

have revived wonderfully since the rain came, which is of great benefit to our stock.

Fall Wheat has got a first rate chance, the rain has brought it away well—where sown early it looks beautifully. On the whole we have abundant reason of thankfulness to the bountiful Giver of all good for sending us an abundance for man and beast.

### THE WHEAT FLY.

To the Editor of the Canadian Agriculturist.

DEAR SIR,—I enclose in a quill some insects that are making considerable ravages among my Wheat. As editors of Agricultural papers are generally expected to know all things, I apply to you for information on the following points:—What is the real name of the insect—it is called a weevil here. Is the small orange coloured one the same kind as the two caterpillar looking ones enclosed. (I ask this as seven or eight years ago there was quite a number of the large kind among our wheat here; but I did not observe any of the small orange coloured ones. Will it destroy the grain after it is ripe and put in the barn? Is there any known preventative for it? Is it the same wheat fly that made such destruction among the wheat of Lower Canada some years since? Dear Sir, I am sorry thus to trespass on your valuable time which must be fully occupied otherwise, but as the questions must be of vast importance to many of your readers besides myself, if you could answer them in your next number, you will confer a great favor on

Your most obedient servant,

WALTER RIDDELL.

### REMARKS.

The proper name of the insect to which our correspondent refers, is the Wheat Fly, or Midge; (*Cecidomyia tritici*). It is a parasitic and dipterous insect, and belongs to a genus which composes several distinct varieties of flies that deposit their eggs in the flowers and ears of a number of cereal plants.

Our correspondent has enclosed in a quill several of the maggots or larvæ produced from the eggs of the Wheat Midge: these maggots injure the young ovary of wheat, and consequently prevent the grain from arriving at a healthful maturity. The injury therefore produced by this insect is done previously to harvest—preventing the proper ripening and development of the grain. Whereas the corn weevil, strictly so called, (*Curculio granaria*) is injurious to grain after it is harvested and thrashed; particularly when stowed away in large quantities either in the granery or board of ship.

The wheat midge is sometimes confounded with the Hessian fly (*Cecidomyia destructor*) an insect altogether different in its habits and modes of inflicting injury on grain. The former impairs the vitality and stunts the growth of the grain in the ear; the latter deposits its eggs and produces its larvæ in the sheaths of the Wheat stem in the lower joint, when the young insect is fully matured, preventing the proper growth and ripening of the straw by absorbing the natural juices, necessary to the full maturity of the ear. It was this insect, we understand, that produced such havoc in the wheat crop of Lower Canada and the Eastern States some years ago, when it was deemed expedient to relinquish the culture of that grain for a number of years.

As to preventatives it is exceedingly difficult in practice to apply an effectual remedy. From our imperfect acquaintance with the habits and modus operandi of many insects injurious to the farmer, the question of providing antidotes is yet involved in much obscurity, but the progress of knowledge arising from some minute and accurate observations belonging to the natural history of these depredators will doubtless throw increasing light on this difficult and, at present, obscure and mysterious topic. In the case of the wheat fly, early sowing has been strongly recommended, and exposing the soil in which the pupa are supposed to be embedded, to the action of the frost. Professor Henslow, (if we remember correctly,) recommends the employment of the fine sieve in separating the larvæ of the Midge from the grain and chaff, and then to burn the former. In the case of the Hessian Fly, he suggests the burning of the stubble on the ground; a practice that has been subsequently tested, and strongly recommended.

We hope soon to be in possession of Mr. Curtis's admirable papers on these subjects, which appeared a year or two ago in the Journal of the Royal Agricultural Society of England, when we will give the matter a more extended consideration.

We are glad to find from a subsequent communication received from Mr. Riddell, that the ravages of the Wheat Fly have not proved so disastrous as he seems at one time to have an-