

Watermelon

Marketing and Market Outlook

Kentucky fresh market seeded and seedless watermelons are currently being sold at produce auctions and farmers' markets throughout the state. Other marketing options include roadside stands, local retailers, foodservice and wholesale markets.

Seedless watermelons have helped this crop become more popular with U.S. consumers in recent years. Current consumer trends call for smaller "icebox" and seedless melons; pre-cut melon quarters and halves; uniquely colored melon varieties (such as yellow-fleshed watermelons); and "mini" seedless watermelons.

Production Considerations

Site selection and planting

Watermelons grow best in sandy or sandy loam soils. Direct-seeding has been the most common way of planting watermelons. Another method is to set transplants that have been started from seed in a greenhouse. This method must be used for seedless watermelons due to their high seed costs and exacting germination requirements.

Black plastic mulch with drip irrigation has been used successfully with watermelons. Advantages include: soils warm up faster, soil moisture is retained, nutrient leaching is prevented and weeds are controlled. A hand corn planter can be used for planting seed through the plastic while a bulb setter or waterwheel setter may be used effectively for transplanting. Trickle irrigation increases fruit quality and



quantity. In addition, fertilizer can be injected through the irrigation system.

When growing seedless varieties, about one third of the plants in the field should be seeded watermelons in order to provide adequate pollination. Wild bees will help provide pollination; however, beehives should be used to ensure good pollination in commercial plantings.

Pest management

Gummy stem blight is the most widespread and serious disease of watermelon in Kentucky. Other diseases that can result in crop losses include anthracnose, *Alternaria* leaf spot and *Cercospora* leaf spot. Good spray coverage with appropriate fungicides/bactericides is essential. Watermelon insect pests include aphids, cucumber beetles and mites. Black plastic helps to control weeds during early growth, and selective herbicides can be used in middles between rows.

Harvest

The best indicator for ripeness is the changes in color of the



underside of the melon where it comes into contact with the ground. However, because this color varies among varieties, growers must become familiar with the varieties grown to determine the best stage of harvest.

Labor requirements

Per acre labor needs for trickle irrigated watermelon are approximately 20 hours for production, 60 hours for harvest and 10 hours for grading. An additional 10 hours per acre is needed for plastic 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.

Production costs for trickle-irrigated watermelon are estimated at \$921 (seeded) and \$969 (seedless) per acre with harvest and marketing costs at \$994 (seeded) and \$1,041 (seedless) per acre. Total expenses per acre are approximately \$2,250 (seeded) and \$2,350 (seedless).

Since returns vary depending on actual yields and market prices, the following per acre returns to land and management estimates are based on three different scenarios. Conservative estimates represent the University of Kentucky's statewide average cost and return estimates for 2005.

SEEDED WATERMELONS

<i>Pessimistic</i>	<i>Conservative</i>	<i>Optimistic</i>
\$(365) *	\$(104) *	\$526

SEEDLESS WATERMELONS

<i>Pessimistic</i>	<i>Conservative</i>	<i>Optimistic</i>
\$(106) *	\$269	\$794

* Parenthesis indicate a negative number, i.e. a net loss

More Information

- Marketing Options for Commercial Vegetable Growers, ID-134 (University of Kentucky, 1999) <http://www.ca.uky.edu/agc/pubs/id/id134/id134.htm>
- Watermelon Marketing Fact Sheet (University of Kentucky, 2005) <http://www.uky.edu/Ag/NewCrops/watermelon2005.pdf>
- Vegetable and Melon Enterprise Budgets (University of Kentucky, 2004) *interactive spreadsheets* http://www.uky.edu/Ag/AGEcon/pubs/software/budgets_veg_melon.html
- Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky) <http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm>
- Commercial Watermelon Production, B-996 (University of Georgia, 1998) <http://pubs.caes.uga.edu/caespubs/pubcd/B996-w.htm>
- Diseases and Pests of Muskmelon and Watermelon, BP-44 (Purdue University, 2001) *Text-only (no photos) available on the internet:* <http://www.agcom.purdue.edu/AgCom/Pubs/BP/BP-44.html>
Order full color guide online: <https://secure.agriculture.purdue.edu/store/item.asp?itemID=5374>
- Drip Irrigation for Vegetables, MF-1090 (Kansas State University, 1993) <http://www.oznet.ksu.edu/library/hort2/samplers/MF1090.asp>
- Plastic Mulches for Vegetables, MF-1091 (Kansas State University, 1993) <http://www.oznet.ksu.edu/library/hort2/samplers/MF1091.asp>
- Watermelon: Commercial Vegetable Production, MF-1107 (Kansas State, 1998) <http://www.oznet.ksu.edu/library/HORT2/samplers/MF1107.asp>

Whole melon photo courtesy of Rosie Lerner, Purdue University.

Cut melons photo courtesy of John Strang, University of Kentucky

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