# Root Vegetables 101 – Beets and Carrots

Root vegetables have been cultivated for thousands of years and are an essential part of diets worldwide. They are edible plants that grow underground. The 'roots' are storage units for the above ground foliage. 'True root' vegetables are taproots such as beets, carrots and radishes. An example of 'tuberous root' vegetables are sweet potatoes, while 'stem tubers' include the many other varieties of potatoes. There are also many vegetables that fall in the 'modified stem' category. These include bulbs (garlic and onions), corms (taro) and rhizomes (ginger).

Root vegetables are nutrient dense, meaning that they are high in vitamins A and C, minerals like potassium and magnesium, and are a great source of dietary fiber. Root vegetables are gluten free! Specific vegetables provide other important sources of nutrition. Carrots, for example, are high in beta-carotene. Beets are loaded with folate and antioxidants. Many others have medicinal purposes or are used for culinary flavoring.

Root vegetables are a chef's delight. Staples in salads, soups, stews, and side dishes, they can be boiled, mashed, roasted, steamed and even eaten raw.

The 2026 Victory Garden will feature several root vegetables as we explore diversity in vegetable gardening.

## Beets 101

**Beets are growing in popularity as a superfood because of their healing and health promoting properties.**

**Growing requirements.**

- Beets are a cool season crop that can be grown in spring and fall. They can tolerate a light frost.
- Beets do best when grown in light, well-drained soils. Planting areas should be well cultivated as compacted soil or clumps in the soil will yield misshapen fruits.
- Beets require consistent moisture but do not like excessive water.
- Fertilizer seedlings about 6 weeks after seed sowing using a balanced 10-10-10 fertilizer. Always follow label instructions.
- Watch beet rows for crowding and remove/pull any that are becoming too close. Crowded beets lose their flavor. Young tender beets and their foliage can be eaten raw in salads.

**Planting instructions.**

- Sow seeds 2-3 weeks before the last frost date. The 2026 last frost date for Grosse Pointe, Michigan is May 3. Succession planting can occur every 2-3 weeks for a continued harvest. If succession planting is implemented, a light dressing of a good quality vegetable fertilizer is suggested between sowings.
- Beets can be sown 6-8 weeks before the first frost date for fall harvest. The first frost date for Grosse Pointe, Michigan is October 10, 2026.
- Plant seeds ½ inch deep and 4 inches apart.

**Harvesting.**

- Both the beet roots and the leaves are edible.

- Beets are ready for harvest when they become the size of a golf ball to a tennis ball or 1 to 1 ½ to 3 inches in diameter. Depending on the variety, this usually occurs 45-65 days after planting. 
- Allowing beets to get larger will lead to tough and fibrous roots.
- Temperatures in the 80's tend to decrease the flavor, so if succession planting is utilized, it may be necessary to harvest the crop earlier, when the roots are smaller in size.
- Harvest when the soil is dry. To harvest, loosen the soil around the roots with a garden fork and gently lift the roots. Cutting off the greens will cause the root to bleed so just twist them off.

**Storing.**

- Damaged or bruised beet roots will not store well, so eat them ASAP.
- Do not wash the soil off of the roots, but rather gently rub it off.
- Beets can be stored in perforated bags in a refrigerator crisper for 1-3 months.
- Check the bags occasionally and remove any beets that may begin to spoil.

**Beet cultivars best suited to Southeastern Michigan.** There are two main beet types: globe-shaped and long-rooted. Beetroots can be gold, orange, red, yellow, or white.

- Detroit Dark Red is a favorite known for its sweetness and color.
- Chioggia is an Italian heirloom that is red and white striped making it visually appealing.
- Golden beets are golden in color (go figure) and have a milder flavor.
- Sugar beets are sweet and juicy. These were the beets grown during WWI and WWII for sugar, industrial alcohol and synthetic rubber uses.

# Carrots 101

**Growing requirements.**

- Carrots, like beets, do best when grown in light, well-drained soils. Planting areas should be well cultivated as compacted soil or clumps in the soil will yield misshapen fruits.
- Carrots require full sun and are drought tolerant.
- Carrots prefer lean soils so do not over fertilize. Adding compost before sowing should be provide adequate nutrition for a successful harvest.

**Planting instructions.**

- Carrots do not transplant well. Early varieties can be sown in the spring. Always check seed packets for instructions. Main season cultivars should be sown in late spring. Succession sowing can occur every two weeks for continued harvest through mid-summer.
- Sow seeds in drills, little shallow ditches made in weed-free loose soil. Barely cover with fine soil. Water lightly. Seeds usually germinate in 1-3 weeks.

**Harvesting.**

- Baby carrots can be harvested is as little as 4-6 weeks. The larger varieties mature in 10-16 weeks.
- When carrots are ready for harvest, they will push their shoulders up out of the ground like radishes do.

- Use a garden fork to loosen the soil around the plants. Gently pull them up with a little twist if necessary. Brush off as much soil as possible and cut the foliage leaving ¼ to ½ inch of the stem intact.



**Storing.**

- Store unwashed carrots in a perforated plastic bag in a cool dry location. They will last in a refrigerator crisper for 4-6 months.

**Carrot cultivars best suited to Southeast Michigan.** Carrots come in orange, purple, white and yellow varieties.

- Nantes are sweet with a smooth texture making them excellent for eating and juicing. They grow to 6-7 inches long.
- Imperator carrots can grow up to 10 inches long and are used for eating and cooking.
- Danvers have a more robust flavor. Growing to 7 inches long, they have a longer storage life.
- Chantenay carrots are short and broad. They are more tolerant of heavier soils. Their flavor makes them ideal for roasting or use in stews.

# Pest and Disease Management

**Beet Pests.**

1. Aphids are small sap-sucking insects that not only weaken the plant's foliage but also spread diseases. They hide on the undersides of leaves causing them to curl and turn yellow.
    a. Manage aphids by encouraging beneficial insects such as lady bugs and lacewings.
    b. Severe infestations may require insecticidal soaps. Always follow label instructions.
2. Leaf miners are detected by their characteristic tunneling through the leaves.
    a. Remove infected leaves.
    b. Use of insecticidal soaps may be necessary.
3. Flea beetles are small jumping beetles that chew holes in the leaves, especially of tender young plants.
    a. Use row covers to prevent the adult moth from laying eggs on new plants.
    b. Keep the garden neat and tidy. Remove weeds that provide cover or allow sites for overwintering.
4. Beet Cyst nematodes are naturally found in the soil. They cause stunted growth and malformed roots.
    a. Control is through crop rotation.
5. Cutworms are no stranger to vegetable gardeners. They chew through the stem at the soil line and are especially fond of young tender seedlings.
    a. Prevention is through the use of collars around seedlings.
    b. Since they are nocturnal, keeping the garden clean and free of weeds lessens their daytime hiding places.

**Beet Diseases.**

1. Cercospora Leaf Spot is a fungal disease. It presents as small, circular spots with grew or tan centers on the leaves. It thrives in warm humid conditions.
    a. Management is through adequate plant spacing to allow good air circulation.

   b. For severe infections, it may be necessary to use fungicides. Always follow label instructions.
2. Downy Mildew, yet another frequent annoyance in the garden, presents as white mold on the undersides of the leaves. It occurs most often during cool, damp weather.
   a. Management is through adequate plant spacing to allow good air circulation and avoiding overhead watering.



3. Rhizoctonia Root and Crown Rot causes dark lesions on the roots and stems. Wilt and plant death follow.
   a. Wet, poorly drained soils are the main culprit.
4. Bacterial Blight presents on the leaves as irregularly shaped spots with dark centers and black borders.
   a. Keeping the garden clean and free of weeds as well as crop rotation are the keys to prevention.
5. Beet Curly Top Virus is transmitted by leafhoppers. The virus causes the leaves to curl upward and thicken.
   a. Management centers around controlling leafhoppers by encouraging beneficial insects like ladybugs, lacewings and parasitic wasps and planting resistant varieties.

**Carrot Pests.**

**1.** Aphids are small sap-sucking insects that not only weaken the plant's foliage but also spread diseases. They hide on the undersides of leaves causing them to curl and turn yellow.
   a. Manage aphids by encouraging beneficial insects such as ladybugs and lacewings.
   b. Spray the insects off with a stream of water being careful not to damage small seedlings.
   c. Severe infestations may require insecticidal soaps. Always follow label instructions.
2. Cutworms chew through the stems at the soil line and are especially fond of young tender seedlings.
   a. Prevention is through the use of collars around seedlings.
   b. Since they are nocturnal, keeping the garden clean and free of weeds lessens their daytime hiding places.
3. Carrot weevils burrow into the roots, effectively destroying the vegetable crop.
   a. Management includes crop rotation and close monitoring for adult weevils.
4. Root-knot nematodes are microscopic and cause galls on the carrot roots.
   a. Crop rotation is the key to prevention.

**Carrot Diseases.**

**1.** Alternaria Leaf Blight is caused by a fungus that leaves dark lesions on the leaves. The lesions prevent photosynthesis.
   **a.** Prevention centers around crop rotation and avoiding overhead watering.
2. Fusarium and Pythium Root Rot are fungal diseases causing root decay and rot. They are worsened by poor drainage and overwatering,
   a. Good garden practices of watering and well-draining soils can prevent these fungal diseases.
3. Ramularia Leaf Spot causes yellow spots on the leaves, leading to poor photosynthesis and poor crop yield.
   a. Crop rotation and use of resistant varieties is the best prevention.
4. Bacterial Blight, another disease spread by leafhoppers, causes yellow twisted leaves.

a. Management centers around controlling leafhoppers by encouraging beneficial insects like ladybugs, lacewings and parasitic wasps and planting resistant varieties.

**Understanding common pests and diseases are the first step to controlling their damage and insuring a healthy and productive vegetable garden.**