

Growing Cauliflower in West Virginia

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Cauliflower (*Brassica oleracea*) is a cool-season vegetable closely related to broccoli, Brussels sprouts, cabbage, kale and collards. Collectively, these vegetables are referred to as cole crops. In West Virginia, cauliflower can be grown as a spring or fall crop. Cauliflower grows best in cool growing environments and is more sensitive to warm weather than broccoli. The optimal temperature for development of the curds, or head, is 60 to 70°F. Recommended varieties of cauliflower for West Virginia are listed in Table 1.



Figure 1. Cauliflower can be grown as a spring or fall crop in West Virginia, and has either white (left) or colored (right) curds. (Source: L. Jett)

Variety of Cauliflower

Table 1. Some recommended varieties of cauliflower for West Virginia.

Variety of Cauliflower	Days to Maturity (after transplanting)	Comments
Snow Crown	48	Early, white cauliflower for spring or fall, self-blanching
Cheddar	68	Orange cauliflower for spring, summer and fall
Amazing	75	Fall production only, self-blanching
Violet Queen	65	Purple broccoli-type head
Apex	71	Main season hybrid, self-blanching
Candid Charm	65	Excellent for spring and fall, self-blanching
Steady	65	Early, self-blanching
Graffiti	70	Purple cauliflower

Transplants and planting

Cauliflower is established or planted as transplants. Seed should be sown in 50- or 72-cell trays or peat pots filled with soilless media. Transplants can be seeded beginning in mid-February, and six to eight-week-old transplants can be planted by mid-April for spring and early summer cauliflower. Sequential plantings of cauliflower can be made through May which ensure crop success in the one or more plantings fails. Each transplant should have four to five leaves at the time of transplanting, and should be fertilized weekly. Approximately one week before transplanting in the spring, the transplants can be conditioned or “toughened up” by exposing the plants to ambient or outside conditions for a few hours each day. For the fall crop, transplants should be seeded in mid-June for transplanting in mid- to late-July. Most cauliflower varieties should be transplanted by early August. Delayed planting will often result in “blank plants” with limited head production. Cauliflower grows best in well-drained soils with a pH of 6.0 to 6.5. Avoid planting in fields that had other cole crop plantings in the last two years.

Cauliflower can have boron deficiency symptoms if the soil pH is greater than 7.0 with low organic matter (Figure 2). Boron can be applied at 0.5 ounces per 1000 square feet. Additional fertilizer requirements are approximately 100 pounds of nitrogen per acre (2.3 pounds per 1000 square feet) with phosphorus and potassium fertilization based on a recent soil test.

The transplants are spaced 18 to 24 inches apart with 36 to 48 inches between rows. Cauliflower should be grown on black plastic mulch to warm soil in spring or white plastic mulch to cool the soil in fall. Organic mulch, like straw and hay, can also be used as it will cool the soil and reduce soil moisture evaporation. Drip irrigation is necessary to supplement rainfall through the growing season.



Figure 2. Boron deficiency symptoms on cauliflower as noted by browning of young leaves and curds of the plant. (Source: L. Jett)

Most recommended varieties of cauliflower are self-blanching, which means the leaves fold over the developing head to keep it from getting discolored from the sun. However, some self-blanching cultivars may need to have the outer leaves tied with rubber bands to shade the curds when the head begins to develop. Most colored cauliflower varieties can tolerate warmer temperatures and don't need to be blanched. While cauliflower can tolerate light frosts, row covers may be needed to protect against hard freezes.

Pest management

Pests of cauliflower include snails, slugs, harlequin bugs and caterpillars. Lightweight row cover or insect netting can be placed over the plants in early spring or late summer to protect the crop from insect damage. In addition, organic pesticides, such as Dipel (Bt) or Spinosad, can be used effectively for worm control. For a complete list of biological and chemical control measures, consult the *Mid-Atlantic Commercial Vegetable Production Guide*.

Harvest and postharvest handling

Cauliflower is harvested when the heads are compact and the outer curds begin to separate from the head. Cauliflower is usually a maximum of 6 inches in diameter when fully mature. Overmatured heads have a “ricey” look and are often discolored. One to two whorls of leaves are harvested with the head to protect it. Harvesting should be done in the coolest part of the day to reduce field heat. Cauliflower can be stored at 32°F for up to three weeks.

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