

leguminosæ. Now, applying this to the above case, all can be understood with ease. The large development of these tubers on the roots of the pea-plants in Prince Edward county showed what is well known, that this district is exceptionally well adapted for the production of good peas. The failure of the plants to produce seed was due to the injury in the stem mentioned above, by which the supply of nutritious material in the root tubers was cut off. These latter again being unable to perform their functions began to decay. Dr. Farlow wrote concerning some of these damaged tubers: "The tubers I examined were somewhat decayed on the outside and had on them some small mould like *Fusisporium* which, however, had nothing to do with causing the tubers."

With regard to the nature of the supposed attack alluded to above, I feel convinced that it was mainly a result of the exceptional drought, and the fact that it appeared upon gravelly knolls and uplands first, would merely be due to the greater aridity of the soil in those spots. The occurrence of a few dead plants, amongst healthy vines, might have been due to attacks by insects previous to the examination.

In confirmation of the above opinion as to the injury being due to the drought, I quote the following from the August agricultural returns of the Ontario Bureau of Industries: "This crop was, of course, more or less injured by the prevailing drought, but on the whole there are larger areas from which good reports come of peas than of wheat. Wherever the seed was sown early, and on good soil, the crop made progress sufficient to cover the ground, and in a measure retain the moisture before the severe drought set in, while what was sown later, and on poorer soil, grew sparsely and did not afford shade to the roots of the plant."

I may mention that some of the growers who had used salt upon their fields claimed that their crops were better than where this had not been used.

## HAY AND CLOVER.

### HAY.

Notwithstanding the dry weather the crop of hay in many localities is reported as up to the average in quantity and above it in quality.

Two reports only of serious injury to the hay crop have been received—one from New Brunswick of the ravages of the Army-worm, the other from various parts of the Provinces of Ontario and Quebec. The exact nature of this last attack is not yet understood, and I must again refer to it by the popular name used by correspondents and mentioned in my last report, viz., "Joint-worm." It is possible, however, that it may be due to the attacks of a mite

### "Joint-worm."

*Attack.*—Exactly similar to the attack of the Wheat-stem Maggot, the top portion, together with the head, withering and turning white just before the seed is ripe.

In the first week of July I found at Desoronto, Ont., stems of Timothy hay (*Phleum pratense*, L.), and Kentucky Blue-grass (*Poa pratensis*, L.), injured in the way described. Upon examination it was found that the stem had been severed, and was decayed immediately above the top joint. In some of the stems small white mites were found, but in others were the larvæ of some minute hymenopterous fly. Unluckily, owing to the excessive heat which occurred just at that time, I was unable to get these specimens home safely.

Mr. W. Brodie, of Toronto, writes to me as follows:—"In addition to a dipterous larva which attacks the timothy, we have found here a mite very common and very injurious. We have collected the ova, the immature and the adult forms. It