

forty pounds a piece. He thins out of all the imperfect berries, and sends the fruit to St. John's. Thinning out helps ripening, and by getting them to market early, Mr. Pattison sells a large proportion of his crop for ten cents a pound. Now, later in the season, I know of Agawam, and other superior qualities, from Châteauguay, that sold for three cents a pound. Though the less said about the quality of the Champion the better, it certainly is the most suitable grape for this province. Of course, all hope of making fortunes out of this most uncertain crop, the grape, is banished from men's minds.

Cherries.—Cherries, too, do not seem to be looked upon with much favour. Birds destroy the crop—when there is one.—Black-knot plays the very mischief with the wood, and out of fifty trees, Mr. Shepherd says he does not get enough for his own use. In Kent, we use mechanical means of keeping the birds off. Clappers, or rattles, kept in motion by the wind, fail to deter the robbers when the wind drops. Bits of bright tin, hung from the limits, do a little good as long as their effects last, but, unfortunately, the birds soon get used to them. If Mr. Gibbs's *dwarf-trees* from Russia turn out well, nets can be spread over them and the birds will be circumvented, but would not dwarf trees be a good deal in danger of injury from our great depth of snow?

Plums.—Moore's Arctic seems to be growing in favour. Mr. Brodie, of Montreal, takes no trouble about his plums: when the old trees die, he takes them up, and allows seedlings to take their place. They attain a large size, often about six inches in diameter of trunk, but if they bear a very heavy crop, they generally die the following year, precisely as my plums did, in 1886-7, at Sorel.

Apples.—Mr. W. A. Hale still despairs of growing apples in the valley of the St. Francois. Fameuse, Tetofsky, Peach, and Baldwin, all die, in three years from planting out, and Montreal Beauty, Rose of Stanstead, Queen's Choice, and other crabs follow in two or three years later. He has tried lime, ashes, bones, in hoed-crops, in sod, with mulch, with top dressing, root-pruning, under-draining, he has budded his own seedling stocks, but all without avail! Trees do live and do well at Sherbrooke on made terraces, the soil of which is nearly all from the surface, and this, too, nearer the river than Mr. Hale's garden, so the river-fogs are not the cause of the persistent failure of his fruit-crop.

FUCHSIAS

Mr. Bain, the Montreal florist, seems to have devoted much attention to the growth of this most popular flower. To him I am indebted for many of the following notes. The name of the plant is derived from *Fuchs*, a German botanist of the 16th century—*fuchs* in German is *fox* in English.

All the varieties of this lovely plant will not stand the same sort of treatment. The fine specimens we see at our exhibitions have not been allowed to run about as they please, but have undergone a training as rigid and severe as a boy receives at school.—I wish all boys profited as much by their training as the fuchsia does!—Some have to be stopped, i. e. have their hearts nipped out, when about six inches high, and the side shoots must be allowed to grow six inches long before another leader is permitted to start; and so, stopping and growing must alternate until the plant is as thick at bottom as is desired. Others are naturally of a compact habit of growth, and only require to have their side shoots stopped to make them bushy enough.

November and December are the best months for setting cuttings. the plants that have stood out of doors until the frost will afford plenty of well matured slips. The cutting should be strong, healthy, and woody, with not less than three

joints under the sand in the cutting pot, and all leaves except the two top ones should be pinched off to give the young plant a chance of making plenty of roots. Each cutting should have a pot—what is called a *thumb-pot*—to itself. When well taken, and the roots begin to show through the holes of the pots, shift them into three-inch pots, and so on, never allowing them to become pot-bound, which would have the effect of forcing them into flower before they have attained their proper development of stem and leaf.

Soil. For striking cuttings, use coarse, clean river-sand, and afterwards, take a mixture of yellow loam and leaf-mould, or peat, with an equal bulk of well-rotted horse or cow manure, passing it through a coarse sieve, and adding about half the bulk of clean, coarse river-sand—thus, $\frac{1}{2}$ yellow loam; $\frac{1}{2}$ leaf-mould or peat; $\frac{1}{4}$ well-rotted dung; $\frac{1}{4}$ sand, will be about the proportions. Plenty of heat, and lots of air and moisture.

Insects.—Red spider—cure-moisture and syringing. Tobacco-smoke for green fly and thrips.

Liquid manure.—Half a bushel of horse-dung to thirty gallons of water, add the same amount of soot in a bag suspended in the water. The soot, of course, is used for the ammonia it contains, for, as Mr. Sterry Hunt very sensibly observes: "So far as the soot consists of carbon, it possesses no manurial value, since carbon in the free state cannot be appropriated by plants." Soot is said to contain from 3 to 3½ per cent. of ammonia, but that must depend upon the height of the chimneys. Bristol, (Eng.) where the chimneys are high, sells its soot at seven pence a bushel, Gloucester, where there are no factories and where, in consequence, the chimneys are low, at five pence.

Old fuchsias should be put in the cellar or root-house to rest until January, when they may be pruned and started into fresh growth.

Stewart on roots.—Mr. E. W. Stewart, whose book in feeding animals is a great favourite on this side of the ocean, appreciates roots to a certain degree. He says, in a late number of the *Country Gentleman*, that "the best way to use mangels is to run them through a pulper, and then mix the pulp with the ration of grain or ground food and cut hay. The beet-pulp will not only give a relish to the feed, but it contains *pectic acid*, which is a digester of other food. Four quarts of this pulp, given twice a day, is sufficient to accomplish the great benefits for which roots should be fed—to cleanse the stomach (Mr. S. would find crushed linseed much better for this purpose. A. R. J. F.), prevent constipation (do.), and act as a digester for other food. This mixing with other food is the true way to feed roots. When fed alone, and in large quantities, roots are a poor food." If the worthy Mr. Stewart had seen the thousands of ripe-fat bullocks from Scotland that I have seen in Smithfield market, not one of which had ever tasted anything all its life but turnips and oatstraw in winter, and grass in summer, he would not call roots a poor food. Mangels, in spite of all the analyses, are poor enough, but swede turnips are anything but poor. Nowadays, nobody, even in Scotland, feeds entirely on turnips and straw, as they used to do forty or even thirty years ago; and instead of giving a bullock turnips enough to fill his belly three times a day, he gets about half a bushel twice a day, with cake, bean-meal, and other succedanea. It was clearly a mistake to make a beast swallow at the least 120 pounds of icy cold water (in his roots), whether he was thirsty or not. Still the roots fattened the beasts ripe-fat, and better meat never came to table than the West-Highlanders, the Galloways, and the Polled Angus of those days, though the first, the Kyloes, were generally only grown in Scotland, and fattened in the Eastern counties of England.