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Summer 2007

Aftermath of the Big Chill -How are Your Trees Faring?

C ome like it hot, some like it cold. Updates and harvest

Dexpectations from chestnut growers across the country are mixed following the big freeze in April. The economic losses associated with the freeze, just in Missouri, are estimated at \$27.5 million for according to Michele Warmund, professor of plant sciences, University of Missouri.



fruit and nut crops,
according to Mi-
chele Warmund,
professor of plantThe cultivar Auburn Homestead exhibiting
above-average dieback of the previous
year's annual growth resulting in poor
nut set at the University of Missouri's
Horticulture and Agroforestry Research
Center.

The 16 days of near-record or record highs in March followed by record or near-record lows in early April, damaged many chestnut cultivars to the graft line in Tennessee. In Missouri, a nearly-normal crop is expected; in Iowa, they are looking forward to a good harvest.

Here are notes from growers across the country:

"Our chestnut trees were still fully dormant (with the exception of nursery stock in containers and raised beds)

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when the late freeze hit this spring, and so were unaffected. It is still too early to assess nut set, but flowering looks comparable to last year (and that was a record crop year for us). Soil moisture is better on my farm than it has been for several years, and I am looking forward to a good harvest."

Tom Wahl Red Fern Farm

Wapello, Iowa

"The April freeze caught the trees just as some of the buds on some of the chestnut trees were swelling and breaking. These early lively buds/trees suffered tip dieback but there appears to have been no really serious limb damage. The exception was that our entire trial Colossal planting was killed back to the rootstock. Generally, among our Chinese and Dunstan trees, dormant buds broke almost reluctantly about three to four weeks after the frost – taking the 'fool me once...' adage too seriously. I was concerned that I might see a lot of graft loss (a similar freeze killed all my grafted trees to the rootsocks in 2001) but (**cont. pg. 5**)

Focusing on Chestnuts

by Rachel McCoy, University of Missouri Center for Agroforestry

Cultivar information is becoming more available. Consumer demand is greater than supply. Gourmet chefs, restaurants and local farmers' markets are starting to make chest-

The full report, "Using Focus Groups to Learn About Landowner Knowledge/Willingness to Establish Chestnut Orchards and Enhance Technology Transfer Efforts," is available at: www.centerforagroforestry.org

nuts a familiar item. But, where are the growers?

To help answer this question, the University of Missouri Center for Agroforestry conducted two focus groups in the apple/peach growing regions of Missouri. Goals of the project were to learn about orchardists' opinions and attitudes toward chestnuts; what types of information they needed to get started; if they were interested in (**cont. pg. 4**)



A Message from the President

Lucienne Grunder Owl Creek Ranch La Grange, Calif.

Much has changed in the Chestnut World in the last few years. In 1997 I was looking to diversify from my English walnut orchard, so as not to be totally dependent on the prices paid for

this commodity. Incidentally, walnuts seem to be the only commodity for which the buyer does not give a price at delivery. The return is dependent on floating prices; factors like the color, size and the crackout of the walnuts.

So I joined the NNGA to learn "everything" about chestnuts; the planting, harvesting, marketing that was known at the time. The few chestnut growers in the organization were generous with their time and expertise.

Yes, much has changed and the pace is accelerating. A core of growers, from Coast to Coast, has in many original ways introduced the chestnut into the American eating culture. Many cultivars have adapted to a wide range of soils and climates. Chestnut knowledge is exchanged internationally. Our growers are finding new ways to bring fresh, American-grown chestnuts to a better informed public.

Last season the growers I talked to were all sold out before Christmas. Value-added products are tuned to an increasingly health-conscious clientele.

I feel it is time to fine tune our choices of cultivars and make a survey; planting our main cultivars at different latitudes. Why does a Colossal taste bland in CA, good and sweet in Washington? Could a sufficient sample of growers plant say five trees each of interesting cultivars? Could they commit to answer yearly questionnaires as to the performance of the trees, their appearance, time of leafout, bloom, the taste, "pealability," storage capacity of the various nuts?

Billy Hansen, an NNGA member from Iowa, published results for a similar study on Black Walnut cultivars in 1994, even getting a grant for it.

I hope to bring the subject up at the Michigan Meeting and would like to donate the necessary grafted trees to the Chestnut Cause.

Let's all have a great chestnut Summer, Your Lucienne

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PUBLICATION DEADLINES

Fall issue deadline 9/15 mailed 10/15 Winter issue deadline 12/15 mailed 1/15 Spring issue deadline 3/15 mailed 4/15 Summer issue deadline 6/15 mailed 7/15

U.S. Chestnut Import Trends: An Update

by Ina Cernusca, University of Missouri Center for Agroforestry

ver the past three years, U.S. chestnut imports have been steadily increasing, reaching \$11.6 million in 2006.

Looking at the value of imports during the 2006 "chestnut season," imports increased from \$238,000 in September to \$2.7 million in October and peaked at \$6.4 million in November, accounting for 55 percent of total imports in 2006.

Compared to November, imports declined dramatically by December (\$902,000), the month most associated with Christmas and winter holidays. Imports declined and remained low during subsequent months (Fig. 2).

The sources of imports remained the same in 2006 as in 2005. Imports from Europe made up the largest percentage, accounting for about 61 percent of total imports (\$7.04 million).



Fig. 1 Value of chestnuts imported by U.S. in 2002-2006 (world total)

Source: http://www.fao.org/statistics/



Fig. 2 Value of chestnuts imported by U.S. during the "chestnut season" in 2006

Source: http://www.fao.org/statistics/

The remaining 39 percent (\$4.5 million) was supplied by Asia. (Fig. 3).

In November 2006, out of the total value of imports, Europe contributed 82 percent of U.S. imports while Asia

18 percent (Fig. 4). In 2006, Italy remained the main European import supplier of chestnuts to the U.S. market. The value of Italian import of chestnuts accounted for 90 percent of the total value of imports from Europe (Fig. 5).

accounted for

dollars)

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Valu

In 2006, China accounted for 60 percent of all Asian imports while Korea supplied about 39 percent of chestnuts, the remainder, ~1 percent, came from other Asian countries

11.272 11.33 12.000 10,000 7,31 8,000 5.999 6,00 4.512 ,015 4.000 2.00 WORLD TOTAL BUROPE DASIA

Fig. 3 Contribution of chestnut imports from Europe and Asia to the total value of U.S. imports

Source: http://www.fao.org/statistics/



Fig. 4 Value of chestnut imports from Europe and Asia in November 2006

Source: http://www.fao.org/statistics/



The USDA Agricultural Marketing Service (AMS) provides daily reports about



Fig. 5 Value of chestnut imports from Europe in 2006 wholesale prices

Source: http://www.fao.org/statistics/ at different terminal markets.

According to the information provided, during November 2006, most of the chestnuts available (cont. pg. 6)

The Chestnut Grower



Bug off! MU Works to Eradicate Chestnut Weevil

Chestnut weevils are re-emerging as pests of the growing chestnut industry in the United States. As the commercial growth of chestnut becomes more economically important to the Midwestern U.S., University of Missouri researchers are working to understand one of the greatest current threats to nut production, the chestnut weevil.

Ian Keesey, graduate research assistant in entomology, who is studying the weevil along with Bruce Barrett, associate professor and department chair of entomology, said lack of basic biological knowledge and appropriate monitoring techniques have led to calendar-based pesticide applications to control the weevil. Their long-term goal for the project is to develop a cost-effective, environmentally friendly insect pest management strategy for weevil pests of the chestnut.

Populations of these weevils tend to rapidly reach economically devastating densities and have the ability to destroy entire chestnut harvests, Keesey said. However, the majority of the work conducted on chestnut weevils since 1930 has been performed in European countries such as France and Italy. In the United States, the two most important chestnut pests are *Curculio caryatrypes*, the larger chestnut weevil, and *C. sayi*, the lesser chestnut weevil.

Keesey and Barrett have conducted several studies to gain fundamental biological and ecological data as to the life cycle and behavioral preferences of this highly potent pest insect. For example, in 2005 and 2006, infested chestnut trees near Glasgow, Mo., were monitored using several trap types to illicit emergence and activity information. Data appears to indicate not one, as previously noted in the literature, but two distinct emergence periods for the lesser chestnut weevil.

Keesey said this and other preliminary studies will be followed by extensive lab and field trials using a synthesized set of chestnut plant volatiles. These studies should lead to further understanding of adult preferences for feeding and egg laying on various cultivars of chestnuts that will be provided from the 60-plus cultivars available at the University of Missouri Horticulture and Agroforestry Research Center.

The overall goal of this project is to provide the necessary biological and ecological data for the eventual development of an effective monitoring tactic for the lesser chestnut weevil that will segue into the development of a sustainable pest management strategy. Such critical information includes data on the pest's life cycle, population dynamics and chemical ecology between pest and host plant.

Without such data it is doubtful that an effective pest management program can be designed, Keesey said. Successful completion of this project will provide the foundation needed for an effective sustainable management strategy of chestnut weevils and support the continued growth of the chestnut industry. *CGA*

Focusing on Chestnuts, (cont. from pg. 1)

regional chestnut festivals; and their opinion of the Center's chestnut literature.

Accompanying the focus groups was a survey sent to randomly selected chestnut grower members of CGA. Potential producers also received a survey, designed to gather their opinions about the Center's literature.

The University of Missouri Center for Agroforestry Nut Tree Research Cluster features research on pecan, black walnut and chestnut, including field studies, market research and outreach. UMCA supports the nation's most comprehensive research programs for developing the eastern black walnut and Chinese chestnut as nut crops for agroforestry practices. Primary research is conducted at the 660-acre Horticulture and Agroforestry Research Center, New Franklin, Mo., and includes dozens of agroforestry demonstrations. In addition to cultivar research, the Center's Socioeconomic Cluster is pursuing ways to increase landowner adoption and understanding of agroforestry practices.

It is within this environment that the Center for Agroforestry looked to determine how to most effectively disseminate information about growing and marketing Chinese chestnuts, a significant and promising research area. The technology transfer team used focus groups and surveys of the Center's literature as a tool for understanding agricultural producers' reactions to current literature regarding growing Chinese chestnuts, and to determine the most appropriate methods for offering ongoing information for establishing, managing and marketing chestnuts.

The majority of total participants were exclusive nut growers, followed by growers of both nut and niche crops. The focus groups were divided up into the Mt. Vernon, Mo., and Pleasant Hill, Mo., areas. The ultimate goal was to create an interested landowner base (**cont. pg. 11**)



The Big Freeze, (cont. from pg. 1)

most everything survived this time, even the Qing variety held on in most cases. We have had close to normal rain all spring, for a change, and the foliage insects and leaf-curl disease seems to be on holiday. The foliage looks pretty healthy. By the second week of June we saw some notvery-heavy flowering. On many trees I observe no burrs; other trees are only very lightly sprinkled with burrs. But they are easy to miss this early in the season. It looks like a very light crop again this year. So what's new. We are in our 12th season and in that time we have experienced just about every record-breaking weather event you can think of except asteroid impact. Next year will be better."

Charlie NovoGradac

Chestnut Charlie's Organic Nuts Lawrence, Kan.

"Since the last newsletter, I am thankful to report that despite some dieback of terminal growth, the chestnuts at the research farm have approximately a 75 percent nut set overall after recovering from the Easter Weekend Freeze. Temperatures during the freeze were low enough to kill any buds that showed signs of swelling (16-19 degrees Fahrenheit). Japanese maple, sourwood and most shrub roses such as 'Knock out' exhibited severe dieback at the research farm. There is zero peach crop and only a few apples at the farm.

Chinese chestnut cultivars that I have observed to show more than average dieback are Auburn Homestead, Mossbarger, Shing, Hong Kong, Auburn Super, Amy, Willamette, Perry, Lindstrom #43, Meiling, Auburn Leader and Carr. Some of these cultivars have a normal amount of nut set anyway, such as Perry, Meiling, Mossbarger, Hong Kong and Lindstrom #43. Several cultivars seem to have a large nut set, such as Qing, Ford's Tall and Miller72-76.

Several hybrid chestnut trees show little terminal branch dieback and excellent nut set such as Douglass 1A, Precoce Migoule, Marigoule and Yolo Grande. Luvall's Monster and Paragon show little dieback and a moderate to good nut set. Bouche de Betizac, Primato, Maraval, Marsol and Colossal show good nut set with moderate branch dieback."

Ken Hunt

Research Scientist University of Missouri Center for Agroforestry New Franklin, Mo.

"The late spring frost (The 'Easter Freeze of 07') almost completely destroyed the Chinese chestnut cultivar collection at Chattanooga. My max-min thermometer (downtown Chattanooga) recorded 26 degrees Fahrenheit on Saturday morning, 7 April, and 28 degrees Fahrenheit again on Sunday and Monday, 8 and 9 April 2007. Low temperatures at the farm are usually about 5 degrees lower than in town.

By early April, all of the Chinese chestnut cultivars were leafed out and growing vigorously. By Monday morning, they looked like 'boiled lettuce' (quote from Jeremy Bramblett, orchard owner). All of the current season's growth was lost on all cultivars. Last year's wood was also killed on most trees. Several cultivars were killed to below the graft union (all 20 plants of 'Amy' were killed to the ground).

The 'Nanking' trees all look pretty bad.

Since the freeze, no rain. The Chattanooga area is currently under 'D4 Drought - Exceptional' drought conditions (NOAA/NESDIS/NCDC: http://www.drought.unl.edu/dm/ monitor.html). That's worse than 'extreme.' The chestnut orchard has received almost no measurable rainfall since before the April freeze! The ambrosia beetles (*Xylosandrus crassiusculus*) are having a field day. The freeze-damaged, drought-stressed trees must be attracting ambrosia beetles from miles around; some tree have literally hundreds of visible frass columns per stem.

On Saturday, 9 June, the Japanese beetles (*Popillia japonica*) emerged. Our only consolation was, last year at least, the Japanese beetles seemed to like hazelnuts better than chestnuts.

Curiously, not all trees in the orchard have been so affected. Quite strikingly, the grafted trees of TACF-SA330, SA333, SA419, etc., were not frozen at all. They have grown vigorously (despite the drought) and are currently all blooming. The hybrid cultivar 'Paragon' was not frozen and it looks very good, too.

'Sleeping Giant' has decided to bloom anyway. Having lost all of last year's wood, new shoots arising epicormically are now producing a few catkins here and there (it's actually kind of a sorry sight).

I will check each of the 'Nanking' trees in the orchard for new catkins on my next trip out there, but don't get your hopes up."

Hill Craddock

Associate Professor University of Tennessee Department of Biological and Environmental Sciences



U.S. Chestnut Import Trends (cont. from pg. 3)

at all terminal markets came from Italy and were sold at prices ranging from \$1.50 to \$3.75 per pound. Imports from China were imported into the U.S. through Boston and New York



Fig. 6 Value of chestnut imports from Asia in 2006

Source: http://www.fao.org/statistics/

at prices			Prices per		chestnuts from	:
between	Terminal markets	Italy	China	S. Kore a	California	Washington
\$1 and	Boston	\$2.00- \$3.25	\$1.60	\$1.60		
	Chicago	\$2.60- \$3.12				
\$1.60 per	Dallas	\$2.37 \$2.00-				
pound	Detroit	\$3.75 \$2.50-			\$2.25	\$2
and	Los Angeles	\$3.00 \$1.50-	\$1.00-		(jumbo)	(medium)
importe	New York	\$3.33 \$2.20-	\$1.60		\$3.00	
imports	San Francisco	\$3.20		-	(jumbo)	
from	St. Louis	\$3.15				

Table 1 Terminal markets and unit prices for chestnuts obtained in November 2006

Source: http://marketnews.usda.gov/portal/fv

through Boston at

Korea

entered

the U.S.

\$1.60 per pound of fresh chestnuts (Table 1). cgA

Thanks and good luck to Rachel!

Newsletter editor Mike Gold and new coordinator Michelle Hall would like to thank outgoing coordinator Rachel McCoy for her years of hard work and dedication to The Chestnut Grower and the Center for Agroforestry at the University of Missouri. She is missed already!

For any questions, comments or suggestions about the newsletter, please contact Michelle at (573) 882-9866 or hallmich@missouri.edu.

Best of luck Rachel!



Make Plans Now the 4th International Chestnut Symposium - September 2008, Beijing, China

On behalf of the 4th International Chestnut Symposium of the International Society for

Horticultural Sciences (ISHS), you are invited to participate in the 4th International Chestnut Symposium. The Symposium will be held September 12-15, 2008, in Beijing.

Program Information: Interested presenters are welcome to submit papers on all aspects of chestnuts, including basic and applied research in the areas of: genetics and germplasm, physiology, production systems, plant and soil nutrition, pests and diseases, post-harvest, nut quality, health benefits and marketing.

Important Dates:

September 1, 2007	Pre-registration with tentative titles due, call for abstracts
January 15, 2008	Abstracts due to Scientific Committee
March 1, 2008	Author notifications, deadline for receipt of abstract
May 15, 2008	Manuscripts due for publication in <i>Acta Horticulture</i>
	Early registration ends (fee increase after this date)
July 15, 2008	Deadline to pre-conference tours

We look forward to seeing you in 2008!

- Ling Qin (convener)

Department of Plant Science and Technology Beijing University of Agriculture

For more information about the symposium, please visit the International Society for Horticultural Sciences Web site at: www.ishs.org/calendar/index.htm or email conference organizers at chestnut2008@126.com



The Nominating Committee will present the following slate of officers for next year at the annual meeting in July:

President: Mike Gold Vice-President: TBA Secretary/Treasurer: Ray Young Directors: Bill Nash Sandy Bole Charlie NovoGradac Lucienne Grunder

Any member, in good standing, of the CGA is eligible to serve on the Board. Please contact the Secretary, according to the By-Laws, if you would like to present another name for any of these positions. Thank you.

-Ray Young, Lee Williams, Ken Hunt, nominating committee

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National Chestnut Week is Oct. 14 - 20!! What are *your* plans?!



The Challenges of Chestnuts: An Interview with Bob Stehli, Northern Nut Grower

by Michelle Hall, University of Missouri Center for Agroforestry

B ob Stehli likes a challenge. And growing chestnuts on his farms in Ohio has provided him one heck of a challenge.

"There are what sometimes seems like insurmountable obstacles in the chestnut field." said Stehli, of Wintergreen Tree Farm. "We've made tremendous strides but there is an awful lot to learn. And there are challenges left to be faced." Stehli has worked to master site selection, disease and pest control, record keeping, grafting, finances, soil type and, most importantly, plant nutri-



Stehli then turned to Dunstan chestnut trees but his challenges didn't end there. He said only about 1 out of 10 seedlings worked for him – Stehli describes his farming area as being at the northern edge of commercial chestnut-growing climate.

So he created a seedling orchard to produce his own cultivars that would work well in his climate. Stehli's next orchard contained seedlings from the 30 best cultivars in North America.

"We planted 4,424 trees and analyzed their performance over 10 years," he said. This has proven to be his most productive chestnut farm, which he owes to its good site. Then, Stehli began yet another orchard with 7,056 seedlings of his best 10 trees, and in the fall of '08, he will plant 2,300 clones of his 10 best cultivars, bringing him to around 13,000

trees.



What has Stehli learned in his work with chestnuts? First, he said site selection is the most important lesson. He recommends checking local climate records for the longest possible growing season in an area. Soil conditions are

also a factor in site selection. Stehli finds that a deep, welldrained soil with high moisture-holding capacity is the way to go.

The importance of good record keeping on all of his different trees is also vital. And Stehli admits a bit of frustration with some cultivars that haven't produced the way they're touted to – he said local cultivars may be the way to go, since growing conditions across the country vary so much. (cont. pg. 9)

tion in his 14 years of chestnut growing.

"It took awhile to zero in on what they really liked," Stehli said of chestnut tree nutrition. "Even though they'll grow here, you can get tremendous growth if you know how to push them."

Stehli said he was at first interested in preserving the American chestnut when he started looking into chestnut farming in the early 1990s. He spent "quite a bit of time" collecting remnants of wild trees from the area and cross-breeding them. Stehli soon realized he was fighting a losing battle.

"But my interest had been piqued in chestnuts as a crop," he said. "At least on paper it looked like a crop that would make as much money as my best Christmas tree crop." Stehli also grows landscape and cut-your-own trees and pick-your-own blueberries, in addition to chestnuts.

Bob Stehli, Northern Nut Grower, (cont. from pg. 8)

Another practical piece of advice: Save up for some deer fence.

"You can't plant enough chestnut trees that deer can't destroy them all," Stehli said. He is now using deer fence

on his newest farm and said the difference is "amazing."

And, Stehli said, he's learned that although only about 1 in 100 people are chestnut connoisseurs, the ones who like them really like them. Luckily for Stehli there's a big market around Cleveland of those who "really like" chestnuts - mostly made up of small ethnic communities



Photos taken at Stehli's Hiram orchard, where he has planted 4,424 trees, seedlings from the 30 best cultivars in North America. He calls this his most productive orchard.

"There's lots of

demand there," Stehli said. "Some are very knowledgeable about chestnuts."

Stehli said he's received all the business he can handle – so far. But with a goal of selling 1 million in chestnuts before he retires, he has gotten his feet wet with wholesaling as well.

"So when the day comes when I have to use it I can," he said.

Maybe that will be this year – Stehli said he is on track to have his largest crop ever this year – estimated at 10,000 pounds. His trees were not affected by the April freeze, although some of the apple crop in the area was. They have been experiencing a bit of a drought, but Stehli said chestnut trees in his area aren't affected much by dry conditions.

"As long as you get some moisture in the last month or so

you're usually in pretty good shape," he said.

One of the lessons he's learned applies to all of his crops – Stehli said farmers can make just as much money with a small, more expensive piece of land near a populated area

than with a larger farm farther away.

"The buyers will actually come to you," Stehli said. And if he's making three times more for a crop selling it retail, "the price of the land becomes a minor issue."

Stehli started as a forestry major in college, but was convinced by friends there was no money in forestry.

"So I switched to geology, which I dearly love," he said. "But I keep going back to forestry." Stehli said

geology wasn't all fieldwork, as he had hoped – a lot of it was analyzing data.

"I'm more of a hands-on person," he said. He then worked as a roofer to finance his first Christmas tree farm. That farm, along with blueberries and landscape trees, finance his chestnut "addiction."

Although his careers have changed, one thing hasn't – Stehli enjoys a challenge – and chestnuts may prove to be his biggest one yet.

"It's a real challenge," Stehli said. "I've enjoyed these different agricultural challenges and I may not run out of challenges with chestnuts.

"It's fun to be on the cutting-edge of a new agricultural industry like that." *cGA*



The Best Part of Waking Up... Are Chestnuts in Your Cup?

Lee Williams doesn't want to let any part of his chestnut crop go to waste. He brews beer out of the "imperfect" chestnuts (although he's now looking for someone to take over the "brewing" part). He creates chestnut chips and chestnut flour.

The newest chestnut-related product for this "retired" farmer? Chestnut coffee substitute, of course!

Williams' coffee, which he has named Castagno Café, is made from roasting left-over chestnut meal in the oven. He does big batches of it – about 8 lbs. at a time.

"When it comes out it looks just like fine-ground coffee," he said. "I took some of this roasted chestnut stuff and used it in a pot of coffee." After a bit of trial-and-error, Williams determined the best way to make the drink is to use four level tablespoons in 12 cups of water. Williams' chestnut coffee can be made in a regular drip coffee maker.

"It's very good iced too," he said.

Williams, of Trails End Chestnuts, Moses Lake, Wash., compares it to the coffee substitute Postum, which is made with wheat and molasses. It's great for people who may have an allergy to regular coffee or a reaction to caffeine but like the taste. Unlike Williams' chestnut coffee substitute though, Postum is not gluten-free.

Williams sells the Castagno Café through a natural

foods company in New Hampshire. They take the orders and he fills them. You can find the product at http://www.simply-natural.biz/chestnut-coffee.php

Williams said although the chestnut coffee substitute is tasty, the demand for his new hot beverage hasn't been high yet – but that's okay with him. He said all of his unique chestnut products are just really a way for him to keep busy experimenting while retired.

"I was looking for something to do," he said. "It started out as a hobby 16 years ago – now it's turning into some work."



Editor's Taste Test:

I prepared a pot of Castagno Café for some friends and relatives and the response was pretty positive. The smell of the roasted chestnuts was different from coffee, but just as fragrant – sweet and nutty, almost chocolaty. The coffee drinkers of the bunch thought it was very smooth with no aftertaste, slightly sweet – they didn't add milk or creamer. The tea drinkers enjoyed it with a little creamer since they felt it was a little strong alone. All agreed it was a good coffee alternative and went nicely with a bagel or muffin!



Focusing on Chestnuts, continued from pg. 4

of potential chestnut growers to work with in coming years in establishing a chestnut industry in the region. Approximately 80 percent of survey respondents would start planting chestnuts, according to the post-focus group literature surveys. Prior to reading the literature and completing the survey, this number reached only 29 percent. This favorable increase in interest toward planting chestnuts could be attributed to information provided in the Center's literature. Of the 80 percent who are interested in planting chestnuts, 40 percent are interested on a hobby level and 40 percent on a commercial level.

The literature surveys for existing producers and potential producers were meant to determine landowner perceptions, attitudes and opinions



Chestnuts are served at the Missouri Chestnut Roast, held at the University of Missouri's Horticulture and Agroforestry Research Center each October. In light of the success of the roast, the Center for Agroforestry is willing to provide guidance to locally interested groups who are considering hosting regional chestnut festivals near metropolitan areas around the state. Approximately 30 percent of focus group participants are interested in regional chestnut festivals, according to question results. More interest was expressed at the Mt. Vernon focus group, while the Pleasant Hill group expressed more concerns for this type of initiative, especially labor requirements.

Landowners are unsure if Missouri is suited geographically for chestnuts. They have heard of import markets along the East and West coasts, and mentioned the need to tap into these existing markets while allowing Midwest markets to develop.

Lack of consumer education toward chestnuts is a common concern, with the belief that chestnuts may be a "hard sell" market without educating consumers as an ongoing effort.

Producers seemed to suggest their own "solution" for this challenge, with both focus groups believing there is marketing potential for chestnuts through selling/creating an agritourism experience around chestnuts or regional chestnut festivals like the Missouri Chestnut Roast.

Cooperatives are perceived as

toward establishing chestnut orchards.

Information gleaned from the existing producers' survey is helpful in gaining further insights into what type of information is desired by potential growers - and how best to present this information. It is also interesting to note what existing producers cited as benefits and challenges to chestnut production. Eighty-seven percent of existing producers of chestnuts would plant chestnuts again.

The study found current landowner knowledge about chestnuts is limited and seems confused by some growers with the traditions and legends surrounding the American chestnut. Negative or neutral responses were generated in regard to knowledge about chestnut (prickly, small, better market elsewhere) more often than openly positive responses. More than half of focus groups participants cited a lack of consumer awareness and the need for more growers.

If landowners have prior knowledge about growing tree crops like chestnuts, it has been learned through associations and fellow growers.

Focus group participants believe diversification is a good thing, but lack of consumer awareness about chestnuts is a significant concern.

a positive and necessary step toward establishing a chestnut industry in Missouri, and a need for consumer education also emerged in producers' comments and discussions.

With 40 percent responding they would plant chestnuts on a hobby level, and 40 percent saying they would plant them on a commercial level, there is an opportunity for the Center to expand hobbyists' interests into commercial-level production.

A future modification of this project could focus on surveying and interviewing farmers identified as community "leaders," including those admired by their peers and those who have leadership roles in local organizations. Perhaps these leaders could be brought together in a focus group to determine their attitudes and opinions toward leading agricultural efforts in their communities.

Working with Extension specialists, Center for Agroforestry technology transfer staff could consider building farmer cooperatives or hosting farmer forums to help encourage adoption of agroforestry crops. As a next step, identified community leaders could be asked for assistance in generating regional chestnut festivals or grower participation in existing area festivals to promote chestnuts. CGA



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