Reviewed June 2010

Brussels Sprouts in the Garden

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Summary

Brussels sprouts are cool season vegetables that prefer a sunny location and fertile, well-drained soil. Incorporate plenty of organic matter and a complete fertilizer into the area before planting. Plant seeds ¼-¾ inch deep. Thin seedlings or transplant Brussels sprouts 12-18 inches apart in the row with rows 2-3 feet apart. Plant Brussels sprouts in early summer for maturity in the fall after several frosts. Avoid fertilization during sprout formation as this may cause loose, soft sprouts, and splitting. Irrigation should be deep and infrequent. Plastic or organic mulches help conserve water and reduce weed growth. Control insects and diseases throughout the year. Harvest Brussels sprouts when the sprouts are one (1) inch in diameter, but before they burst open.

Recommended Varieties

There are many good Brussels sprouts varieties for sale in local gardening outlets and through seed catalogs. Most grow well in Utah. Long Island Improved (90 days), Prince Marvel (100 days), and Jade Cross (100 days) have excellent production, eating quality and storage potential.

How to Grow

Soils: Brussels sprouts prefer fertile, well drained soil rich in organic matter for best growth. Most soils in Utah are suitable for Brussels sprouts production.

Soil Preparation: Before planting, incorporate up to 2-4 inches of well composted organic matter and apply 4-6 cups of all-purpose fertilizer (16-16-8 or 10-10-10) per 100 square feet.

Plants: Brussels sprouts can be grown from seed or transplants. Seeds should be planted ¼-¾ inch deep and thinned to the final stand when plants have 3-4 true leaves. Plants removed at thinning can be transplanted to adjacent areas. Transplants should have 4-6 mature leaves and a well developed root system before planting out. Generally 5-6 weeks are required to grow transplants to this size.

Planting and Spacing: Seeded or transplanted Brussels sprouts should be spaced 12-18 inches between plants in the row with rows 2 feet apart. Brussels sprouts grow best when temperatures do not exceed 70°F and are not seriously damaged by temperatures below freezing. Brussels sprouts require a long

time to mature. Plants should be planted in early summer (early June to late July) for maturity in the fall. Seeded Brussels sprouts may be planted at the same time. They should be planted so that the sprouts develop when fall temperatures cool. High summer temperatures reduce plant growth, decrease sprout quality, and cause internal tipburn.

Water: Water Brussels sprouts deeply and infrequently while trying to maintain even soil moisture. About 1-2 inches of water are required per week. Use drip irrigation if possible to conserve water. Applying mulch around the plant also helps conserve soil moisture and reduce weed growth. Moisture fluctuations during heading will cause maturing sprouts to split open or develop bitter flavors.

Fertilization: Apply ½ cup per 10 feet of row of nitrogen-based fertilizer (21-0-0) at 4 and 8 weeks after transplanting or thinning to encourage vigorous plant growth. Avoid applying additional nitrogen after sprouts begin to form. High nitrogen levels cause loose sprouts and splitting to occur. Place the fertilizer 6 inches to the side of the plant and irrigate it into the soil.

Mulches and Row Covers: Plastic mulches help conserve water and reduce weed growth when using transplants. Fabric covers also protect young plants from insect pests. Apply organic mulches when temperatures increase above 80°F. Mulches help cool the soil and reduce water stress. Organic mulches, such as grass clippings, straw, and shredded newspaper also help control weeds.

Problems

Weeds: Plastic and organic mulches effectively control weeds. Be sure to control weeds when plants are small, and be careful not to damage roots when cultivating.

Insects and Disease:

Insect	Identification	Control
Aphids	Green or black soft-bodied insects that feed on underside of leaves. Leaves become crinkled and curled.	Use insecticidal soaps, appropriate insecticides, or strong water stream to dislodge insects.
Cabbage Worms and Loopers	Worms are light to dark green. Adult loopers are gray or brown moths while cabbage worms are white butterflies. Worms and loopers chew holes in leaves and hide in Brussels sprouts heads.	Control these insects with appropriate insecticides or biological measures.
Flea Beetles	Small black beetles that feed on seedlings. Adults chew tiny holes in cotyledons and leaves. Beetles can reduce plant stands or may kill seedlings.	Control beetles with appropriate insecticides at seeding or after seedlings have emerged from the soil.

Disease	Symptom	Control
Alternaria Leaf Spot	Damping off of seedlings. Leaf spots on leaves or heads is a more common symptom. Spots form concentric circles which have a black sooty color.	Apply appropriate fungicide. Avoid overhead irrigation. Remove diseased leaves and plants. Rotate crops.

Deficiency	Symptom	Control
Tipburn	Nutrient deficiency which causes breakdown of the leaf tissue near the center of the head. Affected tissue becomes dry and brown or black.	Avoid excess fertilizer and water stress during head development. Keep plants evenly moist during growth.

Harvest and Storage

Brussels sprouts should be harvested when the sprouts reach one (1) inch in diameter and are firm and compact. Sprouts near the bottom of the plant develop first. As they are harvested, sprouts further up the stem continue to enlarge. For more uniform sprout development along the whole stem, remove the growing point at the top of the plant when the lower sprouts begin to form. Sprouts can be harvested by breaking or cutting them off the stem. Brussels sprouts can be stored for 2-6 months at 32°F and 95% relative humidity. Avoid storing Brussels sprouts with apples, pears, or other ethylene producing fruits as bitter flavors will develop.

Productivity

Plant 3-5 Brussels sprouts per person for fresh use and additional 5-7 plants for storage, canning or freezing. Expect 50-75 lbs per 100 feet of row.

Nutrition

Brussels sprouts are high in vitamin C, a source of thiamine, iron, calcium, and fiber, and are low in calories.

Frequently Asked Questions

My Brussels sprouts taste bitter. What's wrong? Brussels sprouts taste better after they have been exposed to a few frosts. The frosts cause the sugars to become more concentrated in the Brussels sprouts.

When I cut open my Brussels sprouts, they have brown coloration inside. Why is this? Tipburn is caused by calcium deficiencies in the plant. Most soils in Utah are very high in calcium so plants have access to plenty of this nutrient. However, when plants go through irregular growth periods, calcium is not adequately transported to the inner leaves and this causes the leaf edges to "burn" or turn brown. Uniform irrigation, moderate fertilizer additions, and mulches can help prevent this problem.

This publication is issued in furtherance of Cooperative Extension work. Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Noelle E. Cockett, Vice President for Extension and Agriculture, Utah State University. (HG/Garden/2005-02pr)