

struction of the house and the preparation of the border, together with the constant attention the vines require at all times during their growth, that the wonder is, that any other than a professional gardener will undertake their cultivation; and even with such knowledge, that the vines should survive the "hollow columns of brick rubbish"—the "paved inside borders"—the "outside concrete borders" filled with "carriage," and drenched with liquid manure—the opening and closing of ventilators and air ducts—the conflicting modes of pruning and thinning out, together with the "magnesia" bloom, when none is provided by nature. None of these are necessary, and the most of them are positively injurious to the health of the vine, which is so hardy in itself, that a crop of grapes can be relied on with as much certainty as a crop of cabbages, and with but little more attention to their cultivation,—provided only that the natural wants of the plant are attended to under the artificial condition under which it is grown.

The first of these is the border, which should be outside the house, and well drained, and composed of any ordinary good soil, about eighteen inches deep by ten feet wide, and top dressed every fall with stable manure, and mulched in the spring with leaves or litter. No attention need be paid to the inside border, as vines planted there will only bear two or three small crops, and generally die out when five or six years old. The vines should be well grown and healthy stocks of one or two years from the bud; they should be planted along the front of the house (so that the roots can pass out,) and placed four feet apart.

They should be allowed to grow from one bud the first year, and then cut down to two or three buds; the uppermost one should be allowed to form a cane the next year, and the others spurred back to one bud each, and allowed to bear a bunch of grapes each; the new cane should be again cut back to two or three eyes and these spurred; this system being the simplest for the amateur. The side shoots should be allowed to grow from two to three feet long before stopping, and should remain two feet in length, stopping only the end lateral at one leaf and allowing the side laterals to grow after the first stopping, as the shade they furnish is necessary to the proper coloring of the fruit. One bunch only should be allowed to remain on each side shoot, and the one nearest the main stem is generally the best; the berries should be thinned out about one-half when they are the size of small peas. During the first three years the glass should be white-washed half way up the outside, with a mixture of rye flour and water (or lime wash).

This will peel off during the winter, and should be renewed in the spring,

until the foliage is sufficient to shade the fruit.

A cold vinery should be so placed as to admit of drainage for the border, but may face any direction, and may be a lean-to, or double pitch, of stone, brick, or wood; and of almost any shape, provided only that it has abundant top ventilation, and none whatever at the bottom. The cheaply built lean-to houses of rough boards at the back (white-washed), with 10x12 glass bedded (not glazed) into permanent rafters from 18 to 20 feet long—are the most satisfactory; and will ripen the foreign grapes just as perfectly as the most costly structures. Such a house 40 feet long by 15 feet inside, and and rafters of 18 feet long, will give the roof a pitch of about 34 degrees, and will grow 10 vines, which will give a moderate supply of grapes for an ordinary sized family in three or four years, and an abundance of fruit in five years. The ventilators may be wood shutters, hinged near the top of the back wall and opening outward; they should extend the whole length of the house, and the opening should be from 18 to 24 inches wide. No ventilation should be allowed at the front, as this is a prolific cause of mildew. The top ventilation may be left open all day, and only closed at night after watering the house, which should be done every evening so long as the ground inside looks dry. After the grapes are fully grown and colored, the outside border should be protected from heavy rains by hot bed sash or shutters resting on the front of the house, which may be 3 feet from the ground; this prevents any tendency of the berries to burst from an excess of moisture.

Flowers of sulphur should be placed on boards or slates in the house, or scattered on the floor as a preventative of mildew; closing the house at night and fumigating it with tobacco smoke will destroy the thrip if they should appear.

After pruning in the fall, the vines should be taken down from the rafters and laid along the front of the house, suspended clear of the ground and protected from the sun's rays with corn fodder (or mats), which should be placed along the front of the house and in the rear of the vines so as to shade them effectually. They should remain in this position during the winter, and should not be tied up to the rafters in the spring until the buds have swelled evenly along the whole length of the cane.

The whole theory of the cultivation of the vine under glass seems to be to keep the leaves in a uniformly warm and moist atmosphere, thereby keeping the foliage healthy and protecting it from the sudden changes in our climate. There is nothing in what has been stated which need deter the amateur from having a grapery built and attending to it himself; there is no

rural occupation which will give him more satisfaction, as the results are not only a source of pleasure to himself and family, but to his friends, as no more acceptable present can be sent to such, and nothing more grateful can be given to a sick friend, than a dish of ripe clusters of cool refreshing grapes.—*Gardener's Monthly*.

PREPARATION OF VINE BORDERS.

BY W. L. GARDENER TO J. C. LACKEY, LUTHERVILLE, MD.

The border, both within and without the house, should be prepared by being in the first place excavated to the depth of three feet, and rendered perfectly dry by draining or otherwise; and this should be done in a substantial manner, for after they are formed, and the vines planted, it cannot be so effectually done. And it is of the utmost consequence to the future welfare of the vines, that they should be placed on a dry bottom. Their roots naturally extend to a great distance in quest of nourishment, and are therefore apt to penetrate beyond the limits of borders which are too scantily formed for them either in depth or breadth. When they extend beyond the limits of prepared borders, if the soil be naturally cold and damp, the fruit will not be of fine flavor, and consequently many of the berries will shrivel, assume a sickly color, and ripen prematurely, and be not only destitute of flavor, but actually sour. The foundation of the border should be well drained, and a floor constructed so that the roots cannot penetrate it; over this floor, a thick stratum of lime rubbish or similar matter should be laid, over which the border should be formed of light rich loam, well ameliorated by frequent turning over and exposed to the atmosphere; to this loam, however rich in itself, a moderate quantity of well decomposed dung should be added, and the whole brought to a sufficient degree of lightness by the addition of well prepared vegetable mould, to which may be added a portion of lime rubbish, broken bones, shells or similar matter.

A compost of half good loam soil, with its turf, cut from old pasture land, about three inches in thickness, one quarter of rich old dung, one quarter lime rubbish and bone, with leaf mould to make it sufficiently light, will be found to answer all the requirements of the grape vine.—*Gardener's Monthly*.

Communications.

AGRICULTURAL LITERATURE—THE SEASON—LAST FLOWERS OF SUMMER.

YARMOUTH, 24TH JAN., 1870.

Dear Sir,—I notice your reply in reference to *Canada Farmer*. While it is clearly evident that the low status of Agriculture and of Agricultural Societies, is owing more to ignorance, pure and simple, than to any other, or to all other causes combined, and when it is apparent, year after year, that no voluntary amendment is to be expected on the part of