



Seedlisting 2017



Many Ways to Get Seeds

Agricultural biodiversity is most valuable when it is actively used to strengthen local food and farming systems. With this in mind, Native Seeds/SEARCH strives to provide public access to seeds of regionally-appropriate crop varieties through our various seed distribution programs. In addition to retail sales, individuals and organizations can receive access to seeds via:

Community Seed Grants

We provide free seeds for organizations (including schools, food banks, senior centers, and seed libraries) working to promote nutrition, food security, education, agricultural sustainability, and/or community resilience. Projects that will clearly benefit underprivileged groups are especially encouraged. Applications are reviewed in January, May, and September. See page 5 for more information.

Native American Seed Request

We provide a limited number of seed packets at no or reduced cost to Native American individuals. See page 11 for more information and details on how to order.



Community Seed Grant Recipient: Naco Wellness Initiative Children's Garden, Naco Sonora.

Bulk Seed Exchange

To encourage small-scale farmers to grow, save, and promote arid-adapted varieties we provide start-up bulk seed quantities available in exchange for a return of a portion of the seeds after a successful harvest.

Seed Library

If you are in Tucson, Arizona, we encourage you to visit our seed library located in our Retail Store. The library is open to all to facilitate the free distribution of locally adapted seeds and increase regional seed sovereignty.

Visit www.nativeseeds.org, email us at getseeds@nativeseeds.org, or call us at 520.622.0830 for more information.



Community Seed Grant Recipient: Native Health as part of the PHX ReNews Project, Phoenix, Arizona.

People and Seeds

We are pleased to share with you our new 2017 Seedlisting! Starting with the front cover and embedded in the words and photographs shared throughout you will find a fresh yet familiar perspective on the work of Native Seeds/SEARCH.

Here are some highlights you won't want to miss:

- * The unveiling of several rediscovered and now newly available varieties of chiltepinos which are making their debut on these pages! *Learn more about these amazing varieties and the history and cultivation of chiltepinos in both English and Spanish on pages 21-23.*
- * *Saving Seeds in the Southwest*, a new must-have resource for southwestern gardeners and seed savers, written by NS/S staff Joy Hought and Melissa Kruse-Peebles (see page 33).
- * Unique and flavorful foods that helped inspire Tucson's recent "World City of Gastronomy," designation on page 50.
- * A chance to WIN a City of Gastronomy Gift Box (see page 51).
- * Our recently revised mission statement (below).

Native Seeds/SEARCH is a nonprofit organization that seeks to find, protect, and preserve the seeds of the people of the Greater Southwest so that these arid adapted crops may benefit all peoples and nourish a changing world.

It is through our continued relationships with people and seeds of many ages, stages, colors, and flavors, that we are honoring the traditions, preserving the seeds and knowledge surrounding them, and distributing them in our region and beyond!

Please join us in keeping these important traditions alive by growing the seeds found throughout these pages, by sampling and sharing the locally produced food, and by maintaining an active membership with NS/S.

Thank you for being an important part of our mission and work!

Save – Grow – Share – Educate

Laura Jones

Interim Executive Director



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Our Seeds

We are committed to conserving agricultural biodiversity and to providing the highest quality seed available. With these values in mind:

Open Pollinated Varieties NS/S provides only OP varieties. Seed saved from the parent plant will grow with the same characteristics if care is taken to prevent crossing.

Landraces & Heirlooms Seeds from the NS/S Seed Bank Collection (indicated in this listing with the **S** symbol) are landrace or heirloom varieties with a long historical connection to the Greater Southwest. Landraces are farmer-developed varieties of crops that are adapted to local environmental conditions. Heirlooms are similar in that they are grown and shared over generations.

Non-Collection Seed We also include OP species and varieties from outside our collection to broaden our offerings. These Non-Collection varieties (indicated in this listing with the **N** symbol) perform well in the Greater Southwest even though they do not have a deep historical connection to the region (see page 18 for more information).

Organic Growing Practices Most seeds in our Seed Bank Collection are grown out at our Conservation Farm in Patagonia, AZ. While we are not USDA certified organic, our current growing practices meet and often exceed the standards for organic certification. Please contact us if you have questions about the specific growing conditions of any seed offered by NS/S. All of our seeds are untreated and allowable for use in certified organic programs.

Safe Seeds and GMOs NS/S is a member of the Safe Seed Initiative. We do not buy, sell or use genetically modified seeds. Our seeds can be considered GMO-free and we take efforts to ensure that they are not cross-pollinated by GMO or hybrid seed stock. For more information contact the Council for Responsible Genetics, sponsor of the Safe Seed Initiative.

No Patents on Seed We support free access to crop diversity and support the rights of indigenous communities (and all farmers) to benefit fairly from the crops and associated knowledge they developed. Seeds obtained from NS/S are not to be used for



commercial breeding purposes with a patent outcome unless there are written agreements with the originators of the seeds in the NS/S collection.

Seed Bank Collection

Native Seeds/SEARCH maintains a regional seed bank with approximately 1,900 accessions from over 100 species of wild crop ancestors and domesticated crops used as food, fiber and dye. Each accession is genetically distinct, having adapted to specific ecological and cultural niches. These accessions have a historical connection to the Greater Southwest and represent the rich agricultural heritage of the region. NS/S works to ensure that these resources remain viable and available to farmers for generations to come. Varieties with declining germination rates are regrown in isolation to maintain genetic purity. We make this diversity available to farmers and gardeners when new crops of healthy seeds results in more than we need to maintain viable samples in the seed bank. Distribution of the seeds and education in seed saving techniques also helps to ensure their maintenance. NS/S uses both approaches, a regional seed bank and promotion of local seed saving, to preserve biodiversity.

Conservation Farm

In addition to growing out seeds for the NS/S seed bank, the Conservation Farm serves as a research and demonstration site for sustainable regional agriculture and local seed saving. We are committed to the ecologically sound stewardship of the farm, managing its soil, water, insect and plant resources in a manner that is rooted in the application of sound ecological principles.

Visit nativeseeds.org for opportunities to visit our Seed Bank and Conservation Farm.

How to Read this Seedlisting

HIGH Desert: >3,500 ft and

LOW Desert <3,500 ft

Refer to the origin of the seed varieties and what is suitable based on our experiences in Tucson and Patagonia, AZ. Often plants can be grown beyond these ranges and if you experiment we encourage you to report back to us!

SEED Bank

Varieties that are formally conserved in the NS/S seed bank. They are considered landraces, heirloom, or crop wild relatives with a long historical connection to the Greater Southwest.

NON Collection Seed

Open pollinated varieties that are not from our Seed Bank collection. These are included to broaden NS/S offerings to meet the needs of those

wishing to grow additional species and varieties that will perform well in our region. Unlike our Seed Bank offerings, these varieties do not have a specific history to the Greater Southwest (more info page 18).

FAVORITES

The most essential seed varieties in our gardens.

MEMBERS Only

Indicates varieties that are in low supply and only available to NS/S members, including the Native American Seed Program. Details on pg. 11 & 55.

BULK Seeds Available

Indicates varieties where bulk quantities are available. Sizes from ¼ oz to 1 lb, depending on variety. Please call 520.622.5561 for pricing.

Community Seed Grants

With your support in 2016, we donated over 2,670 seed packets to 119 organizations!

Native Seeds/SEARCH is pleased to offer small donations of our seeds to eligible organizations in the Greater Southwest region. These Community Seed Grants are designed to support the work of educators and those working to enhance the nutritional, social, economic, or environmental health of underprivileged groups in the region, while simultaneously keeping locally-adapted crop varieties alive and in active use in farms and gardens.

Donations are open to organizations working on educational, food security, or community development projects. Strong preference is given to organizations working in the Greater Southwest region. Applications are reviewed three times each year in January, May and September. Please visit our website for more information and to apply:

[www.nativeseeds.org/get-seeds/
communityseedgrants](http://www.nativeseeds.org/get-seeds/communityseedgrants)



Community Seed Grant recipient: Hirsch Academy, Scottsdale, Arizona.

Growing & Seedsaving Information

When you save seeds from your garden or farm, you make a vital contribution to crop biodiversity and seed security. Following the basic guidelines below will help maintain distinct varieties and produce good quality seed. Visit nativeseeds.org for more instruction on seed saving as well as information on upcoming seed saving workshops. See page 51 for seed saving supplies.

Growing healthy seed

Plant healthy, non-diseased seed. Thin plants to a recommended distance within and between rows — most plants simply do better with a little breathing room and good air circulation can help prevent disease (see individual crops for recommended planting distances). Rogue (remove) plants that are diseased or otherwise unhealthy looking. If you're trying to keep pure seed lines, also rogue out plants that don't appear true-to-type (what you know the plant to look like) before they flower.

Keeping lines pure

Growing more than one variety of the same species at a time may result in crossing. Planting the seeds from crosses may produce something entirely different than you're expecting — which is how we got all this wonderful diversity to begin with! However, if you want to get the same crop you did last year yet maintain a healthy amount of genetic diversity, then you may need to prevent cross-pollination from occurring and learn the optimum

number of plants to save seeds from. For this it is important to know whether the crop is self-pollinating or cross-pollinating.

Self-pollinating crops (such as tomatoes, peppers, and beans) are generally the easiest to save seed from; they require less isolation from other varieties, no hand-pollination, and seeds may be saved from just a few plants. Cross-pollinating species (such as corn, squash and melons) thrive with greater diversity, and their seeds must be saved from many more plants for the population to remain healthy. Also, because they depend on the activity of insects and wind for pollination, exposure to pollinators needs to be controlled or they must be hand-pollinated to ensure parentage. There are several ways to do this:

Spacing Plant different varieties at a suitable distance to ensure insects or wind cannot effectively carry pollen from one variety to another; see individual crop descriptions in this listing for recommended distances. In general, wind pollinated crops (e.g., corn) and crops visited by insect pollinators capable of traveling some distance (e.g., carpenter bees, honeybees) should be grown a mile or more apart from each other. Self-pollinated crops (e.g. beans) may require as little as 20 ft., depending on what's grown in-between or the abundance of insect pollinators present—the more insects, the more likely pollen may find its way from one plant to another. But don't be afraid of pollinators, they are part of a healthy agricultural system.

Seed Education

At Native Seeds/SEARCH, we believe that access to a diversity of high-quality, ethically produced seeds is the basis of sustainable and nourishing food systems. The incredible diversity in crop varieties is the legacy of thousands of years of collective human innovation, and we are engaged in its conservation as a public good and a community-based effort. Educational workshops at the NS/S Conservation Center and Farm give gardeners and small-farmers the skills they need to contribute to regional biodiversity by saving, sharing, and producing their own seeds. In addition to courses for Native American communities in Arizona and New Mexico, we also



provide training for Spanish-speaking communities, K-12 educators and students, small farmers, and backyard gardeners.

To learn more about our programs visit nativeseeds.org/learn.

Planting & Harvesting in the Low Desert

Low Desert includes elevations below 3500-ft in the Southwest, such as the Tucson and Phoenix metro areas. Contact your local extension agent or garden center for local planting times if outside this region.



Early Spring mid JAN – late FEB

arugula, chickpea, cilantro, fava, kale, lentil, lettuce, onion, pea, radish, swiss chard, wheat, wildflowers

Spring early MAR – late APR

amaranth, bean, chichiquelite, chile, corn, cotton, cowpea, cucumber, eggplant, gourd, herbs, melon, sorghum, squash, sunflower, tobacco, tomato (plants), tomatillo (plants), watermelon

Monsoon JULY

amaranth, bean, cowpea, corn, cucumber, devil's claw, eggplant, melon, panic grass, sorghum, squash, sunflower, tomato (plants), tomatillo (plants), watermelon

Fall late SEP – mid NOV

arugula, beet, broccoli, cabbage, carrot, chickpea, cilantro, fava, garlic, greens, kale, lettuce, lentil, onion, pea, radish, spinach, swiss chard, wheat, wildflowers

Timing The simplest way to prevent crossing is to only plant one variety within a species in each season (for example, only blue flour corn one year, only sweet corn the next year.) Or, plant different varieties of the same species at different times so that they are not flowering at the same time. This may involve an early and late planting. Be sure there is enough time at the end of the season for the late planting to mature before the first frost.

Isolation cages Physically prevent insects from visiting one variety or another by constructing screen cages and placing them over one or more varieties. This is best used for non-sprawling crops, such as tomatoes, beans (they can cross-pollinate if insects are abundant), okra, cotton, and chiles.

Hand-pollinating Manually transfer pollen from one flower to another. Hand pollination will differ depending on the crop but essentially you want to be sure that neither the flower being pollinated nor the one used as the pollen source have been previously pollinated.

Days to maturity

If you are accustomed to seed catalogs that provide the number of days to maturity for their seeds, you may wonder why we do not provide this data for many of the seeds offered here. Although the number of days can be a guide for selecting varieties suitable to your area, seed companies publish an average number of growing days, using data from

different areas and conditions. For example, a 75-day bean may mature in 65 days in California, 85 days in Maine, and 79 days in Missouri. We do not list days to maturity because we often don't have reliable information. Some of our varieties are from isolated regions with varied microclimates. Moreover, many of our crops reach maturity in different lengths of time, depending on when they are planted — e.g., in the spring or with the summer rains.

Harvesting

Remember to make note of and not eat the delicious specimens you're saving seed from, but allow them to reach their full maturity before harvesting. For most crops, this means leaving them in the field to dry — corn, beans, gourds, okra, devil's claw, peas, chiles, etc. Some crops require after-ripening (e.g., squash) or fermentation (tomatoes).

Cleaning & saving seeds

Remove all plant material, including chaff, stems, or flesh from seeds and allow to dry thoroughly. Use sealable plastic bags, paper envelopes, jars with good lids or any airtight container to store seed from one year to the next. Spread wet seeds from squash, melons, tomatoes, etc., on clean dish towels. We do not recommend paper towels (they stick) or newspaper (toxic print). Store seeds in a cool, dry place, such as your hall closet or freezer.

Producción y almacenamiento de semillas

Al cosechar semillas de su jardín o granja, usted esta contribuyendo vitalmente a la biodiversidad de los cultivos y la seguridad de las semillas. Siguiendo las instrucciones básicas a continuación le ayudará a mantener variedades distintas y producir semilla de alta calidad. Visita nativeseeds.org para obtener más información sobre la conservación de semillas, también información sobre los próximos talleres del cuidado y como almacenar semillas.

Produciendo Semillas Saludables

Siembra semillas sanas, no enfermas y a una distancia recomendada dentro y entre las filas. La mayoría de las plantas crecen mejor con mayor espacio para respirar y una buena circulación de aire puede ayudar a prevenir enfermedades (vea cultivos individuales para distancias recomendadas). Elimine las plantas que están enfermas o las que no se vean saludables. Si usted desea conservar variedades puras, también elimine las plantas que no pueden ser identificadas antes de que florezcan.

Manteniendo Líneas Puras

Producir más de una variedad de la misma especie al mismo tiempo, puede resultar en la polinización cruzada. Las semillas cruzadas pueden producir algo totalmente diferente de lo que estamos esperando — ¡que es cómo hemos llegado a toda esta maravillosa diversidad! Sin embargo, si usted desea conseguir el mismo cultivo que hizo el año pasado, necesita evitar que la polinización cruzada ocurra.

Si usted desea conseguir el mismo cultivo del año anterior, y quiere mantener una buena cantidad de diversidad genética, entonces es necesario evitar la polinización cruzada, y sembrar el número óptimo de plantas a partir de la semilla que guardo el año anterior. Para ello, es importante saber si el cultivo es de autopolinización o polinización cruzada.

Cultivos que se autopolinizan (como tomates, chiles y frijoles) son generalmente los más fáciles de cosechar y almacenar sus semillas; porque requieren menos aislamiento entre variedades, sin polinización manual y las semillas se pueden guardar de unas pocas plantas. Especies de poli-

nización cruzada (como el maíz, la calabaza y melones) prosperan con mayor diversidad, y deben ser recolectadas de muchas más plantas para mantener una población saludable. También, por que dependen de la actividad de los insectos y el viento para la polinización. La exposición a los polinizadores tiene que ser controlada, o las plantas deben estar polinizadas a mano para asegurar la descendencia consistente. Hay varias maneras de hacer esto:

Espaciamiento Siembra diferentes variedades a una distancia adecuada para garantizar que los insectos o el viento no puedan transportar el polen de una variedad a otra. Vea las descripciones de los cultivos individuales para distancias de aislamiento recomendadas. En general, cultivos polinizados por el viento (por ejemplo, el maíz) y cultivos visitados por los insectos polinizadores son capaces de viajar ciertas distancias (por ejemplo, las abejas carpinteras, abejas) deben ser sembradas una milla o más alejados unos de otros. Cultivos que son autopolinizados (por ejemplo, frijoles) pueden requerir tan poco como 20 pies, dependiendo de lo que está crecido entremedio o la abundancia de insectos polinizadores presentes. Cuando hay muchos insectos, es más probable que el polen pueda encontrar su camino de una planta a otra. Pero no tenga miedo de los polinizadores, porque ellos son parte del sistema de una agricultura sana.

Tiempo La forma más sencilla de evitar el cruce es sembrando una variedad de una especie por cada año o estación (por ejemplo, sólo el maíz azul en un año, sólo el maíz dulce el próximo año). O, siembra diferentes variedades de la misma especie en diferentes momentos para que no florezcan al mismo tiempo. Esto puede implicar una siembra temprana y tardía. Asegúrese de que haya suficiente tiempo al final de la temporada, para que sus plantas maduren antes de la primera helada.

Jaulas de Aislamiento Físicamente evita que los insectos visiten una variedad u otra, mediante la construcción de jaulas con tela mosquitera y colocarlas sobre una o más variedades. Esta es la mejor opción para los cultivos que no se extienden, como tomates, frijoles (los frijoles pueden cruzarse si los insectos son abundantes), okra, algodón y chiles.

Siembra y Cosecha en el Bajo Desierto

Fuera de la región? Contacta su centro de agente de extensión o de jardinería local para el momento de siembra en su región.



Polinización Manual Manualmente, traslada el polen de una flor a otra. La polinización manual será diferente dependiendo del cultivo. Básicamente, tiene que estar seguro de que la flor que va a polinizar, o la flor que va a utilizar como fuente de polen no hayan sido polinizadas anteriormente.

Días de Maduración

Si usted está acostumbrado a los catálogos de semillas que proporcionan el número de días hasta la cosecha, usted puede preguntarse por qué no ofrecemos esta información para las semillas que se ofrecen aquí. Aunque el número de días puede ser una guía para la selección de variedades adecuadas en su área, las compañías de semillas publican un número aproximado al día de maduración/cosecha, utilizando datos de diferentes áreas y condiciones. Por ejemplo, un grano de frijol de 75 días puede madurar en 65 días en California, 85 días en Maine, y 79 días en Missouri. No enumeramos días hasta la madurez, porque a veces no tenemos información segura. Algunas de nuestras variedades son de regiones aisladas con microclimas variados. Por otra parte, muchos de nuestros cultivos alcanzan la madurez en diferentes periodos de tiempo, dependiendo del momento en que se siembran — por ejemplo, en la primavera o con las lluvias de verano

Cosechando

Recuerde tomar nota y no comer las deliciosas muestras que esté seleccionando como su semilla final, pero permita que alcance su plena madurez antes de la cosecha. Para la mayoría de los cultivos, esto significa dejar secar en el campo — maíz, frijoles, calabazas, okra, la garra del diablo, los guisantes, los chiles, etc. Algunos cultivos requieren maduración después de la cosecha (por ejemplo, la calabaza) o de fermentación (tomates).

Limpiando y Almacenando Semillas

Retire toda la materia de la planta, incluyendo paja, tallos, o la carne a partir de semillas y déjela secar por completo. Utilice bolsa de plástico con cierre, sobres de papel, frascos con buenas tapas o cualquier recipiente hermético y seguro para almacenar semillas de un año a otro. Extienda las semillas mojadas de calabazas, melones, tomates, etc., en paños limpios de cocina. No recomendamos toallas de papel (se pegan) o periódico (impresión tóxica). Almacene sus semillas en un lugar fresco y seco, como el armario del pasillo o en el refrigerador.

Cursos de almacenar semillas en idioma español se ofrecerán en 2016. Visita nativeseed.org para más información.

A Tradition of Seedsaving Continues

The greater Southwest has a long and rich agricultural history. Corn was being cultivated in northwestern New Mexico and along the Santa Cruz River in southern Arizona by 4,100 years ago, and it became a staple of early diets. Beans, squash, amaranth, cotton, sunflowers, and gourds are also among the primary crops during the early centuries of regional agriculture.

Many Southwestern crops, such as corn, were originally domesticated in Mexico. A few, such as tepary beans and devil's claw, underwent domestication locally. But a large group of crops originally domesticated in Africa and the Middle East were introduced with Spanish settlement during the 16th and 17th centuries. Ultimately adopted by Native groups, these crops include melons, watermelons, wheat, sorghum, and various fruits.

Over the centuries agricultural crop diversity developed through environmental adaptation and human selection. The greater Southwest, although united by minimal rainfall, is diverse and includes lowland deserts, coastal deltas, river valleys, and high mountain plateaus. The crop varieties and cultivation techniques used throughout the region are equally diverse and are adapted to local conditions.

Much of this diversity, over 1,900 different accessions, is conserved in the Seed Bank of Native Seeds/SEARCH. Many are traditional crops grown by Native Peoples in the region. Others include several disappearing wild varieties of these crops including wild chiles (chiltepinas), wild tepary beans, and the wild relative of corn, teosinte.

Today, farming and seedsaving traditions continue among indigenous groups in the greater Southwest. The Tohono O'odham have adapted varieties that thrive in the hot summer monsoon of southern Arizona. O'odham farmers make the most of limited precipitation by placing fields in locations that will receive runoff from the intense summer storms.

Diné (Navajo) farmers practice a mix of dryland and irrigated methods in the Four Corners region and are also renowned keepers of heritage sheep. The Hopi of northern Arizona also practice traditional dryland agriculture aided by the moisture retention properties of sand dune soils. The Tarahumara (Rarámuri) farm the isolated slopes and canyons of the Sierra Madre Mountains of Mexico.

While some native groups rely on waters brought by rainfall, others have made use of floodwaters from dependable rivers. Many of the fields of the New Mexico Pueblos are watered by old acequia systems along the Rio Grande River. The Mojave, Quechan, and Cocopah farm the floodplains of the lower Colorado River and the Havasupai tend farms at the bottom of the Grand Canyon carved by this mighty river.

Like their ancestors, the Hohokam, the Pima (Akimel O'dham) are still using the waters of the Gila River to irrigate their fields of corn, beans, and cotton.

We feel it is important to recognize these original seedsavers for their contributions in developing and continuing to save and pass on the agricultural biodiversity of our region.



Native American Seed Request*

Native Seeds/SEARCH is a non-profit organization focused on conserving and promoting the use of arid-adapted crops in the southwestern US and northwestern Mexico. One way we are doing this is through the Native American Seed Request, which makes these traditional arid-adapted crop seeds more widely available to Native Americans to plant and share. As seed security is at the heart of food security, we encourage recipients to save seeds from the plants they grow. Doing so ultimately increases the resilience of our food system, and sharing them with others ensures that these culturally relevant arid-adapted seeds will be accessible to future generations.

Native Seeds/SEARCH offers memberships and limited quantities of seeds to Native Americans living in the Greater Southwest region at no charge. The Greater Southwest region roughly spans the distance from Durango Colorado in the north to Durango Mexico in the south, from Las Vegas Nevada in the west to Las Vegas New Mexico in the east. Native Americans belonging to tribes outside of this region are eligible to receive discounted seeds and memberships.

Given that the goal of this program is to promote and conserve traditional arid-adapted crop seeds of the Greater Southwest, only seeds from the NS/S Seed Bank collection (indicated in the listing with an S symbol) may be requested.

For Native Americans living in the Greater Southwest region, or belonging to tribes from the Southwest region regardless of residential location:

You may request up to 10 free seed packets, with no more than 3 packets per any one seed variety, per calendar year (January through December). Up to 20 additional seed packets can be purchased at half price. Group exceptions may be considered so please contact us and we will do our best to meet your needs. Importantly, we encourage all recipients to save and share seeds.

For Native Americans living outside of the Greater Southwest Region that belong to a tribe from outside the Southwest region:

You may request up to 10 seed packets at half-price, no more than 3 packets per any one seed variety, per calendar year (January through December). Additional packets may be purchased at regular price.



**Native American identity for this program is self reported and no tribal identification card is required. This is part of an effort to be inclusive to the indigenous nations not federally recognized by the US government, as well as those residing in northwestern Mexico.*

How to Order Seeds

There are several ways to place your order—please, only one order form per household. Shipping charges are \$3.95 per request.

- * Visit the NS/S Retail Shop at 3061 N. Campbell Ave in Tucson, AZ
- * Call 520-622-0830 x113, or toll-free at 866-622-5561 x113, Monday-Friday from 10-5
- * Mail your order form to 3584 E. River Road, Tucson, AZ 85718
- * Email your request to barmstrong@nativeseeds.org

Seeds

Amaranth *Amaranthus* spp.

\$2.95

Grown by Native Americans for millennia, the small grain is rich in lysine and young leaves are high in calcium and iron. Eat leaves raw or cooked. Grain can be milled into a fine flour, eaten whole, or popped. Approx. 0.3g/300 seeds per packet

Culture: Plant in spring after soil warms or with summer rains. Broadcast and rake in, or plant 1/4" deep in basins or rows. Thin the edible seedlings to 10-15" apart. Amaranth grows taller if soil is enriched with compost. Likes full sun.

Seedsaving: As wind or insect-pollinated annuals, amaranth species will readily cross. To prevent this, put paper or cloth bags over flower heads. When ripe, cut off dried heads and lightly beat in a bag to remove seed. Screen or winnow off chaff.

Guarijío Grain *A. hypochondriachus* x *A. hybridus*. "Guegui." From the Rio Mayo in Sonora, Mexico, a white-seeded grain used for tamales, pinole (a traditional drink) or popping. Inflorescences range from light yellow-green to pink to fuschia. **C005 H L S B**

Hopi Red Dye *A. cruentus*. "Komo." The beautiful plant can grow 6' tall with a 1-2' long inflorescence and dark reddish-green leaves. Young tender leaves are excellent in salads and the black seeds are also edible. In Hopi land, this readily crosses with wild *A. powelli*. Originally collected in Lower Moenkopi. **C002 H L S F**

Mano de Obispo *Celosia cristata*. "Bishop's Hand". This ornamental cockscomb decorates graves for Dia de los Muertos (Day of the Dead). Flowers are magenta, some golden. The black seed is edible. **C010 H L S B**

Mayo Grain *A. cruentus*. Another gorgeous amaranth from Alamos, Sonora, with bright fuschia or scarlet inflorescences and dark reddish-green leaves, which are used as quelites (greens). The black seeds are used for esquite (parched), pinole and atole. **C003 L S**

Mountain Pima Greens *A. cruentus*. From the Sonora/Chihuahua border in Mexico. The abundant red-tinged leaves are used for greens and the black seeds are ground for pinole. Produces beautiful bright fuchsia inflorescences. **C004 H L S B**

New Mexico *A. hypochondriachus*. From a dooryard garden near Rinconada, its beautiful tan inflorescence with pink tips yields edible golden seeds. Eat the tasty greens before the flowers form. **C006 H L S B**



Guarijío Grain



Hopi Red Dye



Mano de Obispo



Mayo Grain



Mountain Pima Greens



New Mexico

Bean *Phaseolus* spp.

Native to the New World, beans are a traditional protein complement to corn, rich in minerals, with a variety of tastes and colors. Members of the legume family, beans fix nitrogen from the air if certain nitrogen-fixing bacteria are present in the soil. Beans also contain soluble fiber helpful in controlling cholesterol and diabetes.

Common *Phaseolus vulgaris*

\$2.95

Common beans are a diverse and important crop to Native American farmers throughout the Southwest. They are eaten young as green beans or dried and shelled. Plants can be bush, semi-pole, or pole. Approx. 15g/50 seeds per packet.

Culture: Beans need warm soil for best germination. Plant seeds in spring or with summer rains about 1" deep and 6" apart. If beans need a trellis, try intercropping with corn or sorghum.

Seedsaving: An annual that is generally self-pollinating, but can cross with other plants. Dried pods can be harvested throughout the growing season, or harvest whole plants. Separate varieties by 10 feet (3 meters).

Four Corners Gold Rounded gold bean from the Four Corners Region. Early-maturing, with excellent green beans, and a non-vigorous climbing (pole) habit. **PC124 H S**

Frijol Chivita "Little Goat." A yellow Jacob's Cattle Bean from the arid pinon, oak and juniper area of the eastern Tarahumara in Chihuahua. Also known as "Golondrina" or "Cinco Minutos." Color may vary from white with gold mottling to gold with white mottling. **PC125 H L S**

Frijol de Sinaloa A fast-maturing pole bean grown out from collections in eastern and southern Sonora. Light tan to sulfur colored beans with visible veins. Very productive, but day-length sensitive, so may not have time to mature in northern climates. Plant with monsoon rain in low desert. **PC069 H L S B**

Frijol en Seco New Mexican brown and beige pinto collected in Bernalillo. Early-maturing, high-yielding bushy-pole bean when grown at the Conservation Farm. **PC090 H S**

Hopi Black Small, rounded, black pole bean, dry/runoff-farmed by Hopi farmers. Used for dye. Dark lilac flowers, purple mature pods. Early-maturing, prefers monsoon rains. **PC068 H S**

Hopi Pink High-yielding, medium-large pink beans collected from dry-farm fields near Hotevilla. Early-maturing, good as a green bean. **PC020 H S**

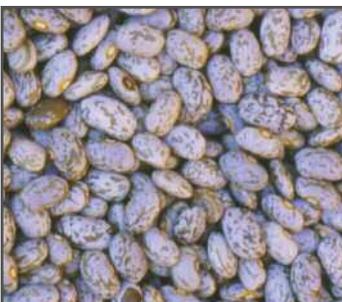
Hopi Yellow "Sikya mori." Large bronze seeds, common in Hopi country, may be dry farmed or irrigated. High-yielding pole type, delicious as a green bean. White flowers. **PC019 H S**

New Mexico Bolitas Pinkish-beige rounded beans grown for centuries by traditional Hispanics of northern New Mexico in irrigated plots. Faster cooking and richer tasting than pintos, and early-maturing too. High protein content. High-yielding pole bean with white flowers. **PC024 H S B**

O'odham Pink "S-wegi mu:n." A pink bean from the desert borderlands of Sonora and Arizona. Fast growing, the plants will sprawl and produce in early spring or late fall in the low desert. Delicious and creamy-textured when cooked. White flowers. **PC063 H L S M**



Frijol Chivita



Frijol en Seco



Hopi Pink

Seeds

More Common Bean

O'odham Vayos Mixed gold and light-tan beans with a sweet, mild flavor and creamy texture. Early-maturing. Good as a green bean. White flowers. **PC062 H L S M**

Rattlesnake A drought-tolerant pole bean. Produces 7-8" round pods are dark green with purple streaks. Harvest early for very sweet snap beans. Allow to mature for delicious dry beans. **TS305 H L N**

Sonoran Canary Elongated beige bean from Hermosillo. Traditionally grown with irrigation during the winter in frost-free desert regions. Early-maturing with an open bushy-pole architecture when grown at the Conservation Farm. Lilac-colored flowers. **PC082 H L S B**

Taos Brown A deep chocolate-colored bean from Taos Pueblo with a few dark maroon and light tan beans. Excellent green bean. Indeterminate climber with white flowers. **PC127 H S B**

Taos Red Very large, red with darker maroon mottling/striping. Grown under irrigation in Taos Pueblo at 7,500' elevation. Rare in the Pueblos, although very similar to Hopi Red. Low pole, almost bushy, with outstanding dark red mature pods. High-yielding. **PC100 H S B**

Tarahumara Bakámina Rare. Semi-pole plants produce tiny, burgundy kidney-shaped beans, seeds with black ring around the hilum. Pods are quite long and make excellent green beans. **PC034 H S B**

Tarahumara Canary Elongated yellow/cream beans collected throughout Tarahumara country. Bush beans, a tasty staple of the mountains. Plant in early spring or late summer in the low desert. **PC038 H L S B**

Tarahumara Ojo de Cabra "Goat's eye." High-yielding pole bean producing large seeds with diversely-colored dark stripes over a speckled light background. Occasional red, pinto or gold beans mixed in. Plants produce purple-striped pods. A sweet, mild staple of the Sierra Madre. **PC054 H S B**

Walter Brandis Pinto High desert pinto bean saved and grown by Walter Brandis at his family farm outside of Flagstaff since 1945. A semi-vining bean, it will send out runners but can be grown in field settings with nothing to climb. Productive heirloom treasure. **PC206 H S B**

Yoeme Purple String A prolific pole bean that can be eaten green or shelled. Seeds are purple on beige. Plants are heat tolerant. Very productive and very popular! **PC071 H L S**



New Mexico Bolitas



Taos Brown



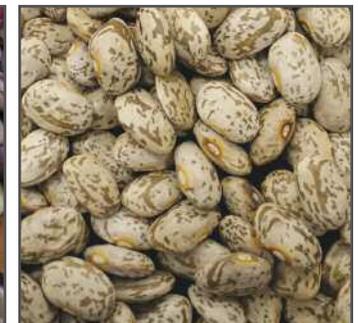
Taos Red



Tarahumara Bakámina



Tarahumara Ojo de Cabra



Walter Brandis Pinto

Lima Bean *Phaseolus lunatus*

\$2.95

Growing as perennial vines in their native tropical environment, lima beans are broad, flat beans eaten green or dried. Plants are tolerant of salt and alkaline soils. Approx. 20g/25 seeds per packet.

Culture: Plant in spring or with summer rains, 1 inch deep and 6 inches apart or in basins. These long season plants will produce until frost, although production slows in the hot dry months. Trellis vines, or allow room to sprawl.

Seedsaving: This annual is mainly self-pollinating. Separate varieties by 40 feet (12 meters). Dried pods can be harvested throughout the growing season, or harvest whole plants.

Calico Often called Christmas Limas, these large, heirloom beans are maroon with creamy white swirls. Originally collected in Wild Horse, Colorado. Extremely prolific and early-maturing at the Conservation Farm (4,000'). **PL012 H S M**

Hopi Gray "Maasi hatiko." The light beige beans can be plain or mottled with black. The seeds are sometimes sprouted and used in ceremonies. May have good resistance to Mexican Bean Beetle. **PL080 H L S B**

Hopi Red "Pala hatiko." Selected by the late Hopi artist Fred Kabotie, these limas are prolific in the low desert. Tasty and meaty, the beans are solid red, or may be streaked with black. **PL009 H L S**

Hopi Yellow "Sikya hatiko." Seeds vary from deep yellow to dark orange with black mottling. During Spring ceremonies, the seeds are sprouted, attached to katsina dolls, rattles, and bows and given to children. Sprouts are then chopped, boiled and cooked in soup for feasting. **PL072 H L S**

Pima Beige Originally collected from the Gila River Indian Community in Arizona. The light beige beans can be plain or mottled with black. Very drought- and heat-tolerant. **PL010 H L S**

Pima Orange Wonderfully orange-colored beans with black mottling. A gem from the Gila River Indian Community in Arizona. Very drought- and heat-tolerant. **PL011 H L S F B**

Runner Bean *Phaseolus coccineus*

\$3.95

Large and showy flowers make this an attractive garden plant. The large pods can be eaten as green beans or you can use the beans dried. Heat sensitive; not recommended for low desert. Approx. 28g/20 seeds per packet.

Culture: Plant 1 inch deep and 6 inches apart in the spring after danger of frost is past. Plants can be bush or produce long vines which need to be trellised. Flowers may drop with no pod set if daytime temperatures are too high.

Seedsaving: An annual that is insect pollinated, so varieties will cross. Harvest dried pods throughout the growing season. Separate varieties by 800 feet (243 meters).

Tarahumara Bordal Large white beans from the remote Tarahumara community of Otachique in

Chihuahua. Pole beans with white flowers. Beans will grow larger when cooked so you only need a few for a hearty meal. Meaty taste. **PS007 H S**



Hopi Gray



Pima Orange



Tarahumara Bordal

Seeds

Tepary Bean *Phaseolus acutifolius*

\$2.95

Cultivated in the Southwest for millenia, teparies mature quickly and are tolerant of the low desert heat, drought and alkaline soils. Tepary beans are high in protein and contain soluble fiber helpful in controlling cholesterol and diabetes. Generally white tepary beans have a slightly sweet flavor and brown tepary beans have an earthy flavor. Approx. 7g/50 seeds per packet.

Culture: Plant seeds 1/2 inch deep and 4 inches apart with the summer rains. If rains are sparse, irrigate when the plants look stressed. Teparies do not tolerate overwatering. Teparies may carry bean mosaic virus, do not plant near other types of beans.

Seedsaving: A self-pollinating annual. Harvest pods as they dry. Be careful: mature pods will pop open and drop seeds if left on the plant. An alternative is to harvest the whole plants when pods are turning brown, allow them to dry on a sheet, then thresh and winnow seeds.

Big Fields White From the Tohono O'odham village of Big Fields where an O'odham farmer maintained this white variety for years. **PT109 H L S B**

Black A rare black tepary selected from white teparies purchased many years ago in a Tucson Mexican market. Similar to a historic Tohono O'odham and Yuma variety. **PT082 L S B**

Blue Speckled Unique and beautiful tan beans with navy blue speckles. From highland areas of southern Mexico, this variety is a Mayan folk race. Does not tolerate low desert heat, but is otherwise prolific. Delicious. **PT079 H S F B**

Brown Speckled Very round beans with beige speckles on light gray. Originally selected out of Blue Speckled. High yielding. Does not tolerate low desert heat. **PT089 H S B**

Pinacate Originally obtained from the most arid runoff farm in Mexico, in the Sierra El Pinacate Protected Zone. Tan beans with slight mottling. **PT074 L S**

Sacaton Brown "S'oam bawi." Medium-sized orange-tan seeds. Early-maturing. Commercially cultivated by the Gila River Pima near Sacaton, Arizona. **PT004 H L S B**

Bean Common Mosaic Virus (BCMV) is a plant disease that can affect all New World beans (*Phaseolus* spp.), including common beans, tepary beans, lima beans, and scarlet runner beans. It is not harmful to humans or other animals, but can cause decreased yield or death in beans.

Tepary beans may be "carriers" of BCMV, as they tolerate the disease with only minor symptoms if grown in arid regions. Because teparies may carry BCMV, do not grow teparies near other species of beans that are more susceptible to the virus — especially those to be saved for seed. Signs of the virus include stunted plants, downward curling and puckering of leaves, and yellow-green mottling of leaves.

BCMV is a seed-borne disease, and seeds saved from infected plants can pass the virus on to future crops. Healthy plants can be infected by aphids spreading the virus from diseased to healthy plants, by infected leaves touching healthy ones, or by gardeners handling healthy plants after working with diseased plants. Diseased plants should be carefully rogued (removed) and discarded.



Blue Speckled



Pinacate



Sacaton Brown

More Tepary Bean

Santa Rita Wild Tepary *Phaseolus acutifolius* var. *latifolius*. Originally collected in the Santa Rita Mountains south of Tucson. Exhibits a diversity of seed colors, including beige, dark brown and grey, and some seeds have brown speckles. Pole habit. Readily reseeds, pods will easily "pop" open when dry. Much smaller and more difficult to germinate than domesticated teparies, but a fun exploration of agricultural history and wild plant conservation. **PW106 L S \$4.95**

Santa Rosa White An old collection from the Tohono O'odham village of Santa Rosa. O'odham legend says the Milky Way is made up of white tepary beans scattered across the sky. Smooth, rich flavor. Drought-hardy. **PT111 H L S**

Yellow Small yellow-tan colored beans. USDA selected and grown out in Tucson. Can be grown on trellis or sprawling on the ground. **PT077 L S B**

Beet *Beta vulgaris*

\$2.95

Native to Europe, beets can be boiled, baked, or pickled. Approx. 2g/200 seeds per packet.

Culture: Beets prefer deep, rich, well-composted soil with trace minerals and plenty of sun. For larger, more uniform roots, thin to 1 plant every 4". Tolerates moderate frosts. Expect slow growth until temperatures rise above 60° F. A cool season plant in the low desert.

Seedsaving: Flowers contain both male and female parts, but do not self-pollinate before flowers open. As pollen is carried long distances by wind, grow seeds for only one variety at a time. Note: beets will cross with Swiss chard.

Early Wonder Selected about 100 years ago from Crosby Egyptian for earliness and vigorous, lush top

growth making it a great choice for early beet greens. Produces deep-red 3-4", exceptionally sweet globes. 45-50 days from planting. **TS020 H L N**

Broccoli *Brassica oleracea*

\$2.95

A wonderful vegetable that actually grows better in cooler climes and higher altitudes than in warmer lowlands. Approx. 0.5g/70 seeds per packet.

Culture: Demands soil high in nitrogen and phosphorus. Companion plants include: dill, chamomile, sage, peppermint, beets and onions. A cool season plant in the low desert.

Seedsaving: Individual plants do not self-fertilize. Provide at least two or more flowering plants to assure seed formation. (Many more needed to conserve genetic diversity.) Bees can cause cross-pollination with other *Brassica*, so isolate varieties by 1,600 feet (488 meters) or more.

Waltham 29 Delicious and dependable broccoli bred to withstand especially cold weather. Short 20" plants

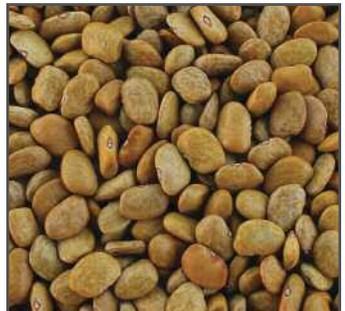
produce medium-large heads and lots of side shoots. **TS033 H L N**



Santa Rita Wild



Santa Rosa White



Yellow

Seeds

Non-Collection Seeds

Many vegetables like lettuce, carrots, and broccoli don't have botanical origins or cultural roots in the Greater Southwest and thus are not a part of our collection. To accommodate interest in growing them, NS/S offers selected heirloom seed varieties from outside of our region. These seeds are marked in the catalog with an **N** for "Non-collection seeds". Since all are open pollinated varieties, if grown to avoid crossing, you can save seeds that will grow true to type the next year. We have chosen **N** varieties that are relatively heat and drought tolerant or that have a shorter growing season, so they are more adaptable to growing in the Southwest. As much as possible, we purchase from sources that produce seed organically and/or using sustainable agricultural practices. When you purchase from Native Seeds/SEARCH you financially support our work of conserving the NS/S treasure of regional heirloom seeds.

Cabbage *Brassica oleracea*

\$2.95

A versatile vegetable, used fresh, cooked or fermented. Approx. 0.5g/150 seeds per packet.

Culture: Demands soil high in nitrogen and phosphorus. Companion plants include: dill, chamomile, sage, peppermint, beets, onions. A cool season plant in the low desert.

Seedsaving: Individual plants do not self-fertilize. Provide two or more flowering plants to assure seed formation. (Many more needed for genetic diversity.) Since bees can cross-pollinate cabbage with other *Brassica*, isolate varieties by 1,600 feet (488 meters) or more.

Golden Acre One of our favorite cabbages for winter desert gardens. Solid, round, 3-4 lb. grey-green heads on short-stemmed, erect plants. White interior with tightly folded leaves. High yields. **TS058 H L N**

Red Acre Beautiful, red version of the famous Golden Acre with larger, 2-3 lb. heads. Red Acre takes 2 weeks more to mature, but stores better and longer in root cellars or refrigerators. **TS059 H L N**

Carrot *Daucus carota*

\$2.95

Smell the seeds and anticipate the sweetness of homegrown carrots. Approx. 2g/1200 seeds per packet.

Culture: Carrots do best in rich (high in phosphorus and potassium with only moderate levels of nitrogen), uncompacted soil. A cool season plant in the low desert.

Seedsaving: Carrots are biennial with perfect flowers (each flower has both male and female parts). As insects are a major pollinating agent, separate different varieties by 1600 (488 meters) feet.

Red Cored Chantenay Our farm crew all rated it at or near the top for eating quality, whether fresh or cooked. An excellent performer in heavy and loamy soils; broad (1.5-2") shoulders, 4-6" long roots that have a blunt tip. Strong, bushy, 2' tops are effective for competing with weeds and make for easy pulling. **TS068 H L N**

Scarlet Nantes A timeless heirloom favorite. Bright-orange, very sweet, slightly tapered, 6-7" roots with characteristic nantes rounded tip. A good keeper. Excellent for juice. **TS061 H L N**



Early Wonder



Red Cored Chantenay



Scarlet Nantes

Chile/Pepper *Capsicum annuum*

\$2.95

One of the great Native American contributions to the cuisines of the world. A widely used fruit high in Vitamin C. Domesticated chiles vary profoundly in shape, size, color, pungency and flavor. Fruit are red when mature unless otherwise noted. Average length and a letter corresponding to their general shape follow each description. All shapes in the key may not be currently available. Approx. 0.1-0.3g/25 seeds per packet.

In the following descriptions, "mild," "medium," and "hot" are relative heat ratings, while "sweet" refers to a sugary taste. Even chiles listed as "mild" may contain some heat. Bell peppers are heat-free.

Culture: Start seeds inside, 1/4" deep in sandy soil, 8-10 weeks before last frost. Seeds are slow to germinate and need warmth. Transplant seedlings 12-16" apart. Partial shade is best in low desert, full sun in cooler climates. Provide support.

Seedsaving: The insect-visited flowers can self-pollinate or cross. Grow only one variety at a time or isolate flowers. Allow fruit to ripen and mature on the plant. Chiles turn red or dark brown when mature. Take care not to touch your eyes when removing seeds from hot chiles.

California Wonder Bell An exceptional strain of this treasured heirloom bell pepper from the 1920's. Vigorous, 24-48" plants produce thick-walled, blocky 4" green fruits which turn red if allowed to mature fully. **TS325 H L N F**

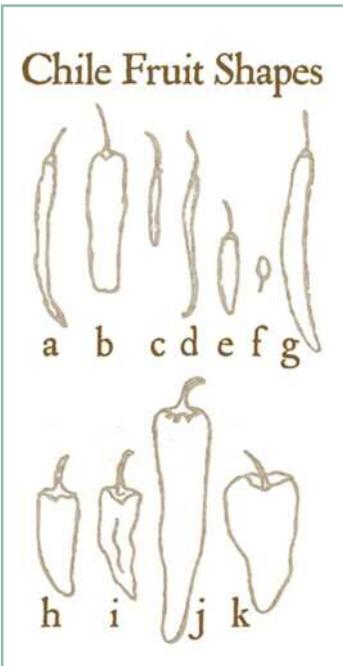
Caribe From southern Chihuahua. Medium-hot, sometimes increasing after a few seconds to hot. 2-3" long. (a) **D055 H S B**

Chimayo From the farming town in northern New Mexico at 5,900' famous for its local chile. Relatively early-maturing. Mild. 3.5-5" long. (i) **D018 H S F**

Cochiti Originally collected at Cochiti Pueblo (5,200'), where loss of farmland has threatened this and other Cochiti crop varieties. Sweet when green and flavorful when mature. Mild to medium. 3.5-4" long. (j) **D021 H S**

Del Arbol de Baja California Sur From an *ejido* (communal farm) south of Guerrero Negro. Narrow, round, bright red chiles with medium heat. 4" long. (d) **D056 H L S**

Isleta Long Collected from Isleta Pueblo at 4,900'. Smooth-skinned and fleshy when green. Flavorful, sweet and fruity when red. Mild-medium to medium. 7" long. (j) **D057 H S M**



Seeds

More Chile

Jalepeño Produces 3 inch, fleshy peppers that are generally medium hot. Usually picked when dark green, but will ripen to red if left on the plant. Earlier than most jalapeno varieties, with a prolific and continuous harvest. (h) **TS327 H L N**

Jemez Grown in Jemez Pueblo in northern New Mexico along the Rio Jemez, a tributary of the Rio Grande. Relatively early-maturing. Medium heat. 3-4.5" long. (i) **D019 H S B**

Miradol Called "Look at the sun," yet these chiles from southern Chihuahua hang down on the branches. This chile is called *guajillo* when dry. Used in soups, stews, and chicken dishes. One of the most productive varieties in our chile trial in Patagonia, Arizona. Mild to medium. 1" wide and 5" long. (g) **D005 H L S**

Nambe Supreme From Nambe Pueblo in New Mexico, at about 6,000'. A farmer in the Pueblo selected this cross between heritage and commercial varieties. Smooth-skinned and slightly triangular. Medium heat with a slight sweetness when red. 5.5" long. (j) **D058 H S**

Negro de Valle First collected in 2000 north of Buenaventura on the plains of Chihuahua. Similar to Vallero, but contains only the darker "native, old type" chiles. Some cooks select only these dark brown chiles to make the best chile colorado. Very productive. Mild to medium heat. 6" long. (j) **D052 H L S**

Ordoño A stunning ornamental chile from Batopilas Canyon, Chihuahua. The small upright fruit mature from purple through yellow, orange, and finally red. Heat and drought tolerant and extremely productive. Good for container gardening. Hot and edible. 0.5" long. (f) **D009 H L S F B**

Patagonia An Hispanic heirloom grown in Patagonia, Arizona. The cone-shaped chiles stand up on the plants, and are yellow with some purple mottling,

ripening to orange then red. Used to make a thin hot sauce by blending with vinegar. Medium-hot. 1" long. (f) **D059 H L S B**

Poblano Called an Ancho when dried, a Poblano when fresh. Pick when green for a mild flavor or wait until red for increased medium-hot heat level. Extremely versatile in the kitchen. (k) **TS323 H L N**

Quatro Milpas Large fleshy chiles grown in the mountain village of Quatro Milpas, Sonora. Ripe fruits are dark brownish red and mild flavored. 5" long. (j) **D031 H L S B**

San Juan "Tsilé" A heritage New Mexico type chile grown by elder farmers in San Juan Pueblo at about 5500'. Early-maturing with mild to medium-heat. 3.5-5" long. (k) **D024 H S B**

Sandia Collected in Albuquerque, New Mexico, where it is used for rellenos, enchilada sauces and stews. Medium to hot. 6-9" long. (j) **D004 H L S**

Tabasco *C. frutescens*. Hot, prolific, and hardy, this is the famous ingredient in Tabasco sauce. Narrow 1" fruits are yellow or orange maturing to red. Good for container gardening. (c) **DF001 L S**

Vallero Originally from the lovely, productive Buenaventura Valley in Chihuahua. Used by the favorite chile colorado restaurant of NS/S co-founders Barney and Mahina. Fleshy when green, rich brownish-black to reddish-brown when mature. Medium heat, but can vary. 6" long. (j) **D020 H L S B**

Wenk's Yellow Hots A beautiful chile selected by one of the last large truck farmers in Albuquerque's South Valley. Very fleshy and excellent *en escabeche*. Early-maturing and very prolific, with outstanding taste. Waxy yellow fruit have a pronounced (and very tasty) orange phase before turning red. Medium-hot to very hot. 1.5" wide, 3" long. (h) **D030 H L S F**



Ordoño



San Juan "Tsilé"



Wenk's Yellow Hots

Growing Chiltepin

Chiltepin (*Capsicum annuum* var. *glabriusculum*), also called chile tepins, are tiny, pea sized wild chiles native to the borderlands though northern South America. Most domesticated chiles and peppers are descended from wild chiltepin thanks to ancient seed savers and plant breeders who began to domesticate chiles 7,000 years ago in central Mexico. Heat level can vary depending on the plant and the amount of water but in general chiltepin are very hot — ranking similarly to habaneros. They have a distinctive smoky flavor.

Chiltepin are synonymous with Sonoran cuisine. Typically eaten in as crushed flakes after they have dried or green fruits preserved in vinegar, chiltepin are added to salsas, soups, or cheese. But they can add a special flavor kick to any dish.

Chiltepin popularity as a regional spice and importance for agricultural history has earned them a central place in Southwestern gardens. Once established, they are easy to grow and require little care. If you don't like spicy food, you can grow them for birds who love them! Chiltepin are often called bird peppers.

Seed Germination Tips

Like many wild seeds, germination can be challenging. Start seeds in small cups or seed trays by planting ¼" deep in sandy soil. Keep seeds moist, but not oversaturated. Two factors will help — warmth and patience. A greenhouse or grow mat helps with winter or early spring seed starting, or wait for warmer weather to start. Chiltepin take longer to germinate than domesticated chiles so be patient and keep moist. You may not see evidence of sprouts for several weeks.

Scarification of the seeds can aid in germination. In the wild, fruits are eaten by birds (who do not taste the capsaicin) and the seeds readily germinate after passing through their digestive tract. You can mimic this at home by feeding to your chickens, however it might be difficult to recover the seeds! The seed coat can also be penetrated by gently rubbing seeds on light sandpaper or soaking for a few hours in a ¼ cup of water with a drop of vinegar. In our germination procedures at NS/S we have found that scarification



treatments are unnecessary if adequate warmth and time are provided.

Growing Information

In the wild, chiltepin grow under a nurse plant such as hackberry or mesquite tree. Mimic these conditions at home by planting under a tree or another area that receives filtered light such as a south facing wall. Chiltepin do not tolerate extended time under direct sun in the low desert. In cooler climates, full sun is appropriate. Soils should be well drained.

Plants will range in size from a few feet up to 10 feet tall if ideal conditions are met.

Chiltepin are frost sensitive but so long as the root ball does not freeze they will live for years to decades. Prune away frost damage to promote new growth. In colder climates, grow in a container that can be brought inside during the winter. Chile harvest is concentrated around early Fall.

Seed Saving

Allow the fruits to dry on the plant to ensure seed maturity. Seed extraction will also be easier than when the oils are fresh. Pick the fruits that have dried and turned from bright to a dull red. Open fruits to separate seeds and further dry before sealing in an air-tight container to prevent mold. Seed germination will improve if seeds are allowed to fully dry before starting.

¿Cómo cultivar chile chiltepín?

Chile chiltepín (*Capsicum annum* var. *glabriusculum*) o chile pulga, tiene el tamaño de un chícharo y son nativos de la zona norte de Sudamérica. La mayoría de los chiles y pimientos provienen del chiltepín silvestre, gracias a las antiguas prácticas de conservación y almacenamiento de semillas. Se conservaban los chiles originarios del centro de México desde hace 7000 años con la intención de innovación filogenética. El chile chiltepín se caracteriza por ser bastante picante, todo depende de cuánto lo riegues, pero en general se podría decir que es tan picante como el chile habanero y tiene un sabor ahumado. El chiltepín es un ingrediente muy típico de la gastronomía Sonorense, Cuando se secan se utilizan como aditivo en algunas comidas o son preservados en vinagre. Son el ingrediente perfecto para salsas, sopas o quesos, con el que logran un sabor ahumado y picante. La popularidad del Chiltepín como una especie regional y su importancia histórica en la agricultura lo han colocado literalmente en el corazón de los huertos del Suroeste del país convirtiéndolo en un signo de identidad. Ya que se sembraron, los chiles crecen con facilidad y no necesitan cuidados especiales. En caso de que no le guste el picante, es un buen alimento para pájaros, ellos lo adoran. El chile chiltepín también es llamado chile para pájaros.

Tips para la fase de germinación de semillas

Como muchas semillas silvestres, la germinación puede ser todo un reto. Empieza por conseguir pequeños vasos o bandejas para semillas y siémbrelas con $\frac{1}{4}$ de profundidad en tierra arenosa. Mantén la tierra húmeda, pero no la sobresatures.

Hay dos factores que son la clave del éxito, calor y paciencia. Un invernadero en época de invierno o en la primavera. También se puede esperar a que el clima este más cálido para sembrar. El chiltepín es un chile que tarda bastante tiempo en germinar así que se paciente y mantén la tierra húmeda. No verás brotes hasta varias semanas después. La escarificación de las semillas puede ayudar al proceso de germinación. En áreas silvestres, las semillas pasan por el tracto digestivo de los pájaros y estas inmediatamente germinan después de este proceso. Puedes intentar imitar este procedimiento, dándole las semillas como alimento a tus gallinas y pollos, pero puede ser difícil recuperar las semillas. El tegumento o cubierta de la semilla puede ser removida, ya sea raspándola con cuidado con papel de lija o remojándola en $\frac{1}{4}$ de taza con una gota de vinagre por un par de horas. En Native Seeds SEARCH hemos encontrado que los tratamientos de escarificación son innecesarios, si se cuenta con la temperatura y el tiempo idóneos para la germinación.

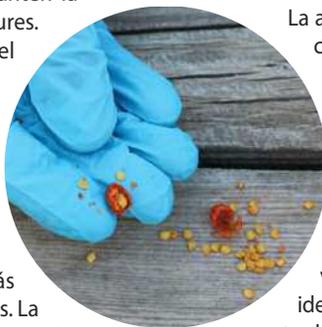


Información del proceso de crecimiento del chile chiltepín

Generalmente el chile chiltepín crece debajo de una planta, que actúa como planta protectora; como ejemplo están los árboles de Celtis o Mesquite. Puedes imitar esta técnica sembrando los chiles debajo de un árbol que te dé las condiciones de planta protectora contra el sol o sembrando en un área que reciba suficiente luz gracias a una pared que mire hacia el sur. Los chiles no toleran la exposición directa y prolongada del sol en el desierto. En un clima más frío, se requiere de exposición directa al sol. La tierra donde se siembre el chiltepín debe estar húmeda mas no sobresaturada de agua, así que debe de drenarse bien la tierra para evitar demasiada absorción de agua por parte de la planta.

La altura que el chiltepín alcanza si las condiciones son apropiadas es de 2 pies hasta 10 pies de altura. Estos chiles son sensibles a las heladas, pero su parte más sensible a las heladas son las raíces, ya que si estas se congelan la planta muere. Si, se congela la parte de arriba solamente, puedes podar las partes congeladas y la planta volverá a crecer. Esta planta puede vivir décadas en las condiciones climáticas ideales. Muchas personas piensan en sembrar este chile en el huerto de su casa, pero si vives en una ciudad con clima frío, siembra las semillas en una maceta para que en las noches puedas meterla dentro de la casa. La cosecha de este chile se recoge a principios del otoño para almacenar y guardar las semillas.

Deja que las semillas se sequen dentro del chile para que las semillas maduren y sean fáciles de almacenar. Recoge los frutos que estén secos y que tengan un color vino tinto. Abre los frutos para separar las semillas y así dejarlas secar antes de guardarlas en un contenedor hermético para prevenir el moho. El éxito de la fase de germinación de las semillas aumentará al permitirse que las semillas sequen por completo antes de la germinación.



Chiltepin *Capsicum annuum* var. *glabriusculum*

\$4.95

The wild relative of most cultivated chiles. Native to North America, chiltepins are attractive perennial landscape plants for shady to filtered light areas in the low desert. They will freeze back in the winter. The pea-sized fruits are very hot. Approx. 0.1g/25 seeds per packet.

Culture & Seedsaving: See page 21–22.

Bacadehuachi Originally harvested by Gary Nabhan in Bacadehuachi, Sonora, a small agricultural village within the Opata homelands, at about 1600 ft elevation. Small round bright red fruits. **DC008 L S**

Devil's River Original plants were wild-harvested in 1952 along the Devil's River near Del Rio Texas. The place where they were collected is now under the water of the Amistad Reservoir. Small, hot, strawberry-shaped fruits. **DC032 L S**

Fort Worth This chiltepin seems very comfortable growing at low elevation. It was sent to us by a Fort Worth, TX, couple who found it volunteering in their yard. Small round bright red fruits. **DC030 L S**

Phoenix This seed was given to a Phoenix, AZ man by a friend. One plant grew under an orange tree and up through the branches to the top, reaching a height of 23 feet! The oblong fruits are hot. **DC031 L S**

Pima Bajo Collected from the Pimas near the Rio Yaqui in Sonora, Mexico. **DC025 L S**

Rock Corral Canyon From a canyon near Tumacacori in what is now the Wild Chile Reserve, in the northern most part of this chile's wild habitat. Original seed was collected from an 8' plant growing in a sheltered area. **DC026 H L S M**

Sinaloa Southern Mayos sell these wild fruits at the railroad crossing between San Blas and El Fuerte in Sinaloa, Mexico. **DC022 L S**

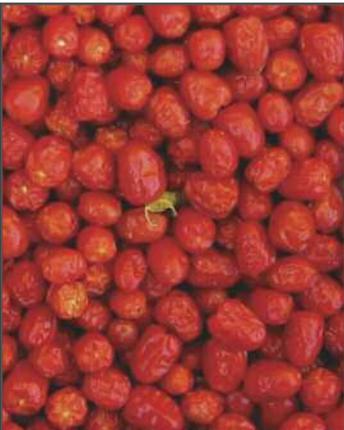
Sonoran Wild-harvested from central Sonora, Mexico. Small fruit that packs a punch. Try them sprinkled over vanilla ice cream. Immature green fruits are traditionally pickled. **DC080 H L S**

Chad's Chiltepin Cheese

32 oz full fat plain yogurt
1Tbs coarse sea salt
1 tsp ground chiltepin
¼–½ tsp cumin
A sprig or two of cilantro, finely diced

In a bowl mix yogurt chiltepin, cumin and cilantro until well blended. Add salt last, once added stir a few times then pour mixture into a colander lined with cheese cloth or a clean towel. Let this mixture sit for at least 24 hours refrigerated, and make sure to have another bowl for the liquid to drip into. After 24 hours you can ball it up in the cloth and squeeze more moisture out. Then I like to store it in a shallow glass container or jar for another 24 hours. I find the flavor spreads much more after doing this.

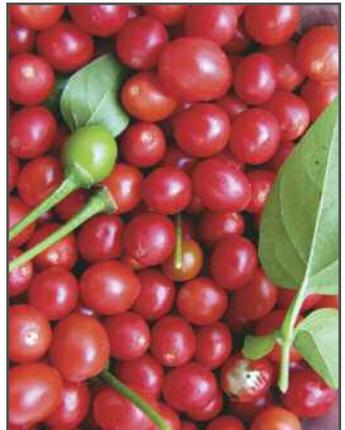
This VERY tasty recipe comes from Chad Borseth, NS/S staff member.



Devil's River



Phoenix



Sonoran

Seeds

Corn/Maize *Zea mays*

\$2.95 *Unless otherwise indicated*

Domesticated in Mexico around 9,000 years ago, corn is a staple food and has many ritual uses.

Dent corns are used for elote (roasted), tamales, tortillas, corn beer and animal feed; the mature kernels are dented due to their flour hearts and flint sides. **Flour corns** are soft grinding corns used for cornmeal, elote and hominy (masa or nixtamal). **Flour/flint corns** may be either a hard, flinty texture or soft and floury. When dry, flints generally store better and have greater resistance to insect damage. **Popcorns** are flint corns used for pinole (toasted and ground) and as popped corn. **Sweet corns** are used for pinole, roasted and reconstituted, or fresh boiled. Kernel colors develop when the corn is past milk stage. Approx. 10–18g/50 seeds per packet.

Culture: In early spring or with summer rains, plant seeds 1 inch deep in rows, clumps, or basins. Needs rich soil and moisture. Heat, aridity and high winds can all reduce pollination.

Seedsaving: An annual, corn is wind-pollinated, and all varieties will cross. Hand-pollination (with bagging) or staggered planting times is necessary to keep seeds pure if multiple varieties are grown. Allow ears to mature and dry on the plant. However, do not let sweet corn varieties dry on the stalk during high temperatures because they can ferment, ruining the seed.

Chapalote "Pinole Maiz" Popcorn. A stunning corn variety that at one point was widely grown from southern Arizona to Sinaloa, Mexico. One of the four most ancient corns. A gorgeous deep brown color (the only brown corn), ranging to a light tan color. Small-kernelled, with slender ears. Plants are very tall and late-maturing. Makes a sweet meal excellent for pinole. Can also be popped. **ZP090 L S F**

Dia de San Juan Dent. An all-purpose white corn used for everything by the Mayo. From north of Alamos, Sonora. Planted on the Dia de San Juan (June 24) when Southwestern folks traditionally celebrate the coming

of the summer rains. Grows 10+ feet tall. Staff favorite for green corn tamales and roasting corn. **ZD084 H L S B**

Flor del Rio Popcorn. A mix of multi colored and chin-mark kernals on small ears (2-6 inches). Some plants will have deep burgundy stalks and cobs. High concentrations of health-promoting carotenoids and anthocyanin pigments. Collected in Velarde, New Mexico, along the Rio Grande. **ZP093 H L S**

Gila Pima "A:al Hu:n" Flour/flint corn. Cream-colored and clear kernels on smallish cobs. Matures quickly and



Chapalote



Dia de San Juan



Flor del Rio



Glass Gem



Guarijío Maiz Amarillo



Guarijío Maiz Azul

More Corn

with minimal irrigation. From the Gila River Pima Reservation in central Arizona. Ears are relatively resistant to fungal damage. Plants are 5-7' tall. 65 day to pollination, 111 days to dried ears from planting, in Patagonia, Arizona (4,000'). **ZL060 H L S**

Glass Gem Popcorn. A stunning variety selected by Carl Barnes, a Cherokee farmer, in Oklahoma. It was developed by crossing many native varieties of varying colors. Produces a diversity of gorgeous translucent, jewel-colored ears, each one unique. The kernels may be ground into cornmeal or popped. **TS363 H L S \$4.95**

Guarijío Maiz Amarillo Flour /Flint corn. Collected from a Guarijío farmer in Sonora, Mexico. A dry-farmed, semi-flint corn with yellow and some white kernels. Used for tamales, atole, pinole and as elote. Plants were over 8' tall and very productive when grown at the Conservation Farm. **ZT045 H L S B**

Guarijío Maiz Azul Flour corn. A unique blue corn with kernels ranging from light blue to deep blue to lavender and purple on thick cobs. Prominent denting on some ears. Grown at lower elevations than most maiz azul races but does not perform well at northern latitudes. **ZF039 H L S**

Guarijío Red Sweet corn. Produces tall 8' to 10' plants with long slender sweet ears. Seed will turn burnt-orange to red as seed matures. Harvest when light in

color for optimal sweetness. Plant with the summer rains in the low desert. **ZS106 H L S M \$4.95**

Guarijío Sweet Produces cobs with yellow or burnt-orange kernels. Dark color of kernels intensifies as corn ripens past the milk stage and dries down. Harvest when light in color for optimal sweetness. From Sonora, Mexico. Grow only with midsummer rains in the low desert due to day-length requirements. Plants are 6-8' tall. **ZS142 H L S**

Mayo Tuxpeño Dent corn. Originally collected in Saneal, Sonora, Mexico. Large fat ears on 10-12' tall plants with yellow, blue and yellow, or pink ears. **ZD083 H L S**

Onaveño Flour/flint corn. An ancient grinding corn used for pinole, cornmeal, and tortillas. From along the Rio Mayo in Sonora. Flinty, cream colored kernels, with occasional pink and purple kernels on tall plants, ca. 8-10 feet. Pollination process can withstand high temperatures. Late maturing **ZT111 H L S**

Reventador Popcorn. Old-fashioned pinole corn with translucent white kernels once grown in Arizona with irrigation. Originally from central Sonora, Mexico. It makes a very flavorful, hardy, crunchy popcorn when popped. Requires a long growing season, so it is not recommended for northern climates. Plants grow 6-7 feet tall. **ZP092 H L S B**



Guarijío Red



Mayo Tuxpeño



Onaveño



Reventador



Rio Grande Blue

Interested in saving corn seeds?

Visit nativeseeds.org to learn more about hand pollination and isolation techniques; you can find supplies on page 51.

Seeds

More Corn

Rio Grande Blue Flour corn. A great all-purpose blue flour corn. Long slender ears on plants 5–7 ft tall. A corn lineage grown from a mix of blue corn varieties from the Rio Grande Pueblos in New Mexico. **ZF202 H S**

San Felipe Pueblo White Flour corn. From the pueblo in northern New Mexico. Used for meal, whole kernels in stews, and chicos. Traditionally irrigated. **ZF053 H S B**

Santo Domingo Rainbow Flour corn. A beautiful mix of red, yellow, orange, purple, pink, pearl, and chinmark flour kernels on ears up to 10" long. A great variety for parching. **ZF032 H S**

Stowell's Evergreen Sweet corn. Popular for more than 160 years. "King of All White Sweet Corn Varieties." Sweet, 10' ears on 7' stalks. 90+ days. **TS361 H L N \$4.95**

Tarahumara Apachito Flour/flint corn. One of the most common types of corn grown by the Tarahumara. Kernels are typically a pearly light pink to dark rose and occasionally pearly white or yellow. The earliest maturing Tarahumara corn. Short plants. **ZT033 H S B**

Tarahumara Maiz Azul Flour corn. Large blue-black (and some white) kernels on medium large ears. This corn is widely used in the barrancas of the Sierra Madre. Used to make tortillas and tamales during first harvest ceremonies. **ZF021 H L S**

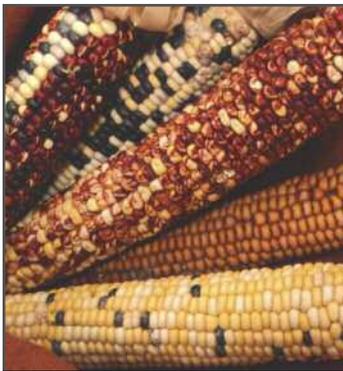
Tarahumara Serape Flour/flint corn. This gorgeous Cristalino de Chihuahua landrace has beautiful long slender ears with pearly white, red or striped kernels. Plants 4–5 ft tall. **ZT044 H S B**

Tohono O'odham 60-Day Flour corn. Extremely fast-maturing desert-adapted corn traditionally grown with the summer rains in the 'ak chin' floodwater fields of the Tohono O'odham. Produces short (6–10") ears with white kernels on short plant stalks. Usually roasted and dried before being ground into flour. The plants are remarkably tough — in our 2012 growout in Tucson, this variety produced on rainwater alone. **ZF016 H L S F**

Yoeme Vatchi Dent corn. Grown with irrigation in Potam, Sonora along the Rio Yaqui by a "socio" or cooperative. Used to make hominy by soaking overnight in water with lime or mesquite ash, then ground for tortillas. **ZD088 H L S**



San Felipe Pueblo White



Santo Domingo Rainbow



Tarahumara Serape



Tohono O'odham 60-Day



Davis Green Cotton



Sacaton Aboriginal Cotton

Cotton *Gossypium* spp.

\$3.95

Cultivated since ancient times, people have utilized the lint for spinning and weaving. In frost free areas, cotton can be a perennial shrub or small tree. Approx. 2g/20 seeds per packet.

Culture: Plant in spring after last frost, 1/2 inch deep, 12 inches apart. Plants need a long season for bolls to mature.

Seedsaving: An annual, mainly self-pollinating but with large showy flowers that attract insects which will cross varieties. Harvest dried pods as they mature. Remove bad seeds and cotton fiber before storing.

Cotton seeds can only be shipped to AZ, NM, TX and OK addresses.

Davis Green *G. hirsutum* x *G. barbadense*. An intentional cross between Pima cotton and a Louisiana green cotton, selected by P. Davis in Albuquerque to create richer color and longer fiber. Lint color is variable, pale green, olive, blue-green, or brown. Said to produce a longer fiber than most green cottons. Warmer weather and more mature plants produce a darker green fiber, color deepens with washing. **H005 H L S**

Sacaton Aboriginal *G. hirsutum* var. *punctatum*. Grown by the Pimans for food and fiber until 1900. Padre Kino noted its use for weaving into clothing and blankets. This variety, related to Hopi cotton, was maintained by the Field Station in Sacaton, Arizona, for many years under the name "Sacaton Aboriginal." Pimans planted cotton "when the mesquite began to leaf out." A stunningly beautiful plant. **H002 H L S**

Cowpea *Vigna unguiculata*

\$2.95

An introduced legume from Africa that tolerates high heat and drought. A good producer in the low, hot desert. Peas can be eaten green (immature) or dry. Approx. 5g/25 seeds per packet.

Culture: Plant 1" deep and 6" apart, or in basins, into warm soil in spring or with summer rains. Plants sprawl, trellising is helpful and will produce more pods for a higher yield. Likes well-drained soil, excessive nitrogen will reduce yield. Pick very small, 2-3", for "green beans" or let dry on vine for dry peas.

Seedsaving: An annual that is mainly self-pollinating. Large, showy flowers attract pollinators. Dried pods should be harvested throughout the growing season. Mature pods will split open if left on the plant.

Bisbee Black Original seeds came from a Native American in Bisbee, Arizona, who gave them to a truck driver, who passed them on to an NS/S member in Missouri. Solid black seeds, a good producer in the low desert. **V001 H L S B**

Mayo Colima From Sinaloa, Mexico, the seeds are shades of beige to orange with a dark ring around a white eye. **V003 H L S B**

Mayo Speckled The pinto-bean of cowpeas! A colima variety with pinto bean mottling over light chocolate-covered seeds. From Los Capomos, Sinaloa. **V015 H L S B**

Corrientes Collected in Nayarit, Mexico. Extremely hardy and prolific, with dark red seeds. Excellent as green beans or shelled. **V013 H L S**



Bisbee Black



Mayo Colima



Mayo Speckled

Seeds

More Cowpea

Pima Bajo "Tukwupoikam" (Black eyes it has) Originally from the Pima Bajo living near the Rio Yaqui in Onavas, Sonora. The small white beans have black and brown eyes. **V009 H L S B**

Tarahumara From a remote village in Batopilas Canyon in the Sierra Madre. The seeds are predominantly cream to beige with occasional brick or black-colored seeds. Later maturing. **V019 H L S B**

Tetapeche Gray Mottled These speckled seeds look like wild beans. They are pea size with white eyes. From a market in Sonora, Mexico. **V005 H L S B**

Texas The color of red sandstone, this cowpea is from the Eagle Pass area of Texas. A heat-tolerant "pole bean" with superior flavor. **V020 H L S B**

Tohono O'odham "U'us mu:n." A gorgeous black and white bean with variable mottling, may be all black (occasionally brown) or splotched on white. Excellent for green beans in the low desert. Fast maturing. **V006 H L S F B**

Yori Cahui Collected from the village of Ahome, near Los Mochis in Sinaloa. Our demonstration garden growout produced lots of "yard long" beans that thrived in our record breaking heat. Great low desert green bean. **V014 H L S M**

Joy's Cowpea & Potato Bowl

- 1.5 c dried cowpeas
- 2 bay leaves
- 2 tsp salt
- 1 lb fingerling potatoes, cut into 3/4" slices
- 2 c broccoli rabe, cut to bite-sized pieces (may substitute broccoli or fresh green beans)
- 4 cloves garlic, finely minced
- 4 eggs, soft boiled
- 4 tbsp best quality olive oil
- 1-2 tbsp Ume plum vinegar
- fresh cracked pepper to taste

Rinse cowpeas and place in large pot with salt, bay leaves, and water to cover by 2 inches. Bring to boil, then reduce heat and simmer until about half done (18-20 minutes). Add potatoes to the pot, adding water to cover if needed. Simmer another 7 minutes, then add the broccoli rabe and simmer 5 minutes or until all ingredients are tender but still firm. Drain off water and bay leaves, then stir in garlic, olive oil, & vinegar to taste. Top with coarsely chopped eggs and cracked pepper, and serve warm. Serves 4-6.

Recipe courtesy of Joy Hought, NS/S staff member.

Cucumber *Cucumis sativus*

\$2.95

Approx. 0.8 g/30 seeds per packet.

Culture: Cucumbers prefer direct sun and warm growing conditions. Plant in rich, warm soil.

Seedsaving: Cucumbers produce separate male and female flowers. Females can be recognized by their ovaries at the base of the blossoms. Unless hand-pollinating techniques are used, bees are primary pollinating agents. Provide at least 1,600 feet (488 meters) between varieties.

Armenian Long Botanically actually a melon (*Cucumis melo*), this unusual, 12-18" long "cuke" has pale green, thin ribbed skin, and a mildly sweet flavor and good crunch. Thrives in hot weather. **TS318 H L N**

Beit Alpha A crisp, delicious, thin-skinned cucumber, great for both salads and pickling. Middle Eastern heritage makes this a heat tolerant and productive plant. Pick fruit when small, 6-8". **TS319 H L N F**



Tetapeche Gray Mottled



Texas



Tohono O'odham

Devil's Claw *Proboscidea* spp.

\$4.95

Cultivated by many Southwest tribes. The black fiber of the fruit or "claw" is used in basketry. Seeds are rich in oil and protein, and dried seeds can be peeled and eaten. Very heat tolerant, the flowers and foliage make these attractive landscape plants. Approx. 1.5g/25 seeds per packet.

Culture: Peel seed tips and presoak overnight for better germination. Plant with summer rains, 1/2 inch deep, and allow 2–4 feet between plants. Plants respond to hot, humid conditions of summer monsoons.

Seedsaving: Varieties of this insect-pollinated annual will cross. Allow pods to dry and mature on the plant; harvest when they begin to open. Seeds can be removed with ice picks or pliers; be careful not to get poked by the razor-sharp claws.

Colorado River *P. parviflora* var. *hohokamiana*. White-seeded variety with long, 12" claws. Collected from Needles, California west of the Colorado River. **R019 L S B**

Domesticated Multiclawed *P. parviflora* var. *hohokamiana*. White-seeded, many of the pods split into 3 or even 4 claws, instead of just two. Claw length is generally 8" or more. **R006 H L S**

Paiute *P. parviflora*. A white-seeded domesticated variety grown on the Shivwits Paiute Reservation in southwest Utah. Medium length claws are 9-10 inches. **R005 H L S**

San Carlos Apache Domesticated *P. parviflora* var. *hohokamiana*. Moderate-sized claws (8–10") and white seeds. Collected from plants growing in a field of blue corn in 1978. **R016 H L S B**

San Carlos Apache Wild *P. parviflora* var. *parviflora*. Black seeds, short claws. Flowers are off-white with pale pink upper lobes. Large bushy plants. **R017 L S B**

Tohono O'odham Domesticated *P. parviflora* var. *hohokamiana*. "l:hug" ("ee hook"). Selected by basket makers for the extremely long claws (up to 15"). Claws saved for basketry are sometimes buried to keep the black color from fading. White seeds. **R004 H L S**

Eggplant *Solanum melongena*

\$2.95

Eggplant is native to the Indian subcontinent. It has been cultivated in southern and eastern Asia since prehistory, but appears in the Western world around 1500 AD. Approx. 0.1g/25 seeds per packet.

Culture: In the spring after soil reaches at least 70° F, plant seeds directly in the garden 1/4" deep, or start indoors and transplant after all danger of frost. Allow 15" spacing between plants.

Seedsaving: Save seeds from at least 6 plants to ensure diversity. Allow fruits to mature past eating stage till they begin to turn brown. Cut lower half of the fruit into 1" squares and blend or food process. Add water and stir. Good, clean seeds will sink to the bottom. Rinse and dry on a paper towel.

Black Beauty Black Beauty was introduced in 1902 and remains the world's common market eggplant because

of its large size, 6", and earliness, 74 days to maturity. Black, shiny fruits. **TS321 H L N**



Colorado River



Domesticated Multiclawed



Tohono O'odham

Seeds

Gourd *Lagenaria siceraria*

\$2.95

The earliest known domesticated plant. Used for ladles, rattles, canteens or containers, as well as musical instruments. Can be carved, burned or painted. Approx. 1.5-3.5g/15 seeds per packet.

Culture: Scarify & soak seeds for better germination. Sow 1" deep after soil warms in spring. The long climbing vines require plenty of room. Plant next to a fence or trellis, or in basins under a tree. Requires plenty of water throughout the long growing season.

Seedsaving: Annual. Varieties will cross-pollinate. The night-blooming white flowers are moth-pollinated. Fruits should mature on the plant until the stems are brown and the fruit lightweight, or until frost. Dry until the gourds are beige and the seed can be loosened by shaking. Interior of fruits are toxic, so gloves and masks are recommended when processing gourds.

Hopi Rattle "Tawiya." Flat-bulbed ceremonial dance rattle of the Hopi. Large ones may also be used to make women's rasp instruments for Home Dance. Plants are prolific. (h) **M022 H L S M**

Mayo Bilobal Medium to large gourds with small upper chamber. Collected in the Mayo River Valley in southern Sonora, Mexico. Traditionally used as canteens, strung with ixtle (agave fiber) for carrying. A popular shape for crafting birdhouses. (c) **M002 L S B**

Mayo/Yoeme Deer Dance Rattle Fruit shapes vary slightly from tear-drop to short-handled dipper. Used to make rattles for the Deer Dance. (d, h, l) **M031 L S**

O'odham Dipper This was our first dipper gourd collection made in 1982 at Topawa on the Tohono O'odham Nation. Gourds vary from 8" to 18" long and have a long thin neck and small bowl. Trellis the plants (or allow them to climb trees) to obtain straight-necked fruit. (g) **M020 H L S F**

Peyote Ceremonial A very small (2-4") bilobal or dipper gourd shape used for crafts and as rattles by the Native American Church. Plants are incredibly prolific. Smaller vines and faster maturing than most gourd varieties. (e) **M029 H L S F**

San Juan Mix A mixture of dipper, teardrop, canteen and banana-shaped gourds. From Ohkay Owingeh Pueblo (formerly San Juan Pueblo), New Mexico. (a, d, g, i) **M056 H S**



Mayo Bilobal



O'odham Dipper

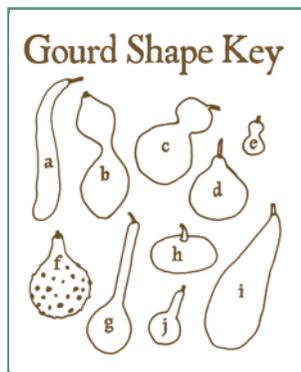


San Juan Mix



Tarahumara Small Bule

Letters at the end of descriptions refer to the key (below) — all shapes may not be currently available.



More Gourd

Santo Domingo Dipper Short-handled gourds have a medium to large bulb. From Santo Domingo Pueblo, New Mexico. (j) **M008 H L S B**

Tarahumara Canteen Quart-sized, pear-shaped gourds. Still used as water containers by the Tarahumara of Copper Canyon in Chihuahua, Mexico. A

shoulder strap of hemp or iztle (agave fiber) is knotted into a sling around the bulb for carrying. (d) **M004 H L S**

Tarahumara Small Bule Small, 6–10" round gourds with short necks. Used for small hand rattles, tobacco containers, or small canteens. (d) **M047 H L S B**

Greens

\$2.95

Greens are excellent sources of vitamins, calcium and iron. See also Kale on page 32.

Culture: See growing information on seed packets.

Seedsaving: Varies by species; see seedsaving instructions on seed packets.

Arugula *Eruca sativa*. Wonderful, peppery distinct flavor that is treasured by nutritionists and favored by gourmets. Bushy, 1-2' plant. Grow year-round fresh greens in the desert. Cold and heat tolerant. Easy to grow. Approx. 1g/350+ seeds per packet. **TS134 H L N F**

Chamisal Quelites Verdes *Atriplex hortensis*. An orach or "mountain spinach" collected at Chamisal, near Taos, New Mexico, at 7,500 feet. Grow in the cool season in the low desert. Orach has a flavor milder than spinach and Can be used like spinach, fresh or cooked. Approx 2g/120 seeds per packet. **GR017 H L S**

Golden Purslane *Portulaca oleracea* var. *sativa*. "Verdolagas" in Spanish. This is not the wild purslane that grows throughout the Southwest, but a cultivated variety that has higher seed germination. The succulent leaves are large and upright, making them easy to pick. Crisp, lemony flavor. Very nutritious. Plant in the spring or with the summer rains. Approx. 0.1g/250 seeds per packet. **TS203 H L N**

Magdalena Acelgas *Beta vulgaris*. Acelgas is Spanish for chard. A family heirloom from Magdalena, Sonora, donated by Jesus Garcia and grown out at the Mission Garden Project of Tucson. Shorter stems than modern chard varieties, it grows well through winter and into the summer in the low desert. Approx. 4g/200 seeds per packet. **GR016 H L S**

Mostaza Roja *Brassica* sp. "Mequasare." A wild mustard with tender, mild flavored leaves. Use in salads or as cooked greens. Plant in fall in the low desert. Very productive. Approx. 0.2g/100 seeds per packet. **GR008 H L S**

Rainbow Mix Swiss Chard *Beta vulgaris*. Beautiful mix of colors. Dark-green, savoyed leaves. Enlarged stems with crisp and delicate flavor. Plant early and often. **TS211 H L N**

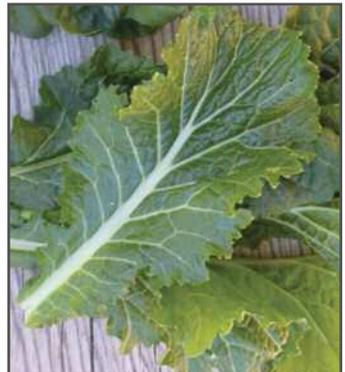
Red Malabar Spinach *Basella rubra*. This is not a true spinach. Spinach-like leaves thrive in hot weather, unlike regular spinach. Beautiful vining plant with dark red stems and deep green leaves rich in vitamins A and C, iron, and calcium. Approx. 1g/50 seeds per packet. Plant in the warm season. **TS202 H L N**



Chamisal Quelites



Magdalena Acelgas



Mostaza Roja

Seeds

Herbs

\$2.95

Most herbs are easy to grow and are quite happy in poor, gravelly soils. Besides being essential to fine cuisine, herbs are used medicinally and are effective insect repellents. See listing for packet size.

Culture: See individual seed descriptions for growing information.

Seedsaving: Herbs are insect pollinated so members of the same species will cross. Harvest dried seed stalks, and hang upside down for complete drying. Crush to remove seeds, and winnow off chaff.

Corrales Azafrán *Carthamus tinctorius*. This red/orange thistle-like flower was used in cooking as a saffron substitute. A sunflower relative, azafrán can be grown as an annual flower and keeps well as a dry flower (though very prickly). Collected in Corrales, New Mexico. Plant seed with the summer rains about 1/4 inch deep. Approx. 1g/25 seeds per packet. **HB014 H L S B**

Epazote *Chenopodium ambrosioides*. A commonly used herb in southern Mexico. Aromatic foliage has a distinct flavor that is a favorite seasoning for beans. Also said to reduce the flatulence caused by beans. Approx. 0.1g/200 seeds per packet. **HB015 H L S**

Genovese Basil *Ocimum basilicum*. Genovese basil's strong flavor and aroma make it the favorite of many for making pesto. This variety is relatively slow to bolt. Approx. 1g/200 seeds per packet. **TS536 H L N**

German Thyme *Thymus vulgaris*. One of the most popular culinary herbs. Aromatic leaves and small, pink flower spikes on a short, creeping plant. A long history of medicinal use: thyme oil is antiseptic, tea is mineral-rich, anti-spasmodic. 6-12". Start indoors or direct-seed outdoors in early spring. Tolerates relatively poor soil and prefers full sun. Approx. 0.1g/100+ seeds per packet. **TS522 H L N**

Guarijío Conivari *Hyptis suaveolens*. A cooling drink is made from the jelled, chia-like seed which has high-fiber mucilage. Mayo Indians use it for an eye remedy and to control diarrhea. For summer gardens. Plant seed with the summer rains about 1/4 inch deep. Approx. 0.5g/50 seeds per packet. **HB008 H L S**

Italian Large Leaf Basil *Ocimum basilicum*. Larger leaves mean more pesto in a hurry! Sweet and spicy leaves grow to 3-4 inches and are great for salads, including Caprese. Plant in the summer. Approx. 1g/200 seeds per packet. **TS537 H L N**

Italian Parsley *Petroselinum crispum*. Flat leaves. The preferred parsley for cooking. Great dried. Provides a winter long supply of fresh nutritious greens. 2-3' tall. Prefers full sun or partial shade, and rich soil. Approx. 0.5g/80 seeds per packet. **TS160 H L N**

Magdalena Cilantro *Coriandrum sativum*. A family heirloom from Magdalena, Sonora, donated by Jesus Garcia and grown out at the Mission Garden Project of Tucson. Approx. 1g/100 seeds per packet. **HB017 H L S**

Mammoth Dill *Anethum graveolens*. Garnish cucumber salads, cold summer soups or freshly baked mountain trout with the lacy, pale gray-green leaves of this popular herb! Yellow umbel-shaped summer flowers are beautiful as cut flowers. Easy to grow for foliage or seeds. 2-3' tall. Approx. 1g/200 seeds per packet. **TS510 H L N**



Corrales Azafrán



Guarijío Conivari



Tarahumara Chia

A Great New Resource for Southwestern Gardeners and Seed-Savers

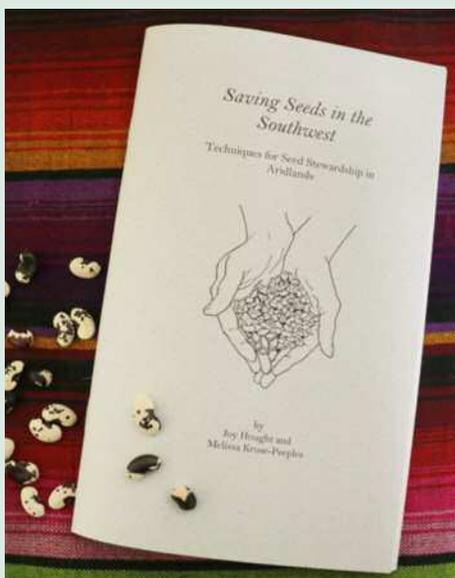
Whether you are a grower serious about increasing seed production on your farm, or a backyard gardener wanting to save seed on occasion, *Seed Saving in the Southwest* will give you the information you need to be a productive seed saver. Written in clear and straightforward language, it is accessible and useful from cover to cover.

Topics include:

- * Understanding trait inheritance and plant life cycles
- * Planning a garden with seed saving in mind
- * Recommended varieties for Southwestern conditions
- * How to prevent unwanted cross-pollination
- * Seed saving techniques for dry- and wet-seeded crops
- * Safe seed storage, and more.

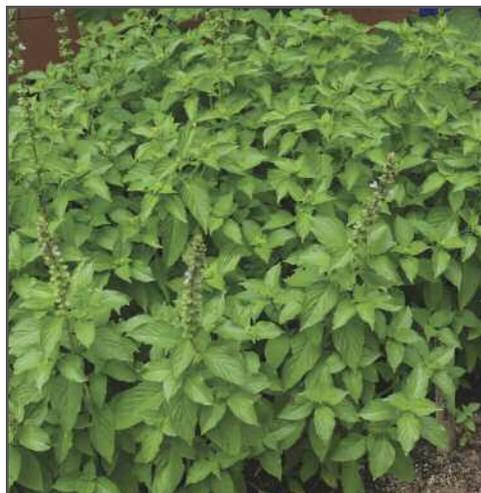
This little book includes detailed information for 29 popular crops that grow well in Southwestern gardens, plus a quick reference guide on isolation distances and seed saving techniques.

Native Seeds SEARCH staff members Joy Hought and Melissa Kruse-Peebles have produced this great resource with our region in mind, but it would be useful for gardeners in most any climate. The 72-page guide is affordably priced and is part of NS/S's effort to spread seed-saving knowledge far and wide. Please contact us for discounts on bulk orders for classes and community projects. **PB2017 \$4.95**



More Herbs

Mrs. Burns' Famous Lemon Basil *Ocimum basilicum*. This famous basil variety was grown for 60 years in southeastern New Mexico by the mother of NS/S co-founder Barney Burns. Readily self-seeds. Amazing lemon flavor. Heat and drought tolerant. Plant seed in spring or with the summer rains about 1/4 inch deep. Approx. 0.2g/50 seeds per packet. **HB003 H L S F**



Mrs. Burns' Lemon Basil

Sweet Italian Basil *Ocimum basilicum*. Specially selected strain from the mountains of northern Italy produces larger, tender leaves. Deep, rich basil flavor. Plant in the summer. Approx. 1g/200 seeds per packet. **TS535**

H L N

Tarahumara Chia *Salvia tiliaefolia*. A plant native from southeastern Arizona to South America. The cute flowers and foliage make it an attractive landscape plant for summer gardens. Gathered and used medicinally by the Tarahumara. Plant seed with the summer rains about 1/4 inch deep. Approx. 0.2g/50 seeds per packet. **HB007 H L S**

True Greek Oregano *Origanum vulgare hirtum*. Taste the best strain of any oregano we have found! Deep, genuine, oregano flavor! Pinkish-white flowers decorate this herb that doubles as a perfect ground cover with soft gray-green leaves. 12-18" tall. Plant in fall through early spring in the low desert, spring through summer in colder climates. Approx. 0.1g/200 seeds per packet. **TS516 H L N**

Yoeme "Alvaaka" Basil *Ocimum basilicum*. A small seed sample was collected from a woman at New Pascua who uses the foliage to make a tea which is "good for the stomach and as a general tonic." The plants have a strong licorice aroma. Plant about 1/4 inch deep in spring or with the summer rains. Approx. 0.2g/50 seeds per packet. **HB013 H L S B**

Seeds

Kale *Brassica oleracea*

\$2.95

In high and low elevations alike, kale is one of the most dependable sources of vitamins and minerals. Approx. 0.5g/150 seeds per packet.

Culture: Kale handles heat well. Frost improves its already rich flavor. Best as a cool season crop in the low desert.

Seedsaving: Individual plants do not self-fertilize. Provide at least two or more flowering plants to assure seed formation. (Many more needed to conserve genetic diversity.) Since bees can cross-pollinate kale with other *Brassica*, isolation distances should be 1,600 feet (488 meters) or more for seed purity.

Dwarf Siberian Blue-green leaves are ruffled and delicately flavored. Plants are compact, approximately 1'. Hardy variety, perfect for small gardens. **TS103 H L N**

Lacinato Ready 50-60 days from transplanting. Dark blue-green savoyed leaves. Winter and summer hardy. Highly adaptable and can be grown almost year-round in many locations. Tender, succulent and sweet as

steamed greens or in a stir-fry. A reliable workhorse. **TS107 H L N**

Red Russian Dark green oakleaf-cut leaves, may be richer in vitamins and minerals than other greens. Red and purple hues intensify after fall frosts, giving way to tender and sweet rich dark green kale when cooked. Also good raw. Very disease resistant. **TS105 H L N F**

Lettuce *Lactuca sativa*

\$2.95

Many wonderful colors and textures to choose from! These lettuces are chosen for their ability to cope with southwestern heat, but should be planted as a cool season crop. Approx. 1g/700 seeds per packet.

Culture: Water lettuce at base to avoid rot. To assure a steady supply, stagger plantings every 10 days, planting smaller amounts more often as weather becomes hot. For full heads, thin to 8". Companion plants include: carrots, radishes. A cool season plant in the low desert.

Seedsaving: Lettuce produces perfect yellow flowers on tall, bushy seed stalks. Since flowers self-pollinate, there is less chance of cross-pollination between varieties. For purity, separate at least 10 feet (3 meters).

Black-Seeded Simpson Looseleaf Sets the standard by which to measure all looseleaves. Large, light-green, broad, frilled leaves with exceptionally crisp, fresh flavor. **TS120 H L N**

Cimarron Romaine Adds color to salads along with the unmistakable texture of a delicious romaine. Broad, flat, crisp, sweet and juicy leaves range from dark red to bronze. Very attractive. **TS124 H L N**

Jericho Romaine Large heads of bright green romaine have excellent flavor and keep their sweet crispness well into early summer. **TS126 H L N**

Lettuce Mix This diverse mix of lettuce varieties contains equal proportions of 5 varieties. A beautiful blend of colors, tastes and textures for your salad. **TS255 H L N**

Oakleaf Looseleaf This timeless heirloom is very popular because of its tender, thin, delicious leaves that are similar to oak leaves in shape. **TS122 H L N**



Red Russian



Cimarron Romaine



Red Saladbowl Looseleaf

More Lettuce

Parris Island Cos Romaine 10" tall, dark green, uniformly upright heads with crisp texture and sweet flavor. One of the best lettuces in the heat. **TS231 H L N F**

Red Saladbowl Looseleaf The beauty, flavor and tenderness of Saladbowl with solid red color, fuller head and slightly more compact shape. Delicious. Withstands hot weather as well as the green saladbowl. Excellent flavor! **TS127 H L N F**

Luffa *Luffa operculata*

\$3.95

Various species of Luffa are grown worldwide for food and to produce natural sponges. Approx. 1g/25 seeds per packet.

Culture: Scarify and presoak seeds for 24 hours. Sow 1" deep in the spring when temperatures are warm. May take several weeks for germination. Plant next to a fence or trellis so vines can climb. Requires plenty of water throughout the long growing season.

Seedsaving: This annual is insect pollinated. Allow fruits to dry on the plant before harvesting the seeds, which can often be shaken directly out of the fruits.

Wild Luffa From dooryard gardens along the Rio Mayo. Produces copious quantities of 2-3" fruit. Removing the thin skin from dried fruits reveals the

small scrubber "sponge." In the low desert, plant with summer rains. **M012 H L S**

Melon *Cucumis melo*

\$2.95

An early introduction by the Spanish into the Greater Southwest. The fruits are varied, with orange, green, or white flesh, and skins that are smooth, ribbed, or netted. A summertime favorite. Approx. 1g/25 seeds per packet.

Culture: In the spring after soil warms or with summer rains, plant 3-5 seeds 1/2" deep directly in basins, 24" apart with plenty of room for sprawling vines. Melons like soil rich in compost. Overwatering can dilute flavor of fruit.

Seedsaving: Annual plants are insect pollinated. Male and female flowers form on each plant. Hand pollinate and bag flowers, or separate varieties by 1600 feet (488 meters). Remove seeds from ripe cut fruit, wash off fibers, and spread seeds on paper or cloth to dry thoroughly.

Acoma Fruit are round or oval, with smooth yellow skin and ribs. Flesh is white to salmon-colored with a mild, sweet flavor. **F014 H S**

Cochiti Mix A mix of native and honeydew types collected from Cochiti Pueblo. Fruit vary from round, smooth-skinned honeydews with light green flesh to elongated oval fruit with ribs and orange flesh. **F020 H S B**

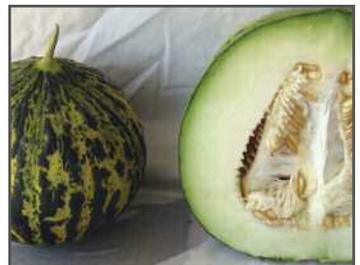
Chimayo Spanish heirloom cantaloupe from northern New Mexico. Oval fruits have netted skins and sweet orange flesh. **F003 H S B**



Wild Luffa



Chimayo



Hopi Casaba

Seeds

More Melon

Esperanza de Oro A "native" melon, interbred for years with Crenshaw melons and selected for size and sweetness in Corrales, New Mexico. **F017 H L S B**

Hopi Casaba Two distinct fruit types within this collection: (1) wrinkled, round, yellow-green fruits; and (2) smoothly elongated yellow-green fruits. Both have pale green to orange flesh. Juicy with a mild flavor. Tasty with chile, salt and lime. Good keeper if unbruised. **F011 H L S B**

Isleta Pueblo Very diverse ribbed fruit shapes, some orange- and some green-fleshed; from Isleta Pueblo near Albuquerque, New Mexico. Tolerates heat.. **F004 H L S**

Jemez Oval, ribbed, mostly smooth-skinned typical native melon from Jemez Pueblo. Orange flesh and sweet flavor. **F021 H S F M**

Melon de Castilla A deliciously sweet melon with pale yellow, smooth skin. From the Sierra Madre Mountains. **F016 H L S F B**

Navajo Fruit have green to yellow skin. Shape ranges from banana to football to round. The flesh color is mostly white. Collected at a market in Shiprock, New Mexico. **F026 H S B**

Navajo Mix Our original seeds were obtained from a melon entered in the Navajo Nation Fair in Shiprock,

New Mexico. Produces three fruit types: ribbed, smooth ovals, and elongated. Mild flavored flesh is pale green to light orange. **F009 H L S B**

O'odham "Ke:li Ba:so" "Old woman's knees," referring to the knobby appearance of the fruit. A favorite of Tohono O'odham and Pima low-desert farmers. Fruits are casaba type with light green flesh. Very tasty. **F005 H L S F**

Ojo Caliente Originally obtained from a farmer in northern New Mexico. The oval fruits are smooth-skinned and can weigh 5-7 pounds. Pale green flesh with a tinge of orange is sweet and juicy with excellent flavor. Harvest ripe fruits when bright yellow and aromatic. **F008 H L S B**

Planters Jumbo A favorite cantaloupe with market growers because it grows well in wet or dry conditions. Firm rind and sweet, deep orange flesh. Developed for hot climates and is resistant to Powdery and Downy Mildew. Melons are 7" by 6" and average 4-5 lbs. **TS262 H L N**

Santo Domingo Native Originally from Santo Domingo Pueblo, these are typical of the "native" melons grown for centuries in the pueblos of New Mexico. The fruit are oblong, ribbed, and have predominantly smooth skin. Some netting or "cracking" occurs. The flesh is orange and tasty. **F018 H S B**



Isleta Pueblo



Jemez



Navajo Mix



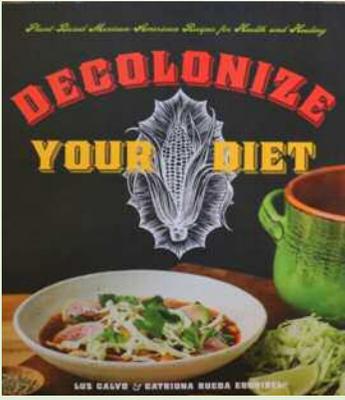
O'odham "Ke:li Ba:so"



Ojo Caliente



Santo Domingo Native



Decolonize Your Diet

More than just a cookbook, *Decolonize Your Diet* redefines what is meant by "traditional" Mexican Food by reaching back through centuries of history to reclaim heritage crops as a source of protection from modern diseases. Authors Luz Calvo and Catriona Rueda Esquibel promote a diet rich in plants indigenous to the Americas (corn, beans, squash, greens, herbs, seeds, and cactus) and are passionate about the idea that Latinos, especially Mexican-Americans, return to their own culture's food roots for both physical health and spiritual connection. Beautiful photographs and over 100 exciting, creative recipes from Kick-ass Chayote Salad to Chocolate Amaranth Cake. 253pp. **PB1134 \$26.95**

Okra *Abelmoschus esculentus*

\$2.95

An introduced African crop that does well in southern areas of the United States. Okra is drought-tolerant and heat-loving. All parts of the plant are edible. Fruit are ready to pick when they snap off the stalk and are versatile in the kitchen: try them fresh, pickled, fried or in gumbo. The leaves may be eaten raw or cooked. Plants are tall with stunning showy flowers. Approx. 2g/25 seeds per packet.

Culture: Soak seeds overnight for quicker germination of this warm-season crop. Plant 1/2 inch deep and allow 12-18 inches between plants. Plants can grow to 4-5 feet tall and will produce until frost.

Seedsaving: This annual is insect pollinated, so varieties will cross. For purity, separate varieties by 800 ft (244 meters). Allow the pods to dry and mature on the plant. Harvest before pods split open. Remove seeds carefully.

Beck's Gardenville An heirloom from San Antonio, Texas. A vigorous, very productive and drought-tolerant plant with green, short, stocky ribbed pods that are tender up to 3" long Indeterminate producer that can be harvested over several months. **OK002 H L S B**

Eagle Pass From the Carrizo Springs/Eagle Pass area in Texas. Good in gumbo or cut and fried. Not slimy or stringy when cooked. Perfect for those who claim they don't like okra! Plants bear large pods beginning near ground level, up to 5'. **OK004 H L S**

Guarijio "Nescafe" From Sonora, Mexico. The beautiful yellow flowers have red throats. The plants are very broad and bushy, with large leaves, and are very productive. Young pods are fried, boiled or added to stews and gumbos. Seeds can be roasted, ground and used as a coffee substitute. **OK001 H L S**

Texas Hill Country Red Attractive plant with beautiful, colorful bronze-red fruit. Produces well in summer heat. Plants are 5-6' tall with dark purple stems. Slender pods can be slivered and eaten raw in salads or cooked. **OK003 H L S**



Guarijio "Nescafe"



Texas Hill Country Red

Okra seeds can only be shipped to Arizona, New Mexico, Oklahoma, and Texas addresses.

Seeds

Onion *Allium cepa*

\$2.95

Onions are a staple for most cuisines and essential in every garden. See listing for packet size.

Culture: Onions prefer well-drained, rich soil, high in organic matter. Water frequently, especially during dry spells.

Seedsaving: Onions produce perfect flowers, yet require cross pollination. Stigmas in each flower become receptive only after its own pollen is shed. Crosses can and do occur between flowers on the same plant, mostly by bees. Separate from other flowering *Allium* of the same species by at least 1,600 feet for satisfactory results.

Australian Brown Superb flavor in a Spanish-type onion that keeps exceptionally well. Medium size with firm white flesh and a waxy brown papery sheath. Intermediate day length, approximately 100 days to maturity. Approx. 1g/200 seeds per packet. **TS145 H L N**

Chives *A. schoenoprasum*. Experience the delicious, fresh, delicate-onion flavor of chives on baked potatoes. Handsome, edible, pink flower globes provide a source of long-lasting cut flowers. 12" tall. Approx. 0.5g/300 seeds per packet. **TS507 H L N**

Evergreen Hardy Perennial Perennial. A delicious bunching onion. Leave some in the garden. Evergreen is a true multiplier onion and will divide itself perennially. Resistance to thrips, smut, and pink root rot. Approx. 1g/425 seeds per packet. **TS140 H L N**

Texas Early Grano Developed in Texas in 1944 to be the perfect eating sweet onion. The mother of modern super sweet onions like Vidalia. Large globe, white flesh, nice flavor. Resistant to pink root rot. Approx. 1g/250 seeds per packet. **TS143 H L N**

Tohono O'odham l'ittoi These wildly popular and prolific multiplier onions were an early introduction to southern Arizona by the Spanish. Today they are eagerly sought out by chefs for their mild shallot-like bulbs and slightly spicy greens. They are very easy to cultivate and in the low desert will grow in response to both winter and summer rains. In cooler regions their growth is in the summer. Rarely flowers; propagate by division of the bulbs. The name l'ittoi signifies the Elder Brother, who is the creator deity in Tohono O'odham legends. Approx. 10 bulbs per packet. **Seasonal Availability Only, beginning mid to late summer; substitution is TS140. B001 H L S F B**

Panic Grass *Panicum sonorum*

\$2.95

A native domesticate of arid America, the grass is used as a forage and the tiny seed harvested for grain. Replace a quarter to half of the flour in recipes with finely ground seed. Approx. 0.5g/500 seeds per packet.

Culture: Plant with summer rains by broadcasting. Rake in. Protect germinating seeds from birds.

Seedsaving: A wind-pollinated annual. Birds love the seed, which is borne in loose heads. Protect with paper or cloth bags. Harvest when dry, strip seeds and winnow off chaff.

Guarijío "Sagui." A rare grass collected by NS/S co-founders Gary Nabhan and Barney Burns during a 2 day burro trek to remote villages in Sonora, Mexico.

The small golden seed is rich in lysine. Attractive plants are fast-growing and heat-tolerant. Birds love it! **O001 H L S F**



Chives



Tohono O'odham l'ittoi



Guarijío

Pea *Pisum sativum*

\$2.95

Nothing is quite as sweet as fresh-picked peas. Introduced by the Spanish. Seed Bank Collection peas can be picked young and eaten fresh, or left to dry on the plant and used like beans for soups, hummus, etc. Pea greens are wonderful in salads. See listing for packet sizes.

Culture: This cool season crop should be planted in the fall or winter in the low desert, or very early spring in cooler climates. Plant 1/2" deep and 6" apart. Plants will sprawl, or climb if supported, and can produce until days get too hot.

Seedsaving: Peas produce perfect, self-pollinating flowers. Cross-pollination by insects is possible but rare because pollination occurs before the flower opens. Ideally, different varieties need to be separated 50 feet or with another crop flowering at the same time. Dried pods can be harvested as they mature or entire plants dried and threshed near the end of the season.

Cumpas Green A smooth green pea from central Sonora, once home to the Opatas. Traditionally used in soups. Approx. 10g/50 seeds per packet. **Q024 H L S B**

New Mexico A typical smooth-skinned, beige Spanish soup pea. Grown throughout New Mexico. Approx. 11g/50 seeds per packet. **Q023 H S**

Oregon Sugar Pod II Snow pea (edible pods). Famous for its sweet, mild flavor. Delicious raw, in stir-fries or steamed "al dente." Tall, 24-30" vines bear smooth, 4" pea pods. Resistant to both pea enation

virus and powdery mildew. Approx. 22g/100 seeds per packet. **TS186 H L N**

Sugar Ann Snap The earliest snap pea. Short 2' vines need no support. Both pods and peas develop well and are exceptionally sweet. Eat fresh in the garden! Approx. 20g/100 seeds per packet. **TS182 H L N**

Velarde A Spanish soup pea with tan seeds. If the pods are picked quite young they make tasty snow peas, eaten pod and all. Or pick and shell before they fully fill the pod, for tender peas with a wonderful fresh flavor. 3-5' vines will need support. Approx. 14g/50 seeds per packet. **Q005 H L S B**

Radish *Raphanus sativus*

\$2.95

Rapidly-maturing, radishes are typically grown for their mild to spicy roots, though their leaves and seed pods are also edible. Approx. 4g/470 seeds per packet.

Culture: Provide shade in summer or plant only in cool season. Plant often for continuous supply.

Seedsaving: Radishes produce annual flowers which require pollination by insects, primarily bees. Satisfactory results for home gardeners require no more than 250 feet of separation. If seed purity is required, separate varieties by 1,600 feet or more.

Easter Egg What colors will you find when you harvest these fast growing radishes? Tasty pink, purple, white and red roots make for an underground treasure hunt, great for the kid in everyone! **TS191 H L N**

French Breakfast The best home garden variety for fresh eating. Crisp, red roots are 3" long with tidy white tips. Flesh is white, crisp and only mildly pungent. Plant early and often. **TS194 H L N**



New Mexico



Oregon Sugar Pod II



Velarde

Seeds

Sesame *Sesamum indicum*

\$2.95

Brought to America from East Africa in the 17th century. Attractive to pollinators, and beneficial as a companion plant for corn and other summer crops. Sesame is also very heat and drought tolerant. Approx. 2g/300 seeds per packet.

Culture: Plant 1/2" deep in moist soil after danger of frost. Tolerates heat & dry conditions once established. Thin to 12-15" apart. Grows 2-6' tall.

Seedsaving: Self-pollinated, but crossing by insects common between varieties. Seeds held within deeply grooved capsules. Continues to produce new flowers and capsules until frost. Seeds mature and shatter while still flowering, so pick dry pods throughout the season to avoid loss.

Benne More flavorful than modern sesame. Leaves used as soup greens; tan seeds flavor rice and baked goods or can be made into flour. High in protein, cal-

cium, iron, zinc, and vitamins. Seed acquired from Anson Mills, preserver of heirloom Southern crops. **TS280 H L N**

Sorghum *Sorghum bicolor*

\$2.95

Originally from Africa. Introduced as a forage, grain and sugar source. The prolific plants are desert-hardy. An excellent cover crop to renew tired soils in arid regions. Stalks are chewed for their sweet juices. Approx. 2g/75 seeds per packet.

Culture: In the spring or with summer rains, broadcast seed and rake in, or plant 1/2 inch deep and 10 inches apart. Thin to allow space, as plants will tiller (sprout stalks from base).

Seedsaving: A wind-pollinated annual, so varieties will cross. Bag seedheads with paper or cloth bags to protect them from birds. Strip dry seeds from stem and winnow.

Caña Ganchado Grown by the Guarijío in Sonora. Seeds are dark maroon and the sweet canes can be 6' tall. **S007 H L S B**

eaten as a nutty, tasty snack. Originally collected from Batopilas Canyon in the Sierra Madres of Mexico. Flour is nutritious and gluten free. **S005 H L S B**

Gila River Kaña Collected from Sweetwater on the Gila River Indian Reservation. Grown for the sweet cane. Cut stalks into small pieces, split open and suck the juices out. **S014 L S B**

Texas Black Amber Molasses An heirloom from Waco, Texas. Plump black seeds. Used for molasses and silage. **S006 H L S B**

San Felipe Pueblo Grown as "sugar cane," these stalks are chewed as a sweet treat. Dark black seeds, and plants up to 5' tall. **S011 H S B**

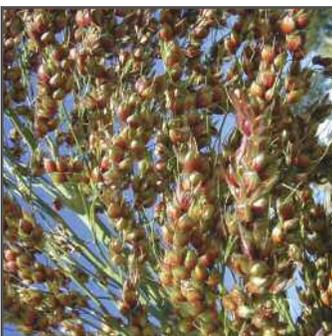
Tohono O'odham "Ka:na." Produces a mix of red and black seedheads. Crosses with *S. halapense*, Johnson grass. **S002 H L S B**

Tarahumara Popping The white seeds are traditionally popped and ground into flour. Popped seeds can be

White Mountain Apache A red-seeded sorghum from Cibeqe, Arizona. **S010 H S B**



Texas Black Amber Molasses



Tohono O'odham



White Mountain Apache

Squash *Cucurbita* spp.

\$2.95 Unless otherwise indicated

Squash fruits vary in shape, color and flavor. Flowers, seeds and growing tips of vines are all edible. All fruits (especially *C. argyrosperma* and *C. pepo*) can be eaten when small and immature as summer squash, and mature as winter squash. Approx. 4.5g/15 seeds per packet unless noted otherwise.

Culture: In spring after soil warms, or with summer rains, sow a few seeds 1" deep in basins 3-6' apart, allowing room for abundant vine growth. Squash likes soil rich in compost.

Seedsaving: An insect-pollinated annual, varieties of the same species will cross. Allow fruits to ripen and mature on the vine until skin is hard and stem brown. After harvesting, fruit needs to after-ripen for 30 days in cool location. Remove seeds, wash and dry before storage.

Cultural Varieties: Some of our squash and melons exhibit a diversity of fruit types within a population. Although it may appear that a grower has allowed varieties to cross-pollinate, and did not maintain the purity of the strain, we have found that this is a cultural mixing. Traditional gardeners and farmers intentionally grow a mix of fruit types to add variety to their harvest and diet. When saving seeds from a diverse planting, gardeners can continue to select for desirable fruit types. Save seeds from the best-tasting squash, the healthiest plants, fruits that stored well, and other plants with the characteristics you want.

Apache Giant *C. argyrosperma*. The large pear-shaped fruits are green-striped, often with patches of brilliant orange, and weigh up to 40 lbs. **EA010 H S**

Calabaza Mexicana *C. argyrosperma*. Pear or flattened pumpkin-shaped fruits are white with green stripes turning yellow-orange, with pale colored flesh and Taos-type seeds. Collected from the region around Espanola, New Mexico, at 5,500'. **EA013 H S B**

Escondida Calabaza *C. maxima*. From Escondida, New Mexico at 5000'. Fruits 4-15 lb., oblong or rounded with

slight ribbing and cream to light orange skin. Flesh is yellow-orange. **EX007 H S**

Grey Zucchini *C. pepo*. A great summer squash for western regions. Stores well and has an excellent flavor. Approx. 2g/20 seeds per packet. **TS332 H L N**

Magdalena Big Cheese *C. moschata*. One of the oldest types of cultivated squash. Excellent producer of large, light orange, ribbed fruits with a flattened pumpkin shape (like a wheel of cheese) and sweet, bright orange flesh. **EM031 H L S F**



Apache Giant



Calabaza Mexicana



Escondida Calabaza



Magdalena Big Cheese



Mayo Kama



Moctezuma Cushaw

Seeds

More Squash

Mayo Kama *C. moschata*. Butternut-shaped fruit with orange- to salmon-colored flesh, good squash flavor but not sweet. Productive even in the Phoenix heat. From Sonora, Mexico. **EM032 H L S B**

Moctezuma Cushaw *C. argyrosperma*. Large green and white striped fruits. Collected from an Opata farmer in Moctezuma, Sonora. Apricot flesh, stringy similar to spaghetti squash. Large, knobby peduncles or stems. **EA042 L S B**

Navajo Orange Hubbard *C. maxima*. Unusual pink-orange skinned fruit with pink-grey mottling. Thick orange flesh. Fruit shapes include elongated, round with pointed ends, and round spheres. Originally collected at a Navajo fair in northern New Mexico. Approx. 3.5g/15 seeds per packet. **EX016 H S**

Navajo Small Pumpkin *C. pepo*. Small orange pumpkins are approximately 8" in size. A mix of deeply incised shapes: round, elongated and acorn. Great option for children's gardens or fall décor. Originally from the Big Mountain area of Navajo country in northern AZ. **EP051 H L S M**

Nogales Cushaw *C. argyrosperma*. Large fruits are round with either long or short necks. Flesh is orange. Pick as a summer squash when young or a winter squash when large. **EA045 H L S**

Pacheco Pumpkin *C. pepo*. From the northern plains of Chihuahua. Typical round to elongated 'native

pepo' with bright yellow skin and delicious cream-colored flesh. **EP046 H S**

Papalote Ranch Cushaw *C. argyrosperma*. Small, dark-green cushaws with varied shapes. Tasty and versatile. Good keeper with very thick skin. Collected at Papalote Ranch in southern Arizona, but originally from Mexico. **EA021 H L S B**

Silver Edged *C. argyrosperma*. Grown for the tasty seeds, which are large and white with a silver edge. Seeds are roasted for pepitas or used in pipian sauce. The beautiful round, flattened fruits are white with prominent green mottled stripes. Flesh is unpalatable. **EA015 H L S B**

Tarahumara *C. pepo*. Pumpkin-shaped medium-sized fruits are cream- and green-striped with beige ribs. Very sweet, great tasting and productive. **EP042 H L S**

Tohono O'odham "Ha:l" *C. argyrosperma*. A very heat tolerant and rapidly maturing squash from the Tohono O'odham Nation. Traditionally blossoms are mixed with wheat flour to make a porridge and seeds roasted for snacks. Prized for the immature fruits, "Ha:al mamat" ("children"), which resemble zucchini. Mature fruits have light orange flesh, mild flavor, starchy texture, and store well. The flesh can also be sun dried and boiled to soften. **EA014 L S F**

Vadito Pumpkin *C. maxima*. Gray or orange spherical fruit with sweet orange flesh. Fruits often have pointed



Navajo Small Pumpkin



Pacheco Pumpkin



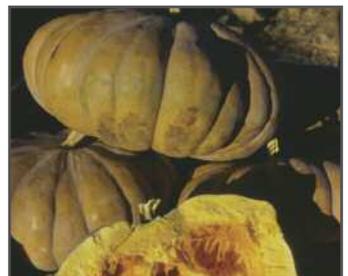
Silver Edged



Tarahumara Pumpkin



Tohono O'odham "Ha:l"



Yoeme Segualca

More Squash

ends some warty and some elongated in shape. From Vadito in northern New Mexico at 8000. **EX018 H S**

Waltham Butternut *C. moschata*. 8-10" fruits with deep, buttery-smooth orange flesh inside hard tan skins. One of the best storing winter squashes. An American favorite that does quite well in the southwest. Approx. 2g/20 seeds per packet. **TS331 H L N**

Wild Cushaw *C. argyrosperma* var. *sororia*. Called Coyote Breasts or Trickster Breasts. Bitter juice of fruits is reputedly used for weaning infants. Produces a small, 5 inch round green-striped fruits. Will cross with domes-

ticated cushaw squash (*C. argyrosperma*). A fun experience with agricultural history. **EA040 L S**

Yellow Crookneck *C. pepo*. Tender, yellow squash with gracefully arched stems. Firm texture. Buttery flavor. Harvest early as baby squash or wait until 5-6" long for slicing. Approx. 2g/20 seeds per packet. **TS333 H L N**

Yoeme Segualca *C. moschata*. Collected from the Yoeme village of Vicam, Sonora. Fruit are large, muted-orange colored, and fluted with a flattened shape. Excellent taste. Like other *C. moschata* varieties, may require a long growing season. **EM040 H L S**

Sunflower *Helianthus* spp.

\$2.95

A Native American domesticated, the seeds are eaten raw or roasted, pressed for oil, planted as an ornamental or for bird feed. Approx. 2-3g/25 seeds per packet.

Culture: Plant seeds in the spring or with the summer rains, 1 inch deep and 12 inches apart. Plants can grow 6-8 feet tall.

Seedsaving: Sunflowers are insect-pollinated annuals, and all varieties will cross. Protect maturing seed heads from the birds with paper sacks or cloth bags (pillow cases work great). Allow seeds to dry in the flower heads. Rub out seeds and winnow off chaff.

Conservation Farm Mix An open-pollinated mix of NS/S varieties planted at the Conservation Farm to attract pollinators and beneficial insects as well as for windbreaks and shade. Heads reach up to 12 inches in diameter and 8 feet tall. Includes single flower heads as well as branched diversity with multiple small-medium sized heads. Grow for the wonderful edible seeds! A mix of seed sizes will be black, white, or striped. **I050 H L S B**

Havasupai Small-Seeded Collected at Havasupai, this sunflower has black seeds that are much smaller than any of our other sunflowers. It is a branch variety that has numerous small heads per plant. It was originally collected in the mid-80s and sent to the USDA. We obtained a sample in 1983. **I014 H L S M**

Hopi Black Dye Called "Tceqa" by the Hopi, the blue/black hull is used for wool, basket dye, and eye medicine, but the seeds are also edible. Flower heads are medium to large sized. Beautiful, and extremely popular. **I003 H L S F M**

Hopi Branched Plants have many branches with small heads rather than a single stalk. Produces a mix of solid and striped seeds. Originally collected in lower Moenkopi. **I012 H L S M**

Tarahumara White This rare variety with solid gold flowers has all-white hulls. Medium- large sized heads, ca. 8" across. Plants 6-10'. Canadian Mennonite in origin but grown by the Tarahumara from Chihuahua for more than 40 years after some Mennonites relocated to Chihuahua. Very beautiful. **I005 H L S**



Conservation Farm Mix



Havasupai Small-Seeded



Hopi Black Dye

Seeds

Tobacco *Nicotiana rustica*

\$4.95

Tobacco, used as a sacred and medicinal herb, is an important part of Indian culture and folklore. Can be used as an organic insecticide (with appropriate caution). Approx. 0.1g/125 seeds per packet.

Culture: Plant the tiny seeds in the spring, cover very lightly with sandy soil. Requires warm moist soil to germinate. Can be started indoors and transplanted. Plant seedlings 1' apart.

Seedsaving: An insect-pollinated annual, varieties will cross. Remove mature seedheads and crush capsules in a bag or on a tray. Use a fan or light breeze to remove chaff.

Isleta Pueblo From the pueblo south of Albuquerque, New Mexico. Plants grow to 4.5', including flowers. **N006 H S B**

Mountain Pima Collected in the Mt. Pima region of western Chihuahua. It is commonly grown in plots or gardens around the house and used for smoking. Delicate pink-tinged flowers and huge leaves! **N010 H S**

Papante Tall plants (over 5') with large deer ear-shaped leaves and large seed capsules. From Piedras Verdes, Sonora. **N008 H L S**

Punche Mexicano From northern New Mexico, this tobacco was used by early Spanish settlers until the 1930s. **N001 H L S B**

Santo Domingo Ceremonial A cultivated annual grown in irrigated gardens by various Pueblos. Used in rain ceremonies. **N003 H L S F B**

Tarahumara El Cuervo From a very isolated area of Batopilas Canyon, Chihuahua. Smoked traditionally by older Tarahumarans. **N004 H L S B**

Tomatillo *Physalis philadelphica*

\$2.95

Tomatillos, "husk tomatoes," are used to make traditional and savory green salsas and stews. Related to ground cherries and Cape gooseberries. Approx. 0.1g/25 seeds per packet.

Culture: In the spring after all danger of frost, plant seeds directly in the garden 1/4 inch deep, or start indoors and transplant. Allow 15 inches between plants.

Seedsaving: Flowers are both insect and self-pollinated, and varieties can cross. Tomatillos begin to ripen when they turn from green to light yellow. When the husk is dry and begins to split open at the bottom, the fruit can be harvested for seed. To remove seeds, puree ripe fruit with water in blender. Pulp will rise and seeds will sink.

Mexicali Originally collected in 1986 at a truck stop in Mexicali, Mexico, by a long-time board member. The largest tomatillos in our collection. Good for salsa. **TM010 H L S M**

Mountain Pima Husked fruit are small and plants are somewhat sprawling. Commonly used in salsa. **TM011 H S B**

Tepehuan Small fruits on weedy plants. Collected in Nabogame, Chihuahua, a remote mountainous region. Our collectors were served these tasty fruits with their beans for breakfast. **TM002 H L S B**

Zuni The small sweet fruit has been semi-cultivated by the Zuni for more than a century. Can be roasted in an oven, then blended with garlic, onion, chile and cilantro as a hot sauce delicacy. **TM003 H L S F**



Mexicali



Tepehuan



Zuni

Tomato *Solanum lycopersicum*

\$2.95

Originally domesticated in the Andean region of South America, the modern cultural and nutritional importance of tomatoes worldwide is difficult to exaggerate. Approx. 0.1g/25 seeds per packet unless otherwise indicated.

Culture: In the spring after danger of frost is past, plant seeds directly in the garden 1/4 inch deep, or start earlier indoors and transplant. Allow 15 inches between plants.

Seedsaving: Flowers are both insect and self-pollinated, and varieties can cross. Bag flowers or separate by 10 feet (3 meters) to prevent crossing. To remove seeds, puree ripe fruit with water in blender. Pulp will rise and seeds will sink.

Chichiquelite *S. melanocerasum*. Not actually a tomato but a solanum cousin. Collected from Piedras Verdes, a Mayo community in Sonora, Mexico. Commonly called the garden huckleberry, the leaves are cooked (do not eat raw!) and the shiny black berries are edible and delicious. Delicious for pies, jellies, and jams but do require more sweeteners than other berries. Berries are 1/2 to 3/4 inch in diameter and produce abundantly over a long season. Do not eat unripe green berries. Originated in the tropics of western Africa. Approx. 100 seeds per packet. **GR012 H L B**

Ciudad Victoria *S. lycopersicum* var. *cerasiforme*. A weedy, semi-cultivated tomato from dooryard gardens in Ciudad Victoria, Tamaulipas. Tiny round, sweet fruit are late maturing and very prolific. **TM005 H L S B**

Flamenco A cross between Silvery Fir Tree for earliness and feathery foliage and Floridade for heat and disease resistance. The result is a semi-determinate 4' bush loaded with highly flavored 2", red round fruits. Nice acid/sweet balance and great flavor. Continues to produce in hot weather when others stop. Performed very well in our 2012 trials in both Tucson and Patagonia, Arizona. **TS340 H L N F**

Nichols Heirloom These seeds were sent to us by the Nichols family in Tucson. Volunteer seeds that just kept coming up, they had been maintained by the family patriarch for about 50 years. It is well adapted to the desert: heat-tolerant and prefers full sunlight. These "pink cherry" tomatoes are prolific producers. **TM014 H L S F M**



Chichiquelite



Ciudad Victoria



Flamenco



Nichols Heirloom



Punta Banda



Texas Wild Cherry

Seeds

More Tomato

Prescott Heirloom Given to us by a member of a family that had lived for many generations in Prescott, Arizona. The fruit are large, red, oval and quite fleshy. The thick flesh suggests that they may be good for canning. **TM013 H S B**

Punta Banda Collected on the Punta Banda Peninsula in Baja California. Plants produce hundreds of red meaty, thick skinned fruits despite heat, water stress and poor soil. Great paste tomato. Performed impressively in our 2012 trials in Tucson, producing

throughout the summer despite full exposure and harsh conditions. Renowned for its early maturity. **TM007 H L S F**

Texas Wild Cherry All that we really know is that seed of this tomato was collected from a patch of apparently "wild" tomatoes in southern Texas. Sprawling plants produce tons of small, tasty, cherry-type tomatoes. Early-maturing and very productive! One of the stars of our 2012 tomato trials in Patagonia, Arizona (4,000'). **TM012 H L S F**

Watermelon *Citrullus lanatus*

\$2.95

Fruits vary in size and color of flesh and rind. Seeds are eaten and used for their oil. Approx. 1.5g/15 seeds per packet.

Culture: In spring after soil warms or with summer rains, plant seeds 1/2–1" deep, 3 seeds per basin, allowing ample room for vines. Plants need a long growing season and rich soil with more compost added as they grow.

Seedsaving: An insect-pollinated annual. Varieties will cross. Male and female flowers develop on each plant. Ripe fruits have a hollow sound when tapped and a yellowing patch on the bottom. Also look for dried tendrils next to the stem. Scoop out seeds of fully ripe fruit, wash thoroughly and dry.

Crimson Sweet Bright red color, fewer and smaller seeds and an above average sugar content. An oblong member of the "picnic" family of watermelons. Commonly weighs 20-30 lbs. Resistant to anthracnose and fusarium wilt. Highly adaptable. **TS263 H L N**

Hopi Yellow "Sikyatko." The green-striped fruits have pale yellow/orange flesh (occasional plants produce red-fleshed fruit). Large fruit with crisp, sweet taste. **G002 H L S F B**

Jemez Striped green fruit may vary from pale to dark green. Red flesh. Considered a native watermelon, but introduced 400 years ago. **G014 H S B**

Mayo Originally collected from Mayo farmers in Los Capomos, Sinaloa, Mexico. Prolific vines produce round and oblong melons of various rind colors all summer. Red flesh is sweet. **G005 H L S B**

Navajo Red Seeded A good-tasting watermelon, sweet but not too sweet. Round fruits, light red to pink flesh and red seeds. Produced well in Phoenix under the care of one of our partner-farmers. **G009 H L S**

Tohono O'odham Yellow-Meated A high yielder of green oval fruit with sweet and crisp yellow to orange flesh. Fruit can be up to 35 lb. Originally collected at Queenswell, Arizona. Stunningly delicious. The best watermelon we've tasted, period. **G003 L S F**



Mayo



Navajo Red Seeded



Tohono O'odham

Wheat *Triticum aestivum*

\$2.95

A native of the old world, wheat was introduced to the Southwest by Father Kino as he established the "Missionary Trail". These grains were quickly integrated into the winter fields of indigenous farmers, where they thrived until the early 20th Century. Traditionally, wheat was roasted and ground to make pinole or stretched to make thin wheat flour tortillas (*chemait*). Wheat berries are also cooked with teparies to make poshol. Approx. 28g/700 seeds per packet.

Culture: In the low desert, plant in December through January for harvest in dry months of May & June. Broadcast and rake in seed, then lightly pat soil. If birds are a problem, cover very thinly with straw and sticks. Keep moist until sprouted.

Seedsaving: A self-pollinating annual. Birds love the ripe seeds, so protection may be necessary. Harvest when dry; strip stems or walk on seedheads to remove seeds and winnow off chaff.

Pima Club At one time grown by the Pima on the Gila River Reservation. Seed heads are short, beardless and club shaped (flattened). White kernels are soft and produce flour used for cookies and pastry. **WH003**
H L S B

White Sonora A beardless soft spring wheat. Brought to the U.S. from Magdalena in northern Sonora, where it has been grown since around 1770. Common among the Pima and Yuma after 1820. Highly adaptable, nutritious, delicious, and versatile in the kitchen. **WH001**
H L S B

Pie Crust

This recipe uses 65% whole wheat flour, which provides the flavor and nutrition of heritage grain but is still light and flaky. Makes one 10-inch crust.

1 cup whole soft white wheat flour
½ cup pastry flour
5 tablespoons very cold butter
2 tablespoons very cold shortening (coconut oil, palm oil)
½ teaspoon salt
4-6 tablespoons ice-cold water

Mix the flours and salt in a medium glass bowl. Dice butter and shortening, then mix into the flours using a pastry cutter or food processor until fat is the size of peas. Add water one tablespoon at a time and combine until mixture just comes together. Press the dough together gently into a thick disk, wrap in plastic and refrigerate at least 4 hours or overnight (whole grain flours need the extra time). Let rest at room temperature for 20 minutes before rolling and baking.

Recipe courtesy of Joy Hought, NS/S staff member.

Baking with Soft Wheat

Even though they are grown over the winter in our mild climate, both Pima Club and Sonora White varieties are classified as soft white spring wheats. Compared to hard red winter wheats used for bread-baking, soft spring wheat kernels have a softer starch structure, are ground more easily, absorb more water, and have lower protein. This makes whole grain flours from both Sonora and Pima wheats very well-suited to baked goods like tortillas, empañadas, scones, cakes, pancakes, crackers, and piecrusts. Soft flours can also be mixed with higher-protein all-purpose and bread flours for added flavor, texture and color in yeasted or fermented breads.



Pima Club



White Sonora

Arizona-grown wheat and flour products from BKW Farms, Hayden Flour Mills, Ramona Farms, and San Xavier Coop Farms, are available at the Native Seeds/SEARCH retail store and nativeseeds.org



Desert Wildflower Seeds

Wildflowers are a wonderful addition to any garden. They provide splashes of color and are a food source for bees, butterflies, and other beneficial insects. Two sizes are available — the small size (A) is 1–1.5g and covers approximately 30 square feet; the large size (B) is 0.5oz and covers approximately 100-200 square feet. Note: Wildflowers are not part of the NS/S seedbank collection.

Culture: Most desert wildflowers are planted in fall/winter in the desert, early spring in cooler climates. Planting instructions are included on the packets of these lovely native Southwestern desert wildflowers.

Seedsaving: Allow flowers to fully mature, dry and drop their seeds in place. Or collect the dried pods by hand, crush the pods and winnow away chaff before storing.

Arroyo Lupine *Lupinus succulentus*. Beautiful spikes of violet-blue, pea-like blooms. Plant fall to early spring. \$2/pkt **WF017A** or \$12/oz **WF017B**

Blue Flax *Linum lewisii*. Perennial herb blooms sky blue with 5 petals from April to September. Used for fiber. Plant fall to spring. \$2.50/pkt **WS030**

Brittlebush *Encelia farinosa*. Perennial shrub, blooms with yellow composite flowers in early spring. Sap from stems was used to make a burnable incense. \$2/pkt **NSC031**

California Poppy *Eschscholzia californica*. This bright golden blossom is the official state flower of California. It is drought-tolerant, self-seeding, and easy to grow. Best grown in full sun and sandy, well-drained, poor soils. Plant fall to early spring. \$2/pkt **WF001A** or \$12 (0.5oz) **WF001B**

Colored Globemallow *Sphaeralcea ambigua*. This multi-stemmed mallow is a good source of pollen and nectar for honey bees. Plants are usually 2-4' tall with

blooms in shades of pink and lavender. Plant fall to early spring. \$2/pkt **WRA052** or \$12/oz **WRB052**

Desert Blue Bells *Phacelia campanularia*. Low growing, blue-violet flowers with yellow stamens look like little bells. Plant fall to early spring. \$2/pkt **WF019A**

Desert Lupine *Lupinus sparsiflorus*. This is a showy purple lupine native to Nevada, Arizona, California, Sonora, and Baja California. The multiple purple blossoms on a tall spike contrast nicely with palmate pale green leaves. This desert wildflower prefers deep well-draining sandy soils and lots of sun. Plant fall to early spring. \$2/pkt **WF004A** or \$12 (0.5oz) **WF004B**

Desert Marigold *Baileya multiradiata*. Lemon yellow flowers on long stems with gray green foliage. Blooms mainly in the spring and after summer rains. Plant fall to early spring. \$2/pkt **WF016A** or \$12/oz **WF016B**

Firecracker Penstemon *Penstemon eatoni*. Bright red flowers that attract hummingbirds. Will bloom March through July depending on water. Plant early fall to winter. \$2.50/pkt **WS024**



Arizona Poppy



Desert Blue Bells



Desert Marigold

Firewheel *Gaillardia pulchella*. Firewheel has 2" diameter daisy-like flowers that are deep red with yellow tips. Blooms March through September. Plant in fall. \$2/pkt **WF014A** or \$12/oz **WF014B**

Mexican Evening Primrose *Oenothera speciosa*. Low growing perennial with bright pink, cup-shaped flowers. Plant anytime. \$2/pkt **WF018A** or \$12/oz **WF018B**

Mexican Gold Poppy *Eschscholtzia mexicana*. The most popular, most photographed golden desert wildflower. Plant fall to early spring. An annual, this flower will readily reseed. \$2/pkt **WF035A** or \$12/oz **WF035B**

Mexican Hats *Ratibida columnaris*. The colorful 1.5" sombrero-shaped flowers generally appear April to November. Easily grown from seed. Plant fall to early spring. \$2/pkt **WF036A**

Palmer's Penstemon *Penstemon palmeri*. Beautiful white flowers tinged with pink or lilac. Has a delicate, inviting fragrance. Grows in washes and along road-

sides at 3,500-6,000'. Plant fall to early spring. \$2/pkt **WF013A**

Parry's Penstemon *Penstemon parryi*. A favorite of hummingbirds, this tall perennial has rose colored, bell shaped flowers. Plant fall to early spring. \$2/pkt **WF012A** or \$12/oz **WF012B**

Summer Poppy *Kallstroemia grandiflora*. These handsome summer wildflowers superficially resemble poppies but are not related. In Arizona they are most commonly found in desert grasslands below 5,000'. It is a handsome sprawling plant (up to 3' across) with showy orange five-petal flowers that sport a bright red center. Plant before humidity begins to rise in the summer. \$2/pkt **WF003A** or \$12 (0.5oz) **WF003B**

White Evening Primrose *Oenothera pallida*. Especially suited to hot dry gardens with well-drained soils. The large showy pale showy flowers and dark green foliage are just part of what makes this a gardeners' favorite. The fragrance seals the deal! Perfect for rock gardens and edging, drought tolerant once established. Perennial. Plant in fall. \$2/pkt **WF006A** or \$12/oz **WF006B**

Desert Wildflower Blends

Butterfly Garden Mix A mix of colorful and fragrant flowers that will attract butterflies to your garden. This blend of spring and summer blooms contains 13 varieties including Desert Lupine, Marigold, Showy Penstemon, California Poppy, Cornflower, Coreopsis, Firewheel, and Maximilian Sunflower. \$2/pkt **WF029A** or \$12 (0.5oz) **WF029B**

Cut Flower Wildflower Mix Fifteen wildflowers perfect for cutting but also beautiful in your yard. Includes Scarlet Sage, Firewheel, Larkspur, Purple Coneflower and more. Plant fall to early spring. \$2.50/pkt **WS016**

Desert Tortoise Mix A mix of Southwest native wildflowers favored as food by desert tortoises. Includes 10 species including Summer Poppy, Desert Marigold, Evening Primrose, and Globemallow. \$2/pkt **WF009A** or \$12 (0.5oz) **WF009B**

Desert Wildflowers for Beginners The perfect easy-to-grow mix for new gardeners. Includes California Poppy, Red Flax, Bluebells, Firewheel, Mexican Hats. Plant in fall to early spring. \$2.50/pkt **WS068**

For the Birds & Bees Wildflower Mix Especially chosen to attract birds, butterflies, bees & Sphinx Moths. Includes Blackfoot Daisy, Desert Sunflower, Butterfly

Weed, Rocky Mt. Bee Plant, Penstemon and more. Plant fall to early spring. \$2.50/pkt **WS017**

Great Basin Wildflower Mix Especially mixed for Prescott, Payson, southern Utah, Santa Fe, and similar habitat. Contains 13 different wildflowers including Buttonroot Snakeweed, Purple Coneflower, and Mexican Hats. \$2.50/pkt **WS025**

Mogollon Rim Wildflower Mix For Flagstaff and locations above Arizona's Mogollon Rim. Best at elevations of 6500-9000'. The different wildflowers include Gold-pea, Locoweed and Tall Verbena. (*Locoweed not recommended in livestock areas.*) \$2.50/pkt **WS026**

Summertime Mix A blend of southwest wildflowers that bloom in the late summer months. 6 blooms in hot colors, including Desert Marigold, Arizona Poppy, Yellow Mexican Hat and Firewheel. \$2/pkt **WF010A** or \$12 (0.5oz) **WF010B**

Southwest Native Mix This colorful annual and perennial mix contains 13 summer and spring blooming wildflowers native to the Southwest, including Desert Bluebells, Arroyo Lupine, Firewheel, Yellow Mexican Hat, California Poppy, and two Penstemons. \$2/pkt **WF011A** or \$12 (0.5oz) **WF011B**



Firewheel



Parry's Penstemon



White Evening Primrose



Celebrate Tucson:

City of Gastronomy

NS/S supports local businesses who grow and/or process foods from the Southwest region by offering their products for sale. Check these out and many more at our retail store in Tucson and online at nativeseeds.org.

Ciolim (Chee-or-lim) Dry Cholla Buds from San Xavier Co-op Farm

- * 1.6 oz jar **SXC005 \$10.00**
- * 3.2 oz jar **SXC006 \$20.00**

Tepary Beans from Ramona Farms 24oz pkg \$9.00

- * Brown **FD061.24oz**
- * White **FD261.24oz**

Whole Chiltepinos from Chiltepinica

- * 1/8th oz bag **CS008 \$3.00**
- * 1oz bottle **CS012 \$14.00**

Sonoran Granola from Bird's Nest Baking Company With prickly pear, amaranth and mesquite. *Please specify:*

- * 2 oz **BNB001 \$4.00**
- * 12oz **BNB002 \$12.00**

Sweets from Cheri's Desert Harvest

- * Prickly Pear Candy **CDHCA001 \$3.00**
- * Prickly Pear Jelly 2 oz **CDHH003 \$3.00**
- * Prickly Pear Jelly 5 oz **CDH051 \$4.00**
- * Jalapeño Jelly 5oz **CDH040 \$4.00**

Teas from Desert Decadence

- * Desert Mint White Sage **FD311 \$4.50**
- * Pomegranate Cranberry **FD312 \$4.50**
- * Prickly Pear Cactus **FD320 \$4.50**
- * Saguaro Blossom **FD310 \$4.50**

White Sonoran Whole Wheat Berries from Flor De Mayo * 8oz pkg **FDM912 \$5.00**

White Sonora Wheat Flour from Hayden Flour Mills

- * Arizona Rose All Purpose 2.2 lbs **HFM010 \$12.00**
- * Type 00 Pastry 1.6 lb **HFM001 \$10.00**

City of Gastronomy Gifts

A tasty selection of foods that are central to Tucson's rich gastronomic history. Includes recipe sheets and information about Tucson's UNESCO designation.

"Chico" Includes 24 oz pkg white tepary beans, 1/8th oz bag whole chiltepinos, 1.6 oz jar dry cholla buds, 8 oz pkg White Sonoran Wheat Berries in a green gable gift box. **COG001 \$25.00**

"Grande" Includes 16 oz pkg each white and brown tepary beans, 1/8th oz bag whole chiltepinos, 1.6 oz jar dry cholla buds, 8 oz pkg White Sonoran Wheat Berries, and 1 tin Mano y Metate Mole Dulce in a green gable gift box. **COG002 \$40.00**

"Extra Grande" The same contents as the Grande, but in a Mayo handmade wire basket. **COG003 \$54.00**

WIN a Grande Gift Box!

(see details on page 51)

Your Membership Supports Our Work

Native Seeds/SEARCH is a nonprofit organization that seeks to find, protect, and preserve the seeds of the people of the Greater Southwest so that these arid adapted crops may benefit all peoples and nourish a changing world.



We envision the Greater Southwest as a place where farms and gardens, kitchens and tables, stores and restaurants are brimming with the full diversity of aridlands-adapted heirloom crops; people are keeping the unique seeds and agricultural heritage alive; and the crops, in turn, are nourishing humankind.

Win a City of Gastronomy Grande Gift Box!

Join or upgrade your membership at the Gourd Level or higher by Feb 28, 2017 to be automatically entered in one of four monthly drawings for this gift box. Join online at nativeseeds.org, by phone (520.622.0830), at our retail store (3061 N Campbell Ave in Tucson), or by mailing the membership form (p. 54) in the enclosed envelope.

Celebrate Tucson: City of Gastronomy

Native Seeds/SEARCH was recognized by the United Nations when they designated Tucson as our country's first "World City of Gastronomy" in late 2015. To some, gastronomy might mean fancy or edgy restaurants, but for the United Nations Educational, Scientific and Cultural Organization (UNESCO) it is so much more. It is a celebration of all foodways — and Tucson, the home base of NS/S, has a rich and diverse history around food.

Residents have grown crops along the Santa Cruz River for the last 4,000 years, making it one of the oldest continuously farmed landscapes in the United States. Our food traditions have been influenced by the many people who have lived here, including Tohono O'odham and Yoeme (Yaqui) farmers. Among their traditional foods which are still savored today are cultivated crops like tepary beans, and many wild harvested foods like ciolim (pronounced Chee-or-lim) AKA cholla buds (the cactus flower bud), and wildly spicy chiltepin peppers. Chiltepins have been called "the mother of all chiles" because most domesticated chiles from the new world descended from this tiny but mighty pepper.

Besides these very ancient and wild foods, Tucson's gastronomy has been greatly influenced by the Spanish who occupied the area for centuries, bringing with them foods from the old world such as Sonoran White Wheat, pomegranates, and figs. Likewise, indigenous people from Central and South America brought many influences like chocolate and the chiles found in rich mole sauces.

Today, and thanks to the work of many, we can still taste these foods along with the food traditions of others who make up the rich tapestry of Tucson's gastronomy. Native Seeds/SEARCH has supported these traditions and foods through conserving the diverse seed heritage of the region, and continues to do so through promoting, distributing, and educating about these crops and more.

Important Ordering Information

Please put quantity ordered, item number, and item name on order form.

Keep a copy of your order. If you have any missing items or problems, it helps if you can identify your order. Please retain your catalog for reference.

We accept checks or money orders drawn on US Banks. For your own safety, please do not send cash. Our website accepts PayPal. We accept credit card orders (Visa, MasterCard, Discover/Novus) by mail, phone, our secure website, and in our store. Our toll free number is 1.866.622.5561 x113 — please note we are closed on weekends and major holidays.

We are a nonprofit organization promoting seed conservation. Your dollars support our mission. We do not charge tax on any orders.

We have limited quantity of some seeds and may need to limit your order. On occasion it may be necessary to substitute seed varieties. Please contact us if you are unsatisfied with your seeds or if you would like additional information to help with your selections.

We ship via USPS unless otherwise specified.

We are unable to ship via UPS to P.O. Boxes.

Okra and Cotton seeds can only be shipped to Arizona, New Mexico, Texas, and Oklahoma addresses.

Shipping & Handling Charges

We ship nationwide and to Canada

Shipping & handling charge for seed orders

Native American Orders \$3.95 U.S. Orders \$5.95 Canadian Orders \$8.95

Shipping & handling charge for food, books, or other items

We will always choose the most inexpensive shipping option. Here are two common sizes and their prices:

Medium Flat Rate Box 11" x 8.5" x 5.5" **\$14** OR Large Flat Rate Box 12" x 12" x 5.5" **\$18**

Please call 1-866-622-5561 x 113 if you are unsure about your shipping charges.

Gift Packaging

Choose any items from the *Seedlisting* and add \$5 for special NS/S presentation (gable box, cellophane bag, logo box). We will choose best fit.

Holiday shipping: Be sure to get your order in by December 9 for delivery by December 25

Every Seed Counts, Every Donation Counts BECOME A MEMBER

By supporting Native Seeds/SEARCH you are helping to conserve a diversity of crops that are uniquely adapted to the challenging growing conditions of the Greater Southwest. These crops represent an irreplaceable genetic resource for global food security concerns as well as a priceless collection of cultural heritage. Your membership supports the conservation and distribution of this arid-adapted crop diversity.

Your Membership Benefits:

- * Access to member's only seed varieties designated with **M** throughout the catalog
- * A 10% discount on all product and seed purchases
- * Early access to NS/S plant sales
- * Discounted tuition to educational workshops and courses
- * Invitations to special events
- * Our annual *Seedlisting* catalog

Join, renew, or donate online at nativeseeds.org

or fill out this form and mail with payment to: NS/S, 3584 E. River Road, Tucson, AZ 85718

Name(s)

Address

City/State/Zip

Email

Phone

Membership Level (check one):

- Squash \$35
- Gourd \$50
- Bean \$100
- Chile \$250
- Corn \$500
- Sunflower \$1,000
- Student/Low Income \$20
- Native American *Free within Greater SW*
- Native American (Non-SW) \$20

*Your privacy is important to us. We will not sell or trade your name, email, or other information with anybody.
Some portion of your membership may be tax-deductible. Please consult with your tax adviser.*

Payment method

Check Money order Visa MasterCard Discover

Card no.: _ _ _ _ - _ _ _ - _ _ _ _ _ Exp.: _ _ / _ _

Print name as shown on card _____ Security Code: _ _ _

Billing address (if different from above): _____

Seed Collections

Get a set of diverse varieties in your area of interest at a reduced price. Collections may include both seed bank and non-collection varieties (see page 5 for information). Each variety is individually packaged. Substitutions may be necessary. Visit nativeseeds.org for a complete list of seeds included.

Chile Gardens 9 pkts **SC001 \$24.95**

Container Garden 9 pkts **SC006 \$24.95**

Herb Garden 9 pkts **SC007 \$24.95**

Heritage Garden (All Seed Bank collection varieties). 8 pkts **SC008 \$24.95**

Low Desert Wildflower Garden 8 pkts **SC009 \$14.95**

Monsoon Garden 9 pkts **SC004 \$24.95**

Southwest Cool Season Garden 12 pkts **TS601 \$29.95**

Southwest Warm Season Garden 12 pkts **TS600 \$29.95**



Complete Garden Collection

Each waterproof, sealed, metal can contains 29 individual packets of open-pollinated vegetable, herb and native wildflower seeds selected for both winter and summer gardens in the low or high deserts of the Southwest. Suitable for other climates as well. Includes a copy of *Seed Saving in the Southwest*. Seed packages are sized for an average-sized family garden. **\$74.95 TS604**

Seed Saving Supplies

Gardeners and farmers play an important role in conserving agricultural biodiversity by growing and saving seeds. Native Seeds/SEARCH has introduced seed saving supplies to provide the tools needed to save and store your seeds.

Seed Envelopes A key to successful seed saving is proper labeling and storage. Our preprinted tear-off strip envelopes make it easy! 20 envelopes **\$3.50 SSS001** or 50 envelopes **\$8 SSS002**

Foil Packets Great for long-term storage. Zipper closure and puncture resistant material will protect your seeds. These 6.5 x 5" envelopes will easily hold 1/2 lb of beans or corn or 10 packet envelopes. 5 envelopes **\$3 SSS003** or 10 envelopes **\$5 SSS004**

Blossom Bags 3"x4" organza bags with drawstring ties, perfect for protecting your tomato and chile flowers from cross-pollination. Or, use to capture milkweed or other easily dispersed wildflower seeds. 10 bags **\$5 SS006**



Corn Pollination Supplies Shoot bags for protecting silks and weather-resistant paper bags for covering tassels and pollinated ears. Tassel bags are also useful for protecting sorghum and amaranth. Hand-pollination instructions (found on nativeseeds.org) are included with your order. 100 Ear Shoot Bags **\$6 SSS008** or 50 Tassel Bags **\$12 SSS009**

Seed Saving Guide for the Southwest see page 33.



Native Seeds/SEARCH
3584 E. River Road
Tucson, Arizona 85718

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(see details on page 51)

Come visit us, join our mission, and learn more!

Visit nativeseeds.org for information about special events, classes and tours.



Conservation Farm: 45 San Antonio Rd. in Patagonia,
AZ. 520.394.0227



Retail Store: 3061 N Campbell Ave. in Tucson. Call us at
520.622.5561 for hours.



Conservation Center: 3584 E. River Rd. in Tucson.
Administrative Offices, Mail and Web Orders, & Seed
Bank. 520.622.0830