ALFALFA LEAFCUTTING BEE

Hymenoptera: Megachilidae

Megachile rotundata

Bug of the Month

Megachile rotundata, the alfalfa leafcutting bee (ALCB), is native to Asia and Europe but was accidentally introduced into the US in the 1940s. Management of the ALCB for alfalfa production in the U.S. has led to increases in overall yields of the crop. These bees do not exclusively pollinate alfalfa, and pollinate other commercial crops, like legumes, and blueberries. They use their mandibles, or jaw like scissors, cutting strips of leaves to line their nesting cavity.

ALCBs nest in hollow branches or pithy plant stems. The mother uses leaf cuts to build chambers for her brood. She then forages to collect enough pollen and nectar for her young. After depositing her resources, she lays an egg and seals the cell with more leaf cuts. She will fill the nesting cavity with brood cells and will lay around 35-40 eggs over her 7–8-week lifespan.

Instead of pollen baskets on their legs like honey bees, leafcutting bees collect pollen on brush like hairs on the underside of their abdomen. Additionally, the alfalfa flower has a “trip” mechanism, where the anther releases from the petal when a bee lands and hits the bee, spraying pollen onto the body of the bee.

ALCBs readily nest in artificial cavities, which allows them to be produced in large numbers, transported, and placed in crop fields. For more information on how to help support alfalfa leafcutting bees, visit the Penn State Center for Pollinator Research website.

pollinators.psu.edu

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