Calgard® and Calraid® microbial preparations contain spores of Fusarium spp. fungi, and they are a combination of microorganisms, alkaloids and metabolites. Aforementioned preparations work on the nervous system of pests to immobilize and kill them in a short time.

This present study aimed to find out effects of Calgard® and Calraid® to Tomato leafminer, Tuta absoluta (Lepidoptera: Gelechiidae), which is a key pest of tomato. For this purpose, egg-laying of mated female adults of the pest on tomato with 6-7 leaves was provided. Larvae, reaching the third- or fourth-stage after hatching were used in the experiment. As a control to compare with the microbial preparations, distilled water was used, and in the experiment, recommended dosages (10 g/l) were applied by dipping, spraying and residual methods. Also, the effects of microbial preparations on the pest were evaluated according to mean number of survival individuals at the 1, 3, 5 and 7 DAA (Days After Application).

As a result of the study, microbial preparations began to impact on T. absoluta at the 3 DAA and they affected on the pest in all three methods was determined. The lowest effect of Calgard® according to the control was obtained as 42.00% at the 1 DAA by residual method. The highest effect of Calgard® was occurred as 100.00% from the 3 DAA in residual method, from the 5 DAA in dipping and spraying methods. The lowest effect of Calraid® on T. absoluta with 9.50% was obtained at the 1 DAA by dipping method. The lowest effect of Calraid® with 100.00% was found at the 7 DAA by spraying method. Consequently, according to the data obtained, Calgard® and Calraid® microbial preparations have an effect on T. absoluta and can be used within the scope of
environmentally friendly integrated pest management (IPM) programs in controlling the pest has been understood.