



Specialty Melons

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Introduction

Specialty melons (*Cucumis melo*) have cultural requirements similar to the more familiar muskmelon (cantaloupe). These melons offer consumers outstanding eating quality and a range of flesh colors, textures, and flavors. With one exception, cultivars of the specialty types listed below have performed well in University of Kentucky research trials. Consult the *Vegetable Production Guide for Commercial Growers* (ID-36) for the latest variety recommendations.

Asian melons — Melons in this group are variable in appearance, size and flesh characteristics. The ‘Sprite’ variety is a small pure white melon with very sweet crisp, cream-colored flesh that has sold well for a number of Kentucky growers.

Canary — This oblong to egg-shaped melon has a bright yellow rind and considerable storage life. The flesh is white to cream-colored or pale green with a sweet, mild flavor. The colorful rind attracts consumer attention. This melon type has sold well in many areas of the state.

Charentais — These melons have an outstanding slightly stronger muskmelon flavor; however, they normally split open in the field following a rain and are not recommended for commercial production in Kentucky.

Galia — The netted skin is green to golden yellow while the flesh is cream or green with a high sugar content. These melons are very popular in Europe and have a slightly muskier flavor than muskmelons.

Gourmet — An excellent, very aromatic sweet melon, Gourmets such as ‘Sensation’ have the popular heirloom ‘Ananas’ melons in their heritage. Fruit are round, have a coarsely netted muskmelon



exterior, and a soft, melting, cream-colored flesh.

Honeydew — This very familiar creamy yellow, smooth-skinned melon is round to slightly oval. The flesh is commonly green; however, some varieties may be orange or cream-colored. Kentucky-grown honeydews are normally much sweeter than those sold in supermarkets, making for strong return sales. The main production problem with honeydews is obtaining a smooth crack-free or netting-free rind, which depends primarily on the variety and the weather.

Muskmelon Galia crosses — These melons (such as ‘Pixie’ and ‘Sweetie’) have a coarsely netted, light greenish-blue rind with yellow highlights. The flesh is very firm, deep orange in color, and very sweet.

Piel de Sapo — An elongated oval melon



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with non-netted skin and green mottling, these melons have a white, very sweet flesh.

Specialty hybrids — Some hybrids do not fit neatly into any of the standard specialty melon groups so they have been placed into this general category. A number of cultivars in this group (such as ‘Tasty Bites’) are outstanding and have consistently performed well in university research trials.



‘Pixie,’ a Muskmelon Galia cross

Marketing

In Kentucky, direct markets are the primary market channels for specialty melons. Farmers markets, on-farm stands, local restaurants and specialty groceries, as well as community supported agriculture (CSA), are good possibilities for marketing high-quality specialty melons. Produce auctions are an outlet where producers may also be able to move smaller quantities of specialty melons at wholesale prices or higher. ‘Sprite’ melons, as well as canary melon variety ‘Camposol’, are two specialty melon varieties that have been evaluated as suitable for shipping wholesale from Kentucky.

Market Outlook

Melons continue to be very popular with consumers demanding a wider range of fresh produce choices. Nationally, per capita use of honeydews and other melons increased slightly between 2014 and 2016. Imported melons from Mexico and Central America have also extended the fresh melon season. Direct and local melon markets have benefited from increased demand and consumer desire for more diverse produce offerings. Total melon use, which is driven by watermelon and cantaloupe, peaked near 30 pounds per person in the late 1990s. Lower cantaloupe consumption, based on production weights, caused a decline in total melon use during the 2000s. Kentucky wholesale melon producers have benefited from strong prices in some past seasons, but face competition from domestic and foreign melon producers with economic and environmental advantages in melon production.

Good marketing and sound production are likely to continue to make locally grown retail melons a profitable

niche crop. For growers marketing specialty melons directly to the consumer, such as through farmers markets,

it will be important to have the customer taste and experience the outstanding flavors of these new melons. Melon sampling at the point of purchase is one way to introduce the health-conscious consumer to the delicious spectrum of specialty melon varieties. Direct marketers must comply with all pertinent

state and local regulations, such as attending Good Agricultural Practices (GAP) training and obtaining a GAP Training Certificate before offering produce samples. For information about offering samples at Kentucky farmers markets, Kentucky Farm Bureau Certified Roadside Markets and on-farm markets, see the Kentucky Department of Agriculture’s Kentucky Farmers Market Manual and Resource Guide and additional resources at <http://www.kyagr.com/marketing/farmers-market.html>.

Production considerations

Site selection and planting

Specialty melons can be grown on medium-textured soils but do best when grown on sandy or sandy loam soils that are well-drained. Melons should not follow melons, other cucurbits, or solanaceous crops (e.g. tomatoes, peppers, eggplant and tobacco) in the rotation for at least three years because of potential disease problems.

Since many specialty melon seeds are expensive, transplanting, rather than direct-seeding is recommended. Transplants can be produced either in a greenhouse or hotbed. There is little competition for specialty melons in the market, so slightly later planting allows them to ripen in late July and throughout August when there is less rain. This increases melon flavor and sugar content.

In addition, black plastic mulch with drip irrigation is highly recommended for specialty melons. Plasticulture encourages faster growth and earlier maturity. It also results in higher yields. Transplants are normally set through plastic with a water wheel setter in Kentucky.

Training plants to grow in the rows during the early stages of development will enable an easier harvest.



‘Sprite’ melons are white, but turn yellow in areas exposed to the sun.

Growers with large acreages should provide one to two strong hives of bees for each acre of plants to ensure good pollination.

Pest management

Bacterial wilt is the most serious disease threat to specialty melon production in the state, and many specialty cultivars are highly susceptible. To control this disease, it is essential to control the cucumber beetles that carry the pathogen. It is crucial that plants be protected from cucumber beetle feeding beginning the day of seedling emergence or the day of transplanting. A systemic, soil-applied insecticide should be used, followed a month later by a routine insecticide spray program. Other diseases of concern are anthracnose, Fusarium wilt, downy mildew and powdery mildew. Localized aphid infestations occasionally become a problem and will require control. A top notch insecticide and fungicide spray program is critical to successful specialty melon production. If plants lose their leaves, melons do not sweeten up and flavor is poor.

Harvest and storage

Unlike muskmelon, most specialty melons do not “slip” from the stem at maturity. Instead, they are hand-cut from the vines at market maturity. Indicators of maturity vary depending on the cultivar and generally include such characteristics as skin color, skin texture and ground spot color. Harvesting every other day will be necessary during periods of high temperatures. Melons benefit greatly when field heat is removed by forced-air cooling as soon after harvest as possible.

Labor requirements

Labor needs per acre are approximately 15 hours for production when using transplants, 100 hours for harvest, and 30 hours for grading. Production with black plastic will require up to an additional 18 hours per acre for post-harvest plastic removal.

Economic considerations

Initial investments include land preparation and purchase of seed or transplants. Additional start-up costs can include the installation of an irrigation system and black plastic mulch.

Production costs for specialty melons are similar to

muskmelon, with potential for a greater seed expense for new or rare varieties. Total pre-harvest variable costs for trickle irrigated specialty melons are estimated at \$1,535 per ½-acre, with an additional harvesting and marketing cost of \$1,950 per ½-acre. Harvest and marketing expenses can be highly variable in melon production; these estimates assumed a marketing charge (transportation, market labor, etc.) after harvest of 10 percent of gross returns. Total expenses, including fixed costs, were estimated at approximately \$3,560 per ½-acre in 2017.

Since returns vary depending on actual yields and market prices, the following per ½-acre returns to land and management are based on three different economic scenarios. Conservative estimates represent the University of Kentucky’s 2017 cost and return estimates for specialty muskmelons.

<i>Pessimistic</i>	<i>Conservative</i>	<i>Optimistic</i>
\$(560)*	\$1,045	\$2,840

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

Selected Resources

- Fruit and Vegetable Crops Research Reports (University of Kentucky) <http://www.uky.edu/hort/documents-list-commercial-vegetable>
- IPM Scouting Guide for Common Problems of Cucurbit Crops in Kentucky (University of Kentucky, 2009) <http://www.ca.uky.edu/agc/pubs/id/id91/id91.pdf>
- Vegetable and Melon Budgets (University of Kentucky) <http://www.uky.edu/ccd/tools/budgets>
- Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky) <http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm>
- Specialty Melon Production for Small and Direct-Market Growers (ATTRA, 2015) <https://attra.ncat.org/attra-pub/summaries/summary.php?pub=492>
- Producing Cantaloupes in Tennessee, PB-962 (University of Tennessee, 1999) <https://utextension.tennessee.edu/publications/Documents/PB962.pdf>

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For additional information, contact your local **County Extension** agent