
Make more use of bats in integrated pest management

It is a shame that many people are afraid of bats—or at the least, are uncomfortable with them.

Contrary to popular misconceptions, bats are not blind, do not become entangled in human hair, and seldom transmit diseases to other animals or humans.

But more importantly, bats are primary predators of beetles, moths, leafhoppers, and other insects that cost farmers and foresters billions of dollars every year. They also devour mosquitoes in backyards.

Like birds, bats consume enormous quantities of insects. Mexican free-tailed bats living in central Texas caves eat about two million pounds of insects nightly, including many costly pests.

Even small colonies of bats—just 150 big brown bats—can eat enough cucumber beetles each summer to protect farmers from 33 million of these beetles' root worm larvae, pests that cost American farmers an estimated one billion dollars each year.

Other facts from Bat Conservation International (BCI) on these allies of the American farmer:

- One little brown myotis bat can catch more than 1,000 mosquito-sized insects in just one hour. A nursing mother eats more than her own body weight nightly.
- One Georgia pecan grower was losing 30 percent of his crop to hickory shuckworms and other pests, but for 2 years after installing bat houses, he has seen no further crop damage. One of his bat houses hosts a colony of more than 2,000 bats.
- Many garden pests can hear bats from more than 100 feet away and will avoid areas where bats are present.

- A red bat that eats even 100 moths may prevent egg-laying that could otherwise produce 25,000 new caterpillars that could attack crops.
- Silver-haired bats and many other bat species help keep countless forest insects in check.
- Pallid bats benefit ranchers by eating large numbers of grasshoppers and crickets.
- The hoary bat often feeds on sugarcane leafhoppers, a serious pest in Hawaii.

The most important threat to bats is loss of natural roosts. To help reduce insect pests, provide alternative homes for bats. That includes building bat houses, working with highway departments to create roosts under bridges, and reducing disturbance to bat roosts in caves and mines.

Natural habitat can be enhanced by providing clean, open water in ponds or lakes, maintaining hedge rows and windbreaks, and preserving areas along forest edges, as well as old trees.

Helping bats by enhancing habitat and survival is a way to incorporate them more fully into an integrated pest management system, according to Ed Hackett, a biologist with the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Agricultural Wildlife Conservation Center (AWCC). The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.

The AWCC funded a cooperative project with BCI that produced a leaflet *Incorporating Bats Into Integrated Pest Management*. This article was written based on that leaflet.

The AWCC offers a grants program to research institutions and others to develop fish and wildlife conservation technology.



NRCS photo by Lynn Betts
Bats leaving Bracken Cave in central Texas

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