

Baby Corn

Cheryl Kaiser¹ and Matt Ernst²

Introduction

Baby corn (*Zea mays*) is a popular Asian vegetable that can be consumed cooked or raw due to its sweet and succulent taste. Many people presume the tiny ears come from dwarf corn plants. In fact, baby corn is the immature ear of fully grown standard cultivars; ears are harvested two or three days after silk emergence, but prior to fertilization.

Marketing

Fresh baby corn sold in the husk can be marketed directly at farmers markets and to ethnic markets. Restaurants, particularly those specializing in Asian or vegetarian dishes, may also be interested in purchasing fresh baby corn. Health food stores are a potential marketing avenue for organically grown ears. Growers desiring to produce and market organic baby corn must first be certified by a USDA-approved agency, such as the Kentucky Department of Agriculture.

Market Outlook

Most baby corn sold in the U.S. has been processed and imported from Asia, mainly Thailand. Very little fresh baby corn is available to American consumers. The reported superior taste and texture of the fresh product may provide a marketing advantage over the more readily available canned import. Organic baby corn may also have a marketing advantage, especially in light of the rapid increase in demand



for organic products. While it is unlikely that the fresh product will ever replace canned baby corn, locally produced baby corn occupies a unique niche market for the producer willing to develop it.

Production Considerations

Variety selection

Many common sweet corn and field corn cultivars can be used for baby corn production. There is no taste advantage in growing a sweet corn variety over field corn, since the ears are harvested before the sugars have an opportunity to accumulate. However, sweet corn cultivars tend to be easier to hand-harvest. An important advantage of field corn is the lower seed cost. Additionally, field corn stalks tend to have stronger resistance to lodging due to the development brace roots.



¹Cheryl Kaiser is a former Extension Associate with the Center for Crop Diversification.

²Matt Ernst is an independent contractor with the Department of Agricultural Economics.

Ear quality, more than yield, should be the primary objective when selecting a variety. Small kernel size, straight row kernel alignment, and tapered tips are preferred characteristics for high quality baby corn; some buyers prefer longer ears, as well. Cultivars producing plants about 6 feet in height are generally considered the easiest to hand-harvest. Another factor to consider in variety selection is the ease in which the ears can be pulled from the stalk without damaging the leaves and plants.

Corn varieties specifically bred for baby corn production are also available. Some of these specialty cultivars are shorter than traditional types, produce multiple stalks, and can yield as many as 20 ears per plant.

Site selection and planting

Corn will do well in all areas of Kentucky, but well-drained soils are essential for good results. In most parts of the state the earliest plantings are made between April 20 and May 1. Potential tillage/cropping systems include no-till, low-till, strip cropping, mulch till, living cover crop, and intercropping.

Baby corn can be produced as either a primary crop (all ears are harvested for baby corn) or as a secondary crop (the top ear is left to mature while subsequent ears are harvested as baby corn). A close plant spacing is used when baby corn is the primary crop.

Cross-pollination with other corn varieties in adjacent fields is not a problem for baby corn when it is grown as the primary crop, since it is harvested when immature. However, when baby corn is produced as a secondary crop, cross-pollination can be a problem for those ears left to develop fully. In this case, isolation among different cultivars will be necessary. This can be accomplished by physical separation or by making sure there is a minimum of 14 days difference in the maturities of different types.

Pest management

Corn earworm is one of the most destructive insects attacking sweet corn, but since it generally attacks after silking, it may be less of a problem in baby corn. Other insect pests that can cause crop damage include European corn borers, armyworms, Japanese beetles, and flea beetles. Growers producing baby corn as the primary crop will be able to avoid many of these problems since the crop is harvested so early. Additionally, baby corn ears are tightly wrapped inside the husk, which helps protect them from pest attack. Potential disease problems include Stewart's wilt, leaf blights, rust, and viruses.

Harvest and storage

Baby corn is hand-harvested 1 to 2 days after silk emergence, while the ears are still immature. The ideal ear size is 2 to 4 inches long and $\frac{1}{3}$ to $\frac{2}{3}$ inches in diameter. Because ears can quickly become too large and tough to be sold as baby corn, frequent harvests of every 2 to 3 days are necessary. The harvest period can last 2 to 4 weeks. To maintain ear moisture and quality, fresh baby corn, like sweet corn, is sold in the husk. Ears must be properly cooled immediately after harvest.

Labor requirements

Labor figures for baby corn production are not available; however, they should be similar to sweet corn production (20 hours per acre). Baby corn harvest and packing, however, will be considerably more labor-intensive than the 55 to 65 hours per acre needed for hand-harvested sweet corn. Harvest of baby corn is currently done by hand and requires 12 to 18 successive pickings, which will add to the labor requirements.

Economic Considerations

Initial investments include land preparation and purchase of seed. The installation of an irrigation system would be an additional start-up cost. Growers choosing to use a sweet corn variety may incur somewhat higher seed costs than growers

who select field corn for baby corn production. Field corn varieties that produce multiple ears can result in higher yields, presuming the ears are of a high quality. Cost and returns will also be affected by the production method used; that is, whether baby corn is the primary or secondary crop. Potential growers of fresh baby corn are advised to locate a market and determine the market value before planting large amounts. Growers interested in costs and returns for direct market baby corn can modify the University of Kentucky interactive sweet corn budgets (referenced below) to estimate their cost of production, or they can contact the University of Kentucky Department of Agricultural Economics with specific production scenarios.

Selected Resources

- IPM Scouting Guide for Common Problems of Sweet Corn in Kentucky, ID-184 (University of Kentucky, 2010)
<http://www.ca.uky.edu/agcomm/PUBS/id/id184/id184.pdf>

- Kentucky Sweet Corn Insect Integrated Pest Management Scout Manual (University of Kentucky, 1994) <http://www.uky.edu/Ag/IPM/manuals/ipm10swt.pdf>
- Vegetable and Melon Budgets (University of Kentucky, 2013) <http://www.uky.edu/Ag/CCD/vegbudgets13.html>
- Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky) <http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm>
- Baby Corn (Washington State University) <http://agsyst.wsu.edu/babycorn.html>
- Baby Corn, PNW0532 (Pacific North West Extension: Washington, Oregon, Idaho, 2000) <http://cru.cahe.wsu.edu/CEPublications/pnw532/pnw0532.pdf>
- Baby Corn (Oregon State University, 2002) <http://horticulture.oregonstate.edu/content/corn-baby>

Reviewed by Zheng Wang, Horticulture graduate student (Revised March 2011)
Photos by Carol Miles, Washington State University (corn plant)
and Dorami Chan, Thai Food Blog, Flickr (baby corn on plate)

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