

Case Study: North Carolina Farm Sets the Stage for Pollinators with Crop Diversity and Solarization

It's clear to see that when Rob and Cheri Bowers set out to create their farm, they wanted to blur the lines between agriculture and nature. The result of that vision is Whitted Bowers Farm located in Cedar Grove, North Carolina, a diverse 52-acre farm that uses organic, biodynamic, and permaculture principles as a foundation for even more ambitious goals. High on that list of goals is an effort to foster pollinator and beneficial insect habitat across the entire farm landscape.

Beginning with an amazing diversity of fruit and heirloom vegetable crops, including strawberries, blueberries, blackberries, raspberries, watermelon, and tomatoes, the fields of Whitted Bowers provide a continuous supply of bee-attractive crops throughout the growing season.

These bee-attractive crops are supplemented with the extensive use of flowering cover crops, such as crimson clover, which further extend the availability of pollen and nectar throughout the year. And, going one step further, the Bowers have worked to establish a growing network of native wildflower field borders on the farm.

To establish more native wildflower field borders, the Bowers are now testing the use of soil solarization to eliminate weedy plant competition prior to planting. The solarization process uses a large sheet of UV-stabilized, high tunnel greenhouse plastic (with the edges buried) to heat the ground, killing weeds and weed seeds below. (In initial nationwide trials conducted by Xerces, solarization has proven even more effective than chemical herbicides in clearing an area for replanting with native wildflowers.)

Finally, while the diversity of crops, cover crops, and wildflowers obviously support bees, these resources also have made Whitted Bowers Farm rich in other beneficial insects, such as syrphid flies, which prey upon pests. The resulting combination is a landscape rich in beneficial insect food resources and a safe haven from insecticides—exactly the balance of nature and agriculture the Bowers had in mind.



Solarization in progress at Whitted Bowers Farm. It is important to bury the edges of your UV-stabilized high tunnel greenhouse plastic when using solarization to control weeds. (Photograph by Nancy Adamson, The Xerces Society.)