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## EARLY-SPROUTING BROCCOLI (*Brassica oleracea*)

Compared to standard heading broccoli, mini broccoli is easier to grow because it more reliably produces a crop under the fluctuating temperatures common in spring and in less-than-optimal fertility and soil moisture. The florets are sweeter and more tender than standard broccoli. Plus, they regrow within a few days after harvesting and thus have a longer harvest window. With a strong market and crop plan, this specialty broccoli product can find a profitable spot in your operation.

Some of Johnny's mini broccoli varieties were developed by crossing standard European/American broccoli with Asian gailon (also known as Chinese broccoli or Chinese kale). Examples of these are 'Happy Rich', 'Bella Verde', 'BC 1611' and 'Sweet Bunch.' We also offer 'Melody', which is 100% gailon. 100% gailon types are more tender and sweet than gailon X broccoli types, but have a shorter harvest period.

All mini broccolis are excellent for bunching and specialty broccoli sales. They are delicious steamed, sautéed, grilled, stir-fried, and eaten fresh.

## SOIL REQUIREMENTS & SITE SELECTION

Like heading broccoli, early-sprouting broccoli prefers a well-drained, fertile soil high in organic matter, with a pH of 6.0–7.5. It requires a regular supply of water, so choose a location that can be irrigated frequently. A thick layer of organic mulch can be helpful in cooling the soil and conserving moisture during the heat of summer.

## CULTURE

Growing practices are the same as for standard heading broccoli. The ideal soil temperature for good germination is 75°F (24°C), and the ideal ambient temperature following germination is 60°F (16°C). Mini broccoli prefers cooler growing temperatures, between 55–75°F (13–24°C), but will still perform reasonably well in weather up to 80–85°F (27–29°C).

Sow 2–3 seeds per cell in 72-cell plug flats and transplant into the field when the plants are about 6" tall and have 3–4 true leaves.

Harden the plants off to outdoor conditions for about a week prior to transplanting.

When transplanting, place the plants about 1–2" deeper in the soil than their depth in the flats. Space rows 12–36" apart, and transplant 4–6" apart within rows for 'Melody', 12–18" apart for 'Burgundy', and 6–12" apart for all other varieties.

Pinching is generally not necessary, and some varieties will typically perform best not pinched. See



['Happy Rich' Mini Broccoli](#)

product descriptions for pinching recommendations for each variety.

## FERTILIZING

If your soil has adequate fertility, no fertilization will be required during the growing season.

If your soil is lacking in fertility, then side-dressing with compost, fish emulsion, blood meal, or a slow-release organic fertilizer is recommended.

The goal is steady growth. Begin fertilizing on a monthly schedule about 2–3 weeks after transplanting, up until a week before harvesting. If planting for a fall harvest, stop fertilizing in midsummer, so that the plants grow more slowly and "toughen up" for fall. Late summer fertilization will result in plants growing too quickly into fall. These plants will be too lush and more susceptible to frost and cold damage.

## HARVEST

Because the best eating parts of early-sprouting broccoli are the stems, rather than the heads, always harvest for best quality of long, tender stems.

We recommend picking side shoots at 4–8" in length every 2–3 days in warm weather and every 5–7 days in cool weather.

To extend the harvest, keep up with cutting side shoots as they mature and dead-head any that have been missed. Side shoots can be snapped off by hand and trimmed as needed. Harvesting with a knife may cause damage to developing buds or to the main stem of the plant. Leave some small, edible leaves attached to harvested stems for a more attractive bunch.

Band or pack into loose crates. Cool immediately.

## STORAGE

Store at 32°F(0°C) for up to 10–14 days.

## EXPAND DIVERSITY

Additional crops that can be grown and marketed like mini broccoli are broccoli raab and choy sum. Our broccoli raab variety is 'Spring Raab' and our choy sum is 'Green 70 D Improved'. These are even earlier to mature and have a short, 1–2-week harvest window. Transplant 'Spring Raab' 6–12" apart and direct seed 'Green 70 D Improved' at 10–12 seeds per foot. See our [Mini Broccoli Planting Program](#) for more details on planting options.

Of this group, broccoli raab can be transplanted successfully similar to the mini broccoli details above. It is a little more expensive to grow the transplants than to direct-seed, but transplanting enables better weed competition by the crop, demands less time occupying field space, and potentially provides a longer harvest window than direct seeding.

## PESTS AND DISEASE

Compared to many other brassicas, broccoli is less prone to pest and disease damage. Disease and pests are most problematic where crops have not been properly rotated; if possible, only grow brassicas on the same ground every third or fourth year.

Other best-practices include using clean starting mixes and strict sanitation practices, including regular disinfection of seed starting trays and tools.

For help identifying pests and diseases or to understand which pests and diseases are most

prevalent in your region, contact your local cooperative extension agent.

**Pests.** Potential pests include flea beetles, aphids, cabbage loopers, cabbageworms, cabbage maggots, cutworms, slugs, mites, and harlequin bugs.

- *Flea beetles*, one of the most common pests of broccoli, are small black beetles that jump like fleas and riddle plant leaves with small holes. Prevent damage from flea beetles by covering seedlings with floating row cover immediately after planting.
- *Aphids* are very small (1–3mm), soft-bodied insects that feed on plant sap, causing the leaves to curl and yellow. They secrete excess sugar as a waste product called "honeydew," which can build up on leaves, attracting ants and leading to the growth of a black fungus called sooty mold. Insecticidal soaps, neem, and pyrethrin are options for control, although aphids are difficult to control with insecticides because they hide on the undersides of leaves and because they must come in direct contact with the insecticide to be killed by it. For indoor growers, the best means of control is to beneficial insects, which are available commercially.
- *Cabbage looper and cabbageworm* larvae are green caterpillars that defoliate plants. Control with *Bacillus thuringiensis* (Bt).
- *Cabbage maggots* feed on plant roots. Cover plants with row cover immediately after planting to exclude cabbage flies and prevent cabbage maggot damage.

**Diseases.** Potential diseases can include club root, black rot, black leg, *Alternaria* blight, *Fusarium* yellows, and downy mildew.

- *Club root* is a fungal disease that causes malformed roots and limits water uptake. The plants become weak and yellowed from lack of water, and tend to wilt on hot days. The disease persists in the soil and is best avoided with crop rotation. Raising the soil pH to 7.0 can help reduce activity by the fungus that causes club root.
- *Black rot* is a bacterial disease that causes V-shaped yellow lesions on the leaves and internal black streaks on the stems. Treat with copper, but take care, as copper is toxic

to beneficial organisms such as earthworms. **Johnny's only stocks seed lots that have been tested free of black rot in a sample of 30,000 seeds.** A disease-free test result means that in the sample tested, the pathogen targeted was not found.

- *Black leg* is a fungal disease that causes leaf spots speckled with black dots and a girdling of the plant stem. At first sign, spray plant

stems with a copper fungicide, but take care, as copper on the soil is toxic to beneficial organisms such as earthworms. **Because black leg may be seedborne, Johnny's stocks only seed lots that have been tested free of black leg in a sample of 1,000 seeds.** A disease-free test result means that in the sample tested, the pathogen targeted was not found.

## ADDITIONAL RESOURCES

Brassica Challenges and Rewards

<https://www.johnnyseeds.com/growers-library/vegetables/brassicas-timing-temperature-fertility.html>

Common Brassica Pests and Diseases

<https://www.johnnyseeds.com/growers-library/vegetables/brassica-pests-diseases.html>

Video: 'Happy Rich' Mini Broccoli

<https://www.johnnyseeds.com/videos/video-v133.html>

Mini & Sprouting Broccoli Planting Program

<https://www.johnnyseeds.com/growers-library/vegetables/broccoli-mini-sprouting-varieties-planting-program.html>

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