



## **Study on striped cucumber beetles**

*Guide reviews management options for cucurbit pests*

The sister species striped cucumber beetle (*Acalymma vittatum*) and western striped cucumber beetle (*Acalymma trivittatum*) are key pests on crops in the Cucurbitaceae family, which includes squashes, gourds, cucumbers, and melons. The beetles live mostly in the US, Canada and Mexico. Damage can kill seedlings, prevent fruit set, transmit pathogens, and make fruit unmarketable.

Adult beetles are notoriously skilled at rapidly finding and aggregating on their preferred crops to feed. Females then lay eggs at the base of cucurbit plants below the soil surface. After hatching, larvae feed on roots, pupate in soil, and emerge as the next generation of adults.

Growers commonly use synthetic insecticides (organophosphates, carbamates, pyrethroids, and neonicotinoids) to manage cucumber beetles. However, these chemicals can lose efficacy over time as beetle populations develop resistance. Moreover, they can have detrimental effects on non-target beneficial insects, including the squash bees, bumblebees, and managed honey bees that pollinate cucurbit crops. Organic control options (kaolin clay, pyrethrins, and spinosyns) show inconsistent and often limited efficacy. Sustainable control of cucumber beetles on cucurbit crops therefore must incorporate other control measures.

This research reviews the biology, life stages, damage, and current and potential strategies for managing these important cucurbit pests.

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