

## Bayer Bee Health



Bee Health › Feed a Bee › Collaborations › Researchers Explore How Different Environments Affect Pollinators

### Researchers Explore How Different Environments Affect Pollinators



(Left to right): Professor Melanie Waite-Altringer and students Cassie Keocher, Cassandra Bauer, Chanel King, and Maxwell Waite, stand in 64 acres of canola adjacent to Anoka-Ramsey Community College's (ARCC) Cambridge Campus. The canola fields along with 25 acres of wildflowers and 18 acres of prairieland are part of a study to determine how different flowering field environment affect pollinators.

Located one hour north of Minneapolis along the Rum River in Cambridge, Minn., Anoka-Ramsey Community College's (ARCC) Cambridge Campus is in full bloom thanks to the work of Professor Melanie Waite-Altringer and her five environmental science research students.

Melanie, a faculty member at ARCC for 18 years, oversees the College's Beneficial Insects Pollinating Study. Now in its fifth year, the Study looks at the influence various flowering field environments – energy crop (canola), restored prairie, and wildflower fields – have on beneficial pollinating insects.

In connection with Ever Cat Fuels, LLC, also in Minnesota, Melanie aims to encourage land owners to plant energy crops like canola to sustainably produce biodiesel while at the same time providing beneficial pollinating insects with habitat and food. Through its new technology, Ever Cat Fuels is able to efficiently and economically convert plant oils and animal fats into biodiesel with no byproduct.

In April 2015, Melanie and her research students, with the help of local manpower and equipment, planted 64 acres with Bayer InVigor® canola seed on donated land adjacent to the College campus and 25 acres of wildflowers on the College campus, as well as restored 18 acres of prairieland.

This is the second year Bayer has donated InVigor canola seed for ARCC's study. Brian Hrudka, canola seed manager at Bayer, mentioned the company's Feed a Bee initiative to Melanie when he contacted her earlier this year to offer support for her 2015 study.

"We jumped at the opportunity to incorporate wildflowers this year to see how this habitat would impact the number and varieties of pollinating insects compared to the energy crop and conservation prairieland," said Melanie. "We are so thankful for the five 50-pound bags of wildflower seed Bayer donated. Without the donation, we wouldn't have been able to plant 25 acres."

While the ARCC researchers expect it to take another couple of years for the wildflower acreage to fully bloom, they are seeing initial benefits of adding this pollinator-friendly habitat – mainly through the attraction of butterflies.

The InVigor canola fields are literally "a buzz" with honey bees and small bees. "Between the fields of yellow flowers and the buzzing sound of the bees, it is simply gorgeous," Melanie said. "Passersby stop to take in the sight and some even ask us about our research." One farmer hired by ARCC to harvest the canola at the College last year planted 40 acres of InVigor canola seed on his own farm in Ogilvie, Minn., this year, and is conducting his own study on how energy crops impact beneficial pollinating insects.

Melanie said the 18 acres of restored prairieland attract the most variety of insects – both in numbers and species – and has a greater longevity of flowering plants throughout the year, but many of the insects are not beneficial pollinating insects. "Each flowering environment, however, benefits pollinating insects," she said. "No one environment is superior to the other. Diversity is key. Rotate crops and plant wildflowers around your crops to bring the bees to the field and provide an additional source of habitat and nutrition."

The Beneficial Insects Pollinating Study is expected to continue beyond 2015 and the researchers hope to incorporate additional points of data, such as if beneficial pollinating insects are more prevalent along the field perimeter near the woods or in the middle of the fields.

Melanie applauds programs like Feed a Bee. "I'm an environmentalist at heart. It is so important to bring general awareness to pollinator health, the role they play in our daily lives and the simple way everyone can support their well-being."