

Saving Seeds

Heirloom Seeds Can Burst With Tradition, But They Must Be Preserved Carefully

BY RITA BRHEL
P&D Correspondent

Heirloom tomatoes aren't known for being pretty. Brandywine tomatoes are notoriously oddly shaped. Both Black Prince and Cherokee Purple tomatoes are dark in color, sometimes tinged with a greenish-black or even brown. Marvel Stripe tomatoes never look quite ripe. And Green Zebra tomatoes actually never turn and are as green the day eaten as they are when growing on the vine.

But for what heirloom varieties lack in aesthetics, they make up for in taste. Brandywines are the classically flavored tomato. Black Prince and Cherokee Purple have a sweet, earthy palate. Marvel Stripe is known for being best eaten raw with its mild tang. And Green Zebra are just barely tart.

"Heirlooms offer a huge variety of variety," said Shannon Carmody, public programs manager for the Seed Savers Exchange in Decorah, Iowa. "They're fun and have some really interesting entertainment value. An heirloom has a history to it, and that could be a history within a family or it could be a historical value in that it used to be offered in the catalogs in the 1930s but is no longer available but someone has kept them going year after year."

Many growers prefer heirlooms for nostalgic reasons, Carmody said: "Their cultural significance, we find valuable. They can have a close tie to our ancestors or customs, land, and things like that. We feel they are important to maintain as artifacts, just like language or architecture or cultural practices would be."

Heirloom vegetable varieties also offer a practical value. Seed companies' hybrids are developed to perform in many regions, but heirlooms are specifically bred to grow in certain regions, so heirlooms can actually out-perform hybrids in specific areas, Carmody says.

In addition, most of the hybrids available today, whether through seed for growers or through the super-market for consumers, are bred for efficiency or hardiness or shelf life or appearance and what was sacrificed was taste and nutritional value, Carmody adds. Growing heirlooms offers a way to reclaim these lost genetics.

Kaylee Mundwiler, who grew up in Milbank and is now an agriculture student at Minnesota State College in Fergus Falls, Minn., remembers her grandmother's heirloom garden: "From a young age, I could recognize the quality of the garden vegetables. I would eat Grandma's garden beets, but I never enjoyed beets that were from the grocery store."

Finally, growers can save money on buying seed while attaining self-sufficiency in seed genetics by collecting seeds from their heirloom varieties, perhaps selected for specific traits they find valuable, and then using these seeds for their next growing season. Saving seeds can only be done with open-pollinated varieties, which include heirlooms and are those that breed via natural pollination, whether by wind or insects. The result is a seed that will grow a plant identical to its parent plants, Carmody says.

"A hybrid, on the other hand, does not breed true from seed," she said. "You might have one melon that tastes really great and one melon that's really big and you want to find a combination of the two, so you have to take these two different parents of the same species and create a seed for Year One that's going to be great and be big. If you save seed from that and grow it the following year, you might end up with something that was not what you had the year before but rather what was in the parents' generation form two generations before."

Hence, the first rule of saving seeds: Save only from an open-pollinated variety.

The second rule: Make sure that the open-pollinated variety has not cross-pollinated with another variety or species. According to Jack Rowe, who provides a free on-line vegetable seed-saving guide, this can be done by various planting strategies, such as growing the varieties far enough apart that their pollen would have difficulty reaching each other, growing each variety in a separate cage, covering individual flowers with bags, and timing plantings so that different varieties are flowering at their own times.

When saving seeds, Carmody explains that there are two methods depending on the type of vegetable.

DRY SEED PROCESSING

This method is done with vegetables that grow seeds in a pod or a husk, which are left on the plant until the plant is dead and the pod or husk is dry. These may be annuals like broccoli, corn, and beans or biennials — crops that take two growing seasons to make seeds — like carrots, beets, and cabbage.

"If you're new to seed saving, annual dry seed processing is a great place to start," Carmody said. "A good one to start with is radish or green beans."

The challenge in collecting dry seeds is in timing with environmental factors that may affect seed dryness. Seeds are ideally harvested dry when the pod or husk easily detaches from the plant, but precipitation and humidity can affect the natural drying process.



PHOTO: RITA BRHEL

"It's a fine line between letting seeds dry as much as possible and letting them get eaten by some pest or having them mold after a fall shower," Carmody said.

Once the seeds are harvested, the second step is threshing, which is when the seeds are freed from their pods or husks. This can be done by rubbing the pod by hand, stomping on it, or even driving over it with a vehicle.

The third step is winnowing, when an air current is used to further separate the seed from the non-seed plant material.

The fourth step is screening, which continues the winnowing step by pouring the seeds through a series of metal screens of decreasing hole size to further separate the seed from non-seed plant material.

WET SEED PROCESSING

This method is done with vegetables that grow seeds inside the produce so that the seeds are surrounded by a gelatinous material that serves as a germination inhibitor. These include melons, squash, cucumbers, tomatoes, peppers, and eggplant.

"With many wet seed crops, seed maturity does not coincide with market maturity," Carmody said. For example, "all squashes need to grow like they're winter squash," she said. Or as with sweet peppers, "in this country, we eat a lot of green peppers, but green is not the color you want them," she added. "You want all vegetables to be at their ripest color."

When in doubt, "with seed saving, it's best to just ignore your garden and you'll end up with a really nice seed crop," Carmody said.

Mature seed is bigger, harder, and drier than what consumers find palatable. The vegetables they come from are also well past their ideal eating size.

"So those of you whose cucumbers get away from

you when you're on vacation, finally you have something to use them for instead of throwing them out or feeding them to the chickens," Carmody said.

With wet seed processing, fermentation is needed to separate the mature seed from the pulp. To do this, first the seed-containing pulp and any liquid needs to be removed from the vegetable and placed in uncovered jars left at room temperature for two to four days until a layer of mold grows on top. At this time, pour the mold and the pulp off the top of the jar and dispose of, and then pour the remaining liquid and the seeds — any mature seeds will have sunk to the bottom of the jar — through a strainer to collect the seeds. The seeds are then spread as a single layer on screens to dry. Be sure to place the screens where air is moving across them so that the seeds dry as much as possible.

"The first and most important rule of seed storage is, your seeds have to be dry," Carmody said. The optimal moisture content is only 6 to 7 percent. "If you can bend a seed, it's not dry enough," she said. "If you bend a cucumber seed and it snaps, it's dry enough. With very small seeds, you might have to try to crush them with a hammer."

SEED STORAGE

Seeds are best stored in cold, dry places like a refrigerator or a freezer or a drawer. It's important that the freezer doesn't have a freeze-thaw cycle, as this creates humidity and will spoil the seeds. Seed containers should be plastic or glass, but paper or cloth is best for seeds that may not be dry enough.

"If you want to store seeds for years, you want to get seed as dry as possible," Carmody said. "Seed can last a long time if dry enough."

Farm Bill Remains A Misunderstood Piece Of Legislation

BY RITA BRHEL
P&D Correspondent

We've entered that time of the year when there isn't a whole lot of excitement going on, on the farm or really anywhere in agriculture — unless you count the continued lack of a Farm Bill. There's still hope, say some, for a 2012 Farm Bill, but if you take a look at your calendar, I'd say that hope is overly optimistic.

What is going on with this Farm Bill? Undoubtedly, the delay has something to do with the trillion-dollar deficit and budget talks. There's a lot at stake as Congress tries to figure out what should go and what should stay in their spending — well, really, it's our spending, it's our taxes.

I don't think a lot of people really understand how important the Farm Bill is. There's a lot more to it than farm subsidies. In fact, 80 percent of the bill has nothing at all to do with farms or farming.

The Farm Bill as it is today was born out of the 1930s when farm production was so successful that the supply literally drowned the prices. The first Farm Bill created initiatives to adjust the supply and therefore market prices. Today, the Farm Bill also includes energy, forestry, school lunches, and



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businesses and landowners. Chris Edwards, an economist with the Cato Institute, told NPR earlier this year of how the average income of farm households in 2010 was 25 percent above the average of all U.S. households.

Another controversial part of the Farm Bill is the food stamp program. The program has grown since the Bush administration increased eligibility as well as an aftermath of a poor economy, but the low-income families and individuals who receive these benefits are still the minority in the nation and members of other income classes understandably have a difficult time accepting these handouts, especially to people who are often painted as lazy and living off the system. However, Dottie Rosenbaum, a senior policy analyst at the Center on Budget and Policy Priorities, told

supplemental nutrition programs.

What makes the Farm Bill so controversial are the farm subsidies, which redistribute taxes from the wealthy to sometimes wealthy farm businesses and landowners.

NPR that the stigma of the food stamp program is over the top, that the increase in program participation should instead be a wake-up call that the economy still needs fixing.

The 2012 Farm Bill is still being hammered out, but it's projected to spend just under \$1 trillion over the next 10 years, the vast majority of which — \$768 billion — will go to food stamps! This total Farm Bill budget is more than the U.S. spends on education, though less than defense, but it's certainly nothing to sneeze at.

There's a lot of speculation as to what will make the cut in the 2012 Farm Bill. Certainly, some

producers have nightmares about the entire farm subsidy program disappearing, and they wake up gasping for breath in the middle of the night. But here are the major components of this next bill:

- Price supports and/or crop insurance for commodity crops
- Conservation programs
- Agricultural exports and food aid, including humanitarian assistance to other nations
- Food assistance programs for low-income Americans
- Agricultural loans
- Forestry programs
- Renewable fuels programs, including ethanol
- Disaster assistance for com-

munity crops.

The biggest change is the transition away from direct farm payments that were instituted in the 1990s. They were designed to streamline the process but were given to farmers regardless of the type of year they had, so those who had bumper years still got

farm payments. The shift will go from price supports to risk management and disaster assistance. It will be a hard switch for producers, but over time, this will save a lot of money as well as a lot of faith in the public toward the value of the overall Farm Bill.

Happy 85th
Laura Goeden

A card shower is requested in honor of Laura Goeden's 85th birthday on Saturday, Dec. 15. Greetings can be sent to: 510 W. 2nd St., Yankton, SD 57078, or call to wish her a happy birthday.

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40th Anniversary Celebration

Jim and Mary DeLozier

Jim and Mary (Aune) DeLozier will celebrate their 40th wedding anniversary during the Christmas holiday with their children, grandchildren, family and friends. They were married in Irene, SD on December 9th, 1972. Their children are Dustin (Allison) of Littleton, Colorado and Cody (Sara) of Las Vegas, Nevada. Grandchildren are Elia, Brody, Hailey and Dracton. Cards may be sent to 1908 Cedar St., Yankton, SD.