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## ARTISANS

BY DIANA BOCCO AND BRIAN HALWEIL

### BANKING ON SEEDS

*The next big veggie thing could come out of Flanders.*

FLANDERS—“Welcome to the weed patch,” says Ken Ettlenger. It’s late October, and he clutches a bundle of lanky lettuce plants whose cottony tufts of seed blend with his own sprawling salt-and-pepper beard. Nearby, emaciated green beans and brown, puckered edamame hang in the wind. Acorn squash are bloated and overripe. Tomatoes and cucumbers have rotted and desiccated on the vine. Succulent ears of sweet corn shrivel in the sun. A plot of carrots would be unrecognizable to Bugs Bunny with rows of alien-looking pom-poms swaying in the wind.

The ramshackle farmhouse, half-finished greenhouse, and smattering of straw bales, wheelbarrows and lawn mowers, don’t help shake the feeling of neglect on this sprawling 17-acre farm that cascades from field to forest and eventually down to the Peconic Bay. But so much about Ettlenger and his “weed patch” evade easy categorization. You see, Ettlenger, is actually one of the leading independent crop breeders in the country—perhaps the world—and all this apparent chaos actually represents hundreds of attempts to ferret out a new flavor, color, or robustness in an agricultural plant.

“This is my playground,” says Ettlenger, a giddy, scattered cross between Deadhead and mad scientist, as he gives a stream-of-consciousness tour of some of his ongoing experiments. “It would be nice if it benefited somebody. But it’s always exciting to create something new.”

Among those new creations that Ettlenger’s careful, steady coaxing and crossbreeding has birthed over the past few decades are the Brandywine tomato, the Long Island cheese pumpkin, and other American seed-catalog favorites, not to mention dozens of yet-to-be-released varieties. There’s a perennial broccoli that can almost survive East Coast winters, a yellow-skinned watermelon, golden and purple snowpeas, marble-size currant tomatoes with intense crunch, the muskaloupe with Old World ambrosia and New World hardiness, miniature white cucumbers, and miniature, disease-free sweet peppers, dubbed fingerlings, that have already inspired buzz among organic farmers on both coasts. “I like finding the thing that you don’t quite know what it is until you find it,” he says.

Of course, Ettlenger didn’t exactly create these plants; he inherited the genetics from generations of farmers before him. But, like an investor who spots the latent potential in a stock about to soar, Ettlenger can sprout a handful of seeds and separate the ordinary from the extraordinary, glimpsing the infinite possibility in what others see as freakishness. Consider the miniature ears of corn that are drying on a table nearby. Rather than accepting that corn can either be good for eating or good for drying and decorating, Ettlenger has been crossing some superior popcorn varieties with some radiant, ornamental Indian corn. “They’re edible and ornamental,” he says, cradling a few of the long slender ears painted with auburn, crimson and other subdued fall colors. Like any scientist who finds true joy in the minutia

of life, Ettlenger giggles when he speaks of a particularly odd or intriguing plant. “You might hang them on the door at Halloween and then take them down at Thanksgiving and have your own batch of fresh popcorn.”

“Every square foot of Ken’s garden is filled with something extraordinary,” says Elizabeth Dyck, a friend and collaborator of Ettlenger, who coordinates a vegetable-breeding program for the Northeast Organic Farming Association chapter of New York. “When Ken walks me around, I am either desperately trying not to step on a breeding project or amazed at the diverse plants and fruits I am seeing. His garden is truly one of earthly delights.”

At a time when 10 companies control half the world’s seed market, and the world has lost an estimated 75 percent of its seed diversity in the last century, Ettlenger’s work is actually revolutionary, if not imperative to the future of humanity. Seed isn’t just the bridge between one food harvest and the next, or the source of new flavors, colors and other sensory pleasures. It’s also our best hedge against a shifting climate, a new crop disease, or any catastrophe that might befall our agricultural system.

“If you started investigating the seeds people you’d find a few folks like Ken badgered away around the country,” says Amagansett farmer and fellow seed-saver Scott Chaskey. “And it is these rare reclusive people on which the future of our food depends.”

#### SEEDS WITH HISTORY

Ettlenger comes from a line of seed savers. His mother, who grew dahlias for the cut-flower industry at his childhood home in Deer Park in the 1950s, saved her favorite vegetable and flower seeds. Both his German grandfather and Italian grandmother brought seeds from the Old World, including a monstrous cucuzzi squash that Ettlenger still grows.

At the age of six, when he took over the family’s kitchen garden, Ettlenger began to realize the almost godly power a farmer had to mold his crops by selecting seeds from year to year. “Even since I was able to hold a shovel I’ve been told by the media how much better it is to buy new seeds from a seed company each year instead of saving your own,” he says. “But when you make your own selections in your garden or on your farm, then you breed for your own preferences.”

Since every farmer and gardener has different soil, microclimates, and disease, weed and pest problems, selecting and saving seed from those plants that flourish will mean better results the following season. “Conventional seed is bred to do okay everywhere rather than really thrive,” Ettlenger explains. And while large-scale seed breeders may be interested in crop varieties that withstand shipping or can be mechanically harvested, a small, organic farmer may want a variety that likes compost and manure or one with superior flavor to sell at a nearby farmers market.





Ettlenger scoured seed catalogs and gardening magazines for interesting varieties, with a particular eye toward little-known companies or exotic packets from Europe and Asia and Latin America. Thwarting US Department of Agriculture prohibitions, friends who were traveling abroad would bring him seeds (or dried veggies with seeds inside) as souvenirs. (That's how he got his impressive collection of Asian long beans, plants that thrive in hot conditions, when other beans often shrivel. "Every little village and community in Thailand has its own variety.") And he became part of a small, close-knit circle of seed savers around the United States, who would help give birth to a resurgence of home gardening, heirloom vegetables, and an appreciation for good food.

"All of a sudden, we had a reason for what we were doing because we had a network," he says, remembering the formation of the Seed Savers Exchange, a group founded in 1975 whose 8,000 members trade nearly twice as many vegetable varieties as are available from all of the mail-order seed catalogs in both the U.S. and Canada.

To support the seed-saving habit, Ettlenger, who is trained as a geologist, began to teach geology, meteorology, oceanography, and botany at Suffolk County Community College in Riverhead. (He also leads a relatively large botany club at the college.) Around the same time, Ettlenger bought his Flanders property and founded the Long Island Seed Company.

And, then, just as Ettlenger became a go-to source for seed brokers from Johnny's, Territorial, and the nation's leading catalogs, and his

**Previous page:** Ken Ettlenger, with his edible-ornamental corns, is one of the nation's leading seed breeders. **Above (clockwise from top left):** Some of his holdings and creations, including deli containers of sunflower, pea, and carrot seeds; fingerling peppers; Long Island Cheese pumpkins; Brandywine tomatoes; yellow-skinned watermelon; golden and purple peas; miniature edible pumpkins; and lima beans.

personal holdings—from tropical basil to Southern okras to ornamental gourds to Native American beans—multiplied, the emotional stress of a divorce and other family challenges forced Ettlenger to abruptly close his seed bank.

Fortunately, seeds, if stored in a cool, dry place, are designed to stay viable for a long time, waiting for just the right person to add a bit of soil and water. In this case it took about 10 years for Ettlenger's teenage son, Zak, who stumbled upon his father's seed room (perhaps prompted by a gardening interest tucked deep within his own DNA), to revive the seed-saving effort. Zak cut through the clutter and selected curious-sounding seeds to plant. He enclosed the front porch with plastic sheeting and added some grow lights. Silvia Carter, at *Newsday*, heard that a young man was raising heirloom tomatoes on a Flanders front porch, and mentioned in her column that the plants would be available for sale in early spring. That season, father and son collaborated to stock a popular roadside farm stand. Zak, who is in film school in South Carolina, but returns during the summer to help

his father plant the garden, saved his father in a way, but he also ended up saving the tremendous wealth of seed.

#### THE SEED ROOM

If a team of scientists were preparing a selection of seeds to send with explorers colonizing a new planet or deserted island, the pantry off Ettlinger's dining room would be a good place to start. Floor-to-ceiling shelves hold plastic

and paper bags, wood bowls, deli containers, glass jars, Tupperware and other receptacles full of seed. The room doesn't present an obvious organizational system (a common problem with seed banks around the world, according to a recent *New Yorker* article on an effort to create a global seed bank). Pole beans were

next to fennel, tomatoes were next to sweet corn, kale and cabbage were next to okra. The disarray spilled onto the kitchen counters and dining room table where seed pods and flower heads were in varying stages of processing. Ettlinger claims that he organizes the room each winter after harvest, only to turn it upside down each spring when he selects what he will plant.

The room contains thousands of seed varieties, including many that Ettlinger hasn't even planted yet. His tomato seed collection alone includes 500–600 distinct types. One large salad bowl looks like it holds dozens of bean varieties—a rainbow of colors, a jigsaw puzzle of shapes, and a size range that includes seeds triple the size of others; they all came from the recently harvested patch of lima bean plants.

Of course, such diversity doesn't mean that much if it's just sitting in Ettlinger's pantry. He can plant out dozens, perhaps hundreds, of varieties each season to keep the seeds fresh, but more importantly he occasionally ships seeds in response to a letter or e-mail from a fellow breeder. "I don't want to be in the business, but I still want to spread the seed," Ettlinger notes. "All gratis. Exchange is really key because you need to grow the seeds out. The whole idea of free exchange is drying up. Everything is becoming so crazily possessive."

Seed patenting, a modern phenomenon accelerated by the advent of genetically modified crops, means that many public institutions are no longer willing to share, for fear that something they currently possess will be patented and removed from the public domain. "And that's really going to hurt us," Ettlinger continues. He hurriedly checks a few e-mails, the screen saver on his computer crowded with striped melons. "It's going to hurt our ability to stay ahead of new diseases and climate change. The diseases are mutating and changing, but our seeds aren't."

#### ALL FOR THE DIVERSITY

The surprisingly obvious first step in creating a new crop variety is just putting seeds in the ground. In particular, Ettlinger enjoys plant-

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ing seeds that he has been told won't thrive in East End growing conditions, a tropical basil or a high-altitude wheat. "The first year, you plant the pack and what comes up looks so bad," he says. "But the survivors produce and you collect the seed. And by the third year, the variety looks wonderful. In a very short time, you can select out ones that flourish."

The work can be tedious. In the case of crossing melons or squash, which produce both male and female organs, each evening Ettlinger finds the flower buds that will likely open the next morning, and ties them closed to prevent unplanned pollination. The next morning, he unbinds the captive plants and pollinates between the males and females he wants to cross, careful not to damage the nascent fruit in the female flower that will ultimately hold the seeds he wants. The plants will ripen and even rot in the field before Ettlinger scoops the seeds into a bucket of soapy water, which helps remove the sticky flesh from the seeds so they can be cleaned in a strainer and dried on newspaper. (Note: If all this piques your interest, Ettlinger's seed-saving work is incredibly labor-intensive and he might entertain the idea of interns.)

But it mostly just requires persistence and patience and good recall. Despite an encyclopedic memory, he uses maps and markers and other cues to denote plants worth watching. To assess taste qualities, Ettlinger often has tasting parties or brings a bunch of tomatoes or peppers to a particularly discerning gastronome. When he's cutting up peppers to save seed, he'll often pop a strip of the flesh in his mouth and take note of the tanginess or flavor.

When it was in business, the Long Island Seed Company encouraged its customers to become backyard breeders by selling blends of many varieties of seed in a single pack. For example, a packet of "Beefsteak Type Tomatoes" sold by his company included dozens of large fruited tomatoes in all colors—red, pink, orange, yellow, white, green and striped. "I found that gardeners who were adventurous really enjoyed the diversity of all the varieties in the packet."

Ettlinger's most recent effort to spread this message was the Organic Seed Project, a bicoastal collaboration between Oregon State University in Corvallis and the New York chapter of NOFA, the Northeast Organic Farmers Association. Because seed companies breed vegetables primarily for large-scale conventional farms, the Organic Seed Project trained small-scale, organic farmers from New York and Oregon in the basics of seed saving. Farmers—who, for thousands of years, were the sole seed breeders—were then given seed varieties to grow and save on their own farms, looking for traits that might work in their particular circumstances.

"What's really neat and inspired about the project is breeders from around the country were sending out partially bred seeds and inviting farmers to finish them," said Ettlinger.

After just three years, big differences have developed in seeds grown in different parts of the nation, a testament to the potential for small farmers everywhere to adapt seeds to their own needs and help broaden the nation's crop diversity. "Farmers are very observant, but they don't always realize the power of their observations." Ultimately, singling out a plant that seems to be bearing more seed or resisting disease or sprouting more rapidly "gives our farmers an edge." (Unfortunately, funding for the program ended, although similar programs have been proposed.)

Because larger seed firms will never be interested in developing

crops for the infinite range of growing conditions around the world, Ettlinger believes that the best hope for preserving plant diversity is "to be maintained in gardens and farms across the land."

He remains optimistic that most people will choose diversity over monotony, and he points to the growing popularity of farmers markets, heirloom and heritage breeds, and membership in groups like Slow Food, devoted to celebrating the unique foods of millions of communities around the world.

The infinite possibilities held by a packet of seeds seem to offer the greatest weapon against a homogenous food culture. "A long time ago I had this wonderful pepper that was this incredible experience. It was remarkably fragrant, sweet and spicy. And I lost the seed. Ever since I've been trying to find it again." □

The infinite possibilities held by a packet of seeds seem to offer the greatest weapon against a homogenous food culture.

## OUR PUMPKIN PIE SECRET

by Ken Ettlinger, Flanders

*We used to bake pumpkin pies for our farm-stand patrons (as a by-product of our seed production), until the demand was so great we could do nothing but bake pies. People would show up at 7 a.m. for pie. It probably would have been lucrative but there just aren't enough hours in the day!*

*For pumpkin pie, moschata squash like Long Island cheese is favored. We never use pepo squash like the standard Halloween pumpkin. Pepo squash often cooks up stringy, insipid and watery. Moschata squash is richly colored (usually bright orange), higher in nutrients and sugars, always smooth-grained and has a denser flesh that will result in a better custard. It's the same reason we use chunks of moschata squash in our winter roasts and stews. Cheese pumpkins can also be stored in a cool room of your house for most of the winter for future use.*

1. Prepare moschata squash (butternut types, neck pumpkin or cheese) either by oven roasting in a covered heavy pan with enough liquid to allow the squash to cook until soft without browning, or by allowing cubed squash to cook in a pot of water on top of the stove until tender (check with a fork). Allow the cooked squash to completely drain and cool and puree in a food processor.
2. Add pumpkin pie spices. For every 2 cup of pureed squash add 1½ teaspoon of cinnamon, ½ teaspoon of ginger, ¼ teaspoon cloves and ½ teaspoon of salt.
3. Since you're essentially making a custard, add your custard ingredients: 2 eggs, 1 can of evaporated milk (or 1 c. of whole milk or light cream) and ¾ cup sugar for every 2 cups of pureed squash. Everything should be nice and blended to pour into a deep unbaked pie crust.
4. Bake in a preheated 350° oven for 45 minutes to an hour depending on your oven and the depth of your pie. Check for firmness toward the end of the baking time (you want a firm custard), but don't let the pumpkin filling overcook or scorch.