

Pages Missing



JUNE

AND what is so rare as a day in June?

Then, if ever, come perfect days;

Then Heaven tries the earth if it be in tune,

And over it softly her warm ear lays:

Whether we look, or whether we listen,

We hear life murmur, or see it glisten;

Every clod feels a stir of might,

An instinct within it that reaches and towers,

And, grasping blindly above it for light,

Climbs to a soul in grass and flowers.

JAMES RUSSELL LOWELL.



Cultivating An Essex County Peach Orchard.

Proper cultivation is now generally recognized as an essential to success in fruit growing, and June is the month when a large part of this work is done. The fruit grower should get work in the four year old peach orchard of Messrs. Hillborn & McLaughlin, of Lamington, Essex County. Mr. Hillborn may be consulted for information. Mr. McLaughlin is in the afternoon. The instructions of the implement here, who was in such that by removing four feet of soil from the surface of the ground, the peach tree will be benefited. After the land has been well worked, it will be found that all weeds and grasses will be killed and destroyed at the same time.

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THE SAN JOSE SCALE IN ONTARIO

ALTHOUGH the area affected by the San Jose scale increased slightly last year, and while I doubt if the scale will ever be entirely stamped out in the province, yet on the whole I think the condition of the scale is most encouraging. The panic period when growers did not know what to do for the scale has passed. It is now realized that thorough spraying will not only check the spread of the scale, but that if continued it may entirely remove it."

These remarks were made recently to The Horticulturist by Mr. J. Fred. Smith, of Glanford, San Jose scale inspector for the province. Mr. Smith for several years has been in close touch with the work of fighting the scale, and consequently is in a good position to speak authoritatively concerning it.

"An encouraging feature of the present situation," continued Mr. Smith, "is that growers are spraying as they never sprayed before. There has been a large increase this season in the number of growers who have bought spraying machinery. Last year there were only three power sprayers in use in the province. This year eleven have been used for the scale alone, not counting those used by the Dominion Department of Agriculture. This year 86,464

pounds of sulphur have been purchased to use in fighting this pest. This is fully one-third more than was purchased last year and twice as much as two years ago, although the area in which the scale is located has increased very little during that period.

In most of the infected localities the people appear to be thoroughly alive to the necessity for action. All through these sections may be seen boiling plants of every description, from the thrashing engine boiling the lime and sulphur either in large tanks or rows of barrels, to the work of the individual who boils his spraying mixture alone in iron kettles.

WHY THE SCALE MAY SPREAD.

"There are two great dangers. In the sections which are seriously infested with the scale many growers have become so thoroughly discouraged that they have given up all attempts to fight the pest. The consequence is these districts become bad breeding points for the scale and infest other sections, and the orchards of growers who continue their preventive measures. It seems hard to convince these men who have given up, that all other sections where the scale has gained a foothold are not so badly infested as their own.

"The second danger lies in the difficulty we find in convincing growers who have not

actually seen the ravages of the scale of the seriousness of the situation. These men are inclined to minimize the danger and are slow about taking preventive measures. They may thus allow the scale to gain a foothold, after which it is almost impossible to eradicate it.

"In 1897, when the department of agriculture became aware that the scale was being imported in nursery stock received from the States, steps were taken to induce the Dominion Government to prohibit the importation of stock from the infested districts. Knowing that the scale had already been located at several places in Ontario, an act was passed called the San Jose scale act. This act provided for the appointment of inspectors, and wherever the scale was found the trees were destroyed.

ACT WAS PASSED TOO LATE.

"It was thought at this time that in a few months all the scale in the fruit growing sections could be stamped out by burning the trees. When the act was passed the scale had been located at Kingsville and at Van Horne, a small postoffice near Chatham, and also in the section near Burlington. Unfortunately the act was passed about three years too late, as the scale had become established. The first imported trees had stood so long that they had become badly infested and the scale had spread so far and so rapidly that in none of these places has it been possible to entirely stamp it out. I would like to emphasize the fact that in no cases where the scale has become thoroughly established have the people been able to eradicate it. All the infested trees have at times apparently been destroyed, but sooner or later the scale has cropped up in some unexpected place.

"The destruction of the trees was continued for two years, but the government realized that it could not hope to stamp it out and called in the inspectors and started a series of experiments with the object of

finding some remedy for the destruction of the scale. These experiments have been carried on to a greater or lesser degree in the infested districts and remedies have been found which if properly applied will help keep the scale in check. In some sections, where the scale was not very thoroughly established, they appear to have entirely stamped it out.

NO NEW OUTBREAKS.

"In the early days of this fight over 100 places were found, where the scale had started through the distribution of nursery stock, that were treated in time to destroy the scale. In none of these places has the scale since been found. One remarkable fact remains that during the last two years no new outbreaks of the scale have been found. This goes to show that the work done by the inspectors in these early years was very thorough.

"Scale has been found more or less all through the chief fruit growing districts of Ontario, but it has made some remarkable skips, leaving some townships so free from it that the people cannot yet be brought to realize that in some districts of Ontario thousands and thousands of trees have been destroyed by the scale. Scale has been found all along the fruit belt skirting Lake Ontario from Toronto to the Niagara frontier, where the scale is at its worst, getting lighter and lighter, with some skips, until after leaving Clarkson. No more scale is known to exist east of that point, although scale has been found in young trees at several points as far east as Belleville. In these last cases it has been stamped out. In the western fruit growing sections, quite badly infested sections have become established at Kingsville, Rondeau, Chatham and Van Horn.

"The lime-sulphur wash is the most popular of all the remedies on trial. It is three years since it was first introduced into

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INDIVIDUALITY OF FRUITS

W. T. MACOUN, HORTICULTURIST, CENTRAL CANADA EXPT. FARM.

THE stock breeder has for a great many years paid especial attention to the individual animal in breeding for size, shape and markings, and for flesh and milk. Just as satisfactory results should be obtained in improving the strain of a variety of fruit, and although comparatively little has yet been done by horticulturists in this respect with fruits, much has been accomplished with flowers and vegetables. It is now recognized by the best authorities that each bud of a tree has individual characteristics which separate it from all other buds, and although the differences in buds are in most cases so slight that it is impossible to detect them, yet in some instances they may be quite marked.

Fruit growers have often noticed that one tree or bush is more productive than another, or bears larger, more highly colored or better flavored fruit. Take as an example the Fameuse apple. When this excellent old variety first bore fruit several hundred years ago one tree produced all the Fameuse apples there were at that time. Some apples on that original tree were probably not as highly colored as others, although exposed to the same amount of light. Some branches, probably, were more heavily laden than others, although there was no apparent reason why they should be. On some branches the fruit was larger though as well loaded as others. In time scions were cut from that tree and grafted, and a new generation of Fameuse trees was the result. Were the trees thus produced identical in vigor and productiveness, and was the fruit borne on each of them exactly similar in every respect? We believe that they were not. Every bud on every tree of every generation of Fameuse apple trees had individual characteristics, and although the differences were barely enough marked to see, there were doubtless many fine shades of variation.

It does not need a great stretch of imagination to see that if such changes can be made as have been made in live stock, flowers, vegetables and other economic plants, by careful selection, that if, when that first generation of Fameuse apple trees began to bear, scions had been taken from the most productive tree bearing the finest colored apples of the best size, that in the next generation of trees there would be at least a slight improvement, and if this selection had been carried on down to the present time we should have a better Fameuse than we have to-day. This selection, however, has not been carried out, and about all that has been done, in a few cases, is to graft from trees bearing highly colored fruit, but as yet we have practically no reliable information in Canada as to whether the results have been satisfactory.

In small orchards, where the fruit is intended for home consumption, the individuality of different trees is more noticed than in large orchards, where the record of each tree is not brought so prominently before the grower. The effect of the stock on the productiveness of the tree and characteristics of the fruit is not yet well understood. Whatever may be the influence of the stock there is no doubt that each variety maintains most of its individual qualities.

At the Central Experimental Farm the yields are kept from each individual tree in the orchard, making it possible to tell at the end of a certain period just what each tree has borne. It has been found that trees planted at the same time, and growing under practically the same conditions as other trees of the same variety, vary widely in productiveness. Some trees also bear a medium crop every year, while others bear a heavy crop every other year.

In the following table will be found the yields of trees of four varieties of apples for the past six years, with the total yield per

tree for that time. It will be seen that some trees have yielded two to four times as much as others. The yield is given in gallons rather than in barrels, to avoid large fractions.

It is worth mentioning that of the 17 Wealthy trees in the table only 7 bore fruit in 1903, and of those that fruited the tree which had borne regularly during the past four years again bore a good crop in 1903:

APPLES—WEALTHY—PLANTED 1896.

Tree	1899	1900	1901	1902	1903	Total
1	1	2.25	2.75	15.0		21.0
2	2	.5	2.5	12.0		17.0
3	1.75	12.0	2.25	8.0		24.0
4	9.0	2.25	15.5	20.5	27.0	74.25
5	7.5	6.5	7.75	23.0	7.5	52.25
6	3.25	6.5	3.5	24.0		37.25
7	7.5	1.0	10.0	19.0	16.0	53.5
8		8.5	.5	21.5		30.5
9		11.25	.25	27.5		39.0
10	1.0	12.25		30.0		43.25
11	1.25	11.25		21.5		34.0
12		7.5		18.5	2.0	28.0
13	4.25	6.25	4.5	20.0	.5	35.5
14	2.5	5.5	.5	34.0		42.5
15		2.25	3.5	21.5	8.5	35.75
16	3.0	2.25	4.0	22.5	4.5	36.25
17		2.0	1.0	22.5		25.5

APPLES—McMAHON WHITE—PLANTED 1898

Tree	1898	1899	1900	1901	1902	1903	Total
1	62.0		83.0	2.0	147.0	1.5	295.5
2	42.0	1.0	6.0	12.5	98.0	23.0	182.5
3	32.0	29.0	49.0	18.0	55.0	63.5	246.5
4	35.0		34.5	4.0	63.0	34.0	170.5
5		37.5	55.0	49.0		61.0	210.5
6	29.0	4.5	46.0	.5	69.5	43.0	192.5
7	.5	9.5	19.5	4.0	19.0	39.5	92.0
8	7.0	9.0	27.0	9.0	53.0	15.5	120.5

APPLES—McINTOSH RED—PLANTED 1890.

Tree	1898	1899	1900	1901	1902	1903	Total
1	17.5	26.0	37.0	6.5	71.5	94.0	222.5
2	1.0	9.5	10.5	1.0	37.5	31.0	90.5

APPLES—GREENING—PLANTED 1892.

Tree	1898	1899	1900	1901	1902	1903	Total
1	27.0	2.0	35.0	1.5	71.0	15.0	151.5
2	2.0	6.0	14.0	19.0	24.0	55.5	120.5
3	2.0	31.0	1.5	40.5	22.0	67.0	164.0
4	13.0		6.5		12.0	15.0	46.5
5	1.0		19.0	.5	17.0	21.0	59.0

Experiments now being conducted at the Experimental Farm by top grafting with scions from productive and unproductive trees, to determine how far the productiveness and unproductiveness of the trees is constant. Root grafted trees are also being grown for this purpose.

In order that fruit growers might learn, by personal experience, of the great variation in individual trees of the same variety, a co-operative experiment was begun in 1903. On application to the horticulturist, six pieces of zinc, bearing six consecutive numbers, were sent to each person. These pieces of zinc when received were to be attached to six bearing trees of a single variety of apple, pear, plum, or peach, the trees to be the same age, and growing under the same conditions of soil and culture. A record of the yield of each tree was to be kept for at least five years. A number of fruit growers in different parts of Canada have already joined this co-operative test, and it is hoped that more persons will desire to take part in this experiment.

If scions from productive trees will produce productive trees when grafted, and if scions from unproductive trees will produce trees which are poor croppers, it is very important that scions should be taken from the best yielding trees. As grafting will, in all probability, become much more general among fruit growers in the near future, the importance of knowing that trees vary widely in productiveness is easily seen.

CURE WANTED FOR THE PLUM ROT

PROF. W. LOCHHEAD, ONT. AGRI. COLLEGE, GUELPH.

I am troubled a good deal with plum rot, and as yet have been unable to find a cure for it. Can you give me a remedy?—(Philip Austin, Arkona, Ont.

On account of the fact that the plum rot or brown rot can thrive on many hosts, such as the plum, peach, cherry, apple, raspberry, blackberry, etc., it is difficult to outline a treatment which will be effective. There are two lines of treatment which should be followed, one as important as the other.

First, gather and burn all the mummy plums which usually remain on the tree in

where insecticides are used, and where the curculio is not so abundant, the brown rot is not severe.

There seems to be some connection between the abundance of curculio and that of the rot, and no doubt the curculio is an agent in the spread of the disease. Thinning the fruit is also an important aid in controlling the disease. As with many other diseases, co-operation among the fruit growers is essential for the control of the plum rot, for it is not fair to the wide-awake careful fruit grower to have an orchard

near by which is untended and the mummified plums allowed to remain all winter and become a source of infestation to the best orchards of the district.



WHAT THE DOMINION HORTICULTURIST SAYS.

The above question by Mr. Austin was also submitted to Mr. W. T. Macoun, of the Central Canada Experimental Farm for answer,

who has replied as follows:

This disease does great injury every year to the peach and plum crop. It is not as easily controlled as the apple spot, but thorough spraying has been found very effectual. The ripe rot spreads by means of spores, which germinate early in the spring and penetrate the twigs from the leaves and flower buds on which they alight. In order to destroy as many of the spores as possible, all diseased fruit should be gathered and burned, whether it is on the ground or on the tree. This fruit harbors myriads

One Method of Preparing the Lime Sulphur Wash—No. 1.

In some sections where the San Jose Scale has made its appearance fruit growers have united to fight the pest. One grower agrees to prepare the spraying mixture for the others, who buy it from him at a fixed price. The method here shown is a common one. The wash is prepared in barrels and boiled by steam from a threshing engine. This photograph was taken near Burlington, where Mr. C. J. Davis prepares the mixture for some 15 growers.

a dry hard condition all winter. It has been proven that these mummified fruits serve to carry this fungus over the winter and that they retain their power to give off in the spring the spores which will continue the disease the following season.

WHEN TO SPRAY.

Second, spray thoroughly with Bordeaux mixture. The spraying should be made before the buds open, again just before blossoming, and after blossoming, and the fourth spraying when the fruit is three-quarters grown. It has been found that

of spores, which endure the winter, and are capable of infecting the trees the following spring.

The trees should be thoroughly sprayed in time to destroy the spores before the disease penetrates the wood in the spring. The first spraying should be made with poisoned Bordeaux mixture, or a sulphate of copper solution, 1 pound sulphate of copper to 25 gallons of water, shortly before the buds start to develop, and with poisoned Bordeaux mixture just before the blossoms open. These sprayings are very important, and should never be neglected. After the trees have bloomed they should be thoroughly sprayed again with ordinary poisoned Bordeaux mixture, and also ten days to two weeks before the fruit begins to color. The trees should also be sprayed

with ammoniacal copper carbonate solution when the fruit is beginning to ripen. This will destroy the spores which appear in great numbers on the mature plums, and will not discolor the fruit.

Plums and peaches which touch one another on the tree give very favorable conditions for the spread of the disease from one fruit to another. Being close together, moisture is retained on the skin, and the spores which may be on one fruit germinate readily and soon infect the next, and thus the disease spreads rapidly. Thinning the fruit makes the conditions much less favorable for the development of the disease. Also discolored and dead wood should be cut out and burned in the meantime. If spraying is thoroughly done the injury from this disease will be much lessened.

The Apple Tree Borer

L. W.

EARLY in the month of June the trunks of the apple trees should be washed with a strong solution of soft soap and washing soda, not only to cleanse them of bark lice and fungi, but also to prevent the attacks of borers. Vigorous growing young orchards are seldom attacked, but if the trees are stunted in growth they are often badly affected and sometimes almost ruined. Two species are often met with in Ontario, the round headed and the flat headed, the former of which spends three years in its larvæ state working between the bark and the sapwood, and even tunnelling into the hardwood, while the latter completes its development in a single year.

The wash above described should be reduced to the consistency of paint and applied with a broom cut short so as to form a sort of scrubbing brush. The object is to prevent the female moth from depositing its eggs within the bark during the summer season.

Pruning Apple Trees

I HAVE almost invariably done my pruning early in the spring, as soon as the hard frosts are over, and considerably before the sap moves. This is the general practice in my neighborhood and has given good results."

So stated Mr. Wm. Rickard, M. L. A., of Newcastle, Ont., to an editorial representative of *The Horticulturist* a few days ago. "Some well known authorities," continued Mr. Rickard, "claim June is the best time. In my opinion June pruning tends to fruitfulness, while winter pruning tends to growth of wood.

"June undoubtedly is a good time to prune, but I have never tried it, not having had time to do the work at that season of the year. I purpose, however, trying some June pruning this year on some of my trees to see what the effect will be."

If a tree bears uniformly the fruit will be larger and better every year. There is much to learn about pruning and fertilizing.

GROWERS ANXIOUS TO ORGANIZE

A HOPEFUL feature of the fruit situation is the desire apparent on the part of fruit growers, in many sections of the province, to organize. It is becoming recognized that only by co-operating in the purchasing of supplies, spraying, and the sale of their products, can the small fruit growers expect to realize the best returns.

As a result of the series of fruit institute meetings held during the spring several local fruit growers associations were formed. A number of these associations are anxious to commence operations but do not know just how they should set to work. With the idea of gaining a little information on this subject The Horticulturist recently wrote to the officers of several well known and successful fruit growers organizations.

THE CHATHAM FRUIT GROWERS' ASSOCIATION
"The principal features of our by-laws," writes W. D. A. Ross, secretary-treasurer of the Chatham Fruit Growers' association, "are that new members are passed upon by the board of directors before being admitted. If a member sells outside of the association he forfeits his membership, but may come in as a new member if the board sees fit. All sales of similar grades are averaged in making returns, so that each member profits by a good sale or shares the loss in a poor one.

"I may say here, however, that no member has been asked to put up a dollar in the way of loss yet. Our returns have not always been as large as we could wish for, still on the average they have been very

satisfactory, and we have not been at the buyers' mercy.

"Our fruit is all packed at a central packing house, a warehouse placed at our disposal by the C. P. R., and since it is all graded by the one set of hands the quality is uniform. We find too that we can do it cheaper in this way, and can work in all kinds of weather, which in a season like the last two is quite an advantage.

"Our directors thought of putting up a packing house of our own this season, but decided to let the matter stand over till next season, and devote their attention and funds for this season to power spraying."

ST CATHARINES COLD STORAGE AND FORWARDING COMPANY.

One of the most noted and successful organizations of fruit growers in the province is the St. Catharines Cold Storage and Forwarding Co., Limited. This company has been in existence for some six years, and now does a large business. Its receipts last year amounted to \$3,005, and its assets total \$8,585.73. Last year it shipped for its members 2,465 tons of all kinds of fruit. By conducting their business on such a large scale the members are able to obtain many concessions from the buyers, railway companies and other firms.

Through the kindness of the president of the company, Mr. Robert Thompson, of St. Catharines, The Horticulturist is enabled to print the by-laws of this company. They read in part as follows:

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Is Willing to Help.—I would esteem it a great favor if fruit growers and all others who read The Canadian Horticulturist would write me about the troubles of the orchard and garden and send me specimens of the pests. By coming in close touch with them, it should be possible for me to do a great

deal more for them, as well as make myself better acquainted with conditions as they actually prevail. In exceptional cases I might visit the locality where the disease is spreading or alarming.—(W. Lochhead, Entomologist and Plant Pathologist, Guelph.

CULTIVATION OF THE ORCHARD

L. W.

THE key word of orchard work during the month of June is cultivation. A great change has come over the methods employed during the past few years, and especially with respect to working up the orchard. Even yet a few advocate leaving apples in sod, but the more progressive fruit growers and those who grow the finest fruit give the best and most thorough cultivation.

The object of cultivation is two-fold, (1) to increase the fertility of the soil by making the plant food more available by the tree roots, and (2) to conserve moisture. There is little doubt that much of our orchard soil is sufficiently rich for the needs of our apple and pear orchards, providing such tillage is given so as to make the plant food available by the tree roots. The saving of moisture is perhaps the more important object of the two in a

country like ours, where rains are not so frequent in mid-summer.

If cover crops occupy the ground these should be plowed under as early as possible before they begin to draw moisture from the soil. And in any case an early plowing of the orchard will make it pervious to the early rains, so that the water will sink into the soil and not be carried off by surface drains.

Continued cultivation during the month and a part of next month is essential to the best fruitage, because either a sowed crop, or a self-sown crop of weeds will rapidly

steal the soil moisture from the orchard trees, and because at this time the greater part of the wood growth is made.

Another most important reason for continued cultivation is the retention of soil moisture. Every one knows that a mulch will retain the moisture in the ground beneath it. Lift a board or a heap of rubbish in summer and note the moist condition of the soil beneath. A mulch of fine dry dust will act in the same way, and the easiest method of providing it is by frequent shallow cultivation. After the ground has been once worked up with plow or disc, a sharp-tooth harrow should be a suitable tool for

keeping the dust mulch on the surface. Ground should be gone over every ten days or so, and in particular soon after every rain, because this latter tends to form a crust and destroy the



Boiling the Lime Sulphur Wash in Tanks—No. 2.

At Winston, Mr. J. W. Smith prepares the lime sulphur wash for some 25 growers. Last year two large tanks were used, but this year two large tanks, holding more than 1000 gallons each, were made. It is much easier to heat the water in these tanks, less fuel is needed and the amount of work is reduced. It is much more difficult to stir the mixture in a small barrel than in a tank. The work is boiled for two hours, by which time it is thoroughly mixed.

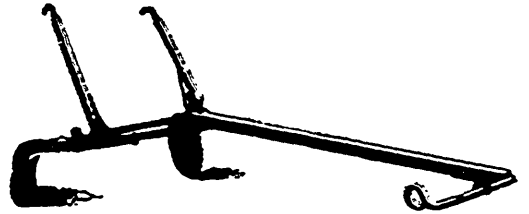
effect of the dust mulch.

No one rule applies in every case. There are orchards which do not need cultivation, and may be left in sod with better results than if worked. We refer to those planted on deep rich sandy loam, inclining to be moist, such as are found along the base of the Niagara escarpment. The springs from the "mountain" in some cases tend to keep a supply of moisture in summer, and the land is so rich that the wood growth is almost too great. If such orchards were in sod the excessive wood growth be lessened and greater fruitfulness would result.

In working about orchard trees some men have great difficulty in avoiding injury to the trunks, especially if the trees are young. A careful adaptation of harness and tools will much facilitate the work. The ordinary farm harness, with its projecting hames and upright turrets, is entirely unfit for orchard use. The former should lie as close to the collar as possible, and the latter should consist simply of a ring, which will be flat on the saddle.

The ordinary long double trees also are entirely unfitted for the orchard; the ends will surely scrape the trees in passing even if bound with cloth. At Maplehurst we use a set made with principal beam 31 inches long, of an oak piece $2 \times 3\frac{1}{2}$, and the whistle trees are each about 22 inches long. These enable a horse to walk quite close to a row of trees without injury to the trunks.

Most of the plowing in an orchard on sandy soil may be done with a gang plow, and the trees may be finished with a one-horse plow, followed by a grape hoe, like the one shown in the accompanying illus-



tration. This tool enables a wonderful saving of work, not only in the vineyard but also in clearing away the sod and earth close about the trees. If managed skilfully with a horse trained to the work there will be very little left for hoe or spade after the grape hoe has done its work.

GRAPES AS A PROFITABLE CROP

AARON COLE, ST. CATHARINES, ONT.

THE best variety of grapes that may be grown for profit will depend very much on the character of the soil. I have two vineyards, one on a clay loam and the other on a deep gravel. The same varieties of grapes are planted on both, namely Niagara, Concord and Worden.

These I consider the three best varieties for money making, but it is also essential to have some red grapes. The Vergennes and Brighton are possibly the best. None of the Rodgers variety have proved satisfactory to me, but for an assortment I would recommend a few Agawam and Rodgers No. 15. It is necessary to have red, white and blue grapes in order to fill a car in good shape for the northwest trade.

SOIL AND FERTILIZERS.

The soil requires more or less fertilizer. I find nothing better than well rotted barnyard manure placed around the vines in the

fall of the year. Above all things, do not place green manure around them during the winter season, or your vines will suffer from incursions of mice. Bone meal is also good, about 400 pounds to the acre being a proper amount.

The best soil for grapes is deep coarse gravel, and the next best a clay loam. Either of these require very little fertilizer as compared with a sandy loam. In the spring of 1867 I planted 270 vines on gravel, and I have had occasion to manure that portion of my vineyard only once since. Those vines furnish me with plenty of wood and grapes every year. My impression is that the stones in the gravelly soil draw from the air what is required for the nourishment and fruition of the vines, and the soil as a result is self-sustaining for grape culture. No crop gives the farmer more pleasure to handle and market than a good grape crop.

SPRAYING MIXTURES UNDER TEST.

PROF. R. HARCOURT, ONT. AGRIC. COLLEGE, GUELPH.

A TEST of the relative efficiency of the lime sulphur wash and the McBain mixture was made this spring under the auspices of a special committee appointed by the Fruit Growers' Association to ascertain which of the two above named substances is the most effective in destroying the San Jose scale. The orchard selected for the experiment belongs to Mr. Bunting, of St. Catharines, and consists of about 65 thrifty growing peach trees.

Before the spraying was done each tree was carefully examined by Messrs. Bunting, Robert Thompson, and Healy, the members of the committee present, and Prof. Lochhead, and full notes were taken regarding the condition of the scale on each tree at that time. Every other row was then sprayed with the lime-sulphur wash, and the intervening rows with the McBain mixture. Mr. Bunting was responsible for the application of the former and Mr. McBain for the latter. Both men were allowed to make the spraying as thorough as they saw fit, but nothing further was to be put on the trees until after they had been examined by the committee at the end of June or the early part of July. Every possible point was safe guarded, and there is no reason why the tests should not be con-

sidered thorough and fairly conclusive.

The same day a barrel of the lime-sulphur and salsoda and a barrel of the lime-sulphur and caustic soda washes were prepared and applied to an adjoining orchard. The former was made according to the following formula: Lime, 25 pounds; sulphur, 20 pounds; sal soda, 12 pounds; water, 40 gallons. These were put together without any artificial heat being used in the boiling. The lime-sulphur and caustic mixture was also prepared without any artificial heat, and the following amounts of the various substances were used: Lime, 30 pounds; sulphur, 15 pounds; caustic soda, 5 pounds, and water, 40 gallons.

Both solutions developed the characteristic color of the lime-sulphur wash, and those present were delighted with the simplicity of the method of preparation. Since that time several barrels of these mixtures have been made and applied in the same neighborhood, and it will be interesting to see how effective they will prove in destroying the scale. Their great advantage over the regular lime-sulphur wash is that they are not boiled, and thus that tedious process is saved. Some other substances have been applied, which, if effective, will greatly reduce the cost and trouble of the spraying.

THE OYSTER SHELL BARK LOUSE

L. W.

PERHAPS the most common insect enemy of the apple in our province is the oyster shell bark louse, an introduction from Europe nearly a century ago. It gets its name from the shape of its shell, which, however, is only about one-sixth of an inch in length.

During the warm weather early this month, these young lice hatch out and begin moving about, and in a few days attach themselves to some portion of fresh bark by

inserting their tiny sharp beaks to suck the sap. These young lice are scarcely visible to the naked eye, being only about the one-thousandth part of an inch in length. It is at this stage of their history that these bark lice are most easily destroyed. A thorough washing of the tree with a strong solution of soft soap and washing soda, or a spraying with a solution of washing soda and water, $\frac{1}{2}$ a pound to a pailful, will cleanse the bark of them.

Does Not Believe in Low Topping

JAMES C. HUGGARD, WHITBY, ONT.

THERE are a great many very useful hints given in *The Horticulturist*, but some features presented to your readers are, to my mind, entirely misleading. One I cannot agree with is the training of low headed fruit trees. By low headed trees I refer to those that branch out two to four feet from the ground instead of four and a half to six feet.

I would like to ask the advocates of low heading where they obtain their prize samples of fruit, if not on the top branches? As it is well known that cultivated orchards yield a much greater return of first-class fruit than an uncultivated orchard, I would like to know how an orchard of say Greenings, Talman Sweet and many other varieties of like habit of growth can be cultivated where the trunk is only three feet high? As a matter of fact, I have never seen well colored fruit on low branches, nor yet the best specimen of green or yellow varieties, except invariably on the higher branches.

A SERIOUS MISTAKE.

Having been actively engaged for the past 30 years in fruit growing, I have found to my sorrow that to allow branches to form less than 4 to 6 feet from the ground, according to the variety planted, is a serious mistake. The argument usually advanced is that the low headed trees are easier to pick, but this is in theory only, as a picker will gather just as many baskets on a ladder twelve to fifteen feet long as on one six feet long.

As to cultivation, it is simply impractical to get the land cultivated near the trees where the limbs are close to or lying on the ground. I advise all fruit growers, therefore, to get good clean trunks while the trees are young. They will not then be under the necessity, later on, of cutting branches 3 to 6 inches in diameter, as some

orchardists are doing this year, in order that they may work among their trees.

Another matter fruit men should attend to at once is the planting of spruce for wind breaks. They not only add to the beauty of a farm or orchard, but add very materially to the total crop of fruit by protecting the trees from high winds in the fall. I cannot too strongly recommend the planting of spruce both for ornament and use. I have several hundred spruce planted, some of which have grown 40 feet high in 22 years from seed.

Trimming Apple Trees

PROF. H. L. HUTT, ONT. AGRI. COLLEGE,
GUELPH.

I would like to know the proper time of the year to trim apple trees. Most of those professing to be experts differ. I saw a statement by one member of the fruit growers' association who said, "prune when your knife is sharp." When is the best time?—(M. H. D. Silver, Sutton, Ont.)

There is a great diversity of opinion in regard to the proper time for pruning trees, which, in itself, shows there is considerable latitude within which pruning may be done safely. Light pruning may be done almost any time of the year, but it is not well to prune to any extent when the trees are in foliage, nor is it well to prune heavily in the fall after the foliage is off, as the wounds are exposed to severe winter conditions before healing begins.

The safest time to prune is early in the spring after severe frosts are over. Wounds made at this time heal rapidly. I had occasion recently to visit an orchard near Ingersoll which had been severely pruned last fall before the leaves were entirely off the trees. The result was that the sap in the trees at that time was not properly elaborated, and as a consequence it was badly effected by severe winter freezing, so much so that in some cases the bark this spring peeled readily from the trunks of the trees.

The Cherry Crop

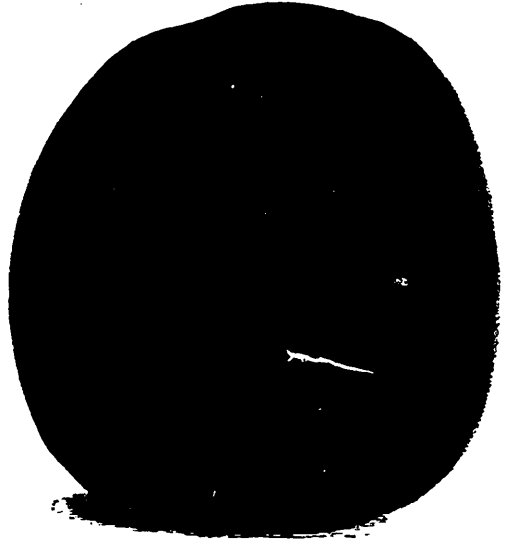
L. W.

TOWARD the end of June, and before the strawberry harvest is quite completed, growers will be engaged with the early varieties of sweet cherries. The Early Purple will be the first to ripen, and will soon be followed by Governor Wood, Cleveland, Elton, Knight's Early Black and Black Tartarian. No doubt the severe winter has severely thinned out these tender varieties, even in the more favored districts. In some parts the cherry has become a very important market fruit, and the loss of it by the severe winter will be a serious misfortune.

As a rule men are the most satisfactory cherry pickers, because the ladders are too heavy to be moved by women and children, and one might better do the work than to be on constant call to move them. Besides women's wages are nearly as high as men's, now women have invaded nearly every avocation in life. A good man cherry picker will gather one hundred quarts a day, in average picking, and do it properly too. By this is meant handling the fruit by the stems and scarcely touching the cherries with the hands. We usually gather the fruit into the half basket, holding about 7 quarts, and if free from rot they will not need turning out on the packing table. Unfortunately the early kinds are often very subject to rot, in which case they must be turned out and repacked.

A GREAT TROUBLE WITH CHERRY GROWERS.

This rot is one of the greatest evils of cherry growing, for it spreads rapidly and soon destroys a magnificent crop of large fancy cherries. It pays the cherry grower to begin early spraying his sweet cherry trees with Bordeaux, especially such varieties as Elton, Black Tartarian and Napoleon Bigarreau, and to continue the treatment until the cherries are well grown, with the ammoniacal copper carbonate and soap, be-



The Salome Apple—No. 1.

L. W.

This is a new western apple which promises to be of great value, especially for the Muskoka and Ottawa sections and parts similar situated. The hardiness of the tree, the clean, bright color of the fruit and its long keeping quality seem to combine in its favor as a commercial variety. Mr. C. L. Stephens, of Orillia, has fruited it in his garden and has kept samples of it until June.

cause it does not whiten the skin of the fruit. The addition of soap is advised as an improvement on the old formula, by the Geneva Experiment station in a recent bulletin, as follows: Copper carbonate, 6 ounces; ammonia, 3 pints; soap, 1 pound; water, 50 gallons. Dissolve the copper carbonate in the ammonia, somewhat diluted with water, using no more ammonia than is necessary barely to dissolve the copper carbonate. Put this into 40 gallons of water. Dissolve the soap and add to the solution of copper carbonate. The solution loses strength on standing in open vessels, but may be kept indefinitely in stoppered bottles.

If we fruit growers expect to keep in line with other branches of business we must get out of the old rut and be alive to our duty. See to it that our trees are doing the most possible for us.—(George A. C. G., Arkona, Ont.)

Sod and Cultivation in the Orchard

"MY belief is," said Mr. William Rickard, M. L. A., of Newcastle, Ont., to an editorial representative of the Horticulturist recently, "that in deep soils, which will retain moisture readily, the Spy apple will do better if the land is left in sod, especially if it is mulched with barnyard manure. Where the ground is left in sod the apple appears to color more readily. With the Baldwin and Greening the difference is not so marked. All varieties of apples grow larger when the ground is cultivated. Where cultivation is practised the Spy seems to grow too large and not to color as well.

"On sharp, dry soil, cultivation is necessary, as otherwise trees will suffer from the drouth. The season, of course, must always be considered, as not so much cultivation will be required if there is plenty of rain.

"When my orchard was young I used to keep it in hoed crops. As the trees become larger and the roots took up the soil, these crops were discontinued. A cover crop is always best after July 1. I prefer clover, although some sow buckwheat or rye. Clover is the best for the land.

"Plow lightly as soon as the land is fit, and then keep the harrow and cultivator at work, stirring the surface at least once a week that it may be kept fine. When the cover crop is put on in July it helps to check growth and mature the wood. I am trying sod now in my orchard, because the land does not need conservation of moisture and because the branches of my trees are touching, although the trunks are 30 feet apart."

We are looking forward this season for better results in our orchard from power spraying.—(W. D. A. Ross, Chatham, Ont.

In thinning the apple tree try and do it so the vitality of the tree will be sent into the fruit.—(J. S. L., Bartonville, Ont.

Cultivation in the Plum Orchard

J. G. MITCHELL, GEORGIAN BAY EXPERIMENTAL STATION.

NY naturally well drained soil sufficiently rich to grow good farm crops will do nicely for plums. Trees grow faster and bear better on loamy soil, but probably live a little longer on clay.

For the first few years hoed crops may be grown, providing there is sufficient plant food for both trees and crops. After trees come into bearing they should have the land to themselves and receive clean cultivation.

CONSERVING THE MOISTURE.

In order to conserve moisture, begin in the spring as soon as ground will work nicely, and continue cultivation right along. Harrow or cultivate once every week or two, or after every heavy rain. As soon as the tools will work clean, provide a good heavy blanket of dust or very fine earth. This will prevent capillary attraction and hold all the moisture needed, even if it should not rain for a week.

About the last of July, or first of August, cultivation should cease, so as not to encourage late growth, but a hard ripening of the wood. Sow with crimson or red clover. I do not know which is best, as I have had splendid stands of both. This should be plowed down during the following spring and cultivation renewed as outlined above. Don't forget to feed seven or eight cents worth of barnyard or commercial fertilizer to each tree. It will keep them doing nicely.

Trees Ringed By Mice.—It has been said that if trees ringed by mice have the earth thrown up around the injured part they will still grow. This is not so; I have tried it and it failed. Mice want the inner bark, and go for what they want, and if the trees are treated in that way they will die. The only way is to bridge them. I have always been successful in bridging.—(A. Shaw, Walkerton, Ont.

SOMETHING ABOUT PLUM GROWING

PHILIP AUSTIN, ARKONA, ONT.

I HAVE one block of plum trees containing 151 trees, seeded down to Lucerne clover, from which I cut three crops of grass annually. The trees are healthy and productive, but if the land was not seeded so heavily it would probably break up.

I prefer clean cultivation, because sod makes a harbor for mice, although last year I had the best plums on the sod. They had a better color and the trees were heavier laden than where the ground was cultivated.

Wood ashes and barnyard manure are my favorite fertilizers, although I have not used any for two years in the orchard, as the ground has been in good heart and did not require it. About 40 bushels of wood ashes per acre, every other year, is sufficient fertilizer, providing the ground is in good shape. Last season I fruited 19 distinct different varieties, and would pick the Burbank as my business plum, it having been the most profitable with me. Eighteen trees yielded about 50 bushels of as fine fruit as one

would wish to see. Satsuma Blood is another favorite. Any grower who has none of these should try them. Six trees yielded me over 15 bushels. They excel anything I have in quality and are the best and easiest sellers owing to their color. They have a very small pit and thick flesh.

The Saunders Seedling is a plum of merit owing to its earliness, coming on the market when there is a demand for such a plum. It is our earliest European. The Lombard is a good plum, but a poor seller.

We need something that is attractive on the market, especially in a season like the one just passed. It is a great mistake to put plums on the market before they are ready. It is a pity to see plums on the market when they should have remained on the trees for weeks longer. Grand Duke, Bradshaw and Niagara also do well with us, but do not yield as well, and hence are not so profitable. Reine Claude is a favorite owing to its lateness, coming when people are not usually looking for plums.

SPRAYING IN JUNE

L. W.

THE two important sprayings have been done in May by most fruit growers, viz., the one just before the blossoms open and the one just after they fall. For fungi and codling moth a third should follow a couple of weeks later when the fruit, such as apples and pears, are still small.

The dust spray is coming into favor in some sections because of so much easier application than the liquid. Mr. Goodman, secretary of the Missouri Horticultural society, has used it altogether on 400 acres of apple orchard, and is satisfied with the results. He claims it is safer, more easily applied, costs less, takes less time, and saves hauling large loads of water. He uses the following formula: Lime, 30 pounds; paris

green, 1 pound; dry Bordeaux, 1 pound; concentrated lye, pulverized, 1 pound; sulphur, 1 pound.

For San Jose scale the lime sulphur spray is being prepared with the use of caustic soda to avoid the boiling, which was the great bugbear in the way of its general use. One formula is as follows: Thirty pounds of lime, 15 pounds of sulphur, 5 pounds of caustic soda, using a little hot water to slack the lime, with no further boiling. This is a winter or spring spray, and is mentioned now because so many are interested in the discovery of some method which will simplify the preparation of this lime sulphur spray, and will be interested in further reports concerning it.



The Salome Apple—No. 2.

L. W.

The Salome originated with E. P. Hathaway, Ottawa, Ill. The tree is very hardy, productive, an early and an annual bearer. Fruit: Size medium to large, about 2 1/2 inches; form roundish, basal somewhat lopsided; color bright red with stripes of darker red and numerous small grey dots on a yellowish ground. When harvested the skin is green, but during the winter it takes on the color above described. Stem stout, three-quarters of an inch thick, with a deep uneven cavity; calyx half closed, segments erect, moderately deep, slightly plaited basin, having five distinct segments; core large, open, sessile. Flesh: Color yellowish; texture firm, becoming tender towards spring, not very juicy; taste pleasant, subacid. Season: November to May. Quality: Excellent for cooking, fair to good. Value: Promising for export. Adaptation: Succeeds remarkably well in the county of Simcoe.

Enriching the Orchard

PROF. H. L. HUTT, ONT. AGRIC. COLLEGE,
GUELPH.

What is the best crop to sow in the orchard to enrich it? My orchard is about 20 years old and is on excellent clay loam. It was in grass for some years, till last season I plowed and sowed to buckwheat. I did not reap the buckwheat, but allowed pigs and cattle to tramp it down. I intend cultivating to keep grass from growing. All the manure available was put on. I thought of sowing it to peas and allowing stock on it the same as last season. Would you advise me to?—(M. H. D. Silver, Sutton, Ont.)

The plan you are adopting of raising crops in the orchard and pasturing them off with stock is not the best one for the orchard. The plan adopted now by the best orchardists is to give the orchard clean cultivation until about the middle or end of July, then seed down with a cover crop of

some kind, preferably a leguminous one, if the ground is in first-class condition.

We found the red or mammoth clover, sown at the rate of 20 pounds to the acre, makes an excellent cover crop, but one of the best crops tried yet is the hairy vetch, sown at the rate of 40 pounds per acre. This plant forms a low dense mass of vegetation, which does not interfere with the harvesting of the apple crop in the fall, and it is so hardy that it goes through the winter in good condition.

All such cover crops should be plowed under first thing in the spring, or if the hogs are allowed in the orchard they may be turned in in the fall after the apple crop is harvested, and what is left of the cover crop can be plowed under in the spring.

The Peach Orchard

L. W.

EARLY in June the peach grower may count with some certainty on the condition of his peach crop. Often a nipping frost about the beginning destroys almost as many peaches as the intense cold of winter, but when this is over, and what is known as the "June drop" has thinned out the superfluous young fruit, those remaining may reasonably be expected to reach maturity.

This is the month for thinning peaches, a job which takes considerable time, but which in many cases pays splendid dividends on account of the increased size of the fruit that remains. Even the Alexander, which has received so much abuse from fruit growers during the past season because of its small size and poor quality, has in consequence of careful thinning grown to double its usual size and brought almost double its usual price.

Thin the fruit until no two peaches touch each other; indeed, some advise thinning until every peach stands 4 to 6 inches from every other peach.

THE FRUIT GARDEN IN JUNE

WM. HUNT, ONT. AGRIC. COLLEGE, GUELPH.

THE ground around the plants in the newly planted strawberry patch should be kept well surface stirred. This not only kills out all weeds whilst small or in the seed leaf, but the loose soil forms a mulch that assists the young plants materially in making growth. Unless the old patch is in very good condition and free from weeds it had better be dug up. Tomatoes, potatoes, beans or corn would be the best garden crops to plant where strawberries have been dug or plowed in.

A better plan still to bring the ground back into good condition after being exhausted as it is by growing strawberries, would be to dig or plow the patch up, harrow or rake lightly, and sow a cover crop of vetches—the hairy variety preferred—or crimson clover could be sown. This cover crop can be dug in late in the fall. A good coat of manure can also be added, especially if the cover crop is not of very rank growth. Strawberry plants should not be planted on the same ground again for three or four years.

PLUMS.

The curculio will be busy on the plum trees as soon as the blossoms are fallen. Spraying plum trees with paris green or Bordeaux mixture is of little use to prevent the mischief of these destructive little beetle like pests. The old fashioned plan of jarring the limbs of the trees and shaking the curculio from the tree into a sheet previously spread underneath to catch them is perhaps the surest way to kill and destroy, and prevent injury by these little pests, as they can be crushed or put into a tin containing coal oil and destroyed when caught on the sheet.

A flat strip of inch board about 2 inches in width and about 2 or 3 feet in length with the sharp edges sawed off, and the sheet or white cloth before mentioned as well as a short heavy club or wooden mallet are the

only implements necessary for this operation. Bind one end of the flat strip of board before mentioned with a few thicknesses of old cotton or cloth to prevent injury to the limbs of the tree. Place the end of the strip protected by the cotton or cloth against the limbs of the tree and give it several hard blows with the club or mallet. This will jar the limb sufficiently to cause the curculio to drop into the sheet, which should be spread under the tree before the tree is shaken or jarred. The curculio can then be picked from the sheet and destroyed at once. Shaking the limbs with the hand is not as effective as the jarring method, although some good may be done by shaking the tree.

Another very effective remedy or preventive of attacks of the curculio, especially on trees of moderate size, is to thoroughly sprinkle or dust them with dry wood ashes or chimney soot, or both mixed together. This should be done once or twice a week during June or perhaps early in July as well, directly after the blossoms have fallen and on until the fruit has attained to about half its full size. Early in the morning or late in the evening, when the dew is on the foliage, or after a shower of rain is the best time to dust the trees. A step ladder will be of assistance to reach the larger trees.

Dust bellows can be purchased at seed stores for distributing this and other dry insecticides, but good work can be done with a fire shovel, a piece of tin or shingle, and a little perseverance. Start as soon as the blossom has fallen, do not wait until you see that a lot of the fruit has been stung before you start. If you do the remedy will be of little use. Prevention is the remedy in the case of curculio, as there seems to be no method of applying insecticides to kill the curculio effectually when once they commence operations.

Spraying the cherry trees with kerosene

emulsion is the best remedy for the attack of the aphid. The spraying should be done as soon as the blossoms drop.

Currant and gooseberry bushes may still want looking after for caterpillars. Dry hellebore powder sprinkled on where the worms are is the best remedy, now that the fruit is formed. A small mustard or baking powder tin with small holes punctured through the lid makes a good distributor for dry insecticides.

The young shoots of grape vines should be pinched off as soon as the bunches are formed on them, and before the bunches blossom. Pinch the shoots back so as to leave one leaf or joint clear beyond the bunch nearest the tip of the shoot. Small

useless shoots with no fruit bunches developed may be broken or cut out close to the old wood if the growth is too crowded. Leaders or shoots that are wanted to extend the size or growth of the tree should not be pinched back until they have attained a length of 3 or 4 feet.

If mildew threatens to be troublesome sprinkle the bushes with dry powdered sulphur, or "flowers of sulphur," as it is termed. Start the sprinkling on the first appearance of the grey, dusty looking appearance the leaves present when mildew appears. A spraying with Bordeaux mixture directly the blossoms have fallen will often prevent mildew appearing the whole season.

THE STRAWBERRY HARVEST

L. W.

THE first fruit of the season to bring money into the pocket of the fruit grower, and the one perhaps of the whole season most valued by the consumer, is the strawberry.

For handling the crop no package seems more popular, and none so economical as our 24-quart basket crate, which can be purchased for about 16 cents each complete, with the small quart boxes inside. Women and girls usually make the best pickers and packers, and their skillful fingers not only do the work quickly, but well.

Each picker should have a six-quart picking stand, with handle, which holds six strawberry baskets, while filling. Two pickers to a row, one each side, will work to advantage, and they should be required to pick the rows clean, leaving no ripe berries to waste. Pickers who will not do this, and those who bruise the berries, should be discharged.

At Maplehurst we insist on having our strawberries and cherries handled by the stems only. These fruits are too soft and

tender to be squeezed between the finger and thumb. Carelessness, in these particulars, will often make all the difference between profit and loss in the prices obtained. Besides, an expert picker will snap off as many berries an hour, cutting the stems with the thumb nail, as a careless picker who grabs the berries themselves in her hands. But, if careful picking does take more time, let it be fairly paid for, and let the work be done right.

Don't top the baskets. If you have careful pickers instruct them to turn the stems down of the upper layers so that they may present an attractive appearance. A packer, who keeps tally of the number of quarts brought in by each picker, may do this work and then pack the berries away in the crates ready for shipping.

Not much spraying is done in my locality. Orchards receive very little care. A few are being cultivated through the influence of farmers' institute meetings, and with good results—(Thos. Welsh, Bruce Co., Ont.

Growing Gooseberries and Currants

WILLIAM FLEMING, OWEN SOUND, ONT.

IN growing gooseberries and red and white currants all plants should be inspected in the spring and those parts needing to be pruned or thinned out should be attended to before the leaves are opened. The bushes should all be sprayed thoroughly before the leaves are half opened, and again in about ten days, always doing the work when the weather is fine and dry. If rain falls inside of 24 hours after spraying, the operation should in each instance be repeated until a perfect application is accomplished.

A liberal application of well rotted stable manure should be worked into the ground between the rows and around the bushes. Not a blade of grass should be allowed to exist in the plantation. As soon as the ground is dry after the first heavy rain, let the spaces between the rows and around the bushes be thoroughly raked or scuffed shallow by a hoe till it is in a perfect mellow condition. The same operation should be repeated when the ground is comparatively dry, and after every heavy rain throughout the whole season. Every weed and all grass should be entirely destroyed in order to secure the best results.

If the plantation is large most of the work of keeping the ground in proper condition can be done with less expense by horse with a scuffer and three-cornered harrow. When this is done the bushes should be planted in rows two ways and much farther apart.

If the currant worm appears during the summer one ought always be on the lookout for it. The bushes should be sprayed at once. If the worm is found before the fruit is half size or after it is picked, the solution should be one-half pound of paris green to 40 gallons of water. If the fruit is half formed or more the spraying material should be a heaping spoonful of hellebore to a pail of water.

Cultivating the Vineyard

THE cheapest method of cultivating the vineyard," said Mr. Murray Pettit, of Winona, recently, to an editorial representative of *The Horticulturist* who visited his place, "is to cut away from the rows in the spring with a disc harrow as close as possible, then work out what is left with the grape hoe. Mellow and clean the ground between the rows by cultivation, particularly after rains where the land is heavy. About August 1 reverse the disc or use the gang plow and throw the earth to the vines.

"Where I have practiced this shallow cultivation for several years I have had good crops, and find it very much cheaper than the frequent plowing usually given. This cultivation allows the rootlets or feeders to come near the surface, where they get more warmth and nutriment. The grape requires a great deal of heat.

"Where cover crops are sown, which is far the cheapest way to keep up the fertility of a vineyard, one plowing is necessary to turn it under. When rape is used we sow it about August 1 in alternate rows. If sown in every row it prevents picking for some time after dew or rain. The other space can be sown with rye quite late in the season. A treatment that would cause one soil to give good returns might bring about very different results in another. The grower must study the character and requirements of his own land to obtain the best possible returns. My soil is clay.

"From experiments conducted at the station here I find Worden, Delaware, Lindley, Niagara, Concord, Agawam and Catawba the most profitable varieties. Campbell's Early is the most promising of the newer varieties."

Some spray and some do not. I find the best apples are to be found where spraying is done.—(R. Collacutt, Durham Co., Ont.

PRUNING IN JUNE

L. W.

PETER PRUNING KNIFE used to say, "Prune when your knife is sharp," meaning, we suppose, that it mattered little as to the season, so long as the work is done some time. The month of June, however, has one especial advantage over other months, in that it is the chief growing season of the year, and wounds made this month begin at once to heal. The tendency to fruit bearing is also increased by summer pruning, because the removal of

the branches of foliage, gorged with elaborated sap, is a check upon the wood growth of the tree.

Very little attention is given in Ontario to summer training of the grape vines, and, as a rule, the vineyards are a hopeless tangle before fruit season. Could our growers give a little more attention to directing the growth in June and July, lopping off a great deal of needless wood, we believe better fruit would result.

COMMERCIAL BULB GROWING

JOHN A. CAMPBELL, SIMCOE, ONT.

IN growing *Gladiolus* bulbs for commercial purposes the object is to secure good strong bulbs, little attention being paid to flowers.

A good coat of barnyard manure is applied and plowed under in the fall. In the spring, as soon as the soil is dry, the land is again plowed, and it is then time to plant.

Shallow furrows are thrown out with the plow about 2 feet 9 inches apart. Men follow with hoes, the object being to make an even drill, 4 inches wide and about 4 inches deep for the larger bulbs, and somewhat shallower for younger stock. The bulbs are strewn quite thickly in the drill and boys follow and place them, keeping them an inch or two apart, and covering them with hoes. A few days before the new growth appears I run over the drills with the rake, which breaks any crust that may have formed, mellow the soil and keeps the weeds in check.

CULTIVATION DURING THE SUMMER.

Summer cultivation consists simply in keeping the soil well stirred and the plants free from weeds. I first use a harrow tooth cultivator, and when the soil becomes firmer an ordinary one. This year a new two-row pivot wheel cultivator, drawn by two horses, and completing two rows at a single passage, will be used. As soon as the flowers appear the spikes are cut. This is done in

order to throw the whole strength of the plant into the bulb.

Large growers in the United States derive considerable revenue from the sale of the flowers, shipping them to the big cities, but in Canada the demand is limited.

PLANT EARLY.

The commercial grower plants as early as he can in order to have a long season to mature the bulb. I generally have most of mine planted in April. A Canadian seedsman's catalogue states that bulbs may be planted from early in May until the end of June. This is all right if some late flowers are wanted, but well ripened bulbs cannot be expected from late planting.

It is interesting to note, from a grower's standpoint, how the improvement in any flower tends to increase consumption, especially in this case. It is to a Canadian, Mr. H. H. Groff, of Simcoe, that we are indebted for the greatest advance made in the *Gladiolus*.

Last year Mr. Cowee, who grows Groff hybrids in the United States, had 70 acres, and this year he will have 80 acres closely planted. Some five acres or more were grown last year at Simcoe, and instead of importing most of our bulbs as formerly, considerable quantities were exported.

SUMMER TREATMENT OF WINTER WINDOW PLANTS

WM. HUNT, ONT. AGRIC. COLLEGE, GUELPH.

NO one who has even the smallest collection of window plants should be without an ash-bed made of coal ashes, on which to stand plants in pots during the summer, to give them the rest many of them require after having done duty in the window the preceding winter. The best position for the ash-bed to suit most window plants is on the north side of a fence or building. In the event of this position not being obtainable, the partial shade of a tree or shrub will answer the purpose very well. The great point to be secured is to have the plants in a position where they are shaded from the sun for an hour or two before and after the middle of the day.

All the material that is really necessary to make the ash-bed is some coal

ashes that have been sifted through a fairly fine sieve. The ashes should be spread to a depth of 3 or 4 inches—or even deeper for large plants—over a space of ground sufficiently large to contain the plants to be placed there. If any of the pots are to be plunged or sunk in the ashes, it would be best to remove some of the original soil to the depth of 3 or 4 inches, filling up the space with coal

ashes the plants in them will require much less water than if merely stood on the ashes. In plunging pot plants, about an inch of the rim of the pot should be above the surface of the ashes. A rough board frame a few inches in depth could also be put together roughly to hold sufficient ashes for a few plants if thought advisable.

This ash-bed will make an ideal place for



A Beauty Spot For Travelers' Weary Eyes.

The idea of improving the station grounds along its line by planting flowers and shrubs was first started by the Canadian Pacific Railway over six years ago by Mr. N. S. Dunlop, then a resident of Toronto. The first year Mr. Dunlop furnished the seed out of his own garden. This year there are between 900 and 1,000 gardens along the railway. The illustration shows the station grounds at Windsor, Ontario. The agents are not allowed to grow the flowers but are encouraged and assisted to do so. It is a splendid work that is bringing excellent returns.

standing out or plunging many of the pot plants in during the hot summer months of July and August. Much of the trouble that most window plant growers have from earth or garden worms in flower pots could be avoided if a proper place, such as I have described, were prepared to stand the pots of plants on, as the earth worm will not penetrate through or live amongst coal ashes. Many fine plants are ruined very

season by the drainage in the pot becoming choked by earth worms.

Imperfect drainage in pot plants soon produces a sour condition of the soil, and consequently an unhealthy plant. If the ash-bed were in more common use during summer by amateur plant growers than it is, there would be fewer failures with window plants than there is where plants are stood about on common garden soil, and where the moisture caused by watering the plants is always a great inducement for earth worms to congregate. Gravel or coarse sand are good materials to stand pot plants on during summer, but neither of them are as effective as coal ashes.

FLOWERS THAT WILL BE BENEFITED.

Amongst the plants that will be benefited by being given the position mentioned are Azaleas, Pelargoniums, old plants of Geraniums, Palms, Rubber Plants, Aspidistras, Fuchsias, Cordylines, *Cyperus alternifolia* (Umbrella plant), most varieties of Cacti, as well as many of the stronger growing winter flowering Begonias and other plants. Most of the pots of the plants mentioned can be plunged—or partially plunged for a few inches, perhaps—in the ashes so as to require very little attention during the summer. The pots of Cacti, however, should not be plunged in the ashes, as there is danger of their getting too much water at the roots. The Cacti plants would do much better if they stood away by themselves, where they could be given special treatment in watering, as a too plentiful supply at the roots is oftentimes the cause of non-success in Cacti culture.

Many of the plants mentioned, such as Palms, Rubber plants, Aspidistras and Fuchsias in flower, make splendid decorative plants for grouping or dotting in shaded positions on the lawn during summer. When these are used for this purpose it would benefit the plants very much if the pots were plunged in the soil nearly

or quite to the rim. If about 2 inches of coal ashes were placed underneath the pot it would prevent, to a large extent, the intrusion of earth worms into the pot. A handful of air-slaked lime sprinkled underneath the pot will answer the same purpose, as the garden worm has a great dislike to lime.

A good remedy for earth worms in the soil of potted plants is to give the plants a watering with a weak solution of lime water. The same quantity of lime—about a pound—as before mentioned, put into about two gallons of water, will make a strong enough solution. A teacupful of this applied to the soil once or twice at an interval of a week between each application will usually expel the worms from the pot, and will not injure the plant. The lime should be allowed to settle in the solution and the solution be strained off before using.

HOW TO REST PLANTS.

The best and really only available method of resting most window plants in summer is by placing the plants in a cool, partially shaded position and by giving them a very limited supply of water at the roots, or in the case of some kinds of bulbous rooted plants withholding water altogether from them. This is the case with the bulbs of the Freesia when they are through flowering. The soil in the pots should be allowed to dry gradually until the foliage is quite yellow, and no more water should be given them until they are started into growth again in the autumn.

Many of the herbaceous varieties of the Amaryllis require almost the same treatment but not quite as severe as the Freesia, a little water very occasionally during the summer being best for most varieties of Amaryllis. The Volutas and evergreen Amaryllis again should be given sufficient water to barely keep the soil moist during summer, as a too dry condition of the soil does not suit these last named.

SWEET PEAS IN THE GARDEN

EDWIN UTLEY, TORONTO, ONT.

SWEET PEAS require plenty of moisture. Some growers recommend pouring a stream of water into the trenches until they are full, and then not watering again until they are dry. I have not found this system beneficial.

The greatest enemy the Sweet Pea has in the hot weather is the red spider, or as some call it, "the mite." These attack from the ground up, and the result of their work is shown by the leaves starting to wither and dry up near the earth, and gradually doing so higher and higher until the vine droops and dies long before it has reached maturity. The best preventive for this is a good sprinkling of water, every day, and in the very hot days twice a day.

Fix your hose nozzle so that it will give a moderately fine spray, and get the water all over the foliage, back and front if possible. Never let the ground get thoroughly dry, and never keep it too wet. The quantity of water they require at the roots will depend very much on the soil: if it is sandy and of a very porous nature you can hardly give them too much, if the soil is clay be more sparing, and should the surface bake and become hard (as all clay soils will do), rake the surface gently about an inch deep. If your seeds come up very thickly, pull up every other one, until the plants are not less than 3 or 4 inches apart.

Have the supports for the vines to climb ready as soon as they are 2 or 3 inches in height. Do not, as I have seen many do, leave the plants until they are quite tall, before giving them something for the tendrils to cling to. The very best material for this purpose is brush. If you cannot get this, poultry netting with meshes 1 inch or 1½ inches in diameter is very good, or put in some 2 x 4-inch scantlings every 10 feet in the row, leaving them 6 feet out of the ground, and stretch a galvanized iron wire (about No. 10) on each side of this scant-

ling every six inches. By putting the 4-inch side of the scantling across the row, this will give two lines of wire 4 inches apart, with the peas growing up between.

If the vines are allowed to grow too tall before giving them support they become crooked and cannot afterwards be straightened, and your flowers will have very crooked stems. The rows of wire need not be put on all at once, but can be put on by two as required. Keep the posts stretched apart by nailing 1 inch by 1½ inch strips (furring) from post to post along their tops.

Sweet Peas will not thrive in a shaded place. Let them have all the sun you can. Keep every flower which is fully developed cut each day. Do not attempt to save seed from the vines you are cutting flowers from. If you want to save your own seed, keep one plant of each kind for that purpose, and don't cut any flowers from that one at all. You cannot hope to get good seed from a plant that is continually exhausting its vitality in its endeavor to replace the flowers you keep cutting away.

RAISING LARGE FLOWERS.

If you want to get extra large flowers for exhibition or otherwise, disbud the same as you would a Chrysanthemum, and only let the number of buds come to maturity that you require. The best time to water is in the evening, but I have never found any damage done even when watering on a hot day with the sun full out. Cut what flowers you want before you begin to water, as the water and sun combined will damage the flowers that are open.

If you find the usual bright green of the foliage is becoming pale your ground is probably not rich enough. When this is the case I have found a heaping tablespoonful of nitrate of soda dissolved in a pail of water and poured along the roots about once a week, very beneficial.

SUMMER CULTURE OF GERANIUMS

WM. HUNT, ONT. AGRIC. COLLEGE, GUELPH.

If nice plants and a good supply of the bright showy blossoms of these popular plants are wanted during the autumn and winter months, the plants must be specially grown during the summer for this purpose. Even the all-enduring geranium rebels at doing duty in the flower border all summer and being lifted in the fall to do duty in the window during winter as well. Plants treated in this way seldom give good results in winter. This treatment is often accountable for the poor, lanky and almost leafless specimens of these plants one often sees in windows during early fall and winter.

Old plants of geraniums that have become tall and unsightly looking can by proper treatment be made into nice bushy plants by autumn if started on now.

The plants should be first cut severely back to within a few inches of the old, hard wood. After the cutting back process the soil in the pots should be kept only moist, not saturated with water. As soon as growth commences, which should be in three or four weeks, the plants should be taken out of the soil they are in and potted into a pot one or two sizes smaller than the one they were in. This process is called potting back by professional plant growers. The soil used when the potting back is done should be composed of two parts of loamy potting soil and one part of fine sharp sand.

If the plant has a large supply of roots it may be necessary to shorten them so as to get the remaining roots into the smaller soil pot. Water the plant well once after the potting, but do not give it too much water until the growth has well commenced. The soil should be kept moist, but not saturated with water. In three or four weeks the plant should have made a growth of several shoots 2 or 3 inches in length. When the growth has attained to about the length mentioned the plant should be repotted into a pot two sizes larger, or about

the size it was originally in, and a good rich loamy compost used with only a small admixture of sand in it. A few broken pieces of pot should be used for drainage when repotting.

HOW TO WATER THE PLANTS.

Water the plant once so as to moisten all the soil, then give water only when the soil



Cutting Back the Geranium.

When it is desired to keep an old geranium plant for use in the winter time it is well to cut it back every year. It can be grown in the open garden during the summer.

appears dry. When the plant has commenced to make good growth more water can be given it as required. An old plant of geranium treated in the manner I have described can, if it is cut back any time in June, be grown into a nice specimen in time to take into the window in autumn. The plant can be grown as described out in the open garden during summer. It may be advisable, for ease of management, to plunge the pot into coal ashes, as recommended in another article in this issue.

Young plants of geraniums in three and a half or four-inch pots, the same as used for planting out at this season in beds or borders, can also be grown on specially for winter flowering. The treatment is a little different from that described for growing on old plants.

The young plants should be at once potted into 6 or 7-inch pots in good heavy potting soil, and the pots plunged to the rim in the open ground. An inch or two of coal ashes should be placed underneath the pot before it is sunk into the ground, or the pot can be plunged altogether in coal ashes. The plant should be well watered once after re-potting, but not over watered. More water can be given after the plant has well started into growth.

PINCHING BACK.

About every two or three weeks, until about the first week in August, the tips of the young shoots or growth should be pinched out. This can be done at any time until August, when the young shoots are 5 or 6 inches in length. By pinching out just the tips of the shoots the plants are made to grow bushy and shapely, as well as growing a larger number of shoots than they would if the pinching process was omitted. All the blown buds should be pinched off as soon as they appear. The plant should not be permitted to open a flower bud until September, when the flowers should be allowed to grow.

In September, before frosts appear, the plant can be lifted into the window or under the cover of a veranda on cold days and

nights, until it is taken permanently into the window. If the pot is very full of roots in the fall it may be necessary to pot it in a slightly larger pot, but as a rule a 7-inch pot is large enough for almost all geraniums grown in the way I have described. Almost any of the ordinary bedding varieties of geraniums treated in this way make good winter flowering plants, and will give good results with their bright trusses of bloom if placed in a bright sunny window during the winter and given only ordinary care and treatment.

GOOD VARIETIES FOR WINTER FLOWERING.

Amongst the many single flowering varieties suitable for winter flowering are Mrs. E. G. Hill, salmon; W. A. Cheffant, crimson scarlet; Gettysburg, magenta scarlet; Lucrece, bright pink with white center; Phyllis, pale salmon; Madonna, pale pink. Amongst the double and semi-double varieties are Thomas Meehan, pink; Jean Vase, pink; Mme. Jaulin, magenta scarlet; Hermine, white; La Favorite, white; Marie la Rue, magenta pink; M. A. Bonheur, scarlet; Marquis de Gallard, rose color shaded. Many of the Bruant type are strong growing pot plants, Bruant, Gustave Director, Le Coutras and Alphonse Remy being amongst the best for pot culture.

The bronze and variegated leaf varieties include the Mme. Saleroi, Wm. Langley, Marshal McMahon and Happy Thought, which are well adapted for growing in window culture. All of the fringed leaved geraniums are also suited for the method of summer culture described.

There is a good lawn in front of our school. By the side of the school we have flowering shrubs and small flowers. Ferns have been planted around the outside fence, and on the whole we try to keep our grounds so beautiful and as up-to-date as possible. (E. Downey, Port Perry, Ont.)

You cannot grow a Spy apple in a shaded-in place, where it will lack pear and sunshine.—(Wm. Rickard, N. York, Ont.)

Severe pruning and judicious fertilizing are one of the secrets of success in apple growing.—(J. S. Lee, Bartonville, Ont.)

ARRANGEMENT OF THE CITY GARDEN

J. E. NORTHWOOD, ONT.

THE gardener who has as his object the beautifying of his home should direct his efforts more to the massing of color and the effective grouping of plants than to the cultivation of prize specimens. The average city gardener will not allow the space which is required for the production of perfect plants and at the same time permit the massing of color and foliage that is required to cover unsightly objects, break the straight lines of fences, round off abrupt corners and give an artistic effect to the grounds.

Perhaps the most useful plants to overcome the disadvantages of a city garden are the flowering vines. Of these the different varieties of clematis, the Japanese hop, some varieties of gourds and also the morning glory will be found very satisfactory. Another very good climber is the Japanese Dolichos or Hyacinth bean, which has a very luxuriant growth, and which in August is covered with beautiful spikes of sweet pealike flow-

ers of pure white or dark violet coloring. After flowering shrubs, such as the *Hydrangea paniculata*, *Deutzia Lemoini*, *Azalea mollis*, *Spiraea* or the common white snowball, if kept free from aphids, can be used to good advantage in a small garden. A good plant of the *Ricinus* or castor oil plant, with its tropical growth, is also useful for its foliage effect.

GRASS ADDS TO THE EFFECT.

A plot of well kept grass, even if very

small, adds greatly to the appearance of a garden and shows off to advantage the shrubs and plants if they are arranged with due regard to their habit of growth. Strict formality and set designs in a small garden are entirely out of place. A much better effect is obtained by simply endeavoring to show the plants to their best advantage, at the same time keeping a certain amount of regularity in the arrangement and also pay-



One of the Prize Gardens in the Lady Minto Competition.

Great interest has been taken in Ottawa during the past few years in the garden competitions inaugurated by Her Excellency Lady Minto. A portion of the gardens of Mr. J. E. Northwood, one of the winners in last year's contest is here shown. The flowers to be seen are a collection of some of the easiest grown and freest flowering plants, such as petunias, gladioli, c. tropicæ, some of the better class of perennial phlox and some others, all of easy culture and effective colorings.

ing considerable attention to neatness.

June has been found the most satisfactory month for starting city garden competitions. By that time the gardens should be in good condition, with most plants well advanced in growth and making a good show of bloom. May is too early, as the majority of flowers then in bloom are spring flowering bulbs, and the gardener who spends the most money is almost sure to have the best showing.

THE SELECTION OF BEDDING PLANTS

E. F. COLLINS, TORONTO, ONT.

THE selection of bedding plants for the bed or border is often a source of worry to the experienced gardener, and more so to the amateur and small cottage gardener. The chief points to bear in mind are to procure plants that will grow in the position you wish to plant them, and also to make a bright effect and have a sweet fragrance from a very limited number of plants.

For a small bed on the lawn a few scarlet geraniums in the centre, with a row of snapdragons next, and a row of sweet alyssum on the outside, with about three tobacco plants (*Nicotiana Affinis*) dotted in between the geraniums, will give a fine effect and also a sweet fragrance in the evenings. If a lot of flowers are wanted for cutting, in place of the above use zinnias, asters, stocks, phlox, with dwarf nasturtiums on the outside, all of which can be bought very cheaply by the box, which usually contains about a dozen plants each.

AN ATTRACTIVE ARRANGEMENT.

Another pretty bed is made by using a few dark coleus in the centre, then a row of pink geraniums (*Madame Balney* is the brightest pink), and for the outside row use silver leaf geraniums (*Madame Saleroy*), sweet alyssums, or blue lobelia. An odd corner in the back garden can be made very

attractive with a very few plants by using a couple of cannas with two or three tobacco plants (*Nicotiana Affinis*) at the back of the plot, then a plant or two of *Salvia Splendens*, or as it is commonly called, scarlet sage, next a few asters mixed with stocks. Place these two together, as the stocks will be over and can be pulled up by the time the asters want more room. Next to them put a few snapdragons and phlox (*Drummondii*) in the front. This will give a variety of flowers to cut from the whole summer and until frost.

Tuberous Begonias are also very effective and do well when planted in a partially shaded location and freely watered. They are fairly cheap and easy to procure. Two or three dozen hills will give a fine show if matted together in a small bed.

The well known *Begonia Vernon*, and the more dwarf variety, *Ergoldii*, are also very pretty, and they usually produce flowers of all shades, from pure white to dark pink and red.

If you have a woodshed or board fence, don't forget to plant a clump of *rudbeckia* (*Golden Glow*), a couple of *cobæa scandens*, with a few plants of *gaillardias*, then a few *petunias* in the front, and you will transform an ugly view from your window into a very pleasing one and at small cost.

GOOD USE FOR THE FILTHY WEED

WM. HUNT, ONT. AGRIC. COLLEGE, GUELPH.

IT is often difficult for plant growers to secure tobacco suitable for making a solution of tobacco water to be used as a remedy for either the green or black aphid that infests so many varieties of greenhouse and window plants. The ordinary commercial plug tobacco is of very little use.

By sowing a few seeds at this season, of some of the coarser growing tobacco or *Nicotiana*, a supply of tobacco leaves can be

secured that will last the whole season. The seed should be sown on rather light soil, and the plants set out as soon as large enough into some good rich garden soil, about 18 inches or 2 feet apart. The soil around the plants should be well surface stirred.

In early autumn, before frost, the plants should be cut off close to the ground and the whole plant hung up in an open airy shed, where it can stay all the winter if kept

dry. The leaves of the tobacco grown in this way will make a splendid tobacco solution to destroy plant destroying insects, especially green and black fly or aphid, and thrip that infest rose bushes, grape vines, ferns and many other plants.

The best variety of tobacco to grow for this purpose is the Connecticut seed leaf or some of the coarser growing kinds of tobacco. The purple flowered *Nicotiana* is about the best of the decorative varieties to grow for making the tobacco solution.

FLOWER AND PLANT LORE

EDWARD TYRRELL, TORONTO.

FROM all parts of the world the historians of bygone centuries have contributed their accounts of the rich assortment of flowers in demand for ceremonial purposes. Associated with the customs which had important significance in the historic days of Greece and Rome, we have abundant details of the skill and care displayed in procuring for religious purposes the choicest varieties of flowers.

The profuseness with which flowers were used in Rome during triumphal processions is proverbial, in allusion to which Macaulay writes,

"On they ride to the Forum
White laurel boughs and flowers
From house top and from windows
Fell on their crests in showers."

and the Coronation, which we now call the Carnation, was a favorite.

Carnation *Dianthus*, from *Dios dicine*, *Anthos, flower*—di me flower, flower of love, July flower. Up to the beginning of the 16th century writers gave it the name Coronation, in allusion to its use in chaplets or from the dented or toothed above like to a little coronet. Pliny gives a long list of garland flowers used by the Romans and Athenians in which the Coronation held such a high place that it was called by the name, Flower of Love.

After the 16th century, or thereabouts, the word Carnation came into use as expressive of the color, the hue or color of one's skin or flesh, a light rosy pink, but sometimes used for a deeper crimson color, as in the Carnation flower. This carnation color is often used by painters to express

the various tints of their colors, and when this is done natural, bold and strong, and is well colored, they say of the painter that his carnation is very good.

THE FLORISTS LIKED IT.

It is not known how soon it became a florists' flower, but it must have been early, as Gerard, who was contemporary with Shakespeare, says "a great and large volume would not suffice to write of every one in particular, considering how infinite they are, and how every year, and every climate and country bringeth forth new sorts, such as have not heretofore been written of, some whereof are called Carnations, others Clove Gilloflowers, some Sops in Wine, some Pagians or Pagon Color. Also a Gilloflower with yellow flowers, the which a worshipful merchant of London, Mr. Nicholas Lite, procured from Poland, which before that time was never seen nor heard of in these countries. This great Carnation Gilloflower hath a thick round woolly root, from which riseth up many strong jointed stalks, set with long green leaves by couples, on the top of the stalk do grow very fair flowers of an excellent sweet smell and pleasant carnation color, whereof it took its name, *Cariophyllus maximus multiplex* (the great double carnation).

The Carnation belongs to the Pink (*Dianthus*) family, and on account of its delicious fragrance, closely resembling that of the Clove of Commerce, or Clove Pink (*Dianthus cariophyllus*), the latter being the generic name of the Molacca Tree, from which the spice is obtained.

FORCING VEGETABLES FOR EARLY MARKET

A LINE of work that promises to develop into an important industry has been undertaken by a number of the leading fruit growers situated along Lake Erie in Essex county. It is the raising of vegetables in greenhouses and under cotton. By planting the vegetables early in March it is possible to force them so that they will be ready to market in June, when vegetables are scarce and realize high prices.

In ordinary years cucumbers raised in this way are ready to market about June 1, which is some six weeks earlier than the regular crop. Tomatoes are ready about the second week in June and can be sold until the regular crop comes in during the latter part of July.

"So strong is the demand for fruit raised in this way," said Mr. H. W. Dawson, the well known commission dealer of Toronto, "I am satisfied there is a good opening for people favorably situated who will take up this work. The vegetables market-

ed by Ontario growers at this season have been of excellent quality and have created a demand which is likely to grow. The vegetables sold at this time do not meet with much competition from American growers, as the period comes between the arrival of Florida crops and those from Mississippi."

NEW HOUSES ERECTED.

An editorial representative of The Horticulturist visited Leamington recently, where a number of these greenhouses and cotton frames have been erected this spring. About 20 growers are raising vegetables this year. Two years ago there were only four or five. One of the largest plants is owned by

Messrs. Hillborn & McLachlan, of Leamington, who were the first to take up this work. Mr. Hillborn started seven years ago with a small greenhouse 11 x 24 feet in area. He now has three greenhouses about 18 x 50 in area and 2,000 yards of cotton frames. He is also using a large number of glass frames. This year Mr. Hillborn has put up two new forcing houses 200 feet long and 10 feet in width, and a third one 10 x 100 feet.

"The idea that work of this nature might be undertaken profitably," said Mr. Hillborn to The Horticulturist representative, "first came to me when I noticed the nature of the soil in this section, much of which is



Combination Greenhouse and Cotton Frames, No. 1.

In Essex County, as described in this issue, the forcing of vegetables for the early market is becoming quite a business. The vegetables are started in greenhouses early in March. Later, they are set out in cotton frames and sometimes are finally set out in the open. The forcing houses here shown are on the farm of Mr. J. D. Fraser, of Leamington, who has undertaken this work on quite an extensive scale.

a light sand, containing a large amount of mineral deposit, including iron. This causes a quick maturity of fruit and vegetables. My start was made on a small scale, but the results obtained were sufficiently encouraging to warrant me enlarging my operations. During the first two years I was the only grower, finally one or two others started until two years ago there were five; this spring there has been a marked increase in the number raising vegetables in this way."

WHEN THE SEED IS STARTED.

"During early March," continued Mr. Hillborn, "the seed of the tomatoes and cucumbers is started in the greenhouses.

When the seedlings have four leaves, which is usually about the middle of March, they are transplanted into larger boxes and given more space. About the last of March the tomatoes are again transplanted into pots and divided boxes, so that each plant has four inches of space to grow in. Cucumbers are only transplanted twice, the second time when they have six or seven leaves, or about the first of July. They are then put into large boxes and pots.

"This year the third transplanting of the tomatoes was late, taking place from April 20 to the second week in May. At this period they were taken out of the greenhouse and placed under the cotton frames to harden. The tomatoes were planted in the open about the middle of May, although some seasons this work can be done much earlier. Cucumbers are kept under cotton all the time. During June the cotton is sometimes taken off for short intervals. It is no easy matter to make a success of the cucumber crop, as it requires a large amount of water. I frequently use 100 barrels of water at one application on a quarter acre of land.

THE CULTIVATION GIVEN.

Tomatoes in the open are given the same cultivation as corn. About May 15, or sooner, the plants are cultivated with a horse

cultivator and later with a hoe. This cultivation is conducted thoroughly until the crop is being picked freely, about July 15. The ground is worked over once every week or ten days. In wet seasons less cultivation is necessary. Only shallow cultivation is practised, as deep cultivation cuts the roots of the plants. On this account it is going out of favor, not only in vegetable growing, but in fruit raising as well.

The land where I raise my vegetables is so rich little manuring is done. For melons I use barnyard manure well decomposed. The second year I follow with tomatoes, which absorb any of the fertilizer not taken up by the melons. Where the land is very rich the tomatoes are likely to make too large a growth. To maintain the fertility of the soil cover crops are sown as soon as the vegetables are picked. Rye, oats or turnips make about the best and prevent washing of the light soil.

The crop is all sold to individual buyers located in about 20 towns in western Ontario. Every week I send them quotations. They order what they feel they can handle, and the surplus is sent to commission men in the leading cities. Four or five of these buyers in the different cities are telegraphed and the vegetables are sent to the sections where the best prices are offered."

CELERY GROWING

H. R. ROWSOME, BURLINGTON, ONT.

FOR late celery plants that have been sown in the field and thinned out to 100 to the foot, must be set out during the first week in July in order to reach marketable size by the last of October. Being grown so close together they have not many fibrous roots and do not get as quick a start as those plants which have been transplanted into hot beds. They ought to be as thick at least as a lead pencil so as to

have sufficient body to live through hot July days until they get rooted. Of course the plant must be placed only in the moist earth, which must be very firmly pressed against it. Plants that are to be set out after the middle of July are grown to a large size in cold frames after the manner of those transplanted for early celery.

Early celery, *i. e.*, the self-blanching kinds, such as Paris Golden and White

Plume, are blanched by placing boards one foot wide snugly up against each side of the row. If earth were used before September the celery would rot. For late celery the self-blanching varieties do not need blanching, as they blanch all too soon in the storehouse. The green and red celeries are whitened by pulling earth up against the row with a dandelion rake (about 16 inches wide) after the earth has been loosened up with a cultivator.

If the celery is to be kept a long time it ought not to be blanched higher than 2 or 3 inches from the root, because blanching is the first step towards decay. Then, when it is kept a long time in the cellar it gradually blanches itself. Most varieties require some earthing up to make the heads compact. This earthing up is greatly facilitated if the plants are set out in a shallow trench or depression made by a double mould board plow; but of course the plants must be large or they would be smothered out by the washings from thunder storms.

SHOULD BE LEFT OUT.

Celery, for late winter use, ought to be left out until just before the ground freezes because two weeks of warm weather while it is in the storehouse will destroy it. It will stand a great deal of frost if it is

banked up high enough to keep the hearts from freezing.

In storing celery the main object is to keep it from heating. The usual method is to stand it up in stalls, *i. e.*, between the boards that have been used for blanching, they stand on edge about a foot apart. If it is packed in very tightly it will heat; while if it is not pretty snug, it will all topple over in one direction, and the heads, lying upon each other, will rot, besides the hearts grow upwards at right angles to their respective heads. There is no danger of the heads wilting, as the celery sweats and gathers moisture. This method is further improved by packing straw or leaves in with the tops so that the tops will be tight and the stalks loose. The tops are allowed to freeze. Another way, which is too laborious to practise on a large scale is to place the celery in earth.

If the celery heats the outside stalks turn yellow; there is the odor of mouldy hay and your crop rots in two or three weeks. If you try to market it the heads have to be trimmed down to a very small size and the price is correspondingly low. It is easy enough to grow celery, but very few can keep it until the middle of March in such a condition that it does not have to be trimmed down almost to the hearts; and celery is hard to sell in the early winter.

JUNE WORK IN THE VEGETABLE GARDEN

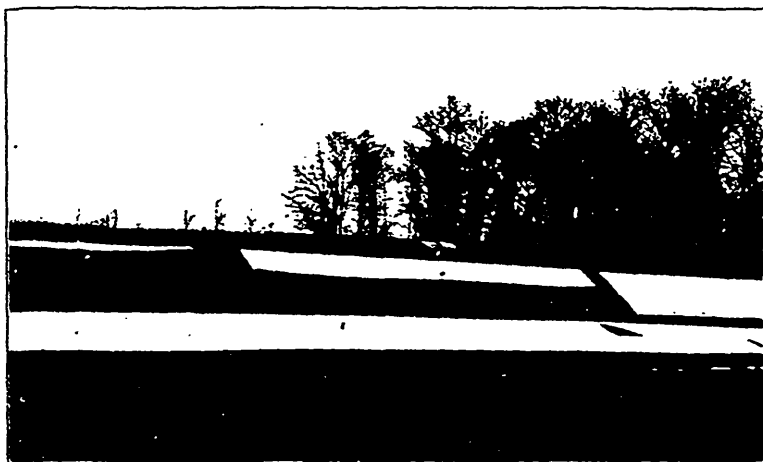
WM. HUNT, ONT. AGRIC. COLLEGE, GUELPH.

A SOWING of peas and beans may yet be made for late crops. Peas are not, however, a very reliable crop sown now, unless the season is very favorable. The green varieties of dwarf beans give the best results for late crops, and are of more service for pickling or salting down if there is a surplus of them, than are the yellow wax-beans.

A row or two of late carrots and beets sown about the end of June or early in July will,

if the season is at all favorable, produce better roots for winter use than the early sown crops. Corn can be sown at any time during June, and will come in before frost generally. Late cabbage and cauliflower can oftentimes be planted to advantage between the rows of early potatoes before the latter are dug. A week or two can be gained in this way, as sometimes there is scarcely time for cabbage and cauliflower head if they are not planted until after early

potatoes are dug. Late cabbage and cauliflower should not be planted too near together. Two feet between the rows and from 18 to 22 inches apart in the rows is about the proper distance. Some of the larger growing kinds of cabbage require 2 feet each way apart. Try some Savoy cabbage; you will not care for the quality of the flat Dutch cabbage for cooking purposes after trying the Savoys. These latter require less cooking than the ordinary cabbage, especially after a few sharp autumn frosts.



Cotton Frames Used For Vegetable Growing, No. 2.

The first person in Essex County to undertake the growing of vegetables under cotton for the early market was Mr. J. L. Hillborn, of Leamington. Starting on a small scale Mr. Hillborn has gradually enlarged his plant until now he has quite extensive cotton frames and greenhouses.

AN INSECT PEST.

The cabbage worm or caterpillar is very troublesome in summer time. Commercial growers spray the plants when young with a weak solution of paris green. A teaspoonful of green to two gallons of water is about the strength of the solution. This should not be used very late in the season, and should be thoroughly mixed before using. A safer solution to use, but not as effective, is a solution of salt and water. Two tablespoonful of salt dissolved in a gallon of water and sprinkled over the leaves once or twice a week will help to keep down

the cabbage worm or caterpillar. Dusting dry pyrethrum powder over the plants is also a preventive of these ravenous grubs.

GET AFTER THE BUGS.

To prevent squash bugs appearing on squash or vegetable marrow vines, the plants should be sprayed with kerosene emulsion two or three times from the time the plants are in flower first until the first fruit has well formed. Soot or wood ashes sprinkled on and around the stem of the plants, particularly on the underneath side of the foliage, every few days during the hot weather,

will often prevent the attack of the squash bug. The ashes or soot should be dusted on when the plants are damp with dew or after a rain. Prevention in this case seems to be the only remedy for these pests, as it seems to be impossible to get rid of these detestable and destructive bugs when once they get a strong hold on the plants. Partial shade, plenty of moisture and a good rich open soil

are necessary elements for the successful culture of vegetable marrows or squash. They will often grow splendidly on an old half decomposed rubbish or manure pile, making an unsightly spot sometimes one of utility and even of some slight picturesque beauty.

Keep the hoe going during the hot dry weather. The hotter the weather the more the crops will benefit by the ground being surface stirred. Water plants in the evening or early morning if possible, but water them at any time rather than allow them to suffer for want of water.

The Canadian Horticulturist

The Leading Horticulturist Magazine in the
Dominion.

1. **The Canadian Horticulturist** is published the first of each month.

2. **Subscription Price** \$1.00 per year, strictly in advance, entitling the subscriber to membership in the Fruit Growers Association of Ontario and all its privileges, including a copy of its report and a share in its annual distribution of plants and trees. For all countries except Canada, United States and Great Britain add 50c for postage.

3. **Remittances** should be made by Postoffice or Money Express Order, or Registered Letter. Postage stamps accepted for amounts less than \$1.00. Receipts will be acknowledged on the address label which shows the date to which subscription is paid.

4. **Discontinuance**—Responsible subscribers will continue to receive *The Horticulturist* until the publishers are notified by letter to discontinue when all arrearages must be paid. Societies should send in their revised lists in January; otherwise it will be taken for granted all will continue members.

5. **Change of Address**—When a change of address is ordered both the old and the new addresses must be given.

6. **Advertising Rates** quoted on application. Circulation 5,500. Copy received up to the 24th. Responsible representatives wanted in Towns and Cities.

7. **Articles and Illustrations** for publication will be thankfully received by the editor.

8. **All Communications** should be addressed:

THE CANADIAN HORTICULTURIST,
TORONTO, CANADA

TRANSPORTATION OF FRUIT.

Probably no class of the community who may have occasion to use the railroad and transportation companies of the country in the ordinary course of their business with the public, have a greater claim upon these public carriers for consideration and assistance in their efforts to satisfy their customers, than the fruit growers of Ontario. From the very inception of his effort to engage in the production of fruit, the grower is beset on every side with difficulties and obstacles that might well appal the most courageous and energetic. If "Hope deferred maketh the heart sick," under any circumstances it is certainly true in the fruit industry.

After having run the gauntlet of unsuitable soil and atmospheric conditions, and the liability to have had worthless varieties foisted on him by the unscrupulous "tree agent"; after having battled with the myriad fungous diseases and insect pests, and escaped the early and late frosts, he secures a good crop of fruit, the expressman or freight handler in a very short time often reduces the results of his care and efforts to a more or less damaged and demoralized condition. Even should his fruit pass through this ordeal in a fairly satisfactory manner it is liable to be delayed in transit for hours or even days, until finally it reaches its destination in a rotten and worthless condition.

For this so-called special service the patient and long-suffering fruit grower is charged the

highest rates possible. Surely the time is ripe for some relief in this respect. It is to be hoped the presentation of the facts and conditions of this trade to the proper authorities, as has been done, is all that will be required to secure a substantial improvement in the service and in the handling of this rapidly increasing business. A tariff of charges is needed that will commend itself to the public as being at once reasonable and in accordance with the principles of justice and equity. Now our fruit growers have put their hand to the plow they must not turn back.

THE FRUIT INSPECTION ACT.

It is interesting sometimes to "see ourselves as other see us." The United States Consul in Edinburgh reports to his government that the system of fruit inspection adopted in Canada, and subsequently renewed at British ports, has served as a guarantee to British buyers, of Canadian fruit. Canadian apple imports as a result, he says, are gaining a very strong position in Scotch markets, and in some cases displace United States supplies.

Coming from such a source this statement is a strong endorsement of both the wisdom and efficacy of our fruit inspection act. The views of the two British apple buyers expressed in this issue of *The Horticulturist* further emphasize this belief. Already this act has resulted in much good to the Canadian fruit trade. It does not seem unreasonable to expect that, after it has been in operation a little longer and its workings are still better understood on both sides of the Atlantic, its benefits will become even more apparent. As for our cousins to the south it will probably be a long time before they will adopt such a law. Action by individual states will not be effective, and it will be a difficult matter to induce congress to deal with the situation.

Unknown seven years ago in Ontario, the San Jose scale is now one of the worst enemies that the fruit growers have to contend with. When it crossed the Niagara frontier the entomologists, knowing its evil reputation, at once raised the alarm, but the majority of the growers made light of their fears and made no attempt to keep the scale from their orchards. The result is that to-day so serious have been the ravages of the scale, thousands of what would have been fine bearing trees are worthless. Many once valuable orchards are being torn up by the owners. The excellent work of the Ontario department of agriculture in tracing and destroying infected stock sent out by nurseries, appointing inspectors to assist in the control and eradication of the disease, and as meeting part of the cost of spraying material has undoubtedly been of great value to the fruit growers of the province. It is encouraging to hear that the fruit growers are now thoroughly alive to the seriousness of the situation and that there has been a great increase in the amount of spraying done to check the spread of the scale.

The big fruit, flower and honey show it has been decided to hold in Toronto next November, affords a splendid opportunity for the fruit growers and florists of the province. Both our fruit and our floral interests require advertising. Their importance is not sufficiently understood. The public at large needs enlightenment. We have all heard much of the magnitude of our dairy industry. Live stock men make a big stir each year at the winter fair and through their annual sales. Fruit growers and florists, but more particularly the former, should push themselves to the front in a similar manner and then stay there. By making a display of fruit and flowers next November, which will truly represent the province, they should attract sufficient public attention to do their cause much good. The Department of Agriculture deserves credit for starting the idea and for its financial assistance. The people directly interested now have the matter largely in their hands. The enthusiasm already displayed augurs well for success.

Many of the horticultural societies of the province are not doing good work. Some, in fact, do not even seem to know what they are expected to do. No attempt is made to hold regular meetings or exhibitions of fruit, flowers and vegetables; such a thing as a distribution of seeds is unheard of by the members, and apathy widespread seems to exist. This should not be. The excellent work being done by a number of societies, such as those at Ottawa, Perth, Guelph, Toronto, St. Catharines and Hamilton, shows what can and might be done.

The suggestion, therefore, that the horticultural societies of the province shall appoint delegates to attend the fruit, flower and honey show in Toronto next November, that they may meet to discuss matters of mutual interest seems an excellent one. It should then be possible to form a provincial association and arrange for the holding of similar meetings annually. Keep this matter to the front; it is worth careful consideration.

The objections expressed in this issue by leading buyers to the use of boxes for the shipping of apples will come as a surprise to many fruit growers. It is hard to attribute this dislike to anything more than conservatism in regard to the changing of the old order of things. Boxes have not yet become established as a commercial package and have yet to overcome many objections that promise to disappear in due course of time.

The Horticulturist finds it is short of copies of the January, February and March numbers published in 1901. Any readers who have spare copies of these issues in good condition will confer a great favor by returning them to this office.

I have enjoyed The Horticulturist very much the short time that I have taken it. It has been greatly improved of late.—(Stewart Burns, Prince Edward Island.

GROWERS ANXIOUS TO ORGANIZE

(Continued from Page 237.)

By-laws of the St. Catharines Cold Storage and Forwarding Co., Limited.

Whereas, the directors of the St. Catharines Cold Storage and Forwarding Company, Limited, deem it expedient that certain by-laws for regulating the affairs of the company should be made; now, therefore, be it enacted and it is hereby enacted,

MEETINGS.

1. That the annual meeting of the shareholders of the company shall be held at the office of the company on the fourth Thursday in the month of January in each year.

2. That a general meeting of the shareholders may be called at any time by the directors whenever they may deem the same necessary for any purposes not contrary to law or the letters patent of the company, and it is incumbent on the president to call a special meeting of the shareholders whenever required so to do in writing, by one-tenth part in value of the shareholders of the company, for the transaction of any business specified in such written requisition and notice calling the meeting.

3. That notice of the time and place for holding the annual or a general meeting of the company must be given at least ten days previous thereto, in some paper published in the city of St. Catharines, or by mailing the same as a registered letter, duly addressed to each shareholder at least ten days previous to such meeting, or by a personal notice delivered to each shareholder by a director or officer of the company.

4. That at general meetings of the company every shareholder shall be entitled to as many votes as he owns shares in the company, and may vote by proxy. No shareholder, however, is permitted to purchase more than 20 shares of the company's stock.

5. Questions at meetings shall be decided by a majority in value of the shareholders present, either in person or by proxy, and in case the number of votes are equal the president or chairman shall have a deciding or casting vote.

DIRECTORS.

6. The affairs of the company shall be managed by a board of five directors, of whom three shall form a quorum.

7. That the president and vice-president shall be chosen by the directors from among themselves at the first board meeting after the annual meeting.

8. That the president shall, if present, preside at all meetings of the company. He shall call meetings of the board of directors and shareholders when necessary, and shall advise with and render such assistance to the manager as may be in his power. In his absence the vice-president shall have and exercise all the rights and powers of the president. A director may at any time summon a meeting of the directors.

10. That questions arising at any meeting of directors shall be decided by a majority of votes. In case of an equality of votes the chairman, in addition to his original vote, shall have a casting vote.

11. That the secretary shall keep a record of the proceedings at all meetings of the board and of the shareholders of the company, and shall be the custodian of the seal of the company and of all books, papers, records, etc., belonging to the company, which he shall deliver, when authorized so to do by a resolution of the board, to such person or persons as may be named in the resolution.

12. That any shareholder holding not less than five shares of the company's stock, and not in arrears for payments on calls upon his stock, may be elected a director.

13. That the directors shall hold office for one year, and until their successors shall be elected.

14. That in case of the death of a director, or his being unable to act as such, or his ceasing to be a shareholder, the vacancy thereby created may be filled for the unexpired portion of the term by the board from among the qualified shareholders of the company.

15. That the company shall have a corporate seal of such design as the board may determine, which seal shall, whenever used, be authenticated by the signature of the president and secretary-treasurer.

16. That the board shall from time to time fix the salary or wages of the officers of the company.

17. That the sum of one dollar per meeting be paid to each director for his services.

18. That the board shall have full power to fix the amount of remuneration to be paid to any member of the board who may act in an official capacity.

STOCK.

19. That calls upon subscribed stock shall be made from time to time as the board may determine. No call shall exceed 25 per cent. of

the subscribed stock, and there shall be an interval of at least 30 days between calls.

20. That the board shall have power to summarily forfeit shares and the money paid on them, upon any call having remained unpaid for a period of six months after it shall be due and payable, and such forfeited stock shall thereupon become the property of the company and may be disposed of in such manner as the company in general meeting think fit.

21. That receipts for payment of calls shall be issued from time to time as such payments are made, but stock certificates shall only be issued when shares are fully paid up. * * *

22. That shareholders may, with consent of the board, but not otherwise, transfer their shares, and such transfers shall be recorded in a book required for the purpose. * * *

ACCOUNTS.

23. That the directors shall cause true accounts to be kept of the stock in trade of the company, of the sums of money received and expended by the company, and the manner in respect of which such receipt and expenditure takes place, and of the credits and liabilities of the company. * * *

25. That once at least in every year the directors shall lay before the company in general meeting a statement of the income and expenditure for the past year. A balance sheet shall be made out every year, or oftener if desirable, and laid before the company in general meeting, and such balance sheet shall contain a summary of the property and liabilities of the company arranged under the necessary headings.

BANK ACCOUNT.

26. That a bank account shall be kept in the name of the company at a bank to be selected by the board, and all checks shall be signed by the secretary-treasurer and president of the company.

Three other rules provide for the appointment of auditors, the borrowing of money, and the making of changes in the by-laws.

AN ENGLISH FRUIT BUYER'S VIEWS

J. B. THOMAS, COVENT GARDEN MARKET, LONDON, ENG.

If Canadian growers desire to stimulate the British demand it is necessary they should grow only the best varieties of apples.

As most of the standard varieties are very prolific, it seems a waste of time to cultivate sorts that will never be of any use for export. In indicating the best kinds to grow, I can almost confine myself to four, viz., Baldwins, Golden Russets, Spys and Greenings.

There has been an idea prevailing for some time that boxes are superior to barrels for packing fruit. This is a great mistake. Notwithstanding the fact that the London market takes every year hundreds of thousands of boxes of apples from California, Australia and elsewhere, yet for Canadian apples there is but one package, and that is the ordinary hardwood barrel. There is no question that apples, if properly packed in barrels, will carry better than in any other way.

There is another important point to be considered, and that is the shipping of the fruit and the necessity of employing only the best steamers. In my experience there has been more money lost by apples being shipped in slow ventilated steamers than through bad markets.

Of late a marked improvement has been apparent in the Canadian methods of growing, packing and marketing apples. The fruit inspection law in Canada has proved very beneficial, and also the different methods of packing.

Although the Nova Scotian apples have always been properly graded, yet it is only now that Ontario has taken this up generally. The result is it is much more satisfactory to buyers to know that the contents of the barrels are something like what is shown on the heads and that the middle part is not filled up with inferior and common grade fruit.

DEFINITION OF A NO. 2 APPLE

AN APPLE SHIPPER.

The committee appointed by the American Apple Growers' Congress last season recommended as a definition of a No. 2 apple the following:

"No. 2 apples may be $\frac{1}{4}$ -inch less in diameter than No. 1 apples, and not over 20 per cent. of the apples affected by defacement of surface by scab, dry rot, worms or other defects, shall be hand picked from the trees and not bruised or skin broken, shall be of a bright and normal color and shapely formed."

This definition of a No. 2 apple is of the very greatest interest to the Canadian apple grower. We have in Section 6 of the Fruit Marks Act a definition of No. 1 fruit that is in every respect satisfactory, and there is a constant demand for a definition of a No. 2; but the difficulty is that language appears to be hardly definite enough to mark out clearly the degree of imperfections that will be allowed in a No. 2 apple, because it is of course understood that a No. 2 apple is a defective apple.

The above definition of the Apple Growers' Congress has also been adopted by the International Apple Shippers' Association. I can not help thinking this definition is not workable. The reference to the size of the apple might pass, though it is little better than using the phrase, "Too small to grade No. 1." But the

most serious objection is the admission of 20 per cent. of defective apples, with little or no regulation as to the degree of imperfection in the individual fruits. The inference is that the remaining 20 per cent. would be free from scab, dry rot, worm holes, or other defects. Virtually, then, 80 per cent. would be No. 1 apples except in the matter of size. Now, size is of the least consequence of the qualities mentioned, so that practically a No. 2 barrel would consist of two grades, viz., fruit with worm hole and scab to the amount of 20 per cent., and 80 per cent. perfect fruit slightly smaller than No. 1.

This violates the first principle of true grading, in permitting different qualities to go in the same package. I, therefore, consider that, so far from making matters better, this definition makes matters worse. In looking for a description of a No. 2 barrel, the individual apples must be taken into account, and if certain blemishes are permitted they must be permitted in each specimen. It will not do to distinguish between certain specimens in the same package, except so far as to make a reasonable allowance—say 5 to 10 per cent.—for the inevitable errors that come in rapid work by the class of help that must be employed in packing fruit.

GRAPES FOR BRITISH COLUMBIA

WILLIAM FRETZ, JORDAN HARBOR, ONT.

I have been shipping grapes to British Columbia for at least three seasons. They were all crated and shipped by express, the bunches being selected. So far this market has not been very satisfactory.

The great objection to it is that as soon as grapes arrive there by freight, customers, who have placed standing orders, will wire cancelling all orders, while perhaps at least two shipments are in the express company's hands. In most cases these grapes are refused, causing loss.

I expect to continue shipping to my best customers, but there are others I would not do business with under any circumstances. All goods are shipped C. O. D., but this does not compel the buyers to receive them.

So far as Manitoba is concerned there is no apparent reason why, with proper facilities, we should not supply all the fruit consumed there. I have also made several trial shipments of strawberries to Winnipeg, but have not met with much success.

A Different Shaped Box Desired.

CRAZE & GOODWIN, MANCHESTER, ENG.

For ordinary fruit the barrel is the most profitable package for the Canadian dealer or farmer. Boxes should only be used for the highest class fruit, and should contain about 60 pounds weight of fruit.

The box of 36 pounds is too small, and there is too much waste space at the bottom, top and sides. The box should be half as long again so as to give it some appearance in the market. At present it is too short and dumpy.

The inspection of fruit in Canada and the new government method of grading are working out satisfactorily on our English markets.

The Wagner Apple for Export.—Mr. John Brown, inspector for the Department of Agriculture at Glasgow, reports to the Fruit Division, Ottawa, that the Wagner apple is much esteemed by some in the trade there, and if the fruit is of good size it is readily bought by certain of the best buyers. Others again will not look at this variety if they can get Spys or Baldwins, and class it next to Ben Davis. Its color and appearance are its redeeming points, as it lacks the flavor and juiciness of the two above mentioned varieties. Some dealers say it is a mistake to ship Wagners after the month of December, as they take on scald very easily.

I like The Horticulturist.—J. C. B., Galt.

Flowers for Guelph's School Children

A distribution of 500 packages of Semple's Branching Aster seed was made to the older scholars of the Guelph public schools during May by the Guelph Horticultural society.

The seeds are to be sown and the plants cared for by the scholars themselves at their own homes. An exhibit of Aster blooms grown by the scholars will be held early in September. The society also gave each scholar a printed bulletin compiled by Mr. Hunt, O. A. C., containing rules and regulations governing the competition, as well as a schedule or premium list, and full directions for the culture, cutting, and arranging the blooms for exhibition purposes. A copy of the bulletin will also be forwarded to each member of the Guelph society.

May Meeting Was a Good One

The first meeting of the year of the Ottawa Horticultural society was held during May. In spite of the lateness of the season there was a fair showing of flowers and vegetables. The exhibits were considered better than those made at the corresponding meeting last year.

In his opening address President P. G. Keyes referred to the increasing cultivation of both house and garden flowers in the city, and attributed a great deal of it to the good work done by the society. Members were urged to offer plants and seeds to their less interested friends and neighbors in order to create an interest in horticulture. Mention was made of the test conducted in Chicago, which showed that over 100,000 children in that city did not know the difference between a dandelion and a rose. An interesting talk on tulips was given by Dr. C. E. Saunders.

Among the special exhibits was a tray of beautiful pansies of numberless shades and hues, grown by Mr. W. Spindlow, of Rideauville. Among the chief prize winners were Messrs. W. H. Snelling, Jas. Rowley, R. B. Whyte, James Thorne, W. G. Black, James Cox, D. McLaughlan, J. F. Phillips, H. P. Carstesen and Dr. Fletcher.

All the Schools at Work

The Cayuga Horticultural society has just complete its spring distribution of seeds, plants and trees. No salaries have even been taken by the officers, and as much public interest has been excited as possible. The enthusiasm promoted by Mr. Goodman, the founder of the society, reached its annual climax at the meeting addressed by Mr. Race this spring, at which nearly 500 people were present.

The county council has given its annual grant to the grounds overseer for floral work. The high and public schools and local enthusiasts are not lagging in their good resolutions taken some years ago. A nice feature of the work is the enlivening of interest in the rural schools, particularly the Decewsville school, where Mr. W. J. Neale is principal. The members obtained by him give their society bonus to-

gether with several days' work with teams for the beautifying of the school grounds.—(F. G. Lishman, sec.)

Hold Garden Competitions

The directors of the Stratford Horticultural society are pushing garden competitions with excellent results. Prizes are offered for the best gardens, and our society gives annually seeds and bulbs to each member, requesting them to make exhibits at our annual show, for which we give prizes. Flower seeds in variety have been distributed, including sweet peas, asters, gladiolus, and this year tuberous begonias.

The prize list for our annual show, which will be held in the City Hall, August 31 and September 1, has been prepared. It is quite liberal, and includes many classes for cut flowers, fruit and vegetables. At the time of the show it is possible we may arrange to have a talk by the judge on flowers. There seems to be a great apathy on the part of the public generally regarding horticultural matters, although we have some enthusiasts who push things along.—(W. Sanderson, sec. Stratford Hort'l soc.)

Doing Excellent Work

The beautifying and cleaning of the old cemeteries of the town has occupied the attention of the Perth Horticultural society. This laudable work has been left entirely with the ladies, and the manner in which it has been performed has been such as to reflect the greatest credit on those interested.

During the summer months monthly meetings are held on the lawns of the members, and this has proven to be one of the most practical means of instruction of any undertaken by the society. Just now a movement is on foot, the initiative being taken by the society, to lay out a park in the town, and no doubt it will be carried to a successful issue.

The society has been of great benefit to the community, as it has been the means of instilling into the minds of the people in general a greater desire to beautify their homes and lawns, so much so that many are found that would compare very favorably with those to be found in much larger places. The success of our society is assured, as each succeeding year sees an increased interest and a larger membership.—(C. J. Foy, sec.-treas Perth Hort'l soc.)

Gave Away Trees.—The directors of the Lindsay Horticultural society this spring sent the members a few apple and pear trees, some Victoria black currants, and a few packets of flower seeds for spring sowing. The apple was the York Imperial and the pear the Worcester Seckel. We had a very interesting lecture from Mr. Hunt on window plants. There was a very good attendance. We have no special line of work laid out for the year.—(E. J. Trampton, sec. Lindsay Hort'l soc.)

The May Meeting Was Interesting

At the regular monthly meeting of the Toronto Horticultural society, held in May, an exhibition of bedding plants was made, and Mr. Wm. Hunt, of the Ont. Agri. College, Guelph, gave a good, plain and instructive talk on garden work for the season, describing the proper method of making a lawn, the places for the flower beds, and the classes of flowers suitable for the various places. He emphasized the great advantage of growing perennials in some of the permanent borders, naming many he thought not suitable and perfectly hardy. Un-sightly walls, etc., he said, might be covered with climbing plants, and rockeries be made in corners. In these ways a small plot of ground may be made a place of beauty. Many questions were asked and answers given by Messrs. Hunt, Manton, J. McP. Ross, and others.

The officers of the society and a large number of members and visitors were present. The society will hold a pansy show the first Tuesday in June, and near the latter end of the month the annual show of roses will be held, it being the desire of the society to stimulate the growth of hardy roses. Exhibits from friends outside the city will be much appreciated. Mr. Chas. E. Chambers, Exhibition Park, is secretary.—(Edward Tyrrell, pres. Toronto Hort'l soc.

Holds Good Shows

The Kingston Horticultural society in the past has applied itself to practical as opposed to theoretical work. Instead of defraying the expenses of speakers it has joined, year after year, with the city agricultural society, and put on a splendid horticultural show as part of the annual fair. Their displays of flowers, etc., on these occasions have been highly praised by outsiders as well as by citizens. It is doubtful if finer displays could be found anywhere. Splendid money prizes have been given, and these have greatly encouraged and stimulated interest in local horticulture and floriculture.

In all probability the Horticultural society will hold a separate show this summer or fall, as there is little prospect of a fall fair. To make this a success the society will use its strongest endeavor.—(Leman A. Guild, sec-treas. Kingston Hort'l soc.

Have Interested the Children

The Newmarket Horticultural society has completed arrangements and prize lists for its fifth annual flower show, to be held in the skating rink at some date in July. A promenade band concert will be given in the evening. There will be a school children's sweet pea competition, open to the children of the public and separate schools, for which no entrance fee will be charged.

A packet of the best strain of mixed pea seed has been given to every pupil 9 years of age and over, attending the schools, who has applied for it and who has agreed to grow the flowers for this competition. Although the bulk of the prizes will be offered for exhibits of flowers,

there will also be exhibits of fruits and vegetables.

We find the interest in horticultural matters, as well as the number of our exhibits, increasing very materially each year. This spring we held a meeting, which was addressed by Mr. T. H. Race, of Mitchell, who gave us an interesting lecture.—(Wm. Keith, sec. Newmarket Hort'l soc.

Have Given the Children Flowers

I would like to hear through your pages the methods adopted by other societies in distributing premiums to members. It has been the custom in Hespeler to allow members to make a choice to the value of 60 cents of any kind of shade, ornamental or fruit trees, shrubs, flowers or bulbs, and also to make their choice of premiums offered by The Canadian Horticulturist, as well as to receive that paper. If any one will tell us of any better method I for one would be glad to hear it. Our aim is to give every member, as far as possible, just what he most needs.

Our society distributed 200 geraniums and coleus among the school children during the second week in May. The teachers detained the children they thought would be likely to take care of a plant, after school, and the principal, the Rev. C. W. Cook, and the writer, in a few words, explained to the children the plants were the gift of the Horticultural society and that those who received them were expected to take every care of them. In the fall an exhibition will be held of all the plants, when a number of prizes will be given for the best plants. A few simple directions were given as to the treatment the plants require, and the children filed out each receiving a plant. The children were pleased, and in many instances the parents have developed an interest, partly perhaps to please the children. These are the first flowers many of the little ones have ever been able to call their own, and I believe will help to develop a love for flowers and the beauties of nature.—(E. Gurney, sec. Hespeler Hort'l soc.

THE SAN JOSE SCALE IN ONTARIO

(Continued from page 212.)

Canada from California, and the quantity used has increased every year. The next most popular preventive is crude oil. This is used quite extensively in the Niagara peninsula, where 3,376 gallons were applied this year. In summer, when the scale is found on trees, crude or kerosene emulsion is used to prevent its spreading.

"In sections where the townships have appointed local inspectors, as they are required to do on the application of fifteen growers, good work seems to have been done to check the pest. With the information we now have in our possession there does not seem to be any grave danger of the disease spreading to any great extent."

A PROVINCIAL HORTICULTURAL ASSOCIATION

The horticultural societies of the province appear to be in need of better organization. There is no means by which the members of one society can be brought in touch with those of another to the benefit of both. The dairy, live stock, poultry, fruit and other interests all have their provincial organizations, but horticulturists have none. The agricultural societies of the province are brought in contact with each other yearly at the annual meeting of the Canadian Association of Fairs and Exhibitions. Why should not representatives of the horticultural societies hold a similar annual meeting at Toronto?

This spring Mr. T. H. Race, of Mitchell, who visited and addressed a number of meetings held by horticultural societies, reported on his return that he had found many of the societies appeared to have a very poor conception of their duties. They were not attempting to hold regular meetings or exhibitions or even to distribute plants or seeds. He suggested that steps be taken to put life into some of these societies.

In this connection Mr. H. B. Cowan, superintendent of agricultural societies for the province, has written to the horticultural societies to learn if they would like to have a general meeting of their representatives held in Toronto next November at the time of the combined fruit flower and honey show. If considered advisable steps could then be taken to form a provincial association. Already a number of replies have been received, all of them being in favor of action of some sort. Some of the replies are here given.

WHAT THE SOCIETIES SAY.

That the Horticultural societies are at a disadvantage in not having a provincial association, to my mind, there can be no question. It would be well for you to state for the benefit of those who have never given the matter a thought what the benefits would be. The suggestion could then be discussed at society meetings. The combined show it is purposed to hold in Toronto next November is a good idea and should be largely patronized.—(E. Gurney, sec. Hespeler Hort'l soc.

I am satisfied that this is a step in the right

direction, and I am sure our society will only be too glad to comply with your request in appointing delegates to attend this show. Such an exhibit must result in lasting good.—(J. G. Jackson, sec. Port Hope Hort'l soc.

I have consulted with prominent members of our association and they all express an opinion favorable to the idea of a provincial horticultural association, and it is likely that this society will be represented at the meeting in November. The letter will be laid before the directors at our next meeting.—(W. W. Livingstone, sec. Tilsonburg Hort'l soc.

At a meeting of the board of directors of the Cardinal Horticultural society, held last evening, I was instructed to advise you that our society would consider favorably the proposition to form a provincial Horticultural association, and will be pleased to support anything that may be done along that line at the meeting in November.—(D. Gow, sec. Cardinal Hort'l soc.

The Cayuga Horticultural society approves of the suggestion to form a provincial horticultural society, and will send a delegate to the combined fruit, flower and honey show to be held in Toronto next november.—(F. G. Lishman, sec.

The suggestion to organize horticultural societies on a plan similar to the Fairs association is, I think, feasible, and sure to work for their good. I have no doubt a delegate will be appointed to attend by the Simcoe Horticultural society.—(J. Thos. Murphy, sec.

The president of the Oakville Horticultural society desires me to say that he heartily concurs in the proposal to hold a provincial meeting of delegates from horticultural societies in Toronto in November next, and that he has no doubt but that the Oakville society will send delegates to such a meeting. Personally I shall be glad to do what little I can to promote the success of such a meeting.—(J. Cavers, sec.

Messrs. Chris Firth, secretary of the Durham Horticultural society, and Allan Cameron, secretary of the Owen Sound society, have both written expressing sympathy with the proposal to form a provincial association and promising to lay the matter before their directors at the first opportunity.

Doing Good Work.—Our society during May was busy preparing Grand Avenue Park for the use of 30 selected pupils of the public school, who have each been given a plot and furnished with flower and vegetable seeds and gladiolus tubs. They planted both seeds and bulbs, under the supervision of a practical gardener. We have also distributed amongst the other children of the school about 500 packages of flower and vegetable seeds, and intend holding a children's flower and vegetable show at a suitable time. We will also give prizes for best cultivated plots both at the park and at the houses of the children.—(W. W. Livingstone, sec. Tilsonburg Hort'l soc.

Hold an Annual Show.—An annual exhibition of plants is held each autumn by the Cardinal Horticultural society, at which prizes are given for the best exhibits of the different varieties of garden and house plants. This has the effect of stimulating competition, among the members, and truly the town hall, where the exhibit is held, is a beautiful sight on the day and evening of this exhibition. Since the formation of the society in the village a marked improvement has taken place in the lawns, as well as in the number and quality of the house plants owned in this place.—(D. Gow, sec. Cardinal Hort'l soc.

THE BIG FRUIT, FLOWER AND HONEY SHOW

Arrangements are now nicely under way for the Provincial Fruit, Flower and Honey show it is proposed to hold in Toronto next November. Judging from the interest and enthusiasm already displayed success seems almost assured.

A joint meeting of the representatives of the Ontario Fruit Growers' association, the Ontario Bee Keepers' association, and the Toronto Horticultural Society, was held Friday, May 13th, in the Parliament Buildings, Toronto. The gathering was presided over by Mr. G. C. Creelman, president of the Ontario Agricultural College, and chairman of the board for experiment stations.

Those present included Mr. W. A. MacKinnon, Chief of the Fruit Division, Ottawa, and Alex. McNeill, Senior Fruit Inspector, Ottawa. The Ontario Fruit Growers' association was represented by Messrs. W. H. Bunting, St. Catharines, the President; Murray Pettit, Winona; T. H. Race, Mitchell; Wm. Rickard, M. L. A., Newcastle; J. S. Scarff, Woodstock, and P. W. Hodgetts, Toronto, the Secretary. The Ontario Bee Keepers' association was represented by J. W. Sparling, Bowmanville, the President; H. G. Sibbald, Claude, and R. H. Smith, St. Thomas, Vice-Presidents, and Wm. Couse, Streetsville, the Secretary. For the Toronto Horticultural Society Edward Tyrrell, the President; J. McP. Ross, W. G. Rook and C. E. Chambers, the Secretary, were present.

A letter was read from Hon. Mr. Dryden, Minister of Agriculture, which stated that the idea of holding a flower show for educational purposes, on the same lines as the Provincial Winter Fair at Guelph, was first talked of by the department last fall. The suggestion met with such approval that he had secured an appropriation of \$1,000 to aid in holding such an exhibition. It had been suggested that the Ontario Bee Keepers' association and the Toronto Horticultural Society be invited to co-operate. Mr. Dryden authorized Mr. Cowan, Provincial Superintendent of Fairs and Exhibitions, to take full charge of the arrangements for the proposed exhibition, and in this connection to call a meeting of representatives of any of the various societies interested that they might confer and work together to make the exhibition a success. In compliance with this letter Mr. Cowan was appointed secretary of the joint meeting.

DISCUSSED THEIR PLANS.

Previous to the joint meeting the representatives of the various associations had met and discussed their plans for the show. Mr. Cowan announced that at a joint meeting of the representatives of the Toronto Horticultural Society, the Toronto Electoral District Society and the Toronto Florists' and Gardeners' association, the selection of a place for the holding of the show had been considered. Committees from the various bodies and from the Fruit Growers' association had visited the two rinks on Church Street and had found that they would be available during November, and that they were in every way suitable for the purposes of the exhibition. It had been found impossible to secure the use of the Armouries. An estimate of the expense connected with holding the show had

been prepared at the joint meeting, as follows: Rent of rinks, \$100; carpentering, \$200; advertising, \$250; music, \$200; printing prize lists, etc., \$150; labor, including caretaker and ticket sellers, etc., \$100; heating, \$200; incidental expenses, \$100. Total \$1,300. These figures, it was thought, would cover all the general expenses of conducting the show aside from the prize lists and the securing of exhibits.

DATE OF THE EXHIBITION.

The question of the best date for the exhibition was the first subject discussed by the joint committee. Representatives of the Fruit Growers' association were anxious that the show should be held the latter part of November. It was finally decided, on motion of Mr. Ross, seconded by Mr. Pettit, to hold the show November 8, 9, 10, 11 and 12, as being the dates best suited for a floral display. It was moved by Mr. Race and seconded by Mr. Tyrrell, that the estimates placing the expenses at \$1,300, as submitted to the meeting, should be accepted, and that the Fruit Growers' association and the Toronto Horticultural Society agree to divide the gate receipts and expenses equally on that basis, the Ontario Bee Keepers' association to be charged nothing for expenses nor to receive any share of the gate receipts.

To avoid expense it was decided that a joint committee, representative of the various associations, should be appointed to look after and make all necessary further arrangements and report back from time to time to their respective associations. The committee appointed consists of Messrs. Bunting, McNeill, Rickard, and Hodgetts for the Ontario Fruit Growers' association; Sparling, Sibbald, Smith and Couse for the Bee Keepers' association, and Tyrrell, Ross, Rook and Chambers for the Toronto Horticultural Society.

The Gardeners' and Florists' association and Toronto Electoral District Society will appoint two representatives each. Mr. Edward Tyrrell was appointed president of this committee until it meets and elects a permanent president and secretary.

Dr. Orr, secretary of the Toronto Industrial exhibition, addressed the meeting and suggested that the show might be held at the time of the Toronto Industrial exhibition. He contended that the holding of so many shows of this nature in Toronto has a tendency to weaken the Industrial. The present he considered a critical time in the history of this exhibition, so he thought everything possible should be done to insure its success. Both the representatives of the Fruit Growers' association and of the floral interests explained to Dr. Orr that the Industrial exhibition is held at too early a date to enable the making of a first class exhibit of fruit and flowers, and that, therefore, a later date had been selected. It is also the intention to hold the annual meetings of the various associations at the same time and to adopt other features which would be difficult to manage on the exhibition grounds where so many other attractions are carried on at the same time. No action was taken on Dr. Orr's suggestion. The meeting then adjourned.

ARRANGEMENTS FOR THE SHOW.

Already elaborate preparations are being made for the show. The Toronto Horticultural society purpose offering prizes amounting to \$1,300 or \$1,400, and inviting exhibits from all parts of the province and from the United States. The Ontario Fruit Growers' association will only offer about \$500 in prizes, but will spend considerable money securing representative exhibits from the Experiment stations and from the districts in which the directors of the association are located. Money will also be appropriated for the transportation of exhibits and for keeping them in cold storage. The Bee Keepers' association will offer some \$200 in prizes.

The prizes will be offered in such a way as to make the exhibits of as great educational value as possible. The intention is to hold the flower exhibits in one rink, the fruit and honey

exhibits in the second rink, and an exhibit of orchard machinery in the open space of land lying between the two rinks. The rinks and the intervening ground are surrounded by a high fence.

The annual meetings of the Ontario Fruit Growers' association and of the Ontario Bee Keepers' association will be held at the time of the show. It is possible that there will also be a meeting of representatives of the provincial horticultural societies. The Fruit Division at Ottawa has agreed to make an exhibit of commercial fruit packages. Demonstrations will be given in packing fruit. Under the direction of the Farmers' Institutes ways of preparing fruit and honey for the table will be shown by some of the lady institute demonstrators. The prize list committees of the various associations will shortly have their lists completed and ready for distribution.

Fruit Prospects Throughout the Dominion

As a result of enquiries made throughout the Dominion the Fruit Division at Ottawa announces that the damage from mice has been most serious in Ontario and Quebec. There has been a serious increase in the number of mice during the past year. The damage to nursery stock was particularly severe, and it is safe to say that not less than 25 per cent. of all stock "heeled in" out doors has been destroyed. The injury was almost nothing where young orchards had clean culture throughout the season. The loss will probably reach about 25 per cent. of all young trees. The practice of the best orchardist seems to be to grow the cover crop even at the risk of encouraging the mice and to protect the trees against their attacks. Keeping a small circle about the trees clean is not, in itself, a sufficient protection.

DAMAGE BY FROST.

The damage by frost, though exceedingly serious in Ontario and Quebec, will not affect to any great extent the amount of fruit put on the market this year, except in the case of plums and peaches. Apples and pears were seriously injured along the northern border of the fruit belt. The Baldwin, Greening, Ontario, Spy and Blenheim have been killed in places where they are usually considered hardy. Top-grafting only very slightly increases the hardiness of the variety. None of the large apple-producing sections were seriously injured.

The Flemish Beauty pear again proved one of the hardest of good varieties. In both pear and apple orchards the trees suffered much less from frost and more from mice when grown in sod or cover crop. Plums were killed in some of the heavy plum-producing sections, and in all probability the buds are so seriously injured everywhere as to render a heavy crop this year improbable.

The reports from the Essex peach-district show a damage approaching that of 1899; 50 per cent. of the trees will be killed outright. The Niagara district is not so severely injured. The Crawford type proved particularly tender.

Cherries are also injured severely in bud. Small fruits escaped with less injury.

Cold Storage Company's Meeting

The annual meeting of the St. Catharines Cold Storage and Forwarding company was held May 21. The financial statement for the year showed a surplus of over \$700, which was considered highly satisfactory. It was announced that in future the directors will help members more than in the past in the purchasing of supplies, baskets, barrels, spraying materials and similar articles at wholesale prices. The fruit of members will be sold direct to consumers and dealers.

During the past five years over \$3,000 of the surplus earnings have been used to reduce the original debt on the plant. This debt now only amounts to \$1,500. In the future it is expected dividends will be paid on the stock. Up to the present no new stock has been offered for sale since the company's inception, but some new stock will now be offered for sale at par. The board of directors was re-elected. The general feeling was that the company had been very successful during the past year.

The Inspectors Meet.—A meeting of the Dominion Fruit Inspectors was held at the Central Experimental Farm at Ottawa, May 17, 18 and 19. The idea of the gathering was to bring the inspectors in touch with each other and to inform them of the latest developments in all branches of the fruit industry. Model orchard meetings were conducted for their instruction, and addresses were given by Mr. W. A. MacKinnon, chief of the Fruit Division, Ottawa; Dr. Fletcher, Mr. W. T. Macoun, and other authorities.

The advertisement of the Pure Culture Spawn appears in this issue for the first time. They invite the attention of all mushroom growers to their new "Tissue Culture Pure Spawn," grown after improved methods, fully described in their interesting circular, on the origin, history, and improvement of "Mushroom Spawn."

FRUIT CONDITIONS IN ONTARIO

The Canadian Horticulturist up to May 25th had received fruit crop reports from some 400 fruit growers in all the leading fruit producing sections of Ontario. Detailed statements dealing with the prospects of each of the leading fruit crops are given below.

Readers must bear in mind that all state-

ments given at this early season are liable to be greatly changed as the season advances and the actual conditions become more apparent. In brief it now appears that the yield of strawberries, plums and peaches will be light, while apples, pears and cherries will be a good average crop.

Apple Trees in Good Condition

Several hundred correspondents scattered throughout all the principal apple producing counties of the province, reporting to The Horticulturist state that trees have come through the winter in good condition. Prospects for both the early and winter varieties of apples are very encouraging. A few correspondents indicate that Baldwins and Spys will be light in some sections. On the whole the early varieties appear to be in quite a little the better condition.

The damage by mice will be no greater than reported last month, when it was estimated the total loss for the province would not be greater than 2 to 3 per cent. In some counties whole orchards have been destroyed through the trees being girdled, but in many sections no loss at all has taken place. Trees appear to be blooming very nicely. On the whole, the reports received from growers show that they feel quite hopeful for this year's crop. In the early varieties of apples prospects are fair to good in Wentworth, Halton and York counties, uniformly good in Ontario, Northumberland, Hastings, Victoria and the eastern counties. In the vicinity of Lake Huron and Georgian Bay, Lambton and Huron counties report trees are in full bloom. Conditions along Lake Erie are equally favorable, as large crops are anticipated in Kent, Oxford, Lincoln and Norfolk counties and fair to good crops in Essex and Welland counties.

THE WINTER VARIETIES.

As already intimated, prospects for the winter varieties do not appear to be as bright as for early apples. Bordering Lake Ontario, Wentworth, York, Northumberland, Durham, Hastings and Lennox counties intimate that they do not anticipate more than 50 to 80 per cent. of an average crop, while in Peterboro and the eastern counties only 60 to 70 per cent. of a full crop is expected. Trees in Ontario county are said to be in excellent condition.

Much the same conditions rule in the Lake Huron section, as reports say the yield is not likely to be more than an average in Huron, Bruce and Grey counties, while Simcoe county will probably be below the average. Moderate yields are expected in Essex, Kent and Welland counties, and good returns in Norfolk and Lincoln county.

I had thought of stopping The Horticulturist, for at 75 years of age I do not take as much interest in fruit as I formerly did, but I like to see how fruit growing improves, so am renewing my subscription.—(A. D. Lee, Stoney Creek, Ont.

Peach Prospects Still Uncertain

Up to as late as May 25 correspondents located in the peach districts reported that it was very difficult to give an accurate estimate of the chances for the peach crop. From the replies received it would seem that the number of trees winter killed will not be as large as at first feared, although in some districts, and in fact in a few townships, peach orchards have been utterly ruined. There are, on the other hand, numerous sections where the damage is reported to be very light.

The most serious reports of loss have been received from Brant county. In West Brantford township the peach trees are reported almost all winter killed. One grower, living near Mohawk, announces that he has lost all of the peach trees on his farm, over 2,000 in number, and that 10,000 trees in that section have been killed. A second correspondent places the number of trees killed at 70 per cent., while a third says that half the trees have been killed and all the buds destroyed.

In Essex county the estimates of damage range all the way from 5 to 90 per cent, showing how conditions vary in different parts of the county. On a whole the loss is evidently much less than at first feared. The conditions in Kent county are much the same, estimates ranging from 3 to 75 per cent. The prospects in Elgin county appear to be better, as no correspondent places the damage at above 25 per cent. Growers in Welland and Lincoln counties appear to take a more hopeful view of the situation. Most of them write that while it is too early to state definitely what the damage has been, they know it has been serious. Old trees have suffered much the worst. One grower writes that his old trees are going to leaf out nicely and some to blossom, but he fears there is not much vitality left in them and they will die later. On the whole it appears that the loss in these two counties has not been serious. Prospects in Wentworth county are good. The trees appear to have come through the winter in excellent shape, although there has been some loss in the old orchards.

PERCENTAGE OF BUDS.

Buds appear to be showing in a most encouraging manner. On this point some growers are enthusiastic in their replies, announcing that there is a "splendid showing for fruit" or "enough for a full crop." Brant county seems to be the worst sufferer, as replies indicate that many trees there are not budding at all, although in two or three sections trees have budded in a promising manner. In Essex and Kent counties estimates of the number of buds

showing range from 25 to over 50 per cent., and in a few cases even higher. In Elgin county buds are not showing to the same advantage. Estimates of the percentage range as low as 5 to 15 per cent., although the hardy varieties are said to be budding freely.

The percentage of buds on trees in Welland county ranges from 10 to 15 per cent., and 15 to 90 per cent. in Lincoln, depending largely on the location of the orchards. The majority of the correspondents replied that there will at least be a moderate crop on thrifty trees. In Wentworth county the conditions are much the same, most replies indicating that sufficient buds are showing to insure a crop of most of the varieties.

NOT MANY NEW ORCHARDS.

In reply to the question, "To what extent are new orchards being planted?" the majority of replies indicate that few or no new trees are being set out, although isolated reports show local activity in this line. In the vicinity of Raleigh, Kent county, it is stated that the number of orchards being planted is the largest in years, while near St. George, in Brant county, large orchards are being set out, numbering in all about 5,000 trees. In Lincoln and Welland counties not so many trees are being planted as last year, although quite a few growers are said to be filling in gaps in their orchards. Reviewing the situation as a whole it seems that the area in bearing peach trees this year will be quite a little less than two years ago. In another month it will be possible to obtain a pretty accurate idea of the fruit prospects in all the counties.

Strawberry Crop Will Be Light

The 1904 strawberry crop in Ontario will not be a very heavy one, as plantations in many of the leading counties have been badly destroyed by the severe winter. The southern counties have suffered the most. In the section bordering Lake Erie and in the Niagara peninsula the yield will not likely be more than 10 to 50 per cent. of an average crop.

In the northern counties prospects are more encouraging. Where the snow fall was heavy and where the snow remained until late in the season, beds appear to have wintered fairly well, although some reports indicate that where strawberries were mulched heavily the heavy fall of snow had the effect of smothering them. Beds that were at all exposed, unless they were mulched heavily, have been almost completely ruined. Some growers have plowed under as many as 25 to 30 acres of their strawberries.

The most severe loss seems to have taken place in Welland and Lincoln counties. Estimates of the loss range from 50 to 90 per cent. of the average crop, although in a few cases beds have done nicely. A good crop may be expected in Bruce, Durham, Hastings, Grey and Lincoln counties and in the eastern sections of the province, and fair to good crops in Huron and Ontario counties, while in Brant, Lambton

and Northumberland counties the yield is problematical, as in some sections, beds have suffered severely, while in others they have come through in good condition. In Essex, Kent, Elgin, Wentworth, Halton, Lennox and Norfolk counties correspondents state the prospects are fair to bad. On the whole there seems no doubt but that the crop of strawberries this year will be quite a little lighter than usual.

Light Yield of Plums Probable

Plum growers this season are not likely to find it as difficult to dispose of their crop as last year, owing to the fact that trees have apparently come through the winter in rather poor condition. Reports received by The Horticulturist from the leading plum producing sections show that many trees have been quite badly injured. In some cases growers are pulling up their plum orchards, having become discouraged as a result of their inability to dispose of their last year's crop at satisfactory prices. Insect pests have also tended towards a decrease in the plum acreage.

In Huron and Bruce counties the crop is reported to be fair to good; conditions in Simcoe county are much the same, while in Lambton county prospects are said to be promising. Along Lake Erie trees in Norfolk and Lincoln counties are doing well, while in Essex and Kent counties only a fair crop is expected. In Wentworth, Halton, York, Ontario, Durham, Hastings, Frontenac and Grenville counties the yield will be light; in Victoria, Peterboro, Lennox, Leeds, Elgin and Oxford counties a poor crop is looked for.

Good Prospects for Pear Crop

Prospects for the pear crop this year are promising in all the chief producing sections. Out of several hundred growers heard from by The Horticulturist the replies indicate that large crops may be expected in Essex, Kent, Norfolk, Welland, Lincoln, Wentworth, York, Ontario and Brant counties, and fair to good crops in Lambton, Huron, Bruce, Simcoe and Halton.

In Northumberland, Durham and Elgin the prospects are not quite as bright, although a good crop is generally anticipated. Growers in Victoria, Peterboro, Lennox, Hastings and the more easterly counties anticipate a light yield. On the whole the pear trees appear to have wintered in good condition and to give good promise of a very satisfactory yield.

Cherry Crop Conditions

Both the sweet and the sour cherry trees give promise of a full fruit yield in most of the producing sections. In Essex, Kent, Welland and Wentworth sweet cherry trees are reported to be in excellent condition, while in Lincoln, Oxford, Lambton, Huron, Grey, Simcoe, Halton, Ontario and Durham a fair crop is looked forward to.

GROWERS' VIEWS OF FRUIT PROSPECTS

Our peach trees were thought at first to be frozen, but good luck saved them. They are not so bad as first indications led us to believe. Have been through 10 or 15 orchards and find them all the same. The mice did a lot of damage to young trees. I lost 100 out of 4,000 trees. Some are very bad.—(J. E. Hambley, Kent Co., Ont.)

Peach trees are killed at the ground, but are showing blossoms. Those on sandy ground are all killed; those on clay loam only a few killed, except those by mice.—(Harry Forbes, Kent Co., Ont.)

The spring has been so unfavorable for the trees that it is difficult to determine the true condition of the trees as to injury done by the winter.—(M. G. Bruner, Essex Co., Ont.)

I find strawberries are very badly injured by the winter, except where heavily mulched.—(G. A. Heath, Norfolk Co., Ont.)

Very few strawberries in our county. I tried them for three or four years; they would have many blossoms, but very few berries, so plowed them under.—(J. W. Harum, Hastings Co., Ont.)

Strawberries look fine. Peaches are all dead, and some plum trees. The fruit crop looks favorable. The first cry was that the buds were all killed, but they are coming out all right and everything is growing fast.—(R. Morton, Durham Co., Ont.)

Red raspberries here have been badly winter killed. Blacks have come through better.—(H. M. Casselman, Lambton Co., Ont.)

Strawberries are in very poor condition. About half the most extensive growers are plowing their berries up. In quite a few cases there are not enough plants to set out a new bed. The ice in the spring killed the strawberries, I think. Fall mulched plants are injured as bad as those not mulched.—(J. W. Munroe, Welland Co., Ont.)

We have not been troubled to any extent with locust or oyster shell bark louse. We give clean cultivation and stop working about August 1st. We thin the fruit to about six inches apart on the limbs and find it pays well to do so. If we allow our trees to overbear one year we are almost sure to have no crop the next. The loss of trees in this section has been very heavy the past winter, in some cases almost 90 per cent. My own loss by actual count has been 34 per cent.—(A. Dawson, Brant Co., Ont.)

The strawberries that were not mulched or covered with snow during the winter were nearly all killed. I lost about 25 acres. Strawberries in this section are nearly all killed. Raspberries are also damaged very much. Blackberries came through all right.—(A. Railton, Welland Co., Ont.)

Strawberry plants are badly injured. On the 3 acres I will not have enough to fill a crate, and what plants appear alive have not strength enough to throw out a blossom. Some peach

trees around Leamington appear to be as badly killed as they were five years ago, but here I believe the orchards will show a good per cent. of uninjured trees, probably 75 to 85 per cent. They are now full of bloom and foliage, excepting a couple of spots; my orchard never looked better.—(J. O. Duke, Essex Co., Ont.)

Strawberry plants are looking pretty well, but are backward. The few blossoms that are out are black with frost.—(John Mead, Halton Co., Ont.)

Strawberry plants in poor condition and over two-thirds winter killed. A large percentage of the peach trees that are showing buds now I think will die. As a rule, if one bud in ten matures a peach it makes a large crop. The few buds that are out now look very pale, which is not a good sign, as they generally drop off.—(F. G. Stewart, Lincoln Co., Ont.)

Plum trees here so heavy last season they were in poor condition to stand the winter.—(G. Gatt, Lambton Co., Ont.)

Vineyards are being pulled up on account of dry and grey rot; poor prospects for this year's grape crop.—(J. Dougal, Essex Co., Ont.)

In Glenlog township little spraying is done. Japanese plums promise a good yield and have wintered all right. Lice are common on apple trees. Pruning has been well done.—(R. T. Edwards, Grey Co., Ont.)

Little can be said with certainty yet about the mice and winter frost. A great deal of damage was done. I lost one large Abundance, one large Burbank, and a lot of smaller trees.—(S. Spillett, Simcoe Co., Ont.)

The prevailing wet weather during May will make apple scab very prevalent, where trees are not sprayed, and curl leaf on peaches.—(Jos. Tweddle, Wentworth Co., Ont.)

Strawberries are not much good owing to the last two seasons being wet. The plots have all gone out of repair and grown up into grass, and many of them will have to be plowed up.—(J. J. Coyle, Lambton Co., Ont.)

Old trees are hurt to a great extent, perhaps 50 per cent; 4 to 6 year old trees about 5 per cent., and 1 to 2 year trees are strong and healthy. One man had 800 trees, fully 700 of which are killed. Very few fruit buds seen as yet. I have ten acres of fruit, and not one tree girdled by mice. Out of an orchard of 1,500 peach trees only 25 are killed. Strawberries very badly killed.—(James Ellis, Wentworth Co., Ont.)

Peach trees show about 30 per cent. of the usual bloom in some cases and less in others. Winter killing of peach buds has been unusually severe, partly because many orchards are in a weak condition on account of San Jose scale infestation. Orchards that have been treated for this enemy have wintered well and buds show for a fair crop. One grower near Queens-ton Heights lost 300 fine peach trees and others more or less.—(Mr. Armstrong, Niagara Co.

THE FRUIT TRADE WITH THE WEST

THE MACPIERSON FRUIT CO., WINNIPEG.

The bulk of our apples commence arriving in Winnipeg from the south the latter part of July and continue coming forward until the latter part of August. The Ontario crop in season, when it has been plentiful, has always displaced them at this date.

British Columbia has sent, late in the season of different years, one or two cars of apples which have been much admired for their fine appearance but are generally regarded as lacking in flavor. A few also have been sent from Oregon and Washington Territory, but the same remarks apply to these as to the shipments from British Columbia. From all these points the apples are sent in boxes.

Pears, peaches, plums and grapes nearly all come from California. Oregon and Washington Territory also contribute some of these. Ontario, with the exception of grapes, sends such a small proportion it does not seriously affect the shipments from the other.

THERE HAVE BEEN HEAVY LOSSES.

Shipments of Ontario fruit, always excepting grapes and apples, have succeeded so badly that we do not like to write or ever to think about them. The long list of heavy losses from badly packed fruit, put up without care or honesty and sent forward without discrimination or

knowledge of what is required on long distance shipments, is so great that it is exasperating to merely contemplate them.

All fruit is in demand that can be put on this market in good order and at fair prices. The best package to use is a subject that requires much study and one that cannot be answered within the space of an ordinary letter. Our inspector here has had a long experience both here and in Ontario and will doubtless be able to give intending shippers some valuable information along that line.

Manitoba and the Northwest Territories are for apples, and ought to be for small fruits, the best customer Ontario has. Before this can take place in small fruits there must be an entire and tremendous change in Ontario in the methods of packing and transportation. Ontario peaches or strawberries are not likely to ever be a pronounced success on this market. The same remark applies to plums.

For apples, grapes and pears it remains with the Ontario men to either hold this market or lose it just in proportion as they show themselves intelligent and enterprising in adopting up-to-date methods and when organization becomes powerful enough to compel concessions for transportation facilities that will ensure the rapid transit and proper handling of goods.

OBSTACLES TO SUCCESS IN FRUIT GROWING

The codling moth, apple scab and caterpillars are our most serious obstacles, together with the way in which commission men buy and handle our fruit. In some cases the fruit is not fit for home market, much less for exporting.—(Daniel Durham, Lambton Co., Ont.)

The tent caterpillar has appeared earlier than usual this season, and is most in evidence at this time. Insect pests are our chief hindrances to growing fruit successfully, together with the expense of handling the fruit properly. Help is so scarce that the fruit cannot be handled in time to prevent spoiling. As a rule the farmer does not spray, and the insects get part of the crop.—(Charles J. S. Natel, Huron Co., Ont.)

The Fruit Marks Act is the most serious obstacle to successful fruit growing in our locality.—(Theo. Murray, Bruce Co., Ont.)

In this district, as in all others, the question of farm labor is the most serious drawback.—(J. W. Munro, Welland Co., Ont.)

Excessive freight rates are a serious obstacle to our fruit raising. We pay as high as 7 to 9 cents per basket to send them to London.—(Fred. Howell, Brant Co., Ont.)

People in my vicinity have not had much experience in growing fruit, and lack of proper knowledge in taking care of trees and selecting the proper kinds has been a great drawback. A great many poor quality trees have been bought and brought into the section by agents, all of

which has been a hindrance.—(J. W. Harum, Hastings Co., Ont.)

Fruit growers should be protected by law from nurserymen selling trees untrue to name. This difficulty and San Jose scale are our two greatest difficulties.—(H. S. and C. Fisher, Lincoln Co., Ont.)

The most serious drawback to successful growing of fruit in our section is the lack of attention by many fruit growers. Apples are our main crop grown for export. Packages are too dear. It is a serious hindrance when the package costs nearly as much as the apples are worth.—(W. J. Bragg, Durham Co., Ont.)

Caterpillars are not so bad this year as the past two years, but there is a fly or insect which is very bad, stinging the apples and thus doing a lot of harm. We have no market to encourage fruit growers to raise fruit to sell.—(Chas. Brethour, Ontario Co., Ont.)

A great drawback to planting good orchards of apples is to get good stock to plant, as nurserymen supply you with anything but the kind you order. They give you mostly varieties that bear in the fall and which are worthless on the market.—(Thos. O'Brien, Durham Co., Ont.)

Farmers think it will not pay to spray. They have been taken in by men going around spraying and have had no results. The man who goes around spraying looks out for his own pocket.—(A. H. Crosby, York Co., Ont.)

The want of a better market is a great obsta-

able to fruit growing successfully. For instance, take the plum crop of last year; we could not give our plums away because we had no open or foreign market.—(Thos. Cairns, Peel Co., Ont.)

Carelessness in growers not looking after their trees in the way of trimming, spraying and cultivating is a great obstacle in growing fruit.—(John Leonard, Northumberland Co., Ont.)

Scarcity of labor and not properly cared for orchards are serious obstacles to fruit growing. Proper cultivation will bring apples every year in our section.—(William Wade, Northumberland Co., Ont.)

Scarcity of help among the farmers, and indifference in the care of apple orchards in pruning, fertilizing and spraying are all great obstacles to successful fruit growing.—(M. S. Schell, Oxford Co., Ont.)

Boarding gangs and uncertainty of getting apples packed in season militates against large orchards.—(Thos. Baker, Sulina, Ont.)

The greatest obstacle to successful fruit growing is probably the tedious and constant work of spraying, which is necessary to produce marketable fruit, also multiplicity of varieties and too much fall stuff; also the exorbitant freight rates to our markets in the west.—(Frank J. Barber, Halton Co., Ont.)

I know of nothing that will aid and help the apple business of Ontario more than expert spraying. It is absolutely necessary to accomplish a condition of things we should aim at, viz., that all apples packed for market should be of uniformly good quality. Seasons may differ, various conditions may differ, but the destroying of insect pests must be reckoned with.—(Wm. Rickard, Newcastle, Ont.)

The fruit growers of to-day find that in order to realize the highest prices for their fruit, it is necessary to place on the market a good sized and clean article free from worm holes. It is impossible to do this without the free use of the spray pump.—(George A. Gott, Arkona, Ont.)

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Our Monthly Weather Report

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In Ontario, April was a cold month in all districts, and particularly so in the southwestern portions of the province, where the temperature was 6 degrees below average and lower than in any April since 1885. In northern and eastern districts conditions were much nearer normal, and in the Ottawa and Upper St. Lawrence Valleys the temperature was higher than in the Niagara peninsula and near Lake Erie.

The rainfall was generally above average, excepting in the more central districts of western Ontario, and there were a few light snowfalls in all parts.

Up to May 20 the mean temperature of the current month has been below average in western and considerably above average in eastern Ontario, Toronto being 1 degree below average. The city of Montreal reports the highest mean temperature for the twenty days, 58.5 degrees, and Ottawa comes next with 68 degrees, being respectively 3.7 degrees and 2.8 degrees above average. Compared with last year, this May has so far been cooler, the difference being very small in the Ottawa Valley and fairly pronounced in the more western portions of the province, and this taken in connection with April conditions amply accounts for the fact that all vegetation in eastern Ontario is much in advance of western Ontario, including even the southwestern counties, which is extremely unusual. Ample rains have fallen in all parts of the province.

Maximum temperatures recorded during period May 1 to 20: Port Arthur, 74 deg.; White River, 76 deg.; Parry Sound, 82 deg.; Saugeen, 84 deg.; Port Stanley, 70 deg.; Toronto, 74 deg.; Kingston, 78 deg.; Ottawa, 82 deg.; Bissett, 86 deg.—(This report is furnished The Horticulturist for the benefit of fruit growers by the director of the Toronto meteorological office.)


The Orchard Monarch

is the spraying machine which should receive the attention of large sprayers. It is a mounted sprayer carrying 150 gallons of liquid. The force for operating is supplied by the mere movement of wagon by means of hind wheel gears. It is intended for large orchard operations and is a

Perfect Automatic Sprayer.

Driving from tree to tree generates power—150 lbs to the inch—to spray five minutes with two nozzles and reach top of tallest trees. It also operates automatically the liquid agitator and brush for cleaning section strainer, so that vines and foliage are never scalded or burned and nozzles never clog. The Monarch, as the name suggests, is the peer of sprayers for large orchard operations. We manufacture many kinds and sizes of sprayers for all purposes. Write us for anything in the spraying line, formulas, appliances, etc., and ask for our Free book on spraying.

Field Force Pump Co., 231 Eleventh St., Elmira, N.Y.



C. G. DAVIS, Agent for Ontario, - FREEMAN, ONT.

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showing range from 25 to over 50 per cent., and in a few cases even higher. In Elgin county buds are not showing to the same advantage. Estimates of the percentage range as low as 5 to 15 per cent., although the hardy varieties are said to be budding freely.

The percentage of buds on trees in Welland county ranges from 10 to 15 per cent., and 15 to 90 per cent. in Lincoln, depending largely on the location of the orchards. The majority of the correspondents replied that there will at least be a moderate crop on thrifty trees. In Wentworth county the conditions are much the same, most replies indicating that sufficient buds are showing to insure a crop of most of the varieties.

NOT MANY NEW ORCHARDS.

In reply to the question, "To what extent are new orchards being planted?" the majority of replies indicate that few or no new trees are being set out, although isolated reports show local activity in this line. In the vicinity of Raleigh, Kent county, it is stated that the number of orchards being planted is the largest in years, while near St. George, in Brant county, large orchards are being set out, numbering in all about 5,000 trees. In Lincoln and Welland counties not so many trees are being planted as last year, although quite a few growers are said to be filling in gaps in their orchards. Reviewing the situation as a whole it seems that the area in bearing peach trees this year will be quite a little less than two years ago. In another month it will be possible to obtain a pretty accurate idea of the fruit prospects in all the counties.

Strawberry Crop Will Be Light

The 1904 strawberry crop in Ontario will not be a very heavy one, as plantations in many of the leading counties have been badly destroyed by the severe winter. The southern counties have suffered the most. In the section bordering Lake Erie and in the Niagara peninsula the yield will not likely be more than 10 to 50 per cent. of an average crop.

In the northern counties prospects are more encouraging. Where the snow fall was heavy and where the snow remained until late in the season, beds appear to have wintered fairly well, although some reports indicate that where strawberries were mulched heavily the heavy fall of snow had the effect of smothering them. Beds that were at all exposed, unless they were mulched heavily, have been almost completely ruined. Some growers have plowed under as many as 25 to 30 acres of their strawberries.

The most severe loss seems to have taken place in Welland and Lincoln counties. Estimates of the loss range from 50 to 90 per cent. of the average crop, although in a few cases beds have done nicely. A good crop may be expected in Bruce, Durham, Hastings, Grey and Lincoln counties and in the eastern sections of the province, and fair to good crops in Huron and Ontario counties, while in Brant, Lambton

and Northumberland counties the yield is problematical, as in some sections, beds have suffered severely, while in others they have come through in good condition. In Essex, Kent, Elgin, Wentworth, Halton, Lennox and Norfolk counties correspondents state the prospects are fair to bad. On the whole there seems no doubt but that the crop of strawberries this year will be quite a little lighter than usual.

Light Yield of Plums Probable

Plum growers this season are not likely to find it as difficult to dispose of their crop as last year, owing to the fact that trees have apparently come through the winter in rather poor condition. Reports received by The Horticulturist from the leading plum producing sections show that many trees have been quite badly injured. In some cases growers are pulling up their plum orchards, having become discouraged as a result of their inability to dispose of their last year's crop at satisfactory prices. Insect pests have also tended towards a decrease in the plum acreage.

In Huron and Bruce counties the crop is reported to be fair to good; conditions in Simcoe county are much the same, while in Lambton county prospects are said to be promising. Along Lake Erie trees in Norfolk and Lincoln counties are doing well, while in Essex and Kent counties only a fair crop is expected. In Wentworth, Halton, York, Ontario, Durham, Hastings, Frontenac and Grenville counties the yield will be light; in Victoria, Peterboro, Lennox, Leeds, Elgin and Oxford counties a poor crop is looked for.

Good Prospects for Pear Crop

Prospects for the pear crop this year are promising in all the chief producing sections. Out of several hundred growers heard from by The Horticulturist the replies indicate that large crops may be expected in Essex, Kent, Norfolk, Welland, Lincoln, Wentworth, York, Ontario and Brant counties, and fair to good crops in Lambton, Huron, Bruce, Simcoe and Halton.

In Northumberland, Durham and Elgin the prospects are not quite as bright, although a good crop is generally anticipated. Growers in Victoria, Peterboro, Lennox, Hastings and the more easterly counties anticipate a light yield. On the whole the pear trees appear to have wintered in good condition and to give good promise of a very satisfactory yield.

Cherry Crop Conditions

Both the sweet and the sour cherry trees give promise of a full fruit yield in most of the producing sections. In Essex, Kent, Welland and Wentworth sweet cherry trees are reported to be in excellent condition, while in Lincoln, Oxford, Lambton, Huron, Grey, Simcoe, Halton, Ontario and Durham a fair crop is looked forward to.