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Seeds Are Like Language, Able to Adapt

Kathy Connolly

Have you spun the seed rack at the garden center recently? Charming drawings and photos on the packets tempt us along with phrases such as easy to grow, great flavor, heirloom, GE-free (not genetically engineered), organically produced, or “hard to find.”

One phrase is conspicuously absent from most seed packs, however: “Local adaptation.” That’s because almost all seeds come from other parts of the country or the world.

Very, very few seeds are produced commercially in the Northeast today. Yet until the early part of the 20th century, almost all seed was locally produced, harvested, and planted—and thus, regionally adapted to some degree. The mainstream seed industry today, however, emphasizes plants that can deliver a one-size-fits-all performance across a wide geography. As a result, hundreds, if not thousands, of varieties have left commercial production.

Should we care?

One person who’s convinced we should is Petra Page-Mann of Fruition Seed. We met at the Connecticut Flower and Garden Show last winter, where she shared Lemon Ice dwarf tomato seeds with me.

According to Page-Mann, local adaptations to weather, sunlight, soil, diseases, and even insects, can make all the difference in growing success, particularly if you want to grow diverse food varieties or grow ornamental plants under difficult conditions.

“Who’d have thought that you could grow peanuts or sesame seeds in the north?” she asks.

Yet, a few years ago, a grower from Michigan’s Upper Peninsula gave her Valencia peanuts. In a recent season, she harvested 40 peanuts per plant. Though Fruition’s farm is in weather zone 5B, it grows melons, quinoa, dry-land rice, and a Caribbean pepper that has evolved into its own variety.

“Local adaptation makes it possible to grow a much wider variety of food crops without transporting the finished crop thousands of miles,” says Page-Mann. “We get the health benefits of fresh, locally grown food without sacrificing variety.”

She and partner Matthew Goldfarb started Fruition (www.fruitionseeds.com) in 2012. Now, five years in business, they harvest seed from 350 varieties of vegetables, herbs, and flowers on 24 acres with a staff of five at their Naples, New York farm. They collaborate with chefs, universities, food banks, and 12 organic farmers in the Finger Lakes region and aim to be a sustaining resource in the regional food system.

How do seeds adapt? Page-Mann suggests we think of it as a language.

“English 200 years ago isn’t the same as the English we speak and write today,” she says. “Languages are constantly evolving and seeds are the same way.”

She continues, “Brandywine tomatoes are called heirlooms, but the seeds we sow today are not the same as Brandywines grown by our great-, great grandparents. Plants are constantly adapting.

“When we’re trying to develop local adaptations in plants, we not only save seed, but more importantly, we select seed. Flavor is always the first selection.”

As regional growers, Fruition seeks plants that mature in a short growing season and otherwise tolerate cold.

“The plants that overwinter without cover are often the ones that become seed sources for us,” she says.

Other selection criteria may be very specific to the crop. For example, most lettuce and cilantro bolt too early for the home gardener.

“So, we select plants that are slow to bolt and eliminate plants that bolt too early,” she says.

They look for early maturity in tomatoes, cold hardiness in kale, and disease resistance in cucumbers, to name a few. They look for plants that generally tolerate regional pathogens better than others.

Eventually, they get a sense of the stability of a selection when the majority of plants exhibit the desired characteristic. A new variety may be named once a single trait is uniformly expressed, distinct from the parent variety, which often takes seven plant generations or more.

Indeed, you can develop your own local seed varieties with a little learning and attention to detail. Check out Seed Savers Exchange, an Iowa non-profit that not only facilitates seed distribution, but also teaches people how to save seed (www.seedsavers.org). Or read one of the classics on seed saving, *Seed to Seed* by Suzanne Ashworth.

More than 500 local seed libraries exist worldwide, according to the international seed library directory (seedlibraries.weebly.com). It lists 12 in our small state: Cornwall Bridge, Deep River, Fairfield, Harwinton, Mansfield, New Canaan, North Stonington, Plainfield, Roxbury, Warren, Waterford, and Westport. In addition, several horticulture organizations save and share seed.

Wishing you wonderful seedlings!

Kathy Connolly is a landscape designer, writer, and speaker from Old Saybrook. Reach her through her website, www.SpeakingofLandscapes.com.