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Seedhead News

No. 130

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Native Seeds S·E·A·R·C·H Est. 1983

Dear Friend,

After celebrating 40 years and reflecting on the past, we turned to the future and began to plan. This past year, we went through a strategic planning process, spending time thinking, updating, and redefining foundational aspects of the organization like our mission, vision, and values. We then outlined strategic goals that will guide how we continue to grow.

Seed saving is a continual, reciprocal process that ties us to our past and binds us to the future. An important part of our work is honoring and recognizing the ancestors who cared for the seeds before us, planting them for generations as they adapted to the desert. Native Seeds/SEARCH, along with other traditional farmers, carries on this reciprocal, circular process of saving, growing, receiving, sharing, and growing again.

The strategic plan and revised vision statement recognize the central role of Indigenous people in stewarding these seeds and the importance of ensuring that our seed bank prioritizes access and reconnection to these communities. Speaking on the importance of representation, Board Chair Jacob Butler says:

"Representation on our board and staff from the communities that have provided the seeds of this collection is important because those communities are the ones who, for hundreds, and in some cases, thousands of years, cared for them. The knowledge and practices from these communities are why they have the specific traits they have. Having relationships with these communities through their representatives ensures we are appropriately caring for these seeds and honoring the longstanding stewardship that created them in the first place."

As we look forward, we are focused on creating a future that is inclusive and representative of the communities that have the deepest roots. With your continued partnership, we can ensure these seeds and their stories thrive for generations to come.

With gratitude,

Alexandra Zamecnik
Executive Director

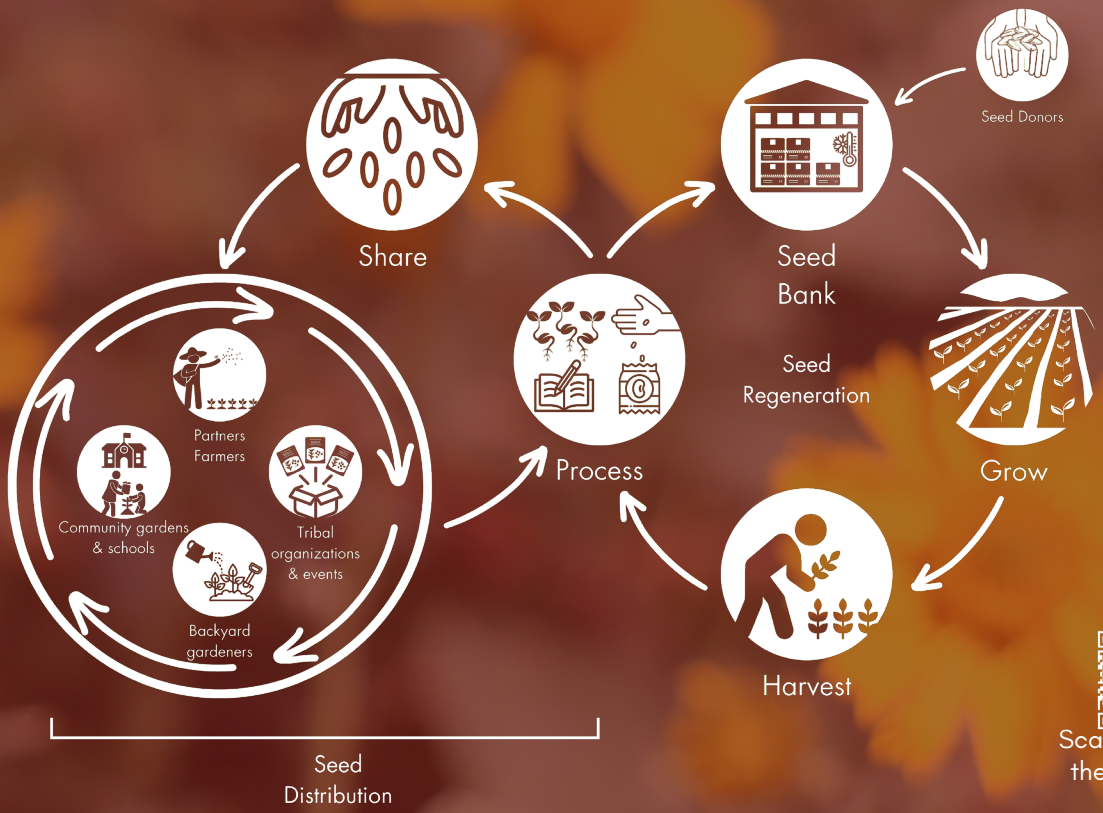
Cover image: Onaveño corn grown by Lowell McCampbell, a supporter in Tallahassee, FL

Seeding the Future:
A Five Year Strategic Plan (2025-2029)

We invite you to explore our strategic plan [nativeseeds.org/5yearplan], which outlines a clear and inspiring vision for the future of Native Seeds/SEARCH. This plan reflects the diverse voices within our organization and centers the communities connected to the seeds we steward. As we look ahead, we ask you to join us in preserving traditional farming practices and conserving the heirloom, arid-adapted seeds that are vital to our region. The strategic planning process resulted in four overarching goals for the organization:

- Stewardship of Seeds
- Empowering Communities
- Resilient Systems, Operations, & Communication
- Represent, Reflect, & Benefit Indigenous Communities

The graphic below from our new plan illustrates the reciprocal cycle through which seeds from the NS/S collection are regenerated and shared. Partner farmers and community organizations who receive seeds actively contribute to this cycle of regeneration—not only by returning seeds to the NS/S seed bank, but also by stewarding and sharing them within their communities.



Seed Savers Speak

Jose Galindo, Partner Farmer, Los Angeles, CA & Tuxcacuesco, Jalisco, MX

Jose is a new partner farmer who is growing Onaveño corn in Tuxcacuesco, Jalisco on the west coast of Mexico, while also caring for a garden plot in Los Angeles. Above, he is pictured with Hopi Blue Corn at his plot in LA.

"I currently live in the US, but I come from an agricultural community in Mexico that I keep close ties with. Over the past few years, the monsoon rains that my community depends on have been inconsistent at best and often insufficient. This has caused my community in western Mexico to move away from the traditional agricultural methods of countless generations to other ways of making a living. I have grown concerned over the sustainability of the new economic enterprises that are growing in the region. Moving away from traditional agriculture, in my view, has come to threaten not only food autonomy and security in the region, but also the culture that surrounds the food ways of the community."

In response to these changes in his community, Jose is looking to try out different drought tolerant varieties of corn to show people there still are crops that align with their traditional growing practices.

"Seed saving takes me back to dear childhood memories of living in my beloved Mexico. Being taken out to the fields with my dad, at the age of what may have been four or five years old, where he would show me how to dig a small hole and place two or three seeds of corn into the ground. In his mind, he might have been hoping to educate me on a simple, everyday task, or perhaps more deeply on my culture and the ways of our people. As I look back on those memories today, I feel a deep sense of identity and connection to a way of life that itself connects me to past generations from this very land, which goes back—if we are to believe historians and archeologists—hundreds or thousands of years."

continued on next page...

Jose's family field of Onaveño corn in Tuxcacuesco

"Seed saving means honoring and connecting with my ancestors and with the people who lived on this land. But more than that, as I continue to ponder about why I find seed saving important to my life, I find it has become a way to cope with the sad reality that we face today due to climate change. Generally, keeping a connection with my traditional Indigenous American foodways—be it by saving seeds, cultivating foods on the land, preparing and sharing meals, etc—has provided me with a way to take action in a time when individual human beings, like myself can, more often than not, feel like an entirely inadequate and hopeless victim to what has been unjustly taken from us. Through the empowerment that comes from taking action to live a more sustainable and connected existence, I can allow myself to also feel the pristine joy that accompanies hopeful optimism in humanity's future on this beautiful continent and planet."

Moses Thompson, UA School Garden Workshop Director, Tucson, AZ.

"Gardening is an exercise in hope, and seed saving is the step in the process that puts the gardener beyond the horizon and into the promise of tomorrow. Even the smallest of yields become multipliers for next season. Surplus seed becomes opportunity to share and forge human to human connection. Over seasons, saved seeds adapt and become woven into the fabric of place."

Hellen Harty, NS/S Garden Associate, Americorps

"Spending the last year at NS/S has meant so much to me. Working in the Conservation Center gardens has been a profound opportunity to connect with people and plants in my community. It has been really rewarding learning how to farm and save seeds in the Sonoran Desert, which I'm lucky to call home. I love watching the plants from the seedbank grow and change between seasons. I'm very grateful for the experience of taking care of seeds which are considered ancestors to the Indigenous communities in this part of the world."

Pete & Judy Allard, Members & Donors from Tempe, AZ

"The mission of NS/S to conserve and promote arid-adapted crop diversity is essential in our world of climate change. We appreciate how NS/S has increased its involvement with the Indigenous communities it seeks to serve."

Irrigated Dry Farming?

Blending Tradition and Technology to Preserve Arid-Adapted Seedlines

Joel Johnson, Conservation Farmer Manager

Irrigated dry farming sounds like a contradiction. And that's because it is. But in our NS/S seed grow-outs, that contradiction may be the key to sustaining the health of the seeds in the seed bank while also preserving the arid adaptations that Indigenous seed keepers have cultivated over generations.

For thousands of years, dry farming, growing without any supplemental irrigation, has been standard practice in the Sonoran Desert. The O'odham word, ak-chin, meaning "mouth of the wash," refers to the farming practice of planting in washes or arroyos to utilize the rainwater and nutrient-rich sediment that comes down from mountain foothills. Growing seeds in the rigorous conditions of ak-chin dry farming naturally selects for resilience and efficiency. Over generations, these practices have shaped hundreds of varieties of arid-adapted food crops like O'odham 60-day corn, tepary beans, devil's claw, and more. While dry farming facilitates great resilience, it is not without risk. As we've experienced in recent years, sometimes monsoon rains come very late, or not at all. In those seasons, a dry-farmed crop may be lost entirely.

As we grow seeds to regenerate the seed bank and increase availability to growers, we are always thinking about how to balance resilience and reliability. Tohono O'odham dry farmers have rightfully reminded us that an over-irrigated crop loses resilience and the seeds produced may no longer be of value to the community that shaped that seedline. At the same time, if we exclusively practice dry farming, we risk losing entire seedlines in a poor monsoon season. In the context of the seedbank, this would also be a failure to appropriately care for these seed lines.

The new dry farmed plot after a monsoon this past July
Photo by Kristen Densmore, Garden Associate/Americorps

Enter the contradiction of irrigated dry farming, also known as deficit irrigation. In our newest addition to the Conservation Center, we learned from the field design at the Tohono O'odham Community College farm. With a homemade water level, tractor, and a lot of hand shoveling, we dug a 20-bed basin field that captures monsoon rainwater from three directions. Rainwater harvesting basins trap sediment, and then the overflow fills the basin field. We saw this work beautifully during a 1.5" rain in late June. While this field is designed to mimic some ak-chin practices and maximize rainwater capture, it is also connected to our irrigation system so we can supply supplemental water as needed during critical periods of crop development.

This spring, we grew Gila Pima A'al Hu:ñ, a 60-day corn that thrives in low water conditions. Instead of setting up a regular irrigation pattern for this growout, we practiced deficit irrigation–using rain as the primary water source and waiting as long as possible between supplemental irrigations, often 2-3 weeks or more. Though the corn was not truly dry farmed, this was the least amount of water we've applied to a corn grow-out at the Conservation Center, and the plants produced healthy, viable seed.

While we have a lot more learning and experimenting ahead, by combining modern drip irrigation technology with the design practices of ak-chin dry farming, we hope to appropriately balance resilience and reliability to ensure these seeds continue to meet the needs of the seed keepers who have invested so much care into their cultivation and will continue to do so for generations to come.

Volunteers & staff digging the 20-bed basin field

Tucson Family, Tucson Tomato

Sheryl Joy, Seed Conservation Specialist

Claude "Al" Alan Nichols, who was interviewed for this piece in June, passed away on July 12, 2024. Our condolences to the Nichols family and friends.

After their WW2 service (as a nurse and B-17 pilot), Dorothy and David Nichols were sent to Davis Monthan AFB in Tucson. They didn't have enough money to leave town, so Tucson is where the couple literally landed.

In the late 1950's they bought land here, and built and tended a big garden. David loved growing tomatoes, but eventually he noticed tomato plants regularly popping up in his garden that he didn't plant. (They were persistent—these tomatoes). David realized they seemed to thrive with little care, and produced really nice fruit: smallish, pinkish, sweet and plentiful. David started saving the seeds, and he grew them pretty much every year, up until his death at age 93.

That might've been the end of these pretty heirloom tomatoes, were it not for the family's sons, who carried on growing this now-favorite crop. At the time of telling me this story, Al, one of the sons, was in his late 70's and still growing these tomatoes. Al was one of the founders of the Civano sustainable neighborhood project (that's a whole other story) and he grew his tomatoes in the Civano community garden. At some point, Al crossed his variety with Early Girl tomatoes, a hybrid variety that has early ripening, medium-sized fruit. The result was more reddish fruits that are possibly a little quicker to produce.

One of Al's coworkers from the early days of Civano is the one who convinced Al to send some seed to NS/S in 2007…his message to us was: "you really need to try these!" Those were the days when Al handed out little packets of tomato seeds like business cards. Between his seed sharing and ours, the Nichols heirloom was soon in high demand.

Where did they come from, originally? Al's theory is they were an accidental cross between a Pink Giant, a variety that's truly enormous, and a cherry tomato variety. Or maybe a bird ate a tomato elsewhere and deposited the remains, seeds included, in the family's garden. Regardless, they now have a history of being stewarded right here in Tucson for over 60 years. Tucsonans rejoice!…these mild, sweet, prolific, desert adapted tomatoes will soon be available once again from NS/S.

SPICY SALSA RECIPE:

10 cups ripe tomatoes, coarsely chopped
1 medium onion, finely chopped
2 pickled jalapeno chiles, chopped
2 tablespoons water
2 teaspoons vinegar
1 teaspoon ground cumin
1/2 teaspoon ground dried chiltepin chiles
Salt to taste
Combine ingredients in a bowl, mix well and serve chilled.

Recipe by Esther Moore
Featured in *From Furrow to Fire: Recipes from the Native Seeds/SEARCH Community*
Compiled by Mary Ann Clark & Shannon Scott

This recipe book is available for purchase online at nativeseeds.org/books

Seed Saving in Mayan Villages

Dr. Andrea Carter, Director of Agriculture & Education

Located in Central America, Belize is a culturally diverse and beautiful country bordered by Mexico and Guatemala, and the Caribbean Sea. A British colony until 1981, Belize remains a unique melting pot of Mayan, Creole, Garifuna, East Indian, Mennonite, and Hispanic communities. Like much of the region, agriculture has moved away from traditional milpa practices of slash-and-mulch farming of maize, beans, and squash towards chemically farmed monocultures and cleared forests for animal grazing. Along with these changes, imported hybrid corn has largely supplanted local varieties leaving many farming communities concerned by the loss of their own adapted and culturally significant seed.

This January, I returned to Belize as part of the Traditional Native American Farmers Associations' Pueblo to Pueblo Cultural Exchange Program – an amazing opportunity for knowledge sharing led by Clayton Brascoupe, the program's director. We traveled to several Mayan villages to teach workshops on seed saving and seed banking. Our first visit was to the village of Santa Cruz where a community seed bank had been recently constructed. Community Chairperson Alvalardo Canti who spearheaded the project shared the following:

Seed Bank built in Santa Cruz Village in 2020.

Andrea with members of Santa Cruz Village

"There is little support for seed conservation, just private companies selling seed. Meeting Mr. Clayton Brascoupe showed me how important seed saving is. People may take seed for granted [seed will be lost] or people stop farming...we want to make sure we have a seedbank to supply people. Or if our children want to return to farming one day, the seeds will be here."

Our next workshop was in the village of San Antonio where there was a large turnout of farmers, community members, and leaders. The Village Chairman, Aron Tzib, was very excited to engage his community in conversations around preserving their local seeds, protecting them for future generations, and exploring new varieties for climate change adaptation.

Revitalizing Tradition: Aron's Journey from Belize to NS/S

Aron Tzib (left) and Rigoberto Saqui (right) of Belize attended a seed saving workshop at the NS/S Conservation Center

> *"Farmers are now taking the protection of our native seeds seriously, ensuring that we pass this knowledge on to the younger generation so they can continue the work."*

Aron visited NS/S in Tucson this past April for our Seed Banking Workshop hosted in partnership with the Traditional Native American Farmers Association (TNAFA):

"I am very happy and fortunate to have been one of the people who visited Native Seeds in Arizona. It was a great experience for me, and I learned a lot about seed selection and storage.

Additionally, I learned about the importance of proper crop spacing and distance to prevent cross-pollination, which helps maintain the identity of a seed variety. I also gained insights on making seeds more resistant to diseases, fighting these diseases, and focusing on organic, sustainable farming. I even learned about manufacturing our own tools and equipment for use on our farms.

I have been sharing a lot of the information I learned at Native Seeds with our local farmers, and I've noticed significant improvements in our community. Farmers are now taking the protection of our native seeds seriously, ensuring that we pass this knowledge on to the younger generation so they can continue the work.

This is something new in our community; before, no one paid much attention to the value and protection of our seeds. However, after I returned from the Native Seeds conference, I shared what I learned about the value of our local native seeds, and it opened everyone's minds. Now, our farmers are so proud of our local seeds.

Thanks to Native Seeds, visiting your seed bank was a transformative experience that has greatly impacted our community. A special thanks to Andrea—I am much appreciative of this opportunity. I look forward to the possibility of visiting your organization again to continue learning."

Farmers, community members, and leaders of the San Antonio community in Cayo, Belize where Aron is Village Chairman.

14-Year-Old Chiltepin Farmer

Justin Risley, Communications Coordinator

NS/S stewards 32 different varieties of chiltepin, a wild crop that is consistently in high demand but low in supply. The iconic "mother of all chiles" is sought after in US Southwest and Northern Mexican cuisine for its unique spice and smoky flavor.

In decades past, NS/S helped establish a wild chile preserve in the borderlands (see Seedhead News No. 66). In recent years, we've found success working with gardeners or organizations with landscape gardens to steward chiltepins in small-scale, local grow-outs away from other peppers to avoid cross-pollination. Therefore, we are always thrilled to find experienced growers interested in increasing and caring for chiltepin populations from our region. Introducing our youngest chiltepin steward, Wyatt, age 14.

For the last three years, Wyatt has been caring for 15 Rio Sonora Chiltepin plants

Wyatt harvests from his 15 Rio Sonora chiltepin plants

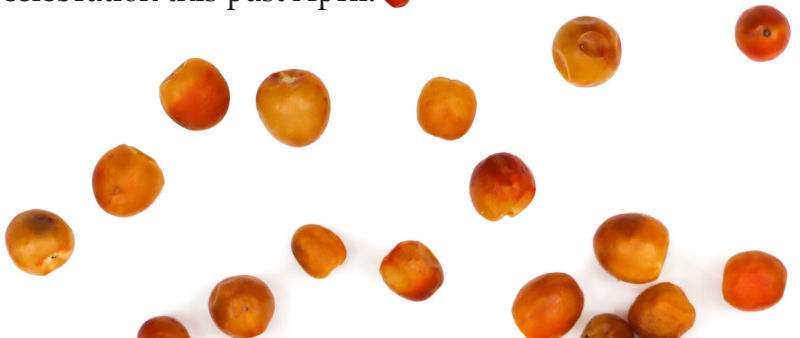
Wyatt and Joel at our 40th Anniversary Celebration

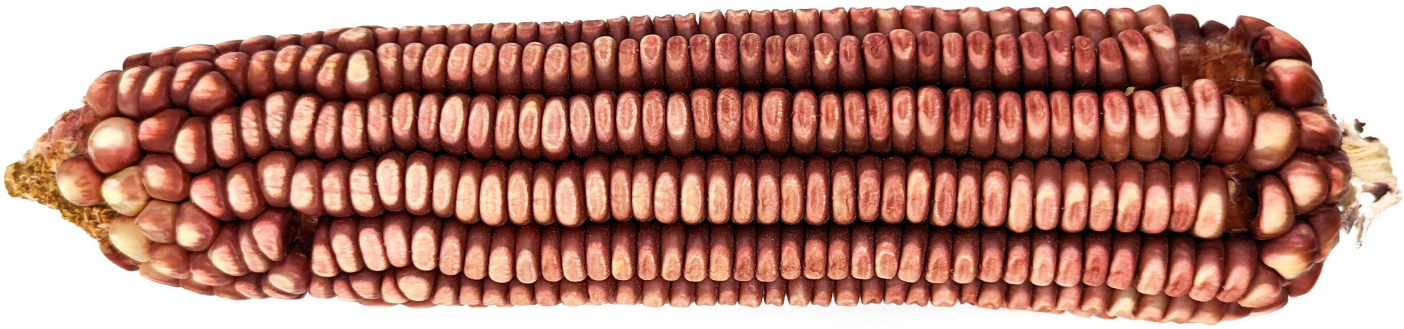
and returning seeds to NS/S. According to his mother, he has always shown interest in growing plants and saving seeds. After a visit to the Conservation Center with his homeschooling tutor, Wyatt aspired to become a partner grower. Little did he know the opportunity was waiting for him!

Turns out, Wyatt's tutor, Camilla, is the mother of our Farm Manager, Joel! Once Joel heard from his mom about Wyatt's enthusiasm for growing plants, he eagerly offered him the opportunity to care for over a dozen chiltepin plants (under the supervision of Camilla).

The variety Wyatt stewards, Rio Sonora, was originally wild-harvested near Baviácora, Sonora, Mexico on the Rio Sonora at about 2000 ft. elevation. This variety is currently unavailable. However, thanks to Wyatt, we hope to make this variety available soon!

Most recently, Wyatt returned Rio Sonora seed while visiting NS/S for our 40th Anniversary celebration this past April.





New Intellectual Property Treaty Affecting Seeds and Associated Traditional Knowledge

Allison Fish, PhD. & Brad Sherman PhD. , University of Queensland School of Law

Earlier this year, we hosted a workshop featuring the work of Dr. Fish and Dr. Sherman on stewardship, sovereignty, and legal protection of Indigenous and heirloom seeds. You can view a recording of the seminar on our YouTube channel.

For over two decades, countries around the world have been attempting to develop an international legal response to biopiracy (the misappropriation of seeds, plants, and associated traditional knowledge). This process ended on May 24, 2024 when the World Intellectual Property Organization (WIPO) adopted the Treaty on Intellectual Property, Genetic Resources, and Associated Traditional Knowledge. To date, over 30 countries have signed the treaty, including Mexico, Peru, Brazil, Chile, Colombia, Nicaragua, Paraguay, and Uruguay (but not the United States). The Treaty's key aim is to facilitate benefit-sharing when seeds, plants, and traditional knowledge are used in research and development. To do this, the Treaty requires patent applicants to disclose the origin of any plant resources or traditional knowledge used in their inventions. This is intended to make violations of access-and-benefit sharing laws, which more than 130 countries have, easily discoverable.

While the passage of the Treaty has been widely celebrated as an initial step in redressing past injustices; its capacity to prevent biopiracy is debatable. As the United States does not have access-and-benefit sharing (ABS) laws, any disclosure that an invention is based on a Southwestern plant or a Southwestern community's traditional knowledge (but without the requisite permissions) will have no legal consequences. While the situation is different where material is collected in Mexico, where there are ABS laws, disclosure of origin is still a blunt policy tool. This is because, although information about origin will be publicly available, it still requires third parties to find and act upon any violations – which is a difficult and costly process. While the finalisation of the Treaty may have ended over 20 years of negotiations, as the Colombian delegation said when the Treaty was adopted, this "must be a first step of many in continuing to make progress on this important task".

For more information about the WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge, visit www.wipo.int/tk/en/

A Final Farewell to the Patagonia Farm

After 27 years, we have officially said goodbye to our 60-acre farm in Patagonia, Arizona. This farm marked an important milestone in NS/S's history, providing a space where we could increase, regenerate, and conserve the seeds we steward. Although we stopped growing there seven years ago, both the farm and the Patagonia community continue to hold a special place for NS/S.

We are grateful to Borderlands Restoration Network (www.borderlandsrestoration.org), a sister nonprofit and longtime renter, who is now the proud owner of the farm. Our thanks also extend to The Nature Conservancy for holding a conservation easement on the property, ensuring its protection for years to come.

As we look ahead, we're excited to deepen our roots and expand our efforts at the NS/S Conservation Center and surrounding gardens. In the coming year, we hope to break ground on a new barn that will further support our mission.

Dear Friend,

You are part of an incredible community that believes in conserving seeds and the crop biodiversity of the Southwest. Your support helps safeguard the seeds of our region—seeds that connect us to our past and hold the promise of a resilient future.

I encourage you to continue that support, and make a gift today using the enclosed envelope.

Your gift today will ensure heirloom seeds are preserved in our seed bank, grown and shared with gardeners and communities of the Southwest, and preserved for future generations.

If you can, please make a gift today to help grow, save and share seeds.

With gratitude,

Lissa Marinaro
Marketing & Development Director

P.S. You may also give online at nativeseeds.org/donate.

In Memory of Brett Bakker (1958–2024)

In May, we were saddened to learn of the passing of Brett Bakker, a former employee and avid seed saver.

Brett worked at our former New Mexico office from 1992-2000, keeping NS/S connected to the communities and pueblos of the region, as well as collecting hundreds of accessions for the seedbank. He was responsible for collecting 229 seedbank accessions of traditional crops from New Mexico, Colorado, Arizona, and Texas. His name is on almost two-thirds of the total collections from New Mexico (Seedhead News No. 69, 2000).

Brett's monumental impact on NS/S endures to this day. This past winter, we cultivated Ojito fava and several New Mexico crops from seeds he collected decades ago. These seeds have been distributed throughout our region and continue to thrive, even after all these years.

Below is a piece written by Brett, a frequent contributor, for Seedhead News No. 38 in 1992.

Reflections on Native Seed Harvest

by Brett Bakker

The harvest is in.

Through drought and hail, wind and weeds and hungry family, you've managed to save some seed from the crop. They're clean, dry and tucked away in a cool dark place out of reach of rodents and roaches.
You may leave them be until spring calls you to plant. Or you can use this introspection of winter to consider your role and responsibility in guarding these precious beings.

Brett harvesting squash seed in 1998

Seeds live and breathe. They are dormant but respirating until sowing. They don't die when sprouted but pass into their next phase as living plants. Hastening to close the circle, they reproduce the next set of seed-beings.

Seeds can die, however. Technically improper storage (too hot, too moist, too easy for pests to find) will kill individual seeds and threaten the genetic variability of your seed stock. But also consider morally improper storage: unplanted seed merely packed away in a dusty collection, like so many lifeless butterflies pinned to paperboard…
Ask any avid gardener why they raise plants and ultimately you will be told, "I just like to see them grow!"

Seeds want to grow, too! Keep a back-up set of seed; what you can't plant, share. As a gift or sold product, help them take their proper place as partners with human stewards.

The more I farm, the more I deal with seeds, the more I feel we should make proper use of these gifts. Eat and share the bounty. Bless the soil by returning crop waste as compost or mulch. You will bless yourself as well in the process.

Our deeper responsibility to traditional crop varieties (be they Native American, African, Asian, Amish, or any other) is to foster the proper respect that their communities accorded them.

Plants link us to our planet by their steadfast roots in the soil. They point us to the heavens as they reach skyward. Listen. Gardens have many stories, if we are still enough to hear.

Sowing will teach us gentleness; weeding, patience. Watering shows us how to nurture; harvesting, to receive with grace. Composting, thrift. Cleaning and saving seed, orderliness. Planting seed you've grown recalls the continuity of existence. It echoes the circles of our lives spiraling from our ancestors toward our grandchildren and back again.

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Native Seeds/SEARCH is a 501(c)3 nonprofit whose mission is to conserve and share the seeds of the people of the desert Southwest and Mexico so that these arid-adapted crops may benefit communities and nourish a changing world.