

Heirloom Vegetables

Cheryl Kaiser¹ and Matt Ernst²

Introduction

Heirloom vegetables are vintage varieties that have been preserved by passing seed down from generation to generation. These varieties are generally 50 to 100 years old, although many are much older. All heirlooms are open-pollinated and usually breed true-to-type. Unlike hybrids, which have been bred largely for uniformity in size, shape, and ripening, as well as for durability in shipping, heirlooms were often selected for flavor potential and eating quality.

Marketing

The best marketing opportunities in Kentucky for heirloom tomatoes are local farmers markets and roadside stands where heirloom crops are presented in a total mix with other high-quality in-season crops. Labeling produce as heirlooms, offering samples to taste, and providing free recipes are some ways to attract customers and boost sales. Heirloom varieties are also very suitable for marketing through community supported agriculture (CSA) shares. Disease-free heirloom seeds can be sold through farmers markets, garden clubs, agricultural expositions, gardening conferences, and the Internet.

Potential wholesale markets include local upscale restaurants, food co-ops, and health food stores. Many heirloom vegetables, such as tomatoes, are not suitable for storage and long distance transport. However, some heirloom tomatoes have been shipped short distances in recent years with special packaging. Finally, producers will nearly always maximize their profitability from producing heirloom crops by focusing on more than just selling their produce. Sales of seed, transplants, and even



'WILLARD WYNN' YELLOW GERMAN TOMATOES

value-added products (such as dry bean soup mixes) can diversify an heirloom enterprise and spread the producer's risk away from relying solely on fresh product sales. Savvy managers and marketers may also find ways to profit from their knowledge of specialty crops through agritourism opportunities (such as on-farm workshops), speaking engagements, and other ways of making their knowledge pay.

Market Outlook

The demand for heirloom vegetables is rapidly increasing, especially among consumers looking for unique flavors and freshness. Some Kentucky growers indicate that they are currently unable to meet this demand, in spite of continued production increases. While many vegetable crops are available as heirloom varieties, tomatoes, beans, and cucumbers are the most popular. Heirloom melon varieties have also sold well. Quality heirloom root crops, such as sweetpotatoes, are good farmers market sellers in some areas of Kentucky. Other storage crops, like pumpkins and winter squash, have also



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.

proved popular with farmers market customers and may help growers extend the sales season. Heirloom seeds and transplants are also highly marketable. Prices have remained strong as heirloom varieties have increased in popularity with consumers.

More intensive production requirements for heirloom crops may continue to limit their supply, but there is also a potential for prices to drop if the supply exceeds demand. Markets for heirloom crops are often narrowly defined niches, making it important for a producer to have plenty of information before investing in production.

Production Considerations

Seed sources

Heirloom seed may be obtained from commercial seed suppliers, through seed exchanges, and/or as “hand-me-downs” from previous generations. Thereafter, heirloom growers usually save their own seed from desirable varieties. Maintaining seed purity is essential to saving seed. This can be accomplished by isolating varieties of the same crop by distance and/or time of bloom. Some small-scale growers use blossom covers on mostly self-pollinated crops to prevent unwanted crosses. Seed should be harvested from several vigorous, disease-free plants of each variety. Processing after harvest can include fermenting the seed mass in water prior to drying on screens or wire mesh. Seeds need to be stored in airtight containers in a cool, dry location, or in a freezer. Properly stored, some seeds may be maintained for several years without significant loss in germination.

Site selection and planting

Choose a site that is well-drained and warms up quickly in the spring. Avoid low-lying fields that are subject to late frosts and high humidity. Cold-sensitive crops should not be planted until all danger of frost has passed and the soil has warmed sufficiently. Transplants can be grown in a greenhouse structure or hotbed, both for direct sales or on-farm use.

Begin with small plantings of unfamiliar crops/varieties, both to assess whether the cultivar will grow well in your situation and to determine marketability. Growers more familiar with hybrids may find that certain heirlooms require changes in production practices. For example, most heirloom tomatoes are indeterminate and will need taller stakes and wider row spacing than hybrids. Since the majority of

heirloom beans are climbers, they will require the construction of a trellis for support before the plants begin to produce runners.

Some crops require a continuous supply of moisture, especially during fruit-set and development. University of Kentucky research has reported greater yields, increased earliness, and a cleaner harvest when growing most vegetable crops on raised beds with black plastic and drip irrigation. The moisture levels under the plastic must be carefully monitored when using this system.

Pest management

Disease and insect pressure may or may not be greater for heirlooms than it is for modern hybrids, depending on the season and cultivar. However, heirlooms rarely have resistance to many current day diseases, thus growing practices that stress disease avoidance are essential. Many heirloom vegetables are grown organically or with a minimum of pesticides. Integrated pest management (IPM) strategies, including frequent scouting to monitor pests, may be needed to prevent or reduce losses. Controlling weeds, following a good rotation system, and the use of beneficial insects can aid in pest control.

Harvest and storage

Heirloom varieties, which tend to have staggered ripening dates, are handpicked at their peak. Yields are completely cultivar-dependent and can range from prolific to sparse. Some researchers report that heirloom yields may be less reliable than today’s hybrids and that there are often more culls. A tendency toward a shorter shelf-life dictates that many heirlooms be sold within a few days of harvest, thus little storage time is needed. On the other hand, because root crops store well for longer periods, there is less urgency to market them after harvest.

Some of the more fragile heirloom crops, such as tomatoes, will require special care to avoid bruising. To reduce handling, tomatoes may be picked directly into shallow, single-layer cushioned crates, boxes, or other containers used to transport the fruit to market.

Labor requirements

Most heirloom crops are standbys from days before mechanical harvest and require hand harvesting to maintain quality. In addition, heirlooms are frequently more fragile and perishable than modern hybrids,

requiring additional labor in handling. Producers who are saving their own seed will also incur additional labor that may be valued as much or more than their savings on seed. While heirloom crops may require anywhere from 10 to 40 percent additional labor time, many producers report the extra effort is currently compensated by higher prices.

Economic Considerations

Heirlooms may yield a higher percentage of cull fruit, deteriorate more rapidly after harvest, and require additional handling for effective marketing. These factors often translate into higher retail prices at urban markets. However, because heirloom crops are most attractive to customers who value quality, flavor and heritage, these buyers are generally less concerned about pricing issues. It is not uncommon for heirloom varieties to retail for prices much higher than commercial hybrids. Heirloom tomatoes, for example, have sold for twice the price of hybrid varieties in both retail and wholesale markets. Similarly, greasy bean varieties have retailed for five to six times the price of commercial machine-picked beans at a North Carolina farmers market. In contrast, some Kentucky producers have found it difficult to move heirloom varieties in local rural markets at premiums sufficient to justify the additional labor required.

Heirloom producers must remember that higher prices do not automatically translate into greater profits. Additional operator/owner labor in producing, harvesting, marketing (particularly in areas unfamiliar with heirlooms), and saving seed are also costs for heirloom production. While these may be non-cash expenses, the value of the producer's time must not be overlooked.

Specialty crop producers should seek only those enterprises that yield reasonable returns for their time. A well-prepared budget projection that includes all production costs will better enable prospective growers to evaluate heirloom crops against other uses of their resources. A useful vegetable budget worksheet for the type of small-scale vegetable production commonly used in heirloom plots has

been developed by Iowa State University (refer to Selected Resources, below).

Selected Resources

On the Internet

- Heirloom Seed-Saving Demonstration (Kentucky State University)
<http://organic.kysu.edu/Heirloom.shtml>
- Vegetable Production Guide for Commercial Growers, ID-36 (University of Kentucky)
<http://www.ca.uky.edu/agc/pubs/id/id36/id36.htm>
- Heirloom Tomato Budget *in* Vegetable Production Budgets (Iowa State University, 2009) *1 MB file*
<http://www.extension.iastate.edu/Publications/pm2017.pdf>
- Heirloom Vegetable Archive (Sevilleta LTER, University of New Mexico)
<http://sev.lternet.edu/~jnekola/Heirloom/>
- The Need for Seed: A Guide to Seed Saving by Brook Elliott (Victory Seed Company, 2000)
http://www.vintageveggies.com/information/brook_seed_saving.html
- Tomatoes (Ohio State) <http://southcenters.osu.edu/horticulture/vegetables/tomatoes>
- Vegetables and Fruits: A Guide to Heirloom Varieties and Community-based Stewardship (USDA National Agricultural Library, 1999)
<http://pubs.nal.usda.gov/vegetables-and-fruits-guide-heirloom-varieties-and-community-based-stewardship-3-volumes>

Organizations

- Appalachian Heirloom Seed Conservancy
address: Box 519, Richmond, KY 40476
e-mail: KentuckySeeds@hotmail.com
- Seed Savers Exchange
<http://www.seedsavers.org>
- Sustainable Mountain Agriculture Center, Inc.
<http://www.heirlooms.org>

Books in print

- *Heirloom Vegetable Gardening*. William Woys Weaver. 1999. Henry Holt & Co.: New York, New York. 439 pp.
- *Seed to Seed*, 2nd ed. Suzanne Ashworth. 2002. Seed Savers Exchange: Decorah, Iowa. 320 pp.

Reviewed by Shawn Wright, Extension Specialist (Revised 2013)

Photo by Bill Best, Sustainable Mountain Agriculture Center

April 2013

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

Educational programs of the Kentucky Cooperative Extension Service serve all people regardless of race, color, age, sex, religion, disability, or national origin.