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WHEATLAND.

THE  
Canadian Horticulturist

VOL. XV.

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No. 12.



THE WHEATLAND PEACH.



THE readers of our journal are not to suppose that every fruit pictured and described in this journal is commended as being valuable for the commercial peach orchard. The object is to make known to all Canadian growers those new or old varieties which appear desirable, and which need more general testing in order to know their adaptability to the various parts of our country.

The Wheatland is a new peach which frequently comes under notice at fairs, and ripens at a time when a good yellow flesh peach is needed, just after the Early Crawford.

The variety originated near Rochester, N.Y., with Mr. D. S. Rogers. He grows a great number of varieties, but of them all he considers the Wheatland the finest. The following is a description of the Wheatland peach: Fruit is large, roundish; skin golden yellow, shaded with crimson on the sunny side; flesh yellow, firm; juicy, sweet, and of fine quality; tree vigorous and healthy.

Our colored plate of this peach is rather too highly colored for the average samples. Its behaviour, too, does not seem to be uniform in all localities, for Mr. A. M. Smith, of St. Catharines, says he has trees six years planted that have never yielded him a half dozen peaches, and he considers it a very poor bearer.

Mr. E. McArdle, a peach grower in St. Catharines, writes us as follows with reference to the Wheatland peach: "My own experience with the Wheatland is very limited, but others tell me that this variety is a very shy bearer. We planted very few of them, only twenty-five Wheatland in an orchard of two thousand trees. I consider the peach a very fine one in appearance, and of good quality, although not very highly colored." We shall be pleased to receive for publication the experience of other peach growers.

## AMONG THE FRUIT GROWERS OF NEW YORK STATE.



CREDIT is due to Professor L. H. Bailey, of Cornell University, for his persevering industry in compiling useful books on horticulture for fruit growers. The bulletins issued by the Station under his direction are all got out in a most unique, attractive fashion. The Professor has lately been making a tour among the fruit growers of Western New York, and his "Notes of Travel," which appear in the *Garden and Forest*, are of much interest to us in Canada.

He speaks of an immense Niagara vineyard at Romulus, N.Y., of 590 acres, divided into three parts, from one of which seventy tons of grapes was expected this season, and from another 140 tons. When the vineyards are eight years planted, the yield is calculated to reach from two to three thousand tons annually. Only a small portion of this will be marketed as green fruit; the greater part of it will be made up into grape juice, for which there is a growing demand. The process of making this article is as follows: Grind the grapes coarsely, taking care not to crush the seeds. This is done in the afternoon. Place the material in tubs. Next morning filter through paper and heat nearly to the boiling point, remove the scum. Filter again, heat nearly to the boiling point, and bottle. These immense vineyards are trained on the Kniffen system, and the tying is mostly all done by women.

The great fruit region of New York State begins near Geneva and stretches away to Niagara Falls and Lake Ontario on the north-west, and to Chautauqua County on the south-west. Orcharding is the dominant industry in nearly all this portion of the country.

Professor Bailey speaks of an immense plum orchard near Geneva belonging to the Maxwell Bros. It covers 85 acres, and every tree was carrying a bountiful crop at the time of his visit. The orchard was kept scrupulously clean. The tops are started at four or five feet from the ground. There are about two dozen varieties in the orchard, of which the most profitable are, Reine Claude, Purple Egg, Fields (often called Early Bradshaw), and Bradshaw. On this same fruit farm there are 80 acres of quinces of Orange and Rea's Mammoth, but, of the two, the Orange is preferred. In another place, this same farm has a block

of quinces of 80 acres, and ten acres of sour cherries, chiefly the English Morello and the Montmorency Ordinaire; the latter being the popular market cherry of this region of country.

One paragraph of Mr. Bailey's shows us how wide-awake the fruit growers of New York State are to their business, and the importance of spraying and cultivation, in producing the best quality of fruit. "All these orchards of one hundred and fifty acres, are carefully sprayed for insects and fungi. A hand field force pump, carried upon a tank in a wagon and Peerless nozzles, are used exclusively. Plums are sprayed two or three times for the septoria, or shot-hole fungus, which causes the premature falling of the foliage, but for curculio the sheets are still used. Plums are treated with the ammoniacal carbonate of copper. The knot is fought industriously. Twice during the summer every tree is carefully examined by two men, who walk up either side of the row. This examination, together with the search which is made in winter, has thus far kept the knot in check; but all growers in this region are apprehensive of this disease, and the new law for its extermination is being enforced with vigor. Cherries are also sprayed with the copper carbonate to combat the leaf blight, a disease which causes the leaves to fall before the fruit matures. The best fruit-raisers recognize the fact that abundant and healthy foliage is essential to a good crop of fruit. Quinces and apples are sprayed twice with Bordeaux mixture, about a week after the blossoms fall, and again two weeks later. This treatment is aimed at the leaf blight on the quince and the scab-fungus on the apple. For both quinces and apples, Paris green is mixed with the fungicide for the purpose of killing the codling moth larvæ. This is a fair sample of the attitude of our New York fruit growers toward spraying. The practice has taken an assured place among the operations of the orchard, and I imagine that if either spraying or cultivation had to be given up for any year, most growers would discontinue the cultivation."

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MARKETING UNGRADED FRUIT.—"I brought three bushels of Bartlett pears to town to-day, and I could not get more than 40 cents a bushel. That price doesn't pay, but I had to let them go." This is what a farmer said to us one day. We turned to look at the fruit. He had been paid all it was worth. The fruit was brought in large baskets holding one and one-half bushels, and was evidently just as it came from the tree—a most unattractive looking lot of fruit. Had this man picked out only two bushels of the finest fruit, rejecting every irregular-shaped and all small and worm-eaten specimens, he would have had no difficulty in getting \$1 a bushel and would thus have received 80 cents more for two bushels than he got for three, and had a bushel of inferior pears left. These again assorted would have produced a half bushel of fair pears; the remainder he should have given to the pigs, or used for drying.—Orange County Farmer.

## GOOSEBERRY CULTURE.



THE most important thing connected with gooseberry culture is judicious pruning. This work, which cannot be neglected, is done from late autumn to early winter. Many of the vigorous-growing shoots and branches are annually removed, and only a moderate supply of young growing wood is left. The bush is made to assume a cup-shaped top, with slightly drooping branches. The cultivation and manuring are like that just described for the currant. As far as I have learned, the varieties of gooseberry in cultivation in Great Britain are far more numerous than the varieties of any other small fruit, and the choice of variety appears to depend to a large degree upon locality. For picking green or for preserving when ripe, the Whitesmith, Early Sulphur, and Warrington, appear to be general favorites. Crown Bob, well known in many American gardens, is also a much prized sort, and its large, finely-colored fruit sells well in the market. Other varieties largely grown are Red Rifleman, Golden Drop, Monarch and Lancashire Lad. I believe that Lancashire, one of the northern counties of England, is quite famous for its gooseberries, and usually succeeds in capturing a large number of the prizes offered for this fruit at horticultural exhibitions. Many new varieties were originated in this county, and the names with which they have been heralded to the world are not unlike those used by our own originators. Among some of the best known I find the following: Roaring Lion, Leveller, Napoleon, Red Champagne, etc. Whinham's Industry is also highly regarded, and is thought to be one of the leading sorts.

I can speak less confidently of the yield of an average crop of gooseberries than I could of that of currants. The greater number of varieties in cultivation, and the fact that more skill is required in pruning, are among the reasons why the "average" crop is variable. Good growers are not satisfied with anything less than a crop of 7,000 pounds an acre. The price received for gooseberries varies greatly. Early fruit of choice varieties, raised in sheltered localities, often brings from 15 to 18 cents a pound. But this is exceptional. Under ordinary circumstances, the price received for the first few pickings is 6 or 8 cents a pound. It soon falls, however, a fair average price for the whole crop would be three or four cents a pound.

Gooseberries are bought very largely for canning and preserving, as well as for immediate use as a dessert fruit, or for puddings, tarts, etc. I judge that the expense of raising gooseberries is about the same as that of raising currants—perhaps a little more. It can scarcely fall below \$100 an acre.

Both the currant and gooseberry bushes, especially the latter, are subject to attacks from the currant worm or saw-fly (*Nematus*). In order to check the ravages of this insect, quick lime, lime ashes, or soot, is scattered close around the bushes late in autumn, and dug into the soil. This is said by many to be

an effective remedy. Other growers syringe the bushes with soft soap and soda and water.

Sprinkling with powdered hellebore, or using it in solution, is practised by some, but not nearly so generally as in the United States. Hellebore is regarded just as dangerous a poison as London purple or Paris green, and most growers will not apply it after the fruit is set. When used, the powdered hellebore is generally applied with a soufflet or hand bellows, which useful apparatus costs about seventy-five cents.—WILLIAM R. LAZENBY, in *Country Gentleman*.

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### POINTS ON BLACKBERRIES.

The main point with blackberries is soil. This, if possible, should be cool, loamy and rich; but I never allow any application of barn manure. Fertilize with soil, rotted chip soil, or whatever will mulch and cool the soil. Our chief danger with blackberries is a dry spell when the berries are approaching maturity. Of the berries now in cultivation my choice for quality is Taylor and Agawam. Erie has not killed back this winter, as it sometimes does; but it is not with me a good cropper of fine berries. Snyder is always reliable, but of good quality. Wilson, Jr., I see, is still spoken of as hardy, but here it is hopelessly a failure. It kills down always, and even in the winter when peach buds escape. Kittatinny is a noble fruit, and I get a crop from a small field by bending down the canes. Wachusett's Thornless does not differ largely from Snyder, and is entirely hardy. Few berries are badly affected by dry weather. On the whole, the key to success is cool, moist soil, not wet. If planted on high land, either mulching must be resorted to or frequent use of the cultivator. The Lucretia Dewberry is tender and must be laid down for winter and covered with leaves. In the spring I lift mine and tie to trellises. It will not pay to plant large fields. The demand for the dewberry, is, however, unlimited, but few persons are willing to incur the labor of cultivating it. The fruit is enormously large, very rich, and two weeks earlier than the high blackberries. It will not ship to a distant market.—E. P. POWELL, in *Fruit Grower's Journal*.

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PICKING GRAPES.—To pick and pack grapes for market, wait until the dew is off the vines and the cluster, then cut the stem with a sharp knife or shears, and deposit carefully in the basket, not crowding or heaping them therein, and let them be taken to the packing house, without much exposure to the sun, especially if well ripened, but give thorough ventilation until the next day, with as little handling as possible, and it will then be found that the stems are soft and easily bent, and the grapes still plump, but adhering to the stems more closely than when first gathered. Now they may be carefully packed in the five or ten-pound baskets without danger of crushing or heating, if properly handled. A partial covering with a green leaf not only shows well against the color of the fruit, but has a tendency to keep it brighter and firmer.

## HARDY CHERRIES.



THE original home of the cherry is in Asia. The Romans are credited with bringing it to Italy, and thence to England. Our cultivated varieties have arisen from two original forms, the one tall growing, now sprouting (*Prunus avium*) Bird Cherry, the other more shrubby, and throwing up suckers or sprouts. The first of these is the parent of the black and white varieties, more or less sweet, known as Hearts and Bigarreaus. The second is the parent of the red cherries, more or less sour, now known as belonging to the Morello class. Seeds of both of these were brought from Holland and England to New England by the early colonists. The two families have become so intercrossed lately that in many cases it is now impossible to distinguish their descendants. Among other things for which Ireland is noted are its cherry trees of great size. One near Dublin is said to have a circumference of nineteen feet, and a height of eighty five feet. Mr. Gibb, speaking of cherry growing in East Europe, says: "There is a district in Russia

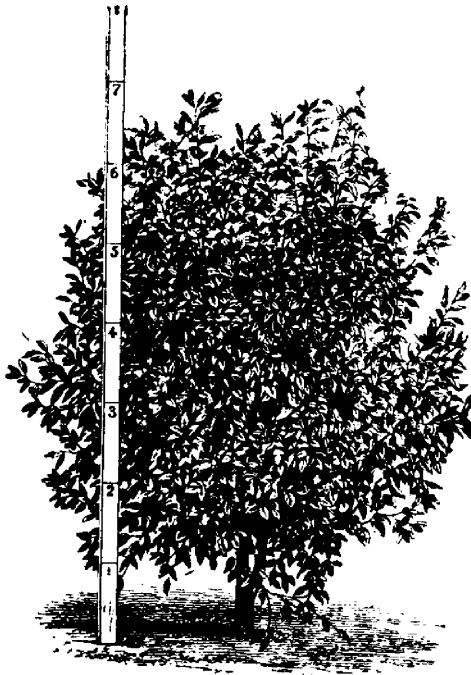


FIG. 98—HARDY CHERRY TREE.  
(From a Photograph.)



where cherry growing is the industry of the population. It is in the Province of Vladimir, between Moscow and Nigni-novgorod, where the winter temperature is about three degrees colder than the City of Quebec. The little trees only grow three feet high. So extensively are the cherries cultivated that they are shipped by the carload in all directions, and I am told that entire trains have been loaded with this one product."

The natural distribution of the wild representatives of both classes, the Hearts and Morellos, seems much the same, though the cultivated representatives of the latter, have a much wider distribution in northern and eastern Europe at the present time. This class seems to have had a greater climatic adaptability than their tenderer relatives, the Hearts, and to have gradually worked northward and eastward till they have become common roadside trees in Poland and Central Russia. Before reaching this northern latitude they have become however, specialized forms, differing materially from our west European types. The west European Morellos, which in ordinary or average seasons have been fairly successful south of the forty-third parallel, in the somewhat dry western and middle States, and further north in the moister, though colder, portions of Canada, have, in late years from one cause or another as in the west, injury from winter and black knot, and bark bursting in the east and been dying so rapidly and giving such poor returns, as to compel the thoughtful planter to look for varieties more suited to the vicissitudes of our northern climates.

Within a few years several varieties, as instances, Ostheim and Wragg, have been brought into notice as having special qualifications in the way of hardiness and adaptability to climate. As far as we can learn, these varieties have been "incidental seedlings from east Europe importations, and to have inherited their hardiness from typical varieties of those regions." The result of investigation is that several importations followed, being special and personal selections made by Prof. J. L. Budd, of the Iowa Agricultural College, and Mr. Charles Gibb, of Abbotsford, Que., in 1883-4. These introductions comprise about forty varieties. From five years of personal observation, and from reports received from widely-separated sources, I am lead to believe that we shall find among them many adapted to the more trying districts of Quebec and Ontario, and the milder portions of the North-West. But should our success be only partial with the originals, we can still use them as stepping stones to something better, by means of crossing and selection, and this line of advance is taking a prominent place in the horticultural work of the farm.

JOHN CRAIG.

*Experimental Farm, Ottawa.*

HATTIE. --Mamma says that my canary's life just hangs by a thread.

SYMPATHETIC CALLER.--My, I do hope it is number 8, you know that is awful strong.

## RAISING BLACKBERRIES.



If I were to recommend any variety it would be the Ancient Briton, as preferable in many respects to most of the others. It is a hardy plant, and being of medium growth makes it quite easy to lay it down in the fall, and the fruit, when properly ripened, is all that could be desired in a blackberry. It is an abundant fruiter, and, as it is a little later than some of the other sorts, there is a good demand for them at a good price.

Blackberries need plenty of moisture, and it will not pay to plant them on the top of some dry knoll; for the fruit will not grow to perfection in such dry places, it will be hard and sour. Chose a place where the ground is of good quality and where there is plenty of moisture. Prepare the ground thoroughly by plowing and harrowing before planting, and make the ground mellow, down quite deep, where you set the plants. You cannot be too particular in this respect—remember you are setting them out for profit and not simply to see whether they will grow or not. I think they should be set about four feet apart one way, and eight feet the other way. Keep the ground loose by constant cultivation, and the sooner you can get a good large bush, the sooner you will get fruit, and keeping the ground loose will help to keep it moist.

When the bushes get quite well started) say three years after they have been set), it will be some trouble to remove the old brush. this I do in the following manner: I take a hooked knife, with a handle attached which is about five feet long. The knife is made from a piece of old file welded to a hoe shank in such a way that the knife stands at right angles with the handle. With this kind of a tool I cut the brush out of an acre in eleven hours, and as I cut them I pull them out of the row with the knife, so I can gather them easily. I next hitch a horse to the side of one-half of a two-horse harrow, and drive over the brush with the horse and harrow, which draws them together into piles, and, if in a dry time, the harrow will break the brush so there will not seem to be more than one-half as many of them after being harrowed as before.

After the brush is piled, I hitch the horse to a sled made of wood without any shafts, and with four stakes in it to hold the brush on; with this I haul the brush out of the field. I think the old brush should be taken out as soon as practicable after they have fruited, as it keeps the new shoots from making as good a growth as they otherwise would if left in.

Blackberries, to be grown successfully in cold climates, must be covered in the fall; if not covered, they should be put close to the ground and fastened there till spring. I commence to put them down by digging the dirt away on one side so as to let the bushes over; then I stand on the opposite side, and with a fork, which I place in the top of the bush, I commence to push with the fork and at the same time push with my foot against the stump of the bush;

with this method I have no trouble in getting the bushes down, when they should be covered with enough dirt to keep them on the ground. I do not think it is of much advantage to entirely cover them with dirt, especially when there is plenty of snow. I think, as a general thing, the bushes should be taken out of the ground as soon as the frost is out deep enough to allow of it, as being a late bloomer, there is not much danger from frost. It is better not to stand the bushes erect, when taken up, as those left near the ground bear the nicest berries. Mulching the ground with wild hay, straw, corn stalks, etc., adds greatly to the growth of the plant and size of the berry.—S. CUTLER, of Excelsior, Minn., before Minn. Hort. Soc., 1892.

### FRUIT IN VICTORIA COUNTY.

I had the pleasure of visiting the gardens and orchards of Mr. Thos. Beall and Mr. Robson, both well-known horticulturists. Both had good crops of apples, pears and grapes. Mr. Thos. Beall grows the Niagara grape in its highest perfection. Mr. Beall thinks very highly of the Ontario apple. My fear is that bearing such overwhelming crops as I saw on Mr. Beall's trees, and elsewhere in this county, it will not grow to be a large tree. Mr. Beall also greatly prizes the Alexander apple, one of his Alexander trees only about 12 years old, produced 12½ bushels this year, and such apples! A few apples over sixty making a bushel every time. Apples are a good average crop here this year.

Mr. H. Reazin, Inspector of Public schools, has one of the best orchards in the county. He is an enthusiastic orchardist. No plums in this county this year.

The following apples are grown in high perfection in this county by the above named gentlemen :

SUMMER APPLES.—Tetofsky, Yellow Transparent, Duchess, Montreal Peach, Red Astrachan, etc.

FALL APPLES.—Snow, St. Lawrence, Haas, Wealthy, Gipsy Girl, Alexander, etc.

WINTER APPLES.—Pewaukee, Golden Russet, Pomme Grise, Mann, Salome, Magog Redstreak, Ontario, Scotts Winter, Ben Davis, Baldwin, etc. I think the quality of the apples grown in this county superior to the same kinds grown farther south.

H.

WATERMELON TESTS.—I draw my thumb-nail over the melon, scraping off the thin green skin. If the edges of the skin on each side of the scar are left ragged or granulated, and the rind under the scar is smooth, firm and white, and has something of a glassy appearance, the melon is ripe. But if the edges of the scar are smooth and even, and the thumb-nail has dug into the rind in places, and the skin does not come off clean, then the melon is green. You can easily learn on two melons, one ripe, the other green, noting the difference after they have been cut open.—Southern Stockman and Farmer.

## FRUIT IN NORTH SIMCOE.



THE past season has been a favorable one for fruit in this section. Strawberries were a very fair crop and of good quality, in fact I never had finer berries than I had this year. The main crop, as regards varieties, were the old reliable Wilson and Crescent. The Haverland, though comparatively new in this section, is a decided success here; yields well and carries its size well to the end of the season. My experience with the Bubach does not lead me to think favorably of it. The fruit is large and of very good quality, but it does not bear half as well as the Haverland; it makes very few runners, so that it propagates very slowly; the fruit stems are very short, so that in seasons like the past one, with frequent heavy showers, the fruit is badly sanded. I think the Williams berry will prove a decided acquisition here. The worst enemy to the strawberry is the rust on the leaves, the Wilson being the most susceptible to it. No remedy has as yet been tried to check it, though I purpose experimenting in this line next year with the Bordeaux mixture, and other solutions of that kind.

Raspberries did well, though not very promising in the early part of the summer, being backward in leafing out, owing, I think, mainly to the severe cold weather in April after the snow was gone. Yet they recruited wonderfully and gave a very good crop, and prices were better than have been for some years. I grow the Cuthbert principally and the soil and climate here seem to suit it well, except that in very severe winter, it kills back a little of the tips.

My experience this year with grapes has not been a happy one, and shows that except with the earliest varieties they are a very uncertain crop in this locality. My vines were well loaded, the fruit (mostly Concords), large, bunches well shouldered; the berries much larger than those grown further south. But, owing to wet backward weather and lack of sunshine, not more than half of them ripened. The severe frost in the first week of October caught them, and spoiled them. I tried smudging but it was no use.

The apple crop has been a good one and the fruit, as regards quality, probably the best of any section in Ontario. The section known as the Georgian Bay Counties, has been especially favored this year in the apple crop. The crop has been saved in good condition and buying was brisk, the bulk being bought for export and fair prices realized. Considerable fruit has been sent from this section for exhibition at the World's Fair, and when that opens next spring, the fruit from this section will speak for itself. I believe the Georgian Bay Counties produce the best apples in America, if not in the world. 'Tis a big assertion to make, but as Burns said, "Facts are chieft that winna ding and canna be disputed."

I notice Mr. Allan's article in the November number, and that he says some very trite things concerning the fruit trade. There is more truth than poetry

in what Mr. Allan says. First, as to cultivating, fertilizing and caring for the orchard in order to produce the very best quality. Then the exercise of good judgment and care in picking, packing and shipping, culling carefully, putting up best quality, and at the proper time. I feel certain that if Mr. Allan's advice were acted upon (for he just hits the nail on the head), it would be the "open sesame" to success in the fruit business, and too much cannot be said on the subject.

I shall have something to say on this subject myself in a future number; having intruded sufficiently upon your space for this time, for which, Mr. Editor, you will please excuse me; and I will close by expressing my gratification at the increased size, efficient conduct and spicy appearance of our reliable little journal.

*Craighurst.*

G. C. CASTON.

SHIPPERS OF DRIED FRUITS.—Apples should be carefully peeled and cored, then sliced or quartered, placed upon frames and dried in a gentle heat. Gnarly or wormy apples should be thrown aside, or such places carefully cut out. Peaches may be dried either peeled or unpeeled. They sell best if cut in halves. Apples and peaches, to bring best prices, must be bright and light colored; to secure this, they must be dried in a dry air. The atmosphere is often so charged with moisture, even in sunshine, that it absorbs more moisture very slowly. Such an atmosphere is very unfavorable to the drying of fruit, the juice evaporating so slowly that it decays and darkens the color. Those who cannot construct drying houses should prepare and dry their fruit upon days when the air is very dry only, out of doors, or else indoors in a gentle fire heat and current of air. Apples on strings are objectionable. If dried on strings these should be removed before the apples are packed.—M. Kiely's Shipper's Guide.

TOP-DRESSING ORCHARDS.—The published reports of the proceedings of the Illinois Horticultural Society give the statement of H. Dunlap of his success in top-dressing bearing fruit trees. He top-dressed two rows of cherry trees, and at the same time left some that were not treated. On the top-dressed trees the shoots grew from 12 to 18 inches, while on those not top-dressed the growth was only 3 to 6 inches. The superior bearing of the top-dressed trees continued for two years. These results are similar to those we have witnessed for many years past, where young and newly transplanted and mulched cherry trees in one lot all lived and grew through a hot and dry summer, while a number of the unmulched ones either made little or no growth, or positively perished. The cherry is more sensitive to the heat of a hot and dry soil than other fruit trees, and mulching is more important.—Country Gentleman

## SHEEP IN THE ORCHARD.



F properly managed, the orchard may be pastured profitably by sheep. The only essential is not to pasture too closely and to have it so arranged as to turn in the sheep from the yards in the morning and take them out when they get restless and rambling, as this is the stage when they reach up for the limbs and hunt for a branch where the bark is tender. In Benton county we kept down the weeds and grass in a large orchard for ten years with sheep without spoiling a single tree by disbarking. If the pasturage alone was the main consideration, it would not pay to turn the sheep in and out. But experience has proven that *the orchard insects do not thrive where the sheep run*. With the sheep in the orchard our apples had less worms, and the leaf-eating insects, thrips, etc., were not as common and destructive as in orchards near by where grass and weeds grew. The common belief of nurserymen and fruit growers is that the sheep and goat are the natural enemies and eradicators of trees and shrubs. It is true of the goat, but sensibly managed "the animal with the golden hoof" is the friend of the nurseryman and orchardist. Year after year I have turned them into the nursery rows after we had quit cultivating. It was interesting to watch their quick and eager search for the tender weeds. Of course, when their appetite was satisfied they were turned out for the day. In the corn-field they proved an equally satisfactory way of gathering up the weeds in early August. In many other ways the sheep, and a boy, cleaned up the unsightly places. Where clean work of a big weed patch or hazel corner was wanted we had hurdle fence panels to throw around them, and the sheep *were kept there* until the work was done. In a hundred-acre pasture on the old homestead we had a corner of about ten acres in hazel brush, with here and there a young, bushy-topped elm, oak, wild cherry, etc. This was fenced in for the sheep when not on their foraging expeditions during the growing season. When the sheep were salted it was by brining the leaves of the taller hazel brush. In two years the brush was killed, and in four years a rich matting of grass took its place among the growing shade trees. I wish to make it emphatic that the sheep, properly managed, is the helper and friend of the horticulturist. But in late fall, winter and early spring, the place for the sheep is the feed lots and sheds. When tree bark is the only obtainable green thing, the sheep will decide that it is made for their use. —PROF. J. L. BUDD.

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AN ENGLISH WAY OF KEEPING FRUIT.—Thoroughly dry a quantity of sawdust. Roll up sound, perfect fruit—bunches of ripe grapes, tomatoes, etc.—in paper, and pack it in boxes, filling spaces with the sawdust. Then wrap the box in newspapers, and keep it in a dry, cool room.

## ✦ New and Little Known Fruits. ✧

### CANADA RED.

SIR,—I send you by mail a sample of an apple which is grown at Hudson, on the Ottawa river, and would ask you to name it. Out of an orchard planted at Mount Victoria at Hudson, Que., some thirty-three years ago, about 150 or 200 only survive. Of these thirty or forty of this variety have lived and seem to do remarkably well. They are "the survival of the fittest," and must be well worthy of cultivation in this part of Canada. I know for a fact the Mount Victoria orchard has been much neglected since the death of the late Mr. Matthews, some twenty years ago, owing to a succession of tenants. The present tenant says he has taken six barrels of apples from one tree, nearly all first quality. I have shown specimens to several dealers in western fruit, and some say that it is the Canada Red, others that it is not. The quality of the fruit is good and its keeping quality excellent. Locally the apple has been called the Red Spitzenburg.

R. W. SHEPHERD, Jr., *Montreal, Que.*

This apple is without doubt the Canada Red, an excellent apple for commercial purposes, where sufficiently productive. Larger apples are, however, more sought for.

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### THE SALLY BROWN APPLE.

SIR,—The sample I send you is a seedling of the Duchess, grown by a lady here of the same name. This is its first year in bearing, nine years from seed. The tree is a close upright grower with smallish sharply serrated leaves, absolutely free from down on the under side. The tree, about one inch through, had twelve to fifteen apples this, the first year. The sample was picked on the 15th of September and has had rough usage, having fallen from my hand to the floor twice. I have not tasted it, but think it is about ripe now.

J. P. COCKBURN, *Gravenhurst.*

This apple is of the Duchess style, but later in maturing, making it valuable. It is now October 27th, little past its best but evidently is of good quality, equally attractive with the Duchess.

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### THE BRITISH COLUMBIAN.

SIR,—I send you a sample of an apple for identification. In my opinion it resembles the Canada Reinette, but the producer claims that he planted the seeds some thirty years ago, and could take his oath to the fact that this tree is a production from that seed. The tree is a very strong and healthy grower, with large thick, glossy leaves, and has borne extraordinarily heavy crops of fine fruit every year for the last twenty years or over, some years yielding thirty bushels of marketable fruit. At the desire of the originator, we have named it the "British Columbian."

G. W. HENRY, *Port Hammond, B. C.*

The apple sent us by our friend in British Columbia corresponds very closely with Downing's description of the Canada Reinette. It is of an immense size, reaching No. 10 of our scale for apples, as given in the October number. It is not so flat an apple as the Canada Reinette, being considerably longer in proportion from the calyx to the basin, and this, if a constant characteristic, may be sufficient to entitle it to a separate name. In our next number we will give a drawing and description of the Canada Reinette.

## THE RED RAMBO.

SIR,—I send you by the same mail some samples of apple which is said to have originated in this neighborhood in an orchard of seedings. It has been called Red Rambo. It is only cultivated to a limited extent, and mostly by the descendants of the originator, by whom it is highly prized as a dessert apple. From my experience with it, I find that top working is best way to deal with it, being somewhat tender when worked at the bottom. Some think that it is identical with the Pennsylvania Vandevere, but, according to Warder's description, the two are different. It is an abundant bearer, and will keep until March. I find it sells on a par with Russets, Spys, Greenings, Baldwins, etc. Please give me your opinion of it.

S. ROY, *Berlin, Ont.*

This is a pretty table apple, but if it keeps till March it is questionable whether it is the Red Rambo. The latter is a sub-variety of Rambo, almost identical with it, only the fruit is more red, and its season is October to December. It is certainly not Vandevere; it much more nearly resembles the Rambo.

Description of the sample: Fruit, medium size, roundish, smooth, yellowish in shade, bright red on sunny side, streaked and blotched with deeper red, plainly marked with brown dots. Stalk slender, straight, three-quarters of an inch long, deeply planted in a smooth, funnel-shaped cavity. Calyx closed, set in a broad, slightly plaited basin. Flesh cream-colored, tender, rich, mild, agreeable flavor. Good. Sample sent ripe Nov. 14th.

## A PRETTY RUSSIAN APPLE.

SIR,—I send you two Russian apples for inspection. The tree on which they were borne was sent us about five years ago for testing.

W. H. ROBSON, *Lindsay, Ont.*

About the time mentioned by our correspondent, some Russian apple trees without name were distributed among the members of our Association, in order to test their hardiness. This probably is one. The apple is strikingly pretty in appearance, and, had it excellency of quality in proportion, it would be the first of its season for a dessert apple. It is medium in size, No. 5 in our scale; oblate conical in shape; skin creamy color, waxy lustre, with a beautiful carmine cheek; stem slender, short, in a deep, even cavity; calyx closed, in a plaited basin; flesh creamy white, tender, but with a somewhat peculiar flavor not quite agreeable at first; season probably October and November.

## JUNEBERRY AND OREGON GRAPES.

SIR,—The July number of the HORTICULTURIST contains a colored plate of a berry indigenous to this district of British Columbia. It is very common, and the work ahead of me would be very much lessened if my land were cleared of them. They thrive best on warm, sandy loam, and those which come under partial cultivation are double the size of those shown in the colored plate, and, besides, the flavor is improved. They are very little appreciated by the white population, but the Indians have gathered them for ages. They dry them for winter use.

We have another kind of fruit indigenous to this portion. It grows on small evergreen shrubs and resembles bunches of small blue grapes. They are of a sprightly acid flavor, rather astringent, and excellent for making into jelly. Although they have no relation to the grapes proper, they are locally called Oregon grapes.

ARTHUR C. GRANT, *Armstrong, B.C.*





## The Garden and Lawn.

### CANADIAN WILD-FLOWERS.—II.

In considering our wild flowers, we shall group them according to their families, describing each under the head of the family to which it belongs, commencing with the

#### BUTTERCUP FAMILY.

This is known to botanists as the *Ranunculus* family, and is also called the *Crowfoot* family. It embraces quite a variety of plants, some of which climb by their leaf stalks, some are found in marshy places, others grow in dry, sandy soil, some prefer the shade, and others the open sunshine. We will first describe some of the plants that have given the name to the family, and afterwards some of the other members which will be interesting and pretty for the flower border.

You will find in many meadows a bright yellow flower during the months of June, July and August, that is an immigrant from Europe which has taken too kindly to our soil and climate. It grows from two to three feet high, the leaves are thrice divided, and each division is again parted, not so deeply, but usually into three lobes, which are again irregularly notched and cut, and the leaf stalk (which is called the *petiole*) is furrowed on the upper side and covered with fine, short hairs; leaves are also so covered, and likewise the flower-stalk, which botanists call the *peduncle*. The flowers are borne singly upon a tall, branching stalk, which is leafless except at the base of the branches, the stalk leaves becoming smaller as the stalk grows in length until they are mere bracts, which is the name given to the leafy appendages from the axil of which the flower stalk arises. *Axil* is the angle on the upper side, formed by a branch with the stem from which it springs, or by a leaf-stalk, or, when the leaf has no stalk, by the leaf itself, or by the flower-stalk. When a leaf or flower has no stalk it is said to be *sessile*. Now let us examine the flower. We notice first of all that it is *complete*; by which we mean that it has a *calyx*, a *corolla*, *stamens*, and *pistils*. These four organs are all that any flower has, and when any one of them is wanting we say that such a flower is *incomplete*. The *calyx* is the outer covering of the flower, and is usually green, though not always. The *corolla* is the inner leaf or leaves of the flower, it is very seldom green, but is usually either white or colored of some other color than green. The calyx of this flower consists of five distinct and separate pieces, which are called *sépals*; the corolla of five

separate parts, these are called *pétals*. Within the corolla and next to the *pétals* we find the male organs of fructification, these are called *stamens*. They consist of two parts, the stalk, which is often very slender and thread-like, and is called the *filament*, and the *anther*, which is borne on the top of the filament, and is the organ which produces the fine, powdery substance called *pollen*. Within the *stamens* and surrounded by them are the female organs of fructification, called *pistils*. A pistil is formed of three parts, the bottom part is called the *ovary*, within which the seed is formed; the middle portion, which is usually prolonged and slender, is called the *style*, and upon the top of this style there is usually an enlargement called the *stigma*. Sometimes there is no apparent enlargement, yet the upper part of the style will have the same moist, naked, rough, stigmatic surface as when enlarged. By *naked* is meant that there is no membrane covering the surface, as exists on all the other surfaces of the plant. It is purposely naked and moist in order that the pollen grains falling upon it may stick fast, from each of which a slender tube pushes out, and thus can penetrate without obstruction the stigma and style, and enter the ovary. In this flower there are numerous *stamens*, each having both filament and anther; there are also many *pistils*, of which the ovaries are the most conspicuous part, the other portions seemingly a mere point. The petals are yellow, the interior surface looking as if varnished, *obovate* in form, that is, *inversely oval*, having the narrower end at the bottom.



FIG. 99.—*RANUNCULUS ACRIS* (Fall Buttercup).

It will be important that those readers who are not familiar with the names of the different parts of flowers should carefully familiarize themselves with them as above described, as in future it will be taken for granted that the reader knows what is meant by these terms.

To sum up then what has been said about this plant, we find that it grows to the height of from two to three feet, that it is hairy, the leaves divided into three parts, each of which is again divided into three irregularly cut and notched lobes, that the *petiole* is furrowed on the upper side, while the *peduncle* is not furrowed; the flowers are borne singly on a long, branched stalk at the end of the branches, and have five *sépals* and five *pétals*, numerous *stamens* (they are more than ten), and numerous *pistils*; that the *corolla*

is yellow. The root is fibrous, not bulbous. This is called the Fall Buttercup. Botanists call it *Ranunculus acris*. It will grow in any dry soil, and has become a troublesome weed in many meadows. The juice is so acrid that cattle do not eat it. It is, nevertheless, a pretty flower, though not desirable in the flower garden, especially where it is abundant in the meadows.

450 Markham St., Toronto.

D. W. BEADLE.

### BULB-FORCING.

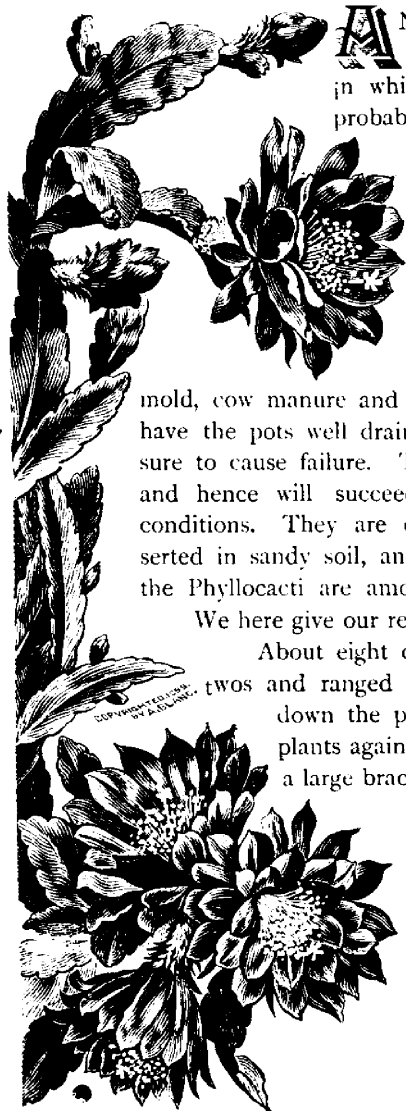


WHEN you pot your bulbs, water them well, then set the pots away in a cool, dark place to allow roots to form. Plant a bulb in spring, and roots and top make simultaneous growth, so that you have weak, unsatisfactory bloom. It is the same when you plant bulbs in pots and put them at once in a warm, light place. If you want good flowers from potted bulbs you must put them away in the dark for at least six weeks to form roots. The cooler the place, provided they do not freeze, the better.

When you bring bulbs to the light, do not put them in a very warm room, or they will make a weak, rapid growth, and very often the buds will blast. If you have a room that is proof against frost adjoining one in which fire is kept, keep your bulbs there. The cooler you can keep the air of the room in which your bulbs bloom, and have it above frost, the longer the flowers will last. If hyacinths show a tendency to develop buds in a little bunch down among the leaves, make a cap of thick brown paper, like a cone, cut off its apex and slip the cone over the pot. The flower-stalk will reach up toward the light coming in through the opening at the top, and in this manner you lengthen it.

In selecting tulips for pot-culture, get single sorts. They bloom better than the double ones, and are really more desirable in all ways. Among hyacinths, too, the single sorts are best. The Roman varieties are favorites of mine. They send up several spikes of bloom, while the ordinary varieties seldom have more than one. Their flowers are arranged more loosely on the stem, and have a less stiff and formal effect. They are delightfully sweet, and come in pink, pale yellow, blue, and white. They are single, and excellent for cutting. Tulips, hyacinths, and daffodils generally bloom in about a month after being brought out into the light. By keeping the pots in the dark the time of flowering can be retarded, so that one can have a succession of bloom. It is not easy to say when the *Harrisii* lily should be brought up in order to have it in bloom at Easter, because the conditions under which it is grown vary so much that advice seldom hits the mark. In a warm room the flowers come on rapidly; in a cool room, slowly. From this you can get an idea that may help you in governing the blooming period somewhat. If the plant seems developing too rapidly, put it in a cooler place; if too slowly, give it more warmth.—ELEN E. REXFORD, in *American Gardening for September*.

## NIGHT-BLOOMING CEREUS.



**A**N interesting account of a social of this kind appears in the *Country Gentleman*, in which, however, the name of the plant is probably a misnomer. *Cereus grandiflorus* is not so commonly grown as a house plant, as a species of night-blooming Phyllocactus, which is also commonly known as Night Blooming Cereus. The Phyllocacti are easy culture and very profuse in flowers, which are of exquisite beauty. The best soil for them is a light sandy loam, but to which is added one-third of

mold, cow manure and sand, all well mixed. It is important to have the pots well drained; stagnation of water about the roots is sure to cause failure. They are not fastidious about temperature, and hence will succeed well in the window under ordinary conditions. They are easily propagated from fleshy cuttings inserted in sandy soil, and kept dry for about a week. Altogether the Phyllocacti are among the most satisfactory of house plants.

We here give our readers the clipping referred to :

About eight o'clock the guests dropped in by ones and twos and ranged themselves in a semi-circle of chairs up and down the parlor, at the end of which stood two cereus plants against a black draped background. At the left a large bracket lamp, artistically shaded, supplied them with both heat and light. The plant stems were covered with long, narrow pendant leaves, somewhat resembling in shape tobacco leaves when first hung up to dry. From very near the extremities of some of the leaves pendulous stems depended, and upon these, when the first guest arrived, were sharp, conical-pointed buds which were partially unfolded before the last couple dropped in. The old saying that a plant grows

so fast that one can see it grow, was here actually verified. The guests watched, with curious eyes, the large, white petals as they gradually unfolded, revealing a pendulous star-shaped centre, so intricate, so delicate and nebulous that art must have stood appalled before it. About the middle of the evening

refreshments were served, and in the buzz of conversation which ensued, some one asked the hostess how long the flowers would last.

"Until midnight," was the reply. "If left on the plant until morning, they would be the most wretched looking objects you ever laid eyes on."

When these snowy, majestic flowers were fully opened, they were as beautiful a sight, of the kind, as one would care to look upon. Considering the great size of these flowers, the wondrous delicacy and beauty of their construction is the most startling thing about them. It is much like being brought suddenly face to face with a botanical impossibility. When the guests arose to depart, the hostess detached the flowers from their stems and sent them to friends who were unable to be present.

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FLOWERING BULBS FOR THE WINDOW.—The same journal says that it is a very easy matter to prepare hyacinths, tulips, crocuses, freesia, and other bulbs for winter blooming, and that failure is hardly possible if any kind of attention is given to their wants. One hyacinth bulb should be placed in a four-inch pot, three tulips, and a half-a-dozen each of crocuses and freesias may go in the same sized pot. They should be potted with rich soil, and the hyacinths set only about one-half their depth in the earth. They should first be well watered and then set in a dark, cool place, where they may be left about six weeks in order to become well rooted. At intervals of several weeks they may be brought out and by this means a succession of flowers may be had during the whole winter. As the bulbs swell, an occasional watering with a weak manure water will result in more perfect flowers.

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SALT AS A FERTILIZER.—It is not known by chemists how salt acts as a fertilizer, but the opinion is that salt has the power to liberate ammonia from the soils that have been manured with nitrogenous manures. This is the case in sandy soils, where the ammonia exists in fertile combinations. The salt acts upon the ammoniacal salts by forming soda in the soil, and chloride of ammonia, which passes into solution, and then becomes an active fertilizer. It is known that on poor land devoid of humus and ammonia it acts as a very indifferent manure, while on rich lands, where ammonia has been stored up in clay or humus, it acts well by eliminating the ammonia and placing it in combination suitable as soluble plant food. Salt is also beneficial on soils as fertilizer by aiding in rendering insoluble potash and phosphate soluble, which dissolves the bone phosphate and renders it into soluble phosphate of lime. Salt is a beneficial solvent when added to the manure heap by drawing moisture, and keeping down the fermenting heat in the nitrogenous manure, and making it more soluble and better decomposed as plant food when applied to the soil and crop.

## THE CULTURE OF ROSES.



As we all wish the finest roses, it must not be forgotten that if you want roses they must be in the richest part of your rich bed. You cannot give roses too much rich feeding, and you cannot keep them too clean. They must be thoroughly watered, and the plants syringed with whale oil soap dissolved in lukewarm water once a week at first, and later once a month, if there are no bugs. Instantly when you see a single bug, those small green parasites, thoroughly syringe with whale oil soap. Water once a week with a watering-pot full of lukewarm water, in which a table-spoonful of nitrate of soda has been dissolved. This can be bought in crude form at any druggist's at ten cents a pound. This enriches the plant and improves the flowers. Let no rose remain on the plant when it is full blown. It exhausts the plant very much.

If your climate is mild you may have a wide choice of roses. If a New England climate, do not waste your time on many roses except hybrid remontants. They will winter usually with some protection and they give lavish bloom, and the robust growth of the plant, with its solid leaves, is to my mind handsomer than any other rose but a few teas. It is well to have some teas for perpetual blooming and the beauty of the flowers, but they must be taken into the house in winter.

The Sombreuil is a very floriferous tea rose of a charming subtle creamy tone. But no rose of any class seems to me so fine as a successful Souvenir de Malmaison. It is a tea rose, but its leaf and stalk have a vigor of a remontant. The great dark green leaves have no rival among all the rose plants, and the flower is large, most exquisite in form, and in color a pure silvery flesh tone, with a blush of rose in the centre. The Bon Silene is very floriferous, and the full open rose is as beautiful as the bud, though of all teas it is supposed to be most valuable for its buds.

The Duchess de Brabant is a charming tea rose, of a delicate shell pink. It grows luxuriously, and if housed in winter can be grown to a fine size, and lends itself easily to being made into a "standard rose" a form of rose the French delight in, and which is the handsomest artificial form that a rose can be trained into. It has great style. The method is to cut away all but the strongest shoots of the tree after the tree is pretty well grown, and then all the strength goes into that one stem, and it grows very large, and straight and tall, no side branching allowed upon it. The foliage at the top of the one stem grows very thick, and it is trained into a shapely mass that bears many roses. The hardy remontants can be excellently used for this form of rose.

I will give the names of a few hard remontants which I have seen successful: The Marshall P. Wilder, which is of a superb red; the Marquise Cast-

illane, which bears a very large rose of a magnificent deep pink ; the Anna de Diesbach which is of a beautiful pink, and very large and very fragrant ; the Abel Grand, very floriferous, and of which the bud is most shapely ; the Silver Queen, which is a blush rose of great beauty ; and I might have said first of all, the Mabel Morrison, a white with a pink blush ; the General Jacqueminot, dark and fragrant ; the beautiful Baroness Rothschild, a full shell pink in color, absolutely perfect in form and the most decorative rose. It has one fault—it has no perfume. But do not let this deter you. Place a Jacqueminot next to it and you will miss nothing. The Marguerite de St. Armand is a lovely rose ; the Dinsmore is not so beautiful in form, but covered with bloom from end to end of the season. One delicious sweetbriar must be among your roses. Mix other flowers with your roses. They are finer so in a garden than alone.

Roses, like poppies and marigolds, need sun. Set your roses out in the autumn only if your winter is mild. If you have a severe winter climate start them in the spring. Then they will get firmly established by the autumn, and winter more safely.

They must be "laid down" as late as possible—that is, gently bent to the ground and fastened so by means of twigs put over them like little arches, the ends of the twigs firmly stuck in the ground : then, according to the severity of the winter, cover them with straw, leaves, litter, cloths, lightly or heavily, as the winter may demand. A snowless winter is their greatest enemy.—Harper's Bazar.


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#### HOW TO LAY OUT THE FARM GARDEN.

A correspondent of the *Practical Farmer* says : "Make your garden long and narrow. Build your fences along the sides of good material and set them solid. Make the fence at the ends movable and support it with the common A brace instead of posts. The panels should be light and strong. Lath crossed like lattice work and nailed to two pine boards four inches wide and twelve feet long will make it. When the garden is to be manured, plowed or cultivated move the end panels out of the way and drive straight through. Plow deep, harrow fine and smooth with a broad plank. Do the job thoroughly and you will have a seed-bed good enough for anything, and the soil will be easy to cultivate the whole season. Set a row of currants and gooseberries close along the inside of the south fence (we are presuming the garden lies the longest way east and west), and a row of Blackcap raspberries along the north fence. Four feet from the raspberries set a row of asparagus ; four feet from this two rows of strawberries, three feet apart ; then plant your radishes, lettuce, peas, beans, beets, etc,—everything except corn and potatoes—in rows far enough apart to admit your steadiest horse and narrowest cultivator. But little hoeing will be required, and in one season you will be convinced that you can garden as easily as farm. The fruit and vegetables will lessen the cost of living fully a third. Your doctor bills will decrease, your health increase, and as the years pass you will wonder how you ever got along without a good garden."

## ❖ Forestry. ❖

### THE WEYMOUTH, OR WHITE PINE, FOR POOR LANDS.

IMBER of every kind is now becoming very scarce in Canada, but especially is this the case in regard to White pine. It being the most generally useful kind of timber, the demand for it abroad has been so continuously supplied, that it is now only a matter of a few years' time when our country will be almost without it, and already it has become a matter of serious consideration. Iron is now used for many purposes for which formerly only wood was used, but the coldness of iron, aside from contraction and expansion, seems to preclude the probability of its ever being well suited for the building of dwelling houses, or even farm buildings for the comfort of live stock.

There is, throughout the country, many thousands of acres of impoverished land, producing little, if any, value. If those lands were planted with White pine, they would, in course of time, become more valuable than much of the land which is now cultivated for agricultural crops. There is scarcely any land so poor that White pine will not thrive on it.

From no kind of tree has there been so much value in timber and lumber obtained in Canada, which fact evidently shows its adaptability to this climate and country. No kind of tree produces useful timber on poor land in so short a time.

The Scotch pine, Austrian pine, European larch, and Norway spruce are all fairly well adapted for producing timber rapidly on poor land, but planted side by side with the White pine they are excelled in every instance.

I can point to mixed plantations where White pine trees have grown to be fifty feet high in twenty-two years, and every tree straight as a mast. This growth has been attained on poor land without any cultivation whatever, beyond thinning out as the trees grew large, and clearing away decaying under-branches.

Ten feet apart, an acre contains about four hundred trees. No other kind of forest tree does so well growing so closely. There are but few farms on which there are not some poor spots yielding nothing but weeds. If these lands were planted with White pine, and protected for a few years, they would, in course of time, become the most valuable lands on the estate.

*Cataraqui, Ont.*

D. NICHOL.

The best time to sow lawn-grass seed is early in spring. Preparations can be made in fall, and if seed is sown on a frozen surface in March, such a thing as the seeds failing to germinate is almost impossible. April sowings, even, are sure of enough spring rains to almost wholly remove any risk of failure.



## ✧ The Apiary ✧

### THE BEST TIME TO BEGIN BEE-KEEPING—SPRING OR FALL, AND THE NUMBER OF HIVES THE BEGINNER SHOULD UNDERTAKE AT FIRST.



THE best time for a beginner to get his first bees is in spring, say about the 25th of May, after all danger of loss from wintering and spring dwindling is past. But, if the subject is entirely new to him, the beginner will require some mental preparation, which, perhaps, he had better commence in the long evenings of the previous fall. He should read all the works on bee culture within his reach. The study of several authors is advised, because when a student has to get up the natural history, the anatomy, and the physiology of the honey bee without the aid of such teachers as Prof. Cook, of Lansing, Mich., or Prof. Clarke, of Guelph, Ont., he will get a better knowledge of these subjects by comparing the teachings of different authors on the same points. For instance it would be difficult to find anything better on the natural history of the honey bee than the first 40 pages of Dziertzan's Rational Bee-Keeping; but when the student has read, in addition to this, the first 100 pages of Langstroth on the Honey Bee, revised by Dadant, and the first 140 pages of Cook's Manual of the Apiary, he will feel that he has a better grip of the subject than he could possibly get by confining his studies to either one of these authors. If the beginner has, by this time, become deeply interested, and desires to study the scientific part of the subject still further, Cowan's Honey Bee, and Cheshire's Bees and Bee-Keeping, Vol. I. will probably keep him busy till spring. Two chapters in the latter work, entitled Bees and Flowers Mutually Complimentary, and Bees as Fertilizers, Florists and Fruit Producers, are very instructive and exceedingly interesting to horticulturists as well as bee-keepers. While engaged in the study of those authors, the student may get a few bees for examination from some neighbor. If he has a good magnifying glass, or, better still, a good microscope, much important information may be gathered by examining the various parts of the bee.

Two or three stocks are quite sufficient to commence with. The bees should be of a quiet strain of Italians, and they should be in movable frame hives; the Langstroth is as good as any. The beginner should provide himself with a bee veil and a smoker. If his motions are slow and deliberate, as they always should be when working about his hives, gloves are unnecessary. But by all means let the beginner provide himself with an observatory hive. About the middle of June he may go to one of his hives and remove a brood comb, with the queen and adhering bees, and place it in a hive having glass sides, through which all the operations of the bees may be readily seen. This hive may be placed in a window in the living-room of the dwelling. A passage may be made for the bees by raising the sash, and placing beneath it a piece of wood through which

a tube may be carried to the observatory hive. With such a hive the unloading of honey and pollen in the cells, the egg laying of the queen, the time required for the hatching of the egg, the nursing of the larvæ, the time of sealing the brood cells, and the time at which the mature insect emerges, may all be clearly observed, as well as many other operations of the hive, which are important to be known, whether beekeeping be followed for pleasure or for profit.

The subsequent course of the beginner will depend to some extent upon whether his object is the dollars and cents to be derived from the business, or to have a hobby. Even the latter may be profitable financially. I know of a business man, in failing health, who said recently to a friend that he would give \$1,000 per year for a hobby which would divert his mind from business matters. There is nothing such a person could take up that would take him out as much into the open air and sunshine, and which would be as likely to secure the object desired, as beekeeping. Dr. Dziertzon says, "Whoever has once experienced the pleasure to be derived from the study and culture of bees will, I am convinced, spend every leisure hour in his apiary." The experience of several others confirms this opinion.

I am aware it may be said that a beginner may learn the business by getting the bees first, and making experiments and observations as he goes on. True, but life is too short to commence *de novo*, and overtake in this way all the work which has been done by others. Far better for the beginner to inform himself first of what has been accomplished, and if he then feels disposed to pursue original investigations, he will find that there are still unexplored fields sufficient to give scope enough for the exercise of all his abilities during the remainder of his lifetime.

*Lindsay, Ont.*

S. CORNELL.

A TIMELY HINT.—Here is one of Professor L. H. Bailey's practical stories, "I know a man by the name of Bixey, and after he went into the peach business I went to see him. Out behind the packing house he had a large dyke vat, and some men and women were dipping the tops of his baskets into this aniline dye. Everybody soon learned to recognize his fruit by the bright color of his basket tops. So he is making lots of money out of the dyeing business, but he takes care that his fruit is carefully graded and all that is put into such baskets is of the finest quality.—Farm and Vineyard.

OUTDOOR ROSES.—Plant roses in the richest bed you have. You can hardly give them too much decayed vegetable and animal fertilizer, or keep them too clean of weeds and insects. If thoroughly watered just before blooming time, with whale-oil soap dissolved in lukewarm water, insects will give little trouble. Give the plants also, once a week, a pot full of warm water in which a tablespoonful of nitrate of soda has been dissolved. Keep full-blown roses picked off, as they exhaust the plants. Roses may be set in fall in climates having mild winters. Protect them during winter by pegging down and covering them with straw, leaves, evergreen boughs or soil.—S. S. STORY.

## BEES AND GRAPES.



R. MURRAY : On the question of the bees puncturing and destroying grapes, I may state that I have been twenty-five years in the bee business, and that I can keep my bees as near my grapes as I am to these gentlemen here, which is about four feet, and they do not harm the grapes. I have read a great deal on the subject, and watched closely, and I would say that the gentleman

makes in his paper one statement that contradicts his own assertion. He says the bees take the grapes and suck out the juices until there is nothing left but the skin, in which there is a little round hole. It is not the bees but the yellow jackets that make those punctures and cut those little round holes. I have frequently found that to be the case. It is well-known by those who understand this question that the yellow jackets do this. The yellow jacket makes that puncture, and then the bees, after the grape is cracked or punctured, either by the yellow jackets, or in any other way, pitch in for their share of the juices. But that does not occur until after the skin is broken. That is what has given the gentleman the impression that the bees did it. But the fact that that little round hole was left there proves to me that the yellow jackets made it, not the bees.

MR. WILCOX : I believe that it has been well established that the honey bee cannot puncture the skin, or the little film or inner skin that surrounds the grape. This has been demonstrated in our Society by overwhelming evidence.

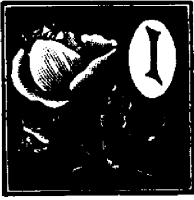
MR. CUTLER : I will state that when the material for honey was very scarce last summer, the bees came and settled in swarms upon my raspberry bushes so thickly that a lady could not go in there and pick the fruit. I know that they punctured the cuticle of the raspberry. They did not touch my grapes, although they were within two rods of my bee hives.

MR. WILCOX : I will state the experiments of Prof. McLean, in which he confined colonies of bees in a glass house and took their food away from them, so as to bring them to a starving condition, and hung bunches of grapes of different varieties around inside the house, and even hung bunches of grapes inside of the hives, and kept them so confined until the bees died of starvation. There was not a single grape injured by them. But as soon as the grape was punctured, even with a needle, so as to penetrate the epidermis, then they went in and cleaned them out entirely. That is the entire basis of these charges against the honey bees. It has been my experience that whenever any bird or insect once punctures the skin of a grape, then the bees take possession and clean out the grape. But they have no biter by which they can penetrate the

skin of a sound grape. This fallacy is one that the bee-keepers of this country have been obliged to fight for years and years, and yet it has many times been proved to be wrong.

MR. HARRIS: I do not believe that the honey bee injures the grape, that is the sound grape.—Minn. Hort. Soc., 1892.

#### NATIVE BEE PLANTS.



IN Michigan there is a very large number of plants which furnish a good quality of honey. If the species is abundant in any region, it usually becomes known to the apiarist as a good bee plant; if not abundant it very likely fails to attract attention. A plant may be rare or important in one region and abundant in another. In autumn, asters and golden rods are known as excellent bee plants, because some few of the many species in the State are plentiful in nearly every neighborhood, but the same sorts of asters or golden rods do not everywhere throughout the State furnish a great amount of honey. As a rule, those plants which produce odorous or showy flowers afford honey and will be visited by honey bees, unless the flower is of a shape which makes it impossible for the bee to reach the food. Probably in the State there are of native plants, introduced weeds and field crops, a thousand species which furnish excellent food for bees. This is nearly one hundred times as many as the bee-keeper has in mind, unless he has given unusual attention to the subject. Our open, low lands furnish a large proportion of the bee pasture; the forests some; the weeds and some of the field, garden, and orchard crops a fair amount. Extremely dry, or very wet weather, are both unfavorable to the yield of honey. Drainage of the swamps and the clearing of waste places are unfavorable to the interests of the bee-keeper. As the botanist now looks at the subject, colors and odors are mere advertisements to call the attention of insects to the rich supplies of food in store for them. It may be said that the honey is there for the bees, but primarily it is there for the good of the plant, secondarily for the good of the insect. Had good old Dr. Watts lived in our day, he would have, no doubt, written his familiar verse in this way:

How doth the little busy bee  
 Improve each shining hour?  
 By carrying pollen day by day  
 To fertilize each flower.

—*Michigan Flora.*

STAKES and similar requisites gather up carefully, and store in a safe place for another season.—*American Gardening.*



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.

CROSBY PEACH.—Mr. E. McArdle, who has a large peach orchard in the vicinity of St. Catharines, writes us as follows, concerning our plate of the Crosby peach. He says: "I notice that one of your correspondents has taken exception to the plate of the Crosby peach. I myself think it is overdrawn; but I got some of them as samples from Mr. W. D. Hines, Townsend, Mass., this season, which were larger than those mentioned by your correspondent, though not so large as Crawford. They were a very attractive peach in color, and, if they are as they are claimed to be, the variety is a valuable one."

FARMERS' INSTITUTE WORK.—We notice in the reports of the Sheep Breeders' and Swine Breeders' Association, that it is considered somewhat of a grievance that they have not a special representative speaking at Farmers' Institutes, as well as the Fruit Growers' Association. Certainly, we, as fruit growers, have no idea of standing in the way of our brethren in other occupations. If farmers can do better raising swine and sheep than fruit, we have no object in persuading them to engage in fruit growing. Indeed, it would be rather in the personal interest of the fruit growers to lessen, rather than extend, the acreage of land devoted to fruit in our province; because, in this way, there would be less competition in our markets for the sale of our fruit.

ACREAGE DEVOTED TO THE VARIOUS KINDS OF FRUIT.—The Annual Report of the Bureau of Industries does not give sufficient attention to the fruit growing industry. Very careful estimates are given of the area of produce of wheat, barley, corn, potatoes, etc., but when you come to the department of fruit growing, we find simply a list of the acres in the various counties devoted to the orchard and garden; but no specific account of the number of acres devoted

to the apple, pear, peach, plum, grape or any other of the fruits. It would help us in our work, as an Association, and make this report of value to many more of us, if careful inquiries were made under the head indicated and the results published in their annual reports. Surely the products of the orchard and garden are of just as much importance to our country as any of those of the field.

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THE STANDARD APPLE BARREL.—Since our last issue we have secured, through the kindness of Wm. White, of Ottawa, the following extract from the Revised Statutes of the Dominion :

“18.—1. All apples packed in Canada for sale by the barrel, shall be packed in good and strong barrels of seasoned wood made as nearly cylindrical as may be ; the staves of such barrels shall be twenty-seven inches in length from croe to croe, with heads from sixteen and one-half to seventeen inches in diameter; and such barrels shall be sufficiently hooped, with a lining hoop within the chimes, the whole well secured by nails.

“2. Every person who offers or exposes apples for sale by the barrel, otherwise than in accordance with the foregoing provisions of this section, shall be liable to a penalty of twenty-five cents for each barrel of apples so offered or exposed for sale. 48-49 V., c 16, s. 18.”

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NEW YORK STATE is waking up to the importance of making a good exhibition of fruit at the Chicago Exposition. Mr. G. T. Powell has been chosen superintendent. He proposes, as an exhibition of fresh fruits in their season, 200 varieties of strawberries, 50 of raspberries, 25 of blackberries, 25 of currants, 25 of gooseberries, 75 of cherries, 150 of peaches, and 250 each of apples, pears and grapes. In addition to this, he is ordering from an expert German artist about one thousand wax models of each of the natural fruits which are supposed to be the exact copies of the originals grown in New York State. These will be very beautiful. In our opinion, however, wax models are inferior to the real thing every time, for people will constantly question whether anything in nature could equal the waxen copies. We believe when our own collection of fruit in glass jars, under Mr. Pettit's charge, is shown, it will gain us more credit than a collection of wax ones, and the expense will probably be much less.

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EXPERIMENTS IN HORTICULTURE.—Mr. John Craig's evidence for 1892, as the Dominion Horticulturist, before a select committee of the House, contains a *resumé* of horticultural progress up to the present time. After speaking of the work of propagating nursery stock and protection against mice, he refers to unleached wood ashes as one of the best and cheapest fertilizers for the orchard. A bushel contains three pounds of potash, one of phosphoric acid, besides lime, magnesia, etc. He cautions against using Paris green with any combination containing ammonia undiluted, because the arsenic is thereby dissolved and

becomes injurious to the foliage. The difficulty is avoided, however, by adding Paris green after the mixture has been fully diluted with water.

Ammoniacal copper carbonate and dilute Bordeaux mixture are spoken of as the leading fungicides for apple and pear scab and grape mildew. The spores of the mildew remains over winter on the dead leaves and on the bud scales of the young twigs of the trees and on the fruit, in fact, on any resting place. They are easily distributed by the wind, and other agencies, after the growth begins in the spring. This explains why it is important to apply a strong copper mixture to the trees and vines of our orchards before the foliage appears in the spring.

McMahon's White apple is very highly spoken of as a very hardy and profitable variety. In Milwaukee it brings the highest price of any apple of its season. It is an early winter apple.

Some experiments with potassium sulphide for gooseberry mildew, in the proportion of an ounce to three gallons of water, was successful. The spraying was repeated frequently, about once a week, until the fruit was formed. Even the English gooseberries were kept free from mildew by this method. The result of this experiment is of great importance to us, for, hitherto, the only reason why Canadians have not succeeded with the fine English gooseberries has been the exceedingly destructive fungus, the gooseberry mildew, which attacks those varieties with great severity.

Mr. Craig's evidence occupies 27 pages, and contains much else that is of interest.

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THE BROOK.—While the whole literary world mourns the loss of Lord Tennyson, England's poet laureate, it will not be out of place for us to note that he was an appreciative observer of country life, its flower gardens and lawns and forests. How beautifully he gives expression to his love of such scenes in this delightful poem, the rhythm of which is as musical as the rippling brook itself:

I chatter over stony ways  
 In little sharps and trebles;  
 I bubble into eddying bays,  
 I babble on the pebbles.

With many a curve my banks I fret  
 By many a field and fallow,  
 And many a fairy for land set  
 With willow-weed and mallow.

I chatter, chatter, as I flow  
 To join the brimming river.  
 For men may come and men may go,  
 But I go on forever.

I steal by lawns and grassy plots,  
 I slide by hazel covers ;  
 I move the sweet forget-me-nots,  
 That grow for happy lovers.

I slip, I slide, I gloom, I glance,  
 Among my skimming swallows ;  
 I make the netted sunbeam dance  
 Against my sandy shallows.

I murmur under moon and stars  
 In brambly wildernesses ;  
 I linger by my shingly bars ;  
 I loiter round my cresses.

And out again I curve and flow  
 To join the brimming river,  
 For men may come and men may go  
 But I go on forever.

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## ↪ Question Drawer. ↩

### THE WOOLLY APHIS AND THE SCAB.

**501** —SIR,—Many of my peach trees have mildewed leaves on the ends of the branches. Can you explain? My apple trees have woolly aphis on them. What is the most simple and best remedy? I have used this year a solution of sulphate of copper and lime for spraying my Winter Nelis pear trees for scab, and found them remarkably free from it. I understand that this preparation is recommended, for not only the scab, but for the mildew in the grape and the fungus diseases of the potato. Has anyone tried it for the peach leaf curl which I understand to be a fungus growth? If not, would you advise using it for that purpose.

H. COTTLE, *Salem, Oregon.*

We could not explain the cause of the mildew leaves of the peach trees without seeing them.

The woolly aphis is easily destroyed by spraying with *kerosene emulsion*. It may be made thus—one quart of soft soap, or one-quarter of a pound of hard soap, two quarts hot soft water and one pint of kerosene. The kerosene is best added when the soap suds are boiling, for then it will easily emulsify, if stirred briskly. When needed for use, dilute with water to one-half or one-third the strength.

A *kerosene and milk emulsion* is also commended for destroying plant lice. It is made thus :—Sour milk one gallon, kerosene two gallons, warm to blood heat and mix thoroughly. Dilute with ten times the quantity of water.



Our correspondent was wise in using sulphate of copper and lime, or Bordeaux mixture, for the scab. It is very effective, and this, or some similar solution of copper, seems to be the hope of future apple and pear growing for profit.

The mildew of the grape and the rot of the potato are also effectually checked by its use. But in all cases the work needs to begin in good time, before the disease has developed, as the application is more preventive than remedial.

The *Bordeaux Mixture* is thus formed :—Dissolve six pounds of sulphate of copper in sixteen gallons of water; in another vessel slack four pounds of fresh lime in six gallons of water. When the latter mixture is cool, it is slowly poured into the copper solution, care being taken to mix thoroughly by constant stirring. Prepare some days before using. Stir before applying. This is somewhat expensive, when a large amount is required, and it is thought by experimenters that one-half the strength will be quite effectual.

Spraying the trees and vineyard in winter or early spring with sulphate of copper, one pound to twenty-five gallons of water, is also useful, because the spores must live through the winter on the old wood, and may at this season be destroyed by such a powerful solution as could not be safely used when the foliage is out. We could not say whether the Bordeaux mixture would be useful in the case of the curl leaf of the peach. The foliage is very tender and these poisons must be applied to it very cautiously.

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### PARIS GREEN AND THE CODLING MOTH.

**502.**—SIR—Is Paris green anything like a check upon the codling moth? Do you find that lime mixed with Paris green lessens its effect? I have found Paris green no use, seven teaspoonfuls to forty gallons of water, lime *ad. lib.*

W. T. PAYNE, *Pokeno, New Zealand.*

In our experience we have found that a careful application of Paris green is very useful in checking the working of the codling moth. Applied in a fine spray, in the strength of one pound to two hundred gallons of water, it will result in fruit comparatively free from injury by either the codling moth, or the curculio. Possibly a weaker solution might suffice. Anyway care must be taken to keep the poison thoroughly stirred, or it will settle at the bottom and the dregs of the barrel will be destructive to the foliage of the trees.

Lime lessens the evil effects of Paris green upon the foliage, and probably also upon the moth, although we have not proved this. Certain it is that a much larger quantity of poison may be used if lime is added.

Probably our correspondent used too little Paris green considering the amount of lime used.

## EXPERIMENT WITH CAUSTIC POTASH.

**503.**—SIR,—I have an orchard of 2,500 plum trees, 500 apple and 200 peach trees. Last May I sprayed the major part of this orchard with caustic potash, diluted to about the proportions of one pound to two gallons of water. The buds had swollen to cup-like forms, but the green edge of the leaf had not appeared. I used a brass pump. The application was sufficient to deeply darken the bark, remaining for several weeks. My object was to destroy the germinal quality of insect eggs, cleanse the bark, and possibly destroy fungous spores incidental to the trees, which may have just lodged. I know the immediate value of potash applied in a soluble form, and the annual need. The ashes of a plum showed 75 per cent. of potash. This season, by accurate observation, my plums and apples, where the potash was so used on the buds, are pronounced one-eighth larger than previous years. I am perplexed as to the cause of this larger fruit. Each cup-like bud was capable of holding one or more drops of the showered potash, and the hundreds of thousands of buds would hold an appreciable quantity, and timely developed larger leaves and stronger fruit blossoms. The absorption by the bark would be influential in the same direction. Kindly favor me with reliable data gathered at Maplehurst along this line of experiment.

W. C. ARCHIBALD, *Earncliffe Gardens, Wolfville, N. S.*

The experiment made by Mr. Archibald is worthy of notice, and we would direct the attention of our experiment stations to the excellent results which he obtained. We have never tried caustic potash in this way. The only use we have made of it has been in a weaker solution applied to the trunks and branches of trees to destroy the oyster shell bark louse. Most experimenters have been endeavoring to destroy fungi with solutions of sulphate of copper, one pound to twenty-five gallons of water being recommended for scab and mildew, applied before the foliage appears, and the Bordeaux mixture after. Possibly a strong solution of caustic potash will be as serviceable, for we can only account for the clean, large fruit resulting, except by the destruction of minute fungi and insects which weaken the growth of the trees, and bring about the production of small sized fruit.

## RASPBERRY GROWING FOR HOME USE.

**504.**—SIR,—I want to set out next spring two hundred raspberry bushes. What varieties, and in what proportion would you advise. The ground slopes to the west, is sheltered on the east and south by a cedar hedge and is clay. I want them for home use, not for shipping.

F. G. TREMAYNE, *Sutton West, Ont.*

Of red raspberries we would recommend Tumer and Cuthbert, and for white, the Golden Queen. If sufficiently hardy, or if winter protection can be given, we would recommend Brinckle's Orange, on account of its superior excellency of quality. A fine red raspberry, surpassing either of the above-named in flavor, was sent us by Mr. Gibbard, of Napanee, some time ago. The bushes are fairly productive and seem quite hardy. We have called it Gibbard's Seedling. Of the black caps for family use, we would recommend Souhegan and Hillborn. For canning purposes the Shaffer raspberry is the most desirable of all, and should have a place in every home garden.

## PRUNING RASPBERRIES.

**505.**—SIR,—How high should Shaffer's Colossal raspberry be trained? Is four feet too low?

F. TREMAYNE, *Sutton West.*

If fall or spring pruning is meant, the operator must be governed by the strength of the wood growth, simply cutting off the weaker portions having the least vigorous buds, and no rule could be given. If summer pruning is meant, three feet is none too low, for if the canes grow too high before branching, they will become top-heavy and bend over to the ground, soiling the fruit, and interfering with cultivation.

## HOW TO INTRODUCE NEW FRUITS.

**506.**—SIR,—Would you please inform me through the Journal, the best way to have a valuable winter seedling apple introduced. Had my whole orchard been of this variety, the orchard this season would have netted me \$1000 more than it has done. It is a beautiful color, always free of scab and will keep until May or June. It is an annual bearer, every alternate year it is a sight to behold. I have frequently propped up the limbs to keep them from being broken. I planted my orchard eighteen years ago, and this variety has been a thrifty grower, and began bearing as early as the Duchess of Oldenburg.

S. C. WAIT, *St. George, Ont.*

The best way to introduce new fruits is to send samples to the meeting of the Ontario Fruit Growers' Association, and also to the horticulturist at the Experimental Farm, and, in addition to this scions should be sent to the latter place to have the variety thoroughly tested. If you get a favorable report from the Fruit Growers' Association and from the Experimental Farm, you will no doubt be able to dispose of the right of propagation to some nurseryman.

## GROWING PEPPERMINT.

**507.**—SIR,—Could you, through your valuable Journal, let me know something with reference to the planting, cultivation and marketing of peppermint? Also the varieties likely to give the best returns, in a district about thirty miles north of Toronto.

WESLEY JACKSON, *Cannington, Ont.*

We have had no experience in growing mint for market and do not know of any one in Ontario who has had. There are three species of the mint family, all hardy, which are cultivated in gardens for the use of their tops or leaves in sauces or for other culinary purposes, viz.: Pennyroyal (*M. Pulegium*); Peppermint (*M. piperita*); and Spearmint (*M. viridis*).

Pennyroyal is least used. It is easily propagated by the division of the roots and succeeds best in a moist, loamy soil. It may be planted six inches apart, in rows one foot apart.

Peppermint is grown chiefly for the use of its tops for distillation in order to obtain that valuable cordial which is so well-known. The roots are divided

and planted in shallow trenches about nine inches apart and about two inches deep. Cuttings may also be made in the summer. A moist situation is preferable for peppermint, but it will succeed in almost any soil. The tops are cut off just as they are coming into flower and distilled as soon afterwards as possible. The beds should be top-dressed with a good soil.

Spearmint is most largely in request, particularly in the spring and early summer. It is wise to have a good stock, in order that a portion may be available for forcing. Otherwise the propagation and cultivation are the same as for peppermint. A portion of the tops should be cut when coming into flower and hung up to dry. Green leaves are preferable to dry ones, and forcing is easy, the only preparation being the insertion of a quantity of roots in a box of soil placed in a temperature of sixty degrees and kept watered.

We are indebted to the "Nicholson's Dictionary of Gardening" for most of the above points.

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#### FOWL MANURE FOR PLANTS.

**508.** SIR,—Will you say in your next issue, whether fowl manure leached will answer all the purposes of a fertilizer for plants in pots? And if the manure should be left to ferment before being leached, should the liquid be diluted before being applied to the plants?

STEARNE TIGHE, *Amherst Island, Ont.*

*Reply by N. Robertson, Superintendent Government Grounds, Ottawa.*

Fowl manure will answer as a fertilizer for plants in pots, but there are many things preferable. It can be used either after fermentation or before. The former method I should prefer for various reasons. If it is not diluted and made very weak much damage may be done by its use. I would advise its use only on what is called soft-wooded material.

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#### WHAT PAYS BEST?

**509.** SIR,—I intend to begin fruit growing, and would like to know what to plant that would give me the best returns in the shortest time?

S. K. MERCER, *Burnhamthorpe.*

There is no doubt that small fruits give the quickest returns. Indeed, take it year by year, they probably yield more money, acre by acre, than the larger fruits. Of course, proportionately more time and labor is required in their cultivation. It would be difficult to advise our correspondent with regard to which fruits pay best. They are all profitable, providing a good market for each is at hand, and upon this everything must hinge.

## PROFITABLE APPLES.

**510.** SIR,—I have a few trees, such as Greening, Blenheim Orange, and Wagner, that ought to be grafted. What kinds would be the most profitable?

S. K. MERCER, *Burnhamthorpe.*

We would recommend our correspondent to try Duchess and Gravenstein for summer and fall apples, and Wealthy, LaRue and Ontario for winter apples. They are large and profitable kinds.

## GRADING APPLES.

**511.** SIR,—I saw an article in your paper on the proper method of grading apples, which I do not understand. If I had to grade them up to that size, I would not have one barrel out of four or five from a tree, fit for shipping. Suppose an apple would measure 3½ or 4 inches across, how much smaller would go in for first class?

S. K. MERCER, *Burnhamthorpe.*

Our correspondent does not quite understand the object in publishing the scale of sizes. It was simply for use in describing fruit. There is so much confusion in describing apples, some writers differing very much from others in what they mean by large or small.

## INSECTS ON CELERY.

**512.** SIR,—I have a quantity of fine celery and am much troubled with "snails and elaters." Is there anything I can do to drive them away? The soil is black muck and grows celery finely.

Geo. C. BASCOM, *Galt.*

*Reply by Prof. James Fletcher, Entomologist, Central Experimental Farm, Ottawa, Ont.*

I wish your correspondent had sent you specimens of what he called "snails and elaters." His snails, I opine, are slugs, and with regard to elaters, is it the grubs (wire worms) or the perfect beetle, to which he refers? I imagine that by this time the celery is being dug, and what is wanted is a remedy for next year. For slugs, frequent dressings with freshly slacked lime, sown broadcast over the beds at night time, have proved the best remedy. For wire worms we have no satisfactory remedy. Prof. Comstock, of Cornell University, after careful study has only been able to prove that many of the reputed remedies were useless, such as sowing salt and the cultivation of buckwheat and other crops. Plowing as late in the fall as possible is considered useful, also the destruction of the insects by poisoned baits spread over the infested ground.

## ONE JUDGE SYSTEM.

**513.** SIR,—In question budget (No. 9) some one asks, "Is the one-judge system at fairs an advantage over having three judges?" I do not think it is. Of course, there is an advantage in having only one judge to pay instead of three, but, as an exhibitor, I am a sufferer. At our fair I exhibited a peck of potato onions, as beautiful a sample as was ever seen. We had only one judge, and he did not give me a prize. He declared they were not potato onions. Had there been three judges, no doubt I would have had my right. Such ignorance does societies great harm.

THOS. HALLOWAY, *Clinton, Ont.*

It is quite possible for three judges to make mistakes as well as one. The great point is to secure competent men, and surely such can only be secured by liberal reward. Were the money paid to three judges given to one, an expert could be secured, in whose judgment the public would have confidence. This would surely be better than three judges, none of whom were experts. If the one judge is not an expert, it would be far better to have three.

## BLACKBERRY LEAF BLIGHT.

**514.** SIR,—Many of my Kittatinny blackberry leaves are turning yellowish as with rust. I enclose samples, can you tell me what to do with them?

WM. McMURRAY, *The Rectory, Niagara.*

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

I have submitted the leaves to Prof. Halstead and he has decided that the leaves are attacked by the fungus disease *Septoria rubi*, West, which is of the common leaf spots of the *Rubus* family. It resembles very much the Strawberry Leaf Blight, *Sphærella fragariæ*, which is figured in a paper on "Some Problems in Horticulture" read by our editor before the Hamilton Association. This disease will probably yield without difficulty to the treatment of the Bordeaux mixture. Your correspondent is correct in stating that the disease is injurious to the blackberry plants.

## LOCATION FOR GROWING FRUIT.

**515.** SIR,—Do you think the sand in Pelham, or the soil about Grimsby best for grapes and small fruits? What ought fifteen acres of good soil and orchard, or small fruit, without any waste, to be worth, first, clear and under cultivation, and second, with fruit? I am offered fifteen acres or. sandy soil, cleared, for \$1,500. It has no buildings.

W. A. CLAPTON, *Fenwick, Ont.*

Questions like these can only be answered approximately, there is so much to consider which cannot be put on paper. In some sections of country land is worth more without an apple orchard than with it, because good markets are so inaccessible that there is no opportunity of selling the surplus. Generally

speaking, where markets are accessible, land is increased in value two or three times by being set with good varieties of fruit and properly cared for. Such land as is described, can seldom be purchased at less than \$100 an acre, and our subscriber appears to have a good offer under consideration.

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### BOOK ON NURSERY WORK.

**516.** SIR,—Is there any work on hybridizing, budding, grafting, etc. ?

A. C. CHAPMAN, *Frankford, Ont.*

The most useful books for the amateur on these subjects is Thomas' *American Fruit Culturist*. Bailey's *Nursery Book*, also give pretty full directions on nursery. Both of these books are advertised in this journal.

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### GOOSEBERRY LEAF SPOT.

**517.** SIR,—Will you kindly tell me in next month's HORTICULTURIST why the leaves of my red currants dry up and all fall off; at this time they are all bare and are now starting to put out new leaves, they are mixed alternate with black currants, five feet apart, and get same attention as black, yet the black are looking splendid and doing well, while red are not making any growth, and looking like winter, all bare. I have enclosed a leaf. Kindly give me what you think reason and remedy for same, and you will greatly oblige.

HERBERT BUGH, *Whonnock, B. C.*

*Reply by Prof. Fletcher.*

The red currant leaves, from our correspondent at Whonnock, B. C., are attacked by the common disease *septoria ribis*, the gooseberry leaf spot. This disease is prevalent through Canada. An interesting observation has been made this summer by Mr. Craig, that upon some gooseberry bushes which were protected against the mildew by the carbonate of copper treatment, the *septoria* upon the leaves was about as abundant as on the untreated leaves. It is questionable whether spraying bushes for this trouble would pay for the material and the labor. The injury does not show itself here until August, and very frequently a second crop of leaves produced. I shall try some experiments next year upon this disease, with Bordeaux mixture, as this annual defoliation must have a very weakening effect upon the trees.

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### GOLDEN-LEAVED ELDER.

**518.** SIR,—I send you sample berries of the Golden Leaved Elder. I think a note of this beautiful showy golden leaved shrub would be of interest to the many readers of the CANADIAN HORTICULTURIST. I find them perfectly hardy, bearing fine large fruit, as you will see by samples sent. With its striking golden foliage, it is a shrub worthy of a trial, both for fruit and for ornament.

M. MILGAU, *Bright, Ont.*

Where golden colored foliage is desired on the lawn, this would be no doubt one of the most satisfactory shrubs. Even the common elder is counted

by some landscape gardeners as worthy of a place in the lawn. Mr. Geo. Nicholson in his "Illustrated Dictionary of Gardening," says: "The Golden Elder (*Sambucus nigra aurea*) is a fine ornamental plant for shrubberies or for use in sub-tropical gardens. If the shoots are regularly pinched off at the tips, the plants may be kept dwarfed and of a fine golden color all summer.

#### BUTTER AND EGGS.

**519.** SIR,—I enclose you a weed that I planted in my garden last year, and this year it has spread in every direction. The root goes down about a foot and breaks easily, so I do not know what to do with it.

J. M., *Sturgeon Falls, Ont.*

The plant is *Linaria Vulgaris*, commonly known as Toad Flax, or Butter and Eggs, and is difficult of eradication. Digging or plowing the ground in summer, when the plant is in full bloom, should destroy it.

#### A HYBRIDIZED GOURD.

**520.** SIR,—Last year I grew some mock oranges and saved one of them for seed which I planted this year, but, instead of bearing mock oranges it has something resembling vegetable marrow, in color, size and shape. As I cut the orange open and planted the seed at once, there was no chance for a vegetable marrow seed to get in with the others. Do you think it would be safe to eat it? Possibly the bloom of the mock orange was affected by bees last year.

HENRY BENNER, *Ayr.*

The mock orange belongs to the gourd family, and so does the vegetable marrow, pumpkin, musk melon and Hubbard squash. These, when growing near each other, very often cross, and, either on this account, or through the agency of bees, the curious instance before us has come about. Probably the mock orange from which the seeds were taken was grown near a pumpkin vine, or a vegetable marrow, and was fertilized by its flower. The seeds therefore produced what is neither the one thing nor the other.

### \* Open Letters. \*

#### ERRATA.

SIR,—I beg to correct some typographical errors which appeared in my apiarian article in last issue, and which naturally alter the sense. In the last line on p. 317 read wire gauze instead of wire "gauge." In the next sentence (on following page) read broad section frames instead of "brood" section frames; and tin separators instead of "ten" separators.

ALLEN PRINGLE.



## PRINCE OF WALES PLUM.

SIR.—We have just received a copy of the November No. of the CANADIAN HORTICULTURIST, and find the Prince of Wales plum described in it. It is not a new variety. We had a tree in bearing as long ago as 1859. We always thought well of it, but the demand for it was never great, and hence, when reducing the number of varieties, it was dropped out from our propagating list. We merely draw your attention to this to show that it is not a new variety, although not well known.

ELLWANGER & BARRY, Rochester, N. Y.

## THE ENGLISH APPLE MARKET.

According to latest advices, Canadian winter apples are now in good demand in the British markets. Unfortunately, the immense quantity of fall apples and poor grade winters have been depressing prices terribly, but now the quantity is so much lessened that quite a re-action is setting in.

Henry Theakstone, Liverpool, under date 9th November, quotes Baldwins 11/ to 14/9; Greenings 10/ to 16/; Kings 14/ to 20/; Ribston 18/; Canada Red 12/ to 15/.

Jas. Adam, Son & Co., under date November 18, quote Baldwins 13/ to 15/; Spies and Greenings 13/ to 14/6; Russets 12/ to 14/6.

Messrs. Woodall & Co., under date 12th November, quote the following as quotations of actual sales: Baldwins 12/ to 17/; Baldwins, 2nds, 8/ to 11/; Spy 8/6 to 16/3; Russets 10/3 to 16/; 20 oz. 11/6 to 16/; Greenings 11/3 to 15/6; C. Red 12/6 to 15/6; Kings 13/ to 20/6; Ribston 14/ to 18/6; Ben Davis 13/ to 16/; Snow 8/ to 13/.

Messrs. Frank Rand & Co. Spitalfields Market, London, Eng.; John See & Sons, Hull; B. & J. Shaw, Hull, and many others, give us weekly quotations of sales, which fairly correspond with those above given.

It may be explained that figures above indicate shillings and pence, the former equalling twenty-four cents, the latter two cents each.

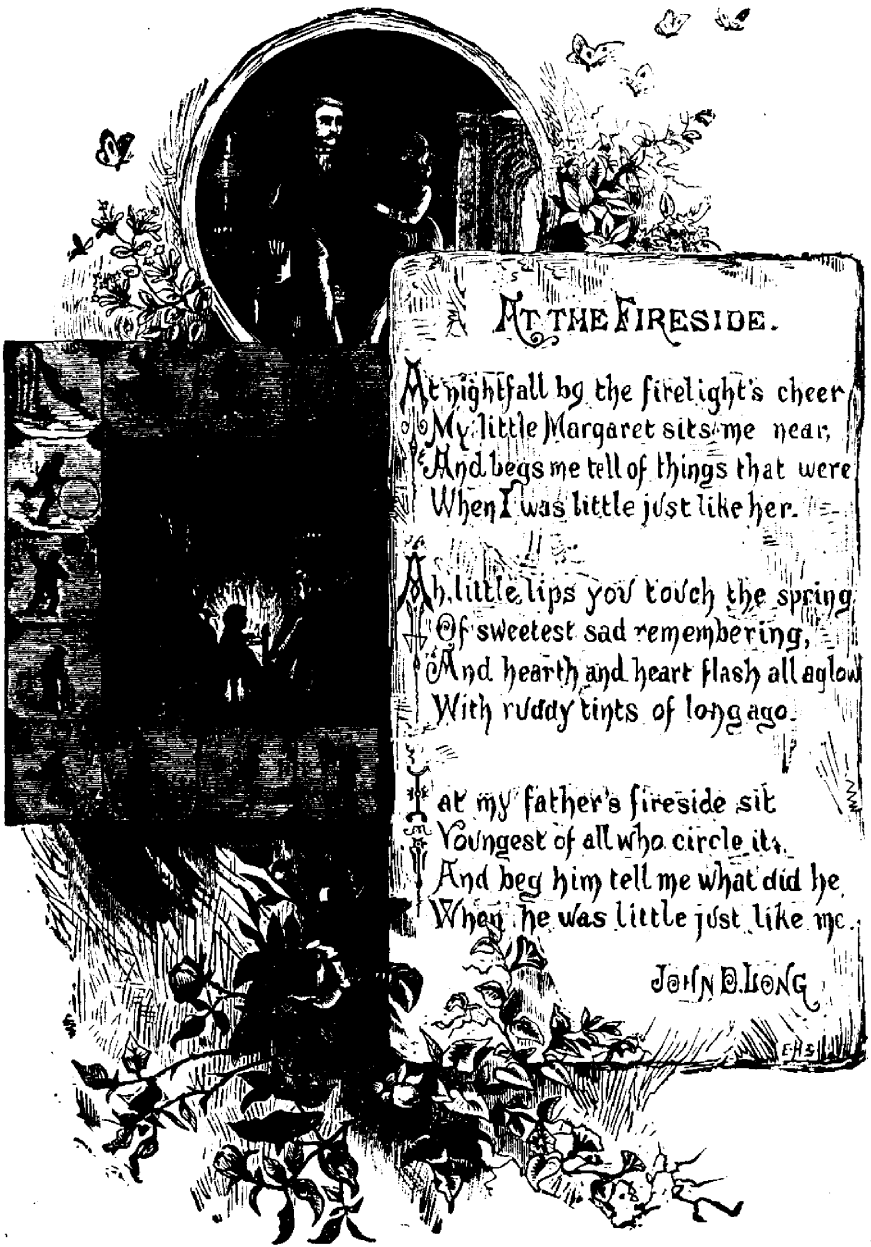
The *Trade Journal* of Montreal, under date 25th November, says of the apple market in Montreal: "The market remains in a very unsatisfactory condition, stocks being large both here and in the West, which are selling at prices which show little or no profit to holders. The sale of 500 barrels of choice winter varieties took place at \$2.50, and we quote fair to good sound stock in car lots \$2.25 to \$2.50 per barrel. Some are asking \$2.75.

THE CHRYSANTHEMUM SHOW in the Pavilion of the Horticultural Gardens, Toronto, from the 8th to the 11th of November, was a grand affair, and reflected great credit upon the Toronto Florists' Club.

## Question Budget

**11.**—Has any member had any experience with the Burdeaux mixture, or any other solution for the red rust on the strawberry leaves?

**12.**—Could a better package be devised than the ordinary barrel for apples, for shipping long distances?



AT THE FIRESIDE.

At nightfall by the firelight's cheer,  
My little Margaret sits me near,  
And begs me tell of things that were  
When I was little just like her.

Ah, little lips you touch the spring  
Of sweetest sad remembering,  
And hearth and heart flash all aglow  
With ruddy tints of long ago.

at my father's fireside sit  
Youngest of all who circle it,  
And beg him tell me what did he  
When he was little just like me.

JOHN D. LONG