

UK COOPERATIVE EXTENSION SERVICE

UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Gourds

Introduction

Gourds, which are related to pumpkins and squash, are generally grown for their hard outer rind. The fruit is dried for fall decorations or useful household



items. The various types of gourds include hard-shell gourds (used for dippers, containers, and birdhouses), soft-shell gourds (decorative and ornamental uses), and luffa gourds (their soft interior fiber is used like a sponge).

Marketing

Marketing gourds will require creativity on the part of the grower. Options include farmers markets, roadside stands, and craft shops. There is the possibility of a direct market via Internet or mail order sales. Some producers utilize on-line auctions to market their gourds to crafters. Large volumes of luffa sponges, sold as cosmetic and bath items, could also be marketed to local health stores and specialty shops.

Ornamental gourds are best marketed during the fall and winter. Some producers in Kentucky have successfully added value to gourd production by combining soft-shell gourds with pumpkins and ornamental corn for fall home and yard displays. Other producers have decorated or crafted hard-shell gourds during the winter and sold them the following year at farmers markets and other market

outlets. Although cleaning is labor intensive, properly cleaned hard-shell gourds can last indefinitely, and thus be available for year-round sales.

Market Outlook

Fall decorating ranks just behind Christmas in terms of money spent per household.

This is a consumer market segment that continues to increase. Kentucky producers may be able to capture some of these consumer dollars, especially if they are able to offer gourds as part of a “market basket” of fall decorative products.

Luffa gourd products have gained popularity in recent years, but producers may have difficulty gaining a market advantage in this niche as luffa products become more mainstream. Other possible growth areas for marketing gourds include edible specialty gourd varieties and gourds for specialty medicinal purposes. Such markets are often thinly traded and tricky for producers to gain consistent market access.

Production Considerations

Site selection and planting

Select a sunny site with good air movement and well-drained, fertile soil. Sandy loam or clay loam soils high in organic matter are very desirable. Land should be selected that has not been planted

in gourds, other cucurbits, peppers, tomatoes, or tobacco for at least 3 years since these crops are susceptible to some of the same disease pathogens.

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The seed bed should be well-prepared by plowing deeply. Since seeds and plants are extremely sensitive to cold weather and wet soils, seeding should be delayed until after the frost-free date when the seed bed is warm and well-drained. Because ornamental gourds are grown primarily for fall sales, the planting date should be based upon the days to maturity and desired harvest date. Ornamental gourds planted too early may rot or lose their color before fall sale time. Some of the larger hard-shell gourds (e.g. bushel or kettle) have a very long growing season and should be started as transplants 3 to 4 weeks before the frost-free date.

Individual plants may require 27 square feet of growing space, depending on the cultivar grown. For some gourds, production on a sturdy trellis, while more labor intensive, saves space and produces cleaner fruit. One strong hive of bees is recommended for every 1 to 2 acres.

A supplemental water source is beneficial for increasing yields during most years in Kentucky. Water should be withheld toward the end of the season in order to ripen the gourds before frost.

Some growers find it beneficial to grow gourds on raised beds with black plastic and drip irrigation. Plasticulture seems to offer the greatest economic advantage with the large, long season gourds, resulting in increased size, improved shape, and increased numbers of mature fruit at harvest. Black plastic can also result in a cleaner crop. Producing brightly colored gourds on plastic, however, may accelerate maturity before an optimal marketing date.

Pest management

Gourds are subject to the same diseases and insect pests that attack other cucurbits. The most common and damaging diseases encountered in Kentucky in recent years have been damping-off, gummy stem blight (or black rot of the fruit), powdery mildew, downy mildew, anthracnose, bacterial wilt, and viruses. The most serious

insect pests include squash bug and squash vine borer. Aphids and cucumber beetles can also be a problem. Scouting to monitor populations help the grower determine when and how often pesticides should be applied. Weeds are controlled by using labeled herbicides, mulches, or shallow cultivation. Hand-pulling weeds may be necessary when the vines are large.

Harvest and yields

Gourds are harvested when the fruit is fully mature and dry using hand pruners, sharp shears, or a knife. Fruit that is picked green may rot and the decorative gourds will not color-up. However, those left on the vine will continue to color-up over a period of 3 to 4 weeks, as long as diseases and insects are held in check. Harvest for the bright-colored decorative gourds generally begins in mid-September and should end before frost to reduce possible spoilage. Hard-shell gourds are usually left on the vines (if alive) until after the first killing frost. Mature hard-shell gourds will not be injured by frost. Gourd seed viability, however, is reduced when fruit are exposed to freezing temperatures before drying.

Gourds are thoroughly washed or wiped clean prior to curing. Curing times can vary from 7 days to 6 months, depending on the type and size of gourd, as well as the thickness of the rind. Luffa gourds are soaked in water until the shells can be peeled back and the sponges easily removed.

Average yields for the large decorative types can be expected to be about 2,000 to 5,000 gourds per acre. Yields for small miniature or ornamental gourds weighing 3 to 4 ounces each may average 20,000 to 30,000 per acre.

Labor requirements

Labor needs per acre are approximately 5 hours for production and 300 hours for harvest and handling. If black plastic is used, an additional 18 hours per acre is needed for removal following harvest.

Economic Considerations

Initial investments include land preparation and the purchase of seed or transplants. Additional start-up costs can include the installation of an irrigation system and black plastic mulch. In Kentucky, black plastic is generally more cost effective for producing the larger gourds than it is for the smaller gourds.

Production costs are estimated at \$900 to \$950 per acre with harvesting and handling costs approximately \$1,400 for large ornamental gourds and \$1,500 for smaller gourds.

Gourd returns can vary widely depending on the marketing channel. Direct marketing larger gourds, like African kettle gourds, could return more than \$2,300 per acre to land, labor, and management. Production of miniature pumpkins and similar gourds for wholesaling in Kentucky results in much slimmer margins, with a higher probability for negative returns to land, labor, and management. Optimistic returns for wholesale miniature gourd production based on a price of \$11.00 per ½-bushel box fall in the \$100 to \$300 per acre range.

Selected Resources

- IPM Scouting Guide for Common Problems of Cucurbit Crops in Kentucky, ID-91 (University of Kentucky, 2009)
<http://www.ca.uky.edu/agc/pubs/id/id91/id91.pdf>
- Ornamental Gourd Production in Kentucky, ID-119 (University of Kentucky, 2007)
<http://www.ca.uky.edu/agc/pubs/id/id119/id119.pdf>
- Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky)
<http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm>
- Commercial Luffa Sponge Gourd Production, HIL-120 (North Carolina State University, 2008)
<http://www.ces.ncsu.edu/depts/hort/hil/hil-120.html>
- Commercial Production and Management of Pumpkins and Gourds, B1180 (University of Georgia, 2009)
http://www.caes.uga.edu/Publications/displayHTML.cfm?pk_id=6279
- Specialty Crop Profiles: Ornamental Gourds (Virginia Cooperative Extension, 2009)
<http://pubs.ext.vt.edu/438/438-101/438-101.html>

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Photo by Cheryl Kaiser, University of Kentucky

December 2009

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