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GOLDEN QUEEN



Large as GUTHBERT and more productive,
Rivals in quality BRINCKLE'S ORANGE and of iron-clad
hardiness, of greatest beauty and strongest growth.

THE Canadian Horticulturist.

VOL. IX.]

NOVEMBER, 1886.

[No. 11.]

New Fruits.

THE GOLDEN QUEEN.

We are so often deceived in estimating the value of new fruits that we hesitate to say much about them until we have tested them well on our own grounds, or else have seen them grown on those of our neighbors.

The Marlboro', for instance, which was so highly puffed some time ago, is now set down by many as not bearing out its good reputation, especially after the first two or three seasons; and a similar tale might be told of many other new varieties.

But all the evidence, thus far, seems to indicate that the Golden Queen raspberry is to be a very strong claimant for popular favour. Already some notices of it have appeared in this journal, so that many of our readers are already partially familiar with its claims upon their notice.

The *Golden Queen* originated on the farm of Mr. E. Stokes, of Camden, N. J. He found it growing in a twelve-acre block of Cuthberts, and thinks it either a sport or a seedling of that variety. It resembles the Cuthbert in so many ways, that its relationship seems well attested. It is like the latter in size of

berry, in vigor of canes, and in productiveness; but differs in color, being a beautiful yellow. Mr. Stokes says that in color and flavour it resembles the famous *Brinckles Orange*.

This latter been for a long time at the head of the list of light colored raspberries, being everything that could be desired in point of flavour; but in these days, when raspberries sell at such low prices, this variety does not produce enough quarts to the acre to satisfy us.

The *Catharine* is the best bearer yet tested of this class, and it was this season laden down on our grounds with the most attractive looking fruit. But alas! one berry was enough to satisfy even the children. It lacks altogether in point of flavour, being most insipid. Besides this it has another fault, for it is too soft to ship any distance.

In this latter respect also the Golden Queen is claimed to be quite equal to its parent the Cuthbert, which is such an admirable shipping berry. Mr. Theo. F. Baker, President of the N. J. Horticultural Society says: — "The fruit is very firm and carries well, from my experience with a pint which I kept three days, after carrying over seventy-five miles, in good condition."

It is also claimed for this variety that it carries the palm for *hardiness* also. Mr. J. T. Lovett of Little Silver, N. Y. who is introducing this berry says: "I have never known it to be injured in the slightest by cold." Now with us in Canada every thing hinges upon this last point, and we are not willing to take the experience of New Jersey fruit growers as a guide to us in this respect. It is claimed to be hardier than the Cuthbert, and it will need to be, to satisfy us, for the Cuthbert is found to be too tender in many places.

To be able to speak confidently we must test it for ourselves, and we hope many of our readers will give it a trial, and report whether it really has any faults; for so far it has been claimed to be faultless.

Notes and Comments.

THE ANNUAL MEETING of the Fruit Growers' Association of Ontario was held at St. Lawrence Hall, Toronto, on Tuesday evening, 11th September. President Saunders read his annual address, which was received with the closest attention by all present. It was a matter of deep regret to every one that it should contain a final statement that it would be impossible for him to serve another year owing to the pressure of other engagements.

Still we are happy in being able to say that he has allowed himself to be elected as a director, representing Agricultural Division No. 11; and the Association will therefore still continue to receive the benefit of his wise counsel and varied stores of scientific knowledge.

THE PRESIDENT for the new year is Mr. Alex. McD. Allan, of Goderich, Ont., a gentleman who has been long and favorably known in connection with our Association, and who has honorably filled the position of vice-president during the past year.

Mr. Wm. Saunders says of him:—"He has an excellent knowledge of Canadian fruits, and has been one of the most extensive shippers of Canadian apples and plums for many years past. He has long been looked upon in our meetings for discussion as one of our most reliable authorities on fruits. He has served as chairman of the Committee on New Fruits for several years, and as such has presented the Association with several excellent reports."

THE VICE-PRESIDENT is Mr. W. E. Wellington, of Toronto, who has been for some years a prominent member of the Association. His intimate acquaintance with the details of his own business is of much service at our meetings; and his eminent success proves that he is possessed of the very highest qualifications for his position as a member of the Executive Committee.

THE BOARD OF DIRECTORS for the new year consists of the following persons, the figures showing which agricultural division they represent:—1, John Croil, Aultsville; 2, A. A. Wright, Renfrew; 3, R. J. Dunlop, Kingston; 4, P. C. Dempsey, Trenton; 5, Thos. Beall, Lindsay; 6, Col. J. Magill, Oshawa; 7, Murray Pettit, Winona; 8, A. M. Smith, St. Catharines; 9, Fred. Mitchell, Innerkip; 10, J. A. Morton, Wingham; 11, Wm. Saunders, London; 12, W. W. Hilborn, Arkona; 13, Charles Hickling, Barrie.

These gentlemen, being elected by vote of the Association and not by any ring or clique, it is evident that any

man from any of these divisions, who is interested in the growth of fruits or flowers, and shows that he has practical knowledge of the same, has before him the possibility of office in the Association, and of influence in the conduct of its meetings.

THE SECRETARY appreciates the honor and confidence reposed in him in his appointment to such an important and responsible a post as that which includes, not only the secretary-treasurership of the Association, but also the editorship of the *Canadian Horticulturist*.

This latter department of the work he takes up with some hesitation, because he has to succeed a gentleman of such acknowledged ability and wide culture, and one who has so ably conducted this journal during the nine years of its publication.

We have no doubt that we express the feelings of every reader of this magazine, when we say that Dr. D. W. Beadle's retirement from the editorship is a matter of the greatest regret and disappointment. We are happy to say, however, that he has most kindly promised us the favor of his valuable assistance at any time, an offer of which we shall not be slow to avail ourselves.

MEMBERS OF THE F. G. ASSOCIATION, and readers generally, please show us your favor both by contributing items of interest, and by securing long lists of new subscribers. Enlargements and many improvements depend upon a large circulation. This magazine is not published in the interest, or for the pecuniary advantage, of any individual. The revenue above the legitimate expenses is devoted to the interests of the whole membership. We only await the necessary means in order to carry out the many plans in contemplation for increasing the attractiveness,

as well as the usefulness, of "*The Canadian Horticulturist*."

PRIZE FRUIT.

THE PRIZE FRUIT AT THE TORONTO FAIR certainly made a fine display in every department, excepting that of peaches, in which it was necessarily a lamentable failure. Even the favoured Niagara district, from which almost the only specimens came, had very little to show, and with that little easily carried off the prizes.

Some very fine specimens of the Lord Palmerston peach was shown from Toronto, but they were grown under glass at Sir D. McPherson's, North Toronto. One of them weighed nearly ten ounces, and the total weight of eight was four pounds and two ounces. This peach is mentioned in *Meehan's Gardener's Monthly*, December, 1873, as being then a new seedling raised by Lord Rivers, which was remarkably well adapted for house culture. Mention is there made of one grown in a twelve-inch pot in a greenhouse in England that measured twelve and a quarter inches in circumference.

The show of Grapes was capital, and it may be interesting to some of our readers to know to what varieties the first prizes were awarded by the judges. For twelve varieties (open air) the following is the list, viz.:—Rogers 3, 4, 19, 43, 44, Sweet Water, August Giant, Iona, Allen's Hybrid, Prentiss, Delaware and Hartford Prolific. They were grown by S. Burner, Hamilton. The same gentleman also took the first prize on the six varieties with Rogers' 3, 30, 43, 44, Prentiss and Allen's Hybrid.

Mr. A. M. Smith showed some magnificent samples of the famous Niagara, which attracted much notice.

The display of Plums was very fine, especially of the Pond's Seedling, an excellent English plum and one of the

most showy varieties known. The prize for the best six varieties, green or yellow, was taken by the following list, viz.:—Yellow Egg, Washington, General Hand, Coes' Golden Drop, Imperial Gage, McLaughlin; Mr. J. K. Gordon, Whitby, being the exhibitor. For best six, red or blue, Mr. Alex. Glass, St. Catharines, carried off the first prize with Pond's Seedling, Victoria, Duanes' Purple, Glass, Columbia and Bradshaw.

The first prize five varieties of Pears were Sheldon, Beurre Diel, Flemish Beauty, Bartlett and Duchess; and the ten varieties included the following in addition, viz.:—Winter Nelis, Louise, Beurre Clairgeau, Beurre D'Anjou and Clapp's Favourite. The prize winner was Wm. Anderson, of Hamilton.

In *Apples* the following were the first prize ten varieties, and they were exhibited by Mr. S. Peck, of Albury:—Alexander, Duchess, Wealthy, Baldwin, Ribston, N. Spy, A. Gold. Russet, King, S. Pomme Grise, Ben Davis.

THE FRUIT EXHIBIT AT HAMILTON FAIR was certainly very excellent. The Hamiltonians claim that it surpassed that in Toronto. We will draw no comparisons, only remarking that it ought to do so, for it has one of the finest fruit districts in the world quite near at hand.

In the beautiful display of *Grapes* we noticed that Mr. S. Burner took the first prize for ten varieties, on the same kinds as he did in Toronto, while that for the six varieties was taken by Mr. W. H. Spira, of Stoney Creek, with (white) Lady Washington and Niagara, (red) Brighton and Delaware, (black) Worden and Concord. Some of Mr. Spira's Niagara's were certainly very fine. There was one bunch among them the weight of which was estimated at one pound.

The first prize six varieties of Plums were Jefferson, Gen. Hand, Pond's

Seedling, Duanes' Purple, Lombard and Prince Englebert. For a dessert plum the Imperial Gage took the first prize, and for cooking the Fellenburgh or Italian Prune.

The show of Peaches was, of course, very small, indeed only eighteen plates were shown, by three exhibitors. The first prize for the best collection was taken by Mr. Gage Miller, of Virgil.

The show of Pears was most excellent. Such immense specimens of Bartlett, Souvenir de Congres and Beurre Clairgeau are not often seen. Mr. Stipe, one of the directors, said a large part of this fruit exhibit would be forwarded to the Colonial Exhibition in England, and it certainly will reflect credit upon Canada.

THE SOUTH RENFREW FAIR, like others throughout the country this year, seems to have been an unusual success. It is interesting to notice that even as far north as Renfrew, the Fruit Department was a leading feature.

The display of Apples was larger than ever, and consisted of such varieties as Duchess of Oldenburgh, Wealthy, Magog Red Streak, Tetofsky, Fameuse, Alexander, Peach, Yellow Transparent and the Siberian Crabs.

The show of Grapes was, of course, small, and consisted of Concord, Champion, Agawam and Brighton. We are pleased to notice that a good many prizes were won by our Director for Division No. 2, Mr. A. A. Wright.

AMONG OUR NEIGHBORS.

We notice in the *Ohio Farmer* that the Seventh Annual Meeting of the American Horticultural Society was held early in September, in the city of Cleveland. Mr. Parker Earle, a famous Illinois fruit grower, is the President, and Mr. W. H. Ragan, of Indiana, the Secretary.

The small attendance of about forty

was attributed by the President to the refusal of the railways to grant any concessions on fares, and also to the fact that many fruit growers were at this time attending State and other fairs.

We give one or two extracts from the proceedings.

GRAPE CULTURE.—A paper was read from Geo. Husmann, of Napa, Cal., upon grape culture in that State. He says the wines of California are now competing with the best wines of the world, and its brandies compare with the best French cogniac, and its raisins with London layers. He believed grape growing would be profitable in that State as long as good grape lands could be had at \$50 to \$100 per acre, and brought into bearing at \$100 more per acre. It would then produce five tons per acre, worth \$20 a ton, and expense of cultivation need not exceed \$12 to \$20. He believed production would be doubled in ten years, and the wine yield this year would reach 20,000,000 gallons.

This paper was followed by remarks on the condition of grape culture in various States. Mr. Cushman, of Ohio, spoke highly of the Concord. F. C. Miller thought the Worden superior to Concord of which it was a seedling. Mr. Hubbard, of New York, commended it, and it was favorably reported upon by eastern growers generally. He had visited Mr. Worden in Oswego, N.Y., seen the original vine that had borne 110 pounds each year for three years past. All reports said that it clung to the stem. It was larger, handsomer and more attractive than Concord, and ripened a week to ten days earlier. Purchasers would pronounce it a first-class Concord. The grape crop this year was very fine, and there was no rot.

Mr. Hollister, of Missouri, said the crop was short in that State, the fruit

rotting badly. He condemned the picking and selling of early grapes, before ripe. Purchasers would buy one basket and wanted no more of the sour things. It injured the business.

Mr. Albaugh, of Montgomery Co., O., stated that Mr. Cramer, of his county, had sown oats between the rows of vines and it entirely prevented the rot. This had been tested several years. The oats was plowed under when full grown.

Mr. Miller, of Ohio, used sulphate of iron, one year, as a disinfectant, when grapes were rotting badly, and to his surprise it prevented rot. He used one to three pounds around each vine, and applied early in July, or in June. Others near him had tested it with like result.

Mr. Kizo Te Mari, of Japan, was present and was called upon. He represented his government at the New Orleans exposition, and has ever since been travelling in this country in the interests of Japan horticulture. He spoke English with difficulty, but all could understand him. He said Japan was adopting American methods, and had introduced many American grapes. They never had any wine in Japan until the country was opened to the traffic of the world. The Chinese grew grapes and made wine, but Japan did not. Now she was pushing ahead in this as well as other things. They were great vegetable eaters, and he would read a paper on growing vegetables during the meeting. Mr. Kizo Te Mari was vigorously applauded.

PRESIDENT EARLE'S ADDRESS.—In the evening Mayor Gardner welcomed the society to Cleveland, in a brief and appropriate address, which was responded to by President Earle in a graceful manner. He then followed with his annual address, which was an able and comprehensive review of the rise and progress of horticulture in this

country and its present condition. He traced the marvellous growth of horticulture in Ohio, from the days of Johnny Appleseed down to the present, and paid a high tribute to that romantic pioneer of fruit culture. The nursery-men of Ohio should erect a monument to his memory. "It was not many years ago," he said, "when all the peaches used in that wonderful fruit market of Chicago were grown in one orchard. Now the orchards of many States are required to furnish the hundreds of carloads that daily pour into Chicago." President Earle suggested the need of a pomological bureau under governmental charge and of experimental stations. Central Russia has been building up a race of fruit almost under the arctic circle that has for hundreds of years withstood the hard winters and arid summers. An investigation of these fruits with a view to their introduction in the interior of the United States should be made. The complaint of over-production in fruit growing is not so much due to over-production as imperfect distribution. Apples in New York and Michigan last fall seemed too plentiful, but many a family out of range of the apple districts went unsupplied.

He spoke at some length on the rapid destruction of our forests, and the bad results that have followed in producing extremes of climate, of drouth and flood, frost and heat. Ohio, in 1853, had 45 per cent. of her surface covered with timber; in 1884, but 17 per cent. No wonder the Ohio valley was visited annually by destructive floods, and that the climate had changed for the worse. It seemed that the State was making rapid strides toward the Agricultural condition of Arabia, and Ohio stands for America. "I quail before the inexorable penalties which nature has in store for all States and peoples who will ruthlessly destroy so glorious a

heritage of forest as the American people once possessed. Without forests no successful agriculture is possible and no high civilization can be maintained."

The address was spoken of in the highest terms by several members, and a committee appointed to take action in regard to it. It should be given the widest possible distribution.

FINE DUCHESS PEARS.—At the recent exhibition of fruits in this city, during the meeting of the American Horticultural Society, N. Ohmer exhibited one of the finest plates of Duchess pears we have ever seen. The largest weighed nearly $1\frac{1}{2}$ pounds, and five others were but little lighter. The large pear he presented to Miss Ragan, daughter of the secretary, for which he has our thanks. Mr. Ohmer marketed nearly 1,300 bushels of pears this year.

BEST TIME TO GATHER APPLES.—At the recent meeting of the Montgomery County Farmers' Club, Mr. Waymire said he had the best fruit he ever raised. Apples have been falling, and he has been picking to keep them from falling. In August he picked green samples of many varieties, except Maiden's Blush and Fall Pippin; laid them away in the dark, and from the fact that they have ripened and mellowed up finely he is beginning to believe in early picking, and let the apples ripen themselves.

Mr. Turner wanted to know the best time to pick apples—came to the meeting to make this inquiry. His apples were falling freely. One or two varieties will fall from the trees if he waits till October.

Mr. Ohmer replied that thirty years' experience in growing fruits taught him that if you want apples to keep, it is best to pick them when they begin to fall, even if that be as early as the first of August, unless the fruit is wormy. The fact that apples are fall-

ing is evidence that they have ceased to grow. Two years ago apples picked in September kept until March. As a rule never put apples in the cellar when first picked, but leave them in the orchard in barrels or in heaps covered over with straw, but not enough to heat them; leave them there until November, then barrel and put in the cellar, or the barn floor or anywhere else. This year he has been blessed with a good crop of fruits of all kinds; pears in the greatest abundance, especially Duchess, Bartletts and Lawrence, and has sold 1,244 bushels of Bartletts alone, at good prices; never saw such crops of fruit. Apples are falling off more than ever before, and earlier, but are much more wormy than usual.

[We have made it a rule for years to begin gathering our winter apples as early as the 20th Sept., notwithstanding the fact that most of our neighbors do not begin until about two weeks later. All we need to wait for is to get the full color, which is so great an attraction of our Canadian apples for export. We usually pick our Greenings first, because they ripen so early, and our Spies last, for the bright sunny days of October give them such a beautiful rich, purplish-red color.—Ed. *Horticulturist*.]

THE BELLEFLOWER APPLE.—Mr. Waymire referred to having saved his Belleflower apple trees, although at one time he had gone to the orchard to cut them down. The trees looked so well, and the idea that it would take ten or fifteen years before others would grow to bearing if planted in their places, caused him to hesitate before destroying them. So he dug around the roots and applied manure to about four of them, and these four bore fruit the next season, while apples fell off the trees not so treated.

John Bradford said that the Belleflowers were more profit to him than

any other kind of apple, if properly fertilized. Had eight trees that yielded 35 to 40 barrels of Belleflowers each year for three years, and sold readily at advanced prices; and this year have a good crop, as can be seen by specimens which he exhibited.

Mr. Waymire said that Belleflowers required more nourishment than other trees. The tops droop and shade the trees so that nothing will grow under them, and they must be fed. His bear so heavily as to require propping up. Other farmers have tried his plan, and their orchards are doing well.

[We in Canada have pretty well discarded the Belleflower as being a very uncertain cropper, and because it bears so much second-class fruit. It also requires the most careful handling.—Ed. *Horticulturist*.]

SPRAYING FRUIT TREES.—In answer to the question—how often is it necessary to spray, and what to spray with? Mr. Olmer said: We spray with poisoned water made with London purple, arsenic or Paris green; one pound of purple to 140 or 150 gallons of water, thoroughly stirred. 'Tis best to make a paste of the purple, then mix it in a barrel and spray it on the fruit just as the trees are going out of bloom, thoroughly wetting the trees, and give them another dose after that. The codling moth is the insect that does the most harm to your apples. It comes out of cellars just as the trees are going into bloom, deposits the egg from which the little worm begins to work around seeking a soft place in the apple. The spray that you have applied settles in the blossom end of the apple, the worm eats it and dies, and if your work has been well done the first crop of the pests have been destroyed, and there are no more to injure the apple. The curculio is different, depositing in a lip on the side of the fruit where it does its work; its

business is to lay eggs and die. The poison can be made too strong, and had better be too weak than of strength to kill the plants. A pound of Paris green should be dissolved in 200 gallons of water.—*Ohio Farmer.*

Question Drawer.

This department is intended as an open one to every reader of the "Horticulturist" to send in either questions or answers. Often a reader will be able to answer a question which has been left unanswered, or only partially answered by us. For convenience of reference the questions will henceforth be numbered, and any one replying or referring to any question will please mention the number of it.

1. HUCKLEBERRIES. — *Can they be profitably cultivated? If so, where can a supply of bushes be obtained, and which varieties would you recommend?*

D. C. L.

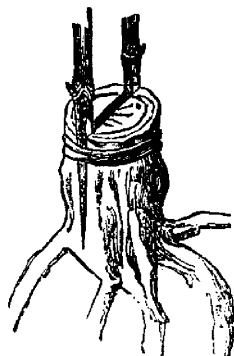
See article by A. S. Fuller, on p. 230 of this vol. Mr. T. C. Robertson, Owen Sound, says: "I do not know where they can be had. My conviction, from experience of reliable parties published in the *Rural New Yorker*, and elsewhere, is that they will not grow in ordinary garden soil so as to be productive." It is said that Prof. Bailey, of the Michigan Agricultural College, has devoted an acre to the experiment of improving the wild species of huckleberries, and we may hope for some useful information from him in course of time.

Mr. John Little, Granton, writes that Mr. J. T. Lovett, Little Silver, N. J., offers two varieties, the Bell and the Cherry, at 50 cents per hundred.

2. GRAFTING GRAPES.—*What is the best time and mode?* D. C. L.

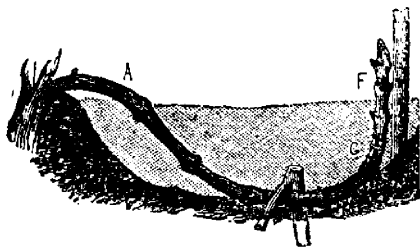
Propagators differ as to the best time for cleft grafting the grape vine, but probably it may be done with best success in spring, just before the buds begin to swell. Any one familiar with the ordinary method of top grafting

the apple tree, will have little trouble. The vine is cut off three or four inches below the surface of the ground, split with a grafting chisel, and held open with a wedge until the scion is fitted to its place. The scion need not be over six inches long, and should have a wedge shaped end, smoothly cut, to fit the cleft in such a manner that when it is allowed to close, the bark of the old and new wood will be in close union. Use no grafting wax; but, if necessary, tie the cleft with a string, and then heap the earth carefully about the graft, leaving but one bud of the scion above the surface (see cut).



CLEFT GRAFT OF GRAPE.

Or, if the stump is old and knotty, you may splice graft a smaller branch. Do this at a distance of two or three



GRAFTED CANE OF GRAPE.

feet from the stump, and then lay the grafted branch down carefully, fasten it in place with a peg, and cover the graft

with earth, pressing it down firmly. Leave one bud above ground, and when you see signs of growth, rub off all others between the branch and the main stump (see cut).

Perhaps some of our experienced gardeners or vineyardists will give their methods.

3. PRUNING PEACH TREES.—*When is the best time to cut back the new growth?*
D. C. L.

Our plan is to prune out the dead wood, and cut back the leading shoots of the new wood in March or April.

4. BREAKING DOWN OF CURRANT BUSHES.—*How can I prevent the breaking of the stalks of my cherry currant bushes, by strong winds, without staking?*—D. C. L., St. Thomas.

Clip back one-half of the new growth every spring, and you will have no trouble. Examine and see if the broken stalks are infested with the currant borer. If so, cut them away and burn them.

5. CUTTING BACK GRAPE VINES.—*In the April number of the "Horticulturist" you recommend cutting back one year old vines this fall to within two buds of the ground. If I do this, the stump will be too short to reach the first wire of the trellis, eighteen inches from the ground?*
H. E.

You need not necessarily save the two lowest buds; you can save two buds at whatever height you wish, and then rub off all the others, and so secure the growth of only two upright shoots, to serve afterwards as laterals. Some vineyardists use four or five wires, especially for this renewal system of training, and put the bottom one within eight or ten inches of the ground, for the support of the two main laterals.

6. BEST APPLES FOR NAPANEE.—*Please name the best apples for this section to cover the whole season; also*

the best and most productive winter apple of good quality that would thrive here. Would the Walbridge do? I do not want to wait for the Northern Spy. The thermometer registered 36° below zero here last winter.
H. E.

We recommend (summer) Yellow Transparent, (autumn) Duchess of Oldenburg, and (winter) Alexander, Wealthy, and American Golden Russet. The Walbridge is only partially tested as yet, but it is said to be an iron-clad, and to be productive, of good quality, and an excellent keeper, but not sufficiently showy for market.

7. FRUIT DRYER.—*Will you or some one of your readers tell me how to make a fruit dryer to be used on a cook stove?*
H. E.

8. GRAPE CUTTINGS.—*Will cuttings from one year old grape vines make healthy vines?*
H. E.

Yes, if wood is well ripened, though perhaps not so vigorous as larger wood.

A. M. SMITH.

Fruits.

DO BEES HARM THE GRAPES?

An interesting experiment has been made at the new station at Aurora, Ill., in solution of the question whether bees injure fruits or not. The following account of it is from the *Farm and Home*:

Two colonies of hybrids and one of Italians were placed in a bee-proof house with fruit of all kinds and in all stages of growth arranged, so that the sun could strike it. The bees were given no food or drink, and a high and dry temperature was maintained. The bees inspected the fruit and took advantage of every opening at the stem or crack in the epidermis or puncture made by insects which lay their eggs in

the skin of the fruit. When the skin was broken or removed they would lap and suck the juices exposed, but would not attack the skin, even of the tenderest grapes. If the grapes were cracked the bees would suck the juices from the exposed segments until they came to the film separating the broken and exposed segments from those unbroken, beyond which they appeared unable to penetrate. After a 30 days' test, another colony of Italians and 20 more different varieties of grapes in all stages of ripeness were introduced, the conditions natural to a severe drouth were produced, and the test continued for 25 days longer. The bees showed no more capacity or disposition to offer violence to one variety of grapes than another. No more attention was given the thin-skinned varieties than the thick-skinned. As long as the skin remained whole, they did not harm the grapes. When the skins were broken by violence, the juices exposed were appropriated.

SEEDLING PEAR.

Mr. W. C. Reid, of Enterprise, County of Addington, has sent me a couple of pears grown at Newcastle, as a sample of a seedling, with the request that I would report on it through the *Horticulturist*.

They were small pears, about three inches in length and six in circumference at the largest place, pyriform, yellowish green, stem about two inches long, slightly curved. The flesh was fine grained, gritty at the core, juicy and sweet, without any marked flavor.

Your obedient servant,

D. W. BEADLE.

IRON FILINGS FOR PEAR TREES.

SIR,—There is in this town a man who six years ago had several pear trees. Some four, some three, and others two years planted. Up to that

time not one of these trees had borne any fruit, except the four year planted ones a few straggling pears. In the fall of the year this man wheeled from his foundry two or three burrow loads of iron filings, and dug into the soil about each tree a pailful of the filings. The following year the four year, the three year and the two year trees all bare fruit, and have continued to bear every year since. The proprietor of those trees makes no pretensions as a horticulturist, but he succeeds in growing larger crops and taking the prizes away from many of us that do. I examined his trees a week or two ago, and found them looking unusually thrifty and bearing heavily. Had the iron filings anything to do with it?

Respectfully,

T. H. RACE.

Mitchell, Perth Co., Sept. 20th, 1886.

[The use of iron filings about pear trees is not new. In our Reports you will find some discussions on the subject. I think the evidence on the whole is in favor of their use as improving the health and vigor of the trees. — WM. SAUNDERS.] See also Reply by Prof. Panton on p. 257 of this volume.

THE SHIAWASSEE BEAUTY.

Not nearly enough attention has been given in the East to that fine Michigan seedling of the Fameuse which bears this name. It has borne with me for two seasons, and the terribly severe test winter of 1884-85 has shown that it is, if anything, harder than its parent. Its great merit is that it is a non-spotting Fameuse. In many seasons from one-third to one-half of the crop of Fameuse is rendered unmarketable by the black fungus spots which disguise, dwarf and deform its fruit. From this grave defect the Shiawassee Beauty is free.

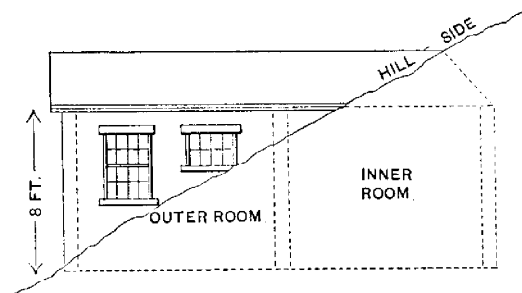
Though plainly of the Fameuse type, the Shiawassee Beauty is not exactly like it in form, color or markings, nor is the young wood exactly similar. Compared with Fameuse, Shiawassee is larger, flatter and more angular. The striping of the fruit of some Fameuse trees, which has given that type in Canada the distinctive name of Fameuse Barrée (Striped Fameuse), is never seen in the Shiawassee. Its resemblance in coloring and dotting is, however, very close to the Fameuse Rouge, the more common type. Stem and cavity, calyx and basin are similar in the two. The young wood of the Shiawassee is darker, with smaller and more numerous white dots; the leaves are undistinguishable. Shiawassee is called the better keeper. The main distinctions between them are the larger size, flattening and angularity, non-spotting and non-striping of the Shiawassee. In quality the two are very close, the Shiawassee in no respect inferior. On account of its non-spotting, it should certainly replace its parent in all commercial orchards at least. In the colder sections it should be top-grafted on an ironclad—preferably on Tetofsky.—Dr. Hoskins, in the *Examiner*.

DR. NICHOLS'S FRUIT CELLAR.

Dr. Nichols of the *Journal of Chemistry* has been conducting some careful experiments in preserving fresh fruits over winter in cellars of different construction. It is so clear to anyone that fruit stored through the winter, to come out fresh and sound in the spring, will command a price several fold greater than the same would bring in the fall that the matter becomes a very important one to the fruit grower. Following is a condensed statement for

making the cellar which has given the doctor the most perfect results. An engraving of the same is also shown. It should be added that the objects had in view were to keep the fruit dry and cool, yet free from frost.

Two rooms, each large enough to contain all the fruits of the farm, are needed—an outer and an inner. A cellar should be dug in the south side of a hill large enough for the inner room.



DR. NICHOLS'S HILL-SIDE FRUIT CELLAR.

The outer room should be exposed to the air wholly in front, and on the sides far enough to accommodate two windows, as shown in the engraving.

Build of brick or stone, carrying the walls to the height of eight feet. If stone is used,—it may be rough and be put up by any farmer,—it must be pointed with mortar. A thick wall, with a door, should separate the two rooms. In the engraving the walls are shown by dotted lines.

The roof should come near the ground in the rear; be carefully constructed and supported by timbers; be lined with tarred paper, strongly secured and painted with tar or pitch. There should be a ceiling—rough boards will do—and a space one and a half or two feet deep between it and the roof, to be filled with dry straw, hay or sawdust.

The fruit should be kept in the outer room until freezing weather, and then be removed to the well protected inner one.

The outer room should be ventilated through its windows; the inner, by opening both doors—but *only in cold, dry weather*, as warm air introduced would condense and give out moisture. There must be special care about admitting warm air in the spring.—*From Popular Gardening (with cut).*

EXPORTING APPLES.

The demand for American apples in Great Britain has increased of late years to such an extent that for the season beginning August, 1885, and ending May, 1886, the total shipments to the three principal ports, Liverpool, London and Glasgow, aggregated 862,000 barrels. The magnitude of the business has attracted the attention of many who have no means of ascertaining the requirements for its proper transaction, and numerous inquiries have been addressed to us for this information. These facts induce us to believe that instructions as to the proper course to pursued will be welcome to a large number of people throughout the apple-growing districts.

MARKING.—The shipping mark must be put on the head of the barrel, and it is a matter of small importance what that mark is. A plain stencil is far the best—the plainer the better, but shippers who send often must remember not to use their brand except for the *best* parcels. If they wish to send fruit that is not up to their standard it is better to vary their mark, as a reputation for good packing is easily established by any shipper, but may be destroyed entirely if the same brand is used on a barrel of inferior fruit. Some brands of fruit hardly need to be shown at the sales, so well has their reputation become established.

All exported apples are sold at auction as soon as landed. The total expense of shipping, without commission, is about \$1.00 per barrel. The only commission charged is 5 per cent.

Some shippers send all kinds and think that is the best plan; the trip across is now made in such a short time that apples keep very well if they are sound when shipped and not over-ripe.—*Circular of S. C. Houghton & Co., Liverpool.*

KEEPING BARTLETT PEARS.

A writer in the *Rural New-Yorker* says:—"I save my Bartlett pears so that they make fine eating two months (! *Ed. Horticulturist*) after those of my neighbors have gone. I take a stout box and line it with paper, almost any kind will answer. The bottom is covered an inch deep with wheat bran. The pears are carefully picked, wrapped separately in thin paper and packed deeply in the bran until the bottom is covered. Then this layer is covered with bran to the depth of an inch, and another layer of pears is placed in the same way. This is continued until the box is full, when the cover is tacked on, and the box set away in a cool, dry place. The fruit will retain its fine flavour and color."

Of course nearly every fruit grower knows that the best time to market his Bartletts is either very early or very late in the season. The only trouble is how to keep them in good condition without the expensive convenience of a fruit house.

Noticing the miserably bad specimens of this fruit exposed for sale in Toronto this year towards the end of the Bartlett season, we tried a somewhat similar experiment to the one described above. We carefully packed away all the finest samples we had left in peach baskets between layers of dry sawdust. After

two or three weeks we began using and shipping them, and found they were in great demand. Plump, rich, and juicy, without any ugly dark blemishes, they sold in the market like "hot cakes," and the children, who are first class judges of good fruit, were always begging for "sawdust pears."

We doubt very much whether Bartlett's could be kept two months in this way. We found them ripening within a fortnight, but their excellent condition alone was a sufficient reward.

SMALL FRUITS AROUND ARKONA.

Once again it becomes my pleasing duty to be able to report a very favorable season, and an abundant and encouraging crop of handsome and well-formed samples in most of the lines of our varied annual fruit.

THE STRAWBERRY CROP,

though injured very considerably by the early frosts of the season, was yet a rather pleasing crop, though by no means an abundant one, and in some soils was almost destroyed altogether. Yet, under favorable conditions and locations, on well-drained, high, and warm soils, and under good culture, the yield of tolerably good fruit was very pleasing. But, compared with last year, it was indeed very poor. It is but little or no use to attempt this delicious crop on low, heavy, undrained lands, for, if frost should come over us before ripening, which is very apt to be the case more and more lately, it is quite sure to catch them, and at once, in a night, to destroy or hazzard the prospect of fruit in such tempting places. If success be desirable in any line of fruit growing, it will be found better to carefully select the location known to be most favorable to the wants and absolute necessities of the fruit so as to be sure to get it in all its perfection and beauty. It is, doubtless,

better to plant strawberry plants for success on high, dry, warm, loamy, well-drained soils, and keep them under the very best care and culture. At one time during the season of marketing a short glut occurred in this fruit, and the saleable price ran down to a point scarcely keeping up with the cost of production, but things like this must always be in a great and growing country. The sorts in cultivation are the Wilson's Albany, Crescent Seedling, Daniel Boone, Manchester, and the Jewell, the beautiful new berry of Mr. Augur's. The last three of those are something astonishing, and fully enough to produce a smile on the most austere. Immediately upon the strawberries being done, and almost before,

THE RASPBERRY CROP

was ready to handle, July 3rd. The tone of the market on the whole was very good considering the general depression in most lines of business, and prices on the whole were good. It is felt, however, that as more and more people go into the growing of raspberries for the market the prices must inevitably go down, unless room can be provided for the increasing crop in canning or fruit drying factories. The Turner and the Cuthbert among the reds, and the Mammoth Cluster among the blacks are still very popular and many of them are being annually planted. Among the newer blacks the Souhegan and the Taylor have proved themselves of most decided merit, quite early, fine size, beautiful color and flavor, and very productive, and carry well to market. Brinckle's Orange is the finest and most valuable yellow sort. These fine raspberries will pay and give abundant satisfaction for any amount of care and labor that may be given them. The best soil for the growth of red raspberries is a rich, warm, well-drained, sandy loam soil,

deeply worked; and for the black raspberry a fine, well cultivated, dry, clay loam soil. It is quite a question how to prevent the crop from suffering so much from drouth, but some locations are better adapted to its successful growth than are others. These must be selected. Before the raspberry was fairly done

THE BLACKBERRY CROP

was in upon us in all its beautiful grandeur. I think I have never seen any berry crop so abundant and perfectly beautiful as was this crop this season. The conditions for the successful production of the crop were fulfilled, and the result was a charming crop all over the county. Even wild roots, where there were any, were heavily loaded with fine fruit. Any good strong soil is suitable for the growth of this fruit, but it is very impatient of drouth. The sorts most grown are Snyder and Kittattinny, and these are very good indeed.

THE CHERRY CROP.

This popular fruit, though a great favorite with our people, is not in its production anything approaching a success in the county. Neither our condition of climate nor of soils seems at all favorable to its healthfulness and growth to maturity. The young trees apparently do well enough in the first periods of their growth and seem to thrive admirably for a time, but just as they are expected to come into fruitfulness they begin to decay, and finally wither away, either through the attacks of fungoid parasites or the severity of the winters. This has of late been the case with all the better and more valuable European varieties we have yet tried. The Old Virginia red cherry, being the only one that will produce plentiful crops of fruit, is planted very largely almost on every farm. This sort this year was very fruitful in most

localities, and the crop consequently was unusually large. The fruit was very fine in its beauty and perfection, and was placed upon the market so as almost to glut it, and at very low prices by the pailful.

THE GOOSEBERRY CROP.

The crop of this growingly popular fruit was this season very fine indeed, and remarkably large. I think I never saw so many gooseberries before put into our local markets, and, of course, the prices ran very low. The soils of our county are well adapted to their most perfect growth and development, and the time is not far distant when we can have our gooseberries shows as in England the old.

THE CURRANT CROP.

Like the preceding, this crop of popular fruit for the heated summer time was very large. We can grow them in highest perfection, and that in many colors and varieties. The best black are Black Naples and Lee's Prolific. The best whites are the White Grape and the White Dutch, and the best reds are Red Dutch, Fay's Prolific or Cherry, and Raby Castle. These fine sorts all do well, and this year were very fine, clear and perfect.

THE GRAPE CROP.

The cold and severe frosts of early spring tended very much to the injury of this valuable and delicious crop in this county. In many places the leaves were severely cut and the joining-point branches blasted. Otherwise the indications are becoming apparent that many favored locations of our county may eventually become very highly noted for the growth and high perfection of their grapes. In vineyards planted in favorable localities, on high, warm, well-drained soils, the crop of handsome, well-formed and perfect fruit, is something to astonish one not ac-

quainted with it, and is now advancing to a high state of excellence and maturity. The best locations for vineplanting are, undoubtedly, high, well-drained, rolling soils, gently sloping to the south. If these soils are a rich wash, or are made rich, and good and warm, they will be every way suitable for the best development of the plant, and the highest perfection of the fruit, but it must be free from all encumbering shade, and well exposed to the sun, and our fruit this season on such soil is perfectly clean and handsome, quite free from mildew and all other defects, and in great quantities and variety. We have the Amber, Brighton, and Delaware in highest perfections, the Golden Pocklington, Jessica, Lady, Moore's Early, Worden, besides Concords, Champions, and Wilder, or Roger's No. 4, Hartford, Prolific, &c., in great profusion. All these fine grapes appear to do equally well on properly selected locations. Were it not for the timely cutting in the spring, and consequently reduction of the crop, the market prospects would have been very dull indeed, and even now the prospects are that the prices may run down very low on account of the general stagnation in business and the consequent scarcity of money.

THE MULBERRY.

Already some of the kind known as Russian Mulberry have begun to show fruit in considerable quantities. Although not very large in size it is very fine and relishable in quality, and may eventually become quite general and serviceable to our people, who are very fond of an early fruit for pies and tarts, &c.

THE CRANBERRY,

although indigenous to the county in the low grounds, especially around Lake Burwell, is not yet very largely produced amongst us, and solely for the

want of proper attention. So far as I know there is not a successful cranberry marsh in the county, and consequently not much of the fruit is shipped, but, on the contrary, those in use are imported from American and other growers. The nut crop is not good this season.—B. GOTT in *Globe*.

Vegetables.

OUR GARDEN.

BY JOHN CROIL, AULTSVILLE, ONT.

Another season gone, in so far as garden operations are concerned, suggests the enquiry, how has it differed from former ones? "Have we spent our money for that which is not bread, or our labor for that which satisfieth not," or has honest toil been rewarded by fair returns? The weather on the whole has been favorable, with few scorching days, and a large proportion of cool, pleasant ones, the former and the latter rain given us in due season, we look back on it as a most enjoyable season. Every thing grew luxuriantly, *the weeds especially*; good gardener he who could at any time of the season boast of having them kept in subjection, but if the weeds grew fast so did the crops. Being very much of the *bird at home* tribe, the reader will pardon our egotism, when we speak only of our *ain kail yard* (our editor must borrow friend Beadle's Scotch Dictionary), we take it for granted, other things being equal, our garden is a sample of many around.

We generally go sparingly into novelties, having from experience learned that it generally requires tens of these to reap units of improvements, but having purchased from Messrs. A. C. Nellis & Co. an assortment of vegetable and flower seeds, we felt bound to try them. These seeds were sent

us at exceedingly low prices, were all good, and many of them valuable. I will only speak of kinds new or nearly so.

Celery.—We tried Nellis' Self-Blanching, but could not see it to be better than Henderson's White Plumer. Both of them are early and excellent, easily grown and very ornamental for the table, but as they keep good only till about Christmas they do not supersede the later varieties.

Cabbage.—Nellis' Mohawk, early market, is all that the catalogue claims, being early, with large solid heads, the best early cabbage we have tried. For fall, and even winter use, we have found none better than Henderson's Early Summer; although ripening early, it keeps long without bursting, heads very evenly, and in weight equals most of the late varieties.

Cauliflower.—Nellis' New Sea Foam, said to be ahead of all other kinds, did not go ahead at all with us, but I must confess neither did other kinds tried, so we must not condemn the Sea Foam.

Corn.—Black Sweet Mexican, although highly recommended, and said to be the most sugary corn of all, is of too swarthy a complexion to grace the table; the color is decidedly against it, and it is too late in ripening in cold sections; the taste, too, we think inferior to Crosby's Early sugar corn and Moore's Early—great favorites with us.

Lettuce.—The Deacon, very good; but we still claim to have a better, and the best of them all, in our own old variety described in our last year's report.

Beet.—New Eclipse; we don't find any better than the old Egyptian beet.

Onions.—New Golden Queen grew to an immense size, but was hardly matured before heavy frost set it. The large Red Weathersfield and Danver's

Yellow seem to be second to none yet. We have always had a large proportion of thick necks. Mr. Beadle, in his excellent book on gardening, attributes this to wet seasons. With us it has been a general thing. This summer I visited the grounds of a friend, a market gardener near Montreal. He had upwards of an acre as fine a crop as the ground would carry. They were nearly free from thick necks, except one ridge on one side of the field, and they were all thick necks. They were all sowed at the same time, with the same seed, manured and cultivated alike, on soil seemingly the same. Query, how came the difference? He could assign no cause.

Peas—*Rural New Yorker.*—The earliest variety we have tried, large, well-filled pods, fine flavor; think it would be a profitable field pea; height two feet. For general use we still claim preference for Bliss' American wonder, a perfect dwarf, very prolific, early, and in flavor among the best.

Tomatoes.—Fulton's Market ripened first, but with us it was roughly shaped, and rotted badly; otherwise it was in every respect good. New Cardinal, about a week later, comes up well to the catalogue description, ripens early, smooth, a good keeper and shipper. The Mayflower we consider as good as either of the above.

(Concluded in next number.)

THE WINDSOR BEAN.

SIR,—In your issue for October Mr. Simon Roy says he is only partially successful in growing it. I have grown it for a good many years—fifteen or sixteen—nine times out of ten with success; but my theory is that it cannot stand the hot sun, so I plant it within two feet of a high, close board fence, and on the north side of it—the fence runs east and west,—so that dur-

ing the extreme heat of the day it stands in the shade. I have planted it for years on the same piece of land, a heavy clay loam, well manured.

Yours truly, W. M. KOUGH.

Scientific.

PLANT LOUSE ON SPRUCE.

SIR,—By referring to page 125 (June Number) of the current volume it will be seen that I received from Mr. John Sailles some spruce twigs which seemed to be effected by some parasite. Being desirous of ascertaining the true nature of the trouble, I sent the specimens to Prof. Comstock, of Cornell University, who replied that the twigs had been infested with some insect that had then passed into the pupa state, and that when the imago appeared he would report thereon. I wrote to Mr. Sailles and obtained some fresh twigs, which were also sent to Prof. Comstock, who has favored me with the following reply.

Your obedient servant,

D. W. BEADLE.

St. Catharines, Oct. 11, 1886.

MY DEAR MR. BEADLE,—Your letter of the 9th inst. was received during my absence from Ithaca. This morning is the first chance I have had to study the plant louse on spruce. I think it is *Adelges abieticolens*. But there is no good description of this species. See Packard's Guide, fig. 520 (p. 523), and Bulletin No. 7 of the United States Entomological Commission, p. 234.

As to remedies, try solution of soap, quarter pound to one gallon of water. It would be well to try the kerosene emulsions recommended by Riley in his reports. But be careful in the application of these, lest the kerosene injure the trees.

Very sincerely yours,

J. H. COMSTOCK.

Ithaca, N. Y., 22nd Sept., 1886.

THE RUSSIAN MULBERRY.

DEAR SIR,—I herewith enclose you two leaves of the Russian Mulberry, which are taken from trees growing on my grounds. This variety is dioecious. The leaves are cordate, one, you will observe, is only serrated, which is the female, or pistillate, tree bearing fruit; the lobed, or oak-leaved, is from the male or staminate tree, blossoming profusely, but not fruit-bearing.

Seedlings, therefore, planted singly cannot be relied on.

Of course, the practised eye of the botanist will soon detect this.

I am, yours truly,

SIMON ROY.

Berlin, 22nd Sept., 1886.

IRON FILINGS ABOUT PEAR TREES.

SIR,—Regarding the use of iron filings in promoting the fruitfulness of pear trees, I would hesitate to give all the credit to their use in the case referred to. The presence of iron is necessary to the production of chlorophyll, one of the most important compounds in the leaf.

This is the chief agent at work in the decomposition of carbonic acid, an important source of food for plants, by supplying carbon which enters largely into their structure. The green color of leaves is owing to the presence of chlorophyll. Plants that grow in soil containing no iron do not become green, and the production of this constituent ceases, and the plants perish.

The analyses of the ash of plants shows iron, but the quantity is small compared with other ingredients, such as potash, etc., and thus though very important, still the quantity required is not much and usually found in soils. However if the soil where the trees referred to was deficient in iron, no doubt a ready response would be given in a more vigorous and productive tree;

but I am inclined to think that the great improvement was due to something else than iron filings. The subject is worth investigation, and if repeated experiments show a decided gain in productiveness in trees, then there will be no denying the facts.

Yours respectfully,

P. HOYES PANTON,

Prof. Nat. History and Geology.

Agricultural College, Guelph,
13th Oct., 1886.

Flowers.

TEN HOUSE PLANTS FOR THE WINTER.

The chief requisites of success in the winter care of house plants are sunshine, moisture, uniform temperature and cleanliness. It is not wise for the cultivator to be too ambitious; one cannot produce all the effect of a varied conservatory in one window, and any attempt to do so will result in disastrous failure. When I say moisture is an indispensable requisite to success, I do not mean that the soil should be waterlogged, nor should the pot stand in a saucer of water, unless it is an aquatic plant. I mean that the atmosphere should be moist, and here we encounter the greatest of all difficulties in the culture of house plants. Both stove and furnace produce a dry heat, and this is more or less trying to all plants. Where possible, it is well to stand a pan of water over the stove or furnace; the evaporation is very serviceable. If this cannot be done, the only plan is to water frequently, but discreetly. Gas is also very trying to plants; even where there are no perceptible fumes the light frequently causes the flowers and buds to drop off. When we are arranging for the comfort of our floral pets it is well to recollect that we ourselves require sunlight as much as they,

and it is hardly wise to entirely block up the only sunny window in a room during the dark winter days. A stand or window-box is always preferable to the numerous shelves we so often see shutting out every ray of sunlight. For these reasons plants noticeable for fine foliage rather than for flowers may be specially recommended, since they require less sunshine.

We must give first place for beauty and ease of culture to *Ardisia crenulata*, a plant little known among amateur growers, though becoming popular as its virtues are becoming known. It is a sturdy-growing, shrub-like plant, with shining, ovate, dark-green leaves. In August or September it bears small, inconspicuous, greenish-white flowers. These are followed by bunches of berries, which, as they mature, turn bright red, resembling, in size and appearance, the Mountain Ash. These berries last the entire season, keeping their beauty, in fact, until a succeeding crop is ripe, so the plant is never without them. The effect is really beautiful, so bright and Christmasy. The plant does well in an ordinary living-room, with regular watering, but it must not be waterlogged or stand in water. The leaves may be sponged once a week, and it will keep its brightness in a northern window where there is little or no sun. This plant is a charming decoration for the dinner table; in fact, it is infinitely desirable in every way.

The Climbing Asparagus (*Asparagus tenuissimus*) is not yet very familiar, but it is a charming thing and may be highly commended as a window climber. Nothing short of a hard frost or the absence of water for two or three weeks will discourage it. It climbs and twines like smilax; but the foliage is fine and feathery, like common asparagus, only more so. It does well in a room heated by a stove, does not harbour insects, and, in short, is a botanical paragon.

Another more familiar climber is the old-fashioned German Ivy, so called by the rule of contrary, I suppose, for it is not an ivy, and does not hail from Germany. However, it is a rapid grower of very pretty habit, and is usually of more easy culture than ivy proper.

All lovers of house plants are familiar with the large-leaved *Begonia Rex*. Its robust habit and handsome vari-colored, metallic leaves justly make it a favorite. Like the palm, it is an excellent thing for city houses where there is little sunshine. Of course, if grown in a gloomy locality it will only flower weakly, and will not be as richly colored as when in good sunlight, but it will do better than most plants and is attractive under any circumstances.

Another member of its family, *Begonia rubra*, is equally desirable, being the most attractive of the plain-leaved varieties. The long leaves are a bright, shining green: the large flowers, profusely produced, are a brilliant red. It is a very free grower, easily propagated and if sponged or syringed in addition to the ordinary watering, is very cleanly in its habits.

Most growers of house plants are familiar with the ordinary abutilons, sometimes called bell-flower, but very few grow the trailing variety, *A. Mesopotamicum*. It is a charming little thing, throwing out long, trailing branches. The leaves are smaller and more pointed than those of the ordinary variety, beautifully variegated with gold; the little bell-shaped, dark-red flower has a besom-like clapper of black stamens. It is as easy to grow as others of its class, but it requires a good sun to bring out the variegation of the leaves.

For those desirous of profusely flowering house plants nothing is better than the Chinese primrose. It can be kept continually in bloom from November till May, and the blossoms form a

whole gamut of color, from pure white to deepest crimson. They are of easy culture, requiring little attention save in watering. They must not grow actually dry, though here, as everywhere else, the cultivator must be warned against over-saturating the pots. A great advantage of the primrose is that it is very rarely infested by green-fly, or similiar pests. Under the same circumstances as the Chinese primrose, we may grow its modest little yellow-flowered English cousin, though a living room is rather too warm for it. The frail English flower, however, is always rather spindling under our alien skies.

Cyclamens are good house plants, and may be readily grown, flowering profusely. It is well to notice in purchasing however, that one should get plants of good constitution; many growers seem to have a very sickly strain, with worn out vitality. In the very beginning of September plants should be repotted, shaking all the old earth off, and giving new soil; the crown of the bulb should be left uncovered.

For those having rooms rather cool than otherwise, violets are charming, but it is useless to attempt them in a very warm place. They will flower profusely during the winter at a temperature of from 45° to 50°, and their beauty and fragrance make them most desirable. Of single varieties the Czar is very fine; it is large, dark purple, and very fragrant. The Neapolitan is the best double variety. With all house plants frequent sponging or syringing of the leaves may be advised as a preventive of red spider and similar pests. But it is well to reiterate that in every case one must water with brains; no amount of printed instructions is equal to a little personal discretion in this case. Discretion, enthusiasm, and energy are the three graces of horticulture, and they cannot

fail to bring success either to professional or amateur.—E. L. TOPLIN, in *Rural New-Yorker*.

PRIMULA OBOVATICA.

This pretty perpetual-blooming primrose is a native of the Tchang Valley, China, and was collected by Charles Maries for Messrs. Veitch, of London, some four or five years ago. It has many good points which make it at once a friend of the florist, and, when more generally known, it will undoubtedly be grown extensively. The heads of bloom can be cut with a long stem bearing sixteen to twenty flowers, each about an inch in diameter, which will last two weeks or more after being cut, and travel well. The color of the flowers is pure white, sometimes changing to lilac, and where several plants are grown you might imagine there were two or three varieties. I have seen plants at the Cambridge (Mass.) botanic garden with over 100 spikes of bloom at one time. Mr. Manda propagates it by division of the roots in the same manner as the double primrose. It thrives well in a cool green-house under clear glass in winter. The flowers should be kept picked off from June to September, as the plant will bloom and thrive better the following winter.—*American Florist*.

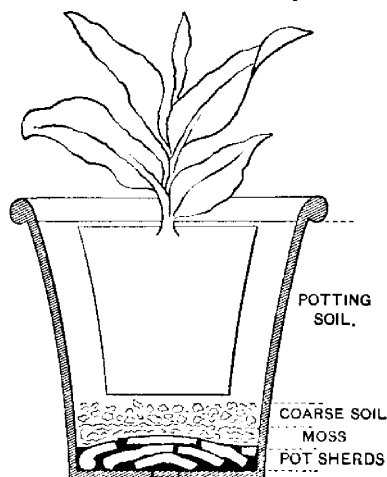
It will be noticed that *Primula Cashmeriana* is among the premiums for 1887.—Ed.

HOW TO POT A PLANT.

Who does not know how? may be asked. We venture to say that a matter weighing as lightly as this often does with growers is very often the one point between future success and failure in plant culture.

The engraving almost shows how without further explanation. A chief point is drainage. This, so far as under-

drainage is concerned, is clearly set forth in the cut. There is first something like an inch of broken pot-shreds,



POTTING—THE PLACING OF THE MATERIALS.

carefully laid, for shedding water. Then—and a very important part—comes a strata of moss or sphagnum to keep the earth above from settling into the drainage below. A clogged drain is of no use. Above this comes the soil, seeing that coarse parts, such as roll down the sides of the heap, go to the bottom as shown in the cut.

Besides such underdrainage, there is clear gain in a similar direction, by having the sides of the pots clean and porous, the dealers in painted pots to the contrary notwithstanding. For plants to do their best there needs to be not only porousness, for the escape of water, for the admission of air to the roots. A painted or dirty pot or a wooden box or cask in a large measure obstructs the admission of air from the sides.

The larger the pot the more needful is underdrainage, and the less needful is side porousness. Hence pots smaller than three inches across scarcely need the former, while receptacles larger

than one foot across can pretty well dispense with side porousness. Tight boxes, therefore, answer better for large plants than for small ones.

The Potting Stick, is of use in doing a good job of potting, for firming the soil about the roots. It may be whittled from a lath, and should be about six inches long.—*From Popular Gardening (with cut).*

GRANDMOTHER'S HOLLYHOCKS.

Hollyhocks by the garden wall,
Quaint old-fashioned flowers;
White and crimson, yellow and pink,
Grandmother loves you best, I think,
Of any in her bowers.

Stately and tall, yet graceful, too,
Swaying with the breezes;
Grandmother loves and cares for you
Out in the pearly morning dew,
And plucks you when she pleases.

Roses and peonies royal red,
Glowing in summer weather,
Have drooped and died near by your side,
While you are standing in your pride,
Clustering close together.

Grandmother's flowers, old and true—
Hollyhocks by the wall—
Sweeter to her than pansies blue.
Dearer to her than orchids new,
She loves you best of all.
Farm and Home.

THE WINDOW GARDEN.

BEGIN EARLY.

Success in window gardening, as in other kinds of gardening, depends in a great measure upon beginning at the proper time, and with the proper materials. If one waits until cold weather, and then purchases plants at a greenhouse, he makes a bad beginning. The plants had already been in a much higher temperature than that of the window, and the change to a cooler place, and to a much drier atmosphere, gives them a check, from which they do not recover in a long time, and some remain in an unhealthy condition all winter. Some depend upon plants

taken up from the borders and potted, to furnish the window. These are apt to delay taking them up until the cool nights have checked their growth, and when they are taken to a warm room the change is too sudden, and the plants rarely do well. If they are to be taken up from the open ground and potted, it should be done so early that they may recover from the shock of removal, and become established in the pots before cool weather makes it necessary to take them into the house.—*American Agriculturist.*

Uses of Fruits.

GRAPES AS FOOD AND MEDICINE.

The quantity of grapes, says Dr. Irving C. Cross, of Washington, D.C., that one may eat with impunity is something astonishing. Persons at European Grape Cure Institutes consume from 3 to 6 Kilos (6 to 12 lbs.) daily. Grapes constitute a perfect nutriment, which includes in remarkable proportions the nitrogenous Albumenoid and Respiratory principals indispensable to a good alimentation. According to the analysis of a French chemist, a striking analogy exists between the juice of the grape and human milk. This chemist finds in 100 parts of each substance as follows:

	<i>Milk.</i>		<i>Grape.</i>	
Albumenoid and nitrogenous matter ..	1	4	1	7
Sugar, Gum, etc.....	17	0	16	0
Mineral Substance, Water, etc.				

Some of the affections which the grape may be used for, as a respirative medicinal agent of great value are those arising from troubles in the digestive functions, diseases of the liver and spleen, female derangements, catarrh of the air passages, and that state of general exhaustion that keeps up all troubles of the respiratory apparatus. The doctor also says: "Over worked persons may

derive from the vegetable milk of the luscious, but inoffensive 'grape,' a rational means to re-establish the physiological conditions of clear thoughts and correct expressions.

MODES OF PRESERVING GRAPES IN THEIR ORIGINAL STATE.—1. Takesound, ripe grapes, in baskets or boxes from three to six inches deep, set in a cool place to sweat, for one or two days, then line the baskets with paper and place in layer of grapes (removing all unsound ones), then a layer of paper, and so on until basket is filled, then cover closely with paper and keep in a dry place with temperature as near thirty-five or forty degrees Fah. as possible. Grapes thus put up will keep sound and fresh from two to six months. Even temperature is desirable.

2. Take grapes, set by to sweat as in No. 1, then take sand and wash until water runs off clear, dry thoroughly in sun or oven, line box or basket with paper, then put one-half inch of sand, then a layer of grapes (each bunch wrapped in manilla paper), then layer sand, and so proceed until filled. Broken or unsound fruit never to be used. This process has kept the grape fresh to the following June.

UNFERMENTED WINE.—1. Take sound, ripe grapes from the stems, cover with water, heat slowly until thoroughly cooked, drain through flannel, do not squeeze or crush the grapes. Use one pound of white sugar to gallon of juice, heat again until hot, but not boiling. Seal up same as fruit, keep in a dark place. When wanted for use, add two-thirds water, and sweeten to suit the taste.

2. Take six pounds grapes, mash well, add half gallon water, let stand in an earthen jar for three days, then run off the liquid which is at the bottom, being careful not to disturb the skins and seeds that have risen to the surface,—or, strain through fine sieve

or cheese cloth. Add one pound sugar to each quart of juice, bring to the boil, and while at that temperature, can in self-sealing jars. Age improves flavor without fermentation.

GRAPE JELLY.—Take under ripe grapes, mash, boil three minutes, strain through flannel bag. To every pound of juice add one pound sugar, let come to boil, skim, boil one minute, and run into moulds.

GRAPE RELISH : *to be used with fowl.*—Take ten pounds under ripe grapes (if well ripened add one box gelatine), boil five minutes, strain, add one pound sugar to one pound fruit juice, also one teaspoon each cinnamon, cloves, and allspice, boil five minutes, strain into moulds.

GRAPE CATSUP OR SAUCE.—Take one quart grape juice, one teacup sugar, one small teaspoon salt, one large heaping tablespoon ground cinnamon, one tablespoon even full ground allspice, one large teaspoonful ground cloves; boil slowly for twenty minutes, and seal, if for future use. Will keep for a long time open. Can be thinned with vinegar to suit taste when used.—Very much liked.

CANNED GRAPES.—Take ripe grapes, separate seeds from pulp, boil pulp three minutes, strain through leno or cheese cloth to take out seeds, add skins after boiling them twenty minutes, add one-quarter to one-half pound sugar (to suit taste) to one pound fruit, let dissolve, then boil one minute—not longer, as boiling too long destroys the aroma.

Caution.—In preserving the juice, or canning grapes, avoid boiling beyond the specified time, as further boiling carries off the flavor and aroma of the juice; also changes and destroys the chemical and food properties of the sugar used.

[The above paper was prepared by E. D. Smith, and published by the

Niagara District Grape Growers' Association.—[Ed.]

Miscellaneous.

AUTUMN.

BY GRANDMA GOWAN, MONTREAL.

(Written for the Canadian Horticulturist.)

Autumn has come with her fairy wand,
And touch'd the trees, the fields and
flowers;

Peace reigns supreme all o'er the land,
And glorious foliage fills our bowers.

Trees standing still to greet the sun,
With weight of fruit are bended low,
Whisp'ring their summer's work is done;
And dew-kiss'd grapes luxuriant glow.

Plenty has come, in golden showers,
Down from a loving hand divine
To these ungrateful hearts of ours,
So prone to murmur and repine.

Here in this sylvan solitude,
All radiant with autumnal dyes,
I praise the "Giver of All Good,"
With tremulous voice and tear-dimm'd
eyes.

Forfend! when angel reapers come
To garner in the golden sheaves,
That I, now in my setting sun,
Have naught to give but withered leaves.

THE WEEDS we have with us always. This statement is indeed near the truth, there being some marked exceptions in the cases of a very few very clean cultivators of the land. Professor Lazenby, of the Ohio Experimental Station, Columbus, Ohio, has gone to great pains to show why weeds are so persistent in their presence; this by counting and closely estimating on the seeds of some of the more common ones. As to results, he found on one plant of the everywhere abundant Shepherd's Purse (*Capsella Bursa-pastoris*) 77,500 seeds; on a rank Burdock (*Lappa major*) 400,328 seeds; on a large Wild Parsnip, 19,000, and many other kinds were nearly as numerous as those of the ones named.—*Pop. Gardening.*

NOT IN BLOOM.—*He* (at the horticultural show)—"This is a Tobacco Plant, my dear" *She*—"Indeed! how very interesting! But I don't see any cigars on it."—*Harper's Bazaar.*

TO PROTECT SHADE TREES FROM STOCK.—Take a stiff board six or eight feet long and set it up against the tree; then, beginning at the top, wind barbed wire very loosely around both tree and edging, fastening to the latter at intervals of two or three inches, and fasten several short pieces of edging inside the upper and lower coils to keep the wire from wearing the bark.—*Farm and Home.*

I HAVE found that air-slacked lime sowed over the foliage of Kittatinny blackberries just before blossoming has (or something has) completely cured them of the rust that threatened to destroy the plantation. Have any of your readers had like experience?—*W. P. Corsu, in Farm and Home.*

LADY—"Have you given the goldfish fresh water, as I told you, Maria?" MARIA—"No, ma'am; and why should I? Sure, they haven't drunk what they have yet!"

APPLES FOR LONDON.—C. S. Nixon, Montreal, Forwarding Agent for Simon Jacobs & Co., writes:—"Have just been advised by our Halifax correspondent that the steamers left that port on Saturday, 9th Oct., with about *eleven thousand barrels* Nova Scotian apples for London."

A FINE QUINCE TREE.—Mr. D. Kerman, President of the Grimsby Fruit Growers' Association, has a beautiful quince tree in his garden. Just now (Oct. 7) it is loaded with immense orange quinces, probably enough to fill a barrel. It grows in such a uniform shape that it is an ornament to his grounds, and not like the neglected scrubs we so often see. Mr. Kerman cultivates it well, and digs in a dress-

ing of manure every spring. This much in favor of high cultivation for the quince.—Ed.

MANY-FLOWERED SUNFLOWER.—We have in our garden a sunflower on which we counted, about Oct. 1, ninety-six fine flowers!—Ed.

RECENT PUBLICATIONS.

Simmer's Descriptive Catalogue of Flowering Bulbs.—This pamphlet is neatly got up and well illustrated. It contains a description of the more prominent dutch flowering bulbs, kept for sale by J. A. Simmers, 147 King Street East, Toronto.

The Canadian Live Stock Journal, published at Hamilton, Ont., by the Stock Journal Publishing Co., is a neatly got up *monthly* magazine of 36 pages, devoted to the interest of farmers who make a business of growing live stock. It is ably conducted and deserves to succeed. Exhibition number just received.

Descriptive Catalogue of Fruits, 1886, Ellwanger & Barrey, Rochester. This catalogue deserves notice, aside entirely from its business value, as containing reliable descriptions of all the more prominent fruits, large and small, excepting strawberries. It is embellished with a handsome colored plate of the Industry Gooseberry.

The Farmer's Advocate, edited by Mr. Wm. Weld, London, Ont., is most ably conducted in the interests of Canadian farmers. We are glad to notice in the October number some account of the annual meeting of the Fruit Growers' Association at Toronto and a most cordial mention of this journal. We do not know of any monthly magazine that is so popular among Canadian farmers as the *Farmer's Advocate*.

NOTICES.

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N. B.—The premiums for 1887 will be distributed in April or May next.

THE MICHIGAN HORTICULTURAL SOCIETY.

A letter from C. Garfield, secretary, says:—"The annual meeting of our society will occur at Grand Rapids, beginning Tuesday morning, November 30, and continuing through Wednesday and Thursday, December 1 and 2. President Willits, of the State Agricultural College, will deliver an address on the second evening, and other prominent gentlemen from abroad will assist in the exercises."