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Pollinators and monitoring options for winter canola (*Brassica napus* L) in Tennessee

Abstract

Winter canola (*Brassica napus* L), being an entomophilous, self- and cross-pollinating yellow-colored flower, attracts a variety of insects which are beneficial. However, limited study has been done regarding the pollinators of canola. In order to identify these pollinators, and various trapping methods for their monitoring, a study was conducted at the Agricultural Research and Education Center in Ashland City, TN on two different days in 2021. Sweep nets, pan traps, yellow sticky traps and visual observations were used in a randomized complete block design to study the insect population during the flowering period. The results revealed that the order Diptera had the greatest populations in the pan trap (93%), sweep net (56%) and sticky trap (34%) but Hymenoptera were seen mostly on visual observation (58%). Across all pollinators and days of observation, the pan trap collected the greatest number of insects (52%) followed by sweep net (24%), sticky trap (20%) and visual observation (4%). Observed pollinators in this study belonged to the orders Diptera (70%), Coleoptera (12%), Hymenoptera (9%), Hemiptera (8%), Odonata (0.4%), and Lepidoptera (0.2%). Both observation days (April 16th and April 20th) collected about the same number of pollinators (547 vs. 569, respectively). This study will help future monitoring of pollinators in winter canola.