THE FRUIT GARDEN.

How to Grow Grapes under Glass.

The following paper, showing how to grow grapes under glass with little trouble or expense, was read before the Ontario Fruit Growers' Association at their meeting last autumn, by James Dougall:

Many persons would be induced to erect a small vinery for the culture of the finer varieties of foreign grapes, were it not for the great trouble attending their culture under glass in the ordinary manner, in watering, syringing, ventilating, &c., requiring the services of a professional gardener, or occupying more time and attention than the generality of persons can spare.

By adopting the following plan in erecting the vinery, they will be relieved of the greater part of this trouble, and have a fine supply of delicious grapes, with no more trouble or attention than is required to grow the natural vine out of doors.

The sashes are made stationary, but so that they can be unscrewed and taken off for repairs at any time. They extend from the front wall to within a foot or ten inches of the back wall at the top, leaving an opening of ten inches wide along the top, to be closed by sheet-iron ventilators in winter or when requisite, but which is kept constantly open from the time the vines are uncovered in the spring, till they are laid down and covered in the fall.

The principal peculiarity is in the glazing. The glass is laid end to end without lapping or putty, and merely kept in its place by small pieces of tin, and a space of half an inch is left open between every third or fourth pane, so that all the rain that falls on the house is distributed pretty equally over the entire house, very little running off the roof except in very heavy thunder storms. There is no ventilation whatever below, as a draught I have found injurious to the vines. Any air that comes in is by these openings in the glazing, and the heated air finds vent at the top.

Last year was a very dry one, as well as this, we having no rain here for months; but the vines never suffered from the drouth, though they were never watered or syringed from the time they were uncovered in spring when it was done copiously, till again uncovered this spring. Nor were they the least affected either last year or this with mildew or red spider; though previous to adopting this plan I was annually troubled with both, in spite of syringing copiously morning and evening.

My present vinery was not erected for that purpose, but for a small conservatory, and the floor was sunk about two and a-half or three feet, with a brick wall all around. About twelve years ago I filled it up level with good compost, and planted the vines all inside, there being no opening for their roots to extend to the border outside. It was intended principally for proving seedling vines of the foreign varieties and the newer varieties, then out, with a few of the best old varieties, and in a space of twenty-four by fourteen feet contained for several years thirty-six vines, which were thinned out as they were proven worthless, till it now contains twenty-four; this is still too many, about sixteen being all that could be properly grown in that space. Last year it got a liberal supply of liquid manure in spring; this year it got nothing but clear water at first, and rain as it falls, and is doing as well as last year, and vigorous enough for a house containing so many vines.

The ends of my present vinery are not glazed, having only a small window and door on each end. Were I to erect a new one I would have the ends glazed to within three feet of the ground, and would have openings in the front wall to allow the roots of the front row of vines to extend into a prepared border outside.

For those who may wish to try this plan, I would recommend the following varieties as being the most successful with me, and of the finest quality:

1, Black Hamburg; 2, Muscat Hamburg; 3, Champion Hamburg; 4, Lady Downes; 5, Golden Hamburg, 6, Bowood Muscat; 7, Buckland Sweet Water; 8, General de la Marmora.

The first four are black or purple grapes, and the last four white grapes.

No. 1 is far the most profitable and best of the blacks, and Nos. 6 and 7 of the whites. Nos 4 and 6 are the better for artificial impregnation, as they do not set the fruit very well.

The principal trouble in following this plan, more than is required in out-door culture of the native, is the necessity of thinning the grapes on the bunches to about one-half when about one-quarter grown, to give room to the rest of the berries to swell.

Names of Parts of a Grape-Vine.

N. F. Lund, in an address before the North-western Wisconsin Agricultural society, thus defines the principal parts of a grape-vine:

The stock is the main part of the vine above the root and below where it branches. The stem includes those portions which have ceased to bear shots, and are two years old and over. The arm is a portion of the stem trained in a horizontal position. The cane is a ripened shoot, from six to eighteen months old, or until it comes to bear shoots directly from its own bud. The spur is a cane cut short. The shoots are the growth of the current year until the fall of the leaf. The laterals spring only from the buds on shoots, and are simply the shoot reproducing itself from its own buds. The nodes are the joints in the shoots and canes from which spring leaves, buds, tendrils, or clusters and laterals. The internodes are spaces between the nodes; both these latter disappear in the stem. The tendril is a twining support. The cluster or bunch is a tendril perfected into fruit. The buds on the shoots occur only at the nodes in the anils of the leaves. They are of two kinds growing side by side. From one springs the lateral, making its growth the current year; the other remains dormant, perfecting for the growth of the shoot the coming year. There are also the blossom-buds, which appear only on the tendrils and the berries. The whole make up the vine. Let it be borne in mind that the vine has not leaf-buds and fruit-buds distinctly, like the apple, but leaves and fruit come from the same bud, borne on the shoot, the growth of the present year itself growing from the bud perfected for that purpose the previous year. No part of the vine which has once born leaf or fruit will bear it a second time.

THE RED THORNLESS RASPBERRY.—A correspondent of the *Gardener's Monthly* states that this new variety "has a decided advantage over all other raspberries. It is perfectly thornless and hard. It stands the heat of summer and the cold of winter better than any other. Bears from different culture better than any he knows. It is a prolific bearer, with a very large, sweet, and delicious berry, and is a vigorous grower." That is the raspberry bush we want to lie under during its season, if it takes all summer. Can't some of our friends try it?

THE FLOWER GARDEN.

Portulacca.

The Portulacca is a very fine-looking, easily grown, popular and altogether desirable ornament. It is most effective on rockwork, but is well at home in baskets, vases, small beds or edgings. There are both single and double varieties—the latter being very fine. It grows of almost every color, some being beautifully striped. An open situation, exposed to the full light of the sun, suits them best. They flower throughout the summer, and once planted will reseed themselves. A bed of them forms a most attractive object, particularly on a bright day. The seed may be sown early in the open ground, or they may be sown in a hot-bed, or indoors in a flower pot, and planted out. The seedlings should be set about eight inches apart. For the engraving we are indebted to Mr. Renne, of Toronto.

GERANIUMS FROM SEED.—One of the most interesting operations pertaining to the florist's pursuit is that of producing new and improved varieties of flowers. The Geranium offers an excellent field for our operations, and just before frost entirely destroys the foliage is the proper season to collect the seed. These should be spread out to dry for a short time in a shaded spot, and then sown in light soil, covered lightly and watered sparingly, until the young plants show, which will be in a few days, should the sun be good. Where a greenhouse is not accessible, the boxes must be placed in a warm, sunny window, and as soon as the little seedlings show two or three rough leaves, they must be transplanted either into small pots singly, or else thinly into other well drained boxes. By planting time in spring we shall have good, strong plants, which will soon show flower, and we may then readily distinguish those which promise to be valuable. But Geraniums very frequently do not arrive at perfection the first season. It is, therefore, poor policy to throw them away if there are any signs of excellence in any new variety.—*New York Tribune.*

INFLUENCE OF THE SCION ON THE STOCK.—A curious instance is furnished by an English journal. A pendulous variety of Abutilon was grafted on stocks about six feet from the ground. Some shoots were left on the stocks below the graft, to prevent too serious a check in the growth, or in common parlance, to "draw the sap." The flowers of the variety inserted were always mottled and spotted, and the shoots on the stock, being left on, have borne flowers beautifully mottled, blotched and barred, like those of the graft. The influence of the graft on the stock in apple trees is well known to nurserymen, each variety having its peculiar roots—the Yellow Bell-flower, for example, always having finely branched fibres, while the Tallman Sweeting invariably presents but few stout, horny roots when the trees are dug, no matter what stocks were used in either case.

The Poultry Yard.

Raising Squabs for Market.

In accordance with your desire, and in answer to an enquiry in regard to raising squabs for Boston market, I will say that I have kept pigeons for a number of years, and during that time I have taken much pleasure in watching their habits, and have given some attention to the raising of squabs for market, and I can confidently say that it can be carried on with profit, when rightly managed. In order to make it a paying business, good care and attention is as necessary as in keeping fowls.

First, a room should be made for them, the size of which should be ample according to the number of pigeons kept. Then there should be boxes arranged for each pair separately, in which to raise their young. The entrance should be so arranged as to give it a sort of hiding place or safe appearance, though the light should not be excluded. To undertake to raise squabs without these accommodations, that is, in a mixed up huddle, one might as well undertake to raise beans in a hen yard.

Next, care should be taken to select the larger kinds of pigeons, as they will produce the largest squabs. Then those of light colored plumage should be selected, as squabs with a light skin look a great deal the best in market. The time to prepare squabs for market is just before they are old enough to fly, as it is at this time that they are prime, and make a very wholesome, as well as palatable, dish for the convalescent. It is better to take them away as soon as fit for market, as they cause less disturbance, and the old pigeons have nothing to do then but lay again. I think, as a general rule, pigeons will turn out at least three pairs of squabs in four months' time. Of course there are discouragements to be encountered, as in every other branch of business. Hawks, cats, and rats are to be guarded against, and the eggs are not always sure to hatch, or the young ones to live when hatched. I have sold since last April from three pair of pigeons three dollars worth of squabs, selling them to the fowl dealers who take them to market and pay me twenty-five cents per pair; but I think I have been selling them too low, as I find upon inquiry that others who are in the business are getting more, as I have myself at other times.

I think the most profitable way is to keep a large number of pigeons, and have a large number of squabs in readiness for market at a time, and then send them to market directly, and thus save, if possible, the middleman's profit.

I think if these rules which I have given are observed, the results will be sufficient to make the business a success, though perhaps on a small scale.—*New England Farmer.*

SCRAP CAKE.—If the poultry keeper lives near a soap and candle factory, he will find that chandlers' scraps are well worth using as feed for his fowls. Such scraps are sold at from two to three cents per pound. They are pressed when hot in great cakes, of the size of large cheeses, and when cold they are very hard, as the gelatine and glue they contain cements the mass very firmly. To reduce the scrap cake to fragments suitable in size for poultry is the problem. The easiest way to manage is to chop it with a hatchet into pieces the size of butter-nuts, then soak over night in cold water. This will soften the scraps so that they can be easily chopped. The best way to chop them is to put them into a stout box of convenient size, and use a common spade ground to a sharp edge for a chopping knife. In this way the strength of two hands can be employed, and the labor of mincing will be comparatively slight. Scraps are so tough, that unless you go to work right it costs more than they are worth to get them to pieces. When the fragments are cut to a suitable size, thicken the jelly-like mass with meal or bran. Feed scraps a little at a time, and often. Remember that while a little animal food is very beneficial for poultry, too much is worse than none at all.—*Poultry World.*