

Miscellaneous.

MILDEW OF THE GRAPE.

AMATEUR:—"Last year I was fortunate enough to lose nearly all my grapes with what seemed to be mildew. It would be a boon to myself and others similarly troubled if the FARMER'S ADVOCATE would give a remedy."

[The various mildews and rots of the grape are the most serious diseases with which the grower has to contend. The black rot caused by the fungus (*Laestadia Bidwellii*) is the most destructive and widespread of the maladies affecting the grape. Downy mildew, brown and grey rot are all caused by a single fungus known as *Peronospora viticola*. When this fungus attacks the leaves it causes downy mildew; when found on the fruit, giving it a light brown appearance, it is called brown rot. And again, when attacking the young fruit, covering berries and stems with a grey-white mould, which arrests their growth at once, causing them to shrivel, dry grey rot is the term applied. Powdery mildew (*Uncinula spiralis*) attacks the upper side of the leaves, and is seen in meal-like patches on the young shoots and fruit. These patches continue to increase in thickness, and until they cause the cracking of the berries and render them susceptible to the attacks of other rot agencies. Spraying with copper compounds in some form has been found to act as a preventative to the above fungus diseases; but to insure success, our inquirer should have begun the treatment before the growth started in the spring, as advised in the first issue of the ADVOCATE for April; still, even if it has been neglected in the earlier stages, much can yet be done to stay the ravages by spraying with either the Bordeaux mixture or the ammoniacal copper carbonate solution, as recommended in that issue. As the downy mildew (*Peronospora viticola*) has been very severe in Ontario some years, and doubtless in the one referred to, we give the following from Prof. Craig:—As a rule, it is first noticed on the fruit when about half formed, presenting a downy and frosted appearance, which gives place to a greyish-brown in later stages. Beginning with one or two varieties in the vineyard, the disease, if allowed to run its course, will spread rapidly, attacking other varieties which were at first exempt. It usually affects the leaves and wood later in the season, sometimes, in the case of early varieties, after the fruit has been gathered. For treatment the vines were sprayed with the following mixture:—Carbonate of copper, two ounces; ammonia, one and a-half pint; water, twenty-five gallons. As soon as the mildew made its appearance on the vines, two applications and the removal of all diseased berries had the effect of checking the spread of the malady, but at the same time demonstrated, when compared with former experiments, that the proper line of treatment leading to complete success lies in the early application of the remedy. The following is the course of treatment planned for our vineyard:—1. All prunings, leaves, etc., to be carefully burned. 2. When the vines are uncovered in spring, spray them, including the trellises, with a simple solution of copper sulphate (blue vitriol), one pound to fifteen gallons of water. 3. Spray with the ammoniacal copper carbonate, using the formula already given, soon after the fruit sets; make two or three applications at intervals of ten days or two weeks, as the necessities of the case seem to demand. 4. Remove and destroy all diseased parts of the fruit and foliage.]

LEGAL QUESTIONS AND ANSWERS.

[Answers to legal questions of subscribers, by a practicing barrister and solicitor, are published for our subscribers free.]

MASTER AND SERVANT.

SUBSCRIBER:—"Last spring I hired a farm laborer for five months, and after the man worked for me for one month and eleven days of the time he told me he had been offered better wages than he agreed with me for, and saying also he was sick and unable to work any longer. He then left and commenced next day to work for another man, where he has continued to work at the same kind of work. He demands from me, through his lawyer, a settlement at the same proportion of wages as was agreed upon for the five months (that is, for one month and eleven days). Will you please answer:—(a) Has he a right to his wages for one month and eleven days at the rate he demands? (b) Can he be compelled to put in his time?"

ANS.—(a) Provided the man left your employ without just reason, as, for instance, being discharged by you, or leaving by your consent and approval, or because of being ill-treated or abused, or by reason of your refusal to pay wages due to him under the contract, but simply because of getting a better offer of wages, or because he would prefer to work for another person, etc., then the man is not entitled to collect from you any wages whatever for the work done during the one month and eleven days. He, having entered into a contract for five months, is required by law to work out his time before the law will assist him to recover anything for his wages. (b) You cannot compel him to work out his time with you. Your remedy on this branch of the case is only an action against him for damages sustained by you by reason of him quitting you.

GARDEN AND ORCHARD.

Horticultural Notes.

Keep the soil moist and cool by cultivating often and thoroughly.

Give the sprouts from fruit and ornamental trees the same attention that you give to the weeds.

Electrified earth is the latest device for attempting to hasten the germination of and the growth of seeds.

Keep the garden busy growing useful crops; always have the ground occupied, otherwise it will be occupied with weeds.

When a young orchard is set out in a stiff sod and left to live or die, the most wonderful thing about it is that some of the trees will survive this treatment and live to bear several crops of fruit before succumbing to such gross negligence.

A cheap hand-weeder, which works splendidly, may be made by grinding an old case-knife on both sides and then bending the blade about two inches from the point.

When the farmer goes to his friends in the town and sees the trim rows of strawberry and raspberry plants loaded with berries, he begins to feel how foolish he was to depend for his supply upon the crops which grow in the fence corners. One row of good bushes is worth all the wild ones on a hundred acres. Every farmer should have a good assortment of small fruits for the use of his family.

The failure of fruit crops is as often due to the carelessness of the farmer as to bad seasons. Too many growers expect to raise fruit without working for it. A fruit farm will not run itself any more than any other business. Good culture, good pruning and the destruction of insect pests are necessary, so also is the application of some plant food: the average cultivator is slow to learn what amount of manure a bit of land pushed to its utmost will absorb. The market gardener is the man who best understands this, and he furnishes an object lesson that his neighbors can well afford to study.

The man who desires fruit should keep his trees healthy and vigorous, but to do this something must be done besides keeping them in grass, a crop of hay being taken off the land each year. A good plan is to pasture the orchard with sheep or pigs, for they will return the manure to the orchard and pick up all fallen apples, thus destroying the worms; but a better plan is to keep the soil cultivated, thus allowing the air to have access to the roots, keeping the soil moist in the droughts of summer.

Bagging of grapes, as a means of protecting them from birds, insects and rots, is steadily growing in popular favor. L. Miller gives his opinion in American Gardening as follows:—"The bagging of grapes at the proper time is a sure preventative of the rot; those that have failed must have made some mistake in their work. This practice is advisable on account of birds and insects, for they can so demoralize an acre of grapes that one cannot get sound bunches enough to make a fair exhibition of. All this can be prevented by bagging." He said he lost ninety per cent. of the grapes not bagged at the proper time. Begin operations just as soon as the fruit is set, no matter what the variety; if done sooner there is danger of imperfect pollination.

Few persons are aware to what an alarming extent the borers are infesting the orchards in the different sections of the country. A tree becomes unhealthy and eventually dwindles and dies, often without the owner having the least suspicion of the true cause—the gnawing worm within. The young, smooth-barked trees are the most liable to damage from this cause, and, unless closely looked after, much damage may be done to them. There are two distinct species of the borer. Of these the most injurious, the round-headed borer, takes three years to mature, and is the larva of the striped Laperda, which lays its eggs at the collar of the tree, and the flat-headed borer which infests the limbs and the upper part of the trunk. The beetles of both species lay their eggs about the same time—the last of June. Common kerosene emulsion or some alkaline wash applied to the trunk and limbs of the trees is very repulsive to this insect, and the female will not lay her eggs upon trees protected in this way. The orchard should be carefully examined several times during the season, and wherever the red sawdust exudes from the trunk of the tree a grub will be found. The little grubs which were hatched from eggs last year will be found actively at work now, and as they have not entered the sap-wood yet, are easily found and dislodged: those that are a year older will be found gnawing away into the wood, taking a downward course towards the roots. A small, sharp gouge or piece of stiff wire makes a good tool to follow and dislodge the borer.

DAIRY.

Meeting of the Executive Committee of the Western Ontario Dairymen's Association.

The Executive Committee of the Western Ontario Dairymen's Association met in the Secretary's office, 361 Richmond street, London, on Saturday, July 1st. There were present President Geary, London; Hon. T. Ballantyne, Stratford; A. Patullo, Woodstock; A. F. MacLaren, Windsor; J. S. Pearce, London, and J. W. Wheaton, Secretary.

Very favorable reports were received from the parties in charge of the dairy school work, carried on at four factories in the west during April and May, showing that substantial and lasting work had been done, and that the efforts of the Association to improve the quality of our early spring cheese were being appreciated by western dairymen. Grants of \$100 each were made to the Western Fair, London, and to the Industrial Exhibition, Toronto, to be given in prizes for cheese shown at the exhibitions this fall. The grant to the Industrial is to be put with similar amounts from the Eastern Dairymen's Association and the Dairymen's Association of Quebec, and \$200 from the Industrial, the whole to form a purse of \$500 to be given in prizes to be competed for by members of the three Dairymen's Associations.

The small exhibit of cheese from Western Ontario of 1893 make, sent to Chicago for the June competition, was the subject of much discussion. It was felt that through ignorance of what was required, or through being too careless about the matter, the western dairymen had not in any way sent a representative exhibit of cheese made this year. While Quebec sent over a number of lots of this year's make, and received twenty medals, Ontario only sent forward one lot of this season's make, and consequently only received one medal for cheese made during 1893. Arrangements were made to have some of the prominent dairymen visit the factories in the west, to select cheese and get the factorymen to forward lots to Ingersoll, where they will be submitted to a final selection before being sent forward to Chicago. The probabilities are that no further exhibit will be made from Canada till September, when an extra effort will be made to send forward the finest goods from our best factories, so that once more Canada may carry off all the laurels as the producer of the finest cheese made on this continent.

The month of June has been an exceptionally good month for the production of milk. There has been an abundance of grass and rich pasturage, which have been freshened by frequent and copious showers of rain, and consequently the supply of milk at most of our cheese factories has never been as large. The indications at present are that July will also be a good month for the dairyman. Notwithstanding all this increase in production, the price of cheese is exceptionally good, and the bulk of June make will go off at considerably over nine cents per lb. The shortage of the make of cheese in Great Britain, and the tendency on the part of some of our cheese buyers to buy up for storage, besides the improved quality and increasing demand for our Canadian cheese across the water, have been the chief factors in keeping up this comparatively high price.

The largest cheese factory in Canada, if not the largest in the world, is in the county of Middlesex, and about seventeen miles from the city of London. This factory last season made 250 tons of cheese, and its output the present year will be upwards of 300 tons. The milk supply for this quantity is received within a radius of three miles around the factory. The amount of money brought into this small district and divided among the eighty or ninety farmers who patronize this factory is from \$50,000 to \$60,000 every year. This extensive business is located at Harrietsville, Ont. The farmers interested in this concern have no reason to complain very much of hard times, when their other farm operations are supplemented so largely by the cheese factory.

The farmers who have sown peas, and oats, and other fodders, in order to have supplementary feed for their cows during the summer, must not form the idea that it will not be needed this year. We have our usual dry, hot weather of August before us yet, when all such succulent feeds will do excellent service in enabling the cows to keep up the supply of milk while the pasturage is dry and scorching.

Now that fly time is approaching, and the cows are excited and worried by these pests, and also during the dry, hot, muggy weather of July and August, particular attention should be given to airing the milk and exposing it to the atmosphere, so as to eliminate bad odours and overcome the bad results arising from these causes, and incident to this time of the year.

Says Mr. Horsfall, a very extensive milk producer for the London market: "Albuminous matter is the most essential element in the food of the milch-cow. Any deficiency in the supply of this will be attended with loss of condition, and a consequent deterioration in the quality of her milk." Mr. Horsfall never omits pulse, i. e. horse-beans or peas, from the rations of his milch-cows.