

Why Save Local Seeds?

You are invited to join the simple and ancient tradition of local seed stewardship.

In this guide, you will learn how to cultivate cushaw squash and save seeds for cushaws that grow stronger and more delicious with each generation.

Localization. Over time, seeds learn your soil, local pests, climate, and your habits, and will thrive with less effort.

Strength through community. Share seeds, stories and knowledge. Every gardener adds to our local food security.

Select for what you love. Grow food that matches what matters to you—flavor, sustainability, resilience, or all three.



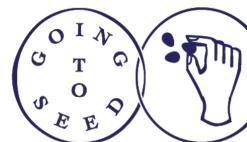
Cushaw Squash

A Growing and Seed Saving Guide



PRESENTED BY

**The Commonwealth
Cushaw Project**



RENEW
APPALACHIA

Digital version at
cushawguide.handbarrow.org



Cushaw Profile

Cucurbita argyrosperma, or cushaw squash, was domesticated in Mexico. It has traditionally been grown in the approximate region from Nicaragua to the

Some varieties historically called cushaw, like *Golden Cushaw*, are now known to be *Cucurbita moschata*, a different botanical species. This guide focuses on *C. argyrosperma* cushaws.

Some cushaws have been bred for quality edible seeds, others for prolific summer squash, or long-storing pumpkin characteristics. Some varieties serve multiple roles.

Days from planting to harvest:	60 for summer squash, 90-120 for winter squash and seeds.
Planting dates:	After the last danger of frost, when soil reaches 60° Fahrenheit.
Light:	At least 6 hours of direct sunlight daily. A small amount of shade can be helpful.
Days to germination:	3 - 7

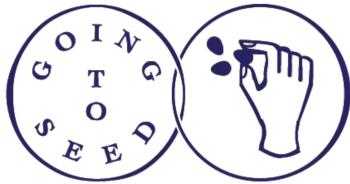
Sharing and Returning Seeds

Community seed projects succeed when gardeners share seeds from successful plants. Sharing is central to the ongoing, ancient work to maintain diverse, locally-adapted crops around the world.

- Submit seeds to the Commonwealth Cushaw Project at cushawguide.handbarrow.org.
- Submit to Going to Seed via goingtoseed.org.
- Consider researching nearby seed libraries and swaps.

The following information will be helpful when sharing your seeds.

Plant and species name:	Cushaw, <i>Cucurbita argyrosperma</i>
Variety or original source:	Commonwealth Cushaw Project
Grower name:	
Garden Location/Year:	
Email or phone:	
Describe the parent plants or fruits with any significant traits:	



This booklet is made in partnership with
Going to Seed



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- Diverse Seeds
- Self paced courses on adaptive gardening
- Online community
- Newsletter and program updates

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Planting Cushaws

Schedule. Seedlings thrive in late spring and early summer after danger of frost, when the soil reaches 60° Fahrenheit.

Succession sowing. Wild seeds often germinate over a longer period of time than domesticated crops, and staggered germination can help protect from pests. You can mimic this by sowing seeds every week or two during planting season.

Site and soil. Cushaw vines can benefit from fertile soil and amendments like aged compost, but they are traditionally grown with minimal amendments, treatments, or irrigation.

Soil pH between 6 and 8 allows cushaws to make the best use of nutrients, but they can grow outside that range. Vines need at least 6 hours of direct sun daily. A little of shade can help.

Open pollination and crosses. Natural crosses among cushaws are common and often desirable. *C. argyrosperma* can cross naturally with other species of *Cucurbita* squash but it is rare.

Final spacing. Cushaws usually have a vine habit, and vines can reach 50 feet long. They are often planted in 6-foot rows, spaced 3 feet apart, or planted in hills spread 6 feet apart.

Planting Cushaws, Continued

Direct sowing vs. starts. With small amounts of seed or new beds, starting seeds in containers can improve the odds of success. With hundreds or more seeds and established garden beds, it is often practical to sow directly in the soil, 1 inch deep.

Sow 6 seeds per hill, or one seed every 6 inches for rows. In dry climates, keep the soil moist until the vines establish roots.

Thinning Seedlings

Some growers allow excess seedlings to compete for survival, while others practice thinning. If you have space in another location, you might also relocate or give away excess seedlings.

When to evaluate. New seedlings seem healthy while nourished by their cotyledons. Vigor is more apparent once they have two pairs of true leaves and begin to metabolize nutrients.



Diversity. Prioritize strong stems, healthy leaves, and vigor, but also look for differences, and encourage diversity.

How to thin. Use scissors or secateurs to cut the vine just above the soil to avoid disturbing the roots of other nearby plants.

The Commonwealth Cushaw Project

We believe in a world where:

- Tasty, nutritious cushaws are more grown everywhere.
- The history, types, and recipes of cushaw squash are widely known in areas where it is traditionally cultivated.
- More cushaw gardeners are sharing seeds.

Gratitude. This guide was developed as part of an effort to share seeds with new growers. It would not be possible without the labor and ingenuity of our cushaw forebearers.

In 2021, Mark W. Kidd of Handbarrow began gathering seeds in Kentucky. Lauren Traitz and Richard Shmikler of Renew Appalachia joined for the 2024 season, focusing on seed increase, outreach, and training.



The project receives technical assistance from Going to Seed. The Kentucky Rural-Urban Exchange and the Foundation for Innovation and Sustainability supported the development and publication of the guide.

Where are cushaws from?

The cushaw, *Cucurbita argyrosperma*, is one of five domesticated species in *Cucurbita*, the genus of all squash. All *Cucurbita* are native to the Americas. Those five species were domesticated from wild types across at least six different places and times in North and South America.

Wild squash were more common before the ice age ended. They declined due to climate changes and the extinction of animals that ate wild squash. The first known domesticated squash is *C. pepo* in Mexico 8 - 10,000 years ago.

Squash was important to many pre-colonial American cultures. That word is from the Narragansett *askutasquash*, meaning "eaten raw or uncooked". It has been proposed that *cushaw* is from a native language, but this is unproven.

Proposed origin: Jalisco, Mexico in North America.

Cucurbita argyrosperma was likely domesticated from wild gourds by 5,100 years ago in the area of Jalisco, Mexico. It may have been domesticated as early as 8,700 years ago.

This overview adapts portions of Wikipedia's article "*Cucurbita argyrosperma*", and is published with the CC BY SA 4.0 license.

The Power of Diversity

Some plants will be better able to resist pests and make good fruit in your conditions. The surest way to find out which is to grow diverse populations.

Large-scale modern agriculture often relies on uniform, inbred crops. Alternately, growers of traditional landrace varieties judiciously embrace cross-pollination to develop robust and resilient crops that adapt to local conditions. This guide has been created to help growers cultivate cushaws using traditional "landrace" adaptation practices.

Local Seeds and Microbial Allies

Throughout its life, a plant builds partnerships with millions of microscopic allies. Plant roots release chemicals to attract fungi that improve water and mineral access, bacteria that fight off diseases, and other allies it finds in local soil.



When we save seeds, the seeds incorporate microbial allies, giving the next generation an advantage when planted in the same garden.

When to Harvest

Cushaw blossoms can be enjoyed raw or cooked throughout the season. Young leaves and tips of the vines are also eaten.

Cushaws can be used as summer squash for about two weeks after the flower is pollinated. The minimum safe age to harvest seeds for planting next season is 60 days after pollination.



The eating quality of fruit on the vine may continue to improve as long as 90 days after pollination. If the vine is healthy, and the peduncle attached to the fruit is still fleshy and hydrated, then the vine is still providing nourishment.

Some growers in temperate climates harvest after the first mild frost when the vines die back. If a freeze is predicted, it is better to harvest exposed fruit in advance.

Saving Seeds: Year by Year

If you are just starting to grow cushaws, you may only harvest one or two fruits. One term for this stage of an adaptation project is "seed increase", when the grower might save seed from most or all fruits, even if some seem better than others.



How does this approach help crops adapt to an environment?

Year 1: Gardeners begin sharing seeds. Some plants will do better than others in some gardens. New growers save seeds from any plants that produce seeds, despite challenges.

Year 2: As adaptation begins, the harvest often begins to increase. Growers are more selective with seed saving.

Year 3 and beyond: Growers save diverse seeds with traits they love, such as flavor, color, shape, or early ripening. Seeds are shared within communities and via seed share programs like Going to Seed. This allows the cycle of adaptation to continue.

Dry Process for Seeds



1. Cut open the squash and scoop out seeds.
2. Use your fingers to separate the seeds from the pulp.
3. *Optional:* Rinse seeds in a colander under a stream of water, agitating to remove any pulp stuck to the seeds.
4. Spread seeds in a single layer on a plate, cookie sheet, or screen.
5. Stir every day or two to dry evenly and prevent sticking. Use a fan to increase air circulation if necessary.
6. Seeds are dry enough when they snap crisply when broken in half.
7. Store seeds in an airtight container kept cool and dark.

Humid climates: Climate is an important consideration for drying seeds. In humid climates, a dehydrator set to 100 degrees or less can help seeds dry enough for storage. Some seed savers employ reusable desiccants to mitigate humidity.

Harvest and Storage

Note: Handling raw squash triggers dermatitis or "squash hands" for some people.

To harvest, cut the peduncle 1 - 3 inches above the fruit. The peduncle helps protect from insects and spoil. Leave it attached and avoid using it as a handle.

Curing. Fruit should be cured 5 - 7 days in warm, ventilated air (80° Fahrenheit is ideal), outdoors or indoors.

Inspection. Over the winter, fruits should be periodically checked for soft spots or mold. Eat those starting to spoil first.

Seeds continue to mature in storage.

Store fruit for a month before removing seeds, especially if it was harvested early.



Winter squash can be cut and frozen raw. You might store a large fruit for months at room temperature. Then when the fruit is first needed, cut and clean the whole cushaw, freezing half for later use.

Roasted Cushaw and Puree

Roasting is a foundation for many winter squash recipes. Roasted pieces can be enjoyed like a baked sweet potato, or processed into puree that is called for in many squash recipes.

Ingredients: Cushaws, cooking oil or lard, salt.

Equipment and supplies: Oven, baking tray or casserole, parchment paper or aluminum foil, knife, scoop or spoon, bowls, potato masher (or equivalent).



1. Preheat the oven to 400 degrees Fahrenheit.
2. Cut the fruit into relatively flat pieces. Cushaws often have necks that are thicker than the flesh around the seeds. The neck can be split in half and roasted longer in a separate tray.
3. Line the baking tray with parchment paper or foil.

Hardshell warning: Because the rind of a hard shell fruit does not soften much, be careful to avoid getting pieces of shell into the puree if yours has a hard shell. Rinsing cut pieces can help.

4. Mix oil and salt in a small bowl. Using a brush or piece of parchment paper, lightly coat the flesh with the mixture.
5. Place a single layer on the tray with the inside downward. For neck pieces, this means placing the cut side downward.
6. If all pieces are approximately the same thickness, only one timer is needed. Fruit at room temperature with flesh up to 1.5 inches thick can be roasted in about 1 hour and 15 minutes. Thicker flesh or frozen flesh should be roasted longer.



7. The edges of a squash piece will brown when the piece is fully roasted. Once the pieces cool, use a scoop to separate the flesh from the rind. Then use a potato masher, food processor, or other approach to mix the flesh until it reaches puree consistency.