

# Growers send in more bees to boost forces

By EDITH MONROE

**C**ONCERNS about adequate pollination are growing among producers of a broad range of insect-dependent crops — from almonds in California to cranberries in Massachusetts to Southern specialties, like kumquats, satsumas and mirlitons.

In Arkansas, Mississippi and Louisiana, adequate bee numbers are essential for squash, pumpkins, melons, tomatoes, peppers and small fruits like blueberries.

As concern grows about honeybees, farmers are exploring how they can promote native bee populations.

One grower is Jerry Hutto, from Waynesboro, Miss., who relies on native bees as the primary pollinators for his 50 acres of blueberries.

“We have a combination — big bumblebees, little bumblebees, and a little black bee that does a super job with blueberries,” Hutto says. “Wild bees probably play a bigger role in blueberries here in the South than they do up North.”

Hutto supplements his wild bees by bringing in 45 hives of honeybees as a backup.

## Key Points

- Bee populations are dwindling across the nation.
- They are essential to many crops in the South.
- Even with cotton and soybeans, farmers benefit from bee visits.

“It hurts to pay \$40 or \$50 per hive, but without the wild bees, we’d probably bring in 100 hives instead of 45.

“When we don’t have good bees, we have production but nothing compared to with the bees,” says Hutto, who estimates plentiful bees increase his yields by 30% to 40%.

“Without the bees, we’re dead in the water,” he concludes.

Blueberries are just one of many crops where bees are critical, says Blair Sampson, Mississippi research entomologist with the USDA’s Agricultural Research Service.

“Even in cotton and soybeans where bees aren’t required, producers can get more yield if they get bee visits,” Sampson says. “They get bigger bolls on cotton and better pod set on the soybeans.”

He cites strawberries as another crop that requires some bee visitation to get better yields.

## The buzz on blueberry bee

Sampson is especially enthusiastic about the Southeast blueberry bee (*Habropoda laboriosa*), a solitary bee that specializes in blueberries: “Honeybees are very slow at blueberries and normally prefer other crops, but these blueberry bees really zip from flower to flower.

“Our growers love them. If you have at least one blueberry bee per plant, you’ll have great crops and the highest yields,” he says, confirming Hutto’s observations. “My motto is you want as many bees on your crop as you can get.”

The best methods to promote native bees vary from crop to crop and region to region, reflecting the complex interaction of plant-specific bees and their habitats.

One of the big factors affecting blueberry bees is farm siting, especially in low-lying areas where the bees’ ground nests could flood. Sampson urges anyone considering blueberry production to consider whether a farm is in bee-friendly terrain in the same way they consider traditional factors like soil quality.

Pesticides are another major issue. For example, squash and melon growers may have a window of opportunity to apply pesticides in the evening without killing *Peponapis pruinosa*, a bee adapted specifically to squash, melons and other cucurbits.

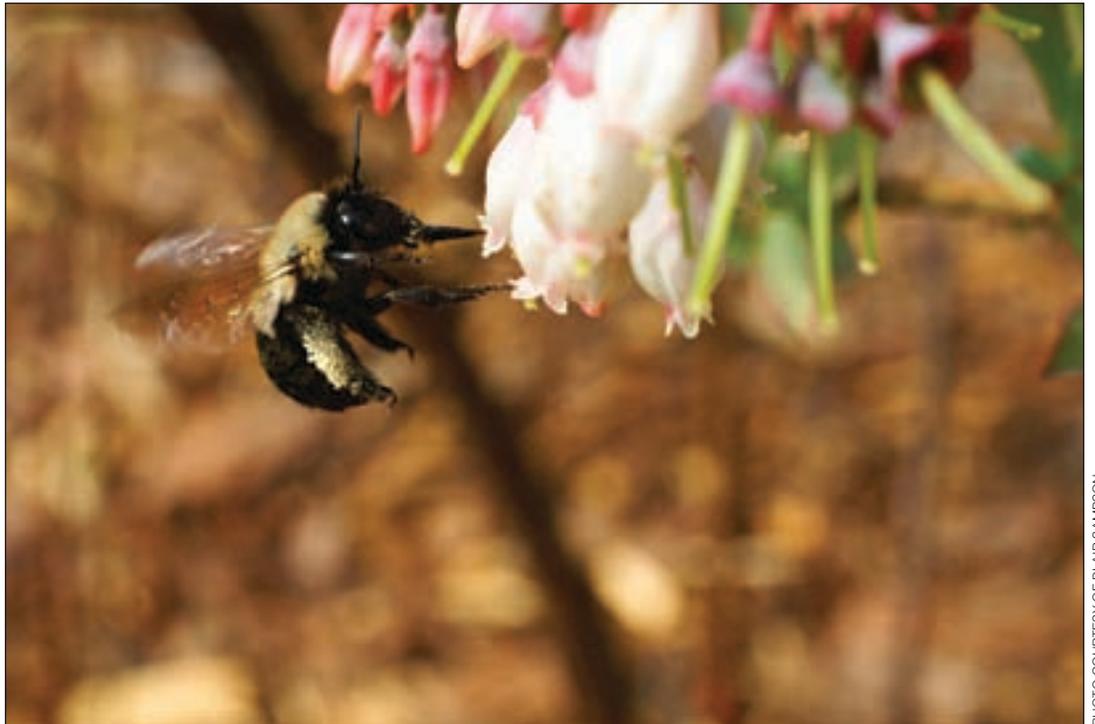


PHOTO COURTESY OF BLAIR SAMPSON

**DWINDLING WINGS:** The blueberry bee is a critical partner for the pollination of crops, but its numbers, along with other species of bumblebees, are dwindling across the nation.

But evening pesticide application can be deadly for colonies of blueberry bees, according to Sampson.

“It’s insidious. Unlike squash, you cannot spray blueberries in the evening because you can kill the male bees. That will affect the ratio of males to females in the population in the next growing season, and over time the ratio gets more and more out of balance. In the end, the whole population may collapse.”

The message from bee experts: “Every bee does the job differently.”

For growers who want to encourage native bee populations,

that means a challenge to get the right information. Fortunately, an increasing array of information resources is available, from the Internet to the local office of USDA’s Natural Resources Conservation Service, which has grant money available to help farmers institute pollinator programs.

One good starting point is the Xerces Society’s interactive map at [www.xerces.org/pollinator-resource-center](http://www.xerces.org/pollinator-resource-center). There growers can click on any state to find region-specific native bee, plant and pesticide guides.

Plant- and region-specific information is also at [about.extension.org](http://about.extension.org), a website where land-grant universities share information. Fruit growers can check out the Southern Regional Small Fruits Consortium at [www.smallfruits.org](http://www.smallfruits.org).

Additional information is available at the Native Pollinators in Agriculture Work Group ([www.agpollinators.org](http://www.agpollinators.org)), the Pollinator Partnership ([www.pollinator.org](http://www.pollinator.org)) or in USDA publications ([www.nrcs.usda.gov/technical/ECS/database/technotes.html](http://www.nrcs.usda.gov/technical/ECS/database/technotes.html)).

Check out more stories on bees in our “Exclusive” at [www.FarmProgress.com](http://www.FarmProgress.com).

Monroe writes from Des Moines, Iowa.



**BENEFITTING BLUEBERRIES:** Blueberry growers are intrigued by the Southeast blueberry bee, which is a quick pollinator of the plant.

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