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SCHEFFELING & BROTHERS S. I.

GABRIEL LUIZET.

THE
Canadian Horticulturist

VOL. XIX.

1896.

No. 6.



GABRIEL LUIZET ROSE.



HIS excellent rose made its bow to the Ontario Fruit Growers Association last spring (1895) when a large number were distributed among our members. Some of them should bloom this month, and our readers will be able to compare their specimens with our frontispiece.

It is still a new rose to many, but is bound to take its place among the most beautiful, and, what is still more in its favor, as one of the sweetest of the hardy kinds. It is admired for its lovely coral red, suffused with lavender pearl; also for being so double and so free in blooming.

Many amateurs fail to grow good roses because their soil is too light and sandy. Such soil should be in part renewed and a compost of clay and manure dug in about the plants, if good blooms are desired.

Then in their display in vases, many mix them in a tight bouquet of other flowers, a most unfavorable style for the best effect. Roses should rather be in a vase by themselves, with long stems, not too closely confined.

Other amateurs are discouraged because of the aphid, and seem never to realize how easily it may be destroyed by using kerosene emulsion.

The Hatch Experiment Station reports in its experiments on insects that twelve rose bushes of different varieties were placed in the insectary greenhouse last April, and as they were infected with plant lice and red spiders those insects were allowed to multiply until the lice literally covered every green twig and more or less of the surface of the leaves. The red spiders also had become

exceedingly numerous on the leaves. A pailful of kerosene emulsion was prepared, and each rose bush was inverted and dipped into it and held there about a quarter of a minute, or long enough to allow the emulsion to reach every insect on the bush. In immersing it in this way the pot was held in the left hand with the right hand over the top, to prevent the earth from falling out. An examination of the bushes two days later failed to reveal a single plant louse or red spider, and none appeared on them during the remainder of the season, thus proving that the work was thorough and effectual. When rose bushes are too large to be treated in this way they may be showered.

The Hatch Station prepares kerosene emulsion in the following manner:— One quarter of a pound of common bar soap is dissolved in two quarts of boiling water, and while still hot four quarts of kerosene oil are added, the whole mixture being then churned through a small hand force pump, with a small nozzle turned into the pail. This churning must be continued about five minutes, until the whole forms a creamy white mass, which becomes jellylike when cool. Care must be taken to have the solution of soap hot when the kerosene is added to it and the churning done, but it must not be near a fire.

Before applying the kerosene emulsion to plants it must be diluted with water in the proportion of one quart of the emulsion to nine quarts of water which must be thoroughly mixed. The above will make sixty quarts of the insecticide ready for use. The emulsion will keep for a long time without injury and may be diluted when needed for use. This insecticide is one of the best substances for the destruction of vermin on domestic animals and in henhouses.

COMPOST FOR ROSES.

The best soil for roses is what is known by gardeners as a rich hazel loam of a moderately firm texture. Cut it with a spade from three to nine inches thick, according to quality. Where it can be had in the form of old sod, clear of trees (as decaying leaf mould is absolutely injurious to roses), it is so much more valuable. In soil as described above, the roots of the grasses will form a dense fiber all through it, sometimes ten to twelve inches deep; then I prefer to take the whole depth, and if a yellow clay below should add some to the compost. The next thing required is well-decomposed cow manure; this, if possible, should be at least one year old. This on hand, commence your compost heap, to every eight or nine loads of good loam, adding one load of equal size of manure, and so continue until enough is collected for the season's use. Where the soil is inclined to be heavy, add one part to ten of good sharp sand as you go along; let it lie a few days to get settled. If it heats, so much the better. Turn the whole over and beat it up fine with digging forks; if it is not considered rich enough, add a little pure ground bone, as it is mixed to go into the houses, and you have a compost that will grow good roses if judicious care is taken of the plants.—American Florist.

THE INFLUENCE OF A WHITE ROSE.



HE far-reaching influence of a little act of kindness, accompanied by "just a white rose," is beautifully shown in the following story told in *The Silver Cross*. Kindness and sympathy are rarely wasted on the unfortunate :

A wealthy lady, young and beautiful, who had lately experienced genuine conversion, was so overflowing with love for the Saviour that she was drawn to visit those who were in prison. One day, before starting on this errand of mercy, she went to her conservatory and her gardener gathered her up a large box of flowers and was about to tie it up for her when she noticed a perfect white rose untouched, and asked that it be added.

"Oh, no!" he said, "please keep that for yourself to wear to-night."

"I need it more just now," she said, and took it with her on her journey.

Reaching the prison she commenced her rounds among the women's wards, giving a few blossoms to each inmate, with a leaflet, a text, or a message of sympathy and Christian hope.

"Have I seen all the prisoners here?" she asked the jailer.

"No; there is one whom you cannot visit, her language is so wicked it would scorch your ears to hear it."

"She is the one who most needs me," she answered. "I have one flower, the choicest of all I brought; can you not take me to her?"

Then when they confronted each other on either side of the grated door, the visitor was greeted with curses, and the only reply she gave was the beautiful white rose, which was left in the woman's cell. As she turned away she heard one heart-breaking cry, and the voice that had breathed imprecation moaned over and over again the one word, "Mother! mother! mother!"

The next week she came again. The jailer met her, saying: "That woman whom you saw last is asking for you constantly; I never saw a woman so changed."

Soon the two were alone in the cell, and the penitent, her head resting on the shoulder of her new found friend, told, with sobs, her sad story—

"That white rose was just like one which grew by our door at home in Scotland, my mother's favorite flower. She was a good woman; my father's character was stainless, but I broke their hearts by my wicked ways, then drifted to America, where I have lived a wicked life; is there any hope for me?"

And so the dawning of a better day came, as the two "reasoned together."

Many visits the lady made in that narrow room, until she seemed an angel of light to its inmate. When the time came for the woman's release, the love of Christ constraining her, she went out into the world to devote her life to the saving of such as she had been.

EXPOSURE FOR A ROSE BED.

A friend inquires what is the best exposure for a rose bed. We would say that any exposure is good enough, the main point being to have the soil in proper condition, which is that it shall have good drainage and be well enriched. On a level surface, especially, must the drainage be well attended to, but this is scarcely less necessary on hillsides even of considerable declivity, if the soil is heavy. A slope to the east, or the north, we think most desirable for roses, for the reason that the blooms will last longer, and there is less danger from severe freezing in winter. A southern exposure might give a little earlier bloom but it would be of shorter duration and the danger of injury in winter is greater, and the same is true of a western exposure. But if circumstances should decide any one of these exposures it should not exclude the pleasure of a rose bed. Experiences might vary with the different exposures, and varieties which might succeed with one might not be so well adapted to another, but this is true in regard to all locations. The rose is so beautiful and desirable, and with moderate attention will bloom so generously, that it should be universally planted, and that not sparingly.—Vick's Monthly.

Fragrance of La France Rose.

Not one of the least of the qualities we desire in a rose is fragrance ; in this regard all classes must do homage to La France, which H. W. Ellwanger characterizes as the sweetest of all roses. If he were compelled to choose one variety it would be La France. It is rather tender, but it can easily be protected, and so winter safely. It does not always open well, but it is a simple matter to assist it ; an operation not practicable with most varieties that do not open perfectly. If La France does not develop well, by pressing gently with the finger the point of the bloom, and then blowing into the center, the flower will almost invariably expand, the pent up fragrance escape and almost intoxicate with delight our sense of smell.—R. Y. N.

Herbaceous Plants in Summer.—The great majority of hardy perennial flowers are natives of woods or grassy places where the earth is shaded from the summer suns. When they are removed to open borders they suffer seriously from summer heat. It is, therefore, good practice in these open sunny situations to have the ground mulched,—that is to say, covered with something like decayed leaves or half-rotted straw, or anything that will prevent the scorching rays of the sun on the earth. Herbaceous plants do not care so much for bright sun as they do for a cool soil at the roots. For the same reason a loose, open soil is better for growing herbaceous plants than soil of a heavier character, because having more air spaces, it is cooler. In short, it is a cool soil more than shade that herbaceous plants require.—Mechan's Monthly.

A FERN LUNCH PARTY.



COOL and pretty entertainment for the late summer is a fern party, and especially is it within the reach of all out-of-town residents. Gather from the woods as many ferns as you can, the largest to the smallest—each has its particular mission in the scheme of decoration. In sending out your invitations, paste neatly at the top of the card a tiny fern of delicate pattern. On the day of your entertainment, if the exterior of your house will lend itself to the plan, mass ferns generously around either post at the foot of the steps. Have them follow the railing, be arranged in shady corners on the porch, and, of course, meet the eye in the hall. In the dressing rooms, over the white linen covers on the dressing table; lay the ferns so they will completely cover them, and decorate the mirrors, fire-places and mantels. Exquisite effects can be made at the windows with the soft lace curtains. In the drawing-room bank the mantle-pieces, and at one end tie a large, green satin bow, made of feather-edge ribbon. Tie bunches of ferns on the lamp-shades. You will find the green or ferns will blend with almost any shade of silk, but, of course, all striking inharmonious colors must be removed from the green.

When the guests enter the dining-room the effect should be that of going into a fernery. Bank the mantle as in the drawing-room. In the corners have large boxes filled with ferns, and arrange them to run up as high as possible, which can be done by the aid of tacks and fine green cord. Have the table laid with a fine white damask cloth, fern pattern, and at the two diagonal corners arrange gracefully loose bunches of the larger ferns tied with large bows of ribbon. The linen centerpiece should be embroidered in a fern design, and on it place a big glass bowl filled with the choicest specimens of the delicate plant. Set each plate on a mat of ferns, which can be easily made by covering a stiff foundation with them. The white candles should have green paper shades, and the entrees should, whenever permissible, be garnished with bits of green.—Landscape Architect.

The Marguerite Carnation.—One of the most charming summer flowering plants we have is the carnation, but, on account of its inability to withstand outdoor exposure, most varieties are propagated and grown in greenhouses. When set out in the garden they are very unsatisfactory, and on this account this lovely flower has been compelled to take a back seat, and give place to the more hardy varieties. However, with the advent of the Marguerite, a fresh impulse has been given to the growing of outdoor carnations. At the present time the writer has a bed of Marguerites which were grown from seed planted last April. The plants are very stocky and compact, and full of buds, while some are just opening, and in spite of six weeks without a drop of rain, they are as varied in color and as double, and almost as large as the best greenhouse-grown specimens, and I think in fragrance even surpass them. The second season is when they will appear at their best. They are quite hardy. I find no difficulty in keeping them over winter if the plants are carefully covered with some coarse litter, straw, forest leaves, or evergreen boughs. As a large packet of seed can be procured from any florist at a very small cost, every lover of fine carnations should give the beautiful Marguerite a trial.—American Agriculturist.

THE CULTIVATION OF THE CANNA, SWEET PEA, ETC.

*A paper read before the April Meeting of the Woodstock Horticultural Society,
by Mr. John Pike, Gardener and Seedsman.*

The Canna.



AS we are to be supplied with roots of this plant through our local Society, perhaps the following remarks, and the criticisms on this paper will give us the necessary information how best to cultivate and care for them. Canna is the Celtic name for cane or reed as its habit of growth also implies. The Canna is an extensive and very ornamental order of tender herbaceous perennials ; most of them have showy flowers ; they are also grown for the remarkable beauty of their foliage, and are equally effective either planted singly or grouped in beds.

The cause for the recent popularity of this plant may be attributed to it being used so extensively for ornamentation at the World's Fair, a few years previous to which vast improvements had been made in them by the introduction of the new dwarf large flowering French strains, which are of the ever-blooming class. This flower is now out-doing all other summer bedders. Every season their splendid flower and foliage effects are increasing in public parks and private grounds ; they also make handsome pot plants, grown in large pots or tubs. I believe the American nation has never decided upon a national flower, although there was considerable discussion upon the matter a few years ago, but I presume they are content to keep to the old adage, expressed in the following lines :—

France has the Lily, England the Rose,
Scotland the Thistle which everyone knows,
While Ireland has the Shamrock which grows on the hill,
But the American emblem is the \$1.00 bill.

Why could they not claim the Canna, as it is known that with the Four hundredth Anniversary of the discovery of America, the average American flower grower first adopted this plant.

Cannas may be grown from seed planted early in greenhouse, hot-bed, or pots in the house. The great difficulty in getting seeds to start (on account of the extreme hardness of the shell) may be overcome by soaking the seed in hot water, or else break away a portion of the outside shell, so that the moisture will penetrate and facilitate their germination. Plants started from seed will usually flower by the end of July, and continue to bloom until frost ; these plants may then be lifted into pots and will flower far into the winter ; but where results are desired the first summer, it is better to propagate from divisions of the roots. Start the bulbs in pots in March or April, not using much water until they start into growth ; then water freely and place in a good light. June 1st is early

enough to trust the plants out doors in this latitude. Cannas will thrive on not too rich soil, if well watered.

Taking care of the roots in winter is often a failure, owing to not understanding what conditions they require; some rot them with water. They require about the same treatment as a Dahlia root, viz.: take up the roots in October, and, after letting them dry a few days, store away in a cellar, free from frost and where the air contains some moisture, so that the roots can take up moisture out of the air, and not the dry air take the moisture out of them; kept near a heap of potatoes or other roots would be about the right place for them. The flowers of the dwarf French class are similar to the Gladiolus, but excelling them in brilliancy of color and markings. The newest addition in Cannas, "Queen Charlotte," comes from Germany, a description of which I will read, as anything better or more attractive than we already have in the French class, is worth consideration:

"This grand Canna was raised in Germany and sent out under the name of 'Königen Charlotte'; this we have changed to 'Queen Charlotte,' by which name it would eventually be known in any case, *Königen* being the German for *Queen*.

"From the first successful attempt to improve the Cannas, their future and possibilities led all to anticipate what might be accomplished by continued and intelligent effort toward improving them.

"Hitherto we have been especially indebted to Mons. Crozy for enabling us more vividly to realize these glorious possibilities, and after the introduction of Mad. Crozy Canna, connoisseurs thought the culminating point of perfection had been reached. But it is apparent from this that nature knows no limit, and 'Queen Charlotte,' the acknowledged Queen of Gilt-edged Cannas, affords another example of those unexpected results which revolutionize theories and mark an epoch in the history of successful hybridization.

"When seen in groups, the brilliancy of 'Queen Charlotte' dazzles the eye with its brilliant scarlet-crimson, massy gold and rich orange-scarlet, separate and distinct, yet blended as only Nature can blend and harmonize in her own workshop and in her own way. The grand color effects produced can only be conceived by actual observation, and but faintly expressed by the most minute and accurate description; the intense velvety crimson of the ground color, melting through the massy gold bands which belt it round, reflects upon the eye in different tints and tones, until its defining power is lost in admiration of the feast of crimson and gold presented to it.

"As a pot plant for winter flowering, 'Queen Charlotte' has a brilliant future, while for massing it needs no prophet to foretell that it will, before long, be given first place in the flower garden of every park, cemetery and private garden throughout the world."

Some of the species are edible, being grown extensively in Peru and the Sandwich Islands as a vegetable, from which we also obtain arrowroot—which

makes an excellent invalid's diet, but now largely supplanted by less nutritious Scotch oatmeal, American corn starch and other cheaper preparations.

Annuals.

It is now in season to consider the starting of Annuals, as the bulk of our summer flowers are derived from them. Hardy Annuals, such as Nasturtium, Mignonette, Candytuft, Sweet Peas, etc., may be sown in the open ground in April or May; tender Annuals, requiring protection, should be sown in the greenhouse or hot-bed. We also hear a good deal of a few seeds started in a box in the house; this appears to me to be a backwoods custom, and handed down since before the time of commercial plant growers. The plants so raised are usually about fit for the same fate as the doctor recommended for the cucumbers, who said: "First pare the cucumbers, then slice them very thin, add salt, vinegar and plenty of pepper, then raise the window and chuck them out." The plants are unhealthy without the proper surroundings to give them a start in life; it is better to buy plants properly raised. The sowings may, however, be delayed until the ground is warm out-doors, say, the middle of May, in which case they will bloom later.

Sweet Peas.

Although an old-fashioned flower, they are again gaining in popular favor. It delights in a cool, moist soil. Sow the seed as early in spring as possible; the seed will germinate in a low temperature, and make considerable growth in the cool, moist, spring-time. To cater to its proclivity for moisture (in situations where it will allow of it), it is better to plant in a trench a foot deep, covering the seed about an inch and gradually drawing the soil to them as they grow, taking care not to cover the crowns at any time. Potash, in the form of wood ashes, is an excellent fertilizer; they love plenty of water, and soap suds is a good way to apply it, poured into the trench. It is very necessary to pick off all blossoms, as, if they are allowed to go to seed-pods, the vines will die off early. Some of the best varieties are: Emily Henderson, pure white; Blanche Ferny, pink and white; Orange Prince, Painted Lady, Countess of Radnor, mauve; Monarch, a rich purplish maroon, and a number of others of the large flowering class. Several colors in double Sweet Peas are now sold, but they do not come true from seed, and are rather disappointing.

Cupid Sweet Peas.

The unique floral novelty for 1896, the first of a race of dwarf Sweet Peas. We have heard much and seen little of this novelty, as this is the first year it has been offered; preliminary notices were sent in July last, that this wonder would be simultaneously offered for sale in all parts of the world. It originated as a sport in 1893, with Mr. C. C. Morse, of Santa Clara, Cal., who sold the stock to Messrs. W. Atlee Burpee & Co., who have since grown it true from

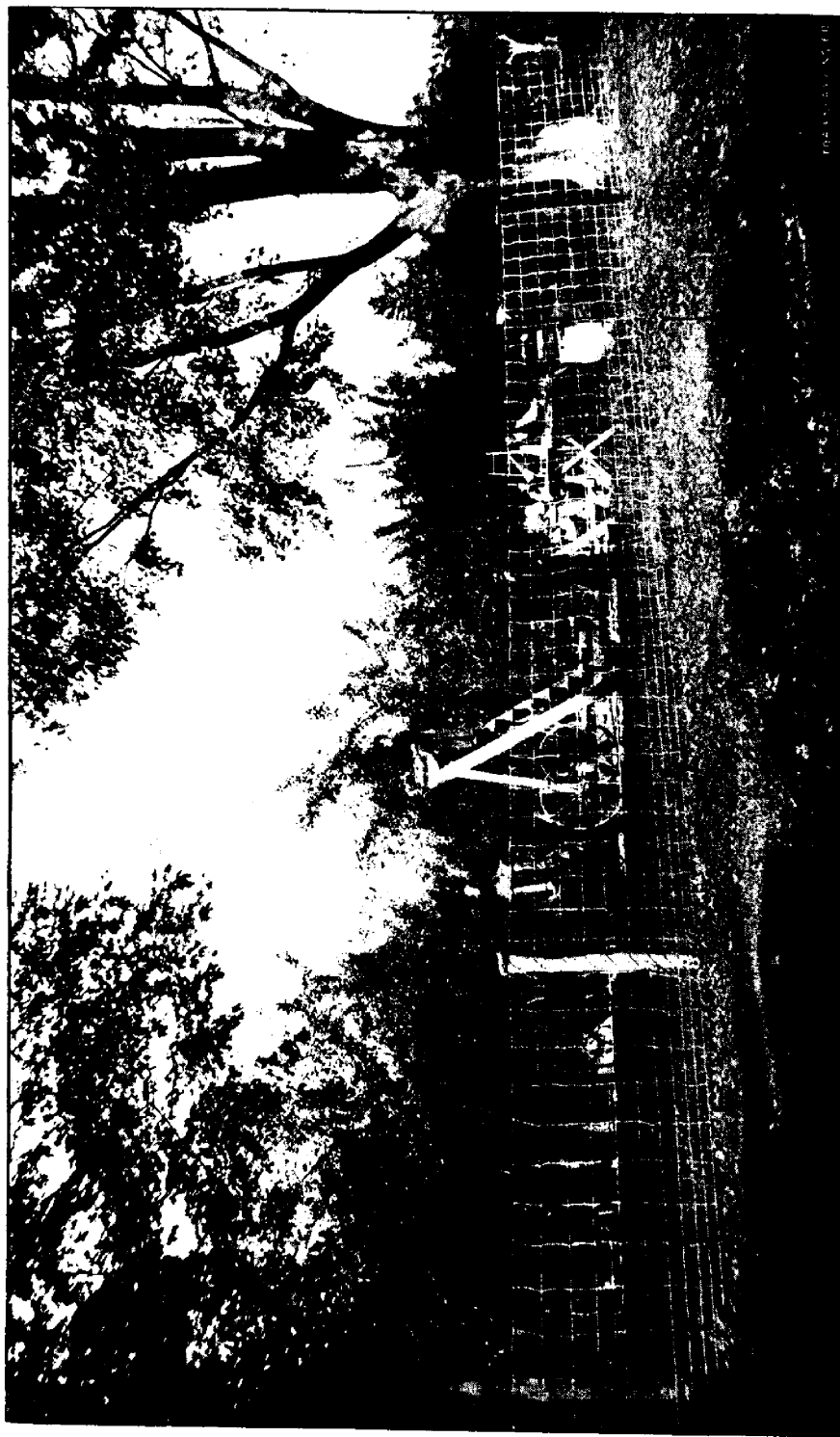


FIG. 938.—A VIEW OF COL. ROGER'S ORCHARD, CRAFTON, ONT.

seed. This year they appointed wholesale agents for the sale of it in Great Britain, Australian Colonies, India, France, Germany, Spain, Italy, Russia and other continental countries. As a pot plant it received an award of merit (the highest honor that can be conferred on a new variety) at the Royal Horticultural Society, held in London, England, last year. From what we read of it, it comes true from seed, grows 5 or 6 inches high, the flowers are borne on long stems, the color white. I have started some in pots, two seeds in each pot, and intend to plant it in the open; I hope others of this Society will give it a trial.

New Branching Aster

As a rival of the Chrysanthemum. Chrysanthemums are rarely brought to perfection by amateurs, and are best left to the professional florist. Asters are easy of culture, and in the new Branching, introduced in 1893, we have a flower closely resembling it in form and color. Many will remember seeing them offered for sale in the flower stores last fall, and a great many might have mistaken them for Chrysanthemums. The flowers have broad wavy petals, gracefully curled and twisted; the season for blooming is earlier than the Chrysanthemum, but later than any other variety of the Aster tribe. This gives it a special value for a late fall flower; the flowers are borne on long stems and are particularly suitable for cutting, as they will keep a long time and the flowers expand in water. If arrangements can be made for covering the plants on frosty nights, the blooming can be extended considerably past the time of other outside flowers. They are also admirably adapted for pot plants to flower in the house in the Chrysanthemum season. One grower writes of them in their last fall trial: "I have a dozen pots of the Branching Asters, loaded with flowers, that are the admiration of every one, and many say they must be Chrysanthemums. I think them a fine pot plant every way." The colors are white, pink, crimson, purple; the time for starting and transplanting is the same as for all other varieties of Asters.

The Orchard Fence.—It is time that the farmers of Ontario began to pay greater attention to the tidy appearances of their farms, and especially of their orchards. The old rail fence with its snake like curves is fortunately disappearing from our road sides; now let us have a fence which is as nearly invisible as good service will permit, that will neither favor the growth of weeds nor even serve as a shelter for mice. One of the members of our association, Col. Roger, of Grafton, Ont., has put up such a fence around his orchard and we have pleasure in showing our readers a view of his place in apple harvest, as an example worthy of imitation.

Fallow crops are the best for orchards, potatoes, vines, buckwheat, roots, Indian corn, and the like. . . . If we desire our trees to continue in a healthy bearing state, we should, therefore, manure them as regularly as any other crop, and they will amply repay the expense.—A. J. DOWNING, *The Fruits and Fruit Trees of America*, 1st Edition, 1845.

CULTURE OF GLADIOLUS.



OR some years I have been cultivating and experimenting with the Gladiolus, and the longer I raise it the more fascinated I become with its culture. The first year I raised it I met with rather indifferent success in getting the plants to bloom; although I thought I planted blooming sized bulbs, still, upon many of them no flowers appeared. Now I am rarely troubled in that way. I have of late years selected a sunny situation for the planting of the bulbs, and I always have the ground manured and well plowed under the fall previous. Then in the spring have it well spaded to a good depth, and the ground thoroughly pulverized. I believe firmly in deep planting; the bulbs attain a greater size, and are better enabled to endure some of the great drouths which visit so many portions of our country. If you have a number of bulbs, plant in rows from fourteen to eighteen inches apart and four inches apart in the row, and make it a rule to thoroughly cultivate between the rows until the leaves are too high to admit of it. I never allow a weed to be seen, neither do I plant any low-growing plants between, such as Alyssum, etc., as a mulch.

Then they are so easily cared for during winter. A dry, frost-proof cellar is all they require, and that is no more than is required for the commonest vegetable. I put mine in cloth bags and hang to the cellar ceiling to keep from mice. He who is induced to grow these lovely lily-like flowers one year will want to get out of the city if he lives there, into the country where he may grow them as he chooses by the acre, so great will his love for them be, and there are so many varieties of them, he will want them all.—Vick's Magazine.



FIG. 959.—SCARLET GLADIOLI AND WHITE ASTER.

I THINK it is wise for the florist and the gardener to bear in mind that the art of making a garden appear beautiful rests mostly with his ability to make an effective use of material at his disposal. One may have all the best things in great plenty, and yet fail to place them together so they will not lose their true value. Sunflowers may be grown so their untidy feet shall be hidden by nasturtium and alyssum; blue delphiniums may be relieved by a bed of dwarf whitephlox, and a dozen cannas can make an equal show with fifty if they are each one given a fair chance; but if sunflower, delphinium, and canna are crowded together without regard to color and form, if the ground beneath them is left bare and encircled by a prim ribbon border of dull and bright leaved colcus then one may bid farewell to artistic endeavor and cultivate the acquaintance of mechanical ingenuity.—American Florist.

A PLEA FOR THE CYCLAMEN.



CYCLAMEN *Persicum* and *C. giganteum* are very desirable plants for pot culture, especially for winter blooming. They are universal favorites, still they are not cultivated to the extent that they should be. No window garden is complete without one or more of these bulbs. They are very easy to raise, both from bulb and seed, and repay you tenfold for the care you give them, in the long continuous bloom throughout the winter months when flowers are scarce.

I have a cyclamen, deepest rose in color, that I have grown in a pot the last year, for house decoration, that is very beautiful; some of the leaves are immense, drooping gracefully over the jar and nearly hiding it from view; the flowers and buds over fifty in number run up strong stems far above the leaves. These added to the exquisite markings of its foliage make a most beautiful boquet for parlor or dining room.

In raising cyclamens in the house give them a cool place, a north window is best, where they can have plenty of light and air. Keep them from the hot rays of the sun and where there is stove or furnace heat, keep a wet sponge under the leaves. When in bloom it is a great help in making a beautiful plant. After the blooming season is past, gradually withhold water till the bulb is dry, when it should be left to rest till October, when you re-pot it in rich, sandy loam, encasing the bulb over two-thirds in the soil, leaving the top entirely exposed. Have good drainage at the bottom, water well, place in a cool, shady place till it show signs of growth; then water freely till flower buds appear, when plant food should be given once a week. On approach of cold weather remove to parlor or window garden. The secret in growing cyclamens is low temperature, light and air.



FIG. 960.—CYCLAMEN.

A friend traveling through Northern Italy was greatly pleased with the beautiful flowers of the cyclamen which grow there in great abundance. She had often admired the cyclamen bloom in my window garden in my Northern home, so while basking under the warm sunny skies of Italy, with its beautiful wild flowers at her feet, her thoughts flew back to her friends on this side of the Atlantic, wishing they too could enjoy with her these lovely flowers grown in the home nature had prepared for them.—Out of Doors for Women.

PLANTS FOR TABLE DECORATION.



THE first essential to plants for this use is perfect cleanliness and freedom from yellow leaves; given this condition and any plant in bloom or out is better than none at all. If the pot is not ornamental, hide it in some way. I attended a banquet recently and on a table was a pot of beautiful white hyacinths, but a quiet investigation proved the pot to be an old tin can wrapped in a sheet of snow white cotton batting, banded down with white ribbon to imitate hoops. Tissue paper can be crimped by drawing through the hands and then arranged in various ways to cover an unsightly pot or can. There are many easy and inexpensive ways of making substitutes for the beautiful jardinières which are always ready, but which all do not happen to have.

One nice way of growing plants for the table is in the low round flaring hanging baskets. When these are placed on the table and the drooping plants arranged over the cloth, it makes a very effective arrangement. Remembering that yellow is one of the best colors to light up, have among the plants some of the beautiful Eclipse abutilon with its pointed leaves of brilliant yellow and green. It is always as beautiful as blossoms, and when in bloom it is exquisite. The small growing varieties of ferns if grown in low pots or on plates are among our best decorative plants, the maidenhair being a general favorite. I have spoken of plants in this connection because it is possible for anyone with even a few plants to have them on the table every day, while comparatively few can use cut flowers every day unless it may be during the summer season.

The arrangement is simply a matter of taste, but care must be taken as to colors, odors, etc., or the effect will be spoiled. Flowers with strong odors are never desirable on a table. One pretty arrangement is to lay a square or oblong piece of looking-glass on the cloth. Trail smilax, ferns or other suitable foliage around the edge and carelessly drop a spray or cluster of flowers on the glass. This is, of course, for the centerpiece; at each end, if the table is long, place a small doily and arrange the same kind of foliage to trail off over the cloth in a gracefully irregular way. Place the salt and pepper set, bonbon dish or other small affairs on the doilies to give them the appearance of being there for use.

Asparagus tenuissimus is a plant which should be universally cultivated for all kinds of decoration; the foliage is like a fern in some ways, although it is a climber like the smilax, and so fine and airy that it seems like a film, but its best point is its durability, as it will keep fresh longer after being cut than almost any other plant.—Farm and Home.

LAWN MAKING.



HAVING secured our seed, such as it is, the next question is, In what quantities and how shall we sow it? Again comes in the question of the quality of soil, its comparative moisture and its cleanness. Under the most favorable circumstances a large proportion of the seed sown will fail to germinate. It is, therefore, wise to sow grass seed liberally.

The price of grass seed is comparatively low. I have consequently not hesitated to use, in some cases, six bushels of Kentucky blue grass or red top to the acre, although seedmen only advise two or three. The art of sowing grass seed properly requires some experience to acquire. The great difficulty is to sow it evenly. Like mowing and other farming operations, it takes trouble to learn how to sow grass seed properly. You must get up early in the morning before the wind has risen. You must consider the direction from which the wind blows, and do a good many things that can hardly be set down intelligently on paper.

When the seed is sown the next thing is to rake with a fine-toothed iron rake the entire lawn over thoroughly. Some people content themselves with a harrow for such work, but it does imperfect work at best. After the raking a heavy iron roller should be used at once over every part where the seed is sown. This sets the seed in the ground firmly and helps wonderfully to secure an even mat of grass, especially if a drought sets in soon after the sowing. It is a good plan also to continue this rolling once or twice after the grass has started and before it is fit to mow.

The first cutting with the mowing machine should come as soon as the grass is high enough for the knives of the machine to fairly take hold. Frequent mowing during the early development of the lawn tends to thicken and strengthen the growth of lawn grass and thus keep down objectionable wild grasses and weeds.

Viewing the matter in this light, we should not hesitate to weed the lawn all summer if necessary, to water it daily in dry weather, and yearly renew bare spots with better soil, to cover it with seed again, and fertilize the entire surface with frequent applications of manure, and in addition to roll it from time to time when the ground is soft. In the course of years, however, the good results of such work must tell, and the necessity for it become much diminished; but vigilance and intelligent culture will be always and continually required under the most favorable circumstances.—SAMUEL PARSONS, JR., in *Landscape Gardening*.

If the ground, which has been appropriated to the orchard, be also occupied as farming land, as is usually done for a few years after planting, while the trees are small, it should be exclusively devoted to hoed crops; by which is meant those that require constant cultivation and stirring of the soil.—JOHN A. WARDER, *Apples*, 1867.

✦ The Orchard and Fruit Garden. ✦

CAUSES OF FAILURE IN APPLE CULTURE—IV.

FROM AN ADDRESS BY THE SECRETARY.

6. Bad Harvesting.



VEN presuming that the orchard has been properly cultivated, pruned and enriched, there are many who yet fail to handle the fruit to the best advantage. In the first place, it is a common mistake to leave the fruit hanging too long on the trees before picking, and in consequence they become too ripe to keep well, and a large proportion is spoiled by falling to the ground. My experience has led me to begin gathering much earlier than formerly, and indeed before my neighbors seem to think of it. At one time it was my rule to begin gathering them about the 9th of October, but the high winds of that month made such havoc with them that I soon changed the rule. The 20th of September is none too soon to begin with such kinds as have attained full size and color, and if by that time all the apples upon a tree have not reached maturity, it will pay to make two pickings, leaving the greener and smaller ones to grow and color up. Attention to the details of preparing fruit for market always returns a good profit and must not be grudged. Careful handling and careful sorting are of paramount importance. Many throw apples into the basket as if they were potatoes, or squeeze them with thumb and finger as if they were made of stone, and so leave marks which spoil their beauty. Round swing-handle baskets, attached with a wire hook to the rounds of the ladders, are the best for apple picking.

Most orchardists empty their apples in piles upon the ground, but sorting in that case is back-breaking work, and every rain delays it. Some empty them in heaps upon the barn floor, but in a large orchard this means much labor in carting. My custom has been to empty into barrels in the orchard, head up without pressure, write the name of apple on the end, and store under cover; and then in packing empty them out on a packing table for sorting. For young orchards and scattered varieties this is the best plan I know of, for the important work of packing can then be done in a clean, dry place without moving about with nails and mallets and press from one part of the orchard to another.

Many inquiries are received concerning the best plan for the farmer to dispose of his marketable apples, whether he should sell them at home or ship to a foreign market. Well, if he has a very large orchard so that he can ship by the carload; or if he has small lots of one special kind, such as the Gravenstein or King, I would say ship to some reliable English wholesale house. As I can show from my account sales, my Gravensteins and Kings, in some ordinary seasons have sold in Covent Garden Market, London, Eng., as high as \$6 per barrel, which I consider paid me very well. Of course these apples were extra selected, all No. 1 grade, and highly colored.

But with mixed lots, less than carloads, it is better to take \$1, or even 75cts. per barrel for the fruit at home, than risk a possible loss by shipping so far.

But at even \$1 a barrel, I ask what farm crop pays better. Take for example an acre planted entirely with Baldwins and Greenings, and what will it pay you at those prices? Suppose you only get 100 barrels a year on an average from it, what other crop would give you \$75 or \$100 per acre with less labor.

Of course it is expensive work planting and raising an apple orchard, a heavy investment; but I am not urging the planting of new orchards so much as the better care of those we have.

7. Poor Varieties.

Perhaps you have not the most profitable kinds; then top graft and you will soon have those varieties which are proved most desirable. The work of grafting is not difficult or mysterious but quite practicable by any one who can handle his knife skillfully; for old trees a method known as crown grafting is very well adapted, as figured in a recent number of the *Rural New Yorker* and by favor of the editor we are enabled to give our readers the following description of it with an excellent illustration.

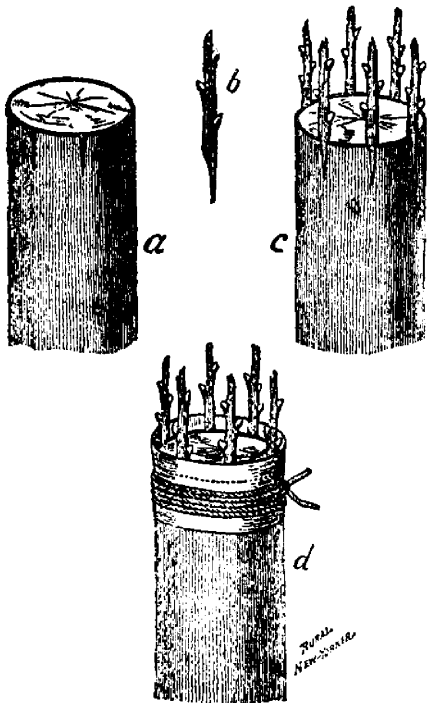


FIG. 961.—CROWN GRAFTING

“The following is an easy and effective method of grafting old trees. By it the percentage of failure is reduced to a minimum, and branches at least six inches in diameter, and, in the case of pear trees 75 years old, may be worked with assured success. Last year we mentioned the case of such a pear tree having been grafted two years before with the Kieffer, that gave a full crop last fall. Saw off the branch at right angles to the stem to be grafted, as at Fig. a. Then cut a clean slit in the bark through to the wood, the same as in budding. Separate the bark from the wood and insert the cion b, one for each slit. The number of slits for each stock will be determined by its size. We will suppose the stock illustrated to be six inches in diameter, and that six cions are to be inserted. The stock after receiving the six cions is shown at c. Grafting wax is not needed. A thick paper may be wound about the top of the stock extending about one inch above it and securely tied with a strong twine as

shown at d. The space above the stock encircled by the inch of paper may then be filled to the top of the paper with a puddle of soil and water, make so thin that it can be readily poured from any suitable vessel. This mud protects the surface of the wood of the stock, and excludes the air from the insertions. It gives every advantage of wax without its objections. Of course stocks of any size may be worked in this way. One, two, or any number of cions may be inserted according to the size of the stock."

I have now given an outline of the chief causes of failure in apple growing in Ontario, and at the same time indicated how they may be overcome. I believe in the future of apple growing in Ontario, for we can grow the finest apples in the world, and our fruit is wanted. Let us grow it in that perfection to which our soil and climate is so well adapted and establish a reputation for first-class honest packing of selected high grade fruit and then our fruit growers will be the most successful class of people in Canada.

A NOVEL MODE OF PRUNING BLACK CURRANTS.

In judging cottage gardens in Essex the other day I came upon a lad sitting on the ground picking the currants off a bough that had been broken off by accident. Remarking on this comfortable method of picking Black Currants on a hot day, my fellow-judge said that he had improved on that simple plan for years. He prunes his black currants so soon as the fruit is ripe, and carefully removes the fruiting branches to a clean packing shed or potting bench, where the fruit is picked under cover in cleanliness and comfort. The major portion or whole of the fruiting branches are then removed annually, the black current bushes being pruned back to the young wood. The wood being thus fully exposed in July, ripens thoroughly before the end of the season and produces full crops of the finest fruits. Of course, for this mode of culture the single-stem style of training is abolished in favour of the production of few or many suckers—from six to a dozen. The bearing wood and bushes to a great extent thus become annuals, and renew their youth as well as their vigour every year.

I have not hitherto adopted the early annual cutting back of my fellow juror. My experience, however, in regard to the wisdom of renewing black currants from suckers entirely agrees with his. His earlier and more severe pruning is also altogether in favour of the improved strength and fertility of the young wood from base to summit, and his samples are most all alike good—a great point in dry seasons like the present. It is no exaggeration to affirm that nine-tenths of the black currants met with this year on bushes grown on the old crowded system are of no commercial value, the major bulk consisting of dry hard flesh, the skins being nearly as tough as an old shoe. But notwithstanding the persistent drought, the fruit on last year's shoots, where these have been fairly fed without overcrowding, is of average size and full of juice. And yet how many go on crowding black currants with old wood, cutting back the best of the young shoots into close spurs—a mere wanton waste of vital force and useful fruit.—The Garden

NOTES ON A LECTURE TOUR.—II.



THE more one sees of this Province of Ontario the more he is impressed with the splendid heritage he possesses in its natural beauties, its almost limitless resources, its wealth of fruit and foliage and flower, its possibilities of development, and his own responsibilities in relation thereto. All this wealth has not been bestowed upon man without a corresponding responsibility in the use that he makes of it. Man bears a responsible relation to every gift that has been given to him for his use. All gifts were given to him for his pleasure and his profit, and the nearer he approximates to the designs of nature in the bestowal of those gifts the more real pleasure and profit does he enjoy. If he fails in his obligation and neglects his opportunities in this regard, he fails in the development of his better nature. Too many men seem contented to live only the hard practical side of life, neglecting altogether the finer or picturesque side. One is man's own side the other is Nature's side. The one man brought upon himself the other was given to him by his Creator, and he too often refuses to accept it even as a gift.

In no country in the world are the opportunities for development and improvement in the material conditions of life greater than they are in this Province of Ontario. And until comparatively recent years, in no country perhaps, have those opportunities been so sadly neglected. American visitors have told us that to them this is very noticeable, especially in our rural districts. They wonder at it too when we possess a land of such richness and a country of such possibilities in material and artistic development. Too often they notice our splendid farm houses without a bit of ornamentation about them in shade tree, shrubbery or flower bed. They naturally ask why was such a land of fruitfulness, or such a wealth of forest tree, evergreen, shrubbery and flowers given to us if not to be used for our profit and enjoyment.

Now, what we want to impress upon the readers of the *HORTICULTURIST* is that removal of this defect is one of the aims and objects of the Ontario Fruit Growers' Association. It aims at the development of floriculture, arborculture, landscape ornamentation and the general beautifying of the home in town, city and rural district as well as the development of fruit-growing.

To this end it has made special efforts during the last few years to organize affiliated associations in our towns and cities whose membership are more particularly interested in flori and arborculture, and whose example and influence will, it is hoped, widen out in time to the suburbs and surrounding rural districts. No city dweller is so selfish or so unpatriotic as not to desire the general improvement of the country immediately surrounding him as well as the improvement of the city in which he resides. His aid and influence is sought

that the consummation of that desire may be hastened. The Ontario Fruit Growers' Association recognize that this Province of Ontario may be made not only the greatest fruit producing country on the Continent, but one of the most picturesque and attractive countries in the world to live in. This being their faith they are following it up with work, hence the organization of the affiliated societies and the sending out of lecturers to address them at their annual meetings.

The first of those societies that I had the privilege of visiting in the month of March, was at the Town of Port Hope. Port Hope is so naturally picturesque that little need be done by man to set off its romantic beauties. Much, however, has been done in this charming town in the way of floriculture, and there I found a very enthusiastic Horticultural Society, numbering well up to a hundred members. The floral display in the hall at their annual meeting was very fine, and the meeting though not a large one was made up of the best citizens of the place. It is almost needless to assert this, for had they not been the best people they would not have been there where flowers and nature were the topics of thought and expression. The society at Port Hope is particularly fortunate in having among its membership Dr. Purslow, of the Collegiate Institute and Dr. Bethune of Trinity College School. These eminent scholars and naturalists made the writer's duties very light, and after their exhaustive and valuable papers I spoke briefly, in a general way, confining myself to no particular topic. There is much missionary work for the Port Hope Horticultural Society to do in the immediate districts to the north and westward where many farm houses are in a state of neglect when a very little effort and expense would add much to their comfort and attractiveness, and hence to their value.

Mitchell.

T. H. RACE.

SMALL FRUITS.

Nitrate of soda is a valuable fertilizer for these crops, especially strawberries and raspberries. It should be applied with powdered phosphate of lime to produce its best effects. This application to strawberries will not only double but sometimes treble the yield. The berries are larger in size, handsomer in color and of fine flavor.

Ordinary manure will not produce such results, for the reason that it is not converted into plant food until after the demand of the fruit.

The plants grow early in the season, and nitrate of soda being a leaf and stem former, while the phosphate of lime is a seed former, they are assimilated by the plant, and at once taken up and appropriated, furnishing the food necessary for the growth of the plant, and the food development of the fruit. As an available source of nitrogen, containing 16 per cent., and also 35 per cent. of soda, which is a substitute for potash for agricultural as well as for industrial purposes, the market does not furnish a better article or one that is more immediately active, and with the phosphate of lime it makes a complete manure.—
New York Tribune.

COMMERCIAL MELON GROWING UNDER IRRIGATION.



THE watermelon delights in a light sandy soil, while its companion, the cantaloupe, succeeds best on a clay loam, or at least a heavier soil than the former. Both do best on the new land, and as this is about all exhausted that is under irrigation in this section some plan of renewal must be adopted. We are having very good success by allowing the land to produce a crop of corn every other year, but it seems the best results will be obtained by plowing under alfalfa sod and growing about two crops of melons in succession on the same land.

The ground for melons should be irrigated during the winter or early spring, so that when plowed and harrowed in April it will hold moisture long enough to bring up the plants, seeds of which should be planted about the first of May, or after the soil has become warm enough to hasten germination. The furrows for irrigation are made before planting and should be run in the direction the water will run most readily, the tools generally used being either a single shovel or six inch diamond plow. For watermelons these furrows should be about nine or ten feet apart, and the hills about eight feet in the row. Cantaloupes need less room, and six by four feet will do very well.

The planting is usually done with a hoe; a hole about two inches deep is drawn out, into which five or six seeds are scattered, when the soil is replaced and firmed a little with the back of the hoe. When this is accomplished the top of the hill should be on a level with the land, and the seeds about on a level with the edge of the water when it comes slowly down the furrow in irrigating during the summer. Then the plants when they come up should be near enough the brink of the furrow to get their roots thoroughly saturated, but never be flooded. The ground between the rows should be kept free of weeds and well cultivated, while the hoe should be brought into frequent use around the hill, and when the plants get large enough to judge of their vitality they should be thinned to about two or three of the strongest, standing two or three inches apart in the hill.—FRANK CROWLEY, Col., in *American Agriculturist*.

Growing Cucumbers for Pickling.—Growing cucumbers so as to have a large quantity of small ones for pickling, is quite a distinct art of culture from growing them for ordinary uses. In order to have them bear abundantly, and not get large, they are usually sown in long ridges, and suffered to grow up rather thickly together. The vines are continually being pinched back, in order that they may produce a large number of comparatively small shoots, which naturally produce weaker cucumbers than larger and stronger shoots would. They usually bring, at wholesale, from fifteen to twenty dollars a bushel.—*Meehans' Monthly*.

ESSENTIALS IN STRAWBERRY GROWING.



PROF. LAZENBY, before the Columbus Horticultural Society, gave the following summary of essential points to be kept in mind: (1) The most profitable varieties for the commercial grower are those not easily influenced by differences of soil and climate. Those which succeed well on wide areas are usually better than those which have a more local reputation. (2) Pistillate varieties, when properly fertilized, are more productive than the sorts with perfect flowers. (3) The value of a variety for fertilizing pistillate flowers does not depend so much upon the amount as upon the potency of its pollen. (4) The flowers of pistillate varieties are less liable to be injured by frost than the flowers of perfect varieties. (5) Varieties that are neither very early nor very late in points of maturity, are the most productive and have the longest fruiting season. (6) As a rule, varieties that have the most vigorous and healthy foliage are the least productive, while those with a weaker growth of foliage and a greater susceptibility of leaf-blight are usually more prolific. (7) Winter protection may be dispensed with upon well drained, sandy soils, but appears to be a necessity upon heavier ones. (8) The leaf-blight may be checked by using the Bordeaux mixture, beginning just as soon as the leaves appear and continuing the application every few weeks throughout the season.

WATERING LARGE AND SMALL FRUITS.



APPLES, peaches, pears and similar fruits should be thoroughly irrigated in the fall, as soon as the leaves are brown or fall off, then again in the spring as soon as the frost is out of the ground. The orchard should always be cultivated and kept free from weeds. Until the trees shade all of the ground, more or less crops that require cultivation may be raised among the trees. The cultivation of fruit trees should be merely surface deep, so as not to disturb the rootlets which seek the very top of the soil for sunshine and air to support and mature the fruit. Too much water is as injurious as too little for fruit trees, same as for other crops. Orchards should never be irrigated later than the last of July, until the leaves fall off in the fall.

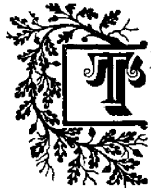
Small fruits and strawberries should be watered two or three times a week during the remainder of the season to prevent the soil from becoming dry. Blackberries and raspberries do not require watering as often as strawberries, but the ground should be kept moist. Strawberries, blackberries and raspberries yield the best returns, if, in addition to irrigating by flooding, the vines and bushes are sprayed with water from a hose.

CELERY UNDER IRRIGATION.

The soil for celery should be plowed deep and harrowed fine. Soil containing a small amount of alkali is to be preferred, as is also loam rather than sand. Early varieties such as white plume and golden self-blanching are set out from June 15 to July 1; later varieties from July 1 to 15. Rows for early varieties may be from 3 to 4½ ft, depending on the amount of banking to be done. Rows for late varieties must be five feet apart to give soil and room for banking. Plants in either case may be 6 inches apart in the rows.

Unless assured of two or three days wet weather just after planting, it is best to irrigate as soon as the plants are set, and repeat in a few days. Replanting unless done very soon is not advisable. In order that irrigation may not wash out or otherwise injure the plants, it is necessary that the latter be set out on the sides of the ridges, leaving the bottom of the trenches free for the passage of the water. The cultivation of celery should be thorough. The soil about the plants needs to be hoed or otherwise kept mellow. Soil needs to be filled in about the plants occasionally to force them to grow upright instead of sprawling over the ground. When the celery is a foot high it must be "handled." This consists in gathering the stems all together and drawing soil about them for the purpose of keeping them upright and thus preventing them from being covered by the furrow slices that are afterward turned against them.—Farm and Home.

MANURE FOR PEACH TREES.



THE peach tree grows so easily and so luxuriantly, and over such a vast extent of country, that few think of supplying it with other nutriment than is found naturally in the soil. Without doubt this is sufficient in many cases, particularly in the newer portions of the country. But every year of cropping in the usual way lessens the fertilizing ingredients laid away in the earth in bygone centuries, and fruit trees, as well as corn, wheat, etc., suffer by its diminution. Indeed, fruitbearing, particularly bearing heavy crops of large fine fruit, makes one of the heaviest drafts, if not the heaviest of all, on the land.

Among fertilizers one of the most important for most crops—and particularly for fruit trees—is potash in some form. This is easily applied in wood ashes, none of which, even if leached for soap-making, should ever be wasted. It is very trying to see ashes emptied out in the road or by the side of a run as has been observed more than once. The ashes may be applied whenever convenient; not around the trunks where they can do little good, but scattered over the entire surface as wide as the branches extend. Anyone who has tried this must have noticed the fine growth of the trees and the thrifty dark green of the leaves afterward.

It is not probable that ashes will cure the yellows now becoming so common in some sections, though at one time there was considerable hope in this direction. But prevention is better than cure; and there is good reason to believe that a peach tree kept in vigorous health will be able to resist the yellows; just as perfect health in the human system prevents, or throws off many forms of disease. Barnyard manure is also a good fertilizer for peach trees as well as for most other things dependent on the soil. But it should be remembered that ashes, or anything containing potash, must not be applied at the same time with barnyard manure; for the ammonia, one of the best elements in the latter, would be liberated by potash and lost. Six months at least should intervene between the application of these two valuable fertilizers—the best probably, of all fertilizing materials, considering everything—National Stock man.

CUCUMBER UNDER GLASS.

Although the cultivation of cucumbers during the winter months is somewhat troublesome, they are comparatively easy of management during the longer and brighter spring days. Plants from seed sown at the end of February will give a supply of fruit from about the middle of April until plants outside begin to bear. The starting of seeds is sometimes troublesome on account of dampening off just after germination has begun; this can be prevented by careful planting. A little study of the habit of the seed will show that the embryo breaks through the shell at the point or thin end, the root being first produced. The seeds should be set so that the roots can go directly down into the soil and the top shoot upward. If the seeds are sown at random the little plant, after germination, is sometimes in a position from which it cannot extricate itself. They should be sown in small pots in a light sandy soil and placed in a good bottom-heat; as soon as the plants are up they should be removed to a light situation near the glass, but shaded from strong sunlight. They must be shifted into larger pots as soon as they are strong enough, using a heavier soil than before, and which the roots will now be able to take hold of. When planted into their permanent quarters a few tobacco-stems spread about will help to keep off the black fly, which is always a ready enemy. It is necessary to keep the atmosphere moist and to syringe twice daily on bright days, but the syringing must be done lightly, as the leaves are tender and easily damaged. On this account smoking should never be resorted to as a means of destroying the fly, but if this pest becomes troublesome fresh tobacco should be spread over the pipes and sprinkled with water. This should be done when the pipes are warm and the house is closed. A night temperature of sixty degrees is sufficiently high, with a rise of fifteen degrees through the day. The plants may be slightly shaded to advantage when the sun is bright. We have tried several varieties, but find none equal to Telegraph for quality, productiveness and free growth.

PREPARATION FOR WINTER GARDENING.



Esay that winter-gardening begins with autumn, but summer, or even the month of May, is none too soon to begin planning for our winter gardens, if we wish to make sure of all the beauty and all the pleasure that may be derived from them. One of the very first points requiring attention is to provide suitable plant-stock between this month and the time of frosts. Here let the inexperienced be on their guard; not all pot-plants are alike suitable for cultivation in dwellings. Let the list be confined to such plants as are known beyond doubt to be well adapted to this purpose, and do not invite failure and disappointment

by attempting to grow others. The list of good winter-flowering plants is so long and so varied that any taste may be satisfied with a choice of thoroughly tested sorts.

A list of fifty distinct kinds of plants specially adapted to window-culture is given below :

- | | |
|---|-------------------------------------|
| 4 <i>Abelia rupestris</i> . | 4 Lantana. |
| 5 Abutilon, bush and trailing. | 1 Madeira-vine. |
| 3 Achania. | 2 Maurandia. |
| 4 Agapanthus. | 5 Moneywort. |
| Agave. | 4 Myrtle (myrtus). |
| 3 Aspidistras. | 3 Neprolepis (fern). |
| 4 Amaryllis. | 3 Orange. |
| 3 <i>Aralia Sieboldii</i> . | 5 <i>Othonna sedifolia</i> . |
| 3 Begonias. | <i>Oxalis rosea</i> . |
| 4 Cactuses. | 2 Petunia. |
| 5 Calla. | 5 <i>Plumbago Capensis</i> , |
| 4 Chrysanthemums. | 2 Primulas. |
| 3 <i>Corypha australis</i> (palm). | 3 <i>Pteris tremuloides</i> (fern). |
| 1 Crocuses. | 3 <i>P. argyrea lanceolata</i> . |
| 3 <i>Cyclamen persicum</i> . | 5 Passiflora. |
| 3 <i>Cyperus alternifolius</i> . | 4 Roses, Monthly Bengal. |
| 3 Date-palm. | 3 Sago-palm. |
| 4 <i>Euonymus Japonica</i> . | 4 <i>Saxifraga sarmentosa</i> . |
| 4 <i>Farfugium grande</i> | 4 <i>Senecio scandens</i> . |
| 3 <i>Ficus elastica</i> (India-rubber). | 1 Snowdrops. |
| 3 <i>Ficus elastica variegata</i> . | 4 Tradescantia, trailing. |
| 5 Geraniums. | 1 Tulips. |
| 5 Heliotrope. | 4 Vallota. |
| 1 Hyacinth. | 5 Vinca (periwinkle). |
| 4 <i>Hydrangea hortensis</i> . | 2 Wax-plant. |
| 5 Ivies. | |

To have a good stock of these plants by fall, the following course should be pursued: Order from the greenhouse ordinary sizes of all the plants wanted except those preceded by (1), which are bulbous, and (2) which are to be seed-grown. Seeds of the latter should be sown early in summer. The bulbous sorts are to be procured in September, and started then in pots.

The kinds preceded by (3) should be grown in pots sunken to the rim in earth, in a spot shaded for about three hours at mid-day. If no other shade is convenient, let the plants stand together in some spot and place a canopy, made of lath nailed an inch apart on a frame and raised about four feet from the ground directly over them. A small empty pot should be set under the middle of each pot containing a plant, to prevent the roots from sticking through the drainage-hole into the soil beneath.



FIG. 962.—TEDESCANTIA.

from fierce winds.

The plants preceded by 5 are comparatively rapid growers, and will summer well if knocked out of their pots and planted in the open soil, where they will grow until September. Such plants as are kept through the summer in pots should be carefully tended. They must never suffer for want of liberal watering. When water is given, saturate the soil thoroughly to the very center of the plants' ball of roots. In cases where root-growth is active, the plants should be repotted into pots a size larger, whenever an examination of the ball of earth shows a lacework of white roots surrounding it. To remove a ball of roots from its pot, invert the plant with the surface of the soil resting on the palm and outspread fingers of the left hand, and with the bottom of the pot grasped firmly in the right hand. Strike the rim of the pot sharply upon the edge of a table or bench, and the ball of earth and roots will be dislodged. Rapid-growing plants like chrysanthemums should be pinched back at intervals until August to make them branch freely. Such plants in particular must not be allowed to suffer even once for lack of water, as this will cause the lower leaves to turn yellow and drop.



FIG. 963.—CALLA LILY.

To provide good soil for the window plants is an essential point in their successful cultivation. None is better for the average of plants in the list given than what florists call "fibrous loam." This is made by cutting sod about three inches thick from an upland pasture lot, or from a country roadside, and stacking it up for some months before it is used. Broken up in rough pieces the size of marbles, such soil contains, with the addition of a sprinkling of fine old manure or bone-dust, all the elements really necessary for a plant's existence. It is a mistake common among window-gardeners to suppose that finely-sifted soil is most congenial to plant-growth; one that is somewhat rough and fibrous is much better.

The beauty of the winter garden is well insured by such a selection of plants, cared for in the manner indicated until autumn, when further directions will be in order.—American Gardening.

ASPARAGUS CULTURE FOR CITY AND VILLAGE LOTS.



SPARAGUS, considered as a vegetable, has some peculiarities which distinguish it from other plants of the kitchen garden.

The growing plant is very beautiful. Its feathery masses of graceful foliage, its peculiar shade of green in summer, the bright red berries contrasted with the rich yellow of the maturing plant in the autumn, make it well worthy of a place among ornamental plants, particularly in the shrubbery border. In cultivation the plant is injured rather than benefited by frequent stirring of the soil; all it asks is abundant

room, not less than five feet square to each plant, and liberal feeding. It takes time to establish itself, but when this is well done a little care and free manuring each year will keep it permanently and enormously productive, a single plant under the Argenteuil system of cultivation having furnished thirty-seven pounds of the choicest asparagus in a season.

The beauty, the ease of culture, the permanency and productiveness of the plants, and the fact that asparagus, even more than most vegetables, should be used when perfectly fresh—should be cut and cooked the same hour—warrant the cultivation of this plant in places where the attempt to grow other vegetables might not be wise. A few plants can be introduced with good effect in highly kept pleasure-grounds. A few can be set in the corner of the fence or beside the shed in places too contracted to warrant the attempt to have a garden of any kind. In fact, there are very few town and village places that could not easily furnish the family with an abundant supply of this vegetable at a trifling expenditure of labor, and without detracting from the beauty or usefulness of the grounds. As a guide to those who may wish to undertake asparagus culture in the way suggested, I give the cultural methods followed in the Argenteuil district of France, which has the reputation of producing the finest asparagus in the world. A considerable proportion of that grown there is the product, not of asparagus farms, or even of fields and beds, but of single plants or clumps standing by themselves, or in groups of from five to twenty scattered here and there in any open space that may chance to be left in corners or between trees and buildings. Wherever there is an unused bit of ground five feet in diameter, which is not in dense shade or liable to be covered with water, there the Argenteuil gardener sticks in a plant, gives it good care, and is well repaid for his labor.

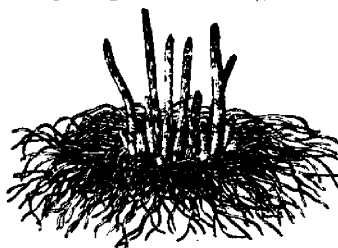


FIG. 964.

The method of cultivation is simple. The spot is put in good tilth and

made moderately rich ; a vigorous plant is carefully set out so that its crown will be about four inches below the surface-level ; weeds are kept down by shallow surface cultivation, and in the fall, after the tops are fully matured and dead, the surface for a circle of five feet in diameter is covered with rich and well-rotted manure. As early in the spring as possible this manure is well-forked into the surface, and the starting weeds kept down by shallow hoeing until the plant has made sufficient growth to take care of itself. The third season the treatment is the same as in the second, especial care being taken to take out any seedling asparagus plants which may spring up, they being treated as the worst of weeds. The fourth season the harvest commences, though if the plants have made a good growth a few cuttings are made the third year, but it is considered a better practice to wait until the fourth, in order that the plants may become well established. The manure is spaded in as early in the season as possible, and as soon as the first shoots appear at the surface the soil is heaped over the crown of the plant in a mound about a foot high, which serves to blanch the growing shoots. In gathering, the shoots are broken as far as possible below the surface. The covering soil being friable from its abundant manuring enables one to secure much longer shoots than if it were level. Care is taken to remove all the shoots at each picking and not to prolong the season far into the hot weather, so that the plants may have a chance to make a good growth in preparation for the next season's crop. At the close of the season the mound of earth is levelled with the surface, and about two quarts of fresh wood-ashes and a handful of salt are scattered about each plant and hoed into the surface. The treatment given the fourth year is repeated, and the shoots gain in number and size as the plant increases in age.—Garden and Forest.

THE FRUIT HOUSE.



FRUIT house entirely above ground can be put up at not a very large cost, in which an even temperature can be maintained, and which will keep out the frost, as follows : Prepare a good tight foundation of stone for the building. Use 2 x 4 inch studding for the sides. The sides should be about eight feet high. Sheath on the outside of the studding with inch lumber, and cover this with building paper, and then on the outside of this with another course of studding, sheathing and building paper. Do this until the wall has three air spaces. The roof is constructed the same way to protect from heat as well as frost. The writer has recently constructed a cellar and fruit house over it, as follows : The floor between the cellar and the fruit room above is laid with 2 x 8 joists, sealed above and below with inch boards. The space between is filled with sawdust. The studding for the sides are 2 x 6, eight feet high. Outside it is sheathed lengthwise with inch lumber, and on this a layer of building paper. Then comes

a course of inch pine siding and battens. On the inside a layer of building paper is tacked to the studding and then a course of inch lumber. The 6-inch space between the two courses of sheathing is filled in with sawdust well packed. Building paper is tacked to the under side of the rafters an inch pine ceiling is put on and the 4-inch space between the roof boards and ceiling is filled in with sawdust. It is ventilated with windows at each end.

The main points to be kept in view when planning a storage place for our apples are good drainage, good ventilation and security from heat and cold. Here in this climate we are very apt to have in the late fall and also during the winter months warm spells of weather; and during these warm spells the ventilators should be opened at night after the atmosphere has become cool, and kept closed during the daytime. In this way a nearly even temperature can be maintained, not so low, perhaps, as in a costly cold storage plant, but sufficiently low as to meet the requirements of the average fruit grower.—From Transactions of Missouri Horticultural Society.

YIELDS AND PROFITS OF THE BLACKBERRY.



THE year following the planting, there should be a sufficient yield to pay for the cost of the plantation to that time. The third year, the crop should be large, and from that time on, the yield should be nearly uniform, when the seasons are good. I do not know the limit to the profitable age of a blackberry plantation. It is certain that it should continue to bear heavily for twenty years if it has good care, and I am told by careful growers that a patch will last even longer than this. As the plants are generally grown, however, they cannot be expected to hold out this long, for the land becomes hard and foul, and the plants full of dead and diseased wood.

Blackberries are capable of yielding 200 bushels per acre, year by year, unless very unfavorable seasons intervene. This Station once made an inquiry amongst fifty growers in various parts of the country as to the average yield of blackberries. The lowest return was 40 bushels, the highest over 300 bushels, and the average of the whole fifty was 98 bushels per acre. The prices in this State range from seven to fifteen cents a quart. J. M. Mersereau, of Cayuga, one of our best blackberry growers, recently said to me: "Let me choose the soil, and I will guarantee to clear \$200 per acre on blackberries." In our own experience at Ithaca, blackberries have sold the most readily of any of the bush fruits, at prices ranging from eight to fifteen cents per quart. Granville Cowing, Muncie, Indiana, a most successful grower of this fruit, makes me the following statements respecting the profits of it: "The blackberry is probably the most profitable of the small fruits. Owing to its firmness it can be kept much longer in good condition than the strawberry or raspberry, and often brings better prices. The best varieties are enormously productive, their cultivation comparatively easy, and a well kept plantation of them should last a life time." Whilst all these figures and statements are tempting, it must, nevertheless, be said that the blackberry, like all other fruits, yields the golden harvest only to those who work for it, and who think whilst they work.—Cornell B. 99.



The Canadian Horticulturist

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✦ Notes and Comments. ✦

THE RED CROSS CURRANT is held by the introducers at \$1. per plant!

THE CLARKSBURG NOZZLE is a good one. We have tried it at "Maplehurst" this spring and the foreman thinks it is superior to the MaGowan.

ERRATA.—The average yield of Mr. Orr's vineyard is given on p. 112 as three tons, this should read three tons per acre.

FAMEUSE apples were quoted on the same date in Montreal, at from \$2.50 to \$4.00 per barrel.

NO GRAPE BUDS.—The Grape Belt, of Chautauqua Co., N.Y., reports that there are no fruit buds on the grape vines in that part of the State, owing, probably to the frost in May, 1895.

THE POTATO ROT is a fungus parasite, and may be prevented from injuring the potato vines by spraying them with the Bordeaux mixture early in July, and two or three times later on.

MR. A. S. FULLER, author of many excellent works on Horticulture, died suddenly at his home at Ridgewood, N.Y., on May 4th, at the age of sixty-eight years. He was a practical florist and fruit gardener, and for twenty-five years agricultural editor of the Weekly Sun. He was editor and part owner of the Rural New Yorker.

MR. A. A. PETTIT, Director of Spraying Experiments for Ontario, has resigned his position to enter political life as Conservative Candidate for South Wentworth. Our Director, M. W. M. Orr, of Fruitland, as been appointed to his position.

ASPARAGUS was quoted at a high price on May 1st, in Montreal. This vegetable is one which fruit growers might well plant in a young orchard, or fruit garden, because it grows easily and is harvested before the orchard tree makes much growth. It also brings in a little money at an early part of the season, when expenses are heavy and no fruit crop is ready to harvest.

THE WILDER GRAPE.—To-day, the 25th of May, 1896, we have opened a box of Wilder grapes in perfect condition, sent us by Mr. E. B. Edwards, of Peterboro'. They are rather under size for this variety; perhaps they do not grow as large in that section as south of Lake Ontario.

Mr. Edwards writes that apples promise a heavy crop so far this season, especially the Blenheim Orange, which look finer than ever. This apple is a favorite with Mr. Edwards, and has proved one of his most profitable varieties.

JAPAN PLUMS.—Mr. John Craig speaks of the hardiness of these plums as follows: "The Russian plums are fully 25 per cent. hardier than the Japanese plums and some of them are equal in quality. The majority of those which I have tested are not nearly as handsome in appearance, but in this locality the Japanese plums are absolutely valueless, as the trees will not stand our climate. In portions of Ontario, British Columbia and Nova Scotia they are destined to be of great value. The Russian sorts as a rule have not proved productive thus far, although, as before stated, the trees are hardy and vigorous.

AN amusing anecdote is given respecting the late Duke of Leinster, who, upon one occasion having run across one of his farm laborers, is reported to have said to him: "I regret, owing to a report made by my steward, at having to dispense with your services, as there is not, I believe, sufficient work for all." Upon hearing this the man innocently remarked "Faith, your Grace, there is no necessity to dismiss me on account of scarcity of work, as very little would keep me busy." The duke was so much amused by his ready wit that he vetoed the advice of his steward and kept the laborer in his service.

THE BLOOM of fruit trees of all kinds has been exceptional for two seasons, first, its earliness, and second, its abundance. We in Southern Ontario had cherry bloom before April was over, and our apple bloom was at its height about the 9th of May, earlier than ever within the "memory of the oldest inhabitant." Usually the even years give the great apple crops in Ontario, and from present appearances 1896 will break all records, and every tree is doing its best, especially of such standbys, as Baldwin and Greening. Cranberry Pippins are light; they have taken to bearing at Maplehurst in the odd years, when most needed. Astracans are heavy. Of pears the Bartlett is well loaded, and clean, indeed most varieties show well; cherries are also setting a most abundant crop. Even the peach shows up well about Grimsby, while about St. Catharines, and in Niagara district there are very few if any buds which escaped the winter's frost, and the same is reported from the State of New York. Altogether the indications are, that fruit growers will have a successful season, which will help make for recent failures.

❖ Question Drawer. ❖

Propagating the Plum.

840. SIR,—Would you describe the propagation of the plum, budding, etc., and say whether it will do to bud upon suckers which grow from the roots?

D. N. ANDERSON, *Wyoming.*

Plums are usually budded upon seedlings of some free growing variety. The pits should be sown in the fall soon after the plums are harvested and before the pits have had time to become very dry. They are sown in drills about an inch and a half deep, much the same way that peas are sown. The frost of the winter will crack the pits and in the spring they will begin to grow. When the seedlings are one year old they may be transplanted into nursery rows and set from four to six inches apart. Early in July following they will be fit

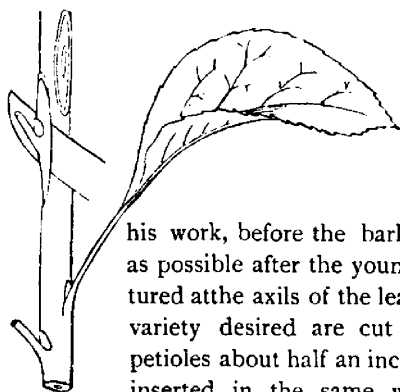


FIG. 965.

for budding. As the bark of the plum is somewhat more difficult to work than the peach, it is necessary for the budder to watch the growth in order to seize the most favorable time for



FIG. 966.

his work, before the bark becomes dry and as soon as possible after the young buds are sufficiently matured at the axils of the leaves. Sticks of buds of the variety desired are cut and the leaves trimmed off, leaving the petioles about half an inch long for handles. Buds are then cut and inserted in the same way as has been previously described for budding peaches. Fig. 965 shows the manner of cutting the bud to be inserted, and 966 shows the manner of slitting the bark, inserting the bud, and tying it with raffia, or basswood bark. Success might possibly be had in budding on sprouts from old trees, although in transplanting they might not be so sure to survive as the seedlings, the roots being poorly formed.

How to Apply Nitrate of Soda and Bone Meal.

841. SIR,—I have been using bone meal and nitrate of soda as advised by writers on lettuce culture. I used soil that had been frozen solid. On a bed 100 ft. square I put two pounds of bone meal. I have cut this day, April 20th, first class Golden Queen Cabbage lettuce and Spindlow's Double Curled lettuce. I put two pounds of nitrate of soda on 100 square feet of land planted with the same varieties, and the result is that they are not nearly ready, and there is no appearance of their ever maturing. Again, on 200 feet of ground I put two pounds of soda and two pounds of bone meal, well mixed, and the result was almost a total failure. Now what caused the failure? Did the nitrate of soda retard the growth or did the bone meal cause extra rapid growth. In the case of the bone meal there was no failure whatever. In the case of the soda fully fifty per cent. of the plants died out and had to be replaced. If the soda killed fifty per cent., why not all?

Are two pounds of soda too much to apply to 100 square feet of ground for lettuce.

WM. SPENDLOW, *Billing's Bridge, Ont.*

Reply by Prof. H. L. Hutt, Ontario Agricultural College, Guelph.

In such experiments one plot should always be left with no fertilizer, to serve as a standard by which might be compared the relative values of the different fertilizers or mixtures used. From the fact that the plants were killed when the nitrate of soda was used, shows that it was applied in too large a quantity. From $\frac{1}{4}$ to $\frac{1}{2}$ lb. would be nearer the proper quantity to use on 100 sq. ft. of ground. It might be applied to the best advantage by dissolving it in a pail of water and then applying it with a sprinkler. Care should be taken, however, that the other plots in the experiment receive an equal quantity of water. Nitrate of soda can be most economically used by applying it in small quantities at intervals of ten days or two weeks.

Hardiness of Japan Plums.

842 SIR,—Are the Japan plums, Abundance, Burbank, Satsuma and Willard, as hardy as the Lombard or the Bradshaw.

J. D. STEWART, *Aitken's Ferry, P. E. I.*

The Japan plums are not as hardy as the Lombard, although they appear to be doing well in southern Ontario. Will our subscribers who have had experience with them farther north, please say whether they are hardy with them.

Quinces.

843. SIR,—Are the Champion and Rea's Mammoth quinces as hardy as the Lombard plum? Compare season of ripening with Lombard plum.

J. D. STEWART.

So far as our experience goes in southern Ontario the quinces are as hardy as the Lombard plum, but we have not yet received results of any experiments with them in our stations farther north. The season of ripening of the quinces is at least two or three weeks later than that of the Lombard plum.

Plum Baskets.

844. SIR, —What quantity of plums does the plum basket of Ontario contain?

J. D. STEWART.

The plum and peach basket of Ontario are the same size and hold about a peck and a half.

The Willard Plum.

845. SIR,—What is the general opinion of plum growers of the value of the Willard?
J. D. STEWART.

Reply by Mr. J. K. Gordon, Whitby.

The Willard is a yellow freestone plum of medium size and quality; the earliest in ripening of all the Japan varieties which I think constitutes its chief value for market; but as it is also a very early bloomer, I am afraid that our May frosts will render it unproductive here, and I would not, therefore, advise that it should be largely planted in Ontario County.

Principal Varieties of Hardy Plums.

846. SIR,—Can you give a list of the principal varieties of plums of the same hardiness as Lombard? as Bradshaw?
J. D. STEWART.

Reply by Mr. Gordon.

The Lombard is not so hardy as the Bradshaw, and I class with the Lombard the following varieties as possessing the same degree of tenderness, viz.: The Willard and Abundance, Grand Duke, Orange, Diamond, Goderich, Oullin's Golden Gage and Reine Claude de Bayay. While I would rank the Bradshaw with the following hardier varieties, that is to say: Yellow Egg Imperial Gage, Smith's Orleans, French and Italian Prunes, Washington, Duanes Purple, etc.

The Saunders Plum.

847. SIR,—What is thought of the Saunders plum in Ontario? With me it is a poor affair, at least on young trees, being small and of only medium quality.
J. D. STEWART.

The Saunders is not generally known or grown in this county (Ontario). From my experience I describe it as a healthy, hardy, underized tree, with slender, pendant branches, and a prolific bearer of handsome yellow fruit, medium to small in size, and medium to poor in quality; season quite early, which, with its fine color, may cause it to sell well, in case its small size and poor quality prove to be no objection.

Propagating the Gladiolus.

848. SIR,—In propagating the Gladiolus—I. Would you rely upon the small root offsets for satisfaction, or would you prefer the seeds?

II. What type would you be most likely to obtain from the offsets, and from the seeds?

III. Which would be nearest to the parent? and if differentiated, in what direction, for better or for worse?

IV. How long will the best imported bulbs remain up to the standard of the variety in our conditions? and from whence do we obtain our finest strain of bulbs?

I am very glad you are giving some attention to this truly beautiful and justly popular flower. I firmly believe that it will amply repay any amount of attention given to it, and be likely to improve both itself and its devoted cultivator. It is easily managed and well suited to popular use. Success to the kindly efforts of the CANADIAN HORTICULTURIST.

B. GOTT, *Strathroy, Ont.*

Reply by H. H. Groff, Simcoe, Ont.

In replying to yours of the 4th inst., let me ask your readers not to lose sight of the fact, that we are speaking of hybrid Gladioli, and that the results of later work, containing as it does, such a complex mixture of blood from several species, produces a most variable flower; and when raised from choice seed, it is likely to break into endless combinations of form and beauty.

The amateur of to-day fails to realize the value of his heritage, in the results of many past years of experiment and labor, now offered at his very door; and those of long experience have yet to learn how far beyond their expectations this work has been carried, to its present successful issue.

Below find my replies to the questions from you:—

Ans. 1.—Varieties are increased by the small root offsets, or bulblets, which invariably reproduce the parent, excepting in special cases of reversion to one of the species from which the variety originally descended. Botanically speaking, no two seedlings are alike, and they are as likely to resemble any other variety of their section as either the seed or pollen parent, excepting in cases of special selection, and even then no definite results can be foretold, the chief advance being in the line of quality.

Ans. 2.—Reply to No 1 covers this query.

Ans. 3.—This depends entirely upon the stock used and methods practised in seed raising. In my own work, varieties originate that are superior to those they resemble in the choicest importations; seventy-five per cent. are often worth retaining, while, from ordinary commercial seed, over five per cent. is the exception.

Ans. 4.—Imported bulbs often fail entirely, before becoming acclimatized, and in the Gandavensis section I have long claimed that high-priced varieties should be furnished in strong, unbloomed bulblet grown bulbs, which are invariably refused, the grower knowing their greater value, and the average buyer preferring something big. Many of these big bulbs fail to produce a characteristic flower for two successive seasons, and often not until grown again from bulblets. These are all questions of the vitality of each individual variety. Europe has always produced the most advanced work on general lines; but we, thanks to the laborers of the past, can easily place ourselves on an equal footing, without the loss of time necessary in building up from the species.

* Open Letters. *

Seely Basket.

SIR,—I notice your favorable commendation of the Seely fruit basket and have had some inquiries from Ontario for material for the construction of that basket, namely veneer splints and discs for top and bottom. I would like to know if there are any people in your fruit district who are making an effort for fancy packages of fruit. I have been perfecting forms, presses and such other requisites for a uniform and convenient size which would be easily manufactured and easily handled in packing, which is no easy matter, as I am already engaged in an extensive and long established business.

I. B SEELY, *Philadelphia, Pa.*

Gladiolus Degeneration.

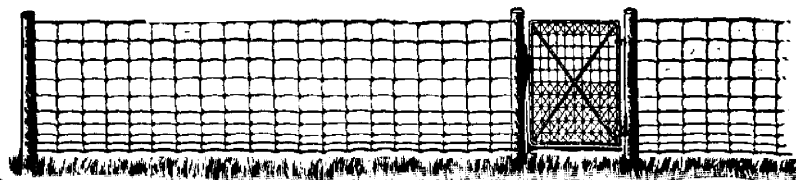
SIR,—On page 171 you make me say, "raise your own seed as well." This should read "raise from seed." Of course any one can raise his seed, but my claim is that new crosses from seeds (wild varieties) are necessary to restore the fading vitality of the commercial gladioli *Gandivensis*. Few choice collections have the necessary stock for such work and practically none of the amateur collections.

H. H. GROFF, *Simcoe, Ont.*

» Our Book Table. «

THE BAMBOO GARDEN, by A. B Freeman, Milford, C. B., author of "Tales of Old Japan," illustrated by Alfred Parsons. Published by McMillan & Co., of London and New York. Price, \$3.

This is a beautifully got up volume in every respect, and so attractive that even one who has no interest whatever in the cultivation of the bamboo can read it with pleasure and profit. It deals especially with such varieties of hardy bamboos as can be grown in England, describing their propagation, culture, uses, superstition, classification, description of species, etc, etc.



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