

HOME HORTICULTURE

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MICHIGAN STATE
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Michigan
Groundwater
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Program

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Information Packet was Compiled from the Michigan State University Home Horticulture Database.

Broccoli

Broccoli is grown for its heads of flower buds. It grows in sun or semi-sun, matures in 55 to 75 days, and tolerates any well-drained soil. Keep the pH between 5.5 and 6.6 unless, clubroot is a problem then it should be 6.8. Seed started indoors takes 4 to 6 weeks to make a suitable transplant. The plants may be set out in late April or early May. Transplants larger than 6-inches may show buttoning. Buttoning occurs if plants are exposed to temperatures below 45 degrees for long periods of time. Space plants 18 to 24 inches apart in rows 30 inches apart. If the garden was not fertilized use 5 cups of 5-10-10 per 50 feet of row. Sidedress with the same amount of fertilizer 6 weeks after planting.

The edible portion is the unopened flower buds. If yellow flowers are produced, the harvest time was missed. Cut the head with some stem while the head is still tight. After the main head is removed, side shoots may also be harvested. Broccoli is not stored.

Broccoli Facts

Availability: mid July through mid October

Days to Maturity: 60 to 80 days from transplanting

Approximate Yield/10 feet of row: 10 pounds

Per Person Requirements: Fresh: 3 to 5 plants or Preservation: 5 to 6 plants

Weights: 25 pound crate = 24 pints frozen or 10 to 12 quarts canned

2 to 3 pounds fresh = 2 pints frozen or 1 quart canned

Cole Crop Insects

Aphids

The cabbage aphid is greenish white. Large populations cause cupping and curling of the leaves and prevent head formation. The turnip aphid is greenish and sucks juices from the undersides of leaves. This causes the leaves to yellow and curl.

Cabbage Looper

The cabbage looper is a pale green worm, 1 1/2-inches long that doubles up when crawling. It injures brassica by eating leaves.

Imported Cabbage Worm

The imported cabbage worm is velvety green and about 1 1/2-inches long. They begin feeding in late May to early June. The adults are light colored butterflies, which swoop over the plants as they lay eggs. There are 3 to 4 overlapping generations per year.

Root Maggots

The several types of root maggots injure plants by burrowing into roots and stems. Injured plants wilt and die. There are 3 generations per year usually in late May, late June and mid-August. The first generation is usually the most damaging.

Thrips

Thrips are cream to brown and about 1/16-inch long. They injure plants by rasping holes in the leaves resulting in tiny brown spots, which turn black.

Cutworms

Cutworms are dull colored and variously marked. They cut off the plant at, or near, the soil surface. Very young plants are most affected.

Flea Beetles

The small black or brown flea beetle feeding give leaves a shothole appearance.

Wireworm

Wireworms are slender, yellow to white or brown and about 1/2 to 1 1/2-inches long. They puncture and tunnel stems and roots.

Cole Crop Diseases

Wirestem, Bottom Rot, Head Rot

All 3 names apply to the same fungus. The symptoms are darkened and girdled stems near the soil line. The plants are weak and only produce small heads or may wilt and die. Bottom rot develops when the plants are in the field. Dark, slightly sunken spots form on the bottom of leaves near the soil. Head rot is a progressive state of bottom rot in which the rot spreads to nearby leaves during moist weather or in storage. The causal fungus is soil borne. The disease is worse in moist conditions.

Black Leg

The early symptoms of black leg are dark sunken cankers at the stem base or light brown circular spots on the leaves. Plants wilt when the canker girdles the stem. Black specks form in the cankers and spots. The disease is easily spread and overwinters in diseased crop residues.

Alternaria Leaf Spot

Spots with dark concentric circles form on the lower leaves. A dusty fungal growth occurs on the spots in moist weather. When the crop is stored, the spots enlarge. Soft rot may get started in dead leaf spots. Wet conditions increase disease development. The disease overwinters in seed and diseased crop residues.

Downy Mildew

Downy mildew begins as small, yellow leaf spots. Later the spots turn brown with blue/black, lace-like markings. During periods of moist weather a mold forms on the underside of the spots. The vascular tissue discolors. The disease is worse in cool wet weather in spring and fall. Downy mildew can predispose plants to bacterial soft rot. The disease overwinters on seed and on crucifer weeds.

Black Rot

Infected seedlings turn yellow and die. Yellow, wedge-shaped areas form at the leaf margins and expand inward, toward the center of the leaf, on mature plants. The affected areas later turn black and die. The vascular tissue in affected areas is black. The heads are dwarfed and one sided. The lower leaves fall off and soft rot often develops. The bacteria overwinters on seed and in diseased crop residues and is easily spread.

Fusarium Yellows

Infected plants are yellow, dwarfed, and infected leaves often have purple edges and brown bases. The vascular tissue darkens, starting from the plant base and moving toward the leaf margins. The fungus persists in the soil for many years. High soil temperatures favor the disease.

Clubroot

Above ground symptoms of clubroot are wilting and yellowing leaves. Below ground, the roots are greatly enlarged. The fungus can remain in the soil at least 7 years.