Market Opportunities with Missouri Nuts: Chinese Chestnut Cultivar Performance in Missouri

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Chinese chestnut is a potential new orchard crop in Missouri and in the Midwestern United States. Missouri River Hill soils and climate are excellent for production of the sweet, starchy and versatile Chinese varieties of the chestnut, which can be planted in an orchard or alley cropping practice. The trees are blight-resistant, much smaller in stature than the American Chestnut, and spread outward like a large fruit tree while producing a significant quantity of nuts. Markets continue to expand both domestically and overseas for chestnuts and products such as gluten-free chestnut flour, showing significant profit potential for Missouri landowners.

For new chestnut orchards to succeed, reliable cultivar information must be made available. Beginning in 1996, a repository of 20 cultivars and accessions (generally 2 replications) of Chinese chestnut and chestnut species hybrids was established at the Horticulture and Agroforestry Research Center (HARC) at New Franklin, Missouri, in fertile, well-drained, erodible, loess "River Hill" soil. Chestnut cultivars and accessions have been added on a yearly basis to total 56 currently. UMCA study objectives are to identify outstanding, locally-adapted cultivars that have traits suitable for commercial chestnut production (e.g., large size nuts, consistent yields, excellent flavor, long storage potential) and to develop field trials to manage these elite cultivars for nut quality and yield. Cataloging descriptors such as bud break date, flowering date, nut size, nut weight, nut maturity and nut yield has been a primary focus. Beginning with the 2005 crop, many cultivars under test in Missouri have now begun bearing commercial quantities of chestnuts. See the Center's *Agroforestry in Action: Growing Chinese Chestnuts in Missouri*, 2009 guide for a current list of recommended cultivars.

Chestnut Market Research Project

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This project consists of a comprehensive program to stimulate both production and consumption of chestnuts. The program focuses on generating demand by increasing consumer awareness about chestnuts by using a "pull strategy." At the same time, by providing information and support to actual and future producers, the team intends to generate enough local production to meet the created demand.

The first step in the implementation of the pull strategy was the creation of the Missouri Chestnut Roast Festival, organized with the intention to expose the general public to chestnuts (plus pecans, black walnuts and many other agroforestry specialty crops) by offering information and samples of fresh, roasted and prepared nuts. In 2004, the specific objective was to conduct a marketing study during the festival to get additional data concerning the familiarity of participants with chestnuts to determine their interest in buying, consuming, and preparing these nuts and the key attributes that influence purchase decisions. The 2004 survey also determined participants' primary
interests in obtaining more information about the production, marketing, cooking, preparation and nutritional information of these nut species.

The second phase of the project was focused on producer market research. In late 2004 and early 2005 a national survey was conducted to identify and describe the chestnut (Castanea spp.) product market value chain. This consisted of a nationwide survey of individuals and businesses active in the U.S. chestnut production and sales.

Key Findings, Chestnut Market Research:
Consumer research (2004-2005):

- There is limited consumer awareness of the product.
- Quality and nutrition-diet-health were perceived as the most important attributes influencing purchase decisions.
- Consumers and grocery produce managers must be educated in handling and using chestnuts. Recipes and information about health and nutritional benefits at the point of sale will help motivate consumers to try chestnuts.

National chestnut market findings: (2006)

- The U.S. chestnut industry is in its infancy. The majority of chestnut producers have been in business less than 10 years and are just beginning to produce commercially.
- Volume of production is low (less than 1.5 million pounds).
- U.S. chestnut producers are mainly part timers or hobbyists with small, manually harvested operations. The majority of respondents sell fresh chestnuts.
- Demand exceeds supply, and wholesale prices range from 0.75 to $7.00 per pound, averaging $3.50 a pound.

(Source: HortTechnology; see full citations under Journal Articles below)

**Focus Groups for Potential Chestnut Growers:**

As an effort to expand the chestnut industry, the Center for Agroforestry hosted focus group meetings in January and February in Pleasant Hill and Mt. Vernon, Mo. The attendees were identified before the meeting as potential chestnut producers. The meetings were held to gauge interest in producing chestnuts and to provide growing and marketing information to the participants in an effort to establish a base of chestnut growers in Missouri. The Center has conducted research with chestnuts for the past 10 years, and is now in a position to offer cultivar and marketing information to potential growers. Read the report here.

**Publications produced by the Center for Agroforestry**

- Chestnut Market Analysis: Producers Perspective (PDF, 309 KB)
- 2006 Market Directory (PDF, 55KB)

The University of Missouri Center for Agroforestry (UMCA) is conducting research to identify and describe the chestnut (Castanea spp.) product market value chain. Through detailed market research and by organizing events that increase consumer awareness towards chestnuts, UMCA’s goal is to broaden market opportunities for all individuals and businesses in the chestnut
marketplace. In 2004, UMCA conducted a nationwide survey of individuals and businesses active in the U.S. chestnut market (nurseries, producers and sellers). The focus of this report is to describe the market from the producer’s perspective.

- [The Chestnut Grower](#), Newsletter of the Chestnut Growers of America
- [Agroforestry in Action: Growing Chinese Chestnuts in Missouri](#) (PDF)
- [Why Chestnuts?](#) (PDF)

### Popular Press Articles Featuring UMCA

- [Slowly, the chestnuts are rising, falling in Missouri](#) - Columbia Daily Tribune - Oct. 13, 2010
- [Making a case for cooking the versatile chestnuts](#) - Columbia Daily Tribune - Oct. 13, 2010
- [Roast celebrates chestnut’s rebirth](#) - Mizzou Weekly - Oct. 7, 2010
- [Chestnuts to You!](#) - Columbia Daily Tribune - Oct. 15, 2008
- [Break chestnuts out of their shells for this weekend’s Missouri Chestnut Roast](#) - Columbia Daily Tribune - Oct. 10, 2007
- Chestnut Growers of America newsletter, "[The Chestnut Grower](#)"

### Journal Publications

UMCA researchers and collaborators are working to determine the state of the chestnut industry across the U.S., as well as consumer preferences and interest. This information will be used to help build the most effective strategy for launching a new chestnut industry in the Midwest. The following articles have been published in HortTechnology, a science-based, peer-reviewed journal for horticulture professionals.