

# Cauliflower

## Introduction

Cauliflower (*Brassica oleracea*) is a cool-season crop in the crucifer family. While it is closely related to broccoli and cabbage, cauliflower is more exacting in its environmental requirements than these other cole crops. Cauliflower is very sensitive to unusually hot weather and drought.

## Marketing and Market Outlook

There is little commercial cauliflower production at this time in Kentucky. Only fall cauliflower crops would appear to have potential for commercial fresh market sales. The U.S. per capita use of both fresh and frozen cauliflower has decreased by about 30 percent since the mid-1980s. Direct marketers may find niche markets for specialty cauliflower varieties, including green, orange, purple, and romanesco heads.

## Production Considerations

### *Site selection and planting*

While poorly drained soils should be avoided, slightly rolling land is suitable. Cauliflower requires high magnesium levels and a pH of 6.5 or higher. This crop will do well on ground that has been in tobacco; however, avoid fields that have previously been in other cole crops for the past 3 to 5 years.

Crop spacing can greatly affect head size; a closer spacing results in smaller heads. It is important to remember that although large heads of cauliflower are attractive and may be preferred by retail customers, wholesalers may prefer small, compact heads.



Cauliflower does not do well as a spring crop in Kentucky; however, it will do well as a fall crop. Transplants can be placed in the field in early August. Irrigation (trickle or overhead) is often crucial for establishing a fall crop.

### *Pest management*

Insects can be a major problem in fall cauliflower production. Insect traps and scouting can help the grower monitor populations, and determine when and how often pesticides should be applied. Plant disease problems, such as black rot, black leg and downy mildew, can also result in yield losses. A good crop rotation program and the use of disease resistant varieties will help in the prevention of a number of diseases.

### *Blanching and harvest*

“Blanching” is necessary to maintain the desirable white head or curd. Heads exposed to sunlight can turn green. Blanching is done by pulling the leaves up over the developing head when the curds are the size of a quarter. There are now some varieties available that have tightly wrapped leaves, thus reducing the need for blanching.

**Crop Diversification  
& Biofuel Research  
& Education Center**

Heads will be ready to harvest in about 7 to 10 days. Once ready for harvest, heads are cut by hand. Cauliflower is packed in cartons (nine to 12 film-wrapped heads) for wholesale fresh market sales.

#### *Labor requirements*

Cauliflower requires about 25 hours of labor per acre for production and about 125 hours per acre for harvesting and marketing.

### **Economic Considerations**

Initial investments include land preparation, purchase of seed or transplants, and installation of an irrigation system. Wholesale cauliflower production is a capital-intensive venture requiring product cooling, wrapping in cellophane, and packaging that meets industry standards. The cooling, irrigation, and handling equipment for proper cauliflower production are similar to those needed for broccoli; fees for these processes can easily translate to \$2.00 to \$3.50 per box of product. Cauliflower production in Kentucky is probably best suited for direct, niche, and well-developed local markets.

Since returns can vary depending on actual yields and market prices, the following per acre returns to land and management are based on three different economic scenarios for trickle-irrigated cauliflower (2009).

PESSIMISTIC	CONSERVATIVE	OPTIMISTIC
\$(1,200) *	\$(858) *	\$35

\* Parentheses indicate a negative number, i.e. a net loss

### **Selected Resources**

- Bt Basics for Vegetable Integrated Pest Management, ID-156 (University of Kentucky, 2005)  
<http://www.ca.uky.edu/agc/pubs/id/id156/id156.pdf>
- Growers' Guide to Bt, ID-156A (University of Kentucky, 2005)  
<http://www.ca.uky.edu/agc/pubs/id/id156a/id156a.pdf>
- Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky)  
<http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm>

---

*Reviewed by Brent Rowell, Extension Specialist (Issued 2002, Revised 2006)*

*Reviewed by Tim Coolong, Extension Specialist (Revised 2010)*

*Photos by Rosie Lerner, Purdue University*

**July 2010**

---

For additional information, contact your local [County Extension](#) agent