

THE CHESTNUT GROWER

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Fall 2014

It's Almost National Chestnut Week

National Chestnut Week is held annually during the second full week of October when growers across the country have nuts available. This year that falls Oct. 12 through Oct. 18. If you've never hosted an event consider doing it this year. It can be as simple as an open house and tours of the orchard to a major event with the types of activities that draw tourists from nearby areas. In any case it's a time when you'll have fresh chestnuts available for sale and perhaps value-added products if you have them.

Those who live in the city are always looking for something to do on the weekend with their families and what better than a visit to a farm.

Talk to someone at your local newspaper and see if they can publicize it for you. Even just a listing in that publication's event calendar about what you're doing will draw people. If you've got a customer list including their email addresses send a note to them encouraging them to come.

You'll have to organize of course. Where will people park? Will you need someone to direct traffic? Will your event be free or for a fee? Will you need to have people available to handle sales for you? How will you roast your nuts?

Take a look at the article on the activities at High Rock Farm. It should give you some ideas. Don't be afraid to try.

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Growing Chestnuts Planning The Orchard

Part 1 of a 3-part article by Bob Wallace chnuts@gmail.com

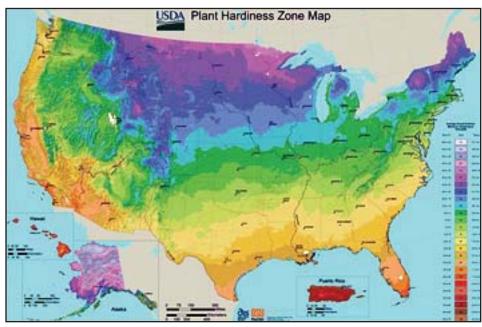
The U.S. is the only country in the world that can grow chestnuts that does not have a large commercial chestnut industry. The U.S. imports \$20 million of chestnuts yearly because there are fewer than 2,500 acres of chestnut orchards in the U.S. It would take 10,000 acres of producing chestnut orchards to supply what we import!

There is a large market potential. American-grown nuts can reach the market sooner, fresher, and bring a higher price than imports, which are often low in quality, often because grocers do not know how to handle them and the nuts spoil at room temperatures. U.S. consumption is less than 1 ounce per person per year, but 1 pound per capita in Europe and 2 pounds in Asia. It would take 120,000 acres of chestnut orchards to supply U.S. consumption at European levels, and create a \$300 million new agricultural industry for America! Growers who produce high quality chestnuts in America will have a virtually unlimited market available to them for many years to come.

Chestnuts can be a very profitable crop. They begin to bear in only 3-5 years, and by 10 years can produce as much as 10-20 lbs/tree. At maturity (15-20 years) they can produce as much as 50-100 lbs/tree or up to 2,000-3,000 lbs/acre each year. Wholesale prices for large, high quality chestnuts are \$3.00-5.00/lb, and higher for organically grown chestnuts. Retail prices range from \$3-10.00/lb. Chestnut prices are superior to the return on pecans, hazelnuts and many other tree crops!

One of our orchardists grows his crop organically and harvests 16,000 lbs on 10 acres, selling them to Whole Foods for \$6.00/lb on average. That is a nice return for a small orchard and seasonal work to harvest and ship!

Before deciding to grow chestnuts it's important to make sure they will grow in your area. Chestnuts can be grown in Zones 5-9 across the country assuming you have a soil pH of 5.0 to 6.5. See the Zone Map for your location. Try to avoid lands in Zone 4.



See Growing Chestnuts, p. 3

Time to Plan Ahead

CGA's 2015 Annual Meeting will be held in Stockton, CA June 12-14.

Headquarters Hotel will be the Holiday Inn Express 1-800-315-2621

A special rate of \$99 available for CGA members.

Contact Karri Ridard at the hotel.

For the first time growers will be able to tour the Flory plant in nearby Salida, manufacturers of harvesting and sweeping equipment used successfully by western growers.

The highlight will be a visit to the Correia Chestnut Farm which has the ability to operate exclusively on solar power.

The Sacramento area is a great place for a family vacation so plan on making it your special trip for the year.

EDITOR'S NOTES

October brings the end of warm weather and hopefully a bountiful harvest. Each year seems to bring its new challenges. For us it was 44 mph winds a few weeks ago with the trees loaded down with burrs. Fortunately no major damage other than my computer crashing when our power went out.

October is a good time to think about marketing your crop. Brianne McAlister does a bang-up job of telling you how they do it at High Rock Farm. Maybe it will motivate you to try something new. A press release sent to us about the West Virginia Chestnut Festival offers more ideas for what you can do to publicize your crop. Sandy Anagnostakis provides an in depth look at the nutrients in our nuts, and Bob Wallace begins his series of articles with a look at planning the orchard. Any of you who are just getting started will find this a great resource.

Carolyn

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One classified ad per member per year is free (max 6 lines, \$2.50 ea add'l 6 lines). Ad space may be reserved with full payment but must meet established deadlines. If ad is cancelled, money may be refunded if space is resold. Make checks payable to Chestnut Growers of America, Inc.

All ads and other copy preferred in PC format. Email to Carolyn@ChestnutsOnLine.com. Ads must adhere to published ad sizes for space purchased. Call for specifics. Layout of ads will not be done until payment is received. Send materials to P.O. Box 841, Ridgefield, WA 98642, or Fedex/Express Mail to 29112 NW 41st Ave., Ridgefield, WA 98642. Call for further info. Publication and Deadlines Fall issue deadline 9/10, mailed 10/1

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Editorial Opinion

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Growing Chestnuts, from p. 1

A detailed map of plant hardiness from USDA can be found at http://en.wikipedia. org/wiki/File:2012_USDA_Plant_Hardiness_Zone_Map_%28USA%29.jpg.

Chestnuts need at least 100 frost free days from flowering until harvest to fully ripen the nuts. Chestnuts flower in May in the deep South, and not until July in northern areas. Chestnuts can survive average minimum lows of -20F when fully dormant, but can be damaged by early fall and late spring freezes. Grow tubes and snow pack helps young trees survive extreme cold, such as the winter of 2014 (the coldest winter in 30 years).

Selecting the site for your orchard is important. If you want to grow chestnuts commercially, it is better to look for the



right piece of land than try to force the trees to grow in a poor location. If your land has problems and does not fit the descriptions below, you will have problems.

Pick a location with good soil drainage and good air drainage such as on the top or side of a hill, to avoid frost pockets where cold air or late frosts settle at the bottoms of valleys. Avoid areas with soil that stays saturated for long periods of time, such as creek bottoms or low areas that stay saturated during snow melt in spring. Areas that are too steep may be hard to harvest with machinery.

Chestnuts prefer a well-drained sandy to clay loam with a pH of 5.0-6.5, but will grow in other soils. Avoid heavy clay and wet soils with a high water table or that stay saturated for long periods of time.

Look at the trees on the surrounding property. If the land supports large oak and See Growing Chestnuts, p. 8

Agritourism as a Part of Your Marketing Approach

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"Chestnuts roasting on an open fire..." is a line that many people have heard. It brings feelings of seasonal joy, familiarity, and a growing curiosity of what exactly chestnuts are. In recent years, people are growing more conscious about what they eat and where they buy their food. This has become a wonderful platform for local farmers to capitalize on the

growing awareness of local products. I can remember growing up and driving by a field of seasonal produce planted and watching a farmer driving his tracker through the field. I always viewed the farmer as "the man

nity. This can be achieved in several ways through farmer's markets, events at farms, and educational opportunities. While each may have its own set of challenges it is important to remember that bringing the farm-



A young man eagerly awaits roasted chestnuts.

behind the curtain" rather than an intricate part of the community. Today, the farmer's role has transitioned into not only taking an active part in the physical aspects of farming but the marketing of products as well.

Through this growing transition of marketing and farming it is important for the local farmer to be engaged in the commuer's produce to the community is not only rewarding to the public but to the farmer as

High Rock Farm has had a wonderful yet challenging journey navigating through certain marketing tasks and sales of chestnuts. It has taken a conscious effort on our

See Agritourism, p. 9

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Nutrients in Chestnuts

Sandra Anagnostakis

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Tests found minor

differences in fiber

but large differences

in protein and fat.

Tests made by Senter et al. (1994) found minor differences in fiber or carbohydrates between species of chestnuts, but large differences in protein and fat. Among the fatty acids, Senter suggested that oleic acid was perhaps the most important in contributing improved flavor to the nuts. The fatty acids linoleic and lino-

lenic have been linked to the ability of nuts to store well. A search of the literature on human nutrition suggests the following: fatty acids are important sources of "fuel" when metabolized, and heart and skeletal muscles selectively use fatty acids; high levels of oleic acid and low levels of linoleic acid in a diet slows the progression of arthrosclerosis; and a high level of linolenic acid is one of the important components of the "Mediterranean Diet."

Anagnostakis and Devin (1999) reported that nuts from controlled hand-pollinations had differences in the amount of protein and total fat in the nuts (Table 1). Subsequent work found differences in fatty acid amounts in nuts from the same kinds of crosses (Table 2).

Table 1. Nuts from hand-pollinated crosses of two cultivars at The Connecticut Agricultural Experiment Station. Values are from 1998 tests and are the % of dry weight (grams/100 grams dry) which was fat (total) or protein.

1998 Pollen Parents

Nut Parent	'Sleeping Giant'	'Little Giant'	'Eaton'
'Sleeping Giant'			0.5% fat, 8.7% protein
'Lockwood'	1.1% fat, 7.7% protein		0.50% fat, 7.3% protein

Table 2. Nuts from hand-pollinated crosses of two cultivars at The Connecticut Agricultural Experiment Station. Values are from the 1999 tests and are % (grams/100 grams dry) of three fatty acids.

1999 Pollen Parents

Nut Parent	'Sleeping Giant'	'Lockwood'	'Little Giant'	'Eaton'
'Sleeping Giant'	1	0.3% oleic 0.3% linoleic 0.2% linolenic	0.3% oleic 0.6% linoleic 0.04% linolenic	0.2% oleic 0.5% linoleic
'Lockwood'	0.2% oleic 0.2% linoleic 0.03% linolenic		0.2% oleic 0.2% linoleic 0.008% linolenic	0.2% oleic 0.5 % linoleic 0.05% linolenic

The embryo in the nut carries genes from the mother tree and the pollen parent, and the bulk of the nut tissue is cotyledon. The bur tissue is genetically like the mother tree. More tests are needed to determine whether the pollen parent has a significant effect on the protein and fatty acid contents of the nuts. I am using grafted and single trees at the Connecticut Agricultural Experiment Station (CAES) farm in Hamden, CT to make crosses to produce orchard trees with resistance to Asian chestnut gall wasp (Dryocos-

mus kuriphilus), and will have the nuts of the first cross and of F1 hybrids tested to see how the crosses have affected the nut quality.

The cultivar 'Colossal' is presumed to be a C. crenata x C. sativa hybrid and is the most widely planted cultivar in the U.S. I have three grafted trees at CAES which have been checked by J.

Romero-Severson and V. Rinkel and found to fall within the genotype profile of the 'Colossal' trees planted in Michigan. The other cultivar of choice is 'Lockwood', which is a complex mixture of C. crenata, C. dentata, and C. sativa, and which has very large, good tasting nuts. Both of these chestnut cultivars are susceptible to infestation by gall wasp. We have C. ozarkensis trees from both Arkansas and Oklahoma, and both types seem to resist infestation by gall wasp.

In 2013, I collected open pollinated nuts of 'Colossal', 'Lockwood', and the two C. ozarkensis types and had the nuts tested for protein content and fatty acid contents as a baseline (grams/100 grams dry weight).

'Colossal'	'Lockwood'	Ozark (AR)	Ozark (OK)
2.42% oleic	0.15% oleic	5.67% oleic	6.63% oleic
0.54% linoleic	0.26% linoleic	2.87% linoleic	2.94% linoleic
0.08% linolenic	0.07% linolenic	0.24% linolenic	0.31% linolenic
5.64% protein	8.2% protein	9.9% protein	8.8% protein

In 2014, 2015, and 2016 I plan to produce hand-pollinated nuts of:

- 1. 'Colossal' x 'Lockwood'
- 2. 'Colossal' x Castanea ozarkensis (Arkansas)
- 3. 'Colossal' x C. ozarkensis (Oklahoma)

'Lockwood' cannot be pollinized by 'Colossal' because 'Colossal' is male sterile. Therefore:

- 4. 'Lockwood' x C. ozarkensis (Arkansas)
- 5. 'Lockwood' x C. ozarkensis (Oklahoma)
- 6. C. ozarkensis (Arkansas) x C. ozarkensis (Oklahoma)
- 7. C. ozarkensis (Oklahoma) x C. ozarkensis (Arkansas)
- 8. C. ozarkensis (Arkansas) x 'Lockwood'
- 9. C. ozarkensis (Oklahoma) x 'Lockwood'

Nuts will be peeled, freeze dried, and tested for total protein, and oleic, linoleic, and linolenic acids at Northeast Laboratories in Berlin, CT.

The accompanying tables have more detailed information of nut nutrient content.

Publications mentioned

Anagnostakis, S. and Devin, P. 1999. Nutrients in Chestnuts. Northern Nut Growers Annual Report 90:36-40.

Senter, S. D., Payne, J. A., Miller, G., and Anagnostakis, S. L. 1994. Comparison of the total lipids, fatty acids, sugars and nonvolatile organic acids in nuts from four Castanea species. J. Sci. Food Agric. <u>65</u>:223-227.

Chestnuts as Food

From the paper, Senter, S. D., J. A. Payne, G. Miller and S. L. Anagnostakis. 1994. Comparison of total lipids, fatty acids, sugars and nonvolatile organic acids in nuts from four Castanea species. J. Sci. Food Agric. 65:223-227.

Grams/1000 gms dry	fructose	glucose ^{SMD1}	inositol	sucrose	malate	citrate
C. mollissima	1.4 +/-0.2	1.9 +/- 0.9	1.8 +/- 0.7	80.6 +/- 19.9	1.7 +/- 0.3	1.8 +/- 0.7
C. sativa	trace	trace	1.3	92.5	1.1	trace
C. pumila	+/- 1.5 +/- 1.5	1.4 +/- 0.9	1.9 +/- 0.6	83.0 +/- 30.2	1.0 +/- 0.6	2.0 +/- 0.1
C. dentata	2.6 +/- 0.2	2.2 +/- 0.1	1.6 +/- 0.5	103.1 +/- 16.6	trace	2.4 +/- 0.4
[SMD1] I'm assuming this	should be glu	cose. Entries b	elow to be co	nsistent with s	ugars.	
Grams/1000 grams dry	total lipids	palmitic	stearic	oleic	linoleic	linolenic
C. mollissima	21.7 +/- 2	2.17 +/24	trace	9.12 +/- 1.7	7.71 +/- 1.2	0.84 +/48
C. sativa	29.5	4.32	0.39	8.82	12.57	1.66
C. pumila	40.1 +/- 3.3	5.33 +/71	trace	16.76 +/- 3.03	12.21 +/- 2.04	1.83 +/- 1.06
C. dentata	95 +/- 5.6	10.53 +/- 1.78	0.81 +/57	57.29 +/- 1.95	19.1 +/- 2.3	1.56 +/86

% of Dry Weight								
Species, old data Fiber Protein Fat Carbohydrate Calories per								
C. mollissima	1.4	4	2	49	2.3			
C. sativa	1.4	3	1	41	2.0			
C. crenata		2	1	35	1.6			
C. dentata	1.9	10	10	40	2.5			

% of Dry Weight

Species, new averages	Fiber	Protein	Fat	Carbohydrate	Calories per gm	nut weight, grams/nut
C. mollissima		7.7		64.8	2.3	16.1
C. crenata	14	7.9	.4	90.0	3.9	12.58
C. dentata	1.9	10	10	40	2.5	5

See Nutrients, p. 6



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Analyses from the 1998 Anagnostakis & Devin crosses at CAES

(grams/100 grams dry weight)

% of Dry Weight

	ultivars crossed and n pollinated	Fiber	Protein	Fat	Carbohydrate	nut weight, grams/nut
'Sleeping G	iant' X 'Little Giant'	14.6	8.6	3.6	85.2	7.75
	X' Eaton'	14.8	8.7	0.5	88.3	10.27
	open pollinated	14.3	6.9	0.2	90.8	12.83
'Little Giant'	X 'Sleeping Giant'	14.0	7.7	1.8	88	3.97
	X 'Eaton'					4.24
	X 'Lockwood'					3.40
	open pollinated	15.1	9.9	0.5	86.9	6.12
'Eaton'	X 'Sleeping Giant'	15.1	7.8	0.5	89.3	11.29
	X 'Little Giant'	13.5	7.2	0.6	89.5	11.09
	X 'Lockwood'					14.17
	open pollinated	14.1	6.9	0.7	90.2	13.25
'Lockwood'	X 'Sleeping Giant'	15.7	7.7	1.1	88.9	30.04
	X 'Little Giant'	15.3	6.4	0.5	90.8	29.58
	X 'Eaton'	15.1	7.3	0.5	89.7	29.82
	open pollinated	15.8	6.3	0.3	91.3	33.62
	ollissima x C. dentata n pollinated	13.2	7.2	2.8	88.3	7.08
'Bee & Thistle'	C. crenata open pollinated	13.2	7.6	0.9	90.5	8.46
B & T, F1 <i>C. ci</i>	renata open pollinated	14.4	7.9	0.2	90.1	18.82
'Cheshire' <i>C.</i> Wes	crenata X Old Lyme t C. crenata	14.3	8.1	0.2	89.6	10.46

Comparison of two year's work: grams/100 grams dry weight

% of Dry Weight

Fat % 1998	1998 Nut weight grams/nut	Fat % 1999	1999 Nut weight grams/nut
3.6%	7.75	1.27	11.3
0.5	10.27	0.92	10.2
		1.21	11.8
0.2	12.83		
1.8	3.97	1.31	5.9
	4.24	1.55	7.2
	3.40	1.08	9.8
0.5	6.12		
0.5	11.29	1.51	15.9
0.5	29.58	0.66	16,5
0.5	29.82	0.96	16.7
	3.6% 0.5 0.2 1.8 0.5 0.5 0.5	1998 grams/nut 3.6% 7.75 0.5 10.27 0.2 12.83 1.8 3.97 4.24 3.40 0.5 6.12 0.5 11.29 0.5 29.58	1998 grams/nut 1999 3.6% 7.75 1.27 0.5 10.27 0.92 1.21 1.21 0.2 12.83 1.8 3.97 1.31 4.24 1.55 3.40 1.08 0.5 6.12 0.5 11.29 1.51 0.5 29.58 0.66

WEST VIRGINIA CHESTNUT FESTIVAL

Rowlesburg, WV – Come, taste and enjoy the only Chestnut Festival open to the public in the 16 Appalachian States, in Rowlesburg, WV, the little town on the big bend of the scenic Cheat River! The 7th Annual West Virginia Chestnut Festival will take place rain or

shine on Sunday, Oct. 12, 2014 from 10:30 a.m. to 7:30 p.m. Also, the Glory of Autumn will be on display in the surrounding hills.

Hosted by the Rowlesburg Revitalization Committee (RRC), Rowlesburg Tourism Commission, and Town of Rowlesburg, the theme of this year's festival will be, "We honor the heritage of our Great American Chestnut Tree."

Dr. N. Joseph Nassif, Co-Chair of the WV Chestnut Festival stated, "A bonus to all of those attending the festival will be the opportunity to attend the West Virginia Chapter Meeting and to sign up for a free membership in The American Chestnut Foundation (TACF), gifted from a very generous Donor, Duane Waddell, living in California."

RRC will also honor the research scientists and their ongoing research, dedicated to restoring American Chestnut Trees – a giant hardwood tree, that once dominated the hills of Appalachia from Maine to Georgia.

The Festival will kick off with a complimentary continental breakfast in the River City Café, starting at 10:30 a.m. until noon. Attendees will have an opportunity to meet our distinguished guests, including Dr. John Brooks, Professor of Forest Resources Management at West Virginia University (WVU), and Mark Double, WVU research associate, and receive an autographed article.

Activities are planned for all ages and for all types of interest. They will take place in the Scenic Rowlesburg Park by the Cheat River, from 12:00 p.m. – 5:00 p.m. Activities include, sampling and purchasing delicious chestnuts roasted on an open fire; chestnut ven-



dors selling their crafts and wares; purchasing of chestnut saplings for planting; and networking with chestnut researchers.

Activities that will take place in the nearby Szilagyi Creative Arts Center will be the West Virginia Chapter Meeting of TACF (public is welcome) from noon – 2:00 p.m. Dr. Brian Perkins, president, will be presiding over the meeting. The Chestnut Scientific Program will be from 4:00 p.m. - 5:00

p.m. The presenters will be WVU research associate, Mark Double, Dr. William Mac-Donald, and Dr. Joseph Nassif. Featured prominent speakers are, Bryan Burhans, past CEO of TACF, and Bob Walters, eminent woodworking specialist.

Other exhibits open to the public include, the acclaimed World War II Museum and the 1927 Centenary B & O Railroad Bridge Exhibit.

The River City Café will be open all day and will be serving lunch and delicious desserts.

The festival concludes with the Gala Chestnut Dinner Banquet from 5:30 p.m. – 7:30 p.m. Festival dinner menu includes savory Chestnut-flavored dishes.

At the dinner, The 7th Annual Crowning of our Chestnut Royalty will take place by honoring "Mr. and Mrs. Chestnut," Bryan and Lisa Burhans, past CEO and President, ACF. Distinguished guests include the keynote

speaker, Dr. John Brooks, West Virginia University.

Master and Mistress of Ceremonies will be Dr. N. Joseph Nassif, Festival Director, and Shirley Cook Hartley, Festival Co-Chair.

For more information and/or to reserve banquet dinner tickets or vendor space, contact Shirley Hartley, (304) 329-1240, Shartley812@frontier.com.

Fatty acid data for nuts from 1999 crosses of cultivars at CAES grams per 1000 grams (dry weight)

Cultivars crossed	Lauric	Myristic	Palmitic	Stearic	Oleic	Linoleic	Linolenic
EA X LG	0.084	0.038	1.92	0.53	4.94	2.77	0.69
EA X LK	0.08	0.063	4.81	0.23	4.51	6.43	0.09
EA X SG	0.12	0.063	5.08	0.032	4.19	3.24	0.38
LG X EA	0.12	0.058	2.28	0.69	3.26	4.73	0.13
LG X LK	0.063	0.023	2.07	0.5	5.11	2.08	0.17
LG X SG	0.071	0.042	2.21	0.62	2.71	5.04	0.6
LK X EA	0.22	0.061	1.51	0.21	1.66	4.45	0.51
LK X LG	0.21	0.016	0.12	1.52	1.91	1.79	0.08
LK X SG	0.21	0.016	1.12	1.6	1.9	1.7	0.28
SG X EA	0.25	0.08	1.6	0.2	1.56	4.56	0.62
SG X LG	0.1	0.06	2.03	0.33	3.11	5.83	0.35
SG X LK	0.058	0.023	2.07	0.091	2.64	3.28	0.24

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Growing Chestnuts, from p. 3

hickory trees naturally, it should be good for chestnuts. If the native vegetation is poor (unless the land was recently logged), look elsewhere.

Assuming your climate and soil types are appropriate to ensure success you should plan on an irrigation system. If you do not have irrigation, you cannot expect to get good growth of the trees as quickly or consistent crops of nuts. Water is the limiting factor for most tree growth, and if the year you plant is a drought year, your trees will struggle and may not live without adequate irrigation. If they are stressed at the beginning, they may never fully recover and grow into strong healthy trees. Irrigation eliminates many (but not all) of these risks. It is inexpensive and easy to install, and readily available at Irrigation Supply stores such as John Deere Landscape stores. We strongly recommend using an irrigation system in your orchard.

Animals, especially deer, love to eat chestnut nuts and leaves and rub the velvet off their antlers on young trees. Grow tubes help protect against deer browsing and killing the young trees with their antlers, as well as protect against rodents and rabbits chewing on the trunks, especially during winter when food is scarce. However, if nut predation is severe, it may be necessary to fence your orchard. An 8' metal deer fence

is expensive, especially on large orchards. A very effective alternative is a 3 wire electric fence, developed by Dr. James Kroll of Stephen F. Austin University in TX as a method to exclude deer from plantings.

In order to determine the number of trees you will need it's necessary to decide on a proper spacing. Dunstan Chestnuts can get large, as much as 50' tall and 30'

Water is the limiting factor for most tree growth.

wide. We recommend a 30'x30' (54 trees per acre) or 30'x 40' spacing for planting. Chestnuts bear on the outer growth each year, and so maximizing sunlight around the tree increases overall production. If the trees are planted closer (20'x20'), it will increase early nut production but the trees will crowd out and production will only occur at the top of the trees (15+ years). The orchard will need to be thinned, or trees will need to be radically pruned to keep them on this spacing.

Most orchard crops are planted with grafted (cloned) trees of particular varieties. However, chestnuts, for several reasons, do not graft well, and in particular, grafted trees suffer high mortality rates in the first few

years after planting. This is due to latent graft incompatibility between rootstock and scion, and is more severe in northern states (sometimes as much as 50-90% loss) than in less stressful environments. Because of this we no longer sell grafted trees. Grafting may work when young seedling rootstock are established in the field and then grafted in place after 1-2 years. However, for best results, the seedlings must be grown from nuts harvested from the particular varieties that you want to use to graft (and even this does not always stop incompatibility).

Our Dunstan Chestnut trees are grown from seed harvested from an orchard of grafted trees of our largest nutted varieties all inter-pollinating each other, and we plant only the largest nuts. Chestnuts are affected by metazenia, in which the nut size of the male pollen parent determines the nut size of tree grown from nuts planted from these trees.

Over 35 years we have learned that our Dunstan trees bear consistently good-sized nuts, averaging 20-35/lb, which brings the highest prices in the market. This has been proven by many of our growers who planted these same trees. We believe it is better to have trees bearing large but sometimes slightly variable nut sizes than to have dead trees in the orchard from graft incompatibility.



Quality Chestnut Trees from a Reliable Source

Available Cultivars:

Colossal, Okie, Belle Epine Prococe Migoule, Marival Marigoule, Marsol, Marrisard Bisalta #3, Bouche de Betizac Maron de Val di Susa, Yoo Ma Marrone di Chuse Pesio, Qing Marrone di Marradi, Eaton Marrone di Comballe, Szego American, and many more The experts all agree, "Grafted chestnut trees outproduce and deliver a more consistant quality chestnut, compared to seedling chestnut trees". This is why we have gone through all the efforts to offer chestnut producers the lartest selection of grafted chestnut trees in North American. Call upon us to be your partner in establishing and maintaining your chestnut orchard.

Washingon Chestnut Company 6160 Everson Goshen Rd., Everson, WA 98247 Phone (360) 966-7158

Supporting the Chestnut Growers of American since 2007

Custom Propagation Services

www.WashingtonChestnut.com

Agritourism, from p. 3

part to offer educational material on the history, taste, and use of chestnuts. One of these challenges was how to keep chestnuts in the minds of our customers year round so that it was not just a product available seasonably. One of the steps we took to overcome this trial was to go out into the community to local co-ops, stores, and events and roast chestnuts. Through this, we created a market for this unique yet versatile product. By creating value added goods from fresh chestnuts like chestnut flour, dried kernels, and gluten free pastries we were able to reach a genre of people who could use the product year round. In doing so we established the best marketing tool of word of mouth.

When marketing local chestnuts, a product the United States imports more than we grow, has left us with challenges of meeting even local demands. When we talked with the community we realized that many had not even seen a chestnut tree and were interested in what it looked like and the specifics on growing them. At that point we knew we had to allow the community the opportunity to come to the farm and see, touch, and experience a local orchard. We knew we wanted to engage the public on several levels from the history of chestnuts as well as the history of our farm and procedures of growing their local produce.

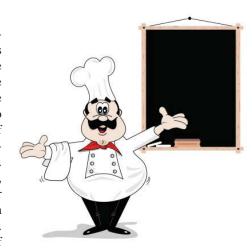
We decided to have a festival as a way to thank the chefs and wholesale buyers who bought and used our chestnuts. Having the festival on a Sunday was a way for grocery store employees, chefs, and restaurant owners to come and enjoy the day on the farm with their families. However, we wanted to also reach our local community and the retail client as well. This brought up the marketing aspects of such a big event. How would we advertise, captivate, and bring people to the event? The first couple of years the focus on advertising was anything that was free. Facebook, Twitter, website, fliers, and our local organizations we were a part of. At the festival we wanted to engage not only patrons who would buy our products but children of all ages as well. We wanted to create a destination location that would help foster not only an understanding of growing and consuming chestnuts but a love for local farms. This was done by inviting local vendors/farmers to set up and sell their products, having a bounce castle for kids, hay rides through the orchard, food, music, and historic house tours. Our local brewery who makes beer from our chestnut flour was able to come and share how he is using local products to continue making

value added products in the community.

The first festival was a trial run. A limited amount of marketing of the event was done and we had about one hundred people in attendance. This was manageable and we learned what we needed to work on to make the flow of the festival better. We needed to pay workers who operated different parts of the activities, make sure questions were answered, and trash cans were being emptied. Making sure we had enough chairs rented, tents set up, gas for the hay rides, ice for drinks, and toilet paper in each bathroom were crucial items was at times challenging. Small details were discussed with our staff after the event and improvements were made each year. The festival is held the first Sunday of November from one to five. Each year we have increased the admission into the event and have found that the more that is charged, within reason, the more people we have in attendance.

The main marketing done at the event is while chestnuts are being roasted. People are able to experience what has been done to chestnuts on an open fire for years and taste a roasted nut that has just been harvested. Material on nutrition and recipes are available and individuals can buy fresh chestnuts and other products at the festival. It is also important to market any events, future activities, or places the farmer sells at the festival. Months after the festival we have received inquiries about our products from people whose friends were in attendance and shared their knowledge and experience of the festival. We have seen a direct correlation between this event and direct sales of chestnuts and value added items throughout the year. The awareness of our farm has advanced as well. As more and more people began to hear about the festival and attendance increased so did the marketing. High Rock Farm has been featured in several magazines, local advertising, and television. This is always exciting to see sales and public awareness of the farm escalate due to the chestnut festival!

Empowering people to think of chestnuts as a unique product built around a sense of local support and community involvement has been very rewarding. By promoting an environment that the general public can come and feel a part of a local chestnut orchard can not only increase sales of chestnuts but mindfulness of local farms. If you are thinking about hosting an event at your orchard start small and work on improvements throughout the year. Remember, local involvement is what makes our communities and local farming successful!



SAUTEED APPLES AND CHESTNUTS

1 pound fresh chestnuts
6 medium apples
1 tbsp. olive oil
1 tsp. cinnamon
1/4 cup brown sugar
1/4 tsp nutmeg

Remove chestnuts from their shell and chop. Remove stem and core from apples. Slice the apples and put them in a large mixing bowl. Add cinnamon, brown sugar, and nutmeg to the apple slices and mix well.

Add olive oil to non-stick skillet. Add apple mixture and chopped chestnuts to skillet. Saute over medium heat for 20-30 minutes until desired doneness.

Submitted by Linda Black

Try this with a scoop of ice cream or use a scoop on your pancakes for breakfast. Yum!



Chef image courtesy of Grant Cochrane, FreeDigitalPhotos.net".

Fall 2014

CGA Planning New Website and Needs Your Help

amy.ciderwood@gmail.com

The CGA is developing a complete online guide to chestnut growing in America for its members, and we need your help! We would like photos, video clips, and/or tips and tricks from your farm, throughout your harvest and growing seasons, to make our site as comprehensive and informative as possible. Topics to be covered are below:

- 1) So you want to be a chestnut grower...
- Things to consider before you start, like site requirements, largescale production vs. a few backyard trees, planting for wildlife, etc.
- Chestnut history and culture
- A global and historical perspective of chestnut production
- Chestnut species and their uses
- Including discussion of cultivars
- Orchard establishment (a large module)
- Including site selection, planting

layout, seedlings vs. grafted trees, bareroot vs. container trees, fertilizer and nutrient management, etc.

- Orchard maintenance
- Including pruning, mowing, equipment needed, etc.
- Diseases and pests
- Pests such as chestnut weevil and gall wasp, predators such as deer and groundhogs, diseases such as chestnut blight and blossom end rot
- Including spray regimes, deer fence strategies, etc.
- Harvest and processing
- Hand-harvesting vs. machine
- Processing steps including sizing, hot water treatment, grading
- 8) Post-harvest storage and valueadded products
- Refrigeration and optimal moisture content
- Products such as chestnut flour, chestnut chips, etc.
- 9) Marketing and sales

- Including information on regional Coops
- 10) Nursery production and management
- Growing trees from seed, container vs. bareroot nursery, caring for young seedlings, grafting

Photographs and video clips of various file formats will be accepted. This harvest season is a good time to show off your good ideas, problems to be addressed, lessons learned, and knowledge gaps from your own experience growing chestnuts. All providers of photos and video retain the rights to their material and will be acknowledged as contributors. We look forward to working with you on this exciting project and improving knowledge and communication of chestnut growing for all! Please send material to: amy.ciderwood@gmail.com or mail hardcopies or discs containing material to Empire Chestnut Company, 3276 Empire Rd SW, Carrollton, OH 44615.

