

A New High-Tannin Animal Stockfood System

by David Klinac
dklinac@xtra.co.nz

(with permission of the NZ Chestnut Council)

This is the title of a joint MPI (Ministry for Primary Industries) Sustainable Farming Fund R&D project, partly funded and supported by the NZTCA (NZ Tree Council Assn.), which started in 2012 and has only just recently been completed.

It was inspired by overseas work that showed that the inclusion of even a relatively small amount of high-tannin “ingredients” in animal feed could bring about much-improved animal health in a variety of animal species (cows, pigs, horses, poultry, etc) and, in particular, a significant reduction in problems caused by intestinal worms, harmful gut bacteria and so on.... potentially improving product quality and reducing or even eliminating the need for chemical intervention and/or antibiotic use, along with reduced levels of nitrogen and phosphorus excretion and methane production. (For a more complete description of the background leading up to this project, see the 2012 issue of “The Tree Cropper”.

Chestnuts have a high natural tannin and polyphenol content

Chestnuts are one New Zealand tree species with a high natural tannin and polyphenol content. As a result, tannins extracted from chestnut bark, especially, have long been used for commercial leather tanning applications. However, there are also useful tannins and related compounds in the leaves, burrs, shell and pellicle....and these have not been utilized commercially before on large scale.

Chestnuts are widely grown throughout New Zealand and, in recent years,

considerable effort has gone into trying to expand the chestnut industry from just “fresh production and sale” to “value added processing”....with products such as gluten-free chestnut flour, bread, jam, puree, confectionary, stuffing, crumb, whole peeled nuts, beer, liqueur, juice, ice cream and the like now being produced, at least on a small scale [please contact the New Zealand Chestnut Council if you would like further information].

With almost all chestnut processing applications, the first step is usually to

levels of tannins and polyphenols, rather than just dumping this waste, can it instead be used as a component of a high-health animal feed supplement perhaps?

Can waste be used as a high-health supplement?

This was the question our R&D trials sought to answer. Drawing on the resources and expertise of the NZTCA, the New Zealand Chestnut Council, local alpaca farmers (alpacas being especially sensitive



Potential new chestnut consumers ponder eating chestnut shells or pasture grass.

remove the outer shell and pellicle (inner skin), leaving just the edible kernel. However, this is often easier said than done (if you have ever tried to peel a chestnut, you’ll know it’s not always easy!)....and, on a large scale, this rapidly creates a mountain of shell/pellicle “waste” - especially if you are using some of the New Zealand-developed and patented chestnut shelling/peeling machinery now available.

Since this is “waste” and contains high

to diet, feed- and worm-related problems), and Plant & Food CRI (Crop Research Institute), a joint R&D project was carried out in the Waikato from 2012-2014.

A brief summary of the results is as follows....

- Chestnut by-product/waste components (especially shell, pellicle, burrs, leaves and bark) were found to contain significant concentrations of a variety of

See *Animal Stockfood*, p. 3

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A MESSAGE FROM THE PRESIDENT

I hope your 2015 chestnut harvest was good this year. From reports I hear, some chestnut growers throughout the United States have had challenges with their orchards because of extreme weather conditions. Too warm, too cold, drought conditions, and too much rain, just to name a few challenges. Some chestnut growers are having the best production year in the history of their orchard. I have heard that many of the chestnut growers have sold out early this season and are receiving good prices for their chestnuts. The demand for chestnuts is definitely greater than the supply of good quality chestnuts we have today. Our chestnut industry is still young and we as an organization need to help to continue to grow good quality chestnut orchards for the future.

We need to grow the right cultivars in the right regions to increase the quantity and quality of chestnuts. How do we help to increase the propagation of the right chestnut trees to create great orchards? Who will be establishing new orchards to grow?

Our next annual meeting should focus on how we might improve our membership and grow CGA. We have already developed information to help grow the best cultivars in the different regions of the United States. We have a diverse membership and each region of the country seems to have certain cultivars that grow the best and produce good quality and quantity of chestnuts per tree. CGA as an organization needs to provide the right information on growing chestnuts trees as a chestnut crop for the right region. We need to get the message out that a chestnut orchard is both sustainable and a good investment. What are the barriers preventing the chestnut industry to grow? Do we have the right cultivars? Are there better cultivars to propagate? Why can't we grow the chestnut industry like the hazelnut industry? These are just a few questions I have to ask our organization. I suggest we set some goals this next year to move the chestnut industry along for decades to come.

Remember the purpose of CGA is to promote chestnuts, to disseminate information to growers of chestnuts, to improve communications between growers within the industry, to support research and breeding work and generally to further the interests and knowledge of Chestnut growers.

I hope you all had a wonderful holiday season with family and friends. I am sure you had many chestnuts with cheer.

Best Regards,

Roger R. Blackwell

Whewwww! It's that time of year when we can once more sit back, relax and think about something, anything, other than chestnuts.

For growers in the west it was not the best year. Everyone we've talked to had a crop of exceedingly small nuts, though crops were large. If you're one of those who dries your nuts you know you've got a market for "x" number of pounds and if you've now got five times "x" that's great but you probably don't have a market for that much. Meanwhile you've got the angry customer who can't take "Sold Out" of fresh nuts at face value, calls and complains that they "only want 5 lbs -- you must have that amount left just for me." What is it about "Sold Out" that they don't understand? The public has become spoiled and thinks they can get anything they want at any time of the year and reality just doesn't click with some of them.

I'm always amused at what some of these people come up with. A long-time customer emailed and complained that her dried chestnuts were rancid. She said she got these two years ago and thought they should last two years. I agreed. Then I checked the records and the last time we sent dried nuts to her was in 2006 -- 9 years ago!

Most customers are great to deal with and appreciate the quality that a grower can provide that they don't often find in the supermarket.

Carolyn

Chestnut Growers of America, Inc.

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President Roger Blackwell
(810) 225-9343
rblackwel@comcast.net

Vice President David English
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Committees

Editor Carolyn Young
(360) 887-3669

Carolyn@ChestnutsOnLine.com

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Full page, camera ready \$20.00
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Publication and Deadlines

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Editorial Opinion

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The Editor reserves the right to reject or edit all material submitted for publication.

***Animal Stockfood*, from p. 1**

potentially beneficial condensed and hydrolysable tannins, and related compounds.

- When included in the normal daily feed for alpacas, chestnut by-product/waste produced a significant benefit in terms of animal health (via reduced worm counts), even when included only at low rates. No chestnut-fed animals needed worming over the trial period.
- In contrast, some animals without chestnut in their diet did need worming (chemical treatment) and some died.
- Alpacas fed chestnuts also showed increased weight gain (though sometimes this was also associated with a reduction in fleece quality - a phenomenon also observed without chestnuts).

Beneficial effects could be obtained with the shell/pellicle fraction alone

- Beneficial effects could be obtained even with just the shell/pellicle fraction (ie. without the more nutritious kernel) and even at low rates.
- Alpacas could also be safely grazed in chestnut orchards (eating fallen leaves, nuts and chestnut shoots), without any need for deworming.



Chestnut trash that has been processed.

- Dried chestnut by-product/waste handled and stored very well (comparable with conventional dry feeds) for over 12 months.
- The results suggest that chestnut could usefully be incorporated in high-health commercial stockfoods, not just for alpacas, while also usefully helping dispose of chestnut industry waste and by-product.

- Overseas studies suggest that some of the same “active ingredients” present could also be very beneficial in terms of human health (especially with regard to diabetes and obesity treatment).

Alpaca farmers were very skeptical at first

The alpaca farmers involved (several of whom were VERY skeptical to begin with) were all very pleased....and are now wanting to know if they can plant chestnut trees on their own farms and where they can get more chestnut processing byproduct or waste.

Here are some unsolicited testimonials from satisfied customers....

“The programme commenced in July 2014. This was the winter season when grass production is at its’ lowest, and the alpacas were fed supplementary feed.

Adding chestnut to their diet at this time of year certainly helped to maintain condition, and once they became used to the taste, they enjoyed the chestnuts.

At the start of the trial we had to worm all of the alpacas, as 2 had already succumbed to a heavy worm burden.

See Animal Stockfood, p. 5



Chestnut trash remaining after nuts have been shelled.

Allen Creek Farm is For Sale

29112 NW 41st Ave.
Ridgefield, WA 98642

\$1,100,000

Located in the Pacific Northwest just 15 miles north of Portland, OR, Allen Creek Farm is a highly productive 10-acre chestnut orchard planted in 1999.

Land and Orchard Details

20.08 total acres

Agricultural zoning for lower property tax

10 acres of Colossal with Nevada pollenizers

Sub-surface drip irrigation with auto timers

Deer fencing

1440 sq. ft. pole barn containing:

-- Processing line for fresh chestnuts -- sorts in 4 sizes

-- Drying shed with natural gas Peerless nut dryer

2268 sq. ft. pole barn containing:

-- Refrigerated container

-- Packing area

-- Storage for harvesting equipment

Licensed commercial kitchen for value-added products

Historically authentic garden maze for agritourism

All orchard-related equipment available

Six figure gross for 2013 and 2014

No WA state income tax

Home and Property Details

Gated estate

3462 sq. ft home on one level

Street of Dreams design

3 bedroom, 2 full baths, 2 half baths

Office, Living room, Dining room, Family room

Large walk-in pantry

Over-size utility room

2 masonry fireplaces

Slate and carpet flooring

Sprinklers

Security system

Built-in vacuum

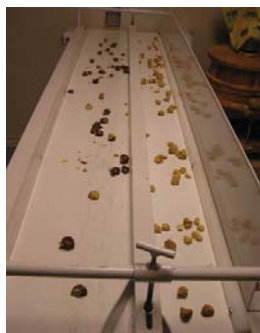
Intercom

Concrete tile roof

Natural gas FAU

Additional efficiency unit with kitchen, full bath, private entrance

Kennel with fully fenced dog exercise area.



For more information contact
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A Paid Advertisement

The Chestnut Grower

Some Growers Fail to Look at Net Profit

A review of 38 growers selling retail on line revealed some interesting facts for the 2015 harvest. These growers included CGA members and non-members alike. Membership did not appear to influence the prices asked.

New this year was the increase in the number of people selling chestnuts on ebay – a whopping 47%. Their ebay prices were as low as \$4.00/lb and as high as \$10.00 with the higher price including shipping. Let's look at a 3 lb order at \$4.00/lb. There's shipping on top of that for a typical cost of about \$7.00 depending on how far it's being shipped. Now you have a total of \$19.00. Ebay has typical fees of 10%. Your profit is now down to \$17.10. Then, if you're using PayPal that will cost you another 2.9% plus \$0.30 – about \$0.85. Your profit is now \$16.25 of which it cost you \$7.00 for shipping so your net is \$9.25 – a whopping \$3.08/lb. And for that enormous profit you have to harvest the nuts, you have to wash and sanitize them, you have to pay for refrigeration, you have to package them, you have to do an invoice, you have to maintain all your equipment, you have to pay employees, you have to maintain insurance, and a myriad of other things. And of course now that you're dealing with individual customers you have to have constant communication with them either via phone or email. It's time consuming. Have you ever looked at just how much time is spent selling one pound of nuts? Is there really a profit here?

The largest size nuts were offered for \$5.25/lb to \$8.00/lb for

US-grown nuts not including shipping. And the median price -- \$6.00/lb for the smallest nuts and \$6.00/lb for the largest. Strange as that may seem that's what was shown.

Ebay even has ads for foreign nuts. A grower in Greece advertised his nuts for \$9.45/lb plus shipping, and a grower in Portugal offered nuts for \$10.00/lb plus shipping.

Four growers, not selling on ebay, all CGA members, have their lowest price nuts priced at \$1.25/lb to \$3.50/lb. If they have to go through the things above, is there any profit at all or are they paying all the chestnut lovers of the country to take their nuts off their hands?

In last year's January newsletter I harped on the responsibility growers have to give adequate information to their customers. Obviously few listened. Few growers indicated the size of their nuts. Those who did indicated a size range for the sizes they sold or defined how many nuts there were in a given size. That information is helpful and gives the buyer a clue as to what they're buying. With some growers the size descriptions themselves are almost laughable. Not unusual is the grower who sells large, extra large and jumbo size nuts with no clue as to what those terms mean. Half of the growers just sell nuts with no indication of size at all. The strangest ad was offering 75 chestnuts for \$15.75 and didn't indicate the size of the nuts or whether the price included ship-

See *Profit*, p. 9

***Animal Stockfood*, from p. 3**

Since the start of the trial, no further deaths have occurred due to worm infestation.

No alpacas lost condition on the programme and we were pleased with the overall results for such a large number of animals". "Animals in poor condition at the start of the trial lost no further condition and improved through the trial.

We consider the chestnuts have been an excellent additive to feeding during the winter months. It has helped keep the alpacas in condition and ready for birthing season and breeding programme.

We consider it would also be very useful during drought conditions".

Alpaca breeders claim their animals quickly developed a taste for chestnuts

"Most animals very quickly seemed to develop a taste for chestnut (especially the females) and shell, pellicle and kernel fractions all seemed equally palatable. When mixed in with standard commercial stockfood, some animals carefully picked out all the chestnut pieces (even if just shell/pellicle) before eating the remainder".....

NB: Only a small amount of chestnut byproduct/waste had to be mixed in with their regular feed in order to have a significant effect....in some cases only 5-10%.

Once they developed a taste for it, animals would come running for it and sometimes refuse their feed altogether if the chestnut had run out temporarily and there was no more left! The only time one alpaca breeder had ever been bitten by an alpaca was when he tried feeding the chestnut "waste" out by hand to impatient and greedy animals ready to fight over it.

Of course, there are other "high-tannin/polyphenol" horticultural

byproducts and tree crops around, and many other sources of horticultural "waste", so its not just chestnuts that could prove useful in this way. Perhaps a "blend" of different tree crop wastes or byproducts could be put together that would have an even better effect? (Let me know if you have any suggestions...wattle? acacia? karaka? willow? persimmons even?).

And I would hope that the beneficial effects would not just be confined to alpacas. If any of you treecroppers are interested in experimenting with pigs, cows, poultry, horses, goats (also prone to worm problems) or "others"....please let me know.

Even better, there may even be some useful human health benefits, longer-term. I'm not recommending you go out into the paddock and chew on chestnut leaves, spikey burrs or chestnut shell...and I'm not implying you may have a worm problem....but some of the same active ingredients that we found in some chestnut "components" have, at least in overseas studies, been shown to have a range of beneficial effects on human health.

Some of the naturally occurring compounds found in chestnut pellicle, especially, have been shown to have beneficial effects in the treatment of diabetes and obesity, for example.

Consequently, we would now very much like to expand the "human health" side of our research and focus more on the beneficial effects of, for example, "wholemeal" gluten-free chestnut crumb and flour (shell-free chestnut crumb and flour with the pellicle "left in") in the diet....especially for coeliacs, diabetics etc.

So....if you would like to be an experimental guinea pig and try out some extra high-health chestnut flour, bread, porridge and the like for us....please let me know.

Regards.

David Klinac, For the NZ Chestnut Council

dklinac@xtra.co.nz

ph 07 8569321





WANTED

Job 1: Editor of The Chestnut Grower

Requirements:

Publish four newsletters a year to be mailed on or about Jan. 1, April 1, July 1, and Oct. 1

Responsible for having newsletters printed for those members who want publication in print

Responsible for mailing printed copies

Responsible for sending PDF version to those requesting online version using only the most recent version of the CGA database provided by the Secretary/Treasurer

Knowledge of and experience in using Adobe InDesign and Photoshop software

Ability to seek out information of use and interest to chestnut growers

Responsible for getting copyright permission for article reprints

Responsible for providing the Webmaster with a PDF version of each issue

Submit itemized bills for expenses to Treasurer for reimbursement

Job 2: CGA Webmaster

Requirements

Ability to use Dreamweaver for site maintenance

Ability to use FTP to upload files

Knowledge of and experience in using HTML and Photoshop

Responsible for uploading new members to Authpro database for members only page

Responsible for deleting unpaid members from Authpro database

Responsible for maintaining all website pages

Interested and have questions? Email Carolyn at Carolyn@ChestnutsOnLine.com

No questions and want to volunteer? Email one of your board members:

Roger Blackwell

David English

Ray Young

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Tom Wahl

Bob Wallace

Lee Williams

rblackwel@comcast.net

chestnutsrus@yahoo.com

ray@chestnutsonline.com

sbole@aol.com

tom@redfernfarm.com

chestnuthilltreefarm@gmail.com

techestnuts@scml.us

There is No Substitute for Good Weed Control

Experiments Prove Benefits of No Weeds Within Three Feet

by Paul Vossen
U.C. Cooperative Extension
pmvossen@ucdavis.edu

Reprinted from the Fall 2000 Western Chestnut Grower

As I travel around and visit new chestnut orchards I see that many of them do not have adequate weed control to a point where the weeds have hindered the growth of the young trees. We have piles of good data that shows how weed competition reduces the growth of fruit trees especially in the first few years of growth up until the trees have reached maturity (almost touching). Remember in the first few years of the tree's growth you are just growing branches and leaves. The faster the trees fill their allotted space the quicker the full return on investment occurs. Tree growth rate depends on climate, irrigation, fertility, and weed control.

The most growth occurred with the mulched trees

In one study comparing different weed control and different cover crops on tree growth the trees with the best weed control grew more, a lot more. The trial compared mulched trees (wood chips), herbicide treated area below trees (bare ground), cultivation below trees, annual clover growing right up to the base of the trees, and annual grasses growing up to the base of the trees. The most growth occurred with the mulched trees followed by the herbicide treated trees and thirdly by the cultivated trees, but they had similar growth rates. The trees with clover "weed - cover crop" grew about one-half the rate of the mulched trees and the trees with the grass "weed-cover crop" grew about one-fourth the rate of the trees with good weed control.

Tree growth in this experiment was measured in both shoot length and trunk diameters and the moisture content of the soils was maintained evenly. Translating the growth rates of this experiment over to a poorly weeded chestnut orchard means that it may take 16 to 32 years to get full sized trees instead of the normal 8 years. In other words weed control is very important.

Weeds compete with trees in several ways - primarily through competition for moisture, but also for nutrients, and for

physical space in the soil. One of the best ways to stunt young chestnut trees is to allow a grass cover crop to dry the soil out around the trees in the spring of the year.

No weed competition be allowed within three feet of the tree trunks - ever!

Many orchard managers have good intentions of removing the winter weeds in the spring but get to it too late. New growth in chestnut trees can begin as early as April, but root growth probably starts sooner. I therefore recommend that no weed competition be allowed within three feet of the tree trunks - ever.

There are really 5 ways to accomplish this:

1. **Herbicides:** Preemergent herbicides can be applied right after planting right over the top of the trees. Registered pre-emergent herbicides will not harm chestnut trees, even young trees. They must be applied to bare ground (recently tilled) and incorporated with a light sprinkler irrigation or rain. They will control the weeds for about 6-8 months. Other herbicides can also be used on older trees to maintain the area weed free including several contact materials, which can be mixed with the preemergents to provide residual weed control. The only problem is that this is not classified as an organic control.

2. **Organic Mulches:** This is the best option for small plantings and ornamental trees. I recommend using at least 3 to 4 inches of fresh wood chips. In many cases chips can be purchased locally from counties and municipalities trying to reduce landfill inputs. Organic mulch is really the ultimate in weed control because as it breaks down slowly it creates a loose tilth to the soil and releases nutrients. Water absorption and retention is also aided. It may be difficult to separate fallen nuts from wood chips during harvest and another big problem is cost, not only for the material but also for hauling and application. One

acre of trees with rows planted 20 feet apart would use 150 to 160 cubic yards of material costing about \$3,000 for the material and delivery alone (based on 4" deep and a 6 ft. wide strip).

3. **Fabric Mulches:** One product that I have tested, called Lumite 994G6, is a black weed control fabric that allows water to pass through but no weeds grow through it. You probably have seen it at container nurseries where they use it in their growing grounds to control weeds. In my trials it has lasted ten years, the manufacturer guarantees it for five. The cost per acre for an orchard with a row spacing of 20 ft. and that would apply a 3' wide strip down each side of the trees would cost \$533 per acre plus the wire staples to pin it down and labor to apply it. This method effectively controls the weed headache for ten years at a minimal cost. Some people, however, don't like how it looks.

4. **Cultivation:** There are several cultivation devices that move in and out of tree rows to remove the weeds right around the trees. These include triggered rototillers and weed blades, the French plow, and various hydraulic rotating heads attached to tractors. They vary in cost from about \$2,000 to \$10,000. They must be manipulated by a skilled tractor driver and be used in orchards with early spring access. Two to three cultivations are needed every year to keep the area under the trees completely weed free during the growing season.

5. **Flamers:** Propane powered weed burning torches have been used in orchards for weed control. Tractor mounted torches along with a propane tank move through the orchard to "cook" the young weeds in the tree row. The heat can injure young trees and only very small weeds are easily controlled. Many grasses with their low growing point are much harder to kill with the flamer system. Because of the cost of propane this weed control method is usually reserved for very high value crops.

One thing for sure is that you will always have weeds, so be prepared to deal with them right from the start.

□□□



I couldn't resist publishing these historical chestnut recipes from the current issue of the Journal of the American Chestnut Foundation.

CHESTNUT BREAD

[Mrs. N. K. M. Lee, Eliza Leslie, *The Cook's Own Book*, p. 25, **1840**]

Roast a hundred fine chestnuts, being careful not to burn them; peel them well, and pound them with butter and double cream; pass them through a sieve; add two eggs, and then strain them again. Weigh your paste, and for a pound, allow half a pound of powder, a little vanilla in powder, and two ounces of flour; mix these together and form of the preparation as many chestnuts as it will make; lay them on a sheet of wafer paper, butter, and dorez them several times, and then bake them in a hot oven.

CHESTNUT SKILLET BREAD

[Mrs. H. D. Cullum, Letter-recipe October 16, **1875**]

Measure out 2 1/2 cups of chestnut meal, and mix in 1 1/2 tablespoons of saleratus [baking powder], and salt to taste. Beat an egg, mix in 1 1/4 cups of warm milk, and melt 1/2 pound of butter -- not too hot, add the melted butter to the milk. Pour these into the meal and stir until the batter is free of lumps. Pour into a smoking hot skillet greased with lard. Cook in a hot oven 40 minutes or until browned.

CHESTNUT PUDDING

[Charles Elme Francatelli, *The Modern Book*, p. 487, **1877**]

Bake or boil fifty fine chestnuts, rub their pulp through a sieve, and place this in a stewpan with a pint of cream, four ounces of butter, six ounces of sugar, a pounded stick of vanilla, and a very little salt; stir these ingredients over a stove-fire until the preparation thickens, and then quicken the motion of the spoon, so as to prevent the paste from adhering to the bottom of the stewpan. As soon as it leaves the sides of the stewpan, remove it from the fire, add eight yolks, and the whites of six eggs whipped firm; pour the pudding mixture into a plain mould previously spread with butter, and then steam it for about an

hour and a half. When the pudding is done, turn it carefully out of the mould on its dish, pour some warm diluted apricot-jam over it, and serve.

CHESTNUT CAKE

[Alameda Lambert, *Guide to Nut Cookery*, p. 373, **1899**]

Take 2 cups of chestnut flour, 5 eggs, 1 scant cup of sugar, 2 tablespoons of water, and a pinch of salt. To make the chestnut flour, first dry the nuts before shelling, or toast them slightly with the shells on. By doing this the skins will be loosened and easily rubbed off without blanching; then grind them in a family grist-mill or a coffee mill to a fine flour, or they may be ground through the nut-butter mill. When all material and cake tin is ready and the oven hot, separate the eggs, and beat the yolks to a thick cream with the sugar. Then beat the whites until they are stiff and crumbly, adding the water and salt after it begins to get foamy, but before it is stiff. Then pour in the yolk mixture, and fold it carefully in, and lastly fold in the 2 cups of chestnut flour. Bake like other cakes.

CHESTNUT CARAMELS

[Mary J. Lincoln, *Philadelphia Inquirer*, p. 11, **1899**]

Put one-half cup of granulated sugar in a smooth omelet pan, place the pan over the fire, or over the chafing dish lamp, and stir until the sugar melts and becomes quite brown, then remove from the fire. Put the boiled chestnuts in another pan, with a little butter, and toss them about until the butter is absorbed, then dip them in the hot caramel and lay them on buttered paper. When cool, serve with ginger wafers and cheese.

CHESTNUT STUFFING

["Household Recipes," *Biloxi Herald*, p. 3, **1889**]

Shell and blanch thirty-four chestnuts, and boil until tender. Drain off the water and pound ten to a paste, add one cracker rolled fine, quarter pound chopped raw meat, one teaspoonful chopped parsley, one teaspoonful salt, one teaspoonful of pepper, one teaspoonful thyme and two tablespoonfuls butter and twenty-four whole chestnuts. Mix well.

DEVEILED CHESTNUTS

[Mary J. Lincoln, *Philadelphia Inquirer*, p. 11, **1899**]

Cut a slit in the shell of each chestnut, put them in a popcorn popper over an open fire and shake them frequently. When they burst open they are done. Remove the shells and skin and then toss them about in hot water in the chafing dish. Sprinkle with salt and paprika, and add sufficient Worcestershire sauce to moisten them. Stir them till all have received a portion of the pungent dressing, and serve them hot.

PRESERVED CHESTNUTS

["What to do with Nuts," *Charleston Evening Post*, p. 3, **1899**]

Select the largest of the chestnuts and boil them for five minutes. Drain them and remove the shell and skin. Make a rich syrup of one pound of sugar and one pint of water. Boil it until it spins a thread, then put into it one pound of the chestnuts. Boil them until tender and put into air-tight jars as you would preserved fruit. When you wish to serve them as a dessert put a teaspoonful of the chestnuts and the syrup into a broad, shallow glass, and add a tablespoonful of vanilla ice cream and a tablespoonful of whipped cream. Serve at once. This is a delicious dessert.

ping. Can you imagine spending the time required to count out 75 individual nuts?

So what do we need to do to adequately serve our customers? First we need to communicate clearly and completely. We need to describe what our sizes mean either by giving them a size range for a given size description or by telling them how many nuts in a pound for a size description. Even better – we can do both. Don't our customers deserve this from us? Remember, a big part of what you're selling is service.

Next we need to ask ourselves why we're charging the same shipping charge for all customers. If I can send 5 lbs in a USPS Regional Rate A box 200 miles from my orchard for \$5.32, but it costs \$9.97 to send the same box across the country why should my local customers subsidize those who are not local? Do they perceive that as fair?

Am I being totally honest about my nuts? A postal inspector in California phoned your CGA Secretary recently to inquire about a shipment of chestnuts that had come from New Jersey. The only identification on the box said "Chestnut Growers of America". There was no name other than that and no return address. We have no CGA members in New Jersey but a Google search reveals that Portuguese nuts are being imported to New Jersey. Hmmm! A phytosanitary certificate is required to ship nuts to California and there was none.

Off my soapbox for now, I encourage you to analyze your costs of production and price your nuts accordingly, and I encourage you to communicate fully with your customers. You've spent time building your customer base and you need to do everything possible to maintain it. Remember, you're not just farming; you're running a business and you need to treat it as such.



CHESTNUT SOUP

["Chestnuts for Thanksgiving," Seattle Daily Times, p. 18, 1901]
Remove the outside shell from a pin of chestnuts and let them stand in boiling water until the inner skin will peel off. Then cover them with water, to which a pinch of salt has been added, and boil until quite tender, with a leak and a sprig of parsley, and let all come to a boiling point.

CHESTNUT CUSTARD

["The Luxurious Chestnut," Bay City Times, p. 10, 1903]
boil a quart of large chestnuts, peel, skin and mash to a smooth pulp; add the grated yellow rind of a lemon, a tablespoonful of lemon juice, a grating of nutmeg, and a custard made as follows: Beat three eggs with a third of a cup of granulated sugar, a pinch of salt and a grating of nutmeg. Pour a pint of scalded milk over the mixture, blend and then return to the boiler and stir and cook until it is a thick, smooth cream. Take from the fire and stir in the whites of the eggs beaten to a stiff froth. Turn the custard into stemmed glasses, set on ice and when cold and ready to serve, heap whipped cream on top.

Many of these classical recipes do not reflect a 21st century style of cooking or baking. For a modern 'best practices' recipe on Chestnut Caramels, use the following:

David English Heads Up 2016 Nominating Committee

David represents the board member of the nominating and will be its chair for 2016. If you might be interested in running for a position you can contact him at 850-566-7092 or by email at chestnutsrus@yahoo.com. The nominating committee seeks to provide officers and a board that represent broad geographic distribution, sustainable and organic production methods, and grower and academic representation.

CGA Annual Meeting

June 10 - 12, 2016

U of MO

Columbia, MO

Exciting topics are being planned
that will be of interest to all growers.

Mark the dates on your calendar.

Registration details will be in the
April 1 issue of the newsletter.

*Your 2016 dues are now due. Please return
the membership renewal form in this issue.*

1. Get a heavy skillet or sauce pan -- one that will distribute heat evenly. Coat the bottom evenly with the half cup of granulated sugar.
2. Cooking at moderate setting, use a wooden spoon or heatproof spatula and push the liquefying sugar to the center of the pan.
3. If lumps form, turn the heat down, continue stirring; they should melt and brown.
4. It is important to not let sugar scorch by being kept stationary on one heated section of the pan. Keep it moving.
5. When you reach an even rich amber color, turn heat to low. You can swirl the buttered whole boiled chestnuts in the caramel and let them cool on a silpad or wax paper.
6. Modern taste suggests a robust salting of the buttered nuts will make the caramel taste even more pointed.
7. Let the caramel coated nuts cool completely before serving.





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