

Planting & Seed Collecting Instructions

2015 Participating Seed Libraries:

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Beans

Planting : Sow seeds outdoors after danger of frost has passed and soil and air temperatures have warmed. Plant seeds 2" apart and 1" deep in rows 36-48" apart. Beans prefer full sun. Provide support for pole beans. Harvest snap beans frequently for increased yields.

Seed Collection: Bean flowers are self-pollinating and almost never cross-pollinate. As a precaution never plant two white seeded varieties side-by-side if you intend to save seed because crossing may occur but not be visible. It is always best to save seed from plants that ripen first and are free from disease. Pods are ready for harvest when some are dry and the remainder have turned yellow, about 6 weeks after the pods were of fresh-eating quality. Cure the pods in a warm, dry place for 1 to 2 weeks.

Seed Cleaning: After the pods are fully dry, crush in a cloth or burlap sack, winnow the seeds from the chaff.

Beets

Planting: Starting beets indoors is not recommended. Beets grow fairly well in almost any soil, but because of their extensive taproot, they prefer deep, moist, rich soil. Prepare the seedbed by working in 2-3 inches of compost or well-rotted manure prior to planting. Beets germinate in soils as cool as 45°F, and the seedlings are frost hardy. Plant in rows 12-16 inches apart. Cover the seeds with sifted compost, loose soil, or vermiculite and water evenly. For uniformly sized beets, thin when the seedlings are 3-4 inches tall. Thinnings can be used as pot greens or in salads. Keep well watered, especially during root development. The 5th and 6th leaf stage is the most critical time for beets to stress. Sudden changes in temperature or moisture will increase zoning (ring formation in the root) and lead to premature bolting.

Seed Collection: Beets and Swiss chard will cross-pollinate, as they are from the same species. Beets/chard must be separated by wind-proof caging, bagging or up to 2 to 5 miles of distance to ensure purity as their wind-blown pollen is exceedingly small and light.

It's easy to leave the base and center of chard plants to over-winter, flower and produce seeds while still eating plenty of leaves. However, to save seed from beets you'll have to plant 20 to 30 plants to leave in the ground to over-winter if you want to get seeds. You can harvest tasty beet greens for the first part of the season, and you can crowd the plants a bit. You don't have to pamper them with lots of room, water and fertilizers to get plenty of seeds in the spring—just make sure they're big enough to get through the winter and re-sprout. Allow beet seeds to fully mature and become dry on the plants before harvesting. After final drying the seeds can be easily rubbed off the stems. Beet seeds will last for up to 5 years if properly stored.

Kale

Planting: Italian heirloom that dates back to the eighteenth century. Bluegreen strap-like leaves are 3" wide by 10-18" long with a heavily savoyed texture. Excellent flavor that is enhanced by frost. Best eaten when leaves are small and tender. 62 days from transplant. Sow seeds indoors ¼" deep. Plant out just before the last frost. Kale is most tender and delicious after a frost. Harvest can continue even after snow.

Seed Collection: Most kales are *Brassica oleracea*, and will cross with other members of this species such as cabbage, collards, broccoli and cauliflower. Siberian Kale, however, is *Brassica napus* and will cross with rutabagas and rape, but will not cross with the members of *B. oleracea*. Let seed pods mature and dry on the plants before harvesting, or the seeds will not be fully mature. Harvest quickly after drying, though, as the pods often shatter and drop their seeds soon after they dry.

Lettuce

Planting: Sow seeds outdoors as soon as soil can be worked in spring. Plant seeds 1" apart and ¼" deep. Seeds will germinate in 7-14 days. Thin to 6-8" apart for Looseleaf, 10" apart for Romaine, and 10-12" apart for Crisphead. Sow continuously for a constant supply of lettuce. Lettuce is best grown in cooler weather and prefers full sun or partial shade. There is only a slight chance of cross-pollination between lettuces. As a precaution separate by 25' from other varieties that are going to seed.

Seed Collection: Allow plants to bolt and form seed stalks. It is best to collect seeds from plants that are slow to bolt so that you don't select seeds for fast bolting lettuce. Seed heads may need to be protected from bird damage and rain when drying. Harvest the seed heads as they begin to dry, or shake them into a bag to avoid loss from shattering. You can also pull the entire plant up when enough seeds have formed and hang it upside down to dry.

Seed Cleaning: Lettuce seeds are small and light. Rub the heads in your hands or flail them, then carefully screen the plant material. Use a screen of proper size so the seeds will fall through. This will leave you with a mixture of seeds and seed fuzz. If you want your seeds to be cleaner, select a screen size that is smaller than the seeds and gently rub the seed and fuzz against the screen to separate the fuzz.

Peas

Planting: Peas thrive in cool weather. Sow seeds outdoors as soon as soil can be worked in spring. Plant seeds 2-3" apart and ½-1" deep in rows 24" apart. Seeds will germinate in 7-14 days. Double rows of peas can be planted on each side of a trellis. Pea varieties should be separated by 50' to ensure pure seed. Select the healthiest plants for seed.

Seed Collection: The fruit is a pod that goes through two stages of development. The first is the flat-pod stage, in which the pod elongates and widens; the second is the round-pod stage, in which the seed fatten and mature. A color change in the seeds and pods indicates harvest maturity for seed collection. Harvest pods when they are dry and brown and when the peas rattle inside if the pods are shaken. If birds start eating the seeds before the pods are completely dry, they can be harvested slightly green and brought indoors to dry.

Seed Cleaning: Store in a warm, dry place for 1 to 2 weeks then shell peas from the pods by hand. Flail larger quantities in a cloth bag or pillowcase or gently strike plants on the inside surface of a garbage can.

**Peppers

Planting: Sow seeds indoors ¼" deep 8 weeks before last frost. Seeds will germinate in 14 days. Peppers germinate best in warm soil, so gentle bottom heat may be helpful until seedlings emerge. Plant seedlings outdoors 12-24" apart when soil is warm. Some peppers will cross-pollinate, so separate by at least ½ mile or plant in insect-proof cages covered with window screen. Peppers prefer full sun.

Seed Collection: Select peppers that are ripe, fully colored, and show no signs of disease to save for seed. Scrape out the seeds and spread them on a screen or paper towel to dry for about 2 weeks.

Seed Cleaning: Pepper seeds do not need any type of cleaning. Once they're dry, they're ready for storage.

**Peppers, Jalapeno

Planting: Start seeds indoors 8 weeks before last frost. Plant 12-24" apart. Open-pollinated. Hot, hot, 3x1" sausage-shaped blunt fruits mature early. Characteristic brown netting appears as fruit ripens from dark green to dark red.

Seed Collection: Peppers within the same species can be safely isolated by 500 feet of separation, or they can be caged since the plants are not overly large. Allow peppers to ripen and dry *fully* on the plants before harvesting the pods. Wash your hands thoroughly with soapy water after harvesting hot pepper seeds, since the residues will burn eyes and lips for some time after contact!

Spinach

Planting -Very hardy. Must be planted as soon as the ground can be worked in the spring to avoid early bolting. For fall crop try late July–Aug. sowing; to overwinter, sow late Aug.–Sept. Heavy nitrogen requirements, but avoid applying high-nitrogen fertilizers shortly before harvest to prevent high nitrate levels in the leaves. Pick large leaves often for heavier production.

Seed Collection Beets, Swiss chard, and Spinach will cross-pollinate, as they are from the same species. Beets/chard must be separated by wind-proof caging, bagging or up to 2 to 5 miles of distance to ensure purity as their wind-blown pollen is exceedingly small and light.

It's easy to leave the base and center of chard plants to over-winter, flower and produce seeds while still eating plenty of leaves. However, to save seed from beets you'll have to plant 20 to 30 plants to leave in the ground to over-winter if you want to get seeds. You can harvest tasty beet greens for the first part of the season, and you can crowd the plants a bit. You don't have to pamper them with lots of room, water and fertilizers to get plenty of seeds in the spring—just make sure they're big enough to get through the winter and re-sprout.

Allow beet seeds to fully mature and become dry on the plants before harvesting. After final drying the seeds can be easily rubbed off the stems. Beet seeds will last for up to 5 years if properly stored.

**Swiss Chard

Planting: Sow seeds outdoors in early spring when soil temperature is at least 50° F. Plant seeds 4" apart and ½" deep in rows 20-24" apart; thin to 12" apart. Chard can also be started indoors 5-6 weeks before transplanting out. Prefers full sun but tolerates partial shade. Swiss chard withstands light frost. Varieties must be separated by ½ mile from all other *Beta vulgaris* when going to seed.

Seed Collection: Chard is a Biennial and will flower during the second growth season. In warmer climates, chard can be left in ground to overwinter, mulch it well, and let it grow into a full plant the second year when it will flower and seed. In northern climates, trim leaves to 2" and store roots in sawdust or sand in a root cellar. Roots will store 4-6 months at 32-40°. If you've overwintered

roots indoors, replant them in the garden in spring. discard any that are damaged, rotted, or shriveled. If you've overwintered in your garden, remove the mulch once you see new growth beginning. The plants will produce some leaves first and then send up a seed stalk. Do not cut any leaves for eating; let them stand to nourish the plant.

Seed Cleaning: After most of the flowers have turned brown, remove the stalk and further dry it in a cool location for 2 to 3 weeks. Remove the seed balls (these are actually dry, shriveled fruits) from the stalk by hand, or place the stalk in a bag and flail. Winnow.

****Tomato**

Planting: Sow seeds indoors 6 weeks before last frost. Plant ¼" deep. Seeds will germinate in 7-14 days. Transplant outdoors 24-48" apart when soil has warmed. Support indeterminate plants with a cage or trellis. Tomatoes prefer full sun. Cross-pollination between modern tomato varieties seldom occurs, except in potato leaf varieties which should be separated by the length of the garden.

Seed Collection: The fruit is the berry and should be picked fully ripe and ready to eat. . Pick at least one ripe fruit from each of several plants.

Seed Cleaning: Immediately after harvest, squeeze the pulp and seeds from the fruit into a container, add enough water so that the seeds are covered by about two inches, and let it ferment several days at or below 70 degrees F. Stir several times a day. The fermentation process takes about 4 days, the water will become cloudy and slightly foamy. Nonviable seeds will float, while seeds having the best chance of being viable will sink. Pour off the water and the floating seeds. Spread the seeds in a single layer on a paper plate or screen.

Herbs/Flowers

Basil (*Ocimum basilicum*) - **Planting:** Sow seeds outdoors when the soil is warm and the temperature does not drop below 65° F. Can be started indoors 4-6 weeks before planting out. Space plants 4-6" apart in all directions. Plant seeds just beneath the surface. Seeds germinate in 5-30 days, so keep moist. Prefers full sun and rich, well- drained soil. Basil will cross-pollinate with other varieties of basil and must be separated by 150' while flowering.

Seed Collecting: The small perfect flowers are borne in racemes. Harvest the clusters when they brown.

Seed Cleaning: Spread the clusters on screens to dry, then rub or thresh to remove the nutlets. Put the nutlets and chaff in a bowl and gently swirl them around. The very small seeds will sink to the bottom, then you can rake off the chaff with your hands.

Chives (*Allium schoenoprasum*) - **Planting:** Sow seeds indoors ¼" deep 4-6 weeks before last frost. Seeds will germinate in 7-14 days. Transplant outdoors 4-8" apart as soon as soil can be worked in spring. Established plants can easily be divided in both spring and fall. Remove spent blossoms regularly to prolong blooming. Chives prefer full sun to partial shade. Chives are a perennial that produces seed each season, and may be also be direct- seeded in very early spring. Chives will not cross with any other Alliums.

Seed Collection : The fruits are capsules, each containing shiny black, flat, angled or round seeds. Harvest the seed heads when they have begun to brown, but before seed-shed.

Seed Cleaning: Spread the drying heads on screens to dry completely; then rub, thresh, or flail to remove the seeds.

****Plants with red stars** require more effort because they should be started inside and planted outside as seedlings. Swiss Chard is starred because it is a biennial.

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