the drill also; after the plants were set out I put about a tablespoonful of Nitrate of Soda around each plant, leaving one row without any Nitrate of Soda or the above mentioned fertilizer, and this was the only row that was any way destroyed by the maggot. I think, probably, it was the Nitrate of Soda that prevented the maggots from destroying the plants, for a field of cauliflower treated in the same manner, with the exception of the Nitrate of Soda, was partly destroyed by the maggot. I did not apply the Nitrate of Soda as a preventive of the maggot, but to give nitrogen to the plants when the land was cold in spring. I got this idea from an article in the *Rural New Yorker* by J. J. H. Gregory."

Fresh unrotted manure and particularly cow-manure seems to attract these flies to plants grown in soil so fertilized.

Onions.

Onions have again suffered from the attacks of Root Maggots, and Cut worms. Under the latter heading the only new item of important information is the successful use of a Kerosene Emulsion, as described in Prof. Riley's annual report for 1885, p. 272. "If the worms should appear in great numbers by migration from the surrounding fields, we would sprinkle the fields at night, while the worms are at work, with a diluted emulsion of Kerosene. Mr. J. B. Smith shows that pure Kerosene has been tried at Goshen with the effect of killing the worms, and simply blackening, but not killing the onion tips. We are not satisfied, however, that the free use of pure Kerosene would not seriously injure the plants, and we recommend instead an emulsion as being safer and much cheaper, while just as effective in killing the worms. For the proper preparation and application of the emulsion a good force-pump is needed, but beyond this no apparatus is necessary."

The best formula for this emulsion is given under the heading "A Turnip Aphis," p. 19, and is the one recommended by Prof. Riley.

The Onion Maggot (*Phorbia Ceparum*, Meigen).

Attack.—A white maggot which bores into the bulb of the onion from beneath and destroys it. When not feeding it generally lies outside the onion in a chamber of wet mud, which is kept moist by the juices of the decaying bulb.

Remedies.—The most successful remedies up to the present time are of a deterrent nature by which the perfect females are kept from laying their eggs on the young plants it is wished to protect.

Mr. E. Bell, of Archville, grew a very good crop of onions, which he considered were much protected by sowing broadcast over the bed, once a fortnight, a light sprinkling of gas-lime. Unluckily he was unable to keep the application up regularly throughout the season, and a proportion of the crop was lost. From what we saw of the effects of this remedy we feel confident that good results would follow a persistent application of this material. Great care must however be taken not to put it on too thickly, as it is extremely caustic, and a light sprinkling just enough to colour the soil answers the purpose.

A greater degree of success attended the application of a Carbolic wash detailed in the next paragraph.

The Radish Maggot (*Anthomyia raphani*, Harr).

Attack.—Very similar to the attack of the Onion Maggot.

Remedies.—The sprinkling of gas lime at short intervals over the beds had a like good effect in protecting radishes as was noticed with onions; but the best results were obtained by the use of the carbolic preparation mentioned in my last report, as devised by Prof. A. J. Cook, of Michigan. "Take two quarts of soft soap and boil