



ON THE FARM

ORGANIC

Strawberry Fields Forever

The seven-year struggle to grow truly organic berries

BY JAMIE COLLINS AND KATHRYN MCKENZIE

PHOTOGRAPHY BY PATRICK TREGENZA

It is no easy task to get everyone on the same page when it comes to making changes in organic agriculture. It has been a particularly trying experience for Dr. Lisa Bunin, who has spent the last seven years working to make sure organic strawberries are really organic—from the roots up.

Bunin knew that 1.3 million pounds of toxic and ozone-depleting pesticides could be eliminated each year if organic farmers would switch to using organic strawberry starts.



Photo by Daniel Nelson

Although consumers see certified organic strawberries for sale at the grocery store and in farmers' markets, the truth is that the vast majority of them are grown from conventional, non-organic transplants, also called starts. These starts are grown in chemical-fumigated soil, and synthetic chemicals are also used for subsequent disease and pest control of the crop throughout the growing season, as they send out the shoots that will be sold as starts.

Most organic strawberry farmers have been buying non-organic starts simply because there are few alternatives. If organic starts are not commercially available—which they have not been in the amounts and varieties needed to supply all the certified organic strawberry farmers—then growers are allowed to use non-organic plants and still comply with the USDA's National Organic Program.

The strawberry industry has long been grappling with the noxious chemicals traditionally used in growing, and Bunin knew that 1.3 million pounds of toxic and ozone-depleting pesticides could be eliminated each year if organic farmers would switch to using organic strawberry starts.

"If you care about how food is grown, these pesticides are bad for wildlife, for water, for the environment," she says. "These are gnarly chemicals. They are not the ones you want in your community or near a school."

The strawberry problem nagged at Bunin, who has spent decades diving into vital environmental issues, particularly around making ag-

riculture more eco-friendly.

While living in Europe, she worked for Greenpeace International and was inspired to study how industrial production systems impact humans and the environment. She served as a delegate to the United Nations' London Convention on Marine Dumping, where she partnered with governments and non-governmental organizations to successfully stop the worldwide burning of toxic waste at sea.

In the late 1980s, Bunin was responsible for helping bring the first U.S.-grown organic cotton to market, an important step forward in shifting cotton production away from conventional practices. Locally, she was instrumental in securing Santa Cruz County's moratorium on growing GMO crops in 2006, and she sits on the board of directors of the nonprofit educational organization, EcoFarm.

While policy director for the nonprofit Center for Food Safety, she focused on the organic strawberry dilemma and organized the Organic Strawberry Fields Forever project. Her goal: to wean organic growers off conventional transplants.

"I wanted to bring all stakeholders in the organic industry along," says Bunin, which meant getting not only farmers on board, but also the nurseries that supply strawberry starts. "That way, there would be no going back once the organic strawberry industry started its transition."

Beginning with a day-long Organic Strawberry Summit in 2013, she initiated a series of stakeholder meetings held over six years to explore what it would take to transition the organic strawberry industry.



Innovative Organic Nursery harvests organic strawberry starts at one of its farms in northern California. Below, ION co-founder Daniel Nelson and a bundle of organic strawberry starts.



Photo by Daniel Nelson



Organic strawberries growing at JSM Organics in Aromas, the same place the photo of Dr. Bunin on page 48 was taken.

fanie Bourcier of Farm Fuel Inc. using organic bare root starts from Innovative Organic Nursery, which were planted at the UC Santa Cruz Farm, Pie Ranch and Swanton Berry Farm along Highway 1 north of Santa Cruz, Live Earth Farm in Watsonville and JSM Organics in Aromas. Ultimately, the results were happy ones; organic transplants performed just as well as, if not better than, conventional and with virtually no disease.

ION co-founder Daniel Nelson says that now they're trying to get as many growers as possible to pre-order the starts, so that ION knows how much demand there will be. "It's a marathon of getting the word out," he says. He's also working to assure growers that the organic starts will

do just fine in non-fumigated soil, and helping them devise new protocols for keeping their plants healthy and productive.

CCOF's backing of the project means that organic strawberry farmers will be legally required to grow organic transplants and fully transition to organic as soon as the supply increases enough to meet demand.

Then there's the issue of price. Nelson says the minimal additional cost for growing truly organic berries will be passed on to the consumer, but he doesn't see it stopping anyone from buying. "People are more focused on healthy foods these days."

The project has been incredibly challenging, but worth it for Bunin, who calls it *almost unprecedented*, because it proves that farmers can come together to make a change outside the usual regulatory process.

"It has been tough trying to convince farmers of the need to switch to organic transplants when the conventional ones are working," she says, "but they are recognizing that the switch is inevitable. And that's rewarding." 🍓

Bunin spent endless hours talking to growers and convincing nurseries to grow organic plants. She also coordinated with California Certified Organic Farmers, the agency responsible for issuing organic certifications.

There's always a supply-and-demand problem in this kind of transition. Farmers had to be convinced that the organic starts would be as hardy and productive as the conventional kind. Without demand for organic starts, nurseries would have no reason to grow them. So data were needed to show farmers that this could work and would not be prohibitively expensive.

The project, now under the aegis of Bunin's consulting firm Organic Advocacy, did not always go smoothly. The first field trial in 2015, involving organic plug starts, proved to be too costly. A subsequent season of field trials was disrupted when conventional fertilizers were accidentally applied to a test field. "That cost us another year," says Bunin.

New field trials began in 2018 with Bunin collaborating with Ste-

GROWING ORGANIC

BY JAMIE COLLINS

James Rickert of Prather Ranch started producing organic strawberry plants for growers in 2005, believing that if they were available, he would have a guaranteed market because certified organic farmers would be required to use organic plants. The sustainable cattle ranch in northern California had 10,000 acres he could use for rotating his strawberries to ensure the ground was free of pathogens and the plants could be certified organic.

At my farm, Serendipity, we used Prather's certified organic plants for our very first strawberry crop in 2007. I didn't know enough about strawberry growing to be afraid to try plants that didn't come from fumigated ground. I was happy to have found organic plants and, as a part-time organic inspector, I knew that I needed to diligently source organic plants or show that none was available before purchasing non-organic. That year I was very pleased with my strawberry yield and how the plants performed; not one plant in the acre died as a result of a pathogen.

Unfortunately, most farmers were more nervous about trying organically grown starts than I was. Considering the cost of planting and caring for strawberries is \$10,000 per acre, farmers did not know enough about how the plants performed and didn't want to jeopardize their livelihood by potentially introducing pathogens into the soil. Very few organic farmers purchased the organic plants, even though regulations state that if planting material is available in the appropriate variety, quality and quantity, organic plants must be purchased regardless of the cost.

Driscoll's—one of the largest berry companies in the United States and beyond—grows its own proprietary varieties of strawberry starts and has been increasing production of organic strawberry nursery stock over the years to comply with organic regulations. The company is not yet producing enough plants to supply all its growers, but has increased the percentage every year so that each organic grower has some organic plants in their fields. However, these plants are proprietary varieties and can only be planted by farmers who grow for Driscoll's.

Several non-Driscoll organic farmers tried the Prather Ranch certified organic plants and found they compared favorably with the conventionally grown crowns. Prather should have had a booming nursery business, but regulation of the commercial availability clause was hard to monitor and enforce at that time. Not enough farmers purchased plants from Prather and sadly its strawberry nursery went out of business in 2009.

However, thanks to the efforts of Dr. Lisa Bunin and Organic



Strawberry Fields Forever, Rickert launched a new organic strawberry nursery in 2016 with Daniel Nelson. Their business, Innovative Organic Nursery, with its home office in Freedom, has stepped in to fill the void, and is currently the only company producing organic strawberry starts that are available to all growers.

ION grows its strawberry starts in Macdoel and Manteca, Calif., where growing temperatures are warm and humidity is low—which helps keep disease at bay. Non-toxic peroxide soil sterilants are used and then beneficial microbes are released to add to the biological life under-ground.

ION is currently growing more than a million plants in six varieties—Albion, Chandler, Monterey, Fronteras, San Andreas and Cabrillo—and two proprietary varieties. Mother plants give way to daughter plants, which are dug up bare root and sold. Once the mother plants produce, they are removed and thrown away and new plants become the mothers for the following season and are planted into clean, disease-free soil. Beneficial insects are released and attracted to control above-ground pest and disease issues during the growing season.

The cost of production is higher than in conventional production, which is the case with all organics, but ION is striving to keep the costs reasonable for the grower. "The industry needs to move forward," says Nelson. "Big or small, growers need an alternative."

Innovative Organic Nursery
innovativeorganicnursery.com
831.728.4967

MARGARITAVILLE
CAPITOLA, CALIFORNIA

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