

labels, pasted them on, took a couple of sample jars to town and closed them out at 25 cents per pint. Last season as soon as the price dropped to \$1.50 per crate (24 qts. wine measure), he began to put up jam, having built a homemade oven or furnace. He had bought glazed pans or trays, and 10,000 pint cans. This output was sold in N. J. Plans are made to put up 100,000 pints this season.

Potato Growing at the Central Experimental Farm.

The yields at the Central Experimental Farm, Ottawa, from the 143 varieties of potatoes grown for comparison in uniform test-plots last year were very good, the best yielding sort, American Wonder, a late white variety, of good quality, producing at the rate of 640 bushels 12 pounds per acre; while the poorest gave 240 bushels 36 pounds per acre. American Wonder produced 52 bushels 48 pounds per acre of unmarketable tubers. The Horticulturist recommends the following for farmers:—Extra Early: Early Ohio (pink), Earliest of All, Bovee, and Burpee's Extra Early (pink and white). Early: Everett and Rochester Rose (pink), Early Puritan (white). Medium: Carman No. 1 (white), Empire State (white). Late: Late Puritan (white), American Wonder (white), Rural Blush (pink). The average yield per acre from the 143 varieties was 410 bushels 47 pounds, which is 291 bushels 47 pounds more than the Ontario average of 119 bushels. Had these varieties been grown in acre plots, the yields would not have been so large, but considering the fact that the poorest variety of the 143 tested yielded 85 bushels 36 pounds more than the average for Ontario, it seems remarkable that larger crops are not produced throughout the country. The soil in which the potatoes were grown was a sandy loam, and, while in good state of cultivation, it is not what would be called rich, although it was given a good dressing of barnyard manure in the spring of 1898. A crop of tobacco was taken off the same land in 1898. The soil was plowed in the autumn of 1898, and again in the spring of 1899, when it was also disk harrowed and harrowed twice with the smoothing harrow before planting. The drills were made about 6 inches deep and 2½ feet apart, and the sets, which had at least three eyes, were of good size and were dropped 1 foot apart, each variety occupying one row 66 feet long. The potatoes were covered with the hand hoe to insure the most uniform conditions. The potatoes were cultivated when required throughout the summer, but were not killed up. They were sprayed with Paris green and Bordeaux mixture to destroy the potato beetle and prevent blight. The potatoes were planted on May 22 and 23, and were dug on October 5, 6 and 7. There was no scab or rot. We notice that in 1898 an experiment was begun in planting potatoes at different dates, beginning when the main crop was put in and continuing at intervals of two weeks until August 23, 1898, and July 23, 1899. An early and a late variety were used in each case: Early Northern (early) and Irish Daisy (late) in 1898, and Early Northern and Rural Rush in 1899. There was a regular decrease in the yield from each planting. For the two seasons the average yield of marketable potatoes per acre for the May 26th planting was 330 bushels 26 pounds; June 9th and 10th, 253 bushels 39 pounds; June 23rd and 24th, 139 bushels 2 pounds.

Some Western Ontario potato-growers report to us getting the best results from June planting, with less trouble from the bugs.

The highest yielding varieties during the past six years were as follows:

1894	Burpee's Extra Early, 361 bushels.
1895	American Wonder, 385 bushels.
1896	Late Puritan, 453 bushels.
1897	Holborne's Abundance, 462 bushels.
1898	Holborne's Abundance, 383 bushels.
1899	American Wonder, 640 bushels.

The New Insecticide.

The FARMER'S ADVOCATE, London, Ont.:

GENTLEMEN,—In reply to your enquiry as to whether green arsenoid is superior to Paris green for the treatment of leaf-eating insects, I beg to say that up to the present I have not considered it wise to recommend any substitute for Paris green. This material is now so thoroughly well known by farmers and fruit-growers that there is no difficulty in getting them to use it upon trees and other crops liable to be attacked by foliage-eating insects. Green arsenoid is one of several compounds which have been lately introduced, and which certainly are valuable insecticides. They differ principally from Paris green in their chemical composition, the omission of acetic acid making it possible to produce them at a slightly lower figure without injuring their insecticidal qualities. I can quite understand that the makers of arsenoid poison might claim that this material is better than Paris green. It is slightly cheaper, and appears to remain in suspension a good deal longer than Paris green when mixed with water. It has, too, the bright green color of Paris green, which is a safeguard against it being mistaken for less dangerous compounds when left about by careless people. Green arsenoid is apparently very similar, if indeed it is not identical with arsenite of copper. Yours very truly,

J. FLETCHER, Entomologist and Botanist,
Central Experimental Farm.

How to Make an Unproductive Tree Bear.

There are many fruit trees that seem to wear out the patience of their owners by failing to bear. They are apparently old enough, big enough, and have had everything in the way of cultivation and manuring done for them that seemed reasonable, and yet they will not bear.

It may be that excessive kind treatment has been the very cause of the refusal to bear. They have grown too much and are yet in the wood-making business, rather than in fruit-bearing. It may be that the variety is not an early-bearing one, and the proper time to bear has not come. The climate may be one which does not favor early bearing.

If either of the two latter is the cause, a little more time may put things to rights. However, the bearing of such trees may sometimes be hastened by the same means that will be recommended for excessive wood growth. This is to check. There are several ways to do this. Some advise cutting back some of the roots, but I do not like this plan, because it permanently cripples the tree. I have known iron spikes to be driven in the body, and sometimes the bark is pounded, which makes ugly scars. Neither of these methods seems advisable.

The plan which I have followed with success and without permanent injury, is girdling in early summer time. This should be done in June. A single cut may be made with a knife through the bark, entirely around the trunk, at any convenient place, or two or more such cuts may be made. If a ring of bark several inches wide is peeled off entirely around the trunk of an apple or pear tree at this time of year no harm will follow, for a new bark will soon form over the wound. Another very good plan is to remove long strips of bark about two inches wide, pointed at both ends, and leaving spaces of bark of about the same width.

Any of these will cause a checking of the flow of sap and an unusual formation of fruit buds, instead of an excess of wood buds. The trees of the stone fruits are much more sensitive to injury and will not safely endure such treatment as has been described; nor do they usually need anything to force them into bearing.—H. E. VanDeman, in *Vick's Magazine*.

ENTOMOLOGY.

The Municipality vs. the Codling Moth and Other Insects.

At the late session of the Legislature of Ontario an Act for the prevention and destruction of certain noxious insects was adopted, providing that upon the recommendation of the Minister of Agriculture, the Lieutenant-Governor-in-Council may make such regulations for the purpose as may be deemed advisable, which will have the force of law in all municipalities adopting the Act by by-law. The actual utility of the Act will therefore depend upon local interest being aroused sufficiently to bring pressure to bear upon municipal councils to pass the necessary by-law. Where this is done, the Act requires the appointment of inspectors by the municipalities adopting its provisions, whose duty it is to inspect all orchards and enforce the regulations. In case of non-compliance, the inspector may cause the work to be done and report the cost to the Council, who are empowered to enter the sum on the collectors' roll against the owner and collect the same in the same manner as other taxes. The occupant or owner of every lot affected is to be furnished, by the municipality, with a printed copy of the Act and the regulations made under it, and also with a copy of the by-law and the name and address of the inspector. A fine of from \$1 to \$20, or, in default, imprisonment, is to be imposed upon persons interfering with inspectors in the discharge of their duties. In view of the extent of the ravages committed by the codling moth and other injurious insects, it is to be hoped that rural municipalities, more especially the fruit-producing districts, will see the desirability of adopting the Act and taking prompt measures for the enforcement of its provisions.

The first order-in-council approved by His Honor the Lieutenant Governor (on May 24th, 1900) under the new Act makes the following regulations for the prevention and destruction of the Codling Moth:

1. It shall be the duty of every occupier of a lot within the municipality, or if the land be unoccupied, it shall be the duty of the owner of such lot, within one week after receiving notice as provided for in the Act, to place bands as hereinafter described upon the orchard trees located upon said lot, as follows: Upon all bearing apple trees and pear trees, and upon all orchard trees of bearing age within 10 feet of such bearing trees.

2. The bands shall be made of "burlap" or "sacking," or similar suitable material, and shall not be less than 4 inches in width, and of three thicknesses, and shall be securely fastened at a convenient point between the crotch of the tree and the ground.

3. The occupant or owner shall have these bands removed and inspected, all larvae therein destroyed, and the bands replaced at intervals of not more than two weeks during the months of June, July and August.

POULTRY.

Feeding, Cooping and Caring for Growing Chickens.

There is no better surrounding for a chicken range than a fruit orchard in sod. The shade provided, as well as the green food and insect life, supplies suitable supplements to the daily rations given at the hands of the poultryman or poultrywoman. Suitable coops should be provided for their shelter. A coop 2½ feet high at back, 3½ feet in front, 3½ feet wide, from 6 to 10 feet long, will answer well. The back and ends should be boarded solid, and the roof made rainproof, and the front covered with small-mesh poultry netting. There should also be an opening against the roof at back, which should be covered with netting. Fowls are then safe from minks, skunks, weasels, rats, etc., and have a free circulation of air. The coops should also have board floors, which should be cleaned once in two or three days and covered with fresh sand. Coops without floors do well on dry ground if moved to a clean location once in four or five days. It is well to provide roosts about a foot from the ground, of 2-inch stuff rounded on top. A coop of the above dimensions will accommodate two or three hens with the hatchlings of five or six.

The chicks should be allowed their liberty to roam from the time they are quite young, and not be overfed on grain too easily gotten. When past their chick food, feeding twice a day with a mash consisting of corn meal, middlings and bran, about equal parts, scalded, and the third meal of cracked corn, wheat or screenings, fed in litter so they will have to work for it, provides a day's ration that will tell favorably on the growth of the youngsters. When the chicks are six weeks old they will no longer need the hens, which should be removed, leaving the home to the brood. They will ramble considerable distances during the day, but return to their coops to roost at night until they are well grown.

Care should be taken that the chickens are never crowded, and the necessity for cleaning at regular intervals should never be lost sight of. Droppings and decayed food form favorable breeding places for lice, and if lice once appear there will be much trouble in getting rid of them. By the ravages of lice the constitution becomes weakened, and the least adverse weather, that would not affect a strong chicken, will produce cold in the head and other troubles in those of weakened constitutions. Troubles of this sort may easily be cured if the origin of the cold be reached, which is not so much the adverse weather as the lice.

Throughout the growth of the chicks it should be remembered that the main considerations are grit, fresh water, and cleanliness, and those who bear this in mind will raise strong chicks with big frames which will be fit for the market—early laying chicks, that will pay their way throughout the winter, and vigorous stock from which superior chicks may be bred the next spring.

A Word of Warning: Beware of Red Lice, or Mites!

They were unknown to me until last spring, and I think they are, without exception, the greatest pest poultry can have. I address myself to those who look upon their advent as of no consequence. To those, I say *Beware!* I noticed them first under my sitting hens and on them. I changed the straw frequently, and burnt it, washed the eggs, saturated the nests with coal oil, sprinkled the hens with insect powder or sulphur; still, the mites thrived.

When the hatching was ended, I burnt 2 lbs. of sulphur in the house, thoroughly whitewashed it, and used coal oil plentifully round the roosts and nests—all to no effect. Early in November I determined to make a still greater fight. I took the entire interior of my house to pieces, every nail was drawn and every board carried out and thoroughly scrubbed with hot water and carbolic acid and then scalded. (I used the pig boiler for heating the water.) I disinfected all my fowls with a very strong preparation, and also used the same over the entire house—ceiling, walls, and floor. My house is grout and mortar between boards, and, to my horror, since the warm weather came I notice the mites creeping out from between the boards. I have been corresponding with Mr. Gilbert, of the Experimental Farm, and I am now following his advice and spraying with a solution of corrosive sublimate, but as it is a deadly poison, we have to use great caution. The solution is prepared as follows: corrosive sublimate, 4 ozs.; common salt, 1 ozs. Dissolve in two to four quarts of water. When completely dissolved, dilute to 25 gallons. Sprinkle thoroughly every nook and crevice. I hope this article may benefit others. It will at least show that mites are harder to exterminate than one realizes.

TRIX.

Have you cleaned out the pens and put on a coat of white-wash? How sweet and clean everything smells, and how much better everything looks! The hens appreciate these things, and the eggs will tell the story.

When a large pan of water and many chickens they pick.

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To the Ed

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