

FRUIT AND INSECTS.



THE Maine Report, containing in one compact volume the many essays, reports and addresses on the various departments of farming, the proceedings of the Agricultural Experiment Station, and the annual report of the Maine Pomological Society, is a volume of much value, and replete with important matter. We can only notice briefly some portions.

The Apple Maggot (*Trypeta*) receives a large share of attention, and the statement of the observations and experiments made at the Maine Experiment Station by Prof. F. L. Harvey, the entomologist, occupy over fifty pages, with some twenty engraved figures or more. This insect is properly regarded as a worse enemy to the apple crop than the codling moth, inasmuch as it perforates the whole interior of the fruit, while the codling worm is mostly confined to the core. It cannot be reached by spraying, coming too late in the season, and being shielded under the skin. It has been known to entomologists more than twenty years, was introduced into Maine from adjoining States eight or ten years ago, and its ravages have gradually increased, so that it has spread over most of the counties of the State. From careful observations, it appears that the fly deposits its eggs early in July and so on into August, and early in September the worms are found in abundance. When the infested fruit drops they go into the ground, but not over an inch in depth. They have little power to penetrate hard soil, and prefer sandy ground. Prof. Harvey examined them in connection with more than sixty named varieties of the apple, and found that such early apples and autumn varieties as Benoni, Oldenburg, Early Harvest, Porter, Red Astrachan, Gravenstein, Golden Sweet, and, in fact, all the early varieties were badly infested by them, while most but not all the winter varieties were more sparingly attacked. Hence the remedy proposed by some entomologists, to cut down all the early trees and thus avoid them, is objected to, and would still leave enough of the winter apples for their increase, among which Tolman's Sweet, Wagener, Esopus Spitzenburg and Northern Spy are mentioned.

The insects have sharp ovipositors, and penetrate the tough skin of the fruit, placing the eggs beyond the reach of any sprayed insecticide. Prof. Harvey remarks that "there is no lazy way to check trypeta," and that it will have to be done by a direct, squarely fought battle. He places the chief reliance on *destroying the windfalls*. The larvæ do not leave the apples till they drop, and if these are daily gathered and fed to animals, or still better if sheep run in the orchard, they promptly gather the windfalls as soon as they drop. This method is strongly recommended by other entomologists. Prof. Harvey also suggests "that the making of cider from maggoty apples might