

prevention sought for than its utter extirpation. The question is thus limited to the best means of destroying it. We have seen that the insect passes through four stages, the egg, the grub, the pupa and the beetle. In each and all of these stages it is open to some means of destruction, and at all of them should be searched for with unremitting diligence.

It is obvious, that means of destruction which are practicable under one class of circumstances, may not be so under another—that what may be suitable for a small garden may not be applicable to a large farm; and in stating the various means of prevention which have been tried or found successful, the reader must judge for himself which are most suited to his own particular case.

The great encouragement to the wireworm grub and every other root-worm, is not cleaning the land properly. It has been found that the wireworm is always peculiarly abundant in land which has been recently broken up from old pasture. Undisturbed in the old pasture it is no doubt always a resident there, but we imagine is kept from increasing too much, by the consolidated state of the soil: when that is loosened, it more easily makes its way through it. It is for this reason that the grub, from its structure, always flourishes best in a loose sandy soil. When old pasture is broken up, this condition occurs; and the roots of the old grass are left upon the field to serve as food. No doubt the wireworm beetle also arrives from other quarters to take advantage of the suitable soil, and to lay its eggs in such a favourable locality. The plants which have been ploughed up, either partially grow again, or retain sufficient nourishment to keep the grubs in life until the new crop springs up, when the grub pounces upon the tender young shoots under ground. It is thus they attack newly broken up land in greater numbers, and with more destructive results, than they showed in the old pasture. But if the farmer, instead of leaving the turf and roots to rot on the land, had burned them, the result would have been very different. All insects whether in the state of egg, grub, or pupa, whether originally there from the old pasture, or deposited about the roots by strangers come to take advantage of the locality, would then be destroyed. This is the grand specific, and if *properly* attended to, no one need fear the wireworm.

This is no mere supposition or untried suggestion. Fields much infested have been pared and burnt, and were freed from

the wireworm, while others in the neighbourhood, where the surface was pared, but not burned, continued as bad as before.—At the same time we must remember that paring will only do in the summer time—in the winter season the grub is too deep for this, and deep ploughing must be had recourse to before burning, the grub being often a foot deep in the soil.

We may be told that this grand specific has sometimes been tried, and proved no specific at all. In all such cases we believe that the failure has arisen from its not being *properly* applied at the proper times, and in the proper manner. The ploughing should not only be deep, but the burning should take place immediately after it. In the next place, it should be used either in autumn or spring, or still better in both.—If the roots and weeds on ploughed land are burned in the winter, or, as is usually done, in early spring, while the grub or pupa is still deep in the ground, where it has retired to pass the winter in a torpid state, it will not be injured by any such burning, unless indirectly from the roots and fibres which would have nourished it being destroyed, but this can scarcely be done so effectually as not to leave sufficient food to keep life in the grub till the young crop has begun to shoot. Whereas if the burning of the roots had been delayed till the grubs were eating them, they would both have been destroyed at the same time.—Besides, although the grubs may have been burned, the pupæ may not have been reached, as their cells are deeper in the ground; and the beetles may come out uninjured by anything that has been done. They lay their eggs, as we have seen, chiefly in May and June, therefore a burning at this season also may be essential. When this has to be done, it necessitates either a summer fallow, or at least a very late crop of turnips. It is better to submit to this than have the crop destroyed, not only for the present season but for several years to come. But it is very rarely that such a sacrifice will be necessary. If the farmer is careful in cleaning his land, and burns the roots of the ploughed land early in autumn, and a second time late in spring, he will seldom be troubled by the wireworm. Care should also be taken to leave no strips of grass or stubble in the field. It will only be when he breaks up old pasture that he will have to take any extra precautions; but even here he need not have recourse to any but early ploughing, and burning the roots and turf in autumn as early as possible, and repeating the burning in spring as late as possible. If, indeed,