

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured covers/  
Couverture de couleur
- Covers damaged/  
Couverture endommagée
- Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée
- Cover title missing/  
Le titre de couverture manque
- Coloured maps/  
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur
- Bound with other material/  
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/  
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/  
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments:  
Commentaires supplémentaires:

- Coloured pages/  
Pages de couleur
- Pages damaged/  
Pages endommagées
- Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées
- Pages detached/  
Pages détachées
- Showthrough/  
Transparence
- Quality of print varies/  
Qualité inégale de l'impression
- Continuous pagination/  
Pagination continue
- Includes index(es)/  
Comprend un (des) index
- Title on header taken from:  
Le titre de l'en-tête provient:
- Title page of issue/  
Page de titre de la livraison
- Caption of issue/  
Titre de départ de la livraison
- Masthead/  
Générique (périodiques) de la livraison

This item is filmed at the reduction ratio checked below/  
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

MARCH, 1890.

516 10/b c.2

# The Canadian



# ORTICULTURIST.

A JOURNAL OF  
FRUIT CULTURE

FRUIT  
FLOWERS  
VEGETABLES

EDITED BY L. WOOLVERTON, M.A.  
PUBLISHED BY

\* THE FRUIT GROWERS ASSOCIATION OF ONTARIO \*

Published at Toronto and Grimsby. \* Office Address—Grimsby, Ont.

Price \$1.00 per annum (including membership, Annual Report and Share in Plant Distribution). Single Copy 10¢

Nurseriesmen and Seedsmen.

# FRUIT TREES

and Ornamental: Evergreens, Apples, Grapes, Hardy Shrubs, Small Fruits, etc.

Free New Catalogue with descriptive priced CATALOGUE containing important information for planters.

**ELLWANGER & BARRY, FREE**

Largest and Most Complete Stock in the United States. **Mount Hope Nurseries, ROCHESTER, N.Y.**

## WATER LILIES

**RED** and other colors very easily grown. Everybody can have lovely **BLUE** Lilies in their own garden the coming **WHITE** is deliciously fragrant, and the **YELLOW** adds brilliancy to a group. Directions for culture with each order.

**FREE** A large packet of splendid **POPPY SEED** sent with each of the first 100 orders.

Price for Strong Plants, by Express, **75 Cents each**; or set of four, **\$2.50**, cash with order.

**ELMER E. SUMMEY,**

Feb. 26. LA SALLE, N.Y.

BRITISHER.—“And have you any paw-paw in Cincinnaughty, like Hyde Park, ye know?” Miss Bacon.—“Any pork! Well, ye had round fat numbers, I should say about 50,000 to the square mile.” Britisher.—“Fifty thousand square miles of pawk! By Jove, now you really surprise me, Miss Bacon.”

## THE NEW EARLY GRAPE

**“The Cortland”**

IS THE

**EARLIEST GRAPE IN NORTH AMERICA.**

It was the first on the market in Toronto last season of any Grape raised in Canada.

It is three to four weeks earlier than Concord Fruit, similar in appearance, quality and hardness. Those anticipating planting Grapes should send for circular at once, and obtain particulars of this the only early Grape with so many good points, viz.: It is the earliest, the most prolific, the hardiest, a strong grower, and of fruit good quality, and in fact is the best early market and table Grape known, and will grow and mature its fruit where all others have failed.

**R. LAMBERT & SONS,**

NURSEYMEN AND FLORISTS,  
Box 369, WINDSOR, ONT.

Also propagators of the “Cortland” Grape. Feb. 31.

## Northern Grown Trees, etc. PORT ELGIN NURSERY.

It will pay you to send for my Catalogue of Hardy Northern Grown Trees, Fruit and Ornamental, Shrubs, Small Fruits, Evergreens, Clematis, Roses, etc.

**GOOD STOCK; TRUE TO NAME; CHEAP.**

**J. H. WISMER,**

Feb. 31. Port Elgin, Co. Bruce, Ont.

1850-1890  
**BRUCE'S**  
Genuine  
**GARDEN**  
AND  
**FIELD**  
**SEEDS**  
For 1890

# SEEDS

Our Descriptive and Priced

Catalogue for spring trade is now ready, and will be mailed free to all applicants, and to customers of last year without solicitation.

Market Gardeners will find it to their advantage to sow our Seeds.

**JNO. A. BRUCE & CO.**

Hamilton, Ont. F. 21.

THE man who is careful to save everything that can be made available for fertilizing the soil will have less occasion to buy commercial fertilizers than the one who lets such material go to waste.

## GRAPE VINES, BERRY PLANTS, Fruit & Ornamental TREES, Etc.

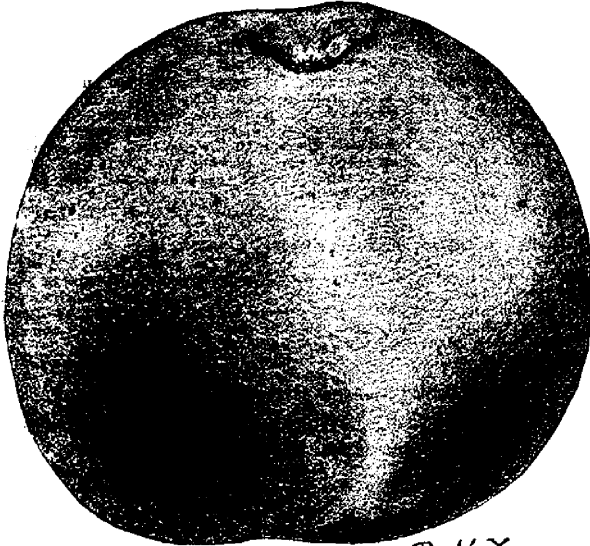
Guaranteed cheap and true to name. Send for Catalogue and Price Lists, Free to applicants.

**Helderleigh Farm Nurseries,**

**E. D. SMITH, Prop.**

Feb. 31. WILKINA, ONT.

Nurserymen and Seedsmen.



R.N.Y

Princess Louise,

THE NEW DESSERT APPLE.

Endorsed by the American Pomological Society; Western New York Horticultural Society; Ontario Fruit Growers' Association; granted a medal of excellency by the American Institute, New York city; recommended by the "Rural New Yorker," "American Agriculturist," "Toronto Globe," "Canadian Horticulturist," etc. First prize at Provincial exhibition and other shows as the best new Seedling. Exceeding Snow apple (from which it originated) in quality and keeping. Resembling Maiden's Blush in beauty. It will pay to top graft your old orchards and plant out new for market with this variety. For scions or trees, send to

SMITH & KERMAN,

DOMINION NURSERIES,

St. Catharines, Ont.

Jan. 4t.

THE SYRACUSE NURSERIES

OLD AND RELIABLE, **LARGEST and MOST COMPLETE** Assortment of Nursery Stock in America. In **BUDDED APPLES and STANDARD PEARS** they acknowledge **NO COMPETITION — QUALITY CONSIDERED.** Nurserymen and Dealers will consult their own interests by getting prices on this **SUPERB STOCK** before buying. **Special inducements to buyers in large quantities.**

SMITHS, POWELL & LAMB,

SYRACUSE, N.Y.

8-6t, omit Dec. & Jan.



CONSERVATISM vs. THE RAGE FOR NOVELTIES.

The Seed Annual for 1890, issued by D. M. Ferry & Co., of Detroit, Michigan, has reached our table. Its cover this year is especially artistic and attractive, and its contents, as usual, interesting and instructive. Ferry's seeds are thoroughly reliable, and always come true. The directions given in the Annual for the cultivation of both flowers and vegetables are so full and explicit that no one can fail of success who uses their seeds and follows the instructions.

D. M. Ferry & Co. are very conservative, both in offering new sorts and in their claims for them when offered; but they take pains to inform themselves as to the true character of all new varieties, so if some much lauded novelties are not found in the Annual, the probability is they have tested them and found them of no value.

A request sent to the firm at Detroit, Michigan, will bring you a copy of the Seed Annual for 1890 by return mail.

Jan. 4t.

NEW STRAWBERRY "LADY RUSK"

The best berry for long distance shipments. Will not rot or melt down if packed dry. Headquarters for all leading varieties of Berry Plants and **GRAPE VINES** having 300 acres in cultivation. **Catalogue free.**  
WM. STAHL, Quincy, Ill.

Jan. 4t.

QUICK IN THEIR ACTION.



TRADE MARK.

LASTING IN THEIR RESULTS.

## BONE FERTILIZERS

DOMINION FERTILIZER AND CASING WORKS, Hamilton, Ont.

GENTLEMEN,—I have used your Fertilizer on different crops, and am more than satisfied with the results. The peach trees where I used it have grown almost as much again as those trees I did not use it on; the fruit was much larger and a heavier crop. I used one teaspoonful to a hill of corn and had a most abundant crop, nearly double to that on which it was not used. There was a marked difference in the potatoes, those on which I used the Fertilizer being much earlier, cleaner and larger in size. Raspberries very large berries. I think it is the best I ever used, and intend giving you a larger order for this year.

NIAGARA, Jan., 1890.

(Signed), HUGH WATT.

DOMINION FERTILIZER AND CASING WORKS, Hamilton, Ont.

GENTLEMEN,—Having used your Fertilizer the past season, will say I am well pleased with results for the following reasons: My grapes were harvested a week or ten days earlier. Berries larger and sweeter, and ripened more even. Vines in better shape for next years crop, also used on pears with good result, pears smoother and more even in size, and am pleased to order another ton for this season.

BEANSVILLE, Jan., 1890.

(Signed), SAMUEL M. CULP.

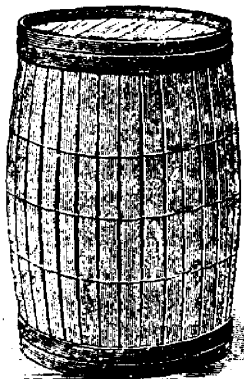
Please send for Catalogue giving full information.

**THE DOMINION FERTILIZER AND CASING WORKS,**  
255-257 James St. N., HAMILTON, ONT.

Jan. 6t.

(Please mention "Can. Horticulturist.")

## A NEW AND VALUABLE INVENTION.



*For shipping Apples, Pears, other Fruits and Vegetables, etc., which require thorough ventilation.*

This barrel has been tested in the United States from Georgia to Minnesota, and has received the approval of all who have used it.

When shipped in knocked-down form, about 2,000 barrels can be placed in a single car. Special rates given on car lots.

Write for prices and particulars to the Manufacturers,

**JOSEPH WILLIAMS' CO.**

Feb. 9t.

GODERICH, ONT.

### AT WORK BY THE DAY.

She—Oh, see that scare-crow out there in the field.

He—That isn't a scare-crow.

She—It must be: see how motionless it is.

He—That's the hired man at work.—*Yankee Blade.*



**9 Cords in 10 HOURS**  
Runs Easy  
NO BACKACHE.

**BY ONE MAN.** Write for descriptive catalogue containing testimonials from hundreds of people who have sawed from 4 to 9 cords daily. 25,000 now successfully used. Agency can be had where there is a vacancy. A NEW INVENTION for filing saws sent free with each machine; by the use of this tool everybody can file their own saws now and do it better than the greatest expert can without it. Adapted to all cross-cut saws. Every one who owns a saw should have one. No duty to pay; we manufacture in Canada. Ask your dealer or write **FOLDING SAWING MACHINE CO., 208 to 211 E. Canal St., Chicago, Ill.**

# KNABE

## PIANOFORTES.

UNEQUALLED IN

**Tone, Touch, Workmanship, and Durability.**  
**WILLIAM KNABE & CO.**

BALTIMORE, 22 and 24 East Baltimore Street.

NEW YORK, 148 Fifth Avenue.

Feb. 3t.

WASHINGTON, 317 Market Space.

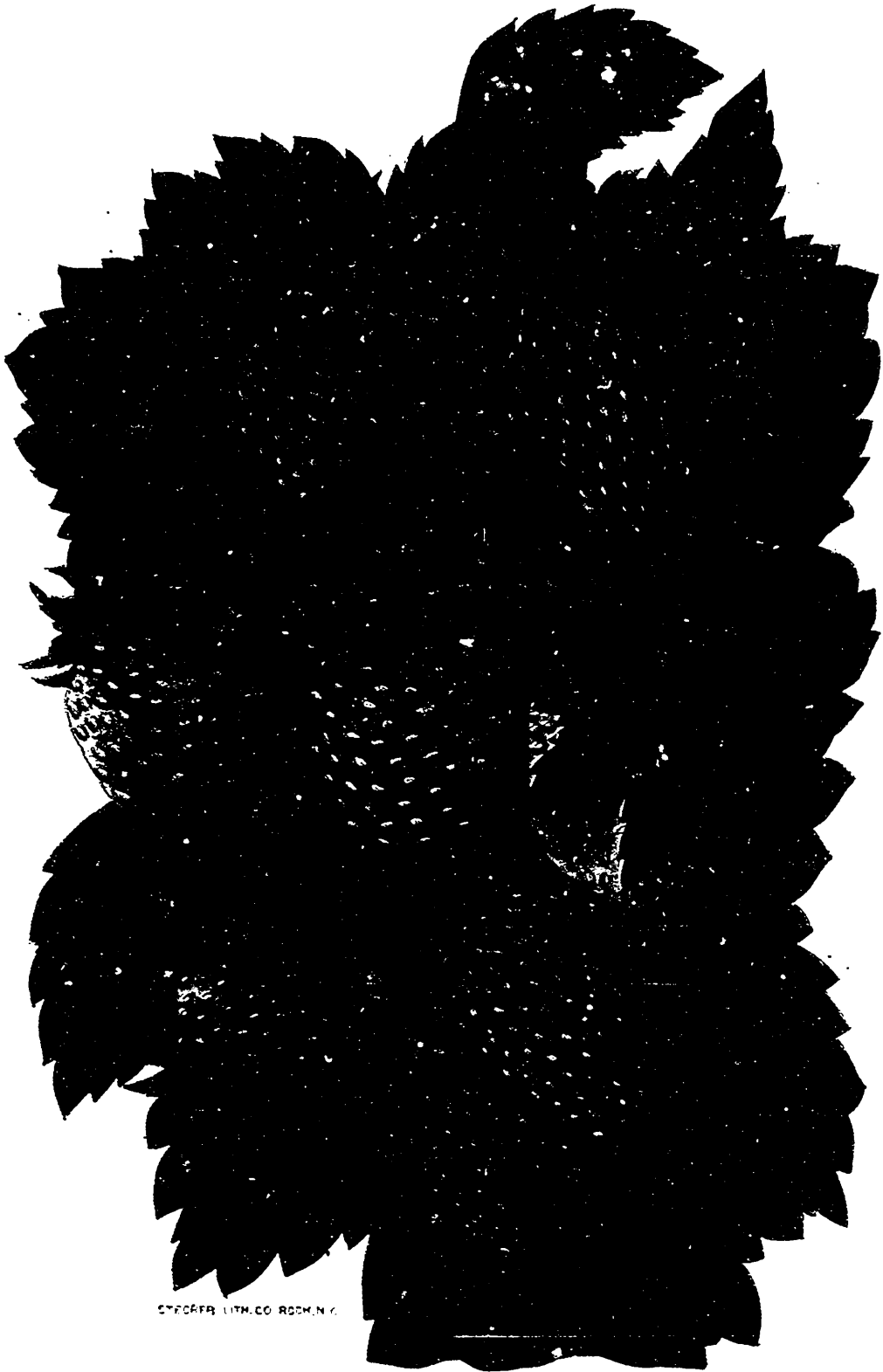
### SPROUTS.

"ARE you doing much gardening, Miss Struck-oyle?"

"No; not much. You see I have not got the proper stockings for such work."

"Got what?"

"The proper stockings—the rubber garden hose I see advertized in the papers."—*Time.*



STROEFER LITH. CO. ROCHESTER, N. Y.

**BUBACH'S No. 5.**  
FOR CANADIAN HORTICULTURIST.

THE  
Canadian Horticulturist.

VOL. XIII.

1890

NO. 3.



THE BUBACH STRAWBERRY.



OF the newer strawberries, there does not seem to be any one which receives more general commendation than Bubach's No. 5. It originated with J. S. Bubach, Princeton, Illinois, and was sent out in 1886. It has been tried at many of the experiment stations, as well as by many fruit-growers, and the general verdict is that it is a valuable market berry, and will be popular with commercial growers.

It is a pistillate variety, and the plants are healthy, vigorous, hardy and very productive. It does not produce new plants as rapidly as some, but the fruit is uniformly large and excellent, being much more regular than the Sharpless, and in every way superior to that similar berry, the Ontario. Regarding its size, while averaging about the same diameter as the Sharpless, or about  $1\frac{1}{4}$  inches, it is frequently grown  $1\frac{1}{2}$  and more inches in diameter. In weight, it averages about the same as the Jessie, according to the 6th Annual Report of the Ohio Experiment Station, in which it is stated that an average of three seasons showed 100 berries of the Bubach and of Jessie weighed thirty-five ounces, but of Sharpless, about forty ounces.

Mr. Geo. Dow, writing in the *Country Gentleman*, says of the Bubach:—

“I have grown the former for three years, and I have yet to find a single fault with it, and the reports I get from all over the country say the same.

It is a strong grower, free from rust or burn, produces plants enough, strong and vigorous, a large yielder of big, attractive fruit, and a variety that does equally well on all soils. I believe it, to-day, to be the best variety for general use that has had a thorough test all over the country."

The following description of the Bubah was given in the *Bulletin No. 5*, of the Central Experimental Farm:—

"Fruit large to very large, roundish or broadly conical in form, sometimes uneven on the surface, but never misshapen; bright red; quality medium to good, not firm enough for distant market; ripens medium early. Plant very strong and vigorous, foliage healthy and withstands the hot, dry weather remarkably well; very productive. All points considered, it is one of the best sorts tested here for a near market or home use."

Now, we may say as much as we please about the humbuggery connected with the introduction of new varieties of fruits, but if we growers shut our eyes to those which have real excellence, we shall miss it in the end, and be like the man who "cut off his nose to spite his face."

---

#### HORIZONTAL ARM PRUNING OF GRAPE VINES.

MR. J. H. TRYON, of Willoughby, Ohio, in his practical treatise on "Grape Culture," gives the following reasons for preferring the Horizontal system of grape pruning:

First, it requires at least one-third less vines to the acre than are usually planted by the other systems, a saving of expense in the purchase of vines and of labor in the planting.

Second, a saving of labor in tying vines to the wires in spring, as the arms properly tied remain so, with but little additional tying for several years.

Third, the lower wire being three feet from the ground, and nothing allowed to grow below it on the vines or on the ground, there is plenty of room for free circulation of air underneath and among the foliage and fruit, one of the surest preventives of disease in vine or fruit.

Fourth, as the fruit grows just above the lower wire of the trellis, at a uniform height from the ground, it is, as a rule, uniform in size and quality, and also in ripening.

Fifth, convenience of gathering the fruit and packing for market, as it is taken from the vines.

Sixth, the fruit is all out of the way of dirt, in case of heavy wind and rain storms.

Seventh, it makes a symmetrical and sightly vine.

Eighth, it is thoroughly practical for vineyard and garden culture, and will insure a paying success for expense and labor bestowed.



Ninth, it has room to grow and develop its wood, foliage and fruit, and is essentially necessary for its health and productiveness.

Tenth, as the vines are allowed to grow along the top wire of the trellis, directly over the fruit, they serve as protection to the fruit from storms and the sun and heavy dews, thus obviating the necessity of the use of paper bags to avoid rot and mildew.

---

### THE APPROACH.

THE time has come, even in our young Dominion, when more attention should be paid to the tasteful arrangement of the surroundings of our country homes. Some efforts were made in this journal, a year ago, to encourage the study of this pleasant art from an amateur point of view; and while it is always best to employ a landscape gardener, so many of our readers have neither the time nor opportunity of doing so, that we believe our remarks, however crude, will be appreciated.



FIG. 21

We present in this number an engraving of an entrance and approach to a suburban home, which may give some hints to those who are planning out their grounds. In too many instances we see the house placed so near the public road, and the carriage drive so nearly in the front, and the land so bare of trees or shrubs, that the place more nearly resembles a public inn than the home of a wealthy farmer. In contrast, observe the effect of an entrance placed well at one side of the pleasure grounds, amid groups of beautiful ornamental trees as completely hide the house itself from view at the gateway. By this means the designer has well effected the retirement so suitable to a delightful country home.

Soon after entering, the approach is found to curve gently toward the house, which is presently seen from the most favorable point of view. A very common fault with carriage drives is in having them cut up the lawn to a needless extent. Sometimes either these or the walks, or perhaps both, are made to approach the house from two front gates, and to curve from each to the front porch, as if, indeed, bare ground or gravel were an ornament instead of a necessary evil. The true idea is to have as few of these walks and drives as possible, and by no means to make them conspicuous. If it is possible to have the carriage drive pass along the side of the house, and not cut up the front lawn at all, it would be better taste; but where it must go in front, it may be possible to so screen it with shubbery where it passes the front windows, that it will not break the view across the lawn from these important points of observation.

---

### BEE-YARDS IN THE ORCHARDS.

**Y**EAR ago, the opinion prevailed among fruit growers, that bees injured fruit and the insect was generally looked upon as an enemy of fruit growers. So widespread was this opinion, even among well informed people, that a formal resolution was passed, at one of the meetings of the Ontario Fruit Growers' Association, declaring the bee guilty of committing serious havoc among grapes and small fruit generally. She was thus assigned a place among the pests of the Pomologist. The fruit-grower has enough enemies to contend against, without adding to the list insects he should esteem his best friends, creatures that, instead of being accused of mischief, should be looked upon as important agents in the fertilization of flowers, and effective co-workers with the hybridist in producing new and valuable varieties.

The bee cannot be fairly classed among the fruit eaters, because "She ain't made that way." She uses only her tongue and her legs in collecting food while foraging. The only weapon at her command, capable of puncturing fruit, is her sting, and this she only uses as a weapon of defense. She never employs it to puncture fruit. To do so would be to put its owner's life in jeopardy. Nine times out of ten when a bee stings she loses her only means of defence and dies. Her jaws are formed with a view to the end they were intended to serve, namely, baking, moulding and building wax into beautiful symmetrical cells, and even this they cannot do until the wax is softened by a high degree of heat within the hive. She finds her food in the *flower*, not in the fruit. When hard pressed, she will appropriate the juice of a ripe raspberry, or a luscious grape, but not until a mischievous wasp has already punctured them, or a destructive bird partially destroyed them; but not then, with advantage to herself or the family for

which she provides. Such delicacies are not good for her, and, if largely indulged in, end in death. Like a baby she relishes the forbidden for a time and will make a meal out of a rotten apple or a decaying pear; but not by any weapon at her command can she conveniently or safely break the skin of a ripe fruit.

It is pleasant to know that among enlightened Pomologists, the old-time prejudice against the bee is fast giving place to an appreciation of her value to the fruit-grower, and not a few of them are establishing bee yards in their orchards and fruit fields, with the view of insuring the better fertilization of the fruit blossoms. I venture to predict the time is not far distant when this practice will be followed to a much greater extent than it now obtains. Ten years experience in fruit growing and bee culture, carried on in the same orchard, a watchful eye upon her movements, and some scrutiny into her anatomy and physiology, has changed my own suspicions into admiration, and established in my own mind a firm belief of the bee's usefulness to the orchardist, and I am ready to recommend every fruit-grower in the land to keep bees if he desires to secure the greatest return for his labor, in orchard and fruit field.

If time permits and you accord me space, I may, in future, have something to say on bees as fertilizers.

*Owen Sound, February 1, 1890.*

R. MCKNIGHT.

---

## RULES FOR THE GARDEN.

MR. GEO. ELLWANGER, of Rochester, in his new book entitled "The Garden's Story" gives the following good rules for managing the ornamental garden:

"I. Whatever is worth growing at all is worth growing well."

"II. Study soil and exposure, and cultivate no more space than can be maintained in perfect order."

"III. Plant thickly; it is easier and more profitable to raise flowers than weeds."

"IV. Avoid stiffness and exact balancing; garden vases and garden flowers need not necessarily be used in pairs."

"V. A flower is essentially feminine, and demands attention as the price of its smiles."

"VI. Let there be harmony and beauty of color. Magenta in any form is a discord that should never jar."

"VII. In studying color effects, do not overlook white as a foil; white is the lens of the garden's eye."

"VIII. Think twice, and then still think, before placing a tree, shrub or plant in position. Think thrice before removing a specimen tree."

## AT THE FARMERS' INSTITUTES.

## EXPERIENCE IN EVAPORATING APPLES.

At the Farmers' Institute at Warkworth, Mr. John Stone, of Norham, said he had been running a small evaporator with great profit. It was of a size large enough to take about sixteen bushels at a time. It was run with very little expense, one girl with a good paring and coring machine being able to prepare about six bushels per hour for the evaporator.

His favorite apple is the Golden Russet, as it yields eight and one-half pounds of sliced evaporated fruit to the bushel; the only other apple which yields more pounds per bushel is the Canada Red, which gives nine pounds. Next comes the Swayzie Pomme Grise, yielding eight pounds, while the Northern Spy only yields six and one-half pounds, and the Colvert only five and one-half.

Mr. Stone has found evaporated apples profitable selling at nine and ten cents per pound; but he has found the greatest profit in evaporating apples whole, of course peeled and cored. He got the idea from a friend in England, who noticed them in London, brought in from Holland, and sold in fancy packages, laid nicely in rows. He has tried it, and with the most excellent results.

The slicer being removed the parer and corer was used, and it was found that the Golden Russet, in this way, would yield as much as twelve pounds per bushel. This and the Swayzie Pomme Grise were the only two varieties which could be successfully evaporated whole. He had put them up in a box two feet long, ten inches wide, and thirty inches high, holding about fifty pounds, and had shipped them to Ottawa and Toronto, where they sold readily at ten and twelve cents per pound, or about two cents per pound in advance of the ordinary sliced evaporated apples.

For all purposes he claimed that the Golden Russets, evaporated whole, were the most desirable, as they cured and kept perfectly, retaining more of the natural condition of the fruit. Spiced and steamed or stewed they were soon made into a delicious sauce for the table, or could be made up in pies or dumplings.

Surely this matter is worth considering, for it would appear that an unlimited market could be found for apples prepared in this way. The only drawback is that only first-class apples would answer the purpose.

## PRUNING TREES.

At many Farmers' Institutes the question of the best TIME for pruning is frequently raised. Now, if a tree is kept in shape by light pruning from year to year, the work can be done at any time; but if heavy pruning must be done, more consideration is required. It is most conducive to the vigor of the tree to do such pruning while the tree is dormant, either in fall or

spring; but in all cases, large cuts should be well painted over to keep the wound from cracking. Red paint, mixed without lead, with boiled linseed oil, answers a good purpose; as also does shellac, thinned with alcohol to the consistency of paint.

If, however, the trees are sufficiently vigorous, and a check is needed to throw them into bearing, summer pruning may be useful, having also the advantage that wounds made between the middle of June and the middle of July will heal readily, without any paint.



FIG. 22.

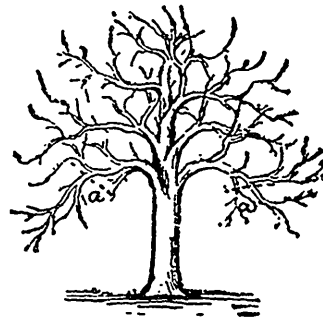


FIG. 23.

The MANNER of pruning is all important. Symmetry of form should be considered, modified by the natural habits of a tree. A tree, which is inclined to grow upright, should not be compelled to spread. Of all forms, the pyramidal is surely nearest perfection; for by this mode, few watersprouts will come, and large cuts need not be made. The idea should rather be to thin out the smaller limbs, than to remove larger ones.

The preceding remarks are well illustrated in the accompanying cuts of trees, one of which has been almost ruined by a murderous method of butchery, and the other pruned on the principles laid down.



FIG. 24.

It is a very bad practice to cut off branches leaving a stub which cannot heal, and in consequence must rot into the heart of the tree as in Fig. 23.

Cuts should be made close and smooth, and then the bark will readily cover the wound.

The tools most useful in pruning are a sharp pruning knife, a fine toothed saw, and a pair of tree pruners. This latter instrument is invaluable. It has great power, and with careful annual pruning should do almost the whole work; and that, too, with the greatest ease.

#### FERTILIZERS.

At some of the recent Farmers' Institutes, Mr. Raynor, B.S.A., recommended as green manures for the orchard, (1) rye, sown in the fall and

plowed under in the spring, (2) clover, and (3) buckwheat. The latter could be sown rather early and plowed under, and this would be especially useful in destroying quack grass and Canada thistles.

Sometimes, according to Mr. Raynor, commercial fertilizers are not kept up to the formula but are of very inferior quality. In order to prove this, it is best to send samples of any fertilizer we are using to the Experimental Farm, at Ottawa, where they will be analyzed free of charge. The actual value of the fertilizer can then be easily reckoned by knowing the following market-value of the various constituents, viz. : Nitrogen twelve to eighteen cents per pound; phosphoric acid, five to nine cents; potash, three to five cents. The value of a commercial fertilizer further depends upon the amount of the above elements which are in a soluble state, or available condition for plant food.

Superphosphate is especially difficult of advantageous application, owing to the fact that the presence of lime in soils tends to render this soluble phosphoric acid insoluble. Superphosphate is found to give the best results on clay soil.

Nitrogen is one of the important elements of commercial fertilizers, but, on light soils, it is apt to leach away, unless there is some green manure to retain it. Nitrogen is largely brought down from the air in the shape of nitric acid. It is also supplied in stable manure, and is the principal constituent of the urine of animals. This latter valuable fertilizer is frequently allowed to waste in the stables, and absorbents should be carefully employed to absorb it. Gypsum is frequently used as an absorbent, and is invaluable for fixing the nitrogen in the form of nitrate, a condition of the nitrogen which is soluble, and thus available for plant food.

Nitrate of soda can be purchased as a special fertilizer for the orchard and garden and is found to be highly beneficial in its immediate effects on growing crops; but, on account of its being soluble, it needs to be applied in the growing season, that it may not be carried away beyond the reach of the roots of the plants.

The fact is that, in gardening or orcharding, we need to make use of every kind of manure within our reach, for the secret of success in this line pre-eminently is found in the abundant use of fertilizers in connection with constant cultivation.



NOTES FROM THE WESTERN NEW YORK  
HORTICULTURAL SOCIETY.

BY A SPECIAL REPORTER.

THE thirty-fifth annual meeting of the above society was held at Rochester, January 22nd and 23rd, with a very good attendance, and the session was of great practical value and interest to all present. We give some of the most instructive points brought out in the essays and discussions.

The officers elected were Patrick Barry, President; S. D. Willard, W. C. Barry, W. Brown Smith, and J. S. Woodward, Vice-Presidents; John Hall, Secretary and Treasurer. The county reports were unanimous as to the unfavorable record of last season. The heavy frost late in May, almost completely ruined many crops, as the frost was followed by a cold, wet summer. Still, the fruit-growers, with their proverbial cheerfulness, did not seem to feel particularly discouraged, as they hope for better things this coming season.

State Entomologist Lintner, presented a paper on "Recent Experience with Insect Pests," in which fruit-growers generally, are considerably interested. We present some brief extracts: "It seems probable that in the next few years the most harmful of the insects would be brought under control. By the aid of the force pump we hope to bid defiance to the plum curculio and insects that feed on the foliage of fruit trees.

"The old methods of insect destruction were compared to the force pump, as the Gatling gun compares to the old flint-lock musket. Regarding insecticides, it was policy to use as little arsenite as possible; London purple was less harmful to some trees than Paris green, while white arsenic should never be used. Pure water, without trimmings, when thrown with sufficient force, was efficient as an insect preventive, in fact it was the best remedy against the Rose slug. The Bordeaux mixture is to be recommended, and where it was used for potato rot, it will also be efficient against the potato bug at the same time, if London purple is added to the mixture.

"A new pear insect made its appearance at Rochester, in June, 1888, being of the case-bearing variety, which burrowed into the fruit. A bark-borer that was found on peach trees was mentioned as being what is commonly known as the elm bark beetle. It was formerly supposed to be the cause of the peach 'yellows.' As all of these insects are hard to reach, the only safe remedy now known is to burn the infected tree. However, experiments are now being made to determine whether or not kerosene is injurious to the trees, and if it is not, it will be an excellent remedy for these bark-borers, which seem to be on the increase.

"The ravages of the destructive grape-vine beetle might be checked by the use of Paris green water, as could also a caterpillar, which lately had been reported as injurious to pear buds. In the matter of spraying, great care

should be exercised in the use of the poisons, which, as quality greatly varies, should be procured only of reliable dealers; twelve ounces of Paris green, dissolved in two hundred gallons of water, was said to be effective against the codling moth. For spraying plum trees, two ounces of London purple to one hundred gallons of water, was recommended; the purple solution, however, should never be sprayed on peach trees, as it seemed much more injurious to the foliage than Paris green."

In reply to various questions it was stated that on heavy loam or clayey soil, dwarf pears, especially the Duchess, Kieffer and Anjou, were by far the more profitable. On light gravelly, or sandy soil, the standards were the best.

"Relative to Evaporation of Fruits," was the subject of a paper read by Michael Doyle. Mr. Doyle said that the failure of the apple crop in Western New York, drove the evaporators to Michigan for a supply of apples. The Michigan apple sold as well in the market as the New York apple. There was a demand for fancy evaporated fruit, which ought to be an incentive to evaporators to try to supply this demand. He complained that there was a tendency to overdo the business, and the competition in the evaporating concerns was very close. Mr. Doyle gave the following estimate of the amount and value of evaporated apples, in the leading apple-producing States: New York, Ohio and Michigan, for last year: Pounds 18,000,000, value, \$712,000.

Mr. Doyle spoke of the measures taken by the German government to keep evaporated American fruit out of the country. The fruit was not allowed to be placed on sale until it had been analyzed by a competent chemist. Mr. Doyle thought the German government desired to see the industry started by the German people, and, therefore, did everything they lawfully could to keep out American fruit. The effort of the Germans, however, to evaporate fruit, was a failure. When Americans were offering fruit at seven cents a pound, in the German markets it was costing the Germans ten and eleven cents to produce a pound of fruit ready for use. The American fruit was looked upon with suspicion, because of the fact that it was dried upon galvanized wires, and it was feared that it contained zinc in quantities sufficient to injure persons using it. He favored the use of something in place of the galvanized wires.

During a talk on fertilizers, it was stated that formerly hardwood ashes from Canada was about the best fertilizer to be had, but that the Canadians were getting wakened up, and they had begun to "doctor" their ashes, so that within the last two years, the quality of the ashes had fallen off.

A communication from W. W. Dunlop, of Montreal, invited the members to attend the Convention of the Dominion Fruit Growers, at Ottawa, February 19th to 21st, and asking the Society to send a judge to act with another judge from the Massachusetts Society. S. D. Willard, of Geneva, was selected in accordance with this request.

*(To be continued.)*



## THE DOMINION CONVENTION OF FRUIT GROWERS.

ORGANIZATION—ENCOURAGEMENT OF FRUIT GROWERS—BRITISH COLUMBIA AS A FRUIT COUNTRY—TRANSPORTATION OF FRUIT, ETC.

THIS first Dominion Convention of fruit growers was a complete success. Indeed so important was it regarded as a means of furthering the interest of the fruit industry of Canada that a permanent organization was effected under the name of "The Dominion Horticultural Association," and a grant has been requested from the Dominion Government for the sum of \$3,000 per annum to cover the necessary expenses. The following officers have been elected for the first year, viz.: President, Prof. D. P. Penhallow, of Montreal; Secretary-Treasurer, Mr. W. W. Dunlop, of Montreal; Vice-Presidents, the presidents of the provincial fruit growers' associations; Statistician, Mr. Geo. Johnson, of Ottawa.

Anyone may become a member of this Association upon payment of the annual fee of \$2.00 and be allowed to compete for the very liberal prizes offered for fruit exhibits at the annual meetings; but members of any one of the provincial associations may become members of this one on payment of \$1.00. Voting power is, however, confined to delegates, and the votes are distributed among the various provinces in the following manner, viz.: Ontario, six; Quebec, four; Nova Scotia, three; British Columbia, two; and one each to the Provinces of Manitoba, New Brunswick, Prince Edward Island, and one to the North-West Territories. A larger number of delegates may be sent, but the number of votes is fixed as above.

We have not sufficient space to give anything like a complete report of the proceedings, which have been taken down verbatim and will be published in due time, but a few notes may be of interest to those who had not the privilege of attending.

The meeting was opened by the Hon. John Carling, who, in a few well chosen words, welcomed the delegates to Ottawa, and expressed the deep interest which the Dominion Government had taken in the extension of the fruit industry and the readiness with which both sides of the House had provided the grant required for the successful conduct of this convention.

Prof. Penhallow, in his address as presiding officer, gave some account of the various provincial organizations, and, in speaking of the Ontario Fruit Growers' Association, paid it a high tribute for the excellent work which it had accomplished in the introduction of new and valuable varieties of fruit and in the publication of a monthly journal which he characterised as the best work on Canadian horticulture extant.

Prof. Saunders, in his address, said it might be interesting to know that the Ontario Fruit Growers' Association owed its first legislative grant to the

agency of the Hon. John Carling, who introduced a bill into the Ontario Legislature for a grant of \$500; and now he was endeavoring to give the same kind of encouragement to fruit growers in a broader way through this convention and through the experimental farms.

One of the most important ends in view in the conduct of these farms was the testing of new fruits. He did not believe that many of the Russian fruits would be of value in those regions where the best varieties are already found to do well; but where these fail, the Russians would be found to be of the greatest value. In small fruits, also, he was confident that many kinds now being tried at the farms would prove of great excellence.

Fruits may be grown in many parts where now they are supposed to fail. Apples can be grown in many other valleys in Nova Scotia besides the Annapolis valley, and many varieties of fruits which are supposed to fail in the vicinity of Ottawa, will succeed. In the North-West even where the Duchess failed, he believed there would be found varieties of Russian or other origin, which would grow and give the inhabitants the successive fruits they so much need.

He had once had a prejudice against the quality of British Columbia apples, but on testing such varieties as the Fameuse, Spitzenburg and other well known varieties, he had found that the quality was little behind that of Ontario apples, and, in size, they far exceeded them. The Spitzenburg, for instance, in British Columbia was twice the size of the Ontario sample, the Russet half as large again and so on. He had never seen pear, plum and cherry trees load, as they do there, and the pear blight and plum knot were, so far, unknown obstacles in the way of the fruit-grower. With such opportunities, he believed that very soon British Columbia would cease to import and instead begin to export many kinds of fruit.

During the first evening there was a very full house, it being a united meeting of dairymen and fruit-growers to consider the important subject of cheap, careful and rapid transportation of our products to home and foreign markets. This subject was opened by Mr. A. McD. Allan, who in a clear and unreserved manner stated the many grievances of the shipper against the steamboat and railway companies. We will give an outline of this address in our next next number.



🍇 Fruits 🍇

THE HOME FRUIT GARDEN.

A SUBSCRIBER asks how to lay out a fruit garden of half an acre, for home supplies. This is so much a matter of taste, and of special requirements, that it would be impossible to give any plan which would be at all likely to meet with universal approval. A few points, however, on this subject, may interest our readers!

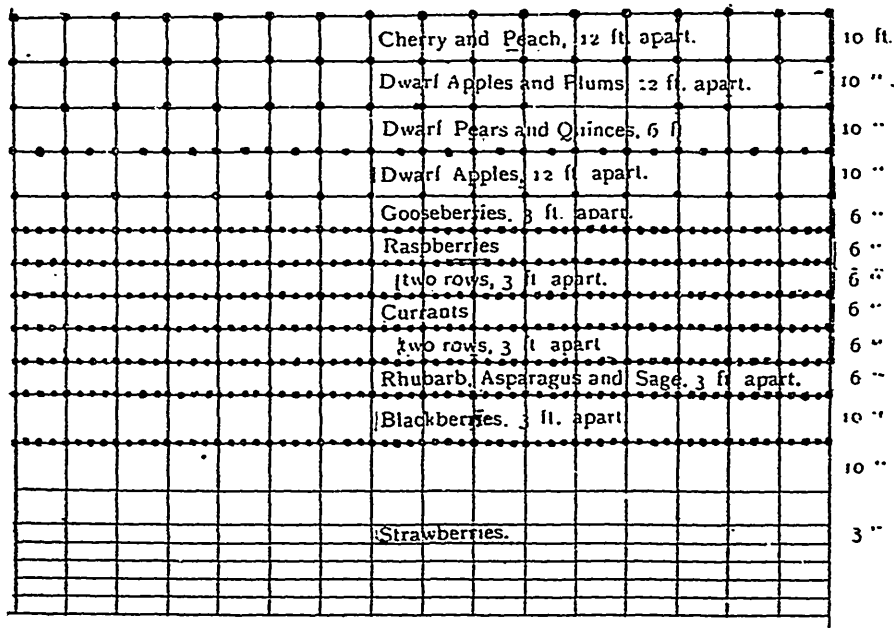


FIG. 25.—THE FARMER'S FRUIT GARDEN.

First to be considered is the *location*. It should be near the house, where it is of easy access for gathering the fruit as it is needed, so that it may be always fresh. One advantage of having it somewhere in the house-yard is in dispensing with a fence. Nothing so interferes with the careful cultivation of a garden as a close fence, that excludes all horse cultivation. The time is gone by when it pays to hire a man to dig the garden with a spade, and with the same instrument to care for the rows of small fruits. We cannot afford such expenditure for labor, and the consequence is the plantation falls into neglect, the owner is discouraged, and the fruit garden becomes a thing of the past.

Secondly, in regard to *shape*. The fruit garden should be longer than broad, for convenience in horse cultivation. One hundred feet wide by two

hundred feet long, will occupy about a half acre of ground, and be a very suitable shape.

Thirdly, regarding a plan for planting. We have drawn out one that may suit some persons and possibly furnish useful hints to others. It will be observed that the whole is planned for cultivation in two ways with the horse and cultivator, so that very little hand work is necessary. Dwarf trees of the apple and pear are introduced, because they are much more suited for the garden than standards, and it is presumed that no orchard is grown separately. The distances apart of the rows are shown on the side, and the distance in the rows are given between the lines. The amount of stock required may, therefore, be easily calculated, and need not be written out here.

Fourthly, a few words about varieties of fruits suited to home use may be in place just at this season of the year, when so many are buying their stock. In doing this we will have in mind especially those suited to home uses rather than market.

*Strawberries*.—Crescent, Bubach's 5, Jessie and Manchester.

*Raspberries*.—Black: Souhegan Gregg and Hilborn. Red: Highland Hardy, Turner, Shaffer and Cuthbert. Yellow: Brinckle's Orange and Golden Queen.

*Currants*.—Red: Fay's. White: the White Grape. Black: the Black Naples and Lee's Prolific.

*Blackberries*.—Early Harvest, Kittitunny (tender) and Taylor.

*Gooseberries*.—Houghton, Smith, Downing and Industry.

*Grapes*.—Black: Moore's, Worden, Roger's 4. Red: Lindley, Brighton and Salem. White: Lady, Jessica and Niagara.

*Apples*.—Yellow Transparent, Early Harvest, Duchess, Gravenstein, King, Wealthy and Northern Spy.

*Cherries*.—Early Richmond, Montmorency, Late Kentish. The large English cherries, such as Gov. Wood, Yellow Spanish, Knight's Early Black, Great Biggarreau, etc., are unsurpassed for dessert purposes where they succeed, but that is only in certain limited sections of Ontario.

*Pears*.—Rostiezer, Bartlett, Flemish Beauty, Duchess, Lawrence, Beurre d'Aujou, Winter Nelis. This selection will give a succession of delicious pears for the table, from August to April of each year.

Elsewhere, in our pages, our readers will find valuable lists of plums from which to select. This list is not given as embracing all the valuable kinds for home uses, but where they succeed they may be depended upon as giving good satisfaction. In our next report, for the year 1890, some valuable lists of varieties of apples and pears adapted to the different parts of our Province are expected to appear, which will, no doubt, be of great value to intending planters; there will also be a carefully prepared list of all fruits published, as soon as it can be prepared, from which also those best adapted to home uses may be readily seen.

## THE CANADIAN APPLES.

IN THE HORTICULTURIST, for January, that you kindly sent me, I find notes by Prof. J. L. Budd, on some Canadian apples, and by another correspondent on the Switzer apples. Living, as I do, near the northern line of Iowa, I thought a few words from me might be of some service to your Northwestern readers.

The Switzer is far from being as hardy here as the Duchess, and on our black soils it is much given to blight, and the fruit drops easily before it is fairly ripe. It is a good bearer and a good apple, but has too many faults to make it valuable for the North-West. The Montreal peach is not nearly so hardy as Duchess, and has so far proven a tardy bearer. McIntosh Red, Canada Baldwin, Fameuse Sucre, and Winter St. Lawrence, have all proven failures on and north of the 43rd parallel.\* None of them are as hardy as the Fameuse, and the bearing orchard-trees of this variety were either killed or severely crippled by our recent severe winters.

I am often tempted to try some tree of Canadian origin, but our experience thus far is not favorable to the experiment. However, I still feel like trying seedlings of the Fameuse that are proving, when root-grafted, to be hardy in northern Canada. The most promising of the new sorts that I have tried is a seedling of the Duchess, now twenty years old; the fruit is of good size, light to dark green in color, just the right acidity for cooking, and when mature an agreeable eating apple. The tree is fully as hardy as the Duchess, and an excellent bearer, from latitude forty-three to forty-five. In your climate this would undoubtedly be a good winter apple. Several of the Russian varieties are proving hardy here, and we are still hopeful of valuable results from our experiments with them.

*Charles City, Iowa.*

C. G. PATTEN.

---

VARIETIES OF GRAPES TO PLANT FOR MARKET PURPOSES.

NO profitably grow grapes for market, only a few varieties are required and to name those varieties suitable to all locations is a difficult question, as a slight difference in location, soil, or culture, will produce results so widely different.

The culture of no fruit, perhaps, gives rise to a greater variety of opinions than that of the vine. For this reason it is safer for those who intend planting to find which varieties succeed best in their own locality.

---

\* NOTE BY EDITOR.—In Canada these varieties succeed north of the 45th parallel.

However, for market, I would select the varieties in the following proportion for 1,000 vines: 100 Worden, 200 Concord, 100 Wilder, 200 Lindley, 200 Agawam, and 200 Niagara.

Some may say, why are Delaware, Brighton, Salem, Moore's Early or Pocklington not included. For the following reasons: Lindley will produce more to the acre than Delaware, ripens at the same time and is more salable; it will produce as much as the Brighton, and improve by hanging when fully ripe, while the Brighton fails in both color and flavor.

The Lindley and Agawam fills the place of Salem in the market, are as productive, and not as subject to mildew, or as liable to burst with rain. Moore's Early can only be made to produce one-third as much as Worden, and is not as good in flavor. Niagara fills the place of Pocklington in the market and is more productive.

*Winona, Ont.*

M. PETTIT.

### PLUMS FOR MARKET.

A GOOD list of plums for market purposes, as also for shipping, are: Lombard, German Prune, Washington, Yellow Egg, Imperial Gage, Reine Claude, Coe's Golden Drop, Quackenbos, Niagara, Smith's Orleans, Duane's Purple, Pond's Seedling, Glass' Seedling, Bradshaw, Lawson's Golden Gage, Gen. Hand, Victoria, French Prune. These for an orchard of 500 or 1,000 trees, I would divide about equally. For an orchard of 100 trees, I would plant as follows: Washington, Niagara, Lombard, Glass' Seedling, Yellow Egg, Reine Claude, Coe's Golden Drop; these being very productive varieties for that number of trees, and the quality is good enough for either table, cooking, or market. All of these I have found perfectly hardy and good bearers, good shippers, and selling at highest prices. There are several plums claimed to be curculio proof, but I have found none entirely free. There are some that seem more free than others from curculio, such as Smith's Orleans, Columbia, Lombard. I find one of the great secrets of profitable plum-growing is to plant the best kinds, give them good cultivation and plenty of fertilizing material to keep good growth in the trees; good cultivation and fertilizers being an enemy to the destructive diseases as black knot and rot. Even the curculio dislikes cultivation, grass and weeds being a hot-bed for the insect, while neglect of cultivation is death to profitable plum culture.

*Winona, Ont.*

GEORGE CLINE.

## SMALL FRUITS TESTED IN MICHIGAN.

MR. T. T. LYON, who has charge of the sub-station of the Michigan Agricultural College Experiment Station, reports his experience in a recent bulletin. In his opinion, the following *Strawberries* are best suited for the family garden, provided that quality is the chief consideration: Alpha for early, May King, Belmont and Barry for medium, and Mount Vernon to close the season. For market, he would grow Crescent or Haverland with Miner as a fertilizer, Bubach, No. 5, with Logan to fertilize it, and Mount Vernon to close the season.

Of the Haverland, he says this is one of very recent varieties which is attracting much attention. It has shown itself at least fully as productive as the Crescent, larger size and better flavor. The plant also is healthy and vigorous. It is a pistillate.

Of the *Raspberries*, Mr. Lyon commends for the family garden the Turner, Herstine, Golden Queen and Cuthbert; and of the black caps, Souhegan, Hilborn and Nemaha, with Shaffer for canning. For market he might, perhaps, substitute the Gregg for the Hilborn.

🍓 New • or • Little • Known • Fruits 🍓

## THE LADY RUSK.

WE have nothing to say concerning this new introduction of William Stahl's, except what he himself says of it, as it has not yet been tested by any of the Experiment Stations, but as plants have been freely distributed among them, we shall receive their unbiased judgment after this summer's fruit season.

The introducer claims for the Lady Rusk the following important qualities: (1) vigor of growth, (2) power of withstanding drouth, (3) freedom from rust, (4) earliness, several days ahead of Crescent, (5) large size, (6) firmness, (7) productive, ness, equal to Crescent.

Mr. Stahl says he now controls the largest acreage of strawberries of any man in the United States, and thinks he is qualified to judge of the kind that will be most profitable to growers. Such a berry he believes he has found in the Lady Rusk, a cut of which accom-  
panies this article.

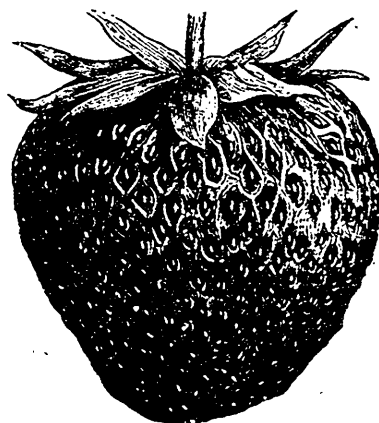


FIG. 26.—THE LADY RUSK.



FIG. 27.—THE PROGRESS RASPBERRY.

### THE PROGRESS RASPBERRY.

WE are favored by that enterprising nurseryman, Mr. J. T. Lovett, of Little Silver, N. J., with cut of a new raspberry, called the Progress, which he highly commends for its earliness and productiveness.

Mr. Lovett describes it as being of good size, jet black, of highest quality; cones of very strong growth, very hardy, and wonderfully productive. Though resembling Souhegan, he claims that it is earlier, firmer, a stronger grower, and that it yields almost double the quantity of fruit.

We do not find it mentioned in the reports of the Experiment Stations.





### SOME POINTS ON GROWING HARDY PERENNIAL PLANTS.

THIS is the season when the future beauty of our garden should be planned. While this is equally true of both vegetable and flower garden, it is more especially of the latter of which I wish to speak. While much can be said on the flower garden as a whole, there is a particular branch to which I desire to call the attention of the readers of THE HORTICULTURIST.

A fact that is not generally known, except to professional growers, is that many of our finest hardy herbaceous perennials are as readily raised from seed as the most ordinary of annuals. Where any number of plants is to be used like a variety of Campanulas, Delphiniums, Poppies, etc., this is by far the more desirable way of securing a fine collection at an expense hardly worth considering, for a packet of seed of most every hardy subject, containing from fifty to one hundred sound seed, may now be had from any extensive seed house, for no more, often less, than a single flowering plant is usually sold for by the nurserymen.

One reason that this method has not heretofore been largely adopted, is that it is only comparatively recently that seeds of the better perennials could be purchased at a low rate,—that is, of such subjects as do not naturally bear seed in every one's garden. Again, it is commonly supposed that, unlike annuals, these perennial seedlings must be grown until the second year before they bloom; this is true only under certain conditions. If the seed is sown in the summer or autumn of one year, naturally no bloom will be had until the following season, the plants, even then, being a year or less old.

The proper way, however, of treating these plants, is to sow the seed about the middle of March, under glass, either in a green-house, hot-bed or sunny window, in a shallow box, and when the plants are above ground,

they should be treated exactly like tender annuals, or early tomato plants; prick them out in other boxes, giving a little space, and as the season advances give them air, to harden them somewhat. See that they are in such a situation that they do not become spindling and weak. Usually, if the seedlings are given space of an inch each way in the second box, they will grow along all right until they can be planted out, although I always think that it pays me, in the long run, to transplant them the second time, before they are put outside; the planting-out must not be done until the weather is warm and settled, for the seedlings are very tender at first, even if they readily withstand the following winter's cold.

From these inside boxes they can be planted in the garden wherever they are desired to bloom, which they will do the same season, although, of course, not so strongly nor so fully as when they become well established.

This starting them under glass, however, is not what I would most strongly urge. It is a good way when one only wants a few plants, but when you would like a dozen or more of as many different kinds as possible of those mentioned below, why then I wish to advise you to sow the seed out of doors. Select a spot that is somewhat shaded, during part of the day, dig the soil thoroughly, and if heavy, apply a two-inch dressing of fine coal ashes, well worked into the soil. Have the spot large enough to give a whole row to each kind of seed, at one end placing a label, having plainly written upon it the name of the seed and the date of sowing.

Sow the seed as early as the ground is in condition, quite thinly, as to economize labor, the plants, after coming up, can be left in the seed rows, which should have been placed about ten inches apart. In case more plants have come up than are really needed, pull out the weakest, thin out crowded spots leaving the ones wanted at as uniform distances apart as possible, transplanting where necessary, in order to fill up empty spaces. During the summer this bed of seedlings should be carefully weeded, and the ground stirred, and the growth of the plants will be very satisfactory. Through the winter a little strawy manure can be placed over them for safety, and in the spring they can be transplanted to their flowering places, and an exceedingly fine collection of hardy plants is had at but little expense, either of time or money.

By taking this means of supplying the hardy garden, there is the possibility always present that you are just as liable to secure fine new varieties as any nurseryman; this really is a most fascinating point in the matter of seedling growing. Then again, the plants gained in this way are, oftener than not, likely to far exceed in vigor and blooming qualities, such as are only a part of an old clump that was divided.

The following is quite a complete list of such perennials as may be easily raised from seed; the first named being such as are desirable for their flowers, while the second list names those which present a striking appearance mainly in the matter of foliage.

Monkshood (*Aconitum*), Achillea, Adonis, Alyssum, Snapdragon (*Antirrhinum*), Windflower (*Anemone*), Anchusa, Arabis, Columbine, (*Aquilegia*), Sweet Woodruff (*Asperula*), Armeria, Auricula, Baptisia, Coreopsis lanceolata, Canterbury Bells (*Campanula*), Candytuft, Cerastium, Cowslip, Crucianella, Larkspur (*Delphinium*), Foxglove (*Digitalis*), Garden Pink (*Dianthus*), Gentiana, Golden Rod, Edelweiss (*Gnaphalium*), Hollyhock, Hibiscus, Lavender, Lupinus, Evening Primrose (*Ænothera*), Paeonia, Chinese Bell Flower (*Platycodon*), Polyanthus, Phlox, Poppy, Potentilla, Pyrethrum, Primroses, Dame's Violet (*Rocket*), Sasifraga, Day Lily (*Funkia*), *Æthionema*, Sunflower (*Helianthus*), Sweet William, Sweet Scented Clover (*Trifolium suaveolens*), Flame Flower (*Tritoma*), Tunica and Valerian.

The following have foliage, which, with their strong habit of growth, makes the plants more noticeable than do their flowers, which, however, are not unpleasing:

Acanthus, Bocconia, Ferula, Geum, Rheum, Glaucium, Arundo, Erianthus, Eulalia, Gynarium, Gunnera and Heracleum.

A number of hardy climbers are also grown from seed in the same manner as above directed: Mountain Fringe (*Adlumia*), Boston Ivy (*Ampelopsis Veitchii*), Dutchman's Pipe (*Aristolochia*) Climbing Asparagus (*Asparagus Broussoneti*), Trumpet Creeper (*Bignonia*), Clematis, Kenilworth Ivy, Everlasting Pea (*Lathyrus*), Wistaria and Bitter-sweet (*Celastrus*).

While all of the plants here mentioned are doubtless hardy in nearly every section of Ontario, yet it is the part of wisdom not to take too many chances, or to expose beautiful plants to too severe exposure, as they will grow and bloom far better if a light covering of marsh hay, strawy manure or similar material is given them.

La Salle, N.Y.

E. E. SUMMEY.



## THE CLEMATIS IN ONTARIO.

MY DEAR SIR,—Yours of the 7th inst. is at hand *re* Clematis and their adaptation to our climate, etc. In reply I may say that some three or four years ago I did essay the culture of some improved Clematis in our surroundings out of doors, and did promise at that time to give further details respecting the same at some future time. I suppose



FIG. 28.—(1) *C. COCCINEA*, (2) *C. CRISPA*, (3) *C. LANUGINOSA*, (4) *C. JACKMANI*.

that means now. I am really delighted by the tenaciousness of your correspondent's memory as to now require the fulfilment of that promise. But it is doubtless a further example of the force of the truth, that if you at any time in your life make a promise of pleasure to a fruit-grower, he will never forget it. I have tried to carry the culture of the beautiful Clematis on to the present, but the results reached have not been by any means encouraging, either to myself or others. I am deeply grieved for this. But, just in our location, the climatic conditions for the finer improved large-flowering varieties from Europe and the East are not at all suitable, whereas a short distance away these conditions might be far more so. I was at Sarnia, a beautiful town on the River St. Clair, just at the foot of Lake Huron, last summer,

and I was perfectly astonished and delighted to see on one gentleman's lawn a most gorgeous *C. Jackmannii* and, opposite, a gay and beautiful *C. Henrii* in profuse bloom, and these fine varieties were in several parts of the town flourishing in great beauty. This showed me that the conditions vary and that we had not got the right ones. I shall now attempt to sum up my experience in the following brief particulars:—

First, of the improved showy sorts the blue *Viticella* and the coral *Coccinea* are the only ones that will endure the conditions of our climate out of doors. The first of these is a most gorgeous sort and apparently as hardy

as a native. For weeks during summer it is a perfect mass of dark blue velvety bloom and will fill a trellis twelve feet high, but the *Coccinea* is delicate in its constitution and growth, and flowers sparingly.

Secondly, that none of the large flowering foreign varieties have succeeded here out of doors, but of those tried *Jackmanii* is the best.

Third, the native American varieties including *C. Crispa* and *C. Virginiana* being small flowering varieties, but immense growers will do well in almost any position, and with almost any treatment, and will succeed in making splendid covering for arbors, old buildings, fences, etc.

Fourth, we are satisfied that our climatic conditions without extra care of planting, covering, etc., are not at present or are likely to be for some time to come, suitable to the growth and success of improved varieties of the Clematis in this country.

Fifth, the only methods of management and successful culture of the best varieties of improved foreign Clematises appears to me to be especial planting in prepared muck or peat compost, and growing and training to supports under glass structure for the purpose.

Sixth, we most earnestly hope and expect that these precautions and protections will in course of time, be adopted amongst us, for it is most decidedly our opinion that the great beauty and other superior qualities of the Clematis, as an ornamental climber, will give abundant satisfaction for the outlay and study given to it. We further hope and believe that instead of these results being made a discouragement in this line to any, that they will rather serve as stimulants to urge us to greater industry and greater care and deeper study of their requirements and wants, and in time we will secure varieties that will give us the satisfaction desired.

Arkona, Jan. 15, 1890.

B. GOTT.

---

YOU love the Roses—so do I. I wish  
The sky would rain down Roses, as the rain  
From off the shaken bush. Why will it not?  
Then all the valleys would be pink and white,  
And soft to tread on. They would fall as light  
As feathers, smelling sweet; and it would be  
Like sleeping and yet waking all at once.

—George Eliot.

## \* Forestry \*

## MOVING TREES IN WINTER.

TWEN days ago, I selected two young Red Pine trees, which I determined to transplant to my grounds. They are about twelve years old, standing sixteen feet high, and measuring nearly six inches through the trunk. The limbs growing low near the ground somewhat interfered with my operation. However, I had a trench dug about the trees eighteen inches deep, and as wide, leaving about five feet of earth about the trees; the snow was kept away so that the earth soon froze solid. But to-day with strong levers three men soon managed to pry up the ball containing the roots, and after breaking several chains in endeavoring to move it we found that there was more earth than was necessary frozen at the bottom of the roots, so that we reduced the thickness of the ball to eighteen inches. Then the trees were easily rolled out and on to a stone-boat by the aid of a strong team, and drawn to their new position. The earth was frozen as solid as rock, so there is no doubt but the trees will do well. The hired help will cost me nearly four dollars per tree. But imagine a fine Red Pine with its great dark green branches spreading over a space of ten or twelve feet, decorating a lawn for so trifling a sum.

*Gravenhurst, Jan. 16, 1890.*

J. P. COCKBURN.

---

 THE PLACES TO PLANT TREES.

THERE are a few words on this subject by a leading Washington authority I should like to lay before your readers: "Most of the methods recommended and described in American newspapers for planting forests, presuppose that the ground to be planted is arable, or at least, workable with the spade. This may be all right for the prairie States, yet there are probably on every farm in the mountainous regions more waste places than anywhere else, that will never pay to get the stones out, that will not grow any grass of value and that defy all cultivation. There are others which are too wet, and on account of their nature, drainage for agricultural use is impossible or unprofitable; others again, which, on their dry, shifting sand, will not bear any crop. These are the very places to which, in time, the forests in every well-settled country will be more or less confined, the better portions being needed for farming purposes; and, fortunately enough, not only can such places be made to bear

forests, but, being so used, they are improved, and often, after some time, gain in value, even for agricultural crops. To find out cheap methods for covering such places with a tree-growth is, therefore a task not to be neglected. Trees should be planted on rocky hillsides, sandy barrens, along the brooks and watercourses, around the springs and by the roadside. It costs little to try the experiment, and in the results, restoring vegetation to sandy, waste places, affording shelter to cattle and preserving the present, if not restoring the lost water supply to the farm, in all this, not to speak of the increased attractiveness that the trees would lend, the planter will be amply rewarded.

R. W. PHIPPS,

Toronto.

*Clerk of Forestry for Ontario.*

---

### THE FIBRE OF THE FIRST YEAR'S SHOOTS OF SUMACH AS A MATERIAL FOR PAPER PULP.

ALLOW me to direct attention to the Staghorn Sumach (*Rhus typhina*), and the Smooth Sumach (*R. Glabra*), as pulp-producing shrubs for the manufacture of paper. The Sumach Tree or Shrub approaches to the Herbaceous tribes in the glandular construction of its rind and in its pith, and the fibre of its shoots is whiter and lighter than poplar. As it is readily propagated from shoots or sprouts, it may be cultivated with profit on rugged and rocky grounds. The first year's shoots should be cut for pulp-making before they begin to wither, when the leaves are full of sap, and especially before frost. They should be stripped of their leaves, which after being wilted in the sun are spread upon shelves or racks to dry in a shaded, but airy place for a month, and in damp weather longer, before going to market. Sumach sells, after grinding, at from \$40 to \$50 per ton. The rind should be scraped off clean from the shoots, immediately after stripping them of their leaves, and dried in a similar manner, and the shoots should be dried and stored away to be sold to the pulp miller. The leaves and the rind of the Sumach contain a tanning and dyeing material having the same properties as galls, its chief consumption being in cotton dyeing. The roots of both of these varieties of Sumach have hitherto been considered troublesome in sending up suckers, and the prevalence of common or smooth Sumach was evidence that the occupant was a poor and thriftless farmer. The velvety crimson berries of the smooth Sumach are also used in dyeing. They are astringent and of an agreeable acid taste, for which reason they are sometimes used as a substitute for lemon juice, for various purposes in domestic economy and medicine, and to turn cider into vinegar. The acid is the bi-malate of lime. Prof. Wm. B. Rogers, in *Silliman's Journal*, vol. 27, p. 295, recommends a process for obtaining it perfectly pure.—A. K. in *Toronto Globe*.



SUBSCRIPTION PRICE, \$1.00 per year, entitling the subscriber to membership of the Fruit Growers' Association of Ontario and all its privileges, including a copy of its valuable Annual Report, and a share in its annual distribution of plants and trees.

REMITTANCES by Registered Letter are at our risk. Receipts will be acknowledged upon the address label.

#### NOTES AND COMMENTS.

**BONES AS A FERTILIZER.**—The treatment of bones is the subject of an article in the *Farm and Fireside*, by "Joseph." He advises the careful saving of all bones accumulating about the farm, as they contain valuable fertilizing material, viz: three or four per cent. of nitrogen, and nearly one-quarter of their own dry weight in phosphoric acid. Their value, according to this scale, would be about one and a-half cents a pound. To get these old bones into available form, the following modes are advised, viz.: (1) burning, (2) mixing with fresh horse manure, the fermentation of which helps to soften them, (3) exposure to chemical action of unleached wood ashes, in which method they should be broken and put in alternate layers with the ashes in a barrel, keeping the whole mass moist until the bones are soft.

**A NEW PRODUCE COMPANY.**—We as fruit growers will gladly welcome any scheme for the better sale of our produce. An attempt was made last spring to form a joint stock company for this purpose, which failed, owing to the bitter opposition of influential English and Canadian commission merchants. A company has now been organized under the name of the Imperial Produce Company, having a head office in Toronto,

and a British head office in London, England. Among the officials of the company we notice the names of Mr. Charles Drury, Minister of Agriculture; Mr. W. E. Wellington, one of our directors, and Mr. A. McD. Allan, our ex-President. The last named gentleman is to be the outside manager, and in his hands will be placed the personal supervision of the sale of our apples to retail merchants in Great Britain, Norway and Sweden. We hope, therefore, to receive material aid from the operations of this company.

**A WEEKLY MARKET BULLETIN.**—We have in view a very important scheme for the benefit of the fruit-growers of Ontario. It consists of a weekly supplement to the *CANADIAN HORTICULTURIST* during the fruit season, giving reliable reports of both English and Canadian fruit markets during the months of July, August and September. This market bulletin will be sent free to all those members of our Association who desire it. Due notice of its first issue will be given in these columns, when those who wish to receive the bulletin will apply by postal card to the Secretary.

**ON GIRDLING THE GRAPE.**—Professor Maynard, of the Massachusetts Agricultural College, has been making further investiga-



ions with regard to the effect of girdling upon the quality of the fruit. On July the 5th of last year, one of the two bearing arms of sixty Concord grape vines were ringed one-half of an inch long near the trunk. As a result, these grapes showed color on August 12th, six days before those of the opposite half of the same vine. They were fit for market on the 20th of September, the berries being then from 30 to 40 per cent. larger and much sweeter than the others. On October 1st they were still sweeter than those not treated, but had a somewhat insipid taste, and lacked the refreshing sparkle of the others.

Dr. Guessman, chemist of the station, was of the opinion that the only explanation of this inferiority at the second period was in the loss of acid. The following is the con-

clusion drawn by Mr. Maynard: "That there is a decided gain in the time of ripening of the fruit which will enable us to grow many late varieties not possible without it; that a gain of ten days would make a great difference in the price of the fruit; that there is no loss of sugar, and the increased size of the berry would make it very attractive, and more than make up for its softness. This latter condition can be of little objection, as most of the grapes grown in New England are sold in local markets."

SMALL FRUITS TESTED.—In the same bulletin Mr. Maynard gives the result of two years' testing of a number of varieties of raspberries and blackberries, both old and new, by means of the following tables, which are arranged on a scale of 1 to 10, 1 indicating the greatest perfection:

	Productiveness.	Quality	Earliness.	Size.	Order of blooming	Per cent. of canes winter killed.	REMARKS.
<b>RED RASPBERRIES.</b>							
Rancocas .....	6	1		4	1	40	Very good.
Brandywine .....	5	2	3	5	6	23	Good.
Belle de Fontaine .....	5	6	2	2	2	13	
Highland Hardy .....	5	1	2	6	2	15	
Crimson Beauty .....	5	4	2	5	1	28	
Cuthbert .....	5	5	9	2	9	25	Standard market berry.
Hansel .....	2	2	2	5	1	35	Profitable.
Marlboro .....	2	5	2	2	2	52	Firm, profitable, requires high culture
Golden Queen .....	5	7	9	2	9	27	Soft.
Caroline .....	4	3	3	6		12	Too soft for market.
Turner .....	5	6	3	7	4	13	Small and crumbles.
<b>BLACK-CAP RASPBERRIES.</b>							
Nemaha .....	4	7	9	5	2	78	Vigorous.
Crawford .....	2	3	3	4	2	0	Promising, vigorous.
Hilborn .....	1	2	2	3	2	0	Not sufficiently tested.
Thompson's Sweet .....	6	7	4	5	6	0	
Ohio .....	3	7	3	2	7	16	Vigorous.
Gregg .....	1	3	10	1	10	39	Tender.
<b>BLACKBERRIES.</b>							
Erie .....	5	6	5	2	2	16	Continued fruiting till Aug. 23.
Early King .....	6	3	3	4	4	0	
Wilson, Jr .....	2	2	2	2	2	25	
Wilson's Early .....	3	7	2	2	2	48	
Early Harvest .....	1	5	1	5	3	62	
Cluster .....	3	6	2	4	1	21	
Agawam .....	1	1	2	3	2	5	Sweet and moderately firm.
Taylor's Prolific .....	1	3	9	3	10	10	
Wachusett .....	4	4	5	5	5	8	
Snyder .....	3	3	5	4	5	9	
Minniwaski .....	5	3	5	5	3	20	
Excelsior .....	5	5	4	5	5	50	
Lucretia .....	3	2	2	2	2	14	Productive good.

ERRATA.—On page 33, and on frontispiece opposite, where it reads "Prof. Wm. Saunders, Director of the Experimental Farms of Ontario," read instead of the last two words, "of the Dominion of Canada."

Also for F.R.C.S. read F.R.S.C., meaning Fellow of the Royal Society of Canada.

Also on page 37 for *Ohio Farmer*, read *Orange Yudd Farmer*.

SPRAYING.—At the recent meeting of the Ohio State Horticultural Society, Prof. Weed stated that he had fully demonstrated the possibility of destroying the "Little Turk" with London purple in a solution of one ounce to ten gallons of water. He also found that by adding Bordeaux mixture to the solution he could prevent the plum rot. The only difficulty was that the mixture adhered to the fruit, making it necessary to wash it with a weak solution of vinegar and water.

RUSSIAN APRICOT.—We are constantly receiving enquiries regarding this fruit. Two dozen trees planted on Maplehurst Fruit Farm have not yet borne a single specimen, though three years planted. It was stated at the Ohio meeting, above mentioned, that this apricot was as subject to damage from frost when in bloom as the European varieties, and therefore not likely to be of any more value. We hope to be able to report definitely concerning the value of this fruit after the coming fruit season.

NUTS FOR PROFIT.—At the Trenton meeting of the New Jersey Horticultural Society, Mr. Parry advocated nut culture for profit. A new walnut, named as "Præparturius," was recommended as wonderfully productive. Of chestnuts, he grows several varieties of the Japan strain, which he highly commends; as, for instance, the "Reliable" and the "Giant," which are of an enormous size, and have sold as high as 40 cents a quart. The "Paragon" and the "Miller" are probably American varieties, and these are very promising. He claims that at the present prices of these large nuts, an acre of having them, twenty-seven trees, will bring \$200, without any expense other than the harvesting, which he claims can be done for about half a cent per quart.

## THE FARMERS' PARLIAMENT.

THE Central Farmers' Institute at Toronto was fully attended by representative farmers from all parts of Ontario. Mr. Aurey, M.P.P., the president, gave an interesting address in which he paid a tribute to the Dominion Government for the generous response given to Farmers' Institutes, in sending out without any expense to the latter, the professors of the Experimental Farm, to give addresses on their special departments. The same spirit had been manifested by the Ontario Government, in sending out the professors of the O.A.C. and specialists in various branches of industry to speak at the January meetings.

He alluded to the subject of annexation as one in which the farmers of Ontario had no sympathy, though they might be desirous of closer commercial relations.

Prof. Shaw, of the O.A.C., in his address on the need of an universal herd law for the Province, showed the inconsistency of the legislation which professedly encouraged road side tree-planting, and at the same time permitted live stock to run on the road. He advocated planting trees freely along our roads, and that a law should be passed of universal application, preventing cattle from running. No fences along the road would then be needed and the beauty of the landscape would be wonderfully increased.

Mr. E. Morden, of Niagara Falls South, read an important paper on market fees. He showed that it was unfair that the market gardener should be compelled to pay tax first upon his land, and then a second time upon his produce of the market. The towns and cities receive sufficient benefit from the visits of the farmers and gardeners to the town without charging them for the few feet of space which each man occupies in the sale of his produce. The town is receiving as much benefit from the market in buying their food supplies as the farmers in their sale of their produce.

All these and other important questions were referred to the committee on legislation.

## Question • Drawer

### GOOSEBERRIES DROPPING.

8. SIR,—Can you tell me the cause of gooseberries dropping off the bushes just as they attain full size? My bushes bore well last season, but I did not save more than one-quarter of the fruit.—ELIZ TRIGGE, *Eleven Oaks, Cookshire, P. Q.*

### PEARS ON APPLE STOCK.

9. WILL pears do well grafted on apple stocks, either on young seedlings, or on bearing trees?—G. J. R., *Penctang.*

Pear scions grafted on apple wood will live for some years, and bear fruit, but will not do nearly as well as on pear stocks.

### THOSE RUSSIAN TREES.

10. SIR,—Are the trees from Russia to be distributed among the members of the Ontario Fruit Growers's Association? If so, I would like a share.—H. E., *Napanee.*

These trees and scions are being reported wholly in the interest of our members, and so soon as we have propagated them in sufficient quantity, they will be distributed among them.

### CANADA ORLEANS.

11. SIR,—Will you please give the origin of the plum known as "Canada Orleans?" It appears to be a seedling, as it is grown from sprouts or suckers; it has been grown in this neighborhood for about thirty years.—C. C. B., *Tapleytown.*

This must be a local variety and not known, except in a few localities. Would our correspondent please send some samples to this office in fruit season.

### BEST WORK ON THE ORCHARD AND GARDEN.

12. SIR,—I am about starting in the orcharding and small fruit business; would you advise me concerning the best work on that subject?—D. M., *Bay View, Pictou Co., N.S.*

The best practical work on this particular line of horticulture is "The American Fruit Culturist," by J. J. Thomas, and can be had through this office.

### CARE OF SHRUBS AND TREES ON THE LAWN.

13. SIR,—Is it advisable to keep a place dug up about shrubs and trees on a lawn, and if so, how large?—R. MCL., *Newcastle, Ont.*

Yes, it is advisable, both because an even cut looks more tidy, and because, while trees are young, they especially need digging about and enriching. The size of the space should be proportionate to the size of the trees, and the distance the roots extend. Of course, large lawn trees, well established, will take care of themselves.

### KIEFFER PEAR.

14. SIR,—What do you think of the Kieffer pear? Would you recommend it as a profitable pear to plant? I have grown it for a number of years and do not care for it.—G. H. NIXON, *Hyde Park, Ont.*

We are by no means favorably impressed with the Kieffer; its quality condemns it. Like the Ben Davis apple, its beauty and its productiveness may make it profitable to grow for market until it becomes well known in the markets, when it will, no doubt, decline in value. It is fairly good for cooking and for canning purposes.

### THE DICTIONARY OF GARDENING.

15. SIR,—Would you kindly inform me if the "Dictionary of Gardening," by George Nicholson, is a really good standard work. Is it worth the money, and where can I get it?—A. J. C., *Listowel.*

This is the best work in the world at the present time on gardening, although written for the English climate, and consequently not adapted to Canada with regard to seasons and dates of planting; it is in every other respect a complete, practical and scientific encyclopædia of horticulture for gardeners and botanists. It is published in eight volumes, beautifully bound, and profusely illustrated. You may order it through this office or from Mr. J. Arnot Penman, 41 Dey Street, New York City, who is the sole agent for America.

### CHERRIES AND WINTER PEARS FOR HOME USE.

16. SIR,—Would you please give me the names of two winter pears which you would recommend for home use, and the four best varieties of cherries for home use or market.—C. C. B., *Taplestown, Ont.*

Of the Heart cherries, we would recommend the following four as most excellent. (White) George Wood and Elton; (black) Knight's Early Black and Black Tartarian.

Of winter pears, none can surpass, for home use, the Lawrence, and the Beurre d'Anjou.

### THE RICHARDIA ALBO-MACULATA (SPOTTED CALLA.)

17. SIR,—Please give us some information about the cultivation of the Spotted Calla, offered in the list, as we shall not get it until the season of growth ought to be nearly over, and, if kept growing all summer, I am afraid it will not flower next winter.—A. J. C., *Listowel.*

The variegated Calla, unlike the ordinary Calla (*Richardia Æthiopica*), is a summer-bloomer and rests in the winter season. The chief requisites for success are plenty of water in the growing season, and good rich soil which may be made of a compost of good oam and cow manure in equal parts.

### BUYING NEW VARIETIES FOR THE ORCHARD.

18. I was thinking of planting out an orchard this spring, and as you are the Secretary of the Ontario Fruit Growers' Association, I take the liberty to ask you to name the best kinds to plant for the English market. The Brown Bros., of Rochester, recommend Grimes' Golden, Longfield, Belle de Boskoop, Wealthy Salome, Duchess and Mann, as they are iron-clads. Are they better than our common kinds to grow for the English market.—A. J. KELLEY, *Talbotville.*

We would advise you to "go slow" with those new varieties. The Duchess is one of the finest summer apples you can plant, and the Wealthy one of the finest early winter apples, but neither are well adapted for distant shipments. If they can be carried in good condition they will sell well. Grimes' Golden is a good apple, and so is Mann; the latter is very productive, but it drops rather easily and its dull green color is against it.

Much is expected of the others, but probably not a single barrel of Longfield, Belle de Boskoop or Salome, has yet been sold in the English market. We would advise you to try them; but we would advise you to plant principally of those varieties which have been tested, and which our market reports show bring the best prices in England. You, in West Elgin, surely, need not be restricted to iron-clads, as you are in the region of the Baldwin, Spy and King.

### WORMS IN EARTH ABOUT CALLA LILIES.

19. I SEND you sample of some small worms which are very abundant in the earth about the roots of my Calla lilies. Can you tell me how to get rid of them?

*Reply by Prof. James Fletcher, Experimental Farm, Ottawa.*

The box containing larvæ, which you had found in pots where Calla lilies were being grown, arrived all right and contained one dead dipterous larvæ, probably a *Sciara*, and two young earth worms, *Lumbricus*; these are both alive. They can be told from the *Sciara* under the microscope by their setæ when fresh from the eggs, they are quite white and resemble the *Sciara*, larvæ somewhat. I should suggest your trying watering your plants with some soot and water (soot from soft coal), this can do no harm to the plants and kills most insects. I have been trying experiments with carbolic acid, but find them unsatisfactory.

### THE SASKATOON BERRY.

20. A DELEGATE to the meeting of the Minnesota State Horticultural Society from Manitoba, in speaking of the native fruits of that region, mentioned one known there as the Saskatoon berry. I think he said it was an early summer fruit produced upon a shrub. Can you inform me what it is? Its botanical name? Is it some fruit limited to that region, or is it a variety of what is known here as the Juneberry?—J. S. H., *La Crescent, Minn.*

The Saskatoon berry referred to, is a dwarf Juneberry, known botanically as "*Ame-lanchier oblongifolia*." It is one of the best varieties known for culture for fruit, as well as for ornament. For this latter purpose it was highly recommended by Prof. Fletcher,

at one of our recent winter meetings, who described it as a most ornamental shrub for the lawn; and Mr. VanDeman, the chief of the section of Pomology, the Department of Agriculture of the United States, says it is well worthy of a place in the family fruit garden. Externally it resembles the huckleberry, changing as it ripens from a reddish purple to a dark purple. In size it varies from one-quarter to one-half an inch in diameter, and its flavor is a mild sub-acid, which is counted by many people as delicious, especially when the fruit is eaten with sugar and cream. It is said to be very good in pies mixed with green gooseberries, the sugar of the one counter-acting the acid of the other. The plants are propagated by suckers which are usually set two or three feet apart in rows, and the rows eight feet apart. The Juneberry belongs to the Rose family, and there are several varieties varying in habit of growth, from bushes to trees of thirty or forty feet in height. Dr. Geo. Thurber, speaking before the American Pomological Society, refers to it in the following terms: "The fruit is borne in clusters like the currant, and ripens in June. I had two or three bunches that fruited several years in succession. In spring they are a sheet of white, and very ornamental. The fruit, which is borne in great abundance, is, to my taste, better than huckleberries. This species varies widely in its wild state. I have found the tall kind in fruit in Maine, but one of those little bushes will bear as much as half a dozen of the big ones."

#### PROPAGATION OF BLACK CAP RASPBERRIES.

21. PLEASE describe how to propagate black raspberries by tips.—G. J. R.

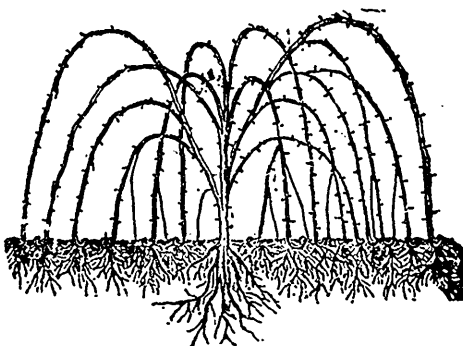


FIG. 29.

The propagation of the Black Caps is very simple, and any one who buys a few plants may easily increase his stock to any extent. Soon after fruiting season the ground should be cultivated and made fine, and the tips of the canes should be layered two or three inches deep in a nearly perpendicular position, as shown in Fig. No. 29. This can be done very rapidly, and the rows should be gone over two or three times in the season, as the younger canes or branches reach the ground. Mr. Chas. Green says that it is possible in good rich soil to get 100 plants from one, the first season planted, and that a good man will put down from 1,000 to 4,000 tips per day. This is a high count, but it shows how little the nurserymen regard the difficulty of propagating Black Caps.

The following spring a shoot will start from the layer very early, and the young plant being furnished with an abundant supply of fibrous roots, may be easily transplanted. The important point is to keep it from exposure to the sun and wind, which would quickly destroy the life of the tender rootlets.

## Open Letters

### VALUE OF THE JOURNAL.

SIR,—Your paper is of great value to the Horticulturist on account of its fine cuts of new fruits and flowers and the very practical character of its contents.

The Vergennes Grape I received last year grew rapidly till the summer frost cut it down, but it made a fine growth afterward. All the other plants I have received did well, except the Boussock Pear, which died.

J. J. BROWN, *Stouffville, Ont.*

### THE MINNESOTA STATE HORTICULTURAL SOCIETY.

THE late meeting of the Minnesota State Horticultural Society, held at Excelsior, January 21st and 24th, was very well attended, and I think will rank as the best and most profitable meeting yet held by the Society. Wyman Elliot, of Minneapolis, was re-elected President, and Prof. Samuel B Green, Horticulturist of the State Experiment Station, St. Anthony Park, was elected Secretary.

Very truly yours,

J. S. HARRIS, *La Crescent, Minn.*

### THE ONTARIO FRUIT LIST.

FROM the following letter addressed to Mr. Thos. Beall, which is only one of several of a similar nature, it is evident that the work of our Association in preparing on Catalogue of Ontario fruits with values, and in making up special lists for various sections, will be appreciated by the public:

SIR,—It affords me much pleasure to see an effort being made to reduce the large number of useless apples now grown in our country. I believe the foreign market value will help to show us the kinds to grow for export. Our section will grow any of the kinds mentioned on your list, but of some the trees are poor growers, and of others the fruit falls too early. The Ben Davis is a heavy bearer, but dwindles with age, and is very coarse.—THOS. BURDEN, *Bowmanville, Ont.*

### PLANTING IN SIMCOE COUNTY.

SIR:—I planted an orchard on a northern exposure, of seventy-nine apple trees, twenty-nine varieties, last spring; also, three kinds of plum and two of pear, and a lot of small stuff on a sandy ridge between Matchedash Bay and Sturgeon Bay, about a mile from the Bay and 150 or 200 feet above it. If I suc-

ceed I intend to plant ten acres or more. I made a map of orchard. I thus know what I put in if true to name, and where it came from. I have some idea of how they grow fruit about Oakville and vicinity. I may correspond with you in the near future if you don't object.

I do not believe in so many varieties, but want to find out kinds that will succeed here. Planted a number of favorite kinds which I do not expect to stand the climate. There is a ridge above me on the west. I intend to leave or plant a belt of timber on the north and west. I bought a new place, our old pine slash, with a great wild berry patch, and I am clearing it up and planting on the new soil. When I get over the squeeze of clearing and building, I hope to be able to buy books and make a study and a success of fruit-growing. Yours sincerely, R. C. STEWART, *Fesserton, Ont.*

### PLANTS TESTED IN GREY CO.—THE ONTARIO FRUIT LIST, ETC.

THE Russian apple tree (sent out, I think in 1885, and of which I have lost the name), was killed the second winter down nearly to the ground and has not grown much since, but I have a couple of grafts growing on other trees, also a couple of small trees grafted from it, so that I have a chance to get fruit from it some day.

The Lucretia Dewberry grows plenty of vine, but very little fruit as yet. The Vladimir Cherry is doing fairly well, but I don't know whether to train it in tree or bush form. I think the classifying of the different varieties of fruit, as described in the January number of the HORTICULTURIST is a good plan, as is also that of prominent fruit growers attending and speaking at farmer's institutes, in the interest of fruit growing.

I attended the meeting of the South Grey Farmer's Institute, held on the 4th of January, in Victoria Hall, Dundalk. The speakers were James Mills, President of Ontario Agricultural College, J McMillan, M.P., and T. A. Race, also R. Cornell, a local cheese maker and dealer. Mr. Race spoke on the pruning of fruit trees, and also about the proper time to buy them. He said it was no advantage to do as some nursery men recommend and buy trees in the fall, bury them through winter and plant them in the spring; as it is like putting a person in a warm bath and then exposing him to the cold wind. He also spoke on the growing of strawberries and other small fruits.—ROBERT SCOTT, *Hopeville, P.O., Grey Co., Ont.*

## SUBSCRIPTIONS ARE PAST DUE,

And should be sent in at once, naming at the same time the choice of plant for testing ; otherwise we cannot guarantee that any plant will be sent.

We give below the list of plants which we propose to send out next April or May. Contracts for them have been made with reliable nurserymen, and we hope they will give satisfaction. It will be understood that these are all of a size small enough to be sent by mail.

- 1.—RUSSIAN APRICOT.
- 2.—SIMON'S PLUM.
- 3.—JOHN HOPPER ROSE
- 4.—SHAFFER RASPBERRY (four tip plants).
- 5.—WEALTHY APPLE.
- 6.—BUBACH No. 5 STRAWBERRY (four plants).
- 7.—RICHARDIA ALBA-MACULATA. or SPOTTED CALLA.

Any one sending in new names may have an additional choice of plants for each new name in place of commission, if preferred. Note well the condition on which these plants are sent out, viz. : that a report concerning their success be given the Secretary when thoroughly tested.

NOTE.—Each subscriber will please notice that the Fruit Growers' Association does not guarantee anything concerning the merits of the above list of plants, but simply sends them out on the recommendation of their introducers to be tested by the members and reported upon for the benefit of the public.

GOOD OFFERS.—A Free Copy of the "Canadian Horticulturist" for one year, with Report, and choice of plant, to anyone sending in five new subscribers and five dollars, or a bound volume. Back numbers can be furnished at 10 cents each, and bound volumes of the previous years at 75c. to \$1.25 each, according to style of binding. New subscriptions may begin with any month.

Address : L. WOOLVERTON,  
*Sec'y of the Ontario Fruit Growers' Assoc'n,*  
**GRIMSBY, ONT.**

**GRAPES** Largest Stock in America.  
**NIAGARA** and all old and new varieties. Extra Quality. Warranted true. Lowest rates. Introducing the new Black Grape.  
**VINES**  
 Also other SMALL FRUITS. Descriptive Catalogue Free. Send list for prices.  
**EATON, T. S. HUBBARD CO., FREDONIA, N.Y.**

## Our Book Table

CATALOGUES :—*Seeds, Novelties, Begonias and plants of every description*, grown by Messrs. John Laing & Sons, Forest Hill, London, S.E., England, 1890.—*Warranted Vegetable, Flower and Grain Seeds*, grown and sold by Jas. J. H. Gregory, Marblehead, Mass, 1890. Free to all.—*Rural Annual. Seeds grown by John Harris Seed Co.*, Moreton Farm, Rochester, N.Y.—*Everything in Seeds, Plants and Bulbs*, season of 1890. Steele Bros., Toronto.—*Vick's Floral Guide*, 1890.—*Northern Grown Fruit and Ornamental Trees*, grown by J. H. Wismer, Port Elgin, Ont.—*Fruit and Ornamental Trees, Grape Vines and Small Fruits*, grown at Dominion Nurseries, St. Catharines, Ont., by Messrs. Smith & Kerman.—*Animal and Bone Fertilizers*; Dominion Fertilizer and Casing Works, Hamilton, Ont.—*Lovett's Guide to Horticulture*, highly illustrated; J. T. Lovett & Co., Little Silver, N.J. Spring, 1890.—*Green's Nursery Co.*, Rochester, N.Y., highly illustrated, 1890; Chas. A. Green, Manager.—

*Fruit and Ornamental Trees and Plants*, 1890; A. G. Hull, St. Catharines, Ont.—*Illustrated Guide for Amateur Gardeners*, 1890; Wm. Rennie, Toronto, Ont.—*Seeds and Bulbs*, 1890; John A. Bruce & Co., Hamilton, Ont.

REPORTS :—*Fruit Growers' Association and International Show Society of Nova Scotia*, 1888 and 1889; C. R. H. Starr, Port Williams, N.S., Secretary.—*Experimental Farm of Canada*, for the year 1888; Wm. Saunders, Ottawa, Director.—*Horticultural Society of Indiana*, 1888; C. M. Hobbs, Bridgeport, Ind., Secretary.

BOOKS :—*Complete Catalogue of Canadian Newspapers and Periodicals*, published by R. Holtby, Myers & Co., Newspaper Advertising Agency, Toronto.

JOURNALS :—*Fruit Trade Journal*, monthly magazine for the producer, importer, preserver and merchant; edited by P. H. Davis, P.R.H.S., 171 Queen Victoria St., London, England.

**NORTHERN IOWA.**

*For Hardest American & Russian Varieties of Fruit*

Address, **C. G. PATTEN,**

Mar. 3t.

CHAS CITY, IOWA.

**TO PLANTERS OF FRUIT.**

If you want to get varieties adapted to your location and climate, and can depend upon as true to name and get them at reasonable prices, send direct to the Dominion Nurseries. You can save the commission of agents by dealing with the grower. You can have all kinds of small fruit plants delivered by mail and guaranteed to come in good order. Send for catalogue and price list at once to

**SMITH & KERMAN,  
ST. CATHARINES, ONT.**

**STRAWBERRIES.**

New varieties. Special offers. Sent by mail, post paid. Give No. with the order.

- No. 1.—4 Mrs. Cleveland, 6 Eureka, 4 Hatfield, 6 Dutter, 6 Gandy, 6 Logan.
- " 2.—6 Miami, 6 Louisa, 4 Clingo, 8 Warfield No. 2, 6 Morse's Early.
- " 3.—4 Mrs. Cleveland, 8 Hoffman, 4 Great American, 8 Logan, 8 Eureka.
- " 4.—4 Hatfield, 8 Gandy, 8 Haverland, 8 Cloud, 8 Prince of Berries.

I will send these 16 varieties, by Express, for \$3.00. Beat this if you can!

- No. 5.—12 Miami, 12 Hatfield, 12 Mrs. Cleveland, 6 Staymans No. 1, 12 Henderson, 12 Woodruff, 6 Morse's Prolific, 6 Great American, 10 Dutter, 10 Louisa, 12 Eureka.

I will send these eleven varieties—110 plants, berries of the largest size and quality of the best—by express for \$4.00, not prepaid.

Send for Circular. **JOHN LITTLE,**  
Feb. 3t. Granton, Ont.

**CLEARING SALE  
OF**

**NORWAY SPRUCE,**

Austrian and Scotch Pine. Also Hardy  
Roses and Clematis, etc.

Send for Price List. **A. GILCHRIST.**  
Mar. 3t. West Toronto Junction.

**GRAPES FOR THE FAMILY.**

For \$1.00 enclosed, I will mail in early spring, 9 vines, three each of the three best varieties white grapes; or 9 vines, three each of the three best varieties red grapes or nine vines, three each of the three best varieties black grapes or 9 vines, one each of the nine varieties, and will mail on receipt of each order, my treatise on "Grape Culture" free, postage prepaid and safe arrival of vines in good condition guaranteed.

Mar. 2t. **J. H. TRYON,** Willoughby, Ohio.



Do not place your orders for **FRUIT TREES, ORNAMENTALS, SMALL FRUITS, GRAPE VINES, etc.,** until you send post card for my new illustrated **Free Catalogue for 1900,** containing important information and **Living Prices.** Plants by mail a specialty.

**A. G. HULL, Central Nursery,**

Mar. 2t. ST. CATHARINES, ONT.

**CANADA SHIPPING COMPANY**

**Beaver Line Steamships**

SAILING WEEKLY BETWEEN

**Montreal and Liverpool.**

Comprising the following first-class, Clyde built, full powered iron steamships:

- " Lake Ontario," Capt. H. Campbell, 5,300 tons.
- " Lake Superior," " Wm. Stewart, 5,000 "
- " Lake Huron," " M.L. Tranmar, 4,100 "
- " Lake Winipeg," " P. D. Murray, 3,300 "
- " Lake Nipigon," " F. Carey, 2,300 "

The above vessels are of the highest class, and have been built expressly for the Canadian trade, and possess most approved facilities for carrying all kinds of perishable cargo—apples, butter and cheese. Perfect ventilation is secured by the use of "Utley's Side Ventilators" and "Blackmann's Exhaust Fan and Air Propeller," which ensures a constant current of fresh air below decks. Have superior accommodation for passengers. Through Bills of lading granted from any railroad point in Canada or Western States to any point in Great Britain, Ireland or Europe at lowest through rates. Special attention given to the handling of all perishable cargo.

For further particulars apply to **H. E. MURRAY,** General Manager, Custom House Square, Montreal, Oct. 12t.



**One Hundred Dollars a Bushel.**

**I WILL PAY** one hundred dollars for a bushel of Peas that in earliness and yield will surpass the early variety to be found in my seed catalogue, page 23. **Don't** send me any "First and Best," "Earliest of All," "Dexter," or "Alaska:" they won't fill the bill; neither have I yet found any of the numerous extra earlies sent out by my fellow-seedsmen able to "toe the mark" with this new pea. Seed catalogue free to everybody. I make a specialty of quoting rates to market gardeners and others needing large quantities of choice strains of seed. **JAMES J. H. GREGORY, Marblehead, Mass.**



**A GLORIOUS FLOWER**

No engraving can do justice to the unique and peerless beauty of this **NEW CHRYSANTHEMUM**. Imagine plants completely studded with balls of flowers one foot in circumference, whose petals curve gracefully inward, and which in turn are dotted with a peculiar hairy-like growth, the whole resembling, more than anything else, masses of **SNOW-WHITE OSTRICH PLUMES**, and you then begin to form some idea of the beauty of this royal flower. Your garden will not be complete this season if it does not contain the "**OSTRICH PLUM CHRYSANTHEMUM**." (Plain and full instructions for culture with each order.)

**PRICE.**—For fine plants, certain to bloom, 40c. each, three plants for \$1; seven plants for \$2; twelve plants for \$3. Free by mail.

With every order for a single plant or more will be sent gratis our superb Catalogue of "**EVERYTHING FOR THE GARDEN**" (the price of which is 25 cents), on condition that you will say in what paper you saw this advertisement. Club orders for **THREE, SEVEN** or **TWELVE** plants can have the Catalogue sent, when desired, to the **SEPARATE ADDRESS** of each member comprising the club, provided always that the paper is named.

**THE "OSTRICH PLUME"  
CHRYSANTHEMUM**  
*(Mrs. Alpheus Hardy).*

**PETER HENDERSON & CO. NEW YORK**

**BOUND VOLUMES**

Of the "**CANADIAN HORTICULTURIST**," in beautiful cloth case, handsome design embossed in ink and gold, with gilt lettering, for sale at this office.

Volumes 1 to 10, excepting 5, 6 and 9, which are out of print, at 75 cents each; Volumes 11 and 12, with numerous illustrations and fine colored plate, at \$1.25 each, post paid, 20 per cent. discount on orders of \$5.00 or upward.

These volumes will be an ornament to any Library, and no more handsome gift book could be thought of.

**ADVERTISING RATES.**

In the **CANADIAN HORTICULTURIST**, published by the Fruit Growers' Association of Ontario, at \$1.00 a year; average circulation, 3,000 copies per month, among all the leading Fruit Growers and Gardeners of Ontario, and distributed to 1,000 post offices.

Owing to the increasing circulation, and growing demand on its space, it is found necessary to advance the advertising rates, according to the following code, which will be strictly adhered to:

Single Insertion,	- - - - -	10 cents per line, <b>Agate.</b>
Three Months,	- - - - -	25 " "
Six Months,	- - - - -	40 " "
One Year,	- - - - -	75 " "

**Address: L. WOOLVERTON,**  
Sec'y of the Fruit Growers' Association of Ontario.

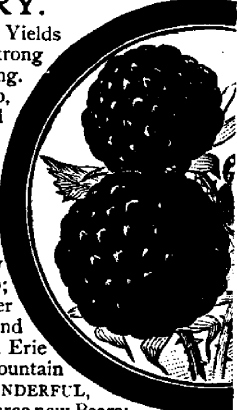
# SEEDS SIMMERS' SEED CATALOGUE FOR 1890

It will be sent FREE to all who write for it. It is a Handsome Book of 100 pp., with hundreds of illustrations, and tells all about the BEST GARDEN, FARM and FLOWER Seeds, Plants and Bulbs, Valuable New Books on Garden Topics. It describes Rare Novelties in VEGETABLES and FLOWERS of real value, which cannot be excelled elsewhere. Send address on postal for the most complete Catalogue published to  
**J. A. SIMMERS, SEEDSMAN**  
 147, 149 & 151 King Street East, TORONTO, ONT.

## PROGRESS RASPBERRY.



The earliest of all; jet black, beautiful, delicious. Yields double the fruit of any other. Very firm. Of strong growth, ironclad hardiness. Best for evaporating. Most profitable for market. Doz., \$1.00; 100, \$5.00. Early Prolific, earliest and best red raspberry. Doz., \$2.50; 100, \$15.00. 3 each, \$1.00; 6 each, \$1.75; 12 each, \$3.00; 25 each, \$5.00; all by mail postpaid. Shuster's Gem, best new strawberry. Large, most prolific, luscious, fiery scarlet. Early till late. Exquisitely beautiful. Succeeds everywhere. Gandy, latest of all. Very large and good. 6 each, \$1.25; 12 each, \$2.00; 25 each, \$3.50; 50 each, \$5.00, by mail. Parker Earle, Jucunda 1m., Crawford, Daisy, Eureka and several other new strawberries; Early King and Erie Blackberries, etc.; Success Juneberry; Green Mountain and all other valuable new Grapes; nine new Apples; WONDERFUL, the remarkable late yellow and LOVETT'S WHITE, Peaches; three new Pears;



Lincoln, Abundance, and other new Plums, etc. All accurately illustrated and described in **Lovett's Guide to Horticulture**. In fact all worthy varieties of Small and Orchard Fruits, Nut Trees and ORNAMENTAL TREES and PLANTS, all of which we grow in vast numbers and sell at almost one-half prices of others. The Guide gives their prices, defects and merits, and tells how to purchase, plant, prune, cultivate, etc. It is a handsome book of over ninety pages, finely printed and profusely illustrated; mailed free; with colored plates, 10c. Trees and Plants to distant points by mail and express a specialty. A copy of *Orchard and Garden* sent free to all who state where they saw this advt.

**J. T. LOVETT CO., Little Silver, N. J.**

## The Choice Novelties of 1890.

HERE IS A LIST THAT WILL GIVE SATISFACTION:—**Red Cross Tomato**—Resembles Livingston in form, solidity, color, etc., but is decidedly earlier. **Ignomum Tomato**—Round, solid and productive; both Rural New Yorker and Prof. Taft have a special g word for gnomum. **Crags Watermelon**—A distinct variety, flesh salmon-color, quality and flavor peculiarly rich and sweet. **Marblehead Early Marrowfat**—A remarkably strong grower, a tremendous cropper, and bears several pickings. **Early Prize Pea**—Cross between Tom Thumb and Advancer; dwarf, early, and a splendid cropper. **The Favorite**—A better Pea than either Abundance or Everbearing. **Ford-Hook Squash**—Dry, fine grained, sweet, hardy, prolific. **White Prolific Marrow**—A new English dwarf, wrinkled Pea, a wonderful cropper. **Giant Pascal Celery**—Stalks extra large, solid, and a better keeper than other self-blanching varieties. **Cylinder Wax Bean**—The rust and blight-proof Wax Bean so long sought for. **Coral Gem Pepper**—With its hundreds of brilliant red pods, it is as brilliant as a gem. **Blonde Block-Head Lettuce**—A rich, golden-headed Cabbage, crisp and fine. 15 cts. per package; Ten for \$1.00. An extra package to all naming this paper. Seed Catalogue free. **JAMES J. H. GREGORY, Marblehead, Mass.**

**A GRAND CHANCE**  
 FOR A MAN WITH SMALL CAPITAL  
 TO ACQUIRE A  
**LARGE BEARING ORCHARD,**  
 Address, **BOX 218,**  
**COLLINGWOOD, ONT.**  
 Mar. 11.

**HORTICULTURAL SUPPLIES.** We carry a Complete Line of all the **NEWEST AND BEST HORTICULTURAL TOOLS** and other supplies. Our *Special Circular* describes them all. Send for it Free. Send also for our *Special Poultry Supply circular* FREE. Send 10c. for most complete **SEED CATALOGUE** published  
**JOHNSON & STOKES,**  
 217 and 219 Market St., Philadelphia, Pa.

# Vine Valley Nurseries.

**250,000 Grape Vines.**

All leading varieties, at lowest prices, by mail, express; or freight.

**SPECIAL RATES TO THE TRADE.**

**20,000 Norway Spruce,**

All sizes, well rooted, at wholesale or retail.

A LARGE STOCK OF

**CURRENTS, Red and Black,**

OF THE LEADING VARIETIES.

**GRAPE VINES A SPECIALTY.**

AGENTS WANTED.

**JOSEPH TWEDDLE,**

Sept. 8t.

Stoney Creek.

**50,000 NORWAY SPRUCE**

**HOME GROWN.**

12 to 14 inch, once transplanted, \$3.00 per 100, \$25.00 per 1,000; 14 to 18 inch, \$3.00 to \$8.00 per 100; Black Walnut, 5 to 7 feet, 10c. to 25c.

ALL KINDS OF NURSERY STOCK. SEND FOR PRICE LIST.

**CAMPBELL BROS.,**

Feb. 2t.

SIMCOE, ONT.

**HER REPLY.**

HUSBAND (during a quarrel)—We shall never meet in heaven.

Wife—Oh, yes, we may. There is plenty of time for you to reform yet. — *Yankee Blade.*

# Niagara Falls Nurseries.

THE VERY BEST VARIETIES OF

**SMALL FRUIT PLANTS.**

The headquarters of the "Raby Castle," the most profitable Red Currant.

A fine stock of Cut-leaved Silver Maples, Russian Mulberries, Ash and Norway Spruce, several times transplanted, at cheap rates.

Grape Vines, many varieties.

Soil, situation and cultivation not excelled any where in Ontario. Deal direct and get your stock cheap and entirely reliable. Prices much the same as those advertised in earlier numbers of this periodical.

**E. MORDEN, Niagara Falls South, Ont.**

April 90.

# THE IDAHO PEAR

What others say about it:

"Its quality is remarkable for such a large fruit."

P. J. BERKMANS,  
Pres't Amer. Pom. Soc.

"I am much pleased with the Idaho Pear."

PARKER EARLE,  
Pres't Amer. Hort. Soc.

"First quality in fineness, juiciness and flavor; rivals our very best fruits."

SIMON LOUIS BROS.,  
Metz, Germany.

"I would recommend it for extensive trial."

H. E. VAN DEMAN,  
Pom. Dept. Agriculture.

Trees now for the first time offered for sale:

Single Tree by mail, post paid, - - - \$2 50

Three for - - - - - 6 00

SEND FOR  
**ILLUSTRATED PROSPECTUS**

Containing a finer list of testimonials than any

**OF NEW FRUIT**

THAT HAS EVER BEEN INTRODUCED.

THE IDAHO PEAR CO.

LEWISTON, IDAHO.

SHE—"You are such a solitary man. Mr. Silby, I should think you would get lonesome."

HE—"Oh, no; I enjoy being by myself."

SHE (thoughtfully)—"I don't see how you can." — *Burlington Free Press.*

**TELL THE NEIGHBORS,  
TELL WHAT?  
THAT OUR NEW  
FRUIT CATALOGUE  
IN COLORS  
HAS COST US \$5,000.  
THEY CAN GET IT FREE  
BY SENDING US  
THEIR NAME  
ON A POSTAL CARD.  
IT IS A GUIDE  
TO FRUIT CULTURE.  
IT TELLS HOW TO GROW  
AND WHAT TO GROW.**

ADDRESS:

GREEN'S NURSERY COMPANY,  
ROCHESTER, N.Y.

**Fruit Commission Men.**

**McWILLIAM & EVERIST,**

FRUIT AND GENERAL

**COMMISSION MERCHANTS,**

25 Church St., TORONTO.

Consignments of Fruits and Produce Solicited. Satisfaction guaranteed; advice of sales daily; returns made weekly. Our facilities for handling fruit are unequalled. 6-12t.

**WILLIAMS, THOMAS & CO.**

**FRUIT & PRODUCE**

**COMMISSION MERCHANTS,**

7 Victoria St., LIVERPOOL.

Telegraphic address: GULVAL-LIVERPOOL.  
Consignments Solicited.

References — BANK OF LIVERPOOL, Liverpool,  
Nov. 6t. A. McD. ALLAN, Goderich, Canada.

**EDINBURGH, SCOTLAND.**

**WOOD, ORMEROD & CO.**

**FRUIT MERCHANTS**

AND

**COMMISSION SALESMEN.**

Account Sales with cheque weekly, or as desired. Consignments of Choice Fruit (via Glasgow) solicited.

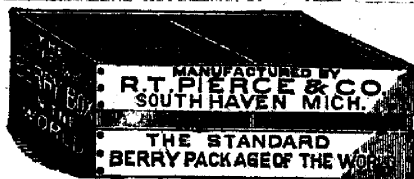
REFERENCE — The National Bank of Scotland, High St.,  
Edinburgh.

Oct. 15t. Telegraphic Address — Wood, Edinburgh.

**FRUIT PACKAGES OF ALL KINDS**  
SEND FOR CATALOGUE TO



**R. T. PIERCE & CO., South Haven, Mich.**



**JAS. MURRAY & CO.**

**PRINTERS**

AND

**BOOKBINDERS**

**26 & 28 FRONT ST. WEST  
TORONTO.**

BOOKBINDING IN ALL ITS BRANCHES.

Manufacturers' Catalogues a Specialty

SEND FOR ESTIMATES.

*Index to March Number.*

	PAGE
The Bubach Strawberry (Editor).....	85
Horizontal Arm Pruning of the Grape.....	86
The Approach (Editor).....	87
Bee Yards in Orchards (R. McKnight).....	88
Rules for the Garden.....	89
At the Farmers' Institutes (Editor).....	78
Evaporating Apples, Pruning Trees.....	70
Fertilizers.....	71
Notes from the Western New York Hort'l Society.....	73
The Dominion Convention of Fruit Growers' (Editor)	75
The Home Fruit Garden (Editor).....	77
Canadian Apples (C. G. Patten).....	79
Grapes for Market (M. Pettit).....	79
Plums for Market (Geo. Chene).....	80
Small Fruits Tested in Michigan.....	81
The Lady Rusk Strawberry.....	81
The Progress Raspberry.....	82
Some Points on Growing Hardy Perennial Plants (E. E. Summey).....	83
The Clematis in Ontario (B. Gott).....	83
Moving Trees in Winter (J. P. Cockburn).....	88
The Places to Plant Trees (R. W. Phipps).....	89
NOTES AND COMMENTS. — Bones as Fertilizers — New Produce Company — Weekly Market Bulletin — Girdling the Grape — Small Fruits Tested — Eru- spraying — Russian Apricot — Nuts for Profit — Central Farmers Institute.....	90-92
THE QUESTION DRAWER. — Gooseberries Drooping — Pear on the Apple — Russian Trees — Canada Orleans — Best Work — Orchard and Garden — Care of Shrubs, etc. — Kieffer Pear — Dictionary of Gardening — Cherries and Pears for Home Use — Spotted Culls — New Varieties of Apples — Saskatoon Berry — Black Caps.....	92-95
OPEN LETTERS. — Value of Journal — Minnesota Horti- cultural Society — Ontario Fruit List — Fruit in Simcoe Co. — Grey Co.....	96

Anderson w p