

Vines that get into a bad condition have the evil laid to the charge of over-cropping, when the cause is due quite as much, or more, to the ravages of this insect. The most effectual means for its destruction is the application of sulphur to the pipes or flues, but if the house is flued, care must be taken that the sulphur is not laid on the flue too near the furnace, or the consequences may be most disastrous on account of the ignition of the sulphur. With hot-water pipes, this cannot occur. To one part fresh lime add two parts flowers of sulphur, and mix with as much water as will bring it to the consistency of thick paint. On a mild dull evening, if possible, get the water in the pipes as near boiling as can be, close the house and saturate the atmosphere with water, then regularly paint the pipes over with the mixture. If the weather is dull, so as to require little or no air during the following day, so much the better. An almost general impression prevails that if sulphur is applied to the pipes before the berries are stoned, the skin will be injured. In the case of tender-skinned sorts, like Buckland Sweetwater or Foster's Seedling, if the bunches are near the pipes, such will be the case, but Hamburghs, Muscats, Alicante, or Lady Downes, will not suffer. If the atmosphere is thoroughly saturated, the skin of the berries becomes coated over with the moisture, which appears to shield them from injury; but for the thorough destruction of the insect, and freedom from injury to the fruit, the above directions as to thorough saturation of the atmosphere must be carried out in their entirety, and the operation must be repeated in the course of ten days, by which time any eggs that have been deposited will have come to life. I may here state that no insecticide can with safety be applied to Vines, except to the bare wood when at rest; any dressing after the berries are formed will disfigure them, and if applied in the late stages of growth, will leave unmistakable evidence of its presence by tasting the fruit.

On Cucumbers and Melons.

Cucumbers are subject to red spider, but on them it can be kept under by the use of the syringe. Melons are especially subject to spider in the early stages of their growth, and whilst the fruit is swelling the syringe will keep it under; but when the fruit begins to ripen, necessitating a drier atmosphere, it is more difficult to manage. In houses or pits heated with flues or hot water, it can be treated as in the case of Vines, but in dung-pits or frames it is difficult to manage. During the ripening season, a close watch should be kept, so as to detect the insect as soon as it makes its appearance, carefully sponging the leaves thoroughly both on their upper and under surfaces.

On Peaches and Nectarines.

The Peach-house is one of its favorite haunts, if there is an insufficiency of water applied to the trees overhead; but where the syringe is used freely in the early stages of the growth of the fruit, it has not much chance of getting established. Neither should it be allowed to run riot over the trees after the fruit is gathered, as such has a most baneful influence upon their strength, causing the leaves to fall prematurely, and thereby destroying the vital power of the trees. Peaches and Nectarines on open walls are alike subject to this insect; but, here again, it is attributable to an insufficient use of the garden engine. The Peach, in its native habitat, is subject to a great amount of moisture, and an insufficiency of this at once renders it a prey to every insect that revels in a dry atmosphere. To keep red spider down, the Peach wall should have a good washing with the garden engine twice a week, from the time the trees go out of bloom to their commencing to ripen. — *T. Guines, in the Garden.*

A Remedy for the Currant Worm and the Hop Louse.

Noticing a request in one of your contemporaries for a "Remedy for the Currant Worm and the Hop Louse," the furnishing of advice to farmers and others upon similar subjects being my profession, I communicate to you the following:

The Currant Worms at present known to me may be divided into three classes—

1st. Those which make burrows in the stems and twigs, of which I know two kinds infesting the cultivated red currants.

2d. Those which cut off the tips of the twigs, of which I know one kind.

3d. Those which eat the leaves, of which I know seven kinds.

You will therefore perceive the impropriety of speaking of the Currant Worm. Of the latter seven, however, only three do important injury in this State. Of these three the one which I have most frequently met on the currant bushes in my garden within the last two years is the Imported Goose-

berry Saw-fly (*Nematus Ventricosus*). The larva (false caterpillar) of this is green with black spots, except sometimes toward the end of its life when the black spots are lost. It has fourteen belly legs in addition to the usual six jointed legs.

The one which I consider next in importance is the American Currant Moth (*Ellopiæ ribæaria*), the larva (caterpillar) of which is yellow with white and black spots, and has only four belly legs in addition to the six jointed legs.

The Imported Gooseberry Saw-fly may be attacked in the egg or in the larva. From about the middle to the latter part of May, or soon after the leaves of the currant bushes are put forth, the eggs can be found attached to the under side of the ribs of the leaves. The leaves should be examined every day at this season, and those which have eggs on them should be picked off and burned. Soon after, if the eggs have not been destroyed, little holes will be made in the blade of the leaf by the young larva, which can thus be discovered more easily, and should be killed. If this is neglected the leaves will be more and more devoured, the larvæ remaining beneath them most of the time in easy reach. If the bushes are not considered worth their care, they should be cut down, so as not to serve as nurseries for the propagation of these and other pests. The farmer who neglects them should feel ashamed. Some of the larvæ should be enclosed in a box, and bred to the winged state, that the farmer may learn to recognize the parents, the males and females looking much unlike. The winged insects are very sluggish, and can be captured without difficulty when they are seen. A second brood begins to appear by the latter part of June and through July, if the former brood has not been destroyed, and must be attacked in a similar way.

I know very little of the Hop-plant Louse (*Aphis humuli*) which is a recently imported European insect, if I am not misinformed. It is stated that an efficacious remedy is to char the hop poles every year before using them. Boiling the hop poles in water or soaking them in oil or corrosive sublimate would be as good as charring them. — *Cor. Mass. Ploughman.*

KILLING THE BORER.—Mr. Gordon D. Brock, of Lindsay, writes: "I have discovered a cheap and sure way of killing the Borer without the knife, by applying soft soap suds with a syringe. The worms have been as bad in my plums as in the apple-trees the past season."

LONG VITALITY OF SEEDS.—An instance is mentioned in the *Prairie Farmer* by Dr. Hubbard, where seeds of the burr oak, buried beneath the surface of a well drained piece of land, remained 30 years in a dormant state, till thrown up nearer the surface, which caused them to germinate. It is familiar to nurserymen that peach stones buried compactly a foot or two below the surface will remain dormant for a time, and it would be an interesting subject of inquiry to ascertain to what length the period might be extended by deep and compact burying, for different kinds of tree and other seeds.

PROFITS OF CRANBERRIES.—Cranberry vines do not, as may be commonly supposed, root into the soil. They appear to twine their roots around grasses and moss, propagating from their joints and obtaining their nourishment apparently from the water around their roots. They are strong and hardy, and, if the water is regulated properly, will multiply with astonishing rapidity. Respecting their value as a product, we have some Munchausen reports for the year 1873. One gentleman picked from his "best acre" 1,373 bushels. He received \$2.80 per bushel, and as the picking cost him one dollar per bushel, his income from that one acre was \$2,461.40. Others had a yield of from seven hundred to one thousand bushels per acre. But these are examples of the greatest yields. Some parties average one hundred and thirteen bushels to the acre others as low as twenty bushels, the latter being marsh just commencing to bear. By the sudden appreciation of the marsh lands producing this article of consumption, many have almost instantly found themselves wealthy. Men who, a year or two since, would have taken a thousand or two for all they possessed, are now the "heaviest" men known to the bankers of their towns. — *Milwaukee Journal of Commerce.*

FORCING BARREN TREES TO BEAR.—This can be done by pruning, from the 25th of August to the 15th or 20th of September. While I don't know as I can give a scientific reason for it, yet I know, by actual experience, that it will have its desired effect if properly done. If the tree is very vigorous, root pruning may be necessary. The reason I assign for pruning at that time is that the fruit buds are formed at that season, and if the flow of sap be turned from the wood it will go to mature the fruit-bud. — *Prairie Farmer.*

THE VEGETABLE GARDEN.

Old Gardens, and means for their Renovation.

Land under cultivation for the production of kitchen garden crops forms no exception to the general rule of the soil being unable to bear, for an indefinite period, a repetition of the same or a limited succession of crops. Such is the state of very great numbers of old private gardens, where too often every load of manure required by the gardener is meted out with a grudging hand, alike unmindful and indifferent as to the absolute requirements of the vegetable and fruit departments. The expedient, not unfrequently restored to, is the making of a new garden altogether. When the area required is large, say from ten to twenty acres, this is in all probability the best course when a suitable site can be got, but even where such is the case the taking of and enclosing a kitchen garden is a costly job. But it often happens that the existing garden is placed in the only situation possible; where such is the case, and more especially if the area is not too large, and the material in the shape of new soil is obtainable, renovation is the only course to follow. The way to proceed is to introduce from eight to twelve inches of new soil. Within an easy distance from large towns, where building operations are in progress, the top spit from grass land can frequently be got for little more than the cost of carriage; but in country districts it is not so easily obtainable. No one is fond of breaking into grass land and removing the best of the soil in such quantity as the extent this operation will require. I must confess that I never yet removed from a pasture, or meadow, the comparatively small quantity of turf required for making or renovating a vine border without feeling that it was making a sacrifice, even if an unavoidable one; and, before commencing, it is as well to see if the material can be got from any other source. Where there is common land that can be got at within a reasonable distance the thing is simple enough; such failing, there is yet another source. In many country districts, on the sides of the roads, there are continuous banks of earth, the accumulation of years of road scrapings and ditch coverings, still increasing, and grown over with a luxuriant sward of grass. These said accumulations do very great injury to the roads, above which they are in many places from a foot to 15 in. higher, preventing most effectually the water from getting away. The gritty character of these road-side accumulations renders them for some soils even superior to the surface soil from cultivated land. Old gardens—the soil of which has become nothing more than a mass of humus—are greatly benefited by a good dressing, say 6 in. of good sound clay, or, still better marl where it can be had, laid roughly on the surface in the autumn or winter, so as to allow it to become mellowed by the action of frost.

When the question of material for the renovation has been settled the first essential is to ascertain that the drainage is efficient. Even where there is little apparent stagnant water in the soil it frequently happens that a more complete system of drainage would greatly improve the land in several ways, by rendering it much more workable at all times, as well as allowing the production of spring crops much earlier. Wherever there is any undue retention of water, even in the subsoil, the heat accumulated in the earth during the summer is much sooner lost in the autumn months, and it requires a longer time in the spring for the sun's rays to warm the soil sufficiently for the development of vegetable life. Then as to the depth of the drainage. This is a subject that for the last thirty years has received the attention of those connected with land cultivation on both farm and garden. Various depths have found advocates, from 2 ft 6 in. up to 6 ft. For most soils a medium depth, betwixt the two extremes, will be found nearest the mark. But any uniform depth of drainage for soils of the different descriptions, such as are found in almost every parish in the kingdom, is about as inconsistent with common sense as it well can be. For all practical purposes, it will be sufficient to say that the bottom of any drain should be something like nine inches below the pan, or stratum, that holds water; and for a garden something more is required than the simple pipe-drain alone, inasmuch as roots of the fruit trees, and some culinary vegetable crops, such as beet, are subject to get down into the pipes and choke them. This is a matter that should be guarded against. After the pipes are laid, six inches of scoria, brick rubbish, broken stones, or flints, should be laid on the top, such not being available, flagstones to the same depth should be used. This, in a great