

though we were forced to acquit him "for want of evidence," yet on the principle of the jury who brought in the man charged with murder, *guilty*, because they knew *he had stolen a horse*, we thought, that as he undoubtedly was making a great many holes in the leaves, and otherwise misbehaving himself, all the sulphur, brimstone smoke, ashes, and soot, &c., that had been adjudged for him!

The insect that is now seen on the potatoe leaves in such numbers, has been compared to a flea, in its "habits and appearance." It is about as much like a flea as an apple is like a potatoe. And as for its "habits" they are totally dissimilar. In appearance it is black, about the length, but thicker and rounder than a flea; it has six legs and two antennae: it appears to hop from leaf to leaf but it is furnished with a pair of wings and wing cases. We examined it with the naked eye only, and from its habit (a very bad one) of preying upon the green leaf, it must belong to the *Mandibulata* or masticating insects—the flea belongs to the *Haustellata* or suctorial class, and has no wings, and is of the order *coleoptera*, or beetle. The notion that this insect causes or has caused the potatoe disease is simply, absurd. That they injure the plant more or less according to the extent of their depredations upon the leaf, is no more than what experience and common sense will tell any one. We have already given our opinions about the disease, but as many persons, the readers of the *Cultivator* especially, may imagine this little "gentleman in black" to be the man, we would advise every one to have an eye to the potatoe field. If they should see him at work, and no disease should follow, we think a negative will be proved at last, and justice will demand that we enter a *nolle prosequit*.

THE HESSIAN FLY.
(*Cecidomyia destructor*.)

HOW TO PREVENT ITS RAVAGES.

The importance of an acquaintance with every fact connected with the history and character of this insect must be apparent to every farmer of intelligence. We greatly fear that from the apathy and disinclination to adopt measures of improvement, or indeed anything out of the usual course, which characterize so many of the cultivators of the soil, no general or efficient steps will be taken to prevent the otherwise certain increase of this most destructive of the insect enemies of man. We shall, notwithstanding, discharge our duty in the matter and leave no excuse on the score of ignorance to those who may read the *Canada Farmer*. It is now certain that the Hessian Fly in the chrysalis state, is at this moment to be found in the wheat fields of all the older townships of Canada West, and in sufficient numbers to stock every township in the Province before the end of '48, and to cut off all the common varieties of wheat. That such a result will not happen, no one who is acquainted with the former ravages of the Hessian Fly can with any confidence expect. It can only be averted by a prompt and general action on the part of the wheat growers in every part where the Fly has appeared, or by some remarkable changes of weather, or peculiar condition of the atmosphere, during the coming winter and spring which shall have the effect of destroying the eggs. The latter we may hope for, but cannot calculate upon.—The former is within our power; but for want of unanimity and immediate action, will not be successful.

In addition to what we have already published, we insert the following from a *Rochester* paper of standing, which strengthens the views we have urged upon our readers in former numbers. It must be remembered that our American neighbours speak of the Hessian Fly from experience.

"The second generation of this most destructive insect makes its appearance in this latitude during the two last weeks in September. The fly does not live more than ten or twelve days. It sometimes hatches a little earlier, and at others a little later than

the time above indicated. If there were no young wheat plants within reach of the perfect insect at the period of its maturity, on which to deposit its eggs, in September or the first week in October, all must perish without providing for the appearance of another generation in the spring. As all summer crops are out of the way in autumn and winter rye is but little cultivated, and may be sown late even better than wheat, the Hessian fly can be wholly exterminated, by delaying to seed till after the 20th September. Late seeding should be practised by all wheat growers simultaneously, for the 20 acre field of one farmer sown before the 10th September, may sustain *larvae* enough to come out perfect insects in April, or the first week in May, greatly to injure a thousand acres in the surrounding country. All insects, and especially the *tipula*, increase with wonderful rapidity. If a man should raise ten thousand wolves and let them out to destroy the sheep and cattle of the community, he would hardly do more injury to the public than to sow 50 acres in wheat early, in a town where the Hessian fly is known to exist, and thus raise countless millions of these destroyers of bread.

We are well aware that on many soils, late sown wheat suffers greatly by the heavings of frost, which separates the root of a small plant from the surrounding earth and destroys it. Under-draining and open water courses will obviate this difficulty. Admitting the full force of danger from winter-killing, still the loss from that cause is nothing when compared with that which results from multiplying Hessian flies in a wheat growing country a hundred fold. The frost usually injures only portions of a field; and even when the damage extends over its whole surface, it never spreads like winged insects within ten or twenty miles.

The subject is obviously one of great importance. Those that think of seeding early to avoid injury from frost, and to give their wheat a good start with numerous roots, before winter sets in, should remember that they need only nourish till spring, a few minute worms, to have their grain nearly destroyed in May and June, by the vast numbers of the next generation.

Rolling with a heavy roller was tried by a large wheat grower in Wheatland last fall to kill the larvae, by crushing them against the stem where they lie, but with little or no good result. This field was on the Genesee bottoms, and sown the first week in September, contrary to our advice. Its crop is now nearly destroyed by insects, and will give to Monroe county far more Hessian flies the coming autumn, than is desirable.

It is not a bad practice to sow a land early through a fallow that all the insects in the neighbourhood may come and deposit their nits, which should be ploughed deep into the earth where not one of them will ever come to maturity. After this the field can be seeded in the usual way. No application to the seed sown will have the least effect to keep off the fly. In the spring, it will deposit its ova on the leaves of the oats, barley, and spring wheat, as well as on the winter varieties of the latter plant. Hence it is much more difficult to prevent propagation in spring than in autumn.

Burning the stubble after harvest, has been recommended and practiced to some extent. This can seldom be done without destroying the young clover which the farmer has on the ground. No skilful wheat grower thinks of omitting to seed often with this renovator of the soil, aided, as it should be with a coat of gypsum, lime, ashes, and salt. Where the land is not seeded, or the clover has come badly, burning the stubble will be advantageous in more ways than one.

To escape the ravages of the *Cecidomyia destructor*, for it is indeed a *destroyer* without a parallel among the insect depredators upon the fruits of rural industry, we urge upon the wheat growers of Western New York, the propriety of delaying to seed till after the 20th September.

HOW TO LESSEN THE EFFECT OF THE FLY—AND DROUGHT.

We clip the following from a report of proceedings at a late meeting of the Farmers' Club, New York. The mode of lessening the depredations of the Hessian Fly does not tally exactly with the doctrine of a sapient cotemporary, that manure produces this insect:—

"Mr. Meigs then read the following:—
"Previous to the revolutionary war, Suffolk county, on Long Island, was so reduced in fertility as to yield, on an average, not more than five or six bushels of wheat to the acre. The Hessian fly often destroyed even that, but it was said to be lessening, for it was discovered that when the land was properly enriched, the fly did little damage. Many

begun to manure their soil, and obtained large crops.

From the proceedings of the "Agricultural Society of England" Mr. Meigs read that Mr. Bennys said that if the land on which the artificial manures were applied, were, in dry weather, strown with a top-dressing of *chloride of calcium* (muriate of lime made by adding spirits of salt to chalk), no drought can affect the crop, which is thus increased to a marvellous extent.

To the Editors of the *Canada Farmer*.

Peterboro, July 26th, 1847.

GENTLEMEN:—When I addressed you lately on the culture of Linseed I followed very much the rule of the projectors of railway schemes, but with more certainty I trust in jumping at once to the profitable results. In doing so of course I left all the important details in the process, from the first preparation of the land for the seed, to others, who may be induced to step forward and favour us with practical information of its management in all its stages. Especially do I cherish the hope that Agricultural Societies at their meetings will take it up as a leading subject for discussion, I fear not but they will arrive at a satisfactory conclusion. And that these societies will find encouragement to appropriate a part of their funds to the establishment of a crushing machine in a central part of each society's bounds, to be afterwards extended as the culture increases, to each Township. Another profitable crop which would be found to answer well in Canada, is the common horse bean, which is so extensively cultivated in the mother country. It covers in fact a portion of every well managed farm; without it there would be deficiency in the proper rotation of crops, and a preparatory step lost in the profitable cultivation of wheat and barley; as either of these generally follow, and the land is then in fine condition for seeding down at the same time with grass. The bean is sown in drills sufficiently wide apart to admit of a one horse plough being once or twice used before the bean is in bloom, and a very little extra trouble and expense would thoroughly clean the ground of every weed, thus superceding a summer fallow, and adding much to the annual produce of the farm. The deep ploughing between, in part confers the benefit of subsoil ploughing, and will also be felt as a means of drainage to the land. In many districts of the old country the cultivation of the bean has been of late extended as a substitute for the potatoe, and an excellent substitute it is; more especially the broad white bean which with bacon forms a dish so justly famous; and moreover, both will pay well as articles of export.

Another consideration not generally known, is, that the field bean may be sown in this country in the fall just before the frost sets in. I have authority for stating that the crop will in that case be more abundant. The Agricultural societies will surely bestow attention upon products suitable for exportation. They would thereby benefit the country far more than by showing up the same bull or ram year after year at an expense to the society, and discouragement to competitors for the first prize. But we must look forward to much good from these societies. It is in fact a duty incumbent on them seeing the Legislature attends to so little of vital importance in forming the ground work of the country's future prosperity. The first step they should take in my opinion, is, as a vacancy or general election affords opportunity, that each District Society send one member at least to Parliament, and if their President so much the better. A body of sound headed practical men would be formed joined to the commercial and other leading interests which would command the respect and cordial support of the country, and silence of those more eloquent and practiced tongues who waste the time of the house, glorying in their strength and drawing foolish comparisons between the Imperial and the Colonial Parliaments. They may be men of metal, and many of them worthy of high respect in their own sphere but they are out of it for the nation's good, as much so as would be sounding brass if applied to every purpose. Our House ought to have material capable of constructing a board of Agriculture, Commerce and Revenue, Health and General Improvement, with just opposition enough, to be when combined a Board of Control. From such a house would emanate very different bills from those lately propounded. Some seem at variance even with common sense, and little or nothing is to be found indicating the collective wisdom of a country like this—the issue of a long debate hangs upon a thread; is just as uncertain as a *law suit* and the actors seem quite as much at home. A toss up would answer quite as well, taking care the coin bore the impress of the Queen's head to give the whole affair a smack of loyalty. Such may appear at first sight

rather a wide digression in addressing the editors of an Agricultural Journal, but it only requires a little consideration and the less, as it becomes more apparent every Session, how much this country may be check'd in its progress by the people taking their Representatives almost *en mass* from one class, and that one by no means the most likely to supply the best statesmen to guide the country's onward progress.

Apologizing for the length of this letter,
I am, Gentlemen,
Respectfully yours,
A. SCOTCHMAN.

NEWLY DISCOVERED USE OF THE SUNFLOWER.—Those most experienced in the cultivation of this plant are sanguine that, with proper soil and proper cultivation, it is more profitable than wheat or corn. The seeds are more oleaginous than those of the flax plant, and combine the qualities for table use of the best olive oil; for burning, of the best sperm, without its smoke; and for painting, it is said by painters who have used it, to be superior to linseed, and it is more rapid in drying, equally easy in spreading, and without forming a much denser coat. Prepared and eaten as artichokes, the young cups of this plant are very esculent and pleasing to the palate; the stalks are an excellent substitute for hemp or flax, and for the bee pasturage it is equal to any plant, yielding from its luscious and numerous nectaries, an abundance of the best and most palatable honey. A writer in one of our agricultural exchanges, says that, on suitable soil, with proper cultivation, it will yield on an average from eighty to one hundred bushels of seed to the acre. From five to seven quarts of oil are calculated on, per bushel. If this is not over-estimating its productiveness, if it can be raised as cheaply as wheat or Indian corn, ordinarily considered the most expensive crops cultivated, the Sunflower must be a very profitable production. We, have, heretofore, cultivated it on a small scale, usually in vacant spots, by the fences and in places where the cultivation of other vegetables was intelligible, and so far as our experience goes, it corroborates the above assertions. We find that the green leaves are very excellent fodder for cows, especially when the feed in our pastures gets low in seasons of scarcity and drouth. We generally commence plucking them in July, taking the lower leaves first, and feeding them out at night, or, if the scarcity of feed is great, in the morning before turning them from their yards. We have sometimes given them corn-toppings and the leaves of the sunflower at the same time, and have found that the latter are invariably preferred. The seed of the Sunflower is a most desirable food for poultry, its highly oleaginous nature wholly supercedes the necessity of animal food.—[Ex.

NEW USE OF ETHER.—A friend at Concord sends us the following account of a new and successful experiment with "Ether":—

Friend R.—I administered the "Ether" to a very vicious, ugly horse to-day, and she was made subservient by it that any operation might have been performed upon her without any apparent sensibility.

Mr. Bigelow, our blacksmith, told me some time ago that one of the stage horses, which he was obliged to shoe, from some cause would keep up such an incessant violent kicking, biting and squealing, that it was not only troublesome but dangerous to shoe her. I told him to let me know when he shod her again, and I would give the ether to her. I did so to-day, and two minutes after I applied the ether to her nostrils, she was as quiet and harmless as a sheep, and was shod with perfect ease and safety. The horse was as bright as ever afterwards.—Lowell Cour.

TO REMOVE DUST OR MOTES FROM THE EYE.—Fill a cup or goblet with clear cold water, quite to the brim, and place the eye in distress in such a position as to be completely within the water in the cup; then rapidly open a shut the eye a few times, and the dust or mote will be immediately washed away. If a cup or other vessel be not at hand, the eye may be placed in a spring or bucket of water.

TO FIX AMMONIACAL GASES IN VAULTS.—The most effectual substances that can be employed for the purpose of attracting ammoniacal gases, are green vitrol or common copperas (sulphate of iron) and sulphuric acid. A pound of either of these substances, diluted in a gallon of water and thrown into a vault, will immediately render it inodorous.

THATCH.—On the roofs of houses, thatch may be rendered incumbrable by a common flame, by coating it over with a mixture of white-wash and alum. One pound of alum will suffice for five gallons of white wash.