Garden, Orchard and Lorest.

THE PEAR SLUG.

This disgusting insect has been quite numerous in some localities during the summer, and has in some instances caused considerable damage to the pear trees. They are first noticed after they have eaten several days, and the trees begin to put on a rusty appearance. The perfect insect of this slug is of a glossy black color, about a quarter of an inch in length, and might be mistaken by a careless observer for a common fly. They come forth from their winmon fly. They come forth from their will ter quarters in May or June, and lay their ter quarters in the course of three eggs and disappear in the course of three weeks. We quote Harris' description of these slugs:-

"At first the slugs are white, but a slimy matter soon oozes out of their skin and covers their backs with an olive-colored They have twenty very short legs, or a pair under each segment of the body except the fourth and the last. The largest slugs are about nine-twentieths of an inch in length when fully grown. The head, sticky coat. of a dark chestnut color, is small, and is entirely concealed under the fore part of the body. They are largest before, and taper behind, and in form somewhat resembles minute tadpoles. They have the faculty of swelling out the fore part of the body, and generally rest with the tail a little turned on the state of the body and generally rest with the tail a little turned on the state of the body. up. These disgusting slugs live mostly on the upper side of the leaves of the pear and cherry trees, and eat away the substance thereof, leaving only the veins and the skin beneath untouched. Sometimes twenty or thirty of them may be seen on a single leaf; and in the year 1797 they were so abundant in some parts of Massachusetts, that small trees were covered with them, and the fo liage entirely destroyed; and even the air by passing through the trees became charged with a very disagreeable and sickening odor, given out by these slimy creatures. The trees attacked by them are forced to throw outnew leaves, during the heat of the summer, at the ends of the twigs and branches that still remain alive; and this unseasonable foliage, which should not have appeared till the next spring, exhausts the vigor of the trees, and cuts off the prospect of fruit.

The slug-worms come to their growth in twenty six days, during which period they cast their skins five times. Frequently, as soon as the skin is shed, they are seen feeding upon it; but they never touch the last coat, which remains stretched out upon the

After this is cast off they no longer retain their slimy appearance and olive color, but have a clean yellow skin, entirely free from viscidity. They change also in form, and become proportionally longer; and their heads and the marks between the rings are plainly to be seen. In a few hours after this change they leave the trees, and, having crept or fallen to the ground, they burrow to the depth of from one inch to three or four inches, according to the nature of the soil. By moving their bodies the earth around them becomes pressed equally on their sides, and an oblong oval cavity is thus formed, and is afterwards lined with a sticky and glossy substance, to which the grain of earth closely adheres. Within the little earthen cells or cocoons the change to chrysalids takes place; and, in sixteen days after the descent of tha slug worms, they finish their transformations, break open their cells, and crawl to the surface of the ground, where they appear in fly form. These flies usually come forth between the middle of July and the first of August, and lay their eggs for a ground broad of slug-worms. The latter second broad of slug-worms. The latter come to their growth and go into the ground in September or October, and remain there till the following spring, when they are changed to flies and leave their winter quar-

It seems that all of them, however, do not finish their transformations at this time; some are found to remain unchanged in the ground until the following year, so that if all the slugs of the last hatch in any one year should happen to be destroyed, enough from a former brood would still remain in

the earth to continue the species."

Whale oil and soap-suds applied with a garden syringe will destroy this, as well as most of fine dry dust sprinkled on the insects freely, will destroy nearly all that are touched.

They cannot live long unless covered with their peculiar slime, and any dust which absorbs the moisture and dries them up is pretty sure death to them.

ORCHARDS-CULTIVATED OR IN GRASS.

This question has been the subject of a good deal of honest controversy through the agricultural papers within the past year or two, some contending that all fruit trees, to be healthy and productive, must have the ground under and about them constantly cultivated, while others are equally sure that a surface covered by grass is decidedly better for the health and productive capacity of the trees. We are inclined to take the middle ground, and allow that each method is the better under certain circumstances. Much depends upon the character of the soil on which the trees grow. We can point to certain orchards which have been in grass ever since the first year or two after the trees They are both thrifty and were planted. productive, and the owners claim that if they were to cultivate the land constantly, the trees would grow vigorously, but produce little or no fruit.

The land is peculiarly adapted to fruit trees, and little care is required, except to keep injurious insects from the trees, and harvest and market the fruit. Such cases are comparatively rare, however, especially in New England where the land generally needs considerable forcing to make it produce thrifty, healthy trees, capable of bear

ing full crops of large, handsome fruit.

We would treat the orchards according to their needs. If they need checking we would check them, and if, as is usually the case, they need urging and forcing, we would do that by applying fertilizers in abundance, and by keeping the soil mellow and free from other crops which might injure the growth and bearing habits of the trees.

Mr. Thomas Meehan, of the Gardener's Monthly, has been a strong advocate of the plan of keeping orchards in grass, and is opposed to the common theory that trees, to do well must be cultivated like corn or other The following extract from an hoed crops. article of his will indicate on what ground he bases his peculiar theory. Our readers can judge whether their own soil most needs

shade or culture:—
"One of the old and long cherished theories of fruit culturists is that trees will not do well without a constantly clean surface. It is conceded that trees will not thrive when the temperature of the earth is much above seventy degrees. At eight degrees the system of the tree becomes weak, and renders the leaves susceptible to the attacks of various fungi and other diseases. And yet the experimenter will find in this region, at least, that soil unprotected on the surface of the sun's rays will go over ninety or one hundred degrees. It is very likely after this he will get tired of seeing the leaves of his pear trees fall off before midsummer has hardly gone, and go to protecting the surface in the same way, yet be-lieving, probably, that in "theory," at least, the exposed, clean, sun-roasted surface is the proper way, and the only right way, to

He may live in a region where, year after year, seedling pears drop their leaves so early in the season that it is impossible to bud them; and he may have to abandon the business to Northern men who can "grow pears." He may take a dozen or so of young seedlings and pack them thoroughly through and about with brushwood, so that it is aland about with brushwood, so that it is almost a struggle for the plant to push its way through. He will find the leaves young and healthy to the last, while those in the clear, clean soil will long have lost theirs; and on testing land under the crust with a thermometer, will find it about twenty degrees lower than in the other case. He may think after this that it will pay to keep his soil cold in some way, though he still may not dare to dispute the theories of those who hold that a clear, clean surface is the beginning and end of all good culture.

This is the season of the year to think of these things. Let every one take his ther-mometer and try the difference between the shaded ground and the cleared ground, and the difference in health of the trees in connection wite the earth's temperature, and he will be surprised how much he will learn. He may, perhaps, be laughed at as a "scienorchard, but lime, ashes, or even any kind tist" by some good, easy-going folks, but he of fine dry dust sprinkled on the insects can lay the whole blame of its folly on the Gardener's Monthly, who will cheerfully bear the ridicule for its dear readers' sake."

BLACKBERRIES

A. M. Purdy, Palmyra, recently showed us a plantation of an acre or two of the New Rochelle blackberry, densely loaded with berries and promising a very heavy crop. The bushes had stood seven years upon the ground, and the only cultivation to which they are subjected is a shallow ploughing between the rows early in spring, and mowing the grass in which they are enveloped.

They are pinched back so as not to grow

They are bout three feet high. This more than about three feet high. treatment keeps them partly in a dwarf condition, and insures productiveness. If cultivated more the growth would become too rank on this rich soil, and they would bear less, become more straggling, and be more liable to winter killing. This is now well understood by blackberry planters, and is in accordance with the remark which we have from boys who gather will blackberries, "that if they find a bush which the cows have browsed, it is always sure to be full of berries." Mr. P. says that with this treatment the New Rochelle proves more produc-tive on his grounds than the Kittatinny, and that the winter killing, from which the former suffers, does not prove a serious difficulty. He is sometimes troubled with the yellow rust on the leaves, and his remedy, which is to remove the affected plants on its first appearance, proves effectual. Exchange.

TRANSPLANTING.

Always see that the soil is thoroughly moist in the pots, if not it is difficult to turn the plants out without breaking the roots, and the old ball of soil will remain dry after frequent waterings. Make the soil thoroughly firm around the roots for them to strike at once into the fresh soil; if necessary to water the plants after planting, do it with a spout, not wetting the soil all over the ground; this only cools the soil without giving the plants any benefit, and the soil is seldom dry far below the surface at this

If the beds were well turned up in the fall, which should always be done, at the same time adding any fresh soil or manure required, nothing more will be required but stirring up with a fork, which should be done in a few days before planting, to allow the sun to warm the soil. We shall infer that it has been previously decided how the most prominent beds are to be planted, and the requisite number of plants prepared for each, so we have nothing to do but bring the plants out and plant them at once, for the less time pot plants are standing about before planting the better, as in a very short time they get dust dry and the roots suffer. We mention this from noticing very enthusiastic amateurs taking out a quantity of plants in the morning and leaving a number unplanted until perhaps the next day, and then planting when the pots were dust dry.—Horticulturist.

OLD STRAWBERRY PLANTATIONS.

If they have borne two full crops, plough them under. We do not beneve that it will pay to raise over two crops of strawberries from one planting, and many of our best small fruit growers only take one full crop.

Which gives them the pleasant sour taste. I hope some will try this method and profit by it.

Indianola, Texas. knowing that they will diminish in size and yield thereafter; but if well matured when planted, and kept clean at all times, the

second one may pay.

Let us examine the plants in a strawberry plantation at this season of the year, when a large crop of strawberries has just been gathered. If the plants have been kept in stools—the runners all removed—those stems which have borne fruit are exhausted, and die, and so do the roots employed in feeding them; but from near the crowns of those roots new roots have started, which either have thrown or will soon throw up new stems to form the basis of next year's crop.

Some practice cutting off and removing the old stems and leaves, just as we do the old exhausted raspberry canes after they are through bearing, and believe that the new ones start up fresher, and grow more rapidly in consequence, and we have certainly seen good results from such a course, but whether we cut off the vines or not, the ground between the rows which has been compacted by many feet, should be broken up mellow to the depth of three to five inches, and all

would be the best implement for mellowing seen,

it, but if it is packed too hard to yield readily to these, a one horse plough (steel is the best) should be used, ploughing the earth from the rows. After the plants have been cleaned out, the ridge thrown up between the rows should be leveled with the culti-

If the strawberries have been kept in narrow matted rows, the spaces between them should be broken up, and the rows themselves cut down quite narrow, and cleaned out. Sometimes the workmen may run the plough just under the original plants, and leave a row of fresher ones on one side of the old one. Where this can be done, it will give you a more vigorous plantation for next year's crop.

After the plantation has been put in good order, you would have a stronger assurance of a good paying crop next year, if you should apply a top-dressing of fine, concentrated manure.

A good article of superphosphate, or bone dust, could be easily scattered along the row, and would probably repay cost several times over in the next crop of berries.

The directions here given for the management of market plantations will apply equally well to the family garden patch, only substituting the spade for the plough in breaking up the ground.

If the reader comes to the conclusion that a good deal of labor is involved in the proper cultivation of the strawberry, it will be a correct conclusion, but then none but the best cultivation pays. Our best cultivators make some money in growing strawberries for market, but half cultivators make none. -Am. Rural Home.

TO PRESERVE GREEN GRAPES.

MESSRS. EDITORS:-A very simple and MESSRS. EDITORS:—A very simple and successful method of preserving the green grapes of wild vines, is one employed in this State, which may be interesting to some of your readers. The grapes must not be too old; the best time is just before the seed begins to harden. They are, after being picked and freed from stems, put into bottles (strong wine or champagne bottles are best) (strong wine or champagne bottles are best) so as nearly to fill the latter. These are then filled with fresh and clean water. After this they are all placed in a large kettle, partially filled with cold water, and the temperature raised nearly to the boiling point. The water in the bottles expands by the heat, and part is driven out. As soon as sufficiently heated, they are taken off, enough water poured out of each bottle to merely allow a well-fitting cork to be pressed in tightly. After being corked they are sealed up with sealing wax or common beeswax. As the bottles cool down a partial vacuum is left in the neck of each. Grapes thus preserved have kept for years

in this climate, while canned fruit almost invariably spoils during the hot summers. They can at any time be opened and pre-pared like fresh grapes, and no difference will be found in the taste. It is better to use the water, also, in which they were kept, as it contains a large percentage of tartaric acid, which gives them the pleasant sour taste.

WHAT IS THE BEST MANURE FOR APPLE TREES.

E. W. Paine, Shelter Island, N. Y., writes

as ionows:

"I saw by the New York Times that the question was asked—'What is the best manure for apple trees?' I have tried several kinds, and find that by taking off the soil around the trunk, say two or three feet down, or nearly to the roots, and putting on any bones which go from the kitchen, which any bones which go from the kitchen, which I save for that purpose, covering and letting them decay, that this feeds the trees sufficiently. I tried the experiment on some, and found that they grew four times as fast as the others, and yielded abundantly. One of my neighbors dug a trench around some of his that had never bore anything and not his that had never bore anything, and put into it two inches of bone dust. The same trees have borne ten bushels a tree ever since. I have, by grafting in the ground, got fruit in three years, which has been my common practice. I take sweet sugar apples and graft on a sour stock, and get beautiful and sweet-tasting apples. I have some that weeds and grass cleaned out.

If the ground is not very hard, perhaps one of the improved cultivators or grubbers one of the improved cultivators or grubbers (keep well—better than any I have ever

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ertainly a hard time l support the thou ough the coming fall nows.-Plowman.