

eventually destroy the nuisance. It should be remembered that most kinds of thistles are endowed with an amazing quantity of seed, which the farmer often sows with his grain, so that the evil is self-propagating. The ordinary corn, or as it is here termed Canada thistle, (*Carduus arvensis*) often contains from five to six thousands seeds in a single plant, besides rapidly extending itself by creeping roots. The prevalence of thistles, and weeds generally, is an infallible mark of slovenly farming. Good cultivation and the sowing of clean seed, will in the long run prevent these pests from producing a serious annoyance. The only perfect cure, however, is to pull up or cut off the plant below the surface, *before it runs to seed*. In this way, by constant attention, thistles and all other weeds may be completely arrested, and the land kept *perfectly clean*, which in the end is by far the *cheapest* way of encountering the evil.

The following observations of Professor Backman, in a recent number of the *Mark Lane Express*, will be found both interesting and useful:—

We have now to speak of the perennial forms of thistle: and here the *Carduus arvensis*, from its specific name, might appear to be an agrarian rather than a pasture weed; but, in truth, it is far too abundant in both, and wherever found it is difficult to eradicate on account of the long succulent creeping *Rhizomata*, by which so large an underground growth is maintained, being ever ready to shoot up on the advent of spring, and suddenly to show forth the patch of thistles where formerly only a few had been observed. From the well-known fact of the increase of this plant by the means here described, the farmer concludes that it is only propagated in this way, and that the seed of this plant will not grow. And Curtis entertained the same opinion, for after describing the growth of the part which botanists call the *rhizome*, he says as follows,—“This, therefore, is the manner of their reproduction: the fibres left shoot out larger roots, which also rise higher in the soil and spread; these form buds, and hence come our annual crop of thistles.”

However, as we had reason to suspect some fallacy in this, we collected some seeds and planted ten in a pot, and we found that *every one germinated*. We have them still growing; and when the experiments are complete, shall hope to make out some new facts in the natural history of thistles. At present, however, we can only record the opinion that the *Carduus arvensis* is annually produced from seeds to an enormous extent; but so small is its first year's growth above the ground as hardly to attract

notice, while the underground growth is preparing small buds, which make a complete colon the second year. However, it happens fortunately that much of the seed of this plant is eaten by a weevil, and that which arrives at perfection is a favourite of small birds, and particularly of the finches.

To destroy thistles of this kind in a meadow we should take care never to let the leaves which are the lungs of the plant, have time for their growth; as soon as we see them we should trample them under foot, or hammer the young buds to bits with something like the old “clod beetle;” and when they greatly abound a repeated rolling with a Crosskill seems advisable, the object being to *bruise* them, as they do not recover injuries of this kind so soon as those done by a sharp implement, clean wounds in plants, as every gardener knows, being much more easy to heal than contused ones; and the object is to prevent the growth of the leaf which is the active agent in building up the structures of the plant, not even omitting those below ground. If this be continued with either this kind of thistles or nettles, the rhizome will gradually die out. Curtis condemns the earl attack upon thistles; he says,—“Clearing the wheat of thistles by the hook or spud is usual practised during the months of April and May, but, to show of how little avail it is to cut down thistles early in the year, the following rust doggerel may be subjoined:—

“If thistles be cut in April,  
They appear in a little while;  
If in May,  
They peep out the next day;  
If cut in June,  
They re-appear very soon;  
If in July,  
They'll hardly die;  
But if cut in August,  
Die they must!”

From these lines it would appear to be generally known that thistles (and we have seen the same rhymes applied to the case of nettle grow again after injury, more or less readily according to the month in which it is done; so that in May, when the destinies for the year of so many plants are determined, the new growth is rapid. Well, be it so; but we would remark that cutting them in April or May does the greater amount of permanent injury on this very account, whereas although it is equally true, that if it be done in August, you see no more of them the next year; yet no real injury is done to the future crop of thistles or nettles, inasmuch as by that time the plant had used all its growth powers to the enlargement of the underground stems—the root-stocks, which are thus strengthened for the following year's growth; for should be remembered that in August its ordinary natural period of growth is nearly over. At this point we may quote the remarks of a writer in the *Agricultural Gazette* for June, 1859: