

Impact of Planting Dates on a Seed Maggot, *Neotephritis finalis* (Diptera: Tephritidae), and Sunflower Bud Moth (Lepidoptera: Tortricidae) Damage in Cultivated Sunflower

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Abstract

Neotephritis finalis (Loew) (Diptera: Tephritidae), and sunflower bud moth, *Suleima helianthana* (Riley) (Lepidoptera: Tortricidae) are major head-infesting insect pests of cultivated sunflower (*Helianthus annuus* L.). Planting date was evaluated as a cultural pest management strategy for control of *N. finalis* and *S. helianthana* in several production regions of North Dakota during 2009 and 2010. Results of the nine site-year study revealed that late planting date (early to mid-June) reduced damage ratings and percentage of damaged heads for *N. finalis* compared with early planting dates (mid- to late May). Visual observations of adult *N. finalis* found that the majority of flies were found in the early planted sunflower (78.2%) compared with the late planted sunflower (21.8%). Late planting date also reduced the percentage of *S. helianthana* damaged heads compared with early planting dates. Yield losses were reduced with late planting date when populations of *N. finalis* and *S. helianthana* were high enough to cause damage. Results of this study showed that delayed planting is an effective integrated pest management strategy that can reduce head damage caused by *N. finalis* and *S. helianthana* and mitigate yield losses.

- sunflower
- *Neotephritis finalis*
- sunflower bud moth
- *Suleima helianthana*
- planting date

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