

FRUITION SEEDS

guide to organically growing

ONIONS

this guide is for seed onions as well as seed shallots

AT A GLANCE

Latin Name: *Allium cepa* for classic onions, *Allium fistulosum* for bunching onion/ scallions

Sun: Full

Life Cycle: Biennial

Ease of care: Easy-moderate

Direct sow or transplant: Transplant only in shorter seasons

Height: 1' to 1.5'

Container Friendly: Yes! 5 gallons minimum

Microgreens: Yes (scallions, slow but delectable) **Sprouts:** No

TYPES OF ONION

Onions have co-adapted with humans more than 8000 years! Though their closest wild ancestor has since gone extinct, what we often think of as 'onions' originated in the Mid-East and western Asia with many other species of allium co-adapting with countless other cultures across the globe.



As a general rule, the sweeter an onion is the less long it will store. Those pungent sulfurous compounds are part of what allows some onions, like these New York Early onions, to store all winter with ease.

Short Day vs Long Day

Onions: Since onion bulbing is triggered by day length, it's vital to source seeds suited for your latitude. 'Short day' onions thrive in the shorter days of longer seasons closer to the equator, while 'long day' onions thrive in the longer days of higher latitudes with shorter seasons. We grow long day onions in zone 5.

Yellow Onions: Classically pungent with brown/yellow skin, some varieties of yellow onion store longer than others. Interestingly, the sulphurous pungency of yellow onions helps them store longer than sweet onions.

Red onions: Notably sweeter than yellow onions, red onions are quicker to caramelize and are more often eaten raw in salads and on sandwiches. Though many red onions are spherical, some have wide shoulders while other are long and narrow. Storability varies widely by variety.

White Onions: More mild than yellow onions and less sweet than red, white onions are lovely in guacamole and other dishes where a bit of onion pungency is delightful. Few white onion varieties store through long winters.

Sweet Onions: Often large and succulent with white flesh and pale yellow skin, sweet onions have the highest sugar content of all onions and lack the sharp pungency of yellow onions. Though they don't store long, they are marvelous to caramelize and the go-to for onion rings.

Cipollini Onions: Popular in Italy and increasingly present in the US, Cipollini (pronounced chip-oh-Lee-nee) onions have a characteristic flattened sphere shape, with greater sweetness than yellow onions and thin skins. We love to braid them together to hang in our kitchen to enjoy all winter!

Bunching Onions: Also known as scallions or spring onions, bunching onions are exceptionally versatile. Scallions share a genus and are a separate species from classic onions. They're also perennial in Zone 4 and warmer! Enjoy our separate Growing Guide for scallions.

SOW

Onions are relatively easy to grow from seed compared to many other seeds sown early indoors like peppers and tomatoes. To surround yourself with onion abundance, it's critical to have nutrient-dense potting mix, a quality grow light and a heat mat goes a long way to foster robust, vigorous seedlings.

Enjoy our 40-page book *Rise & Shine: Starting Seeds with Ease* for step-by-step instructions! You'll find paper copies at www.fruitionseeds.com as well as our free download of the ebook.



Onions are the first seeds we sow, the harbingers of spring germinating 8 to 10 weeks before final frost.

Goal: Healthy seedlings are deep green & vigorous, only 5 inches tall at transplanting (trimming is key, learn more below!), about the diameter of the graphite in a pencil.

Sets vs Seeds: Like all things, each has their pros and cons. **Onion sets** are tiny, baby onions convenient to tuck in the soil, though their varieties are limited and rarely get large in short seasons since they're most commonly short-day types ideal for longer seasons than Zone 5. **Onion seeds** require more time and commitment to grow & must be started well before final frost, though it's easy to select varieties that are brilliantly adapted for your region so they're generally much healthier and more abundant, especially in short seasons.

Common Mistakes: If you don't have a grow light or full-light, cozy greenhouse, don't start onion seeds 8 to 10 weeks before final frost, start them 6 to 7 weeks before final frost or simply support a local farmer growing onions! Without adequate light, your seedlings will be stressed and your onions will not be abundant. Heat mats hasten as well as increase germination rates, making a huge difference for all seeds and especially onions. **If you're starting your onions late**, keep them on your heat mat beyond germination so they grow the fastest, just be sure you're watering them well since the extra heat will quickly dry them. **Trim your onion seedlings to 5 inches** when they're 6 inches tall or more or begin to flop over! Be sure to **harden off your onion seedlings well** before planting them out and **keep them well-weeded**, since their sparse foliage doesn't compete with weeds. Finally, if you're attached to **storing your onions** long-term, harvest promptly and cure them fully.

Days to germ: 5 to 12 (75° to 85°F is optimal for germination)

When: Sow your onions 8 to 10 weeks before final frost. For us here in Zone 5, mid-February to mid-March is ideal. We have started onions the first week of April and have found they still size up well, just not as large as if we had started them a couple of weeks earlier. If you don't have a grow light, start your seedlings later rather than earlier.

Seed depth: ¼ inch

Direct sow/transplant: Transplant only

Preferred seed starting method: Gently broadcast onion seeds in open flats with about ¼ inch between seeds. Onion roots are not fibrous and impressively resilient, so they can be pulled apart with ease prior to planting without worry of damaging your seedlings.

Seeds per soil block/cell: Sow 4 or 5 seeds per block or cell. Rather than thinning, simply transplant out each block or cell 6 inches apart.



Seeds: All allium seeds (including onion, leek, scallion and chives) have a thin, fragile seedcoat that quickly oxidize, greatly reducing the longevity of your seeds. Though most seeds last several years without losing much germination, allium seeds are best sown fresh each season.

Trimming Seedlings: Most seedlings don't need to be trimmed, but onions and early-sown leeks do. Once they grow over 6 inches tall, gently hold their tops and trim them back to 5 inches with sharp scissors. Enjoy these trimmings like chives! This encourages them to grow more stout than tall, helping them transplant with less stress.

Watering Seedlings: Bottom-watering is best (see our blog, *Bottom Watering is Your New Best Friend*, for full details) and only overhead water after letting the top millimeter of your potting mix dry out, preventing algae growth on the surface as well as damping off.

Feeding Seedlings: Grow your seedlings in the most nutrient-dense potting soil you can find! You'll find ours at www.fruitionseeds.com. Additionally, we feed our onion seedlings once they are 5 inches tall, spraying their foliage with dilute fish emulsion every 10 to 14 days.

Succession Sowing: Since onions are day-length-sensitive, we do not succession sow them. Other alliums like leeks we succession sow each month through early August (here in Zone 5) to enjoy a consistent harvest through the season.



The sulfurous compounds of onions, leeks & scallions (above, with broccoli) are fabulous companion plants. Enjoy our 'Guide to Companion Planting' blog for more details!

Companion Planting: Onions are fabulous companion plants! Their sulphurous compounds naturally deter aphids and cabbage moths while attracting lacewings and ladybugs. Their sparse foliage and shallow roots allows them to grow close to other plants while not competing above the ground for light or below the ground for nutrients. Interplanted among kale, broccoli, cabbage and other plants in the brassica is our favorite way to companion plant onions. Enjoy Fruition's *Guide to Companion Planting* on our blog!

❧ CULTIVATE ❧



Onions are hungry! There is a direct relationship between the quantity & quality of nutrients available and the quantity and quality of abundance you'll harvest. We foliar feed with dilute fish & kelp emulsion every 2 to 3 weeks until the summer solstice, when onions begin to transition to dormancy.

Soil: The healthiest, most abundant onions are grown in fertile, well-drained soil, and full sun. Onions thrive in a wider pH range than most, 6.0 to 7.0.

Fertility Considerations: Onions require lots of fertility and specifically nitrogen to become large, delectable and long-storing bulbs. At Fruition, we incorporate compost as well as our slow-release granular fertilizer into the soil prior to transplanting. The most vital time to feed your onions is 4 to 5 weeks after transplanting, when a nutrient-dense sidedress of compost or other nitrogen-rich organic fertilizer will boost their health and abundance just as they're beginning to bulb. We foliar feed dilute Fish and Kelp emulsion every 2 weeks until the summer solstice, June 21st, when onions begin to transition toward dormancy; excess nitrogen after this will decrease your onion's storage life.



Onions bloom and set seed in their second growing season, often 5 feet tall or higher.

Hardening Off & Transplanting: It's critical to 'harden off' your onion seedlings, acclimating them to life outdoors for 4 to 7 days before planting them. Plants can get sunburned, too! Slowly increase their sun exposure during this time. Just before transplanting, shower your seedlings with water or dilute fish emulsion to loosen and feed their roots, mitigating transplant shock. Onions are cold-tolerant, so we transplant them into our gardens about one month before final frost, often late April or early May here in Zone 5. If you've grown seedlings in an open flat, we love to gently separate them just prior to transplanting. You'll notice their roots are strong and distinctly not fibrous, so they tease apart with ease. Though we prefer to grow onion seedlings in an open tray, when we grow them in soil blocks or cells transplant we prefer to plant the whole soil block or cell tray in a 8-inch grid (see diagram on page 5), though you can certainly break them up, as well. To transplant, use a dibble or your finger to make a long, narrow hole for each onion seedling; up to one-half of your seedling can be buried. In a row, transplant one seedling every 4 inches or, in a grid, transplant 3 to 4 seedlings every 8 inches. Remember to gently back-fill your hole and gently tamp down the soil around each seedling base, reducing air gaps.

Watering: Onions are shallow-rooted and grow best with at least 1-inch per week of rain or irrigation, especially during the bulbing phase.

Weeding: Since onions have such sparse foliage, keeping them well-weeded is key to their thriving. Mulch helps retain moisture as well as suppress weeds.

Pests: Onion thrips can munch leaves, dramatically reducing your harvest. To reduce their pressure, diligently remove dead plant material in the garden for them to overwinter in. Allium Leaf Miner is a fairly new 'pest' insect in the North and, like so many pest insects, floating row cover over hoops brilliantly excludes them from your garden, completely organically.

Pruning: Onions don't require pruning.

Disease: Fortunately, thanks to their abundant sulphur compounds, onions are resilient against many fungal and bacterial diseases. Good air circulation and crop rotation, as general practices, always help with disease control.

Staking: Staking is only necessary if you are growing second year bulbs for seed. With strong posts every 5 feet along the edges of the bed, we secure hortonova netting horizontally about 3.5 feet high to hold up the glorious 5+ foot foliage with 6-inch pom-pom flowers maturing the next generation of onion seeds to share with the world!

Season Extension: Since onions are cold-tolerant, they thrive in the cool of the early season, so long as they're hardened off well. Their day-length sensitivity means onions are harvested well before frost, so season extension for onions in fall is not necessary.



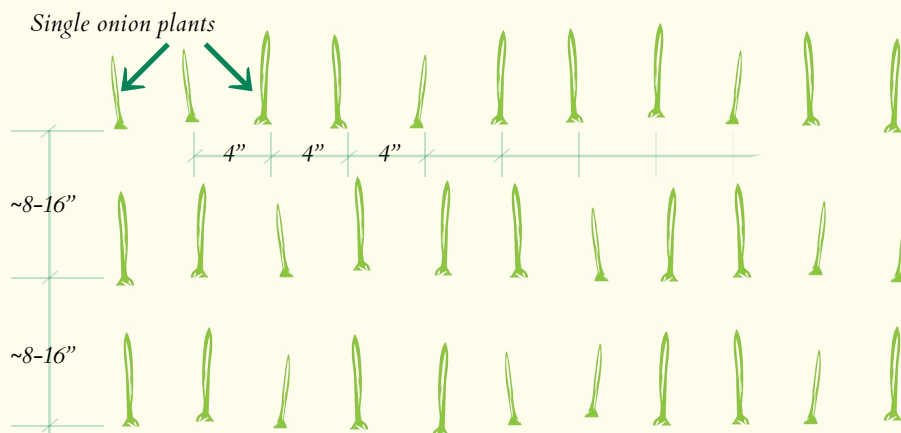
Seeds vs Sets, Long Day vs Short Day: Though sets are convenient, most available varieties are of short-day onions thriving in long seasons. Grown in short seasons, they often only grow as large as the onion on the left. If you grow in short seasons, be sure to focus on long-day varieties, like our New York Early on the right.

THREE SIMPLE ONION PLANTING APPROACHES

~ your imagination is the limit ~

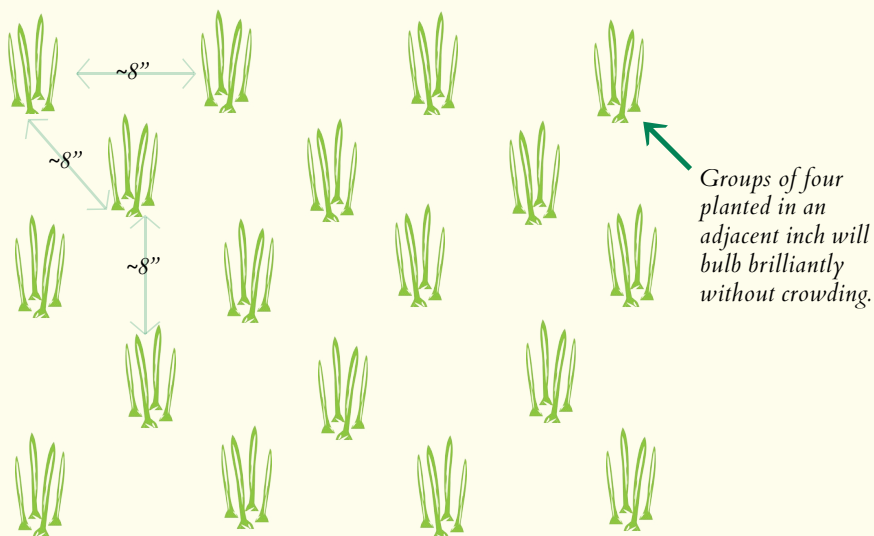
“Row” Style Planting:

Space single onion seedlings 4 inches apart in rows, with 8 to 16 inches between each row, depending on how you plan to weed and how fertile your soil is. Onion spacing can be closer in rich soil.



“Block” or “Grid” Style Planting:

Transplant 3 to 4 seedlings within 1 inch of each other every 8 inches in a staggered grid, maximizing your space. Impressively, your onions will grow away from and not crowd each other! This is another way to grow beets, as well.



“Interplanting” or Companion Planting Method:

Spacing for the interplanting or companion planting method: As you transplant a row of broccoli (or brussels sprouts, kale or cabbage, for example) planted 18 to 20 inches apart, in between each broccoli you could tuck a lovely cluster of 4 onions transplants within an inch of each other. Four leeks and up to a dozen scallions thrive in this configuration, as well. If you’ve sown onions into soil blocks or cell trays, simply plant an entire block or cell, so long as there are not more than 5 onions in it.



The brilliance of this interplanting is manifold: Abundant sulfur compounds in your onions deter pest insects like cabbage loopers while attracting beneficial insects like lacewings. Additionally, their sparse foliage and shallow roots don’t compete above or below ground with your surrounding broccoli. If your broccoli begins to crowd out your onions, harvest your onions early.

HARVEST

Onions may be harvested anytime you wish, whether their bulb is golf ball or softball-sized. Onions keep growing until days begin to shorten after the summer solstice, June 21st, which triggers them to become dormant. After summer solstice onions continue to grow until, several weeks later, their tops suddenly fall over just above the ground. The leaves will still be green but they'll quickly soften and turn gold. Once they fall over, harvest your onions to cure in a dry, warm place with plenty of air flow. Once all foliage and roots are crisp and dry (often



In humid climates, it's important to harvest your onions promptly once their tops flop over, especially if you're hoping to cure and store them over the winter. Hanging their foliage upside down in the slats of wooden palates is an easy way to cure onions.

three weeks or more in humid climates), clip off all tops and roots. Remember to not cut too close on the foliage to the top of the onion or you could impact storage time. We leave about ½ to 1 inch above the bulb.

Onion storage:

Some varieties store longer than others; sweeter onions tend to not store as long, though certainly there are exceptions. All onion bulbs store the longest in

cold temps (close to but above freezing is optimal) with about 70% humidity with good air circulation.

SEED SAVING

Life cycle: Biennial

Qualities to select for: Flavor (including pungency or lack of pungency), color, shape, long storage capability, single or fewer apical bud 'centers,' seed size (larger is more vigorous) as well as robust foliage that competes with weeds doesn't flop too early.

Wet or dry-seeded: Dry

When to harvest: Re-plant second year bulbs for seed about 6 weeks before final frost. In humid climates, sowing them in a high tunnel (or otherwise protected from rain) will increase both seed quality and quantity. Before re-planting, cut one-quarter of the onion top off, re-planting only those with 2-3 or less green apical bud 'centers,' since onions quickly revert to their ancestral tendency to grow many centers, making them more challenging to prepare in the kitchen. Enjoy all the onions tops, they're delicious! Shortly after re-planting onions, stake them by placing strong posts every 5 feet along the edges of the bed and secure hortanova netting horizontally (or other supportive materials) about 3.5 feet high to hold up the glorious 5+ foot foliage with 6-inch pom-pom flowers maturing the next generation of onion seeds to share with the world! Drink in the heaven scent of their breathtaking blossoms and harvest promptly once their easily shattered seedheads turn from green to gold. We wait to harvest individual heads until the seed can easily fall out when we tap our hand against the flower.

Seed Cleaning Notes: We clip onion seedheads with about one foot of the stalk still attached, allowing the seed to 'after-ripen' on screens in a warm, dry and well-ventilated area until the seed breaks rather than bends. Rubbing the seeds under your feet or in your hands will remove most of the seed. Screens and fans readily separate the seed from the chaff.

Seed storage & viability: All allium seeds (including onion, leek, scallion and chives) have a thin, fragile seedcoat that quickly oxidize, greatly reducing seed longevity. Though most seeds last several years without losing much germination, allium seeds are best sown fresh each season. Store your seeds in a freezer for the greatest longevity.

BEST OF THE BLOG



Insight & inspiration daily!



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**Harbinger of Harbingers:
Sowing Allium Seeds for Spring**

6 Seeds to Sow in Early April

5 Tips for Gorgeous Transplants

*Enjoy the videos with each of our
varieties online, as well!*

Find more onion seed sowing insight in our free

Seed Starting Academy

online as well as in our

Sowing & Growing Onions Webinar

in our free webinar library at www.fruitionseeds.com.

OUR VARIETIES:



ORGANIC NEW YORK EARLY ONION

HEIRLOOM Beyond her delectability, we love New York Early for her dependable earliness and long storage life. Storing rock-hard consistently through the winter, we rarely have

months where we don't eat these 2.5 to 3 inch wide, beautifully round onions!



ORGANIC ROSSA DI MILANO ONION

HEIRLOOM We first fell in love with Rossa's high shoulders, tapered heart shape and of course her rich and glorious color; we continue to grow Rossa di Milano for her

remarkable flavor. The sweetest onion we grow, Rossa is our favorite onion for raw salsa and guacamole. We enjoy her grilled, sauteed and indeed any way we enjoy onions. Rossa di Milano is also an exceptionally long storage onion, easily accompanying us through the long winters.



ORGANIC HARDY BUNCHING ONION

HEIRLOOM Did you know bunching onions, also known as green onions and scallions, are perennial? So often grown as an annual, scallions are perennial here Zone 5.

We sow both in spring for summer scallions as well as fall for a treat to enjoy in April as the snows melt. Either planting will overwinter in the gardens, regrowing quickly as soon as the snows melt, ready to be munched, divided or allowed to flower for some of the most gorgeous flowers we've ever seen.

Our favorite recipes: *We add onions to our meals almost daily, it's true! We love them sauteed or caramelized on pizza, salad, curries and pasta. We adore them sauteed with peppers on tacos, putting pickled onions right on top!*

Preserving the harvest: *It's hard to have too many pickled onions! We also saute and freeze onions as a delectable addition to soups when we have copious quantities and need to preserve them fast. Otherwise, onions resiliently preserve themselves, just be sure to start with storage varieties, harvesting promptly and curing fully to surround yourself with delectable abundance throughout the seasons.*

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