

2022 Vegetable Varieties Trial Garden

9 Bed Design

Planting Instructions, Plant Layout, and Cultural Practices to Demonstrate

- Check your soil to see what it needs before planting. See more on vegetable garden soil here: <https://cpb-us-e1.wpmucdn.com/blogs.cornell.edu/dist/f/575/files/2016/07/Veggie-Info-Sheet-2016-1jsq90e.pdf>
- Vegetables should be planted to replicate the planting layout for each bed. If you're not planting in a 3x3 raised bed, the plants should still be arranged to replicate the planting layout which will also be on the signage.
- The number in front of each variety corresponds to placement in the bed and not the number of plants to plant.
- Signage should be printed and displayed by each bed/planting. We suggest that you laminate the signage or use another method to protect the signage from the weather.
- If you grew the Italian Seasoning Bed in 2021, keep those plants. They will be included in the Herbs for People and Pollinators Bed in 2022 along with garlic chives (transplanted from the 2021 Insectary Bed). Oh no! I don't have the plants from the Italian Seasoning bed or the garlic chives. Not to worry, you will get seeds or plants depending on how you registered. Even if you grew them last year.
- If you grew the Northeast Pollinator Mix in previous years, feel free to transplant those plants to a new location near your veggies where pollinators visiting the garden can enjoy them!
- Culantro will require part shade – consider planting on the shady side of the epazote and maybe even a second plant in a container located in partial shade if possible.

Note about the South Americas – Fingerling Potato:

Potatoes will be shipped in April to counties that registered to have all seeds mailed.

Counties picking up their plants/seeds on plant pick-up day at Cornell University will receive their potatoes with their seed then.

Note about the Pan-American Herbs:

Epazote is hardy in USDA plant hardiness zone 6 to 11 and, due to its invasive nature, should not be allowed to produce seed.

Large quantities of Epazote can be poisonous to humans. Epazote is toxic to dogs, cats, and horses.

<https://plants.ces.ncsu.edu/plants/dysphania-ambrosioides/>

https://www.usbg.gov/sites/default/files/images/epazote_science_page.pdf

Caribbean Coastline - Pepper Paradise (TrueLove Seed Co.)

Transplant Only: Start seeds indoors. Sow ¼ - ½ inch deep, 5-6 weeks before last frost date. Soil temperature for germination: 75-80 degrees. Germinates in 10-20 days. After germination, grow at 60-65 degrees. Harden off seedlings outdoors for 1-2 weeks prior to transplanting. Plant carefully to avoid damaging stems. Plant 1 plant of each variety.

Demonstrate Cultural Practice: Peppers like warm temperatures, use black plastic to speed early growth and offset cooler nighttime temperatures. Growers note: Provide consistent moisture to help reduce Blossom End Rot.

1 - Pepper 'Willing's Barbados' (Capsicum annuum) Days to maturity: 70-80

Plant one plant. This plant will require a large cage or tall stake and you may need to remove some stems keep it in bounds.

In the late summer through fall it is covered with tiny, upward facing peppers that are dark green, turning bright orange and red as they ripen.

2 - Pepper 'Aji Dulce' (Capsicum chinense) Days to maturity: 90-110

Plant one plant. Provide stake for support.

This is a mild habanero without the heat. For a sharper flavor, use the green fruits, for softer flavors, use them when ripened red.

3 - Pepper 'Ají Amarillo' (Capsicum baccatum) Days to maturity: 100

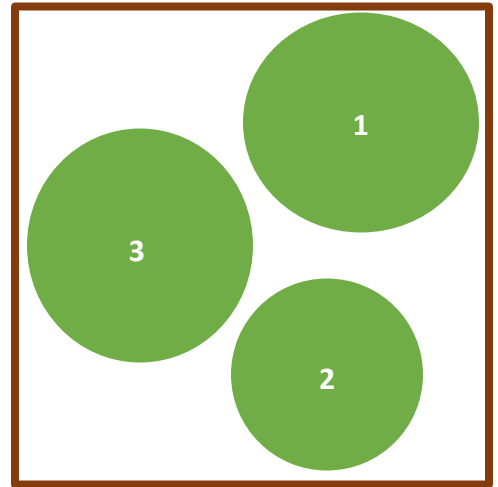
Plant one plant. This plant will require a large cage or tall stake and you may need to remove some stems keep it in bounds.

'Aji Amarillo' is hot, sweet, and fruity.

Seed Source: TrueLove Seed Company

Recipe: Puerto Rican Sofrito (uses both peppers and Culantro from Pan American Herb Bed)

<https://www.seriousseats.com/sofrito-puerto-rican-how-to-make-recipe>



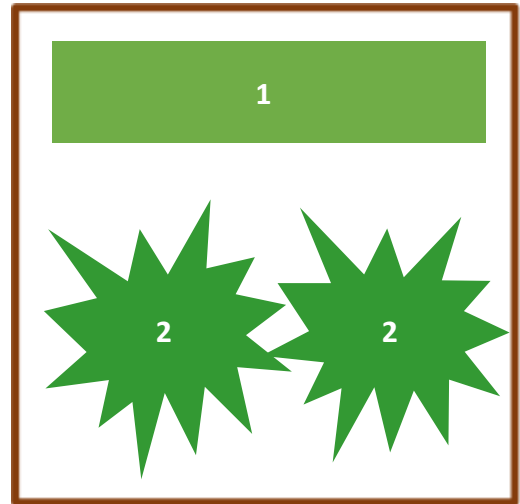
Caribbean Coastline - Callaloo & Beans (TrueLove Seed Co.)

1 - Field Pea 'Rouge et Noir' (Vigna unguiculata)

Reaches maturity in 63 days.

Direct sow: after danger of frost has past, any time between late May and mid-July. This is a bush type that produces runners, so it should be planted next to a structure or trellis. Plant 1" deep with 3-4" spacing, on each side of the net trellis or in another arrangement if using a different kind of trellis, like a pole or garden sculpture.

This heirloom cowpea has large seeds that are red when fresh and black when dried, up to 18 seeds per pod, a very productive, drought tolerant bush type that produces runners.



2 - Amaranth AKA Callaloo (Amaranthus sp.)

Reaches maturity in 30 days.

Direct Sow: After last frost, plant one or two seeds per inch 1/4 inch deep. Keep the seeds moist but not soaked and they should germinate in 10 to 21 days at a temperature of 65 to 75 degrees Fahrenheit. Expect fast growth after that. Thin to 2 plants at 1.5 ft. apart

Start Indoors: Sow seeds 4 weeks before the last frost. Plant one or two seeds ¼ inch deep. Keep the seeds moist but not soaked and they should germinate in 10 to 21 days at a temperature of 65 to 75 degrees Fahrenheit. Transplant 1.5 ft. apart a couple weeks after the last frost, when the soil has warmed. Plant 2 plants.

Callaloo may be harvested whole at 12" as a way of thinning. Although amaranth is tolerant to drought, constant soil moisture results in increased yields. To keep these plants in bounds and productive, don't be afraid to trim them back heavily or use succession planting to extend harvests.

Seed Source: TrueLove Seed Company

Recipe: Jamaican Callaloo - <https://thatgirlcookshealthy.com/jamaican-callaloo/>

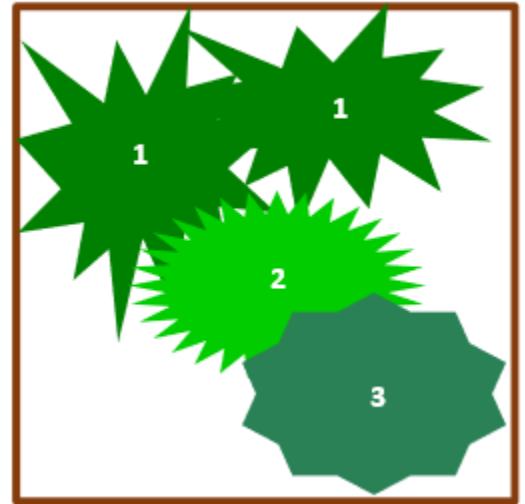
Pan-American Herbs (TrueLove Seed Co.)

1 – Huacatay: Reaches maturity in 110 days.

Direct sow: after last frost when soil is warm. Sow 2-4 seeds, 2 ft apart and 1/8-1/4" deep. Water regularly until germination. Germination can be spotty in the soil. Thin to one plant at 2 locations.

Transplant: Sow indoors 8-10 weeks before last frost. Seeds should sprout in 10-16 days. Bottom heat will speed germination. Plant two.

Huacatay is a member of the Marigold family that grows 5-6 ft tall when given consistent moisture. Its flowers are very small and pale-yellow.



2- Culantro (Eryngium foetidum): Reaches maturity in 80-90 days.

Transplant only: Start seeds indoors patted down on the surface of pre-moistened, sterilized seed starting mix 8 weeks before the last frost - do not cover the seeds. Keep seeds moist (but not too wet) and warm. Allow up to 25 days for germination. Using bottom heat speeds germination - optimal temperature for germination is 80°F.

Transplant outside after nighttime temperatures are consistently above 50°F. This plant has a tap root, when transplanting seedlings, try not to disturb the roots. Sowing them in peat pots reduces root disturbance when transplanting. Plant one plant.

Provide partial shade by planting on the shady side of the Huacatay plants. Keep plants moist to delay bolting. Cut the rosette at the base before flowering or harvest individual leaves.

3 - Epazote (Dysphania ambrosioides): Reaches maturity in 45 days.

Direct sow: After soils have warmed to 65 degrees, plant 3-4 seeds no more than 1/4" deep. Thin to one plant.

Transplant: Sow seeds 2-4 weeks before the last frost very lightly covered. Harden off and transplant a couple weeks after the last frost. Plant one plant.

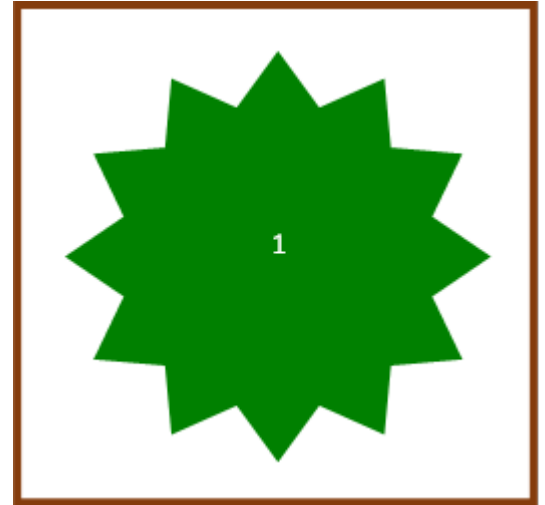
Prefers full sun and tolerates poor soils. **Reseeds readily – can become invasive.** Do not over-water. Harvest the tips of the stems on a regular basis for a supply of young tender leaves and a more compact and bushy plant. Older leaves have the strongest flavor while young leaves tend to be milder. Fresh stems can be cut and held in water or stored in a refrigerator wrapped in a damp paper towel and placed in an unsealed plastic bag.

Seed Source: TrueLove Seed Company

First Peoples – Winter Squash (Harris Seed Co.)

1 - Acorn Squash 'Royal Ace PM F1': Reaches maturity in 85 days. This is a beautiful dark green acorn bred to have strong intermediate resistance to Powdery Mildew. The plants produce high yields of fruit that are uniform in both size and shape, with good color retention in storage and great tasting flesh.

Direct sow (recommended): Sow 2-3 seeds 1-1 ½ inches deep in center of bed after soils have warmed. Thin to strongest plant once seedlings produce first set of true leaves. Seeds typically germinate in 6-12 days.



Demonstrate Cultural control for insect pests: Lightweight row covers can be used to protect plants from vine borers and squash beetles until they begin to produce flowers. Remove covers at bloom time to allow for pollination. Can also use diatomaceous earth around base of plant to discourage larval form of vine borers.

Seed Source: Harris Seed Company

First Peoples – Sunflower and Bean (Harris Seed Co.)

1 - Sunflower 'Ring of Fire': Reaches maturity in 70 days. 3-5' tall, heavily branching type. All America Selections winner, this is a bicolor sunflower. Flower petals have golden tips that transitions to a deep red around the base of the petal with a dark central disk. Plants have excellent yields. Flowers can be harvested for bouquets or can be allowed to fully mature and used for edible seeds or left in the garden as a natural bird feeder.

Direct Sow (recommended): after danger of frost has passed. Plant **2** seeds, ¼ to ½ inch deep.

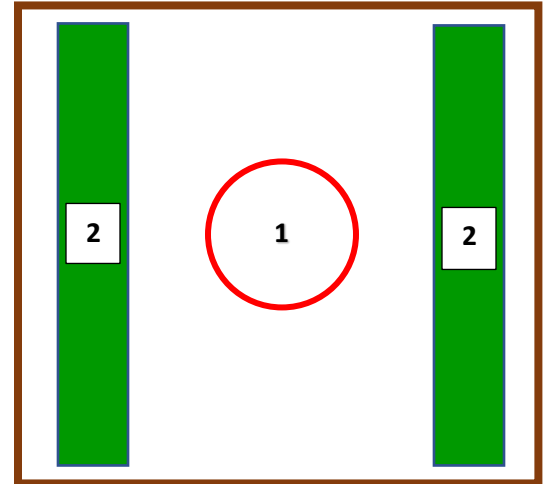
From Transplants: Sow 2-3 seeds in container. Transplant into center of bed once danger of frost has passed. Be careful not to disturb the roots.

2 - Bean 'Eastland': Reaches maturity in 70 days. Tall, upright plants bear gray-green 3" pods filled with dime-sized, greenish-white flat beans. This is a dependable, heavy yielder of high-quality baby limas. One of the best mini lima varieties available!

Direct Sow: Plant 1 row down each side of the bed once danger of frost has passed. Sow 3-4 inches apart and 1- 1 ½ inch deep. Do not thin.

Seed Source: Harris Seed Company

Recipe: Native American Succotash: <https://hoohla.cooking/summer-succotash/>



Herbs for People and Pollinators (Harris Seed Co.)

Combine perennial herbs from previous years or plant new so the bed contains one clump/plant for of each of the following:

1 - Sage 'Fanni': Fanni produces large oval gray leaves with excellent yields. Use fresh or dried for seasoning. Its nectar-rich flowers attract a wide range of pollinators including bees, butterflies, and hummingbirds.

Start Indoors: Sow seeds 6-8 weeks before the last frost 2-3 seeds 1/4" deep in individual containers, thin to one plant per container after germination. Transplant outside after the last frost. Plant one plant.

2 - Winter Thyme: Small oval gray-green leaves grow on upright shrubby perennial plants. Excellent aroma and flavor makes it suitable for culinary uses. Flowers attract pollinators.

Start indoors: 6 weeks before last frost. Sow 1/8 to 1/4 inch deep. Soil temperature 60 – 70 degrees. Germinates in 18 - 24 days. After germination, grow on at 55 - 60 degrees. Harden off and transplant outside after weather has warmed. Plant one plant.

3 - Oregano Vulgare: Erect, bushy plant, 8 to 18" plants produce pungent flavored leaves with purple flowers that is often used in Italian and Greek cooking. Also called Wild or Pot Marjoram, if allowed to flower, this plant will be a magnet for bees, butterflies, and other pollinators.

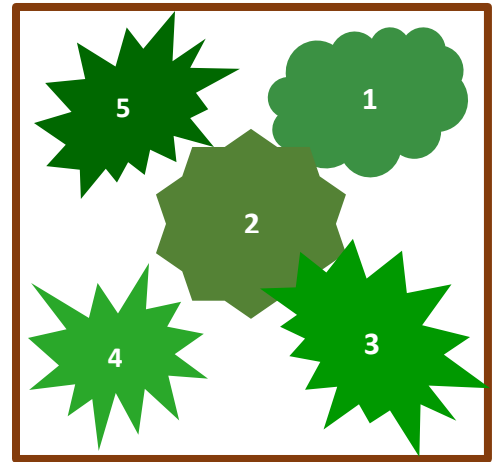
Start indoors: 6 weeks before last frost. Sow 1/8th inch deep (just covering – seeds require light to germinate). Soil temperature 65-70 degrees. Germinates in 14-21 days. Harden off seedlings (reduce water & temperature 3-7 days). Transplant outside after last frost. Plant one plant. Harvest before flowering for best flavor.

4 - Garlic Chives (Chinese leeks – Perennial): This flat-branched chive expresses garlic flavor. It is often used to replace garlic in sauces and salads, and the chopped leaves can be sprinkled over vegetables. Compact plants produce delicate white flowers in their 2nd year that attract pollinators and other beneficial insects.

Direct sow: on soil surface 3" apart after danger of frost. Germinates in 7-14 days.

5 - Parsley 'Krausa' (Biennial): Makes an attractive garnish or provides a bit of flavor and nutrition to soups and other dishes. Its flowers attract beneficial insects and the leaves are a food source for black swallowtail caterpillars.

Start indoors (recommended): Seeds take at least 3 weeks to germinate. Sow seeds ¼ to ½ inch deep. Seeds germinate best at 64-70 degrees. Plant one plant.

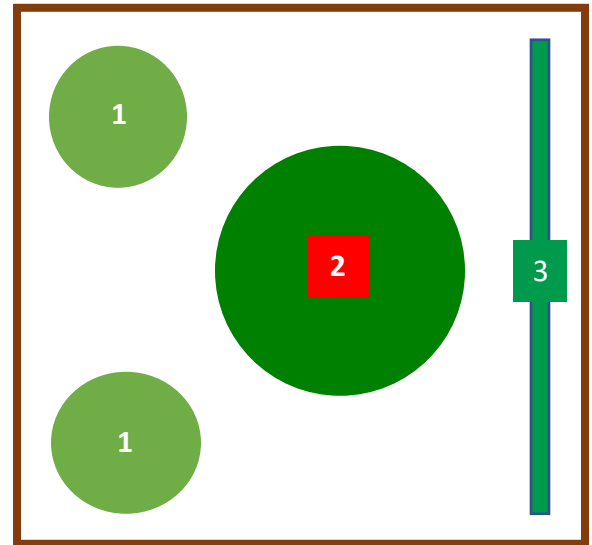


Seed Source: Harris Seed Company

Central Americas - Salsa Bed (Harris Seed Co.)

1 - Pepper 'Mad Hatter F1': Reaches maturity in 75 days. This All-America Selections winner is a truly unique mild hot pepper. The flat-disc peppers have a refreshing citrus floral flavor that intensifies and sweetens as it matures. While the peppers may have some heat near the seeds the wings are always sweet. This is an indeterminate, vigorous pepper that will do best with some type of support (stake or cage).

Transplant Only: Start seeds indoors. Sow ¼ - ½ inch deep, 5-6 weeks before last frost date. Soil temperature for germination: 75-80 degrees. Germinates in 10-20 days. After germination, grow at 60-65 degrees. Harden off seedlings outdoors for 1-2 weeks prior to transplanting. Plant carefully to avoid damaging stems. Plant 2 plants.



Demonstrate Cultural Practice: Peppers like warm temperatures, use black plastic to speed early growth and offset cooler nighttime temperatures. Growers note: Provide consistent moisture to help reduce Blossom End Rot.

2 - Tomato 'Pony Express F1': An early determinate saladette tomato, this plant produces heavy, concentrated yields. Fruit is elongated in shape and dark red. Pony Express has an excellent disease package that includes resistance to Bacterial speck, Tomato mosaic virus, Root Knot Nematode, Verticillium wilt and Fusarium wilt.

Transplant Only: Sow seeds ¼ inch deep, 5-6 weeks before transplanting outside. Cover seeds lightly and keep seedling mix moist, at 75-85 degrees. Transplant into larger container as needed after first true leaf. Grow at 60-70 degrees and use complete fertilizer until plants are hardened off for transplant into the garden. Plant one plant.

Demonstrate Disease Management Practices: Use a stake, trellis, or large tomato cage for support. Mulch under plant with plastic, fabric, or straw to reduce potential infection from splash back from soil. Remove diseased, damaged, or yellowing leaves throughout the season.

3 - Bunching Onion 'Parade' (Organic): Matures in 70 days. A uniform bunching onion that produces 12-16" dark green top leaves that are straight and uniform. The lower portion is a bright white with mild onion flavor. This variety has intermediate resistance to Basal Rot and Pink Root and gives consistent yields.

Direct Sow: ¼ - ½ inch deep, 2 inches apart as soon as soil can be worked. When plants are 5 inches tall, thin to ½ - 1 inches apart for bunching.

Transplant: Sow seeds thickly in a container (best soil temperature for germination in 65-75 degrees). Keep tops trimmed to 3 inches until ready to transplant. Transplant into rows ½ - 1 inch apart. For fresh eating, harvest whenever they reach desired size.

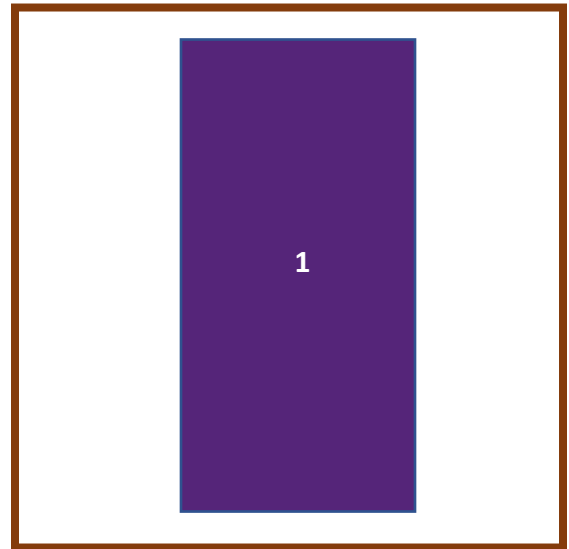
Seed Source: Harris Seed Company

Recipe: Salsa Epazote: <https://www.epicurious.com/recipes/member/views/salsa-epazote-52491471>

South Americas – Fingerling Potato (Harris Seed Co.)

1 - Potato ‘Magic Molly’: Magic Molly Fingerling Potato is an extremely vigorous producer that sets tubers with striking deep purple skin and flesh. These potatoes have an oblong shape and can be harvested for fingerlings or left in the ground for a blockier shape. Tubers can grow to 6” long and make a good boiler that retains its purple color! Makes delicious oven-baked wedges.

Planting Prep: Potatoes grow best in loose, well-drained soil high in organic matter. Add a 5-10-10 or 10-20-20 fertilizer as needed. Mix fertilizer into soil prior to planting. Till or spade soil to a depth of 10-12 inches.



If seed potatoes are small to medium sized, plant whole potato. If they are large, you may cut them in half or quarter them. Each section should have 2-3 “growth eyes”. ***After cutting, allow potato to callus over for a day or two prior to planting.**

Planting and Maintenance: Dig a trench down center of bed, about 6-8 inches deep. Space potatoes/potato sections about 6-10 inches apart. Cover tubers with about an inch of soil. Pull in additional soil over foliage as plants develop until trench is entirely filled in. Additional soil can be added to hill the plants as needed/desired. Consistent soil moisture produces the best results. As a guideline, water potatoes approximately 1” per week during summer.

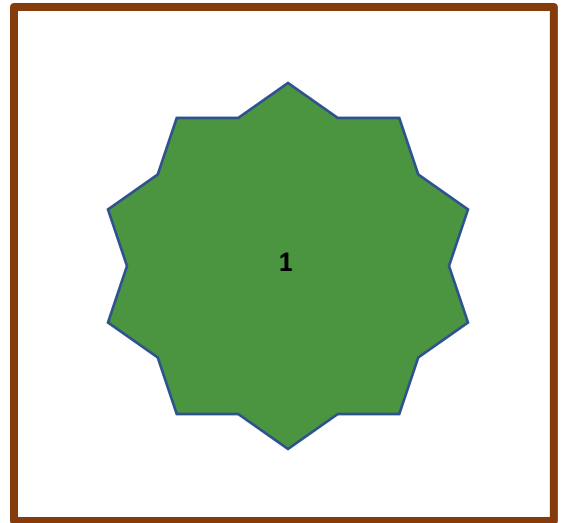
Harvest: Potatoes can be harvested in late summer when foliage dies back. Dig potatoes from soil taking care not to cause wounds to flesh of the tuber. Remove excess soil by gently brushing off. Minimize light exposure during cleaning. Store in a cool, dark place with high humidity and good ventilation. Wash completely prior to eating.

Seed Source: Harris Seed Company

Recipe South America - Ocupa Sauce with Potatoes: <https://perudelights.com/ocopa-sauce/>

Central Americas – Summer Squash (Harris Seed Co.)

1 - Squash ‘Hurakan F1’: Reaches maturity in 50 days. Hurakan grey zucchini is a staple of Mexican and Latin diets. This squash variety produces big yields of grey-green fruit on semi-erect bush plants. The fruit have light flecking, thin dark green stripes and are best harvested when they reach 6” in length. The bulbous fruit of Hurakan squash have a good shelf life after harvest and retain their bright, shiny skin. This variety also shows good intermediate resistance to powdery mildew.



Direct Sow: Sow 2-3 seeds 1-1 ½ inches deep in center of bed after danger of frost has passed and once soil has warmed up. Thin to strongest plant once seedlings have developed first set of true leaves.

Transplant: Sow 2 seeds 1-1 ½ inches deep in a container. Thin to strongest plant once seedlings have developed first set of true leaves. After all danger of frost has past, and 3-4 weeks after sowing, transplant one plant into the center of bed.

Demonstrate Cultural control for insect pests: Lightweight row covers can be used to protect plants from vine borers and squash beetles until they begin to produce flowers. Remove covers at bloom time to allow for pollination. Can also use diatomaceous earth around base of plant to discourage larval form of vine borers.

Seed Source: Harris Seed Company

Recipe: Mexican Calabacitas <https://www.mexicoinmykitchen.com/corn-and-zucchini-mexican-style/#mexican-zucchini-and-corn-recipe>