

Welcome

by Ben Bole, President, WCGA

Welcome to the Western Chestnut Growers Association Newsletter.

Carolyn Young, who with her husband Ray have recently planted a Colossal orchard, has agreed to put this together and I appreciate her willingness to make it a reality. The purpose of the Newsletter is to establish a means of exchanging topical information among the chestnut growers so that this expanding industry can become better established and prosper as quickly as possible.

Over time a list of people either growing or interested in growing chestnuts has been assembled. This newsletter is being sent to current members and nonmembers hoping that those of you who have not joined will sign up. If some names have been omitted or if you know of others who may have an interest in joining, please let Carolyn know so that they can be included in the mailings. The more people we have sharing problems and solutions, the better off all of us will be. I hope all of the nonmembers will seriously consider joining the association.

The potential for chestnuts is strong. The markets are there and the price today is

good when compared to other fruit and nut products in spite of the fact that startup cost for a new orchard are higher than some originally anticipated. I am very positive about the potential for both fresh chestnuts today and added value products in the future. I feel that our biggest problem today is not having enough production to support a strong marketing effort. If we can work together, share ideas and plant more trees, we can build a viable industry that will expand and prosper. Please feel free to call me if you have any questions or if you just want to talk about chestnuts. (503-625-1248). If you have comments about the newsletter or if you have topics that you feel should be included in coming issues, please forward them to Carolyn Young. We hope to have the next newsletter ready to mail in early October. By that time we should have a good idea of what this year's crop should be. Some people have also expressed an interest in having an informal meeting, perhaps at someone's orchard, in early September. Time and location to be announced. Any suggestions on this will be welcomed.

I look forward to hearing from you and wish you the best for the 1999 crop.

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NNGA's 90th Annual Meeting Promises to be User Friendly

Mark your calendar for the Aug. 8-11 annual meeting of the Northern Nut Growers Association to be held at the University of Nebraska-Lincoln East Campus, in Lincoln, Nebraska. Registration for the affair is only \$50.00 if paid prior to July 20, 1999 -- \$60.00 thereafter.

Two speakers, in particular, should be of interest to chestnut growers. Sandra Anagnostakis will be doing two presentations, one on The Food Value of Chestnuts, and the other on Peroxidase Isozymes and Chestnut Grafting. In addition, Dennis Fulbright, of MSU, will be speaking on Evaluation of the Colossal Chestnut Cultivar.

There will be tours to the Matzke's Tree Farm, the Lied Center Hazel Nut Orchard and the Arbor Lodge.

There are special events planned for spouses including a visit to the International Quilt Study Center, the University Botanical Garden, and the SAC Air Museum.

For further information or to obtain a registration form, contact Sandy Lineberry, 316 Orcutt Ave. W., Lincoln, NE 68504-3528.

Gleanings from the Second International Chestnut Symposium

The Symposium was held Oct. 19-23, 1998 in France, and featured speakers from around the world. WCGA members, Christopher Foster and Anthony Boutard, were fortunate to attend. Perhaps at a future meeting they can be convinced to share their experiences.

Following are highlights of some of the presentations that might be of interest to you. If you would like more information, contact the Editor.

T. Zhang, **China**, reported that they were doing close planting using improved variety se-

lection, young shoot thinning, head-germ pruning, male flower thinning, pruning, strengthening the management of soil, fertilizer and water and were getting nuts the second year and high yield in the fourth year.

Klinac and Knowles, **New Zealand**, reported that pollination has been shown to have a significant effect on nut quality, as well as yield and insects have proven important vectors. They are successfully using hydrogen cyanamide to modify
See International Symposium, p. 8

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EDITOR'S NOTES

After joining WCGA in January I naively kept waiting for the association's newsletter, but it was not to come. So when I called to inquire about it I was surprised to find at the end of the conversation that I had agreed to take on the job of Editor. Hmmm.

I am a neophyte when it comes to agriculture and our orchard is only a matter of months old, but I served as Editor of a small national publication for a nonprofit group so I'm pretty resourceful at coming up with articles of interest and I've developed a skill for nagging folks to write.

My goal is to provide articles of interest and educational value to both longtime growers and newcomers. This is your association and it should serve your needs. If you have ideas for articles, or better yet, a penchant for writing them, please contact me. Letters to the Editor are welcome.

Read on, and enjoy.



Minutes of the Annual Meeting of the Western Chestnut Growers Association

Date: January 23, 1999

Location: Nut Growers Society Office,
21595 Dolores Way, Aurora, OR

The meeting was called to order by Ben Bole at 1:00 P.M.. Ben thanked the Nut Growers for the use of their facility.

Carol Porter read the minutes of the previous meeting and the Treasurer's report. Both were accepted as read.

Ben then described the discussions which had taken place between the Nut Growers and our Organization regarding possible cooperation. The range of options include merger, an association, to just loose cooperation. A vote was taken, and passed, to continue these discussions to develop a specific plan.

Technical Discussions

Crop and Market Report by Randy Coleman: Randy reviewed the 1998 harvest season based on his personal experience and talking with local growers. The total harvest continues to increase although not as fast as might be hoped. Local flooding hurt some growers. On the other hand the market definitely is expanding. The demand for good quality nuts exceeded supply.

Update on Cultural Practices and New Varieties by Lorin Amsberry: Lorin reviewed his contacts with growers in other regions and a cooperative effort between UC Davis and Fowler. At least two new promising pollinators for Colossal were discussed. These new cultivars will not be commercially available for a year or two.

Graft Compatibility Experience by John Schroeder: Growers in the Pacific Northwest that have experienced shot hole borer damage unanimously report that the beetles have a very strong preference for grafted trees. This observation

combined with experience in the California foothills with Colossals and elms in the mid-West suggest that there may be a lingering graft incompatibility in Colossals.

Lorin commented that graft incompatibility is brought up from time to time but he is unaware of any substantiated evidence.

Transplanting Established Chestnuts by Steve Jones: Steve described their experience transplanting approximately 400 four year old trees to increase the intertree spacing. They hired a professional tree mover. A jawed scoop was used to dig, lift and move the tree and ball. The move went very well. All of the trees survived and put on new growth during the season.

Harvesting and Processing Equipment Report by Ben Bole: Ben described a trailer mounted vacuum nut harvester and passed around photographs. The machine has two hoses so two rows of trees can be harvested as the machine makes a single pass down an alley.

Election of Officers: There were no volunteers for officers for 1999. A motion was made to re-elect the current officers by acclamation. Carol Porter objected on the grounds of medical problems in their family. John Schroeder was nominated to replace Carol as Secretary-Treasurer. The motion was modified, seconded and passed. The officers are: Ben Bole, president; Jack Allen, vice president; John Schroeder, secretary-treasurer; Ken Beachy, Randy Coleman, Steve Jones and Paul'la Allen, board members.

The meeting was adjourned at 4:45 P.M.

Submitted by John Schroeder,
Secretary-Treasurer

WESTERN CHESTNUT GROWERS ASSN., INC.

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NOTICE

The Western Chestnut is published quarterly by the Western Chestnut Growers Assn., Inc. at PO Box 841, Ridgefield, WA 98642.

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Regular membership is \$20 per year per person. Members receive The Western Chestnut quarterly. For foreign delivery contact Editor for pricing. Back issues may be obtained by members. Membership applications may be obtained from the Secretary-Treasurer.

POSTMASTER

Send Address changes to WCGA, c/o PO Box 841, Ridgefield, WA 98642.

ADVERTISING RATES

Full page, camera ready (w/1 photo) ... \$10.00
Half page, camera ready (w/1 photo) 7.00
Quarter page 5.00
Business card (4 issues) 10.00

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 Western Chestnut Growers Assn., Inc.

All ads and other copy preferred in PC format on disk or e-mail to rayoung1@ix.netcom.com. Ads must adhere to published ad sizes for space purchased. Call for specifics. Otherwise for best results, submit original photographs. 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
Winter issue	deadline 12/10	mailed 1/1
Spring issue	deadline 3/10	mailed 4/1
Summer issue	deadline 6/10	mailed 7/1

EDITORIAL OPINION

The views, articles and advertising appearing in The Western Chestnut Quarterly do not necessarily reflect the attitude nor policy of the Western Chestnut Growers Assn., its members, officers, Board of Directors or Editor. The Western Chestnut Growers Assn. Inc., and this publication are not responsible for errors and/or misrepresentations in advertising. The Editor reserves the right to reject or edit all material submitted for publication.

Dealing With Shot Hole Borers in Western Chestnut Orchards

Anything with a name like *Scolytus rugulosus* couldn't be good for an orchard, and so it is with the shot hole borer. Invading orchards in the northwest, it can cause damage to chestnut trees, especially young trees. The UC Integrated Pest Management program provides the following information about this pest.

DESCRIPTION OF THE PEST

Shothole borers are tiny brown or black beetles. Their white legless grubs mine the sapwood of the tree and often reduce it to powder. Adult females bore tiny holes in the bark and lay eggs in the cambium layer of the tree. When the eggs hatch, young larvae feed and excavate secondary galleries at right angles to the egg gallery. The outline of the gallery system resembles a centipede. There are from one to three generations each year.

DAMAGE

Normally a number of shothole borer adults invade a tree at the same time. Healthy [apricot] trees exude resin, which usually kills the insects. If the tree has injured or weakened areas, this resin

buildup does not develop and the invasion is successful. Ultimately, larvae may girdle the tree, or tree part, and cause its death.

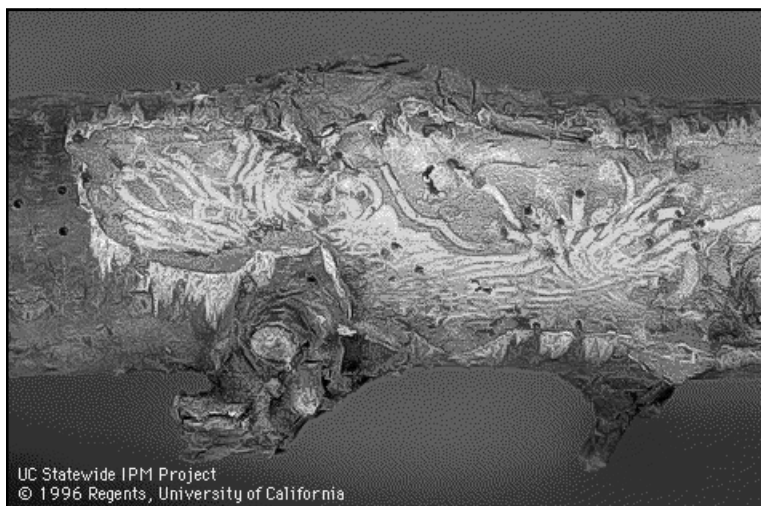
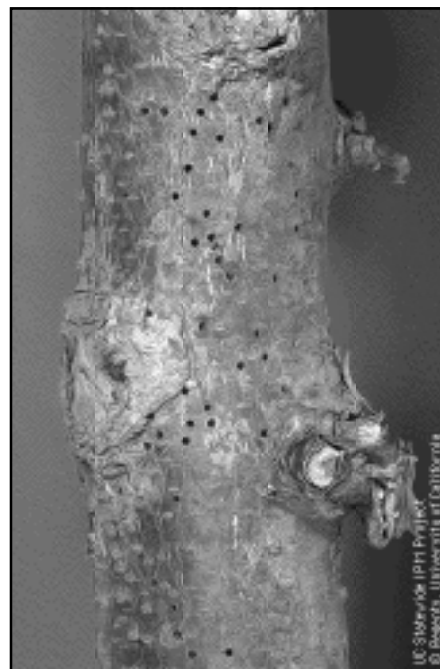


Actual size about 1/4"

(Above) The shot hole borer is a black or brown beetle.

(Right) Holes made by the borer in the branch of an apricot tree are clearly visible.

(Below) The gallery system created by the borer resembles a centipede



UC Statewide IPM Project
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CULTURAL CONTROL

Shothole borers invade trees that have been previously damaged. The nature of this damage dictates the course of preventive action. To prevent attack by this beetle, maintain trees in a sound and vigorous condition, with sufficient fertilizers, water, and sunburn prevention to keep uninfested tree limbs from becoming damaged. Pruning can be helpful in eliminating areas in older trees infested with shothole borer. Severely infested trees should be removed. Burn or remove all infested wood from the orchard before the growing season starts. Do not leave pruned limbs or stumps (healthy or infested) near orchards (for example, in woodpiles) as beetles can emerge from these materials before they dry out and migrate into orchards. Spraying for this insect is not recommended.

The preceding information is reprinted

with permission from UC IPM Pest Management Guidelines: Apricots R. A. Van Steenwyk, Insect Biology, UC Berkeley, W. W. Coates, UC Cooperative Extension San Benito Co., L. Hendricks, UC Cooperative Extension Merced Co. UC DANR Publication 3339. Check out their website at <http://www.ipm.ucdavis.edu/PMG/r5301311.html>.



Advertise in The Western Chestnut

Full Page	\$10.00
Half Page	\$7.00
Quarter Page	\$5.00
Business Card	\$10.00/4 issues

See p. 2 for further details

Do-It-Yourself Shot Hole Borer Trap

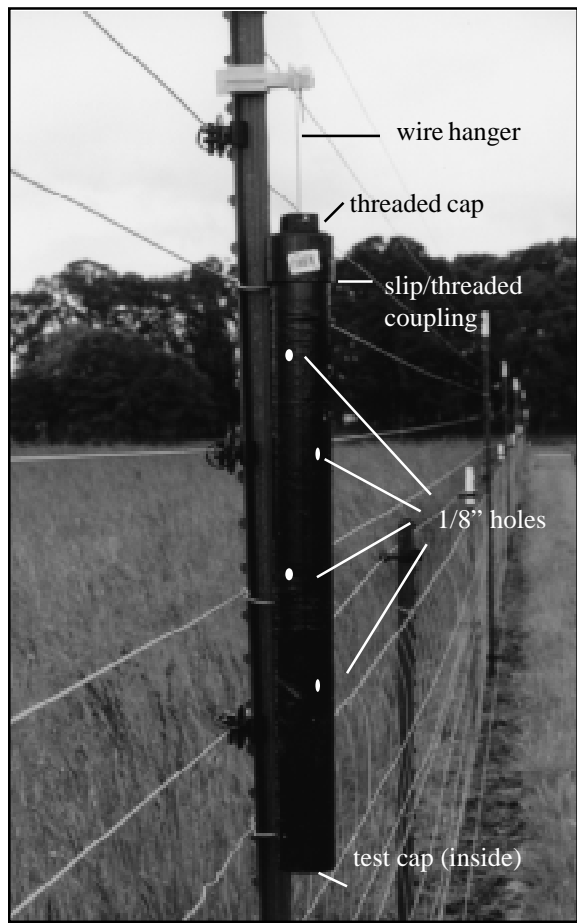
adapted from a design by Ben Bole

Materials List

- | | |
|--|---------------------------------|
| 1 24" length of ABS pipe 2.5" dia | 1 ABS cap, threaded |
| 1 ABS test cap, slip fit | 1 12" length of 12 1/2 ga. wire |
| 1 T post | 1 T post insulator |
| 1/2 C vodka or grain alcohol
cut to 50% alcohol | 1/4 C +/- Tanglefoot |
| Surgical-type gloves | Small qty ABS glue |

Directions

- Cut a 24" length of ABS pipe from a standard 8' length.
- Glue the test cap into one end of the pipe and glue the slip/threaded coupling to the other end.
- Drill a 1/8" hole down through the center part of the threaded cap for a wire hanger.
- Bend about 1/2" of the wire over on itself and put it up through the hole from the bottom. Now bend the top over to hang on the insulator.
- Drill 2 holes on each of 4 sides of the pipe. Alternate their heights as shown in the photo. Make sure you don't go too close to the bottom or you'll lose your vodka.
- Cut the vodka to a 50% alcohol solution.
- At the location where the trap is to be hung (and not before or you'll hate yourself) fill the plugged pipe with the vodka solution -- about 1/2 cup. Use a funnel if necessary. Make sure to hold it upright or your vodka will leak out.
- Attach the threaded cap with its wire hanger.
- Install an insulator on the T post.
- Using surgical-type gloves smear Tanglefoot on the pipe, covering it completely. Keep it off the cap or you won't be able to touch it later to refill it.
- Hang the trap on the insulator.



Classified Section

Each member is entitled to one free classified ad per calendar year. Free ads are limited to 6 lines, or approximately 50 words. \$2.50 for 6 additional lines any issue. Send checks made payable to Western Chestnut Growers Assn. and copy to the Editor at P.O. Box 841, Ridgefield, WA 98642. See p. 2 for deadlines.

Got an idea for a logo for the association? Send your sketch or graphic file printout to John Schroeder by Aug. 1, for consideration. If yours is used your 2000 dues will be free.

No. Calif. Orchard Tour Planned for August 12

Lorin Amsberry reports that Dr. Anna Maria Vettrano from the University of Tuscia in Italy will be coming to the U.S. this summer. Dr. Vettrano specializes in the study of *Phytophthora* sp. root rot diseases of chestnuts.

She will be doing her work on *Phytophthora* at Michigan State University but may come to California if we can generate enough interest from growers to have a one day tour of orchards in Northern California.

While she is in the U.S. she will be trying to confirm that the root rot problems here in the U.S. are caused by the same fungi as in other parts of the world. Root rots are the biggest problem here in California with chestnuts and Fowler Nurseries is helping to sponsor her studies at Michigan State.

Growers, please let Lorin know if you would like to tour with Dr. Vettrano

so he can make arrangements to bring her to California. The tentative date for this will be Thursday, Aug. 12. Call Fowler Nurseries at 1-800-675-6075 or e-mail at fowler@foothill.net.

The tour will begin early in the day, possibly as early as 7:00 A.M., at Fowlers Nursery in Newcastle. If you will be staying in the area the nearest motels/hotels (5-7 miles distance) include the following: Holiday Inn, Auburn, 530-888-8787
Sleep Inn, Auburn, 530-888-7829
Super 8, Auburn, 530-888-8808
Travelodge, Auburn, 530-885-7025
Days Inn, Rocklin, 916-632-0101
Hilton Garden Inn, Roseville, 916-773-7171
Larkspur Landing, Roseville, 916-773-1717
Oxford Suites, Roseville, 916-784-2222
Rocklin Park Hotel, Rocklin 916-630-9400
First Choice Inn, Rocklin, 916-624-2500



The Cook's Corner

Welcome. Cook's Corner is a space to share our favorite chestnut recipes and cooking / storing tips or to ask questions concerning the use of chestnuts. We thought we'd start it off with one of our favorite summer recipes. It's your opportunity to use some of those chestnuts you froze last fall or to try out some of the commercial products on the market. Please share your thoughts and your recipes with all of us. Hope to hear from you by telephone, fax, e-mail or regular mail.

Sandy Bole

Chestnut Ice Cream

- 3/4 lb fresh chestnuts *or*
- 1 1/2 C vacuum packed chestnuts
- 2 Tbsp corn syrup or syrup drained from marrons glace (candied chestnuts)
- 3C half and half
- 6 egg yolks

- 1 tbsp vanilla
- 1/2 C sugar
- 1/4 tsp salt
- 1/4 tsp cinnamon
- Toppings (optional)**
- Marrons glace in syrup or shaved chocolate

Mark an "X" on flat side of fresh chestnuts and simmer in water to cover for 5 min. Drain and peel off outer and inner layers. Return to saucepan and simmer until very tender, about 15 min. Drain and puree fresh chestnuts or canned chestnuts in blender with syrup.

Heat half and half in double boiler until warm. Beat egg yolks, vanilla, sugar, salt and cinnamon in separate bowl. Gradually beat in the heated half and half.

Return mixture to double boiler. Cook over medium-low heat, stirring slowly and continuously until custard thickens and coats the back of a metal spoon, about 6 min.

Combine the chestnut mixture with custard, transfer to a bowl and refrigerate until cold, about 1 hr. Transfer chilled mixture to an ice cream maker and freeze, according to the manufacturer's instructions. Serve immediately or transfer to a chilled container. Cover and freeze 2 hrs. or longer.

Serves 4 - 6.

U.C. Pollenizer Gets New Identity

Lorin Amsberry reports that the new chestnut variety developed by U.C. Davis, and formerly known as "Pollenizer #1" is now known as "Okei." It is a seedling selection of "Silverleaf" made by Dr. Kay Ryugo at U.C.Davis. Characteristics include:

- very large nuts, 16-18/lb. triangular in shape
- fewer pellicle invaginations than Nevada variety
- nut shell light in color with pronounced stripes
- pollen produced at the correct time to pollinize Colossal variety
- variety should be considered for test only, not proven in commercial orchard sites

Tentative Northwest orchard tour planned for Early September.

Comments, questions, ideas?
Contact Ben Bole
503-625-1248 or
Email him at BBole@aol.com

Directions to Fowler Nursery

From Sacramento go east on Hwy 80 to Sierra College Blvd. in Loomis. Turn left and follow SCB until it dead-ends into Hwy 193. Turn right (east) to Fowler Rd., about 1/4 mile. Go left 1/4 mile to the nursery.

From Yuba City, go 3 miles east to Marysville on Hwy 65. Go south on Hwy 65 to Hwy 193. Go left (east) on Hwy 193 about 4 miles to Fowler Rd.



NOTICE

This is the first issue of *The Western Chestnut*, and it is being distributed to members and nonmembers alike.

With this mailing all members should have received their 1999 Membership Directory. If you did not receive your directory notify John Schroeder, Secretary/ Treasurer to make sure that your dues were recorded for this year. If there are errors, notify the Editor.

If you are not a member you are encouraged to join and enjoy the benefits of membership including the quarterly newsletter, membership directory, free classified advertising and up-to-date news about the industry.

Quality Standards in the Nut Industries

Compiled by Jennifer Wilkinson

Reprinted with permission of the Chestnut Growers Association, Australia
As published in the "Australian Nutgrower"

Australian nuts are known for good flavour but taste is not the only factor that determines quality. Quality nuts are nuts that look good, are safe to eat, store well and taste good. All nut producers contribute to the consumer image of Australian nuts and all have an important part to play in ensuring that Australian nuts in the marketplace are top quality.

The quality sieve in nut production is post-harvest processing. This is the control point that ensures the final product is free from foreign material. It is also the grading point where top quality lines are separated from lesser quality and all is processed and packaged accordingly.

So how do we ensure that nuts in the marketplace are good quality? Industry associations can adopt standards and recommend to members that produce offered for sale meets those standards. Processing companies can specify that product arriving for bulk processing meets a particular standard, and wholesalers and retailers can reject poor quality product.

In the larger nut industries in Australia, the bulk of the crop is processed by 'state of the art' factories that maintain international quality standards. However in the smaller developing nut industries, nuts are graded and packaged on-farm and quality can be variable. While industry associations endeavour to maintain quality standards, samples of poor quality and sporting an 'Australian-grown' label are not uncommon. Unfortunately in a developing market, it takes only a handful of growers selling poorly graded nuts to damage consumer confidence.

By and large the quality standards adopted by the various nut industry associations reflect internationally accepted standards. So what are the standards recommended by our nut industry bodies, and what are the purchasing conditions required by processors?

The Chestnut Quality Manual

In 1993, the Quality Committee of the chestnut Growers of Australia Limited (CGA) developed a Quality Manual. It has been the primary reference document for growers and covers items such as harvesting, storage, grading, labeling, packing as well as a number of other matters. During the industry's 1997 Strategic Plan Review it was decided that a major revision was required. This process is almost complete and the new document is due to be released around mid-1999 as part of a Production Manual for the chestnut industry. This work is being done by Dan Ridley under HRDC Research project CH96001: Chestnut Industry Best Practice and Market Development Program. Until this document has been approved by the CGA Quality Standards Committee and the

Board of Directors it cannot be released. However we have extracted a number of sections from the now outdated, 1993 version. Rather than reproducing the entire 8-page document we are listing some of the key items in an abbreviated form or as headings only.

Harvesting and Storage

1. Nuts should be picked up as soon as possible after they fall.
2. The nuts should be placed in a coolstore at 0° Celsius as soon as possible and kept at this temperature until marketed.
3. Forced air cooling of the nuts is advantageous in removing field heat.
4. Nuts should be stored in small quantities.
5. Boxes should be lined with a polythene bag which is loosely folded.
6. For short-term storage refrigerated air is satisfactory.

Grading Requirements

1. Chestnuts should not be packed or sold unless they comply with the following general requirements:
 - Such chestnuts are mature, are sound, clean, well formed and show no evidence of beak, tooth, claw or insect damage where such damage has penetrated the nutshell. Slight surface scratching of the nut shall not be the cause of rejection.
 - The package contains not more than 2% by weight of undeveloped nuts.
 - The chestnuts in any one package are of one size group having been graded into either one or another of five grades viz.: Small, Medium, Standard, Large, or Special if accordance with the following provisions:
 - i) Chestnuts described as **small** shall be of a size such that they will pass through a circular hole of 25 mm diameter with the minimum limit such that the count per kilogram shall be a maximum of 175 at the time of packing.
 - ii) Chestnuts described as **medium** shall be of a size such that they will pass through a circular hole of 29 mm diameter but will not pass through a circular hole of 25 mm.
 - iii) Chestnuts described as **standard** shall be of a size such that they will pass through a circular hole of 38 mm diameter but will not pass through a circular hole

of 31 mm diameter.

iv) Chestnuts described as **large** shall be of a size such that they will pass through a circular hole of 38 mm diameter but will not pass through a circular hole of 31 mm diameter.

v) Chestnuts described as **special** shall be of a size such that they will not pass through a circular hole of 38 mm diameter.

Chestnuts shall be considered as complying with the grading requirements of those regulations if each package contains a minimum of 95% by weight of chestnuts conforming to the size group marked on the package. The maximum of 5% of chestnuts comprising the balance of the total weight when packed must be from the size immediately above the marked size or below the marked size or combination of both.

For the Purpose of the Regulation

A mature chestnut is one that shows a minimum of 70% of the shell surface excluding the helium to have developed to the mid to dark brown colour typical of chestnuts.

Undeveloped chestnuts, also termed 'wafers', 'flats' or 'pennies' are defined as chestnuts with minimum dimensions less than 30% of the maximum dimension.

The following are the prescribed markings to be placed on chestnut packages or on any slips or labels attached to such packages:

- The words "Sweet Chestnuts" or "Chestnuts"
- The net weight of the chestnuts contained in the package at the time of packing.
- The description of the grade whether "Small", "Medium", "Standard", "Large" or "Special" — all to conform with the requirements listed above.

Phomopsis

Because of the potential for the rapid development of the disease at temperatures above 4°C, the Directors of the Chestnut Growers of Australia, Ltd. Recommend that varieties and/or trees exhibiting the symptoms of Phomopsis at harvest or pre-marketing should not be marketed. It is further recommended in order to ascertain the presence of the disease to randomly select 50 nuts of the variety to be marketed and cut these in half for identification of the disease. You should look for an internal rot or discolouration of the kernel. Healthy nuts appear to be odourless when

cut but infected nuts have a distinct odour having been described as sweet or yeasty. If in doubt about identification, contact a plant pathologist. If only a few nuts are found when sampling, this indicates that the disease is present in that variety and it is likely that seemingly unaffected nuts could develop this rot during marketing.

Standardisation of Packaging

The Chestnut quality committee urge growers to send cartons or bags in either 5, 10 or 25 kg weights for uniformity. Currently there is a vast array of carton and bag weights reaching the market place which is damaging our quality image.

There should be one size grade per carton or bag, not a range of different sized chestnuts. Preferably only one variety should be in a carton or bag. If varieties must be mixed, the chestnuts should all have a similar appearance.

It is most important to be accurate when weighing your produce so wholesalers don't come back to growers complaining of underweight packages. It is suggested that packages be overpacked so that at marketing they reflect the weight written on the label. It is also strongly recommended to keep in close contact with your wholesalers to satisfy any changes in his requirements as the season progresses.

Wholesale Documentation

It is vital that all documentation as required by transporters and wholesalers is supplied and a copy be retained by the grower.

Information supplied should include the number of units, i.e., cartons or bags.

Weights of each grade, total weight of consignment, name and address of grower, and the name and address of wholesaler. Invoice books are commonly used for this purpose.

Footnote: Because temperature control of chestnuts is important at all stages of the production and marketing, the CGA makes available brightly coloured 'Keep Cool' stickers for use on cartons, bag labels, etc.

Letters advising details of these stickers have again been sent to all growers just before the 1999 harvest.

Fresh Chestnuts — Premium Chestnuts Australia

Premium Chestnuts Australia (PCA) is a small group of chestnut growers who have formed an association specifically for the purpose of exporting chestnuts. Members of PCA have put considerable effort into developing a Quality Assurance (QA) Manual which all members of PCA are

obliged to follow. Clive Perrett, Chairman of PCA, says "these Quality Assurance Procedures enable us to deliver a consistent product to our clients. However, I believe they will be essentially the same in concept as the QA Procedures being developed for the domestic market under the sponsorship of the Chestnut Growers of Australia.

Adherence to these procedures in PCA is mandatory and starts in the paddock. Since all PCA clients place orders for specific varieties, it is essential that PCA growers ensure that those varieties are separated in the paddock and packed separately. Since the time from picking up to delivery to the client in Asia can be up to two or three weeks, maintaining the cool chain is very important in PCA procedures. Thus their procedure determines that all nuts for export must be picked up within twenty-four hours and immediately placed in the cool room at 1°C. This cool chain is maintained apart from short breaks for grading and packing, right through to shipping to the client. This is essential to maintain the quality of nut and to minimise any external mould. All cartons have a code which identifies the variety, grade and the individual grower to enable any problems to be identified back to the source.

All nuts for export are delivered to the export packing shed run by Joe Rinaudo. He has comprehensive systems to track incoming product from member growers and to carry out specified checks to ensure that quality has been maintained in terms of grade size, external mould, internal mould, etc. The chestnuts are then sent by refrigerated truck to Melbourne Airport. PCA procedures also cover record keeping and the use of chemicals which is an increasing concern around the world.

A final interesting comment from Clive: "quality assurance processes for the export market are fairly rigorous as export clients are very discerning. However, it is clear to me that to foster and grow the home market we also, all of us, all growers in Australia, need to deliver a quality product to the retail shelves of the supermarkets. This will eventually involve the application of similar quality assurance procedures. This is no different to say, apples or other fruit and vegetables. All chestnut growers in Australia have to face the fact that the industry needs to work towards delivering a consistent, quality product to the home market if it is to survive.



Symposium, from p. 1

flowering date and ethephon to advance maturity and compress harvest.

Ridley, **Australia**, reports that the majority of production is in the southeast part of the country at elevations of 1000 ft. or more. Growers recently voted to pay a levy of 10 cents/kg of produce sold to support research and marketing efforts.

Nash, Mandujano and Fulbright, **Michigan**, reported on the use of ethephon to reduce the natural ripening time in Michigan. It was estimated that all of the nuts from an ethephon-treated tree could be harvested by tree shaker within a few seconds and up to two weeks ahead of the naturally-ripened controls.

Abreu, **Portugal**, reports problems with phytophthora cinnamomi in Terra Fria, cold land of mountainous northeast Portugal. The expression of the disease is increased by a suitable environment involving dry periods during summer followed by frequent waterlogging in wet seasons.

Vettraino, **Italy**, discussed the increase in ink disease (phytophthora) in

Central Italy, particularly in the Monti Cimini area. He noted the presence of a large number of diseased trees along the country roads, suggesting a role in the diffusion of the disease of both the draining ditches and the transit of farm tractors.

Portela, **Portugal**, reported widespread occurrence of ink disease and suggested that farmers' practices play a part. The relationship between the severity of ink disease and concentrations of plant nutrients were submitted to principal components analysis. The importance of soil fertility parameters, soil organic matter and effective soil depth in improving health conditions of chestnuts was evidenced, while radiation, frequency of tillage and unbalanced mineral fertilization contributed to the severity of the disease.

Berruto, **Italy**, reported on a chestnut harvester for mountainous areas. He discussed the use of two machines, one a mini-track with 15 kW power, maximum weight of 600 kg, and a width under one meter. It is intended for use on ground up to 50-55% slope. The machine can harvest 9-10 times more nuts than a person in the same period of time.

Zhao and Liu, **China**, report that chestnut yield can be increased by 47% by thinning catkins. Doing the job manually is very difficult, but it is convenient, economical and easy to do by spraying SXC.

Bassi and Craddock, **Italy and Tennessee**, described the planting of the chestnut cultivar "Colossal" in the Piemonte Region of Italy in 1992. It is ranked favorably there. The trees have grown vigorously and began fruiting during their second year in the orchard. Burs ripen between September 18 and 20 and contain an average 1.85 nuts. Nuts are large, averaging 45 nuts/kg.

Martins, **Portugal**, reported on a study investigating the effects of soil and climatic conditions on the development of ink disease. He reported that when soil temperature was higher and the soil was dryer, and air temperature and wind speed were higher while air humidity was lower, the severity of the disease was higher.



Membership Application Western Chestnut Growers Assn., Inc.

New Member Renewal

Name(s) Date of application

Address

City State/Province

Zip/Postal Code

Phone () Fax ()

Email:

<u>Variety</u>	<u># of Acres</u>	<u># of Trees</u>	<u>Yr Planted</u>	<u>Current Production</u>	
_____					lbs
_____					lbs
_____					lbs
_____					lbs
_____					lbs

Photocopy this form.

Send this form with your check for \$20.00 per person made payable to Western Chestnut Growers Assn., Inc. to John Schroeder, Secretary/Treasurer WCGA, 39002 NE 124th Ave., Amboy, WA 98601.