

Biology/Phenology

Effect of *Bt* on phenology of obliquebanded leafroller and pandemis leafroller

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Abstract: The effect of *Bt* on the developmental rates of OBLR and PLR was investigated. We found that PLR were more sensitive to *Bt* and showed reduced growth rate at 1% of the field rate. OBLR were less sensitive, and the effects were about the same at 1, 2, or 4% of the field rate. For both species, the instar following the ingestion of *Bt* had the slowest developmental rate, and the effect decreased as caterpillars aged. PLR developmental time to adult was slowed 23 to 30% for caterpillars treated as 3rd instars and 6 to 36% for 4th instars. OBLR treated as 3rd instars had a developmental time about the same as control insects except for the 4% field rate treatment, where developmental time to adult was increased by about 8.5%. When treated as 4th instars, developmental time to adult was 13 to 23% longer than control caterpillars.