

# **Growing Midwestern Tree Nut Businesses: Five Case Studies**



**Prepared by the UW-Madison Center for Integrated Agricultural Systems**

**Michelle Miller, Brady Williams, Matt Raboin,  
Cris Carusi, Ruth McNair and Lisa Bauer**

**August 2016**

The **Center for Integrated Agricultural Systems** (CIAS) is a research center for sustainable agriculture in the College of Agricultural and Life Sciences, University of Wisconsin-Madison. CIAS fosters multidisciplinary inquiry and supports a range of research, curriculum and program development projects. It brings together university faculty, farmers, policy makers and others to study relationships between farming practices, farm profitability, the environment and rural vitality. For more information, visit [www.cias.wisc.edu](http://www.cias.wisc.edu) or call 608-262-5200.

This report is a product of the Upper Midwest Hazelnut Development Initiative ([midwesthazelnuts.org](http://midwesthazelnuts.org)), and was supported by grants from the Kailo Fund and the United States Department of Agriculture — National Institute of Food and Agriculture (USDA-NIFA) Specialty Crops Research Initiative (SCRI).

Authors: Michelle Miller, Brady Williams, Matt Raboin, Cris Carusi, Ruth McNair and Lisa Bauer

Publication design and layout by Ruth McNair

Cover photo credits: top left, Prairie Grove Chestnut Growers; lower left, Missouri Northern Pecan Growers; center, Chestnut Growers, Inc.; top right, Hammons Products Company; lower right, Heartland Nuts 'N More

Editorial reviews provided by Steve Deller, Nav Ghimire, Michael Gold and Philip Rutter

# Table of contents

- Executive summary .....i**
- Introduction .....1**
- Building a supply chain .....4**
  - Choosing a business structure.....4
  - Locating start-up and operating capital .....6
  - Purchasing nuts from growers.....6
  - Developing strategic partnerships .....7
  - Building a labor pool.....7
- Production challenges.....8**
  - Opportunity costs .....8
  - Varietal selection.....8
  - Horticultural challenges .....9
  - Variable harvests .....9
  - Market value .....9
- Processing options .....10**
  - Acquiring processing equipment.....10
  - Developing products .....10
  - Innovating to develop a market for nut wastes.....11
  - Processing to manage product flow.....11
- Marketing and pricing unique products .....12**
  - Product differentiation .....12
  - Educating consumers about unfamiliar nuts .....12
  - Market price.....13
  - Sales strategies .....13
  - Chefs as strategic marketing partners.....14
  - Diversity of markets .....14
- Lessons learned .....15**
- Profiled businesses .....16**
  - Chestnut Growers, Inc. ....16
  - Hammons Products Company .....18
  - Heartland Nuts ‘N More LLC.....20
  - Missouri Northern Pecan Growers.....22
  - Prairie Grove Chestnut Growers LLC.....24



# Executive summary

---

The United States is feeding global and domestic appetites for tree nuts. Production has expanded rapidly in response to strong export demand and increased domestic utilization. In 2014, the value of U.S. tree nut production exceeded \$10.4 billion. Growers in the Midwest are exploring and capitalizing on the potential of this perennial crop to increase farm income and diversify production. The Midwest is home to some successful nut businesses, and expanding tree nut production in this region can potentially increase the sustainability of agriculture and food systems.

In order to address some of the challenges of forming a business for aggregating, processing and marketing tree nuts, the UW-Madison Center for Integrated Agricultural Systems (CIAS) conducted case study research of five midwestern tree nut businesses. The core activity of all of these businesses is to process a raw product—nuts in the shell—into a ready-to-eat food. The businesses in this study are based in Missouri, Michigan, Nebraska and Iowa, and the nuts they process include Chinese and hybrid chestnuts, black walnuts and pecans. Business structures include two cooperatives, a family corporation and two limited liability companies (LLCs).

## **Building a supply chain**

Developing a supply chain that moves nuts from individual farms to wholesale, and organizing growers to pool, process and collectively market their product requires vision, planning, tenacity, patience and resolve. Cooperatives require participation and input from a large number of members, especially in the start-up phase, which can slow down the process. If established by a single proprietor or a small number of people, LLCs may take less time. Cooperatives, corporations and LLCs offer members a way to limit personal liability for company debts.

Investing in a collective business creates one of the first barriers to joining a group enterprise. While new growers are often enthusiastic about an emerging nut

business, they may not be willing to invest in the enterprise before production reaches a profitable threshold. The most common source of start-up capital for the interviewed businesses were the farmers themselves. Grant funding for start-up capital was vital to the success of some enterprises, although the time required for grant management sometimes detracted from business management.

Most of the businesses in this study didn't initially invest in processing equipment or other infrastructure; instead, they rented space and equipment while developing partnerships for custom processing and building markets.

## **Production challenges**

Establishing a nut orchard is a considerable investment, and the trees won't bear fruit for years. Members of a nut processing business need to consider whether they have enough product to enter the market and consider the opportunity costs of growing a perennial nut crop.

Tree nut production can be a good use of highly erodible land that is both fertile and accessible for harvest, since the perennial cover stabilizes the slopes and provides a marketable crop on marginal acres.

Most U.S. tree nut production is located in dry climates where irrigation is timed to minimize stress on trees and maximize yields. In the Midwest, the climate is humid and irrigation is far less common. As a result, midwestern tree nut growers typically contend with greater pest and disease pressure, and yields are less predictable. Lack of long-term, widespread research on midwestern nut production exacerbates these challenges.

The nut industry constantly deals with variation in the quality and quantity of harvests due to extreme weather, plant physiology and the number of trees producing nuts at any given time. Total nut harvest may be affected by local growing conditions if production is concentrated in a limited geographic area.

Some growers in this study perceived value-added production approaches such as organic certification, geographic indication and wildcrafting as barriers, while others saw them as opportunities to increase market value and provide a story that can generate sales.

### **Processing options**

Processing nuts provides markets with a ready-to-eat product, adds value, lengthens shelf life and increases returns to growers. A common hurdle for nut processors is finding the right equipment for the type of nut and scale of the business.

Some of the interviewees felt that businesses should first focus on selling raw nuts and initially avoid value-added processing. As their businesses expanded, most developed value-added products. Only a small portion of most nuts is marketable nutmeat, and some of the businesses developed products and markets for shells, husks and other byproducts. Whether processing byproducts or innovatively packaging smaller nutmeats and pieces, finding uses for non-premium products has been vital.

Variable harvests and seasonal market demand can create inconsistent product availability. Value-added processing and storage can make nut products more consistently available. Growers increased the shelf life of their nuts to consistently meet market demand and reduce market volatility.

### **Marketing and pricing unique products**

When it came to marketing, the message from interviewees was clear: success as a small-scale, value-added nut processor means avoiding the commodity market and head-on competition with large companies. The businesses in this study suggested building markets first and using that momentum to build the business. Interviewees stated that a diverse customer base is important. Product differentiation is critical to success.

Growers emphasized the need to distinguish their products from similar imported and domestic commodities to fetch a higher price. Differentiation can be based on

nut qualities such as distinctive flavor, local sourcing and careful handling to maximize quality.

All of the businesses interviewed for this research found that market demand for their nuts exceeded production. They were actively seeking new growers and encouraging members to plant more trees. Even in a growers' market, processors must determine a fair price for their product, which can be challenging, especially in the start-up phase of a business.

Some of the nut enterprises vigorously pursue their markets, while others have customers come to them. The scope and scale of the different businesses' markets vary widely—from small, local grocers to overseas importers. Nonetheless, for these five businesses in this report, wholesale, unprocessed nuts are the most lucrative market, if the demand is there.

Several enterprises introduced their products in high-end restaurants by partnering with chefs. Because these restaurants often distinguish themselves by sharing stories about food and farms with their customers, chefs can help differentiate products. While the restaurant market can provide nut businesses with an opportunity to expand, many of the interviewed businesses found that the this market can be unstable.

### **Lessons learned**

The enterprises highlighted in this report have taken different approaches to business organization, processing and marketing. At the same time, common themes relating to organization, start-up capital, labor, infrastructure, product differentiation, adding value, market diversification and consumer education cut across their experiences.

This research aimed to provide nut industry leaders with data and insights gleaned from the experience of established midwestern nut processors and marketers. The experiences of these companies may be informative to tree nut growers, especially those interested in aggregating products for processing, packing and marketing.

# Growing Midwestern Tree Nut Businesses: Five Case Studies

Michelle Miller, Brady Williams, Matt Raboin, Cris Carusi, Ruth McNair and Lisa Bauer

## Introduction

---

The United States is feeding global and domestic appetites for tree nuts. Tree nut consumption has increased with income and educational attainment,<sup>1</sup> and China has become an important market for U.S. tree nut exports.<sup>2</sup> From 1980 to 2014, U.S. exports of tree nuts increased almost sevenfold, and domestic utilization of tree nuts increased over 200 percent. During the same time, per capita tree nut consumption in the U.S. more than doubled.<sup>3</sup>

Tree nut production has expanded rapidly in the United States and abroad in response to strong export demand, especially for almonds, pistachios and walnuts.<sup>4</sup> From 2007 to 2012, U.S. acreage planted to almond trees increased more than 18 percent. The number of acres devoted to other nuts tracked by the USDA agriculture census—chestnuts, hazelnuts, macadamia nuts, pecans, pistachios, English walnuts and others — increased more than 10 percent.<sup>5</sup>

In 2014, the value of U.S. tree nut production exceeded \$10.4 billion.<sup>6</sup> The number of pounds of shelled nuts sold in the U.S. increased 81 percent for almonds and 36 percent for other nuts from 2007 to 2012, with more than 2.8 billion pounds sold in 2012.<sup>7</sup> The value of those nuts grew 77 percent for almonds and 111 percent for other nuts.<sup>8</sup>

California dominates the U.S. tree nut industry, providing nearly 90 percent of the annual tree nut harvest in 2012 and most of the nation's almonds, pistachios and walnuts.<sup>9</sup> The primary states growing pecans are Georgia, New Mexico and Texas.<sup>10</sup> While U.S. almond production is based exclusively in California,<sup>11</sup> where growing conditions meet the demands of this crop, the Midwest is well-suited for black walnuts, hazelnuts, hickory nuts, heartnuts and chestnuts, while pecans are mainly grown in the region's southern reaches.

---

<sup>1</sup>USDA ERS. 2016. *U.S. Food Commodity Consumption Broken Down by Demographics, 1994-2008*, ERR-206, p. 16. Accessed 7/28/16. <http://www.ers.usda.gov/media/2053476/err-206.pdf>

<sup>2</sup>USDA-ERS. 2015. China's Potential as an Export Market for Tree Nuts. *Fruit and Tree Nuts Outlook Special Article/FTS-358SA*. Accessed 7/28/16. <http://www.ers.usda.gov/media/1811357/fts358sa.pdf>

<sup>3</sup>USDA ERS. 2015. Fruit and Tree Nut Yearbook Tables, Table F-6. *Supply and utilization*. Accessed 7/27/16. <http://www.ers.usda.gov/data-products/fruit-and-tree-nut-data/yearbook-tables.aspx>

<sup>4</sup>USDA-ERS. 2013. Fruit and Tree Nuts Outlook: Commodity Highlight. *Organic Tree Nuts*. Accessed 7/29/16. <http://www.ers.usda.gov/media/1224001/fts355sa.pdf>

<sup>5</sup>USDA Ag Census. 2012. Table 39. Accessed 7/27/16. [http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_US/usv1.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_1_US/usv1.pdf)

<sup>6</sup>USDA ERS. 2015. Fruit and Tree Nuts Yearbook Tables, Table F-5. *All tree nuts: Value of production, United States*. Accessed 7/27/16. <http://www.ers.usda.gov/data-products/fruit-and-tree-nut-data/yearbook-tables.aspx>

<sup>7</sup>USDA ERS. 2015. Fruit and Tree Nuts Yearbook Tables, Table F-3. *All tree nuts: Utilized production (shelled basis), United States, 1980/81 to date*. October 30, 2015. Accessed 7/27/16. <http://www.ers.usda.gov/data-products/fruit-and-tree-nut-data/yearbook-tables.aspx>

<sup>8</sup>USDA ERS. 2015. Fruit and Tree Nuts Yearbook Tables, Table F-5. *All tree nuts: Value of production, U.S., 1980/81 to date*. October 30, 2015. Accessed 7/27/16. <http://www.ers.usda.gov/data-products/fruit-and-tree-nut-data/yearbook-tables.aspx>

<sup>9</sup>California Department of Food and Agriculture. (n.d.) Fruit and Nut Crops. In *California Agricultural Statistics Review 2013-2014*, p. 56. Accessed 7/28/16. [https://www.cdffa.ca.gov/Statistics/PDFs/ResourceDirectory\\_2013-2014.pdf](https://www.cdffa.ca.gov/Statistics/PDFs/ResourceDirectory_2013-2014.pdf)

<sup>10</sup>USDA ERS. 2015. *Fruit and Tree Nuts Outlook: Economic Insight. Special Article/FTS-359SA*, p. 19. Accessed 7/28/16. <http://www.ers.usda.gov/media/1860840/fts-359sa.pdf>

<sup>11</sup>Iowa State University Ag Marketing and Resource Center. 2015. *Almond Profile*. Accessed 9/21/16. <http://www.agmrc.org/commodities-products/nuts/almonds/>



Consumers may not be familiar with chestnuts, hazelnuts and black walnuts.

Photo: Chestnut Growers, Inc.

As a result of increasing global and domestic consumption of tree nuts, growers in the Midwest are exploring the potential of this perennial crop to increase farm income and diversify production. Expanding tree nut production in the Midwest can potentially increase the sustainability of agriculture and food systems in the region. Diverse agroforestry systems, including systems with nut trees, may provide farm revenue, environmental benefits<sup>12</sup> and resilience in the face of variable and extreme weather.<sup>13</sup> Edible nut production can be an integral part of diversified agriculture by incorporating a variety of perennial plants. It is especially well-suited to marginal land in rural areas. Because nut trees don't require annual tillage, they hold the soil in place during extreme rainfall and wind. As part of a complex cropping system, nuts and other perennial tree crops can contribute to productive landscapes that help address climate change, pests, diseases and biodiversity.

While tree nuts may provide an economic and environmental opportunity for Midwest growers, they also present marketing challenges. Consumers who

prefer almonds and pecans may not seek out hazelnuts, chestnuts and black walnuts. It is important to educate consumers about the health benefits and uses of a diverse variety of nuts. Growers must also differentiate midwestern nuts from imported and domestic commodity nuts by highlighting unique qualities, regional origins and conservation benefits. Value-added processing, as well as certifications such as organic and geographic origin, can increase the marketability of less common nut varieties, but this may be cost-prohibitive for a new nut business.

In 2013, the UW-Madison Center for Integrated Agricultural Systems (CIAS) conducted case study research on tree nut businesses in the Midwest. The goal was to address some of the challenges of forming a business for aggregating, processing and marketing tree nuts. The cases included in this study cover three business structures: two cooperatives (Heartland Nuts 'N More and Chestnut Growers, Inc.), a closely held family corporation (Hammons Products Company), and two limited liability companies (Missouri Northern Pecan Growers, classified as a partnership LLC, and Prairie Grove Chestnut Growers, classified as a single-member LLC and functioning as a brokerage). The core activity of all of the businesses listed in this paper is to process a raw product—nuts in the shell—into a ready-to-eat food.

The data were collected through in-depth group and individual interviews with owners, managers, consultants, board members and affiliates of five midwestern tree nut businesses (Table 1). In 2016, CIAS updated the information through follow-up interviews. The data collected from both sets of interviews is included in this report. In addition, case studies of each individual business are provided. Data analysis identified key concepts and themes from the information provided by the

---

<sup>12</sup>USDA National Agroforestry Center. 2012. *Profitable Farms and Woodlands: A practical guide in agroforestry for farmers and ranchers*. Accessed 7/27/16. [http://nac.unl.edu/documents/morepublications/profitable\\_farms.pdf](http://nac.unl.edu/documents/morepublications/profitable_farms.pdf)

<sup>13</sup>Neufeldt H, Wilkes A, Zomer RJ, Xu J, Nang'ole E, Munster C, Place F. 2009. "Trees on farms: Tackling the triple challenges of mitigation, adaptation and food security." *World Agroforestry Centre Policy Brief 07*. World Agroforestry Centre, Nairobi, Kenya. Accessed 7/27/16. <http://worldagroforestry.org/downloads/Publications/PDFS/mitigation-adaptation-food-security.pdf>



## Tree nut businesses interviewed

	<b>Chestnut Growers, Inc.</b>	<b>Hammons Products Co.</b>	<b>Heartland Nuts 'N More</b>	<b>Missouri Northern Pecan Growers LLC</b>	<b>Prairie Grove Chestnut Growers LLC</b>
<b>Based in</b>	Clarksville, MI	Stockton, MO	Valparaiso, NE	Nevada, MO	Columbus Junction, IA
<b>Year started</b>	2001	1946	2003	1999	2000
<b>Nuts purchased</b>	Chinese and hybrid chestnuts	Black walnuts	Black walnuts and pecans	Pecans	Chinese and Chinese hybrid chestnuts
<b>Organization</b>	Cooperative	C corporation	Cooperative	Partnership LLC	Single-member LLC
<b>Number of employees</b>	1 seasonal	75-80 year round plus 20 seasonal	1 seasonal	10-12 year round plus up to 35 seasonal	4, mostly seasonal
<b>Number of growers supplying nuts</b>	30	Thousands of nut gatherers	46	30-35	56
<b>2015 sales (approx. values)*</b>	75,000 lbs sold	9.3 million lbs** harvested	7,000 lbs black walnuts** 6,000 lbs pecans harvested	300,000 lbs sold	50,000 lbs sold

\* This category includes byproducts, including shells and husks, as well as nutmeat.

\*\*Businesses with 2015 production below their long-term averages

respondents during the interviews. The research findings presented here are organized under these themes. This research aimed to provide nut industry leaders with data and insights gleaned from the experience of

established midwestern nut processors and marketers. The experiences of these companies may be informative to tree nut growers, especially those interested in aggregating products for processing, packing and marketing.

## Building a supply chain

---

Anyone who, as a child, stuffed their pockets full of nuts realizes that while trees provide a bountiful harvest, cracking the nuts and extracting the meat can be a challenge. Husking, cleaning, sizing, cracking, separation and other tasks require time and labor, as well as capital investment to make or buy equipment at the appropriate scale. The Missouri Northern Pecan Growers is a case in point. Growers in this company pursued collective processing so that they could focus on the harvest.

Once a company has sufficient capital to invest in processing equipment, it is necessary for producers to supply enough nuts to cover operating costs and earn a return on capital investment. When businesses achieve an efficient operating scale, it creates an opportunity to begin marketing wholesale. Companies can then develop relationships with suppliers, distributors and markets. This supply chain moves nuts from individual farms to a processing facility to wholesale opportunities with retailers and processors. Developing a supply chain requires vision, planning, tenacity, patience and resolve.

To achieve the scale necessary for mechanical processing, businesses tend to start with a number of nut growers



*One of the primary reasons growers work together is to achieve a scale where mechanical processing is practical.*

Photo: Chestnut Growers, Inc.

working together to process raw nuts into marketable products. The first questions that arise for these entrepreneurs commonly revolve around cooperative arrangements.

**Choosing a business structure:** Interviewees noted that organizing growers to pool, process and collectively market their product is a significant hurdle, especially since nut production is often not the growers' primary business. Many growers interviewed for this research were semi-retirees, serious hobbyists with other jobs, or farmers of other crops looking to diversify. Growers' limitations included time, financial capital and, in some cases, business expertise.

Organizing a formal business requires an understanding of state-specific legal requirements, particularly for businesses operating in multiple states. The 45-plus growers at Heartland Nuts 'N More relied on help from the Nebraska Cooperative Development Center to establish their cooperative. Chestnut Growers, Inc., hired a lawyer and a cooperative development expert. Chestnut Growers, Inc., has a sophisticated marketing agreement with its members to ensure business viability, while Prairie Grove Chestnut Growers operates on handshake agreements.

Cooperatives (co-ops) require more participation and input from a larger number of members than other business structures, especially in the start-up phase, which can slow down the process. If established by a single proprietor or a small number of people, limited liability companies (LLCs) may take less time, especially once the business plan is written and capital is readily available. Chestnut Growers, Inc., board members noted that while being a cooperative opened up significant grant and financing opportunities, it also required more grower-member participation than other forms of incorporation. Prairie Grove Chestnut Growers initially explored forming a marketing cooperative but

ultimately decided they didn't want a board of directors, dues or even applications. They originally organized as a sole proprietorship:

“We went back home and talked about it and somebody suggested, ‘Well, why do we have to go through all that? Why can't we just appoint one person to be in charge of marketing, and market all the chestnuts through that person?’” — *Grower from Prairie Grove Chestnut Growers*

Chestnut Growers, Inc., has made a strong effort to inform members about services provided by their co-op, especially at times when it pays members less than market prices.

“If they do not hand their stuff off to the cooperative, they do not have marketing expertise, they don't have delivery expertise, they don't have bagging expertise, they don't have storing expertise, they don't have sizing expertise, they don't have cleaning expertise.” — *Chestnut Growers, Inc. advisor*

It's crucial to weigh advantages and disadvantages of different business arrangements. Cooperatives offer members a way to limit their personal liability for company debts and pool resources. Corporations and LLCs also limit personal liability for company debts. In addition to liability, taxes are also a consideration. A C corporation is taxed as a corporate entity, and shareholder income is taxed as personal income. This is in contrast to an LLC or cooperative, where income is only taxed once.

Hammons Products Company incorporated in 1954 as a C corporation, which is typical for medium- to large-sized businesses. This business structure must have officers, a board of directors and shareholders and must file regular reports. Hammons used to have outside shareholders—mainly investors who knew and trusted founder Ralph Hammons. Over the years, the Hammons family has redeemed those shares, and stock is currently held primarily by individual family members or in trusts dedicated to taking care of older

family members. The closely held corporation has a seven-member board: three internal members and four outside directors. Collectively, the outside directors have experience as CEOs, as well as legal, investment and insurance expertise. The outside directors help Hammons keep its internal leaders accountable in presenting their performance and progress to external experts.

While a LLC shares some characteristics with a C corporation, there are important differences that make it a good fit for smaller organizations. The LLCs do not require a board of directors or regular annual meetings, and paperwork requirements are minimal. Membership requirements for LLCs are more flexible than those of cooperatives and corporations. Profits and losses are passed directly to the LLC owners rather than being taxed at the company level.

Missouri Northern Pecan Growers chose the simplicity of forming an LLC over the complexity of setting up a cooperative. Five grower-members pooled their money in the LLC, invested in processing equipment and contracted for outside processing. The LLC structure, however, has presented challenges. Given a chance to start over, one of the two original partners noted that he would incorporate with stock options rather than as an LLC, which cannot issue stock. In its early years, Missouri Northern relied on grants for start-up capital. Had they issued stock, those who invested in the company would have received benefits in return.

The LLC structure also has tax implications. The previously mentioned Missouri Northern partner receives a bonus on every pound of organic pecans that this company sells. The pass-through taxation of an LLC recognizes this bonus as short-term personal income. With a corporate business structure, this bonus could be treated as a long-term capital gain, with more favorable tax implications.

To save money and time, Prairie Grove Chestnut Growers organized as a sole proprietorship and

proceeded without formally filing paperwork to create a legal organization. This informal approach worked well for these growers, whose goal was simply to find a place to sell their nuts. Production tripled in the fall of 2013, and the group contracted with a broker in 2015 to purchase and sell all of their nuts. The business also hired seasonal workers. As Prairie Grove's volume of business increases, more paid workers will be involved with the enterprise. The current broker organized Prairie Grove as a single member LLC for liability purposes; for tax purposes, it is similar to a sole proprietorship.

**Locating start-up and operating capital:** The most common source of start-up capital for the interviewed businesses were the farmers themselves. Investing in a collective business creates one of the first barriers to joining a group enterprise. While new growers are often enthusiastic about an emerging nut business, they may not be willing to invest in the enterprise before production reaches a profitable threshold. Those with money to invest in the operation stay engaged, while others may leave. For example, early meetings of the Missouri Northern Pecan Growers had as many as 70 growers in attendance, but this quickly fell to seven when the group asked for capital investment. In 2016, Missouri Northern had 30 to 35 growers and 10 to 12 employees.

The two cooperative businesses participating in this research, Chestnut Growers, Inc., and Heartland Nuts 'N More, have clear investment requirements. Members of Chestnut Growers, Inc. are required to pay a one-time membership fee, purchase shares in the co-op and sell most of their nuts through the co-op to ensure adequate operating capital.

Grant funding for start-up capital was vital to the success of most of these enterprises. The grants came from a variety of federal, state and non-profit sources including USDA value-added producer grants, USDA Sustainable Agriculture Research & Education (SARE) grants, rural development grants, product development grants and operating capital grants. The businesses used

grants for buying equipment, buildings and nuts, hiring temporary marketing and processing employees, developing new value-added products, and more. Heartland Nuts 'N More used grant funds to supplement start-up capital from small loans procured by member-growers.

While beneficial, grant funding sometimes turned out to be a challenge. A few interviewees noted that the time required for reporting, paperwork and other grant management detracted from business management, which adversely affected the business once funding was gone. Without grants, however, growers may not have been able to finance business start-up.

*“The downside...is that they became so dependent on grants that they forgot they were trying to run a business...The problem is they didn't plan for what was next when the grant ran out. Now the marketing person's gone, the processing person's gone, and they're doing it all themselves again.” — Cooperative development expert working with Heartland Nuts 'N More*

Chestnut Growers, Inc., found itself in a bind with a grant for product development. Because this grant was paid as a reimbursement, some of the co-op's members had to take out a loan to cover up-front costs. The loan ended up costing the membership \$15,000 in interest and fees, teaching them about the administrative costs of grants.

**Purchasing nuts from growers:** For new nut supply chains to reach their full potential, it is critical that products are priced to accomplish three goals: 1) encourage growth in nut production, 2) pay for investments in processing and marketing, and 3) attract wholesale buyers. Each business has a different approach to purchasing nuts from growers and pricing products. Prairie Grove Chestnut Growers sets a purchase price based on nut size, with discounted rates for poorer quality nuts. In contrast, Chestnut Growers, Inc., buys nuts at a target price for an average-grade product, then pays growers a premium for higher quality product or less for a lower-grade product. Because the Missouri

Northern Pecan Growers differentiate their products as “being northern, being native and being organic,” they purchase certified organic nuts from growers at a premium ranging from 10 to 100 percent above the conventional price.

**Developing strategic partnerships:** Most of these businesses didn’t initially invest in expensive processing equipment or other infrastructure; instead, they rented space and equipment while developing partnerships for custom processing and building markets.

Chestnut Growers, Inc., does not own a building, in part because it generally sells out of product just after the harvest. The co-op rents space for nut receiving and contracts with the storage facility to hire some of their employees for nut sorting. Heartland Nuts ‘N More initially brought nuts to Iowa for custom processing, while Prairie Grove Chestnut Growers made use of a licensed community kitchen to shell and package frozen chestnuts. During its first few years, Missouri Northern Pecan Growers sent its pecans to Texas and Arkansas for custom shelling.

Key partners also provide technical expertise for nut growing, processing and marketing, as well as business development. The businesses in this study received assistance from grower associations, forestry organizations, Extension, state and federal agencies, cooperatives, and other business development organizations and universities. These partnerships helped both the emerging and established companies develop their supply chains, cultivars and growing strategies to improve harvests, as well as grow and manage their businesses. Hammons Products Company has worked with the University of Missouri for more than 40 years to boost nut production through improved cultivars, agroforestry techniques, and nutrient cycling. Chestnut Growers, Inc., works closely with Michigan State University (MSU) to develop new products, secure grant funding for projects and improve cultivars.

“The partnership that we’ve developed [with MSU] has been so important to move it along. It would’ve

been hard to build the cooperative to the extent that it is right at this moment...without Michigan State.” — *Chestnut Growers, Inc. board member*

**Building a labor pool:** Many of these businesses struggle with labor issues. The seasonal nature of nut harvesting and processing combined with the tendency to undervalue the labor necessary to run a business may increase the chance of conflict between growers. Chestnut Growers, Inc., and Heartland Nuts ‘N More reported that they were operating with no permanent paid staff, which negatively affected their businesses. Heavy reliance on board members to provide the labor needed to run a cooperative led to burnout at both of these businesses.

At the time of the first interview in 2013, Missouri Northern Pecan Growers employed six full-time people and three seasonal workers. By 2016, they had grown to 10 to 12 year-round employees and as many as 25 seasonal workers.

Hammons Products Company, with its 70 years of experience, said that they maintain a substantial labor pool of 75 to 80 year-round employees at their main processing plant, as well as seasonal workers to augment processing needs. They also hire local, seasonal staff at their 200 or more hulling stations throughout the 11-state region where they buy product.



*Chestnut Growers, Inc. contracts with employees of a rented storage facility to sort nuts.*

Photo: Chestnut Growers, Inc.

## Production challenges

---

Establishing a nut orchard is a considerable investment, and the trees won't bear fruit for years. Businesses need to ensure their producers are growing adequate quantities of desired nut varieties that meet quality standards to be aggregated for processing.

**Opportunity costs:** Members of a processing business need to consider whether they have enough product to enter the market as well as consider the opportunity costs of growing a perennial nut crop. What will they need to give up to start, or increase, nut production? Answers will vary widely depending on whether the orchard is on prime or marginal agricultural land, or if the source of the nuts is a stand of unmanaged trees. Tree nut production can be a good use of highly erodible land that is both fertile and accessible for harvest, since the perennial cover stabilizes the slopes and provides a marketable crop on marginal acres.

Prairie Grove Chestnut Growers estimated that chestnuts can net a landowner \$1,000 to \$6,000 per acre, but the steep learning curve for growing and harvesting nuts can pose a barrier to entry and profitability. Other barriers include a lack of available nursery stock and reductions in harvests due to wildlife predation.

“Wildcrafting” is a term used to describe the collection of plant products, like tree nuts, from natural areas such as unmanaged forests. The Missouri Northern Pecan Growers collect nuts from wild trees, as ranching and raising commodity crops are more cost-effective uses of their prime farmland. A Missouri Northern grower noted that there is more profit in producing corn at five dollars a bushel than growing pecans without price supports. If production is tied to existing stands of nut trees, it is unlikely that farmers will respond to a dramatic increase in market demand by investing in new stands and breeding programs. Wildcrafting helps farmers diversify their income stream, not transform it.

In contrast, Heartland Nuts ‘N More farmers are planting black walnuts and pecans on marginal agri-

cultural land. Their up-front expenses are much higher than those incurred by wildcrafting, so return on investment is lower. Still, this company sees value in diversifying grower income by making marginal lands fruitful.

Some of the companies emphasize the history and social benefits of harvesting nuts. Missouri Northern Pecan Growers and Hammons Products Company both point to the traditional role nut harvesting plays in improving a community's economic condition and its social cohesion. In its promotional material, Hammons tells the story of families' harvesting and cooking traditions of black walnuts. They share that selling nuts historically helped finance Christmas gifts, vacations, education and property taxes. Hammons' central processing facility is located in Stockton, Missouri, which derives some of its identity from the annual nut harvest and has hosted an annual black walnut festival since 1961.

**Varietal selection:** It is important to consider varietal selection when establishing a nut orchard, for optimal production and resilience. The first chestnuts planted commercially in Michigan were open-pollinated seedlings that generally produced an unreliable, poor-quality crop. Chestnut Growers, Inc., worked with MSU to research the suitability of a hybrid chestnut cultivar for their climate and growing conditions.

“The stuff that they were putting out were [trees] that...if it was a chilly spring or a hot summer or a drought, they would shut down and it took forever for them to get into production.”— *Michigan State University professor, describing early chestnut plantings in Michigan*

The average black walnut that Hammons Products Company processes contains only 6 to 7 percent nutmeat by volume; the rest is shell, moisture and hull debris. This company worked with universities to develop region-specific cultivars with nuts that contain more nutmeat. Hammons is looking to increase

nutmeat yield by gradually increasing their sourcing from black walnut orchards rather than exclusively wildcrafting. The prices they pay their growers—in 2016 they paid 14 to 15 cents per pound, after hulling—are below the cost of production for orchard-grown nuts, however. Farmers with Heartland Nuts ‘N More are committed to growing improved black walnut varieties that contain up to 35 percent nutmeat.

Consumer preference is also a factor when selecting varieties. Chestnut growers in Iowa and Michigan found that their markets preferred specific, different nut varieties.

**Horticultural challenges:** In the U.S., most tree nut production is located in dry climates where the trees can be irrigated in a relatively controlled environment. In these systems, carefully monitoring moisture levels and delivering fertilizer through irrigation water provides predictable growing conditions, and the dry climate combined with targeted timing of irrigation minimizes crop losses due to pests and diseases. Though Midwest growers can irrigate in dry years, they will typically contend with greater pest and disease pressure and less predictable yields. Lack of long-term, widespread research on nut production in the Midwest exacerbates these challenges. Growers have little information available on how the germplasm they select will respond in the soils and microclimates where they are planted. In some cases, crops have not evolved locally and are not adequately selected to adapt to midwestern climate conditions, resulting in higher risks of crop loss related to weather, such as late spring frosts. In the future, extreme weather associated with climate change may impact nut production and yields worldwide.

**Variable harvests:** The nut industry constantly deals with variation in the quality and quantity of harvests due to extreme weather, plant physiology (including the age of the tree, the species and variety and how it responds to its environment), and how many trees (and farmers) are producing nuts at any given time. Total nut harvest may be affected by local growing conditions if production is concentrated in a limited geographic area.

Hammons Products Company purchases nuts from a large and diverse geographical area, which helps mitigate the effects of an off-year. Businesses can address variable harvests by storing nuts for market. Chestnuts, however, are ideally marketed as fresh as possible, as they shrink and lose value in storage.

Hammons evaluates its business success on several dashboard indicators including nut harvest, yield and quality. This business has worked with the University of Missouri to select cultivars that yield a greater percentage of nutmeat and don’t display alternate-bearing tendencies, where the tree produces a heavy crop every other year. While Hammons’s nut suppliers are primarily gatherers rather than growers, this business has encouraged some suppliers who own land to plant trees and learn to harvest high-quality nuts. In recent years, Hammons has purchased more orchard-grown nuts to better meet market demand and improve nut quality.

**Market value:** Some growers perceived value-added production approaches as barriers while others saw them as important opportunities. The Missouri Northern Pecan Growers invested in organic certification, for example, which added costs. However, organic certification for their wildcrafted nuts increased the market value of the nuts and farmers’ income.

Hammons Products Company and the Missouri Northern Pecan Growers rely primarily on wildcrafting to source product for their supply chains. Wildcrafting gives a product an authentic provenance that is in high demand with upscale buyers who will pay a premium for food with a story, especially when that story relates history and evokes memories. In parts of the country where nut gathering is an annual tradition, wildcrafting provides a story that can generate sales.

Geographic indication is a form of certification common in Europe that adds value by assigning a product a legally protected name associated with a place, as well as other characteristics. Missouri Northern Pecan Growers is the only business interviewed that looked into formal geographic indication.

## Processing options

There are many reasons to process nuts, including providing markets with a ready-to-eat product, adding value, lengthening shelf life and increasing returns to growers. Basic nut processing requires the removal of husks, burrs and shells. Chestnuts are the easiest nut to process at this level, as burrs are removed in the field and the nuts are primarily sold in the shell.

As the case study businesses expanded, most developed value-added products, including some from husks and shells that are typically part of a waste stream. Growers have also increased the shelf life of their nuts to consistently meet market demand and reduce market volatility, especially in years when harvest is unusually low or high.

Some of the interviewees felt that businesses should first focus on selling raw nuts and initially avoid value-added processing. Several interviewees noted that the costs of value-added processing can be prohibitive, and that it is worth the extra work to find wholesale markets for raw product.

“There’s absolutely no reason to do value-added processing when we can sell everything fresh. It’s just way more profitable to sell fresh chestnuts because of the cost of the processing...and the hassle and the time and the hours, and the government paperwork.”  
— *Prairie Grove Chestnut Growers former marketing coordinator*



*When sales grew, Missouri Northern Pecan Growers obtained their own equipment rather than contracting out processing.*

Photo: Missouri Northern Pecan Growers

**Acquiring processing equipment:** A common hurdle for nut processors is finding the right equipment for the type of nut and scale of the business. Chestnut Growers, Inc., developed its own chestnut grading process and leased an appropriate commercial chestnut peeler from Italy. The Prairie Grove Chestnut Growers developed their own shelling equipment suited to the type and quantity of nuts they raise. Early in their operation, the Missouri Northern Pecan Growers used a nut cleaner meant for larger pecans grown in the South, but growers found it only marginally useful. They contracted with custom shellers to access technology without a high initial investment. Once the operation grew, they purchased their own equipment.

“[We] didn’t have to invest the three, four, five hundred thousand dollars in a small shelling plant. That allowed us to develop our market...and if you develop your market first, you know whether or not it’s going to fly... [In 2007] we had [enough] customers that we just bowled ahead and put in our own shelling plant. But I would not recommend it from the get-go. Develop your market first.”

— *Missouri Northern Pecan Growers partner*

**Developing products:** Value-added processing transforms a raw product into a more marketable form and complements a business’s bulk wholesale operation. Chestnut Growers, Inc., for example, turns small, hard-to-sell nuts into one-pound bags of frozen, peeled chestnuts. They also make freeze-dried chestnut slices and sell chestnut chips to microbreweries for beer. They recently spun off their value-added processing to a new start-up. Similarly, Prairie Grove Chestnut Growers developed packages of frozen, shelled chestnuts before finding a more profitable market for fresh, small- and medium-sized nuts.

Hammons Products Company offers a variety of value-added products made from black walnuts. They also sell harvesting and home cracking equipment, cookbooks and gift items as a service to their growers and retail



customers. Their most lucrative market is wholesale. In the past, as much as 40 percent of the harvest has been sold wholesale as an ice cream ingredient.

“It’s mostly a customer service...to help provide something that people might like that have black walnuts in them, and maybe somebody will get the idea of going into business for themselves...[and] buy black walnuts [from us] then make those products and sell them.” — *Hammons Products Company official*

The Missouri Northern Pecan Growers found that their cracking process left them with lots of small pieces in addition to the high-value pecan halves. One partner in the business developed a Parmesan cheese-like shaker for the hard-to-sell bits, marketing them as a topping for ice cream or salads. Whether finding a market for processing byproducts or innovatively packaging smaller nutmeats and pieces, finding uses for non-premium product has been vital for these businesses.

“In the early years...before the ethnic market discovered us...we were able to sell large and extra-large chestnuts, but we had no market at all for small and medium... [We] started selling frozen chestnut kernels to chefs at white tablecloth restaurants... Back then, medium chestnuts made up about 40 percent of what we were harvesting; the small about 5 percent...So it was a significant percentage of our harvest that we couldn’t sell, so that’s why we started processing.” — *Prairie Grove Chestnut Growers former marketing coordinator*

**Innovating to develop a market for nut wastes:** Only a small portion of most nuts is marketable nutmeat. Once they had a few years under their belts, some of these businesses found innovations that reduced processing waste by developing products and markets for shells, husks and other byproducts. At Hammons Products Company, for example, grinding black walnut shells into industrial abrasives is an essential part of their business. They have explored using husks and shells as a source of nutrients in their orchards. Using federal stimulus money, the Missouri Northern Pecan Growers



*Hammons Products Company sells ground walnut shells as industrial abrasives.*

Photo: Hammons Products Co.

bought a furnace that burns pecan shells, providing heat to dry the pecan meats, as the nuts are soaked in water before cracking. They also considered marketing pecan shells as mulch. Heartland Nuts ‘N More is looking into using husk byproducts for a colon cleansing product and juice as a wood or tanning stain.

**Processing to manage product flow:** Variable harvests and seasonal market demand can create inconsistent product availability. Value-added processing and storage can make products more consistently available. Missouri Northern Pecan Growers keeps nuts at temperatures just above freezing and cracks the nuts immediately before shipping to ensure fresh nuts are available for an extended period of time. Hammons Products Company also keeps nuts in cold storage to maintain product flow from season to season and year to year. Chestnut Growers, Inc., freezes chestnuts after peeling for future sales.

“It’s very difficult trying to balance the three legs—you have production, financing and marketing. If you don’t know what production’s going to be, then how do I know how much push to put into marketing?” — *Missouri Northern Pecan Growers partner*

“We’ve learned a lot about keeping nuts both in-shell and nutmeats over a period of time where they’ll still retain their quality and their freshness.” — *Hammons Products Company official*

## Marketing and pricing unique products

---

When it came to marketing, the message from these interviews was clear: success as a small-scale, value-added nut processor means avoiding the commodity market and head-on competition with large companies. The businesses in this study suggested building markets first and using that momentum to build a business. Interviewees stated that a diverse customer base is important, and they saw chefs as potential strategic marketing partners. Product differentiation is critical to success.

**Product differentiation:** Growers emphasized the need to distinguish their products from similar imported and domestic commodities to fetch a higher price. Chestnut Growers, Inc., and Prairie Grove Chestnut Growers set apart their nuts from the chestnuts that are imported from Italy and Asia. Hammons Products Company distinguishes its black walnuts from English walnuts grown extensively in California. Missouri Northern Pecan Growers differentiates its products from larger, less-sweet, grafted southern pecan varieties. Heartland Nuts 'N More sells its grafted black walnut cultivars as different from wild, “unimproved” varieties.



*Emphasizing that a product is from an improved nut variety is an important marketing angle.*

Photo: Heartland Nuts 'N More

Differentiation can be based on nut qualities such as distinctive flavor, local sourcing and careful handling to maximize quality. Prairie Grove Chestnut Growers offers fresher, higher-quality chestnuts than the imported chestnuts commonly found in grocery stores. This business also reaches out to a targeted market—Bosnian immigrants—that specifically demands smaller Chinese chestnuts that more closely resemble their traditional European nuts.

At the other end of the spectrum, the Missouri Northern Pecan Growers expanded sales to broader markets. They obtained organic certification, sold the story of native northern pecans, asserted their product’s superior taste, and pursued geographic indication status. Through these marketing strategies, they aim to keep buyers from perceiving their product as a commodity. This business has shown that the story of a particular food can be an important marketing tool.

*“[Becoming certified organic] really opened the doors for us.” — Missouri Northern Pecan Growers partner*

### **Educating consumers about unfamiliar nuts:**

Customers’ familiarity with a particular nut and its story impacts marketing. Chestnut Growers, Inc., and Prairie Grove Chestnut Growers had to acquaint American consumers and chefs with the taste and preparation of chestnuts. The holiday song that describes “chestnuts roasting on an open fire” is the only cultural context of chestnuts for many people. A connection with a Bosnian community in Iowa, however, sent demand for Prairie Grove’s fresh chestnuts skyrocketing. This business now sells Chinese and Chinese hybrid chestnuts to ethnic markets across the U.S.

*“... the community of 4,000 Bosnians in Waterloo is sucking up 90 percent of the chestnuts grown in Iowa, Illinois and Missouri put together... [The*

universities and chestnut grower organizations] think if only they could get Americans to eat more chestnuts then the market would be so much bigger. They're missing out on the fact that there's already a bottomless pit of a market out there ..." — *Prairie Grove Chestnut Growers former marketing coordinator*

Chestnut Growers, Inc., discovered another successful approach to promotion: A co-op advisor suggested sending samples to potential buyers. This strategy led to contacts at the Detroit Produce Terminal and connections with local specialty markets. Many buyers, in fact, strongly preferred the taste of the Michigan-grown chestnuts to other sources and found that the better handling techniques employed by Chestnut Growers, Inc., result in fewer rotten or moldy nuts.

Heartland Nuts 'N More growers found that area consumers hesitated to buy their black walnuts, perhaps because they had previously tasted sub-par nuts. So grower-members gave out free samples of their black walnuts and pecans in upscale grocery stores. The co-op also advertised in magazines, and members organized promotional events at community festivals in order to increase visibility. A grant allowed the co-op to hire a marketing coordinator who developed relationships with retail outlets such as bakeries and grocery stores.

**Market price:** All of the businesses interviewed for this research found that market demand for their nuts exceeded production. They were actively seeking new growers and encouraging members to plant more trees. Even in a growers' market, processors must determine a fair price for their product. This can be challenging, especially in the start-up phase of a business. The processor may not understand labor and other operating costs or be able to predict future financial needs. When setting their price, Prairie Grove Chestnut Growers neglected to account for shrinkage, as chestnuts lose their moisture in cold storage. As a result, their business lost money as the nuts lost moisture, and they doubled their product markup to offset this loss.



*Recipes on company websites provide consumers with new ideas on how to cook with nuts.*

Photo: Hammons Products Co.

**Sales strategies:** Some of the nut enterprises vigorously pursue their markets, while others have customers come to them. Hammons Products Company does extensive demographic research to identify core customers, which has helped them understand how to work with and expand a base of wholesale buyers. Different nuts have unique traditional markets.

The scope and scale of the different businesses' markets vary widely—from small, local grocers to overseas importers. Nonetheless, for these five businesses listed in this paper, wholesale, unprocessed nuts are the most lucrative market, if the demand is there.

Heartland Nuts 'N More reported that only a small percentage of their sales were direct-to-consumer. A regional confectioner and dining services at the local university campus purchase most of their product, along with local grocery stores in Omaha and Lincoln.

Missouri Northern Pecan Growers relies on wholesale buyers such as bakeries, confectioners and the Hy-Vee supermarket chain. The company has developed buyer contacts in other countries by attending national food trade shows in Chicago. A key sales strategy for this business is having a story that illustrates the origins, quality and uses of its product.

At the time of the interviews, all of the businesses had developed websites to communicate with their consumers. Wildcrafting stories are especially compelling; it is a family tradition throughout the world, with an aura of authentic and intimate connection to the land.

Hammons Products Company has marketed wildcrafted black walnuts for decades, and the tradition of harvesting wild black walnuts in the rural Ozarks is a key part of their marketing strategy. Wildcrafting is also an important selling point for the Missouri Northern Pecan Growers.

Recipes can make a product more accessible, especially for customers who do not normally consume a particular nut. Though few interviewees discussed the importance of recipes as a part of a marketing plan, each business's website had a recipe section. Recipes were also a way for these businesses to evoke customers' good memories about their products.

“Enjoy some great pecan recipes straight from Granny's secret cookbook. (She is still a little upset that we shared them, but she is getting over it!)”  
— *Missouri Northern Pecan Growers website*

Marketing the health benefits of food can pose challenges, especially without research to back up claims. While the health advantages of some nuts, such as almonds, are well established, this is not the case for pecans, chestnuts and black walnuts. Even though the interviewees said little about health, emphasizing these benefits was an important component of the companies' online marketing:

“Chestnuts have just the right balance of complex carbohydrates and high-quality protein to make them the ideal human food.” — *Prairie Grove Chestnut Growers website*

**Chefs as strategic marketing partners:** Several enterprises introduced value-added products in high-end restaurants. Chefs are often early adopters of culinary

trends who can be strategic partners in business development. They are interested in authentic products and unique food that will showcase their creative talents. Chefs at high-end restaurants are often willing to pay more for ready-to-use nut products. Because these restaurants distinguish themselves by sharing stories about food and farms with their customers, chefs can help differentiate products.

Chefs tend to move frequently to new restaurants, however. This can provide nut businesses with an opportunity to expand, if a chef introduces their product to a new restaurant. Many of the interviewed businesses, however, found that the restaurant market can be unstable. Chefs typically purchase low volumes of product and markets can dry up when they move on to new venues.

“Chefs, at least chefs of upscale restaurants, are a moving target. You may line up a chef that really likes your product, maybe buying so many pounds a week. And then a couple months later he's moved on to a different restaurant... The restaurant market is very tough in that respect. It's a swirling miasma of problems. And I'm glad I don't have to deal with it anymore.” — *Prairie Grove Chestnut Growers former marketing coordinator*

**Diversity of markets:** While high-quality, fresh, large, minimally processed nuts are usually the most profitable, diverse product offerings have helped these businesses attract customers and stabilize income streams. For example, Chestnut Growers, Inc., has benefitted from a variety of buyers who want different nut sizes.

Wild fluctuations in the conventional wholesale pecan market impacted Missouri Northern Pecan Growers' domestic sales between 2006 and 2012. During this time, China went from purchasing almost no pecans to purchasing a third of the U.S. crop, almost tripling the price of pecans. In 2012, the bubble burst and prices fell. Missouri Northern Pecan Growers was able to weather this market variability largely through product differentiation and market diversity.

## Lessons learned

---

The enterprises highlighted in this report have taken different approaches to business organization, processing and marketing. At the same time, they have navigated similar issues, and common themes cut across their experiences.

**Organization:** All business enterprises found significant value in working together, whether organized as a corporation, LLC, cooperative or sole proprietorship. Each structure offers unique advantages depending on the goals and resources of the group. These businesses benefitted from collectively setting their goals and objectives, pooling resources, and choosing the right business structure to help them succeed.

**Start-up capital:** Some of these enterprises—in particular the cooperatives and the partnership LLC—discovered advantages to requiring up-front member contributions. This investment provides start-up capital and weeds out growers who are not serious about working together.

**Labor needs:** Some businesses rely heavily on one or two growers to carry out all management, marketing and processing, which can result in burnout. For many growers, nut production is not a primary enterprise; they do not have time to manage a nut processing business. The businesses that are willing to pay for management are stronger and more resilient.

**Infrastructure:** Some of these enterprises developed strategic partnerships for renting processing space or sharing equipment with others in the start-up phase. This can be a cost-effective strategy to test the market without the burden of large capital investments. Having access to cold storage can help businesses deal with year-to-year fluctuations in harvests.

**Product differentiation:** Whether based on location, organic certification, unique flavor or other special characteristics, distinguishing products from commodity nuts is important. Communicating the traditions and



*The interviewed nut businesses have navigated similar challenges, and their experiences offer helpful lessons.*

Photo: Hammons Products Co.

unique qualities of their products allows businesses to set a higher price than their competition. Crafting a story takes time, but is an important part of adding value to a product.

**Value-added products:** While whole, fresh nuts were usually the most profitable product for these businesses, some found advantages in adding value to small and broken nuts. Likewise, turning waste products such as hulls and shells into marketable products stabilized income and diversified customer bases. However, the interviewees stressed that whole nuts are the best product for start-up businesses, as the infrastructure required for adding value can be cost prohibitive. Value-added enterprises can be spun off from the parent company.

**Diverse markets and consumer education:** While nuts grown in the Midwest have unique and desirable qualities, U.S. customers do not automatically seek them out. Strategies such as tasting events and free samples can introduce customers to new products and varieties. Ethnic markets can prove lucrative for some businesses. Chefs can introduce restaurant customers to midwestern nuts and nut growers, but restaurants may not provide a stable, long-term market.

## Profiled businesses



Chestnut Growers, Inc.

**Website:**

[www.chestnutgrowersinc.com](http://www.chestnutgrowersinc.com)

**Based in:** Clarksville, Michigan

**Nuts purchased:** 80 percent European/Japanese hybrid chestnuts, 20 percent Chinese chestnuts

**Business organization:** Cooperative

**Number of employees:** 1 seasonal

**Number of growers:** 30

**Geographic distribution of growers:** Lower Peninsula of Michigan

**Markets:** Fresh chestnuts sold nationwide, focused on ethnic consumers accustomed to chestnut consumption

**2015 sales:** 75,000 pounds

**Pay based on:** Nut size and quality standards

**Facilities:** Rented facility for receiving, short term storage, packaging and shipping

## Chestnut Growers, Inc.

### Steady and strategic growth for a novel crop

**Overview**

Chestnut Growers, Inc., is a producer-owned and operated marketing cooperative based in Clarksville, Michigan, with members spread across the state's Lower Peninsula. The cooperative grades, cleans, packages, markets and delivers its members' Chinese and Japanese/European hybrid fresh chestnuts. Producers send about 100,000 pounds of chestnuts to the co-op annually. With new growers and more trees, yields are expected to increase.

**Leveraging a university partnership**

Pioneering work by researchers at Michigan State University (MSU) was the catalyst for Chestnut Growers, Inc. (CGI). Commercialization of chestnuts in Michigan plodded along prior to the university's involvement. The first Michigan growers to experiment with chestnuts as a commercial crop in the 1980s were planting open pollinated seedlings that were slow to bear fruit, unreliable and generally produced small crops of poor quality.

In the 1990s, MSU plant breeders researched the suitability of 'Colossal,' a European/Japanese hybrid that is a standard cultivar on the U.S. West Coast, for Michigan. This cultivar dependably produces a healthy crop of larger nuts, even in stressful conditions, starting the fourth year after planting. This variety is suited to growing conditions in extreme western Michigan, where the lake effect moderates the climate. MSU helped troubleshoot early problems with 'Colossal' including poor nut formation and rotten kernels resulting from open pollination with Chinese chestnuts. 'Colossal' trees are susceptible to chestnut blight. Still, according to one grower, "Without Michigan State and the cultivars that are growing now—if it stayed just the original seedling[s]—I wouldn't even be in it at this point."

In addition, MSU partnered with CGI and the Midwest Nut Producers Council on research for processing, marketing and development of value-added products. MSU also leased out expensive processing equipment to CGI. Both research and leasing arrangements enabled CGI to market smaller, fresh nuts. The co-op has

generated enough production and sales to spin off a new chestnut processing company, Treeborne Inc., which specializes in selling chestnut chips to artisan brewers.

### **Making a co-op work**

CGI formally incorporated as a cooperative in 2001. The co-op received legal help from an area lawyer and cooperative expert to develop by-laws and statutes. Under co-op agreements, growers receive a base price for nuts (\$2.50 per pound in 2015), with premiums for larger nuts and lower prices for smaller nuts.

Co-op members enjoy a number of benefits. First, they have a market for their crop, and demand for their product far exceeds supply. In 2015 they sold their entire crop of fresh chestnuts—50,000 pounds—in just four weeks. Roger Blackwell, President of CGI and Treeborne Inc.'s Vice President for Business Development, said he could easily sell 1 million pounds. The co-op has been particularly successful at finding markets for harder to sell, smaller nuts.

In addition, the co-op helps maintain key customers. Chestnut yields can fluctuate year to year, but in a cooperative arrangement, a poor year for one grower is balanced by a good year for another. The co-op has been



*Demand for CGI fresh chestnuts far exceeds supply.*

Photo: Chestnut Growers, Inc.

able to keep supply relatively steady. “By being a group,” one CGI board member noted, “we’re able to keep our customers” by ensuring them a reliable supply.

One challenge for the co-op was that some growers were selling their best nuts independently for higher prices. To address this, the cooperative implemented a marketing agreement requiring that each member deliver all chestnuts to the co-op, except for not-for-resale direct sales occurring on the farm (e.g. a “you-pick” operation or a farm stand). Although 15 members—about a third of the membership—did not sign the agreement and left the co-op, board members view it as an important step in the development of the business, ensuring that the co-op can sell enough high-quality chestnuts each year.

### **Lessons learned**

- **Forge smart partnerships:** Support from MSU and affiliation with the Midwest Nut Producers Council not-for-profit organization provided a foundational platform for this exploratory industry.
- **Work together:** Having a well-planned and managed co-op provides benefits that members would not realize if marketing their product individually.

### **Looking forward**

Chestnut trees are still unfamiliar to most potential growers; long-term investment is necessary to produce a marketable crop. University research has reduced some of the uncertainty and risk. In addition, CGI is proving that the potential market is vast and a carefully managed business can be profitable. As a cooperative advisor said:

“As long as they keep their focus on doing some things very well where they can make money, and... [as long as they are able] to keep money going back to the members, I think they stand a pretty good chance of making it here. I would [describe] them as a sustainable business now.”



**Website:** black-walnuts.com

**Based in:** Stockton, Missouri

**Nuts purchased:** Black walnuts

**Business organization:** C Corporation with stock held primarily by family members, seven-member board

**Number of employees:** 75-80 year round and 20 seasonal

**Number of growers:** Black walnuts are gathered by individuals and purchased by Hammons at 217 locations in 11 states

**Geographic distribution of growers:** 11 Midwest states, concentrated in MO

**Markets:** Black walnut nutmeats for wholesale food distribution companies, ice cream makers and grocery stores; value-added black walnut and other nut products for online retail sales; and ground shells for industrial products

**2015 harvest:** 9.3 million pounds (well below the long-term average of 24 million, due to the cyclical nature of black walnut production)

**Pay based on:** Annual pay rate based on the year's crop and market demand. Weight as measured at buying stations.

**Facilities:** Stockton plant includes drying facilities, shell cracker, electronic nut sorters and shell grinder.

## Hammons Products Company

From traditional cottage industry to economy of scale

### Overview

Over its 70-year history, Hammons Products Company has grown to be the world's largest processor of black walnuts. A family-owned business based in Stockton, Missouri, Hammons aggregates nuts from 11 midwestern states. The company cleans, dries and cracks nuts to sell wholesale as well as processing them into a wide variety of value-added products. They generate much of their income selling abrasives made from black walnut shells.

### Building on local traditions

Stockton, the town that Hammons calls home, has a clear emotional and cultural connection to the yearly black walnut harvest. The town hosts an annual Black Walnut Festival to celebrate the tradition of collecting black walnuts. According to the *Cedar County Republican*, "The black walnut ... is the source of happy memories for many ... Days spent as children, parents and grandparents, aunts, uncles and cousins worked together to harvest the tasty nuts that would flavor their Christmas fudge and banana breads."

After Hammons began processing in 1946, families who collected wild black walnuts—known as wildcrafting—could sell them, too. Hammons built its business on aggregating this wild harvest, an uncommon model that works because the people, product and tradition of the harvest were in place for generations. According to company President Brian Hammons, the collection of wild black walnuts comes mostly from "individuals, from yards and pastures. Some people pick up multiple truckloads. Sometimes someone has just one tree. Sometimes people go door to door."

One Hammons official stated that, by providing this market, "I like to think that we do have [a positive] impact on the smaller communities." At the very least, the enthusiasm that the company helps generate makes the black walnut crop "the talk of the coffee shops."

### Achieving scale

In order to aggregate enough black walnuts to make its business model successful, Hammons must purchase nuts from a large



number of individuals. In 2015 they operated 217 hulling and buying locations in 11 states where they purchase black walnuts from individuals.

When asked how they manage such a large number of hulling and buying locations and so many individuals, company President Brian Hammons said, “It’s something we’ve developed over time. We’ve been around for 70 years.” He admits, however, that understanding the dynamics of the market, the consumer base and the supplier base is an ongoing challenge. “It’s a difficult industry,” he said. “Right now, there’s no one else doing what we’re doing.”

On average, Hammons purchases about 24 million pounds of black walnuts per year. Good years can top more than 30 million pounds, while poor years drop below 10 million. To deal with variability, Hammons keeps a supply of black walnuts in cold storage to satisfy customers in lean years. In the words of a company official, “We’ve learned a lot about keeping nuts both in-shell and nutmeats over a period of time where they’ll still retain their quality and their freshness.”

The majority of Hammons black walnuts are sold wholesale to food distributors, ice cream makers



*Hammons is the world's largest processor of black walnuts.*

Photo: Hammons Products Co.

and grocery stores. It also sells a variety of value-added products on its online retail Nut Emporium ([shop.black-walnuts.com](http://shop.black-walnuts.com)), and it has found markets for the ground black walnut shell, which is used as a cleaning abrasive, a component in filtration systems and a cosmetic ingredient.

### Lessons learned

- **Harnessing tradition can help drive a successful business:** Hammons grew out of a symbiotic relationship with communities that traditionally harvest black walnuts, and this relationship underpins the company’s success.
- **Achieving scale can be a long-term learning process:** Hammons benefitted from the fact that wild black walnut trees are already prevalent across much of the Midwest. Over time, they have succeeded in developing efficient processes for collecting, processing and marketing these nuts.

### Looking forward

Despite its success, Hammons recognizes the need to adapt. A company official noted that they are considering moving toward more orchard-grown nuts, hoping to develop cultivars that yield more nutmeat. They are also trying to select against the alternate-bearing tendency in these improved varieties. Additionally, Hammons is working to tighten nutrient cycling in orchards to create a system where hulls are removed at harvest and returned to the soil as organic matter.

According to Brian Hammons, one of the biggest constraints for future growth is lack of consumer awareness about the uniqueness of black walnuts. He sees thought leaders in the food industry as instrumental in driving growth, with the company “continuing to develop awareness and usage among chefs and people who are really interested in good foods and rich flavored foods that are healthy, natural, wild and local.”

**Website:**

[www.heartlandnutsnmore.com](http://www.heartlandnutsnmore.com)

**Based in:** Valparaiso, Nebraska

**Nuts purchased:** Orchard-grown black walnuts and northern pecans

**Business organization:** Cooperative

**Number of employees:** 1 seasonal

**Number of growers:** 46

**Geographic distribution of growers:** Nebraska, Iowa, Kansas and Missouri

**Markets:** Local businesses, grocery stores and direct marketing to consumers

**2015 production:** 7,000 pounds black walnuts (well below average, due to poor pollination) and 6,000 pounds pecans

**Pay based on:** Paid per pound based on evaluation of percent nutmeat

**Facilities:** 5,000-square foot processing facility with nutcrackers, separators, packaging machine and coolers. This facility also houses a retail store.

## Heartland Nuts ‘N More LLC

### Cooperatively marketing improved varieties

#### Overview

Heartland Nuts ‘N More is a 46-member, formally incorporated cooperative headquartered in Valparaiso, Nebraska. The co-op produces, processes and markets black walnuts and pecans from growers in Nebraska, Iowa, Kansas and Missouri. Relying on more than 30 years of research and experimentation, Heartland’s focus has been on growing improved, grafted, orchard-grown black walnut and northern pecan varieties.

#### “Domesticating” a wild nut

In the 1970s, Bill Gustafson at the University of Nebraska-Lincoln (UNL) Department of Horticulture and his team helped develop alternative cash crops for landowners. They created a less-bitter, higher-yielding black walnut cultivar that offered advantages over wild nut trees, including reduced time to nut bearing (6 to 7 instead of 14 years) and sweeter, milder-tasting nuts with more nutmeat.

Extension educator Cyril Bisch and colleagues trained farmers to graft and grow the trees in orchards, and ran workshops to identify nuts and trees with desired characteristics. As yields increased, a network of growers formed a steering committee, conducted background market research and in 2003 officially incorporated as a cooperative with 32 members. With help from the Nebraska Cooperative Development Center and UNL, the group secured vital grant funds to start the business. They now have a production facility in Valparaiso, Nebraska, where in a good year they process 25,000 pounds of black walnuts.

Historically, it may have taken hundreds of years to domesticate a wild nut, but researchers and nut growers in Nebraska did it in just a few decades. They continue to graft new trees today. With advancements in harvesting and handling processes, they have further improved nut quality.

#### A labor of love

The co-op includes many retired professionals who grow black walnuts or pecans as an intriguing side project. According to one grower, his orchard is “a little family project to give us a reason to



*Heartland Nuts 'N More sells value-added products such as black walnut pecan brittle.*

Photo: Heartland Nuts 'N More

get together.” Others view it as a way to conserve soil on hilly landscapes that are not suitable for row crops, while turning a small profit.

“I couldn’t live on the nut crop, and I don’t think the other growers could either,” said Larry Martin, a board member and nut producer who volunteers his time in managing the processing facility. “It’s a hobby,” he adds.

Heartland Nuts ‘N More provides growers who have time, money and interest in midwestern tree nuts to recoup some expenses incurred in pursuing their passion for conservation. Heartland Nuts ‘N More makes it possible for nut growers to realize the conservation benefits of a perennial crop and work with other growers to add value through nut processing.

The co-op’s 5,000 square foot processing facility—“The Nut House”—doubles as a retail store. It is also home to The Nutcracker Museum, where Heartland Nuts ‘N More showcases a wide array of nutcrackers and nut memorabilia.

Most nuts are sold wholesale to retail grocers in Lincoln and Omaha; local institutions such as the University of Nebraska dining services; and local businesses such as Bakers Candies, a Nebraska-based confectioner. Heartland Nuts ‘N More also sells value-added products at

its retail store, online on the company’s website and at festivals and functions.

### Lessons learned

- **Industry development:** Building an industry around a newly domesticated perennial plant can be a challenging, long-term process with uncertain financial rewards.
- **Pioneering nut growers:** Dedicated early adopters willing to invest their time and energy can help carry such an industry through its infancy.
- **Protecting natural resources:** Perennial nut production has conservation benefits.

### Looking forward

Martin maintains there are untapped sales opportunities for Heartland Nuts ‘N More, particularly with value-added products or greater economies of scale. “Most of my co-op growers are in their upper 70s and lower 80s,” he said. “We do need younger and adventurous people” to try new things that will carry the industry forward.

“We do have a few younger growers who are starting to get established,” he added, suggesting that the first seeds of a next generation of entrepreneurial black walnut and pecan growers may have already been sown.



*Heartland Nuts ‘N More houses a collection of nutcrackers and nut-related memorabilia in its processing facility and retail store.*

Photo: Heartland Nuts ‘N More



**Website:** mopecans.com

**Based in:** Nevada, Missouri

**Nuts purchased:** Organic pecans

**Business organization:** Partnership LLC

**Number of employees:** 10-12 year-round, up to 35 during peak season

**Number of growers:** 30-35, depending on the year

**Geographic distribution of growers:** Western Missouri

**Markets:** Primarily sells wholesale organic pecans to confectioners and distributors, including small specialty stores and national supermarket chains. Recently added international customers. Retail sales are a small portion of the business.

**2015 sales:** Just under 300,000 pounds

**Pay based on:** Premium for organic nuts over conventional prices

**Facilities:** New processing facility with cleaning and shelling equipment; use of their old facility for storage; additional off-site cold storage facility space is leased

## Missouri Northern Pecan Growers

### Distinguishing an organic, geographically based product

#### Overview

Missouri Northern Pecan Growers is a pecan processing company comprised of growers from the Nevada, Missouri area, near the state's western border with Kansas. Each year the company buys pecans from 30 to 35 growers, mostly from in and around Vernon County, Missouri. Missouri Northern ships some pecans in-shell and processes nuts into value-added products available on the company's website and at retail outlets throughout the country.

#### Putting "skin in the game"

In the late 1990s, pecan growers in Missouri felt that they had a unique product that was undervalued. But pecans are particularly laborious to shell and clean. To address these issues, growers held public meetings to discuss collective processing, and 70 participants attended the first meeting. When participants were asked whether they would put their own money on the line and invest in a business, however, the numbers quickly dwindled. Committed members pooled resources and formed a LLC in 1999.

The resulting company stores, shells and cleans locally purchased pecans and produces value-added products. Since its inception, Missouri Northern Pecan Growers has shown steady growth, with sales reaching nearly \$3 million in 2015.

Managing Partner Drew Kimmell and four partners bought land in Nevada, Missouri and put up a processing facility in 2001. The company recently expanded into a larger facility and added new cracking equipment. They can now process 6,000 to 7,000 pounds of nuts per day.



*Northern pecans are smaller than those grown in the South, with a sweeter flavor.*

Photo: Missouri Northern Pecan Growers



*Missouri Northern Pecan Growers has a processing facility that can process 6,000 to 7,000 pounds of nuts per day.*

Photo: Missouri Northern Pecan Growers

“We are a for-profit LLC. When we put the business together, that’s the way we made it,” said Kimmell. “It takes a hard-nosed person to make a profitable business.”

### **A story brand**

Northern pecans from wild trees are generally smaller than those grown on plantations further south. They are also sweeter and have a higher oil content. According to Kimmell, “They just taste better... We just need people to eat with their taste buds.”

In its marketing, Missouri Northern Pecan Growers emphasize that its trees are wild and native, not grown in neat rows on a plantation. Its website refers to trees “as old as George Washington” and its packaging calls northern pecans a “Delicacy of the Osage Indians.” Evoking these images and ideas of authenticity and “taste of place” adds value to its product.

To further differentiate its product, Missouri Northern began to offer certified organic nuts in 2003. According to Kimmell, becoming certified organic “really opened the doors for us.” The company grew significantly, and customers were more willing to pay premium prices knowing that the nuts were certified organic.

“Organic is the vehicle we have latched onto, and it has latched onto us,” said Kimmell. “Without organic, I don’t want to be in this business.”

Missouri Northern Pecan Growers primarily sells its products into wholesale confectionery and retail markets. Recently, it expanded into international markets.

### **Lessons learned**

- **Investment is an incentive:** Growers and partners who have invested time and money in the business also have an incentive to do what it takes to make it profitable.
- **Stories matter:** The story of wild, native, organic trees has won the hearts of consumers who are willing to pay more for this unique product.

### **Moving forward**

Missouri Northern Pecan Growers has proven that it can be a profitable business, and demand for its product continues to grow. But finding enough nuts to meet demand is challenging. Yields fluctuate and, because pecans bear nuts in alternate years, the next bumper crop (weather permitting) is at least another year away. This business is looking to add more growers, but getting new growers approved and certified organic can be a slow process.



*Missouri Northern Pecans includes its story on its packaging.*

Photo: Missouri Northern Pecan Growers

## PRAIRIE GROVE CHESTNUT GROWERS

**Website:**

prairiegrovechestnutgrowers.com

**Based in:** Columbus Junction, Iowa**Nuts purchased:** Chinese and Chinese hybrid chestnuts**Business organization:** Single-member LLC operating as a brokerage**Number of employees:** 4 (mostly seasonal)**Number of growers:** 56**Geographic distribution of growers:** Iowa, Illinois and Missouri**Markets:** Selling fresh chestnuts nationwide, targeting ethnic consumers familiar with chestnuts**2015 sales:** 50,000 pounds**Pay based on:** Nut size and quality standards**Facilities:** Warehouse for collection, sorting, packaging and shipping in Columbus Junction

## Prairie Grove Chestnut Growers LLC

### Brokering a specialty crop to niche markets

**Overview**

Prairie Grove Chestnut Growers consists of 56 growers of Chinese and Chinese hybrid chestnuts from Iowa, Missouri and Illinois who market nuts through a single-member LLC that functions as a brokerage. Roger Smith manages the brokerage and sells chestnuts to customers across the nation, focusing on niche markets where quality chestnuts are highly valued. From modest beginnings, the company has become an increasingly successful venture on a trajectory for sustained growth.

**Keeping the business structure simple**

In 1992, landowners in Iowa began planting chestnuts for commercial purposes. Six years later, the trees started producing nuts. Although the total production was only a few hundred pounds, about a dozen growers got together to discuss marketing their harvest. Growers were intrigued by the idea of forming a marketing cooperative and enlisted the help of experts from Ames, Iowa. After learning about costs and legal work involved, however, they opted for a more informal structure.

The group appointed a marketing coordinator in 2000 to organize sales. The business persisted as an informal brokerage through 2013. At that point, the volume of chestnuts they marketed had increased from 400 to more than 35,000 pounds. Tom Wahl, the marketing coordinator through most of this time, decided to step down to focus on managing his own trees.

Without a marketing coordinator and with a steadily increasing supply of nuts to process and market, the group had to reconsider its structure. Once again, the group considered cooperative marketing, then opted for a simpler alternative, appointing separate processing and marketing coordinators.

Since then, the group has evolved further. Long-time member Roger Smith took it on as a more formal brokerage. They opened a new processing center in Columbus Junction, Iowa, and in Smith's words, "The brokerage has taken off." They have 56 growers and sold more than 50,000 pounds of chestnuts in 2015. Smith projects a growth rate of 20 percent per year for the foreseeable future.

In the end, the growers got what they wanted—a place to sell their nuts—and Smith reported that the prices paid to growers increased by 35 percent between the end of the informal structure in 2013 and the current situation in 2016.

### Searching for and finding the right markets

Prairie Grove exclusively markets Chinese and Chinese hybrid chestnuts from both seedling trees and grafted cultivars. The customer base for chestnuts in the U.S. tends to be immigrants. Many of these customers prefer Chinese chestnuts rather than the less familiar European and Japanese hybrids.

In the early years, Prairie Grove sold large nuts with ease but struggled to sell the small- and medium-sized nuts that accounted for nearly half of the harvest. With financial and technical assistance from the North Central Initiative for Small Farm Profitability (NCISFP), they developed a shelling machine to process smaller nuts into value-added products. They succeeded in producing packages of frozen, peeled chestnuts.

They first targeted chefs with their new product. Local chefs showed limited interest, but enthusiastic chefs at a Chicago trade show seemed promising. However, these chefs tended to be “moving targets” who only bought small quantities.

Everything changed a few years later when a Bosnian man from Waterloo, Iowa, bought 300 pounds of medium-sized fresh chestnuts. Chestnuts are a common ingredient in Eastern European diets, and Waterloo is home to about 4,000 Bosnian immigrants. Once word got out, the marketing coordinator was unable to supply a “bottomless pit” of demand.

When Roger Smith took on Prairie Grove Chestnut Growers as a sole brokerage, he brought 20 years of marketing experience from a previous career. He has expanded to broader markets, selling largely to Bosnian, Chinese and South Korean customers around the country, all of whom traditionally eat chestnuts. Smith said one of his greatest challenges is setting pricing structure. He knows people will pay more, but he does not want to price out poorer customers.

### Lessons learned

- **Sometimes simple is better:** It takes effort to form and manage a co-op business. In the case of Prairie Grove Chestnut Growers, a single-member LLC appears to be functioning profitably while satisfying growers’ needs.
- **Do market research:** Early market research might have identified immigrant communities interested in buying fresh chestnuts and would have saved a lot of time, effort and money invested in value-added processing.

### Looking forward

Prairie Grove Chestnut Growers continues to expand production. Existing growers’ trees are increasingly fruitful. Although convincing new growers to make a long-term investment in chestnuts is an ongoing challenge, new producers are planting trees, often on Conservation Reserve Program (CRP) land. Roger Smith sees a bright future:

“We’ll look back in 100 years and see that we were just in the embryo stage. We have much more pricing power than most industries and that isn’t likely to change for another 20 years ... The chestnut business is the ideal business. It is very low labor, except for harvest. The trees are very hardy. The people on both sides—growers and buyers—are very pleasant to deal with. For many of them it brings back childhood memories of eating chestnuts.”



*Prairie Grove Chestnut Growers has built a strong market.*

Photo: Prairie Grove Chestnut Growers LLC