

utterly incorrect, the increase in the number of cattle is only equivalent to the increase of the population.

Nor can we console ourselves with the fact that the production of other grain increased 9 times in the above period of 44 years. In the year '27 a considerable quantity of oatmeal was imported, and the quantity of grain raised at the time was not equal to the wants of the county. We were as backward then in the cultivation of Wheat. Gentlemen, we cannot shut our eyes to the fact, that there is something seriously wrong in our husbandry. No one can travel through our county without meeting with fields so exhausted that it is difficult to say whether they are intended for hay land or commons; fences in such a wretched state that they do not offer the slightest resistance to horses or cattle; land of the very best quality chilled and useless for want of drainage; disorder, negligence, thriftlessness and confusion reigning about the farm house, while the tiller of the soil loiters about in lazy unconcern, or spends his time in drunken riot about our streets; such scenes meet us wherever we go, and vividly remind us of that dire sentence passed upon old father Adam, "Cursed is the ground for thy sake, . . . thorns also and thistles shall it bring forth unto thee."

There are many farmers who do not attempt to raise more produce than will supply their own families, and yet they incessantly complain that they cannot save any money, and find it impossible to make ends meet. Now what would we think of the shoemaker who only made enough boots to supply his own household, or the blacksmith who only shod his own horses, or the tailor who only made his own clothes, or the doctor who only prescribed whatever medicine went down his own throat? True, when the farmer supplies the wants of his table and a part of his clothing from the produce of his farm, his expenses are more than half met, but common sense teaches that, in any advanced state of civilization, a man must have a good overplus of the commodities which he produces in order to exchange them for those which he cannot produce.

When we, for one moment, compare the scanty crops raised by our farmers with the full and abundant harvest of farmers in Britain, we cannot fail to be struck with the idea that our county is lamentably far behind. Our little neighbouring province of Prince Edward Island is one hundred years in advance of us. While visiting a farmer a few miles from Charlottetown, in September last, he pointed out a field of turnips consisting of ten acres, the crops from which would probably be about 4 times the quantity

of turnips grown in the township of Tracadie, and nearly half of what is grown in the whole county of Antigonish.

However, to return to our subject. I have said that we send annually out of our county \$70,000 for flour, and that there is not an equivalent raised for it. Now, can this be remedied? We are told that the causes of the failure of the wheat crop of last year are two,

1st, Weevil.

2nd, Rust or Mildew.

The Weevil is a name that is misapplied. Weevils belong to the beetle tribe and their young prove very destructive to corn in granaries. It is a little snouted beetle of a brownish red colour. So prolific are they that one pair of these beetles may produce six thousand in one year. If grain be kept cool and frequently moved, it is not liable to be attacked, for it is when the corn is housed that the female deposits her eggs in it; the young maggots, as soon as hatched, burrow into the grain, each maggot selecting a different seed, the inside of which it devours, and, having undergone their various transformations, no time is lost in depositing eggs for another brood.

The insect to which the name of weevil is given in this country, is the *Wheat Midge*, called by naturalists *Cecidomyia Trilici*. It belongs to the natural order of insects called *Diptera*. To this order belong the common house fly, the gnat, and the mosquito. Insects of this order have two wings, as the name implies, but behind the wings they have as it were, a pair of abortive wings, these are commonly called halteres or balancers; they are frequently kept in rapid motion while the true wings are apparently quiescent, and by this rapidity of motion cause a loud piping noise. This is familiar to us all, in the hum of the gnat and the mosquito.

One peculiarity of the *Diptera* is their tendency to exist in immense numbers, becoming in some instances a plague and a nuisance. One of the plagues of Egypt was a "swarm of flies," probably mosquitoes from the banks of the muddy Nile. Records of the appearance of immense hosts of flies in Britain are not wanting; in 1736 they appeared at Salisbury in such hosts as to resemble columns of smoke; and in August, 1766, they accumulated in incredible numbers in Oxford, resembling a black cloud, almost totally intercepting the beams of the sun. In Lapland they swarm in incredible hosts during certain parts of the year; there is neither rest nor sleep for the inhabitants, indoors or out, unless the body is smeared with some unguent, such as grease, tar, or oil. In the eastern part of the world we well know that mosquitoes are a plague by day and a "terror by night."

We have seen that the insects of this order are very troublesome to man. They are no less a nuisance to him by the loss which they occasion to crops of grain. There are several species which are very destructive. Linnæus mentions one *Chlorops Frit* which infests the heads of barley and occasions a loss of not less than half a million dollars annually in Sweden. This genus have yellow eyes as their name implies; the *Wheat Midge* in this country has dark eyes.

The *Wheat Midge* which proves so destructive to our crops is, in its fully developed state, a pretty little creature, its body being of a bright yellow colour, its two large wings perfectly transparent, with iridescent reflections, its eyes black and its antennae or feelers long and jointed; the male is smaller than the female, and has its antennae ornamented with hairs.

If we watch a field of Wheat on a calm, warm evening, about the month of July, we can see these tiny creatures hovering over it in little clouds. If undisturbed, they will alight on the ears of Wheat and deposit their eggs upon the chaff. The egg when hatched, brings forth a little grub which creeps inward to the young grain, and feeds upon its juices. By the time the grain is ripe, the little grub is in a lazy, torpid state, while the grain of Wheat upon which it lived is more or less destroyed. If the grain be left long enough, the shaking of the ears by the wind causes the grubs to fall to the ground. They then burrow into the earth and pass the winter there. In the following June they again come to the surface, their shell bursts and out flies the fully developed Midge, ready to lay its eggs in the nearest Wheat field.

Now that we know the habits of the little creature, what can we do to prevent its ravages? It is evident that for the greater part of its life the Midge is beyond the farmer's control. He cannot prevent it from depositing its eggs, he cannot drive the young grubs away after they are hatched, nor has he any power over them during winter, while they are buried in the ground. But there is a time when, with a little care, he can destroy them by the million. This is as soon as the grain is ripe; as soon as it can be housed without loss, and before the storms of Autumn shake the larvae from the chaff to the ground. In this country Wheat is often left until it is too ripe, over ripe grain being much inferior to that which is earlier cut in quantity and quality of its flour. The Wheat should, if possible, be reaped, rather than cradled, in order to avoid shaking as much as possible. Having housed the grain, it should at once be thrashed on a close barn floor, which will not allow the larvae to fall through. The grain should