

in a moderate climate like that of the British Islands, ranks amongst the foremost of the forage crops. It is adapted to the heavier class of soils; and being generally cultivated for soiling, it is not allowed to ripen its seed, and is consequently less exhausting to the land than most other crops. The spring and winter varieties of this plant have evidently been produced by the different periods of sowing, since the seed of both kinds seems perfectly alike. We strongly recommend, however, that in this country the spring variety only should be used, and that the ground should be thoroughly prepared by ploughing, harrowing, &c., that all weeds may be eradicated, and the seed sown as early as possible. If the season be favourable, with proper management, tares will be ready for cutting before clover; and will be found most serviceable, especially for horses and cows. A liberal application of seed is to be recommended; from $2\frac{1}{2}$ to $3\frac{1}{2}$ bushels per acre may be considered ample. It is of importance that the plants should thoroughly cover the ground, that moisture may be retained during the dry season, and weeds prevented from springing up. A thin, patchy crop of tares is one of the greatest misfortunes that could happen to the soil; while a heavy crop is highly ameliorating, by keeping the land clean and restoring back again a large amount of rich manure. Vetches may be made into excellent hay.

7. LUCERNE.—This plant, which has been cultivated from remote antiquity both in Europe and Asia, is richly deserving a sufficient number of experimental trials, with a view to test its adaptation to this country. A dry, deep soil should be selected, thoroughly ploughed and subsoiled, with a liberal dressing of well-rotted dung and lime. As early in spring as the weather and the state of the soil will admit, sow in rows about 18 or 20 inches apart, 10 lbs. of seed to the acre. Carefully keep down all weeds. The crop may be mown as soon as in flower and afterwards kept down by sheep, care being taken not to stock hard or tread the ground when in a wet state. Early in the following spring, the intervals between the rows must be horse or hand hoed, and two or perhaps three light crops may be mown during the summer. It will take three years for the plant to arrive at full perfection. The principal thing to be observed in the cultivation of lucerne is to keep the ground clear of grass and weeds, by occasional hoeings, with an annual top dressing of well-rotted dung, and the application of lime every few years. Treated in this manner, on suitable soils, the plant will continue to flourish for several years, and produce an immense amount of provender.

8. SAINFOIN.—Whether this plant, so extensively cultivated on the chalk downs and dry sands of England and France, could be profitably adopted in

this country, carefully conducted experiments only can decide. It is a plant peculiarly adapted to calcareous soils; its roots deeply penetrate the earth; in rocky soils they extend a prodigious depth among the crevices and open strata in quest of food and moisture. It may be sown like clover, with a crop of grain, 3 or 4 bushels per acre, and it will take two or three years before it arrives at full maturity. Sainfoin makes excellent hay, and affords nutritious pasturage for all kinds of stock. It will not bear such frequent cutting as lucerne. Some prefer mixing white clover with it when sown, as that valuable plant does not interfere with the progress of the sainfoin, and gives a good bottom growth. It would be useless attempting to cultivate sainfoin upon thin wet soils, resting on clay; but on a dry limestone, it is well deserving a trial.

There are several other kinds of plants cultivated in Europe for forage, which our limits will not allow us even to enumerate. Among them may be mentioned *rape*, *artichokes*, *succory*, and the family of *trefoils*—all of which are worth an experimental trial in this country. Since the potato can no longer be depended upon as an article of human food, or for live stock, it becomes most important to ascertain what other roots can be raised as its substitute. Clover and timothy, which are naturally so well adapted to the soil and climate of this country, will no doubt continue to constitute the principal food of horses and cattle; yet it must be acknowledged, that to increase the variety as well as the annual bulk of provender, would be a most desirable and valuable acquisition. We would caution individuals against making experiments on a large scale, and against drawing general conclusions from single cases either of failure or success. Truth can be elicited only by repeated trials, performed under all the various conditions of soil and climate. The neglect of this simple rule has occasioned many false and hasty conclusions. We strongly recommend this subject to the best consideration of our agricultural societies, and shall always be happy to open our pages for communicating results.

PLANTING HOPS.

We submit the following directions for making a hop-garden to an agricultural correspondent who signs himself "*A Canadian*," in the hope that they may be useful not only to him, but to others also, who contemplate the cultivation of that plant. We may on some future occasion treat of the natural history of the hop, its varieties, expense, and modes of culture, &c., as practised in England. The cultivation of hops in Canada must necessarily continue restricted, since the demand is small, and the requisite