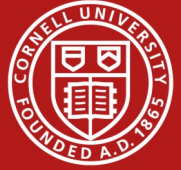


# Timing of Planting and Harvest for Annual Seed Crops

By Crystal Stewart-Courtens



Timing of seed crops varies widely based on the type of crop and its seed lifecycle. Some annual crops are harvested mature for seed or food, making the horticultural considerations for production easier. Other food crops must be allowed to mature past their marketable state to harvest viable seed. Crops are broken down by type here for ease of discussion:

**Tomatoes and Peppers:** Plant these crops as you usually would for food crops, but with isolation distances in mind. Harvest of fruit for food or seed on these crops is identical, since both are completed when fruit reaches full maturity. Peppers tend to hold well on the plant longer than tomatoes, and may be batched into larger harvests. Indeterminate tomatoes in particular may need weekly harvests over a longer period of time. Determinate tomatoes can often be harvested in one to two batches. It is important with both peppers and tomatoes to allow them to ripen fully before harvesting seed.

**Legumes:** For dry beans, peas and cowpeas, planting is the same as for food crops, but harvest timing depends on the variety. Bush beans have larger flushes of fruit over a shorter period of time and it may be easier to let the whole plant dry down, harvest the whole plant and thresh from there. For peas, pole beans and cowpeas, several small harvests of dry pods are easy to store in paper bags and then thresh the entire harvest later in the season.

**Cucurbits:** Timing of all cucurbit planting is the same as for food crops, while being mindful of isolation distances. Cucumbers (*Cucumis sativus*) are harvested immature for food but mature for seed, which adds 20-40 days to the crop timeline, depending on variety. Fruit for seed are allowed to become full sized and will ripen to white or yellow, with a hard skin. Fully mature fruit can sit for up to 2 weeks at room temperature, allowing for some batch processing. Summer squash (*Cucurbita pepo*) are also harvested mature, adding 20-40 days to the crop timeline. Fruit can be allowed to stay on the vine as long as plants are healthy. Mature fruit have a hard skin and often turn yellow. Summer squash can often be stored for a month until being processed, and the seeds benefit from doing so. Winter squash (*Cucurbita maxima*, *Cucurbita mixta*, *Cucurbita moscata*, and *Cucurbita pepo* (Acorn types)) are grown identically for food or seed (still mindful of isolation). Conveniently, winter squash can be stored longer and processed after the frost, which may ease the farm workflow.

**Leafy greens:** This category includes lettuce, leafy brassicas (collards and kale (*Brassica oleracea*), raab and Chinese mustard (*Brassica rapa*), arugula (*Eruca sativa*), and mustard greens (*Brassica juncea*)), and spinach, all of which have fairly different timings. (Spinach is not being included in this year's mentorship offerings)

Lettuce: Starting lettuce for seed early in the spring allows seed to mature in mid-summer, before the heavier dews of mid-August through the end of the growing season can start to reduce seed quality. Flowering and seed set extend the lettuce season significantly; add about two weeks for the plant to bolt and flower, then another 12-24 days for the seed to mature.

Leafy Brassicas: This group has tremendous variation in maturation time. Kale and collards (*B. oleracea*) and Chinese mustard (*B. rapa*) are biennials and are planted in August or September for overwintering and seed production the next season. This approach will work better in zones 5 and warmer; significant winter injury/death will occur in zone 4 or colder. Flower stalks will emerge in the spring in the spring and quickly set seed following pollination.

Broccoli raab (*B. rapa*), arugula (*E. sativa*), and mustard greens (*B. juncea*) can all be grown as annual seed crops. Raab sometimes behaves as a biennial, but if you grow your seed crop early enough in the season to expose it to cool nights early on it will bolt readily in late spring. All of these crops can be lightly harvested prior to allowing them to bolt. At bolting, the first seed stalks to emerge will yield the highest quality seed. None of them will cross with the others, because they are all different species. Time to seed maturity varies dramatically, depending on variety and weather, but all are quick crops.

Spinach: Spinach is a daylight sensitive crop and will bolt when daylight reaches 12.5 to 15 hours. Periods of extreme heat and cold can also cause it to bolt outside of these daylight hours. Seed can be grown by starting plants in early spring, allowing them to mature, and then initiate bolting shortly after the solstice. Plants will tolerate light harvesting without reduction in seed yield. The extra time needed to allow the plant to flower and mature seed ranges from 20 to 30 days, depending on the variety. This is an excellent crop to grow out in the high tunnel, where it is protected from rain during seed maturation. However, pollination and seed set decline in high temperatures, so make sure the tunnel is well ventilated if using one.

**Herbs and Flowers**: This is a very large and broad group which is hard to create general rules for. Here are some of the larger herbs that we can consider, however.

**Basil**: Flowers will form on plants after 30-45 days, depending on the weather. Seed matures slowly from the bottom of the stem towards the top. It is recommended that the stems are cut once the bottom seed capsules turn brown. Place stems in a dry, well ventilated area and the remaining seeds will continue to mature.

**Cilantro/coriander**: It is extremely easy to grow and save seed of this plant; simply allow a patch of it to go to seed after light harvesting. Seed will form about 20-30 days after bolting begins. Harvest stalks as seed becomes visible.

**Parsley**: As a member of the carrot family, parsley is a biennial. Plants are started in the spring and can be moderately harvested from through the season. Let rosettes fill through September and dig before the ground freezes. Parsley can also be overwintered in high tunnels in zone 4 or mulched and overwintered in the ground in zones 5 and higher. In the spring, the primary and secondary umbels will yield the best seed.

Source:

Seed to seed: Seed saving and growing techniques for vegetable gardeners. Suzanne Ashworth, 2002.



This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, through the Northeast Sustainable Agriculture Research and Education program under sub-award number LNE22-446. Learn more about [Northeast SARE](#)

Cornell Cooperative Extension Eastern NY Commercial Horticulture Program

<https://enych.cce.cornell.edu/>

[cls263@cornell.edu](mailto:cls263@cornell.edu), [enychp@cornell.edu](mailto:enychp@cornell.edu)

February 2022