

Carolina-Virginia Farmer

Across the country, the demand for pollinators and concerns about honey bee losses are prompting farmers and researchers to take a better look at the role native bees can play in pollinating specific crops.

Meanwhile, some Virginia and Carolina growers are already reaping the benefits of native bees.

In North Carolina, Shelly Rogers, a graduate student in entomology studying bee populations on blueberry farms, works with some of those farmers.

“We’ve found a lot of different bees pollinating blueberries,” she reports. “It changes in different regions, but on one farm we found blueberry bees, bumblebees, sweat bees, carpenter bees, and andrenid bees.”

Another example she cites is a blueberry farmer on the coast who is keen on native bees and does a lot with habitat and alternate food sources to encourage them.

“I feel that last year he could have gone totally without honey bees for his pollination,” she says.

Bee surveys in Virginia have confirmed much higher numbers of native bees on many crops than researchers expected, according to Dr. Rick Fell, an entomologist at Virginia Tech.

“We looked at bees visiting blossoms and found 105 different species on key crops like apples, peaches, caneberries and cucurbits.

“On cucurbits like squash and melons, squash bees (*Peponapis*), bumblebees and other native bees accounted for up to 83% of bee visits. In apples, *Andrena* were very common. These bees are excellent pollinators.”

He believes native bees play a much greater role in pollination than anyone has realized.

Hudson Reese, a Virginia grower, agrees: “We grow some squash, cantaloupe, and watermelon, and we get a lot of benefit from native pollinators, especially from the bumblebees. I think we get a better and maybe an earlier pollination because we have the natives. On the squash and pumpkins, we could probably get by with the natives alone. Bumblebees do a good job on squash and pumpkins.”

Encouraging pollinators can be important, even for crops that are commonly thought of as self-pollinating, says Keith Tignor, Virginia’s state apiarist. “You see some benefits from having bees work the flowers. It can benefit cotton and soybeans with bigger bolls or better pod set. There’s even some benefits in peanuts.”

So far, Carolina and Virginia farmers have had an adequate supply of honey bees, in part because of the number of in-state bee keepers and hobbyists. That could change, however.

Don Hopkins, North Carolina’s apiary inspection supervisor, already sees a “commuting problem” for blueberry growers. “Our two biggest commercial bee operations take hives to California for almond pollination, but our blueberries come into bloom almost before they can get the bees back from California.”

Fell points out that Virginia, like so many other states, is losing 30% of its managed hives on average each year.

“In Virginia, the number of managed hives is down substantially from 20 or 25 years ago. So if not honey bees, what does a grower rely on?” he asks.

For growers who want to encourage native pollinators as an insurance policy, he offers some basic recommendations:

“The important aspect from the farmer’s point of view is doing what you can to assure healthy populations of native bees – protecting them from exposure to spraying and preserving some native plants.

“The idea that we need to cut everything down is actually harmful. We need to leave some areas for native plants because that’s what these bees rely on for the rest of the year.”

The good news is that a growing array of information sources is available for farmers who want to learn more about encouraging native bees.

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

Localized information is also available at <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, and their local extension service.

A visit to the local office of USDA’s Natural Resources Conservation Service (NRCS) can also be worthwhile, since NRCS has grant money available to help farmers institute pollinator programs.

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

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