

Documentary: High Mowing Organic Seeds for a New Food System

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STORY AT-A-GLANCE

- > High Mowing Organic Seeds has become one of the only companies producing organic seeds from organically grown plants
- > Their mission is to grow organic seeds that came from an organic source that have high disease and insect resistance, high yield and that produce high-flavor crops
- > They now grow over 600 heirloom, open-pollinated and hybrid seeds, including vegetables, fruits, herbs and flowers, for home gardeners and commercial growers
- > Ninety-five percent of the acreage of organic vegetable farms are planted with conventional seeds
- > Choosing organic seeds is important for avoiding pesticides and growing the heartiest, most resilient plants

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Tom Stearns, who has both an entrepreneurial spirit and a desire to get back to the roots of where his food comes from, started saving seeds when he was 18 years old. The drive to connect to the source of his sustenance in the most direct way possible led him to begin exploring how to grow seeds.

"Growing food wasn't enough," he said in an episode of "Growing a Greener World," a PBS series. "I was curious about the growing seeds and saving seeds part of it." It's an

aspect of food production that many people overlook, yet it's among the most important.

Growing a Greener World creator and host Joe Lamp'l makes a good point in that you can buy a seed or seedling and raise it organically with care, without any pesticides or other chemicals. And you can call it organic — but is it really? Not many people think about the seed that starts their plants, but Stearns did — deeply.

As he began his hobby of saving seeds, he realized he was saving more than he needed, and some of the varieties weren't commercially available. With a desire to share the unique seeds with others, he packaged them up in small envelopes, learned about germination tests to ensure the seeds would grow and sold \$2,000 worth of seeds in the first year.

"It was from those humble beginnings, 28 varieties planted in his own backyard, that one of the leading seed companies in the United States was born," Lamp'l said.

High Demand for Organic Seeds

In 1997, Stearns' second year in the organic seed business, he grew 50 varieties and sold \$8,000 worth of seeds. The year after that it grew to \$18,000 in sales, then \$34,000 — while still very much a hobby business.

Clearly there was a strong demand for organic seeds from people eager to know where their food, including the seeds, comes from, and by Year Four, Stearns reached a decision point regarding what he saw as a clear demand for high-quality, organic seeds.

The company continued to take off from there, becoming a half-million-dollar company by Year Seven or Eight. "And we had just barely gotten out of hobby stage at that point," Stearns said. The company's name, High Mowing Organic Seeds, has roots in northern Vermont, a hilly region that once centered on an agricultural term known as "high mowing." The company noted:

"When the early European settlers came to New England, they brought with them their livestock-based agriculture. The practice of mowing hayfields and storing winter feed was well-established, and became even more important when they encountered the long winters in northern New England.

But instead of calling such a field a "hayfield" like we do today, they called it a "mowing". These fields, or mowings, were usually further identified by a descriptor referring to location: the "back mowing" was behind the farm, the "low mowing" was in the valley, and the "high mowing" was up on the hilltop."

Organic Seeds From Organically Grown Plants

High Mowing Organic Seeds has become one of the only companies producing organic seeds from organically grown plants. Most seed companies don't even grow their own seeds, which made High Mowing Organic Seeds stand out even more from its competitors, as it grows all of its seeds.

Similar to going to a farmers market to meet the farmer behind the food, this back-toits-roots seed company allowed people to see where their seeds were coming from going back to the source of their sustenance.

The company now has 60 acres of land, which is about the length of 40 football fields. Their mission is to grow organic seeds that come from an organic source; that have high disease and insect resistance; that have a high yield; and that produce high-flavor crops.

They now grow over 600 heirloom, open-pollinated (seeds that are pollinated by insects, birds, humans, wind or other natural mechanisms) and hybrid seeds, including vegetables, fruits, herbs and flowers, for home gardeners and commercial growers.²

What's more, Stearns notes in the film that choosing organic seeds is very important, as while there are rules regarding chemical usage for commercial food crops, they're more lax when it comes to growing conventional seeds, which technically aren't a food product:

"When you're growing food conventionally, there are rules about all the different chemicals you can use and not use. When you're growing seeds conventionally,

there's also rules, but there are a lot more chemicals that are allowed.

So seed crops get sprayed with a lot of things, because it's not a food crop, so it's not going to translate into that risk for people, but of course it's still poisons in the environment. So when you grow seeds organically, you don't have those poisons, and it's a major reduction of them compared to the conventional comparison."

Neonicotinoids are one such example. A majority of soybean, corn, canola and sunflower seeds planted in the U.S. are precoated with these insecticides,³ which have been shown to threaten the entire food chain, having toxic effects on pollinators such as bees as well as invertebrates, birds and other wildlife.

For instance, researchers tested how exposure to these chemicals influenced the behavior of migrating songbirds.⁴ Birds that ingested realistic amounts of neonicotinoids had reduced feeding and accumulation of body mass and fat stores, leading to delayed departure from stopover sites that could affect breeding and population levels.

Most Organic Crops Are Grown With Nonorganic Seeds

Another eye-opening fact revealed by Stearns is that 95% of the acreage of organic vegetable farms is planted with conventional seeds. This isn't necessarily by choice, as the organic seed industry is still in its infancy, which means there isn't always enough to go around or the correct varieties aren't always available.

In fact, half the vegetables grown today have no commercial sources — you have to get them through seed trades.⁵ High Mowing Organic Seeds is trying to bring more organic seed varieties to organic farmers, which they say makes a major difference compared to using conventional seeds. Stearns states in the film:

"If you're producing a seed organically for organic farms, it's going to be better adapted for those conditions. So when you're planting a certain crop, you can do it when the weather and the soil conditions are favorable for that crop, so that you don't need to come in with some 'rescue' chemical to help solve an issue that you shouldn't have in the first place if you are paying attention to those things."

Conventional seeds used on organic farms are not bred for the conditions in which they're being grown, which means you're missing out on the full potential of the organic crop. So why aren't more companies growing organic seeds?

It's a very different process from growing plants for food, as it requires them to stay in the ground for much longer. This means they're even more susceptible to damage from diseases and pests, which conventional growers use chemicals to ward off.

Growing Robust, Resilient Organic Seeds for a New Food System

High Mowing Organic Seeds is focused on growing seed varieties that can grow in varied conditions across the U.S., varieties that will be hearty, robust and resilient in changing climates. They grow seeds thoughtfully, carefully selecting for plants that are slower to bolt and more resilient to stress. Bolting is defined as the rapid shift in a plant's growth from leaf production to flower and seeds. It's a process that many gardeners are eager to slow down.

The company removes plants that are quick to bolt, which is a sign that the plant may be less tolerable to stress. Paul Betz, sales manager, explains why this selection process makes a difference in the resulting plants' tolerance to stress:

"If you think about what the plant is doing when it's bolting ... the plant feels threatened, so that plant translates into "life is getting a little bit tough, and so it's time to make some seeds.

And so if you can do anything to reduce the stress that the plant is under, that will prolong how long it grows before it starts to bolt. And your job as a gardener is to create the easiest environment for the plant to grow in."

Stearns believes growing seeds organically and focusing on the health of soil and water are keys to rebuilding an entire food system:

"This new food system that we need to create needs to think deeply about how we take care of the soil, the water, the air, what tools we use, what types of seeds we use, what the nutrition is that goes into the soil, and then into the food and then into people.

And so this new food system that I feel to be a part of changing through these seeds is something that I think has a global effect and a global requirement. If we don't try, we're losing our capacity to grow food here ...

It is the single biggest way that we engage with this Earth, and we are doing it wrong. There's no arguments about that among people. We just need the courage to figure out the new ways of doing it."

Toward that end, High Mowing donates over 100,000 seed packets annually to community gardens, school gardens, church gardens, food bank gardens, summer camps, seed libraries and disaster relief groups, helping to spread organic seeds across the U.S.⁷

While there's increasing focus on the importance of growing food crops organically, it all starts with a seed. So, in addition to asking where your food comes from, remember to ask where the seed that grows that food came from as well.

You Can Save Seeds

If you garden, seeking out high-quality organic seeds will help you produce the most robust plants and healthiest food. Another alternative, however, is to save seeds from your own plants. When you save seed from your own best performing plants, on your land and in your own ecosystem, you gradually develop varieties better adapted to your own soil, climate and growing conditions.

Large seed suppliers rarely "rogue" the fields to pull out inferior or off-type plants, so the open-pollinated seeds they sell have inferior specimens in the mix. High Mowing is one of the rare seed companies that does do this, but you can also select your own seed for uniformity and quality.

You can control the gene pool for optimal germination, ripening time, flavor, storage, disease resistance and color. After a few seasons, more and more of your plants will have all of your personally selected traits.

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