Market for pollination services grows

O nly a beekeeper would move to South Carolina for the pollen. But Chuck and Karen Kutik of Almond, Calif., count on it to help feed their livestock — 2,000 to 5,000 hives of honeybees. Bees mix pollen and nectar to make food (beebread). A summer hive, or colony, at peak can hold as many as 80,000 bees.

The Kutiks pack bees off to California almond fields in February, apple orchards in New York in May, and blueberry fields in Maine in late spring with vegetable and fruit stops along the Atlantic seaboard in the summer.

Charles Hatley of Concord, N.C., also rents hives. “You want to try to keep your bees busy,” he says. In mid-April, were foraging for nectar in the raspberry fields of Stanly County, N.C., before heading to blueberry and blackberry fields.

Beekers like Hatley and the Kutiks are part of a growing market for pollination services that has expanded over the past century, especially since the 1980s when wild bee populations began to vanish. Farmers can’t rely on or manage other pollinators — birds, other types of bees, butterflies, wind, or water.

Honeybees forage across flowering plants, improving quality and yields for farmers, while the bees process the blossom nectar into honey, a boon for the beekeeper, colonies are placed in February and early March to pollinate almonds. Almond pollination prices are higher when honey production and pollination do not occur simultaneously.

The authors find the price of pollination services reflects “a complex array of knowledge of entomology, horticulture, environmental science, consumer preference, logistics, and world trade.”

Honeybees also have appeared in economic theory. Imagine adjacent property owners, a beekeeper and apple farmer. Economists have argued in a 1952 paper that beekeeping is an “unpaid factor” in apple production because neither farmer nor beekeeper arranged pollination or honey-making services in spite of mutual benefits to the bees’ stamens-to-pistil pollen deposits. Theory suggests that, absent an agreement over compensation, the farmer will neither arrange for optimal beekeeping services nor the beekeeper establish the number of hives that would maximize both the farmer’s return on apples. In that case, there is an argument that bee pollination services — or the reverse, nectar provision services — would be “under-provided” by the market.

Coast-to-Coast Demand

Compared to bees, honey is a foreign commodity, but the story is the same. Higher prices are attracting beekeepers from as far away as the East Coast. The Kutiks sent their bees by truck to California for the first time in 2008 and again for the 2009 almond pollination. They contract with another beekeeper in California who unloads and then ships the bees back. “We lease our bees to another beekeeper who deals with the farmer,” Karen Kutik notes. “The bees are inspected to make sure they are the proper standard that the farmer expects for the money he pays.”

Economist J. E. Meade suggested in a 1952 paper that bee pollination grows.

PHOTOGRAPHY: DEBBIE ROOBS, NORTH CAROLINA COOPERATIVE EXTENSION
Honeybees
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BY BETTY JOYCE NASH

O nly a beekkeeper would move to South Carolina for the pollen. But Chuck and Karen Kutik of the Kutiks, based in Orangeburg, S.C., count on it to help feed their livestock — 2,500-3,000 hives of honeybees. Bees mix pollen and nectar to make food (beebread). A summer hive, or colony, at peak can hold as many as 80,000 bees.

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Beekkeepers like Hatley and the Kutiks are part of a growing market for pollination services that has expanded over the past century, especially since the 1980s when wild bee populations began to vanish. Farmers can’t rely on or manage other pollinators — birds, other types of bees, butterflies, wind, or water. Honeybees forage across flower plants, improving quality and yields for farmers, while the bees process the blossom nectar into honey, a boon for the beekeeper if the weather, temperatures, and blossoms cooperate.

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While aggregate pollination data are not recorded, the authors found the fees paid for a honey crop like vetch are lower than all fees reported for non-honey crops like almonds. Almond pollination prices are higher when honey production and pollination do not occur simultaneously.

The authors find the price of pollination services reflects compensation for a complex array of knowledge of entomology, horticulture, environmental science, consumer preference, logistics, and world trade.

Beekeepers have reduced available supplies, especially in California, and so the demand for almond pollination continues to be reflected in prices, which Thurman cites as being $280 per colony in 2008. He estimates fees paid to all U.S. beekeepers for all crops at about $130 million in 2006 and increasing.

With an estimated 25 colonies per acre, and an increase of 25 percent in almond acreage from 2006 to 2014, economist Daniel Sumner and research specialist Hayley Borris of the University of California at Davis estimate hive requirements at roughly 1.4 million in 2014. By 2017, the almond crop may need about 2 million colonies.

Bee operators who migrate to California to pollinate almond blossoms may rent hives to fruit and vegetable growers along the way. After almonds, many move on to the Northwest for apple, pear, and cherry crops. During the summer, hives remain in the Midwest, home to the mega operations for honeybees. There, bees may frequent sunflower, clover, basilwood, and various nectar sources to produce honey.

Higher prices are attracting beekeepers from as far away as the East Coast. The Kutiks sent their bees by truck to California for the first time in 2008 and again for the 2009 almond pollination. They contract with another beekeeper in California who unloads and then ships the hives back. “We lease our bees to another beekeeper who deals with the farmer,” Karen Kutik notes. “The bees are inspected to make sure they are the proper standard that the farmer expects for the money he pays.” It was very lucrative

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Honey-making isn’t ever a sure thing.” For instance, cool, the blueberry growers. “That’s a perk. It is not a sure thing. Maine, they “don’t even talk honey with them,” she says of from the pollination services. For example, although blue—no explicit honey subsidy, there was a new $2.63 per kilo—money is, she says. Honey prices have risen, in part because Coase, R.H. “The Problem of Social Cost.” Journal of Law and Economics, October 1960, vol. 3, no. 2, pp. 11-33.


Readings


future of the bee business
While beekeeping has vanished from the fields and forests, domestic bees are also struggling with a variety of mites and viruses. There are pest control options, but keeping hives healthy is tricky. Researchers are even examining the possi—bility that the migrations may weaken bee colonies, making them more susceptible to mites like varroa. Apiculturalists are worried. Some losses are odd and include reports of bees fai—ling to return to the hives and rapid colony losses for reasons that remain largely unknown, according to a 2008 report by the Congressional Research Service.

“The market for pollination services has grown and it has co—ncurred with these infestations of exotic pests we’ve had,” says Don Hopkins, the state apiculturist for North Carolina. The pests are one reason most states require inspections, certifications, and permits for incoming bees.

North Carolina has the most beekeepers of any state in the nation, but most keep the bees as hobbies or sideline businesses, like Charles Harley. He has kept bees for 35 of his 45 years. With demand for pollination services ramping up, and bee populations in jeopardy, he wants to transform his sideline into a full-time operation. He currently breeds queen bees, good for disease resistance, for eventual sale. He places bees in a 400-acre forest of sourwood trees for a dis—tinctive honey that can bring a price premium of up to 200 percent over other varieties. Harley also rents hives to vegetable and fruit growers for about $50 per colony for six weeks. He has drafted his own contract, one that specifies whether they use insecticides because he prefers to rent hives to organic farmers. He can’t keep up with demand. “I got a call from a farmer who wanted 400 colonies for watermelon and cucumber.” As research continues into colony collapse disorder and the various pests plaguing managed bee colonies, the demand for pollination intensifies. As he says, “This can get as big as I want it to get.”

references

Subsidy contests among states to lure sports teams and factories have been fought for years. Now many states are attracting film and television shows and offices. To lure Hollywood productions, generous incentives. Critics of incentive programs argue that they don’t pay for them—selves. Supporters of production incentives claim they are an attractive and quick way to inject money into a community. When production companies arrive, they immediately spend money on items such as lumber for set construction and accommodations for out—of—town cast and crew. Tim Reid, an actor who played the disc jockey “Venus Flytrap” on the television show “WKRP in Cincinnati,” has firsthand knowledge of these expenditures. Reid is also a filmmaker and co—founder of New Millennium Studios in Petersburg, Va. He says bringing a production to a community is like hosting dream in—laws. “They come and visit you, they spend lots of money and they leave quickly,” he says. “Who wouldn’t want in—laws like that?”

“One Tree Hill,” a CW television network drama filmed in Wilmington, N.C., shows the impact a production can have, says David Hartley, a producer for the show. The pro—gram has just finished its sixth season shooting in Wilmington. In the time it has been there, Hartley says the shows has generated revenue for Wilmington’s economy through spending at local businesses, which boosts the city’s tax base. “We’re not even a big budget show,” he says. The honey they purchase from local beekeepers, however, remains in question. States that seek those revenues and offer production incentives should be asking themselves of their business. “Are they going to leave?”

Many states offer incentives to all sorts of companies looking to relocate or open a plant. However, not all firms will view incentives as a major factor in their location decision. Education levels of the work force, the ease of transporting goods, and the overall quality of life could prove just as important for the company A comparative advantage, like the abundance of a particular natural resource or a special—ized labor input, may also attract a firm to a state. Film and television productions differ from corporations making choices about where to put factories because movie productions in particular are short—term work. Television series can stay longer in a community but don’t always last. Besides, with celebrity features shot on location, much of the labor force could come from somewhere else and eventually leave.

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