

# Building a base for honeybees

September 15 2009, By Bill Estep

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On a recent muggy morning, Tammy Horn used a smoker to puff aromatic drafts into wooden beehives beneath a locust tree, then carefully removed the top of a hive.

Inside, thousands of honeybees were making sweet liquid gold in this place where noisy machinery once dug out a form of black gold.

The bee yard is on a reclaimed surface coal mine, one of four Horn has set up in Perry and Leslie counties in a project to create good conditions for honeybees on reclaimed mine land.

The Coal Country Beeworks project is among the emerging efforts to find new uses for such land.

Horn, a researcher with Eastern Kentucky University, is looking to expand the project to other counties and neighboring states.

The goal is to help create a flourishing industry in Eastern Kentucky based on bees, with hundreds of people producing honey as well as wax for cosmetics and candles; rearing queens; providing bee colonies to pollinate crops; and doing research.

Even if that dream doesn't come true, using surface mines to create food for bees will have significant benefits.

"We may not provide positions for 500 employees, but we'll provide food for 500,000 pollinators," said Horn, with the Environmental

Research Institute at ECU. "We're setting up a biosphere for the future."

That's important because bees play a crucial role in agricultural production. A third of our diet comes from sources pollinated by insects, the U.S. Department of Agriculture estimates, and bees do 80 percent of that work.

It's also important because the nation's bee population has been decimated, first by mites in the 1980s and more recently by an affliction called [colony collapse disorder](#).

Commercial beekeepers began seeing losses of 30 percent to 90 percent of their colonies in 2006. Scientists have not pinned down a cause for the disorder.

Part of the solution, however, could be providing habitat and food sources for bees.

That is what Horn is working with coal companies to do -- change the mix of trees they plant during reclamation in a way that creates more nectar and pollen for bees.

"It addresses a national need," Horn said.

In nearly all cases, coal companies must put back vegetation to reclaim areas after mining. They use a variety of grasses, shrubs and trees.

As part of Horn's pilot project, International Coal Group (ICG) and James River Coal have planted more than 10,000 sourwood and basswood trees during reclamation since last year, she said.

Those trees, which haven't typically been planted in reclamation, provide nectar in mid-summer. That bridges the gap between when other trees

and flowers bloom, providing a continuous food source for the bees from early spring to late fall.

Sourwood trees grow only in Appalachia, which means only beekeepers in the region can produce sourwood honey, Horn said.

Despite the name, sourwood honey is very sweet and light, with what Horn describes as an intense floral quality, like "sipping a magnolia right off the tree."

The coal companies also have planted flowers that bloom in the fall to provide more nectar and pollen then.

The bee project is only in its second year, but Horn said interest is growing. In addition to working with ICG and James River, she plans to set up bee yards at Pine Branch Coal Sales and TECO Coal.

There is no system yet to sell honey produced by the bees at the reclaimed mine sites, but the goal is to build a self-sustaining co-op in a few years.

Horn, a native of Harlan County whose grandparents kept bees, started the project with a one-time gift from a Tennessee beekeeper, Edwin Holcombe, and his wife Elaine, and the help of Letcher County beekeeper Allen Meyers.

She has since gotten support from coal companies, foundations, EKV, the University of Kentucky's extension service and the state Department of Fish and Wildlife Resources.

The project builds on the work of the Appalachian Regional Reforestation Initiative, an effort to promote planting trees during reclamation.

The initiative helped pave the way to add bee-friendly trees to reclamation efforts. In turn, the bees help pollinate trees planted to reclaim mines, Horn said, a benefit to coal companies.

Eastern Kentucky has a tradition of beekeeping. Horn and others see potential for a revival.

There is plenty of room to develop additional honey production in Kentucky, said Phil Craft, the state Department of Agriculture's bee expert.

Craft said consumers want local honey just as they want local produce. He often gets calls from people late in the year wanting honey, but the supply has run out, he said.

"It's a seller's market at this point," he said.

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