of them were actually discovered among the bales of goods. The people of Bremen were in a state of consternation when one of the voracious horde was found in a package about to be delivered on the wharf. In England and Ireland, where the potato crop is no mean item of agricultural produce, every possible precaution is taken to prevent the potato bug effecting an entrance.

Spring Crops—Oats.

A great advantage of oats as one of our spring crops is its great hardiness and its adaptability to every variety of soil. It yields well on light or heavy soil, if in fair condition and properly cultivated. We have grown good crops of oats on stiff clay, on light gravel, and on drained peat soils. This, by itself, would be one point in its favor. And the farmer can never dispense with the oat crop. Barley, corn and beans are, each in their turn, good for horses, but none of them can take the place of oats; none of them imparts the same high mettle and power of endurance.

Oats, though taking a place among exhausting crops, is not so much so as wheat. We have had clover and grass seeds, when sown with oats or barley broadcast, to succeed very well and produce heavy succeeding crops of grass for soiling or hay, as well as pasture. This cereal is generally sown broadcast on ground in good tilth, though for it, as well as wheat, drill culture is now preferred. We never had better oat crops than from seed sown on the surface of land that had borne root crops the preceding year; the seed was then plowed under with a light furrow. Oats may be sown earlier than barley. In Britain it is the earliest sown of the grain crops. We have sown them in January to prevent too great luxuriance of the straw, and had a heavy crop. In seeding about two and a half bushels per acre are sown here, but English farmers sow from three to four bushels. They think less than that is *starring the soil*. Back oats are best suited to moist soils, and to dry soils white oats are better adapted. It