

Chestnut Markets

Chestnut Workshop Series #4
Sept 14, 2010

The "Chestnut Market" Road Map

- Promising Trends
 - Diet, Health and Nutrition
 - \$ Buy local \$
 - Growth in the organic market
- Chestnut Marketing 101 basics
- Fast facts about the chestnut market
- The status of our knowledge about prices, sales, markets, consumers, trends
- Where and how to market chestnuts
- Value added ideas

Diet, Health and Nutrition - Booming Market Demand -

- The time is right to promote tree-nut consumption
- Nuts contain potent, health-protecting compounds.
- U.S. consumption of all tree nuts combined is less than three pounds per person/year.

Chestnuts are more similar to grains than they are to nuts!!!

The Traditional Healthy Mediterranean Diet Pyramid

Eat, drink, be merry AND exercise



New from FDA in 2003

Chestnuts are low in fats, gluten free, the UnNut!

UMCA Nutrition Guide Sheets developed with healthy recipes



**Chestnuts:
Chock Full of
Nutrition!**

- Low in oil, chestnuts are 99% fat free
- One-third the calorie content of peanuts and cashews!
- High in complex carbohydrates for energy
- Cholesterol free
- Contain as much Vitamin C as an equal weight of lemons
- Nutritionally similar to brown rice
 - described as “a grain that grows on a tree”
- Gluten free

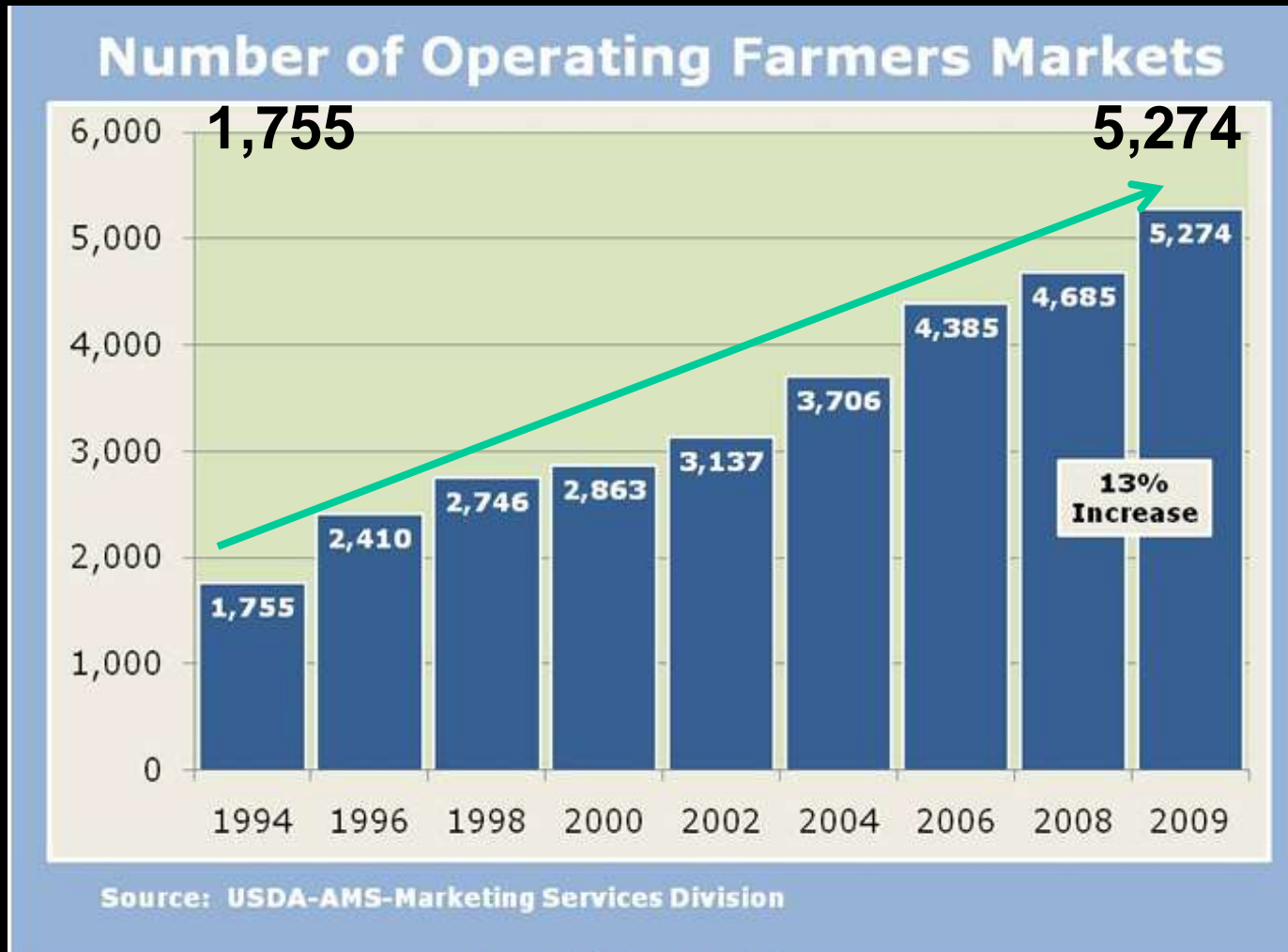
Trend toward “buy local” supports growth of niche crop markets.

Buy Local
SPEND IT HERE • KEEP IT HERE



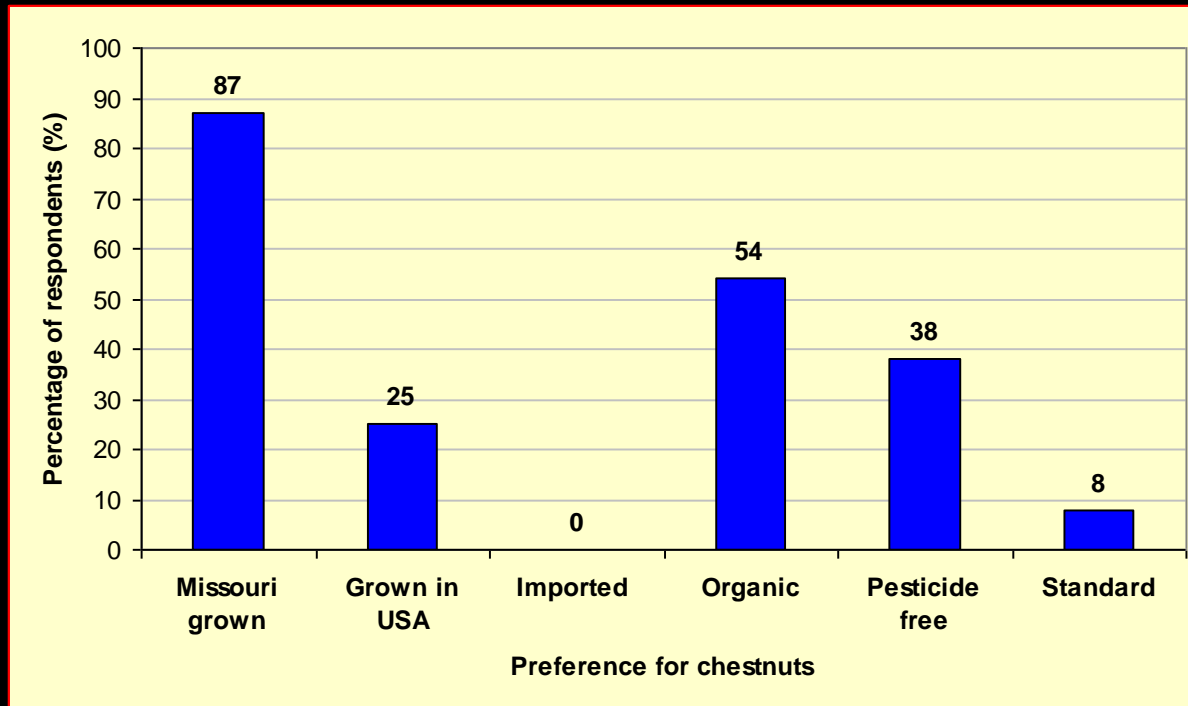
Growth in Farmers Markets 1994 - 2009

Farmers Markets Supplied by Family Farms



Buy Local Trend? You Bet!

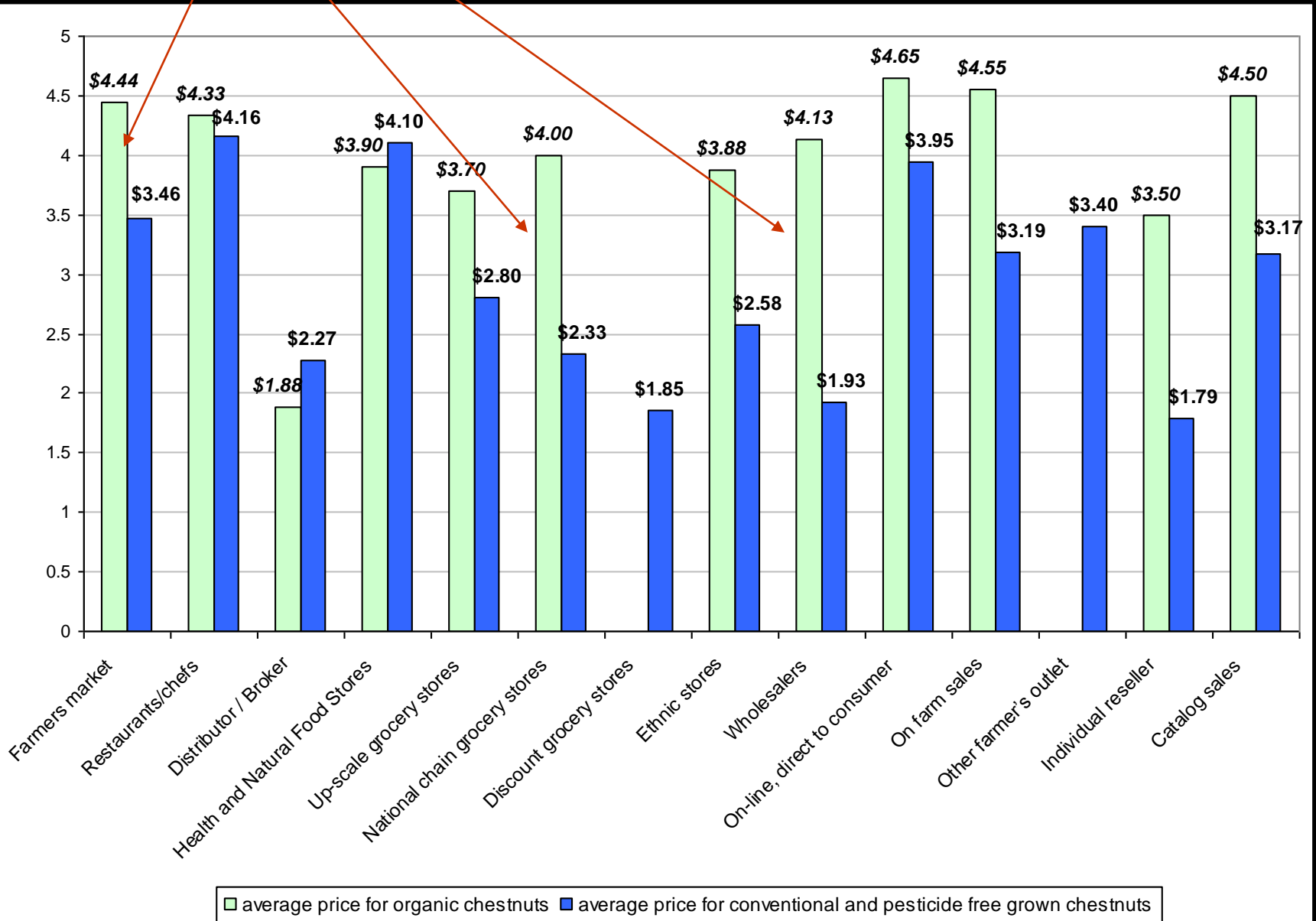
- Consumers are **20 times** more likely to choose Missouri chestnuts, and **5 times** more likely to select U.S. chestnuts compared to imported nuts (Aguilar et al. 2010)



The Organic Marketplace

- ✓ Organic food market retail sales growth has equaled 20 percent or more annually since 1990, from \$1 billion in 1990 to \$20+ billion in 2008
- ✓ Contrast this to growth rate of less than 5% for the overall US retail food market

Organic Chestnut Price Premium



Chestnut Marketing 101

Why Look at Markets?

- ✓ Risk-averse producers reluctant to undertake new enterprises (e.g., chestnut production) in the absence of readily available market information
- ✓ Market knowledge is a key ingredient in the success of profitable enterprises that produce commercially valuable products

Exploring the market potential

- identify buyers and their needs
 - Who are my customers?
- Research the competition
 - Who are my competitors?
- How do I explore the industry?
- Is there a way to add value to my product?
- What are my costs and potential returns?
- What price should I charge?
- How do I get into the market?
- How do I get products to the buyer?

Marketing Research - Where to begin

Ask questions about:

- ✓ **Customers** - the group(s) most likely to buy your product
- ✓ **Competition** - current or potential entrants in your potential market
- ✓ **Industry** - specifics about industry standards, influences and trends

Marketing Strategy

- ✓ Identify buyers and their needs (consumers, brokers, wholesalers, retailers)
- ✓ Research the competition (how do they market, is the market flooded, are there untapped niches)
- ✓ Explore the industry (know the industry standards, influences within the industry, industry trends)
- ✓ Add value if possible and appropriate to your situation

Market Opportunities

Chestnut

Revisit UMCA Chestnut Program

Focused in 4 areas

1. develop and test best chestnut cultivars and orchard production and management techniques
 2. ongoing market research
 3. increase consumer awareness and demand
 4. create “grower clusters”
- Develop value-added industry (still to do)
- Long-term goal: develop a thriving U.S. domestic chestnut industry

Approach to Chestnut Market Development

Market “Pull” Strategy

- ✓ Develop US consumer market to stimulate demand for chestnuts and chestnut products.
- ✓ Introduce chestnut to US consumers as a “new” crop
- ✓ Increased demand will provide growers with the motivation to increase productive acreage to meet the demands of the marketplace
- ✓ Requires strict adherence to quality standards

Europe/Asia - An Ancient Crop

MONUMENTAL CHESTNUT TREES in ITALY



Monumental Chestnut tree in the area of Cusco



The Chestnut tree "Pistoiese" - Le Celle (AR)



The Chestnut tree "Salto" - Palazzuolo sul Senio (FI)



The Chestnut tree "Proti Piani" - Palazzuolo sul Senio (FI)

ELVIO BELLINI



Chestnut: *New U.S. Nut Crop*

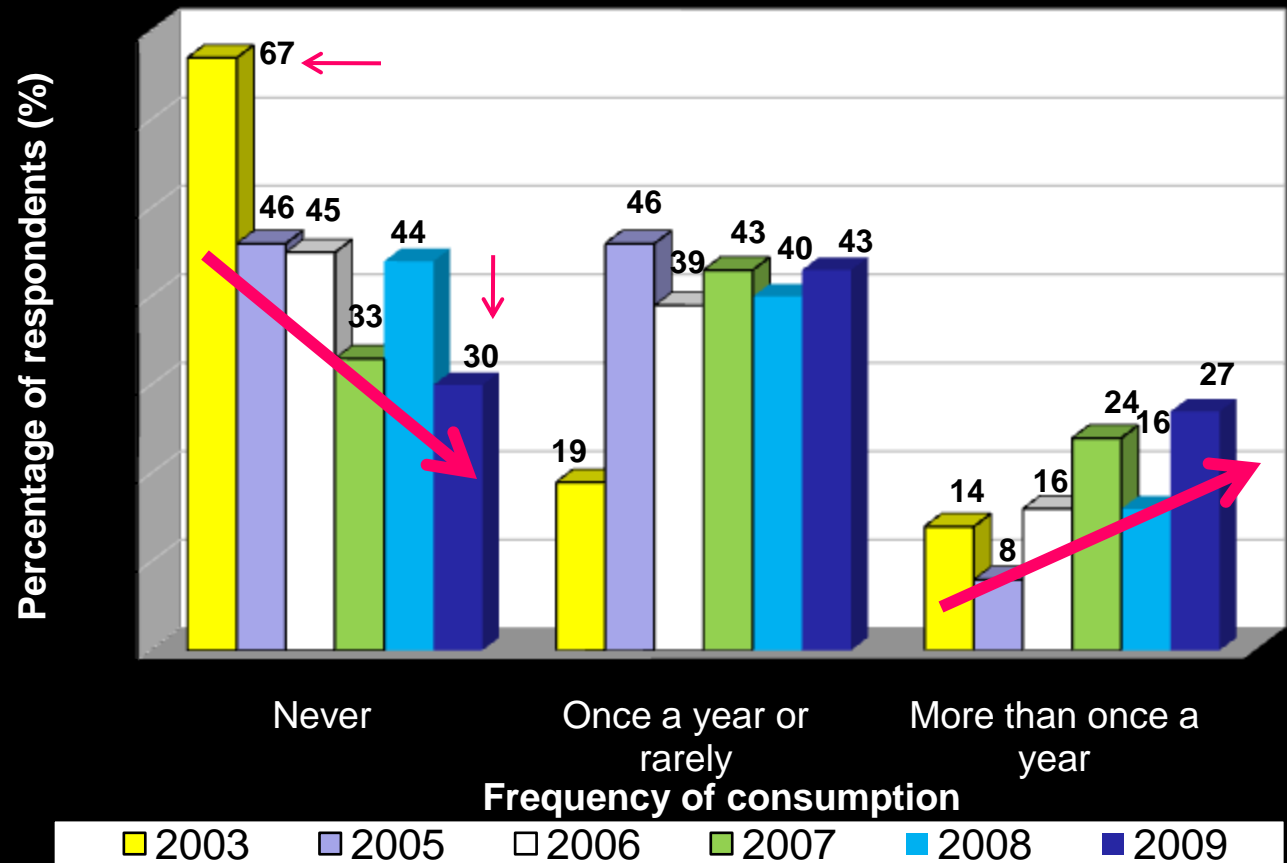


1,000-2,000#/acre @ \$1.60 - \$3.50 pound – wholesale;
@ \$4.50 - \$7.00 pound retail

Fast Facts About the Chestnut Market

- American consumers like the taste of chestnuts, BUT, 2/3rds have never eaten *

** With education, this can be changed!*



Fast Facts About the Chestnut Market

- Freshness effects quality, appearance, taste



Fast Facts About the Chestnut Market

• Growers, grocers and public must be educated about post-harvest and storage (refrigeration).

• Unrefrigerated nuts mold within 7 days!

CHESTNUTS: A NEW CROP FOR MISSOURI

from the University of Missouri Center for Agroforestry, www.centerforagroforestry.org

Chestnuts are a great new product for Missouri! The climate here is suited to growing Chinese chestnuts. Chestnuts are nostalgic for some buyers and new for others - from roasting on an open fire to adding a nutty crunch to the unNut - they have less fat than other nuts, such as walnuts and pecans. This also means they have a higher shelf life than these other nuts.

displayed in the refrigerated section adjacent to other fruits and vegetables. Although chestnuts can deteriorate rapidly under less than ideal conditions, with proper storage...



Why Chestnuts?

Chestnuts: The "unNut" you'll love!

As you consider healthy food choices, why not consider chestnuts? They offer excellent health benefits and will help you stay on track with your diet. They are a delicious source of fiber and vitamins E and C. Chestnut nutria tree nuts, chestnuts, chestnuts. They also have a significant amount of protein.

NUTrition and Your Health

Chestnut, the "unNut" that's high in nutrition, low in calories!

- Nutritionally, chestnuts are similar to whole grains and offer a sweet, subtle flavor.
- Unlike pecans and walnuts, chestnuts contain just a trace of fat, due to their high water content.
- Good source of fiber and cholesterol-free.
- Chestnuts contain just one-third the calorie content of peanuts and cashews!
- Chestnuts are high in complex carbohydrates for energy.
- Chestnuts contain as much ascorbic acid (vitamin C) as an equal weight of lemons.

Nutrient composition of 1 ounce (3 chestnuts/ounce) roasted chestnuts	
(source: USDA; www.nutrition.gov/nutrition)	
Protein:	1.2 grams
Fat:	0.3 grams
Carbohydrates:	14.4 grams
Fiber:	1.4 grams
Vitamin C:	11 milligrams
Calories:	68
Cholesterol:	0
Sodium:	23 milligrams
Potassium:	608 milligrams

Also a source of magnesium and phytonutrients.

Learn more about the nutritional value of chestnuts, pecans and black walnuts at www.centerforagroforestry.org

Delicious, versatile Missouri-Grown Chestnuts

The "unNut" you'll love!

Recipes and preparation instructions from the University of Missouri Center for Agroforestry

www.centerforagroforestry.org

The status of our knowledge

➤ What we do know

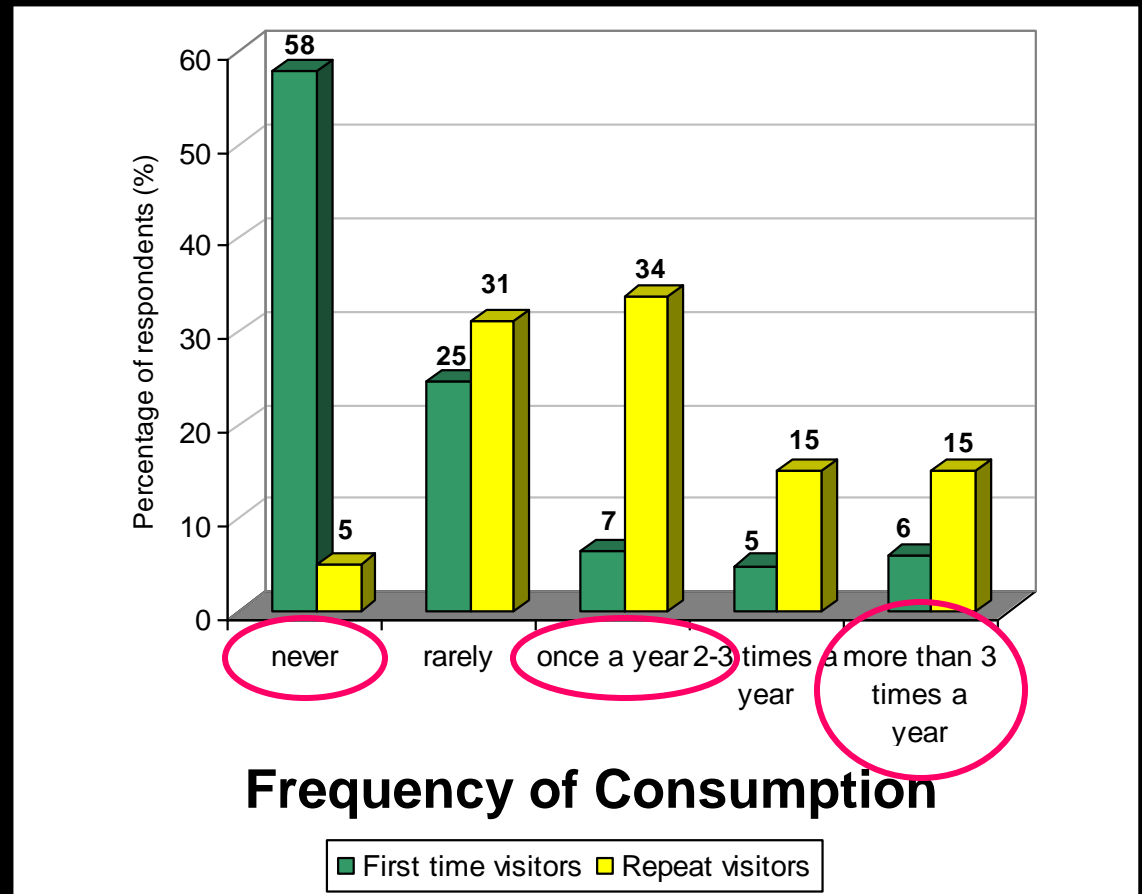
- **Successful growers exist, cannot meet demand**



The status of our knowledge

➤ What we do know

• Exposure makes a huge difference!



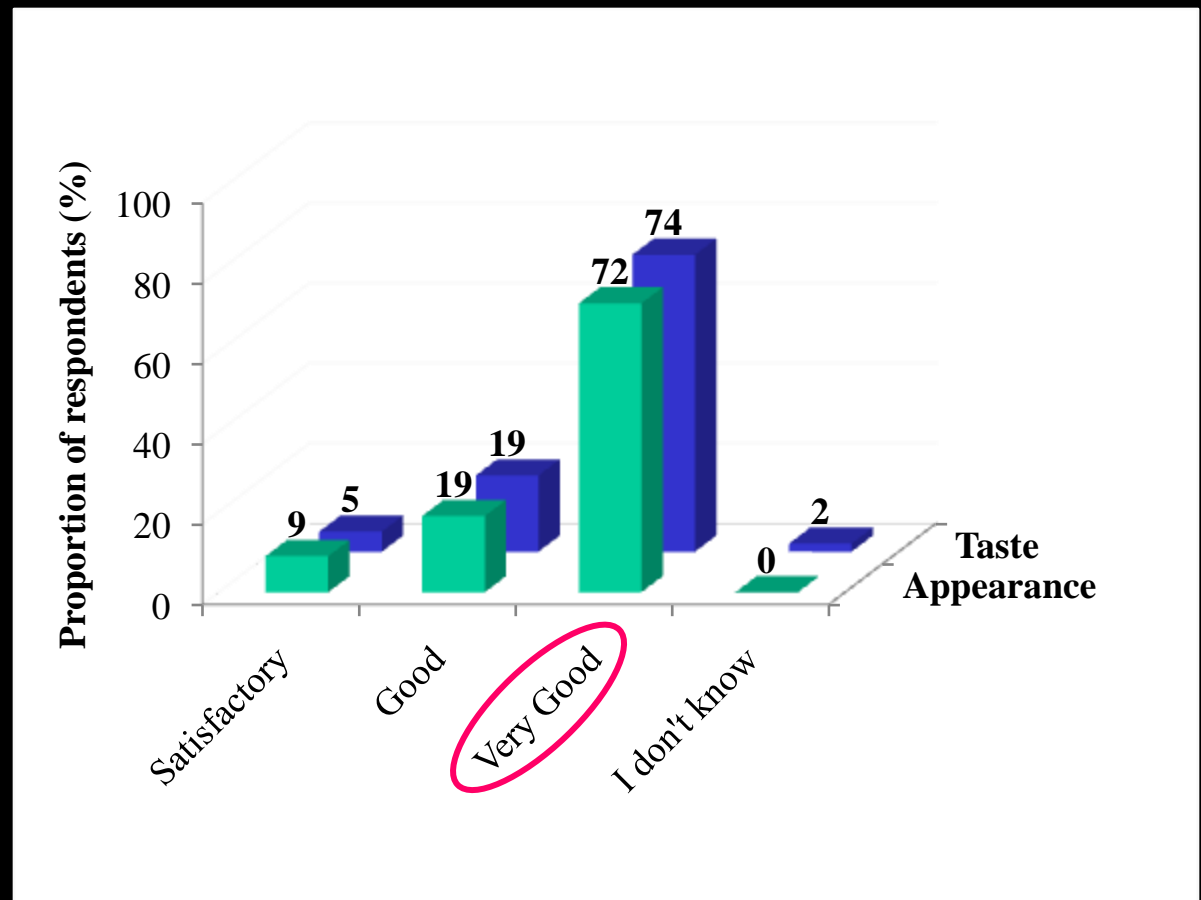
Chestnut Roast Consumer
Survey Results
(2008)

First Time ($n=367$) versus Repeat Visitors ($n=119$)

The status of our knowledge

➤ What we do know

• Consumers receptive when exposed to chestnuts



2009 consumer survey (N=45)

The status of our knowledge

➤ What we do know

- Consumers receptive when exposed to chestnuts

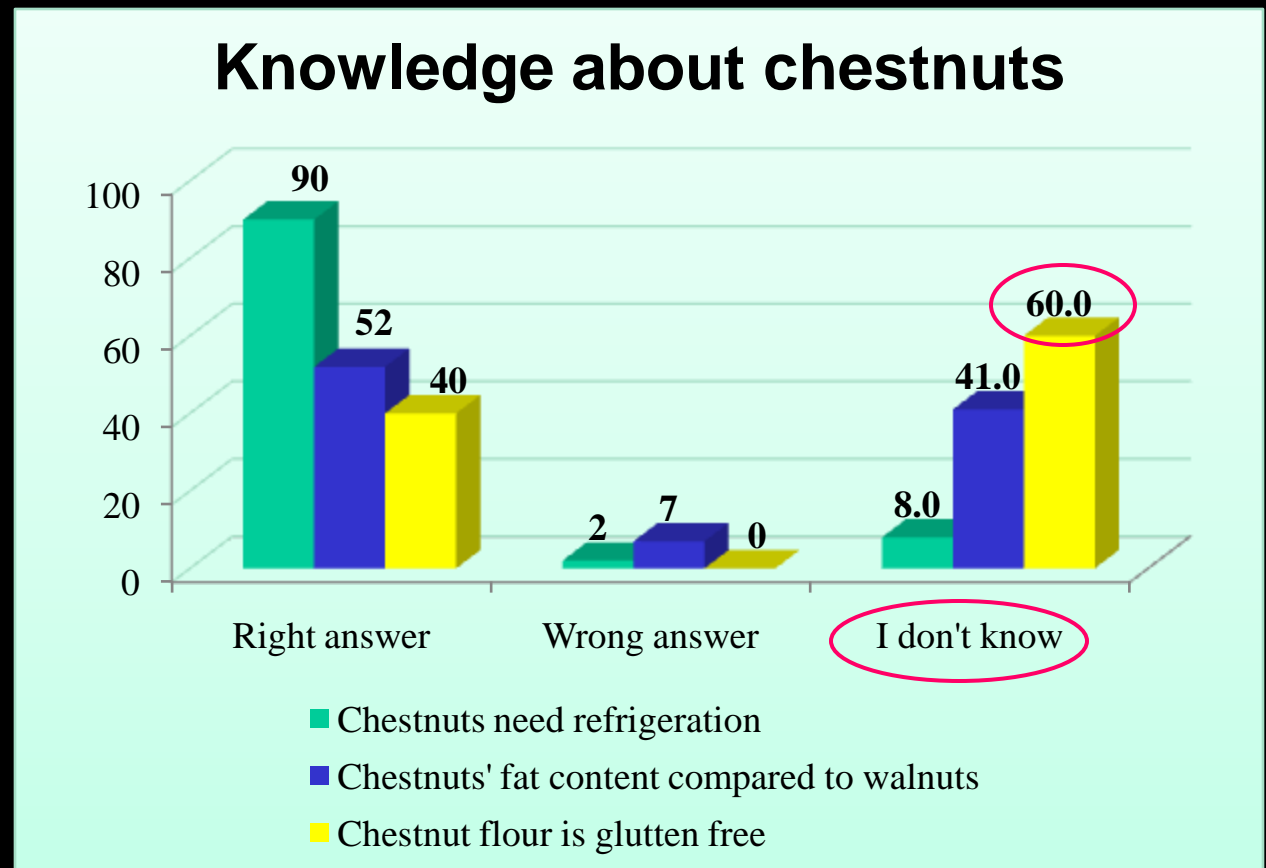


2009 consumer survey (N=45)

The status of our knowledge

➤ What we do know

• Consumers who buy chestnut have some knowledge about chestnuts, but there is still more to learn

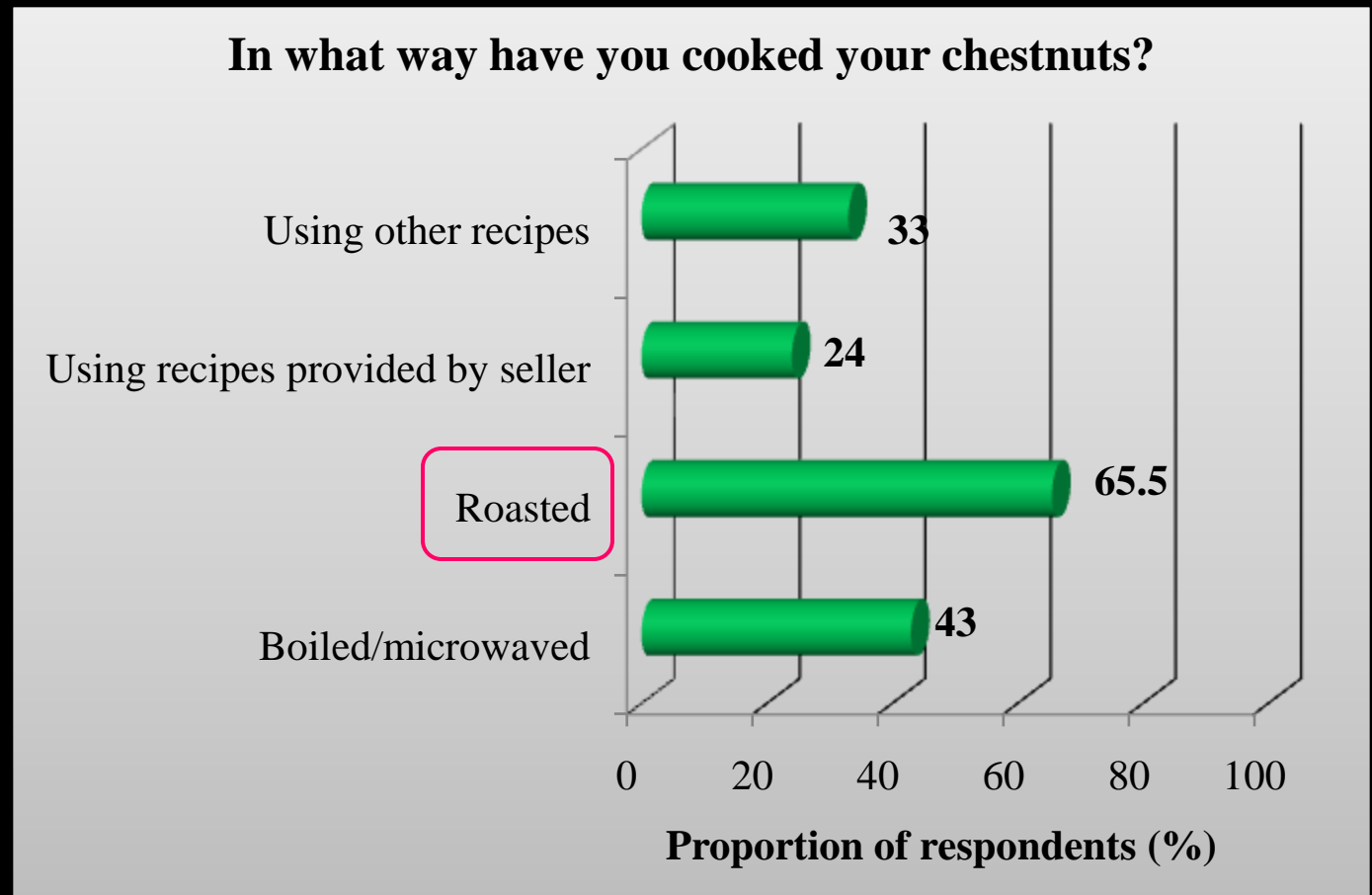


2009 consumer survey (N=45)

The status of our knowledge

➤ What we do know

- Consumers know how to cook with chestnuts, but primarily how to roast



2009 consumer survey (N=45)

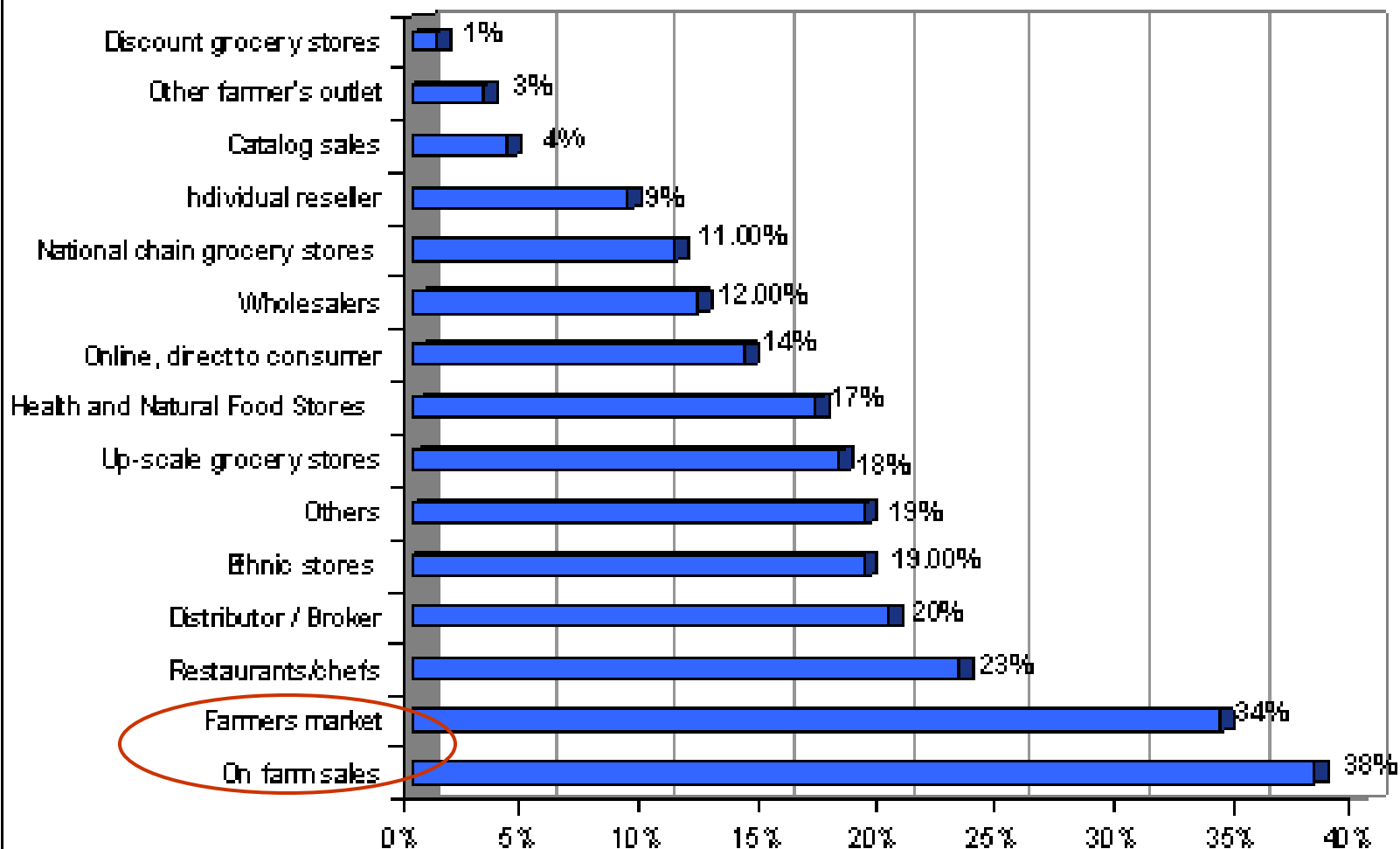
The status of our knowledge

➤ What we do know, "local" rules

• Consumers' preferences

2007		2008	
Attributes	Odds ratio	Attributes	Odds ratio
Medium size	1.892		
Large size	1.849		
Small size	Baseline		
Price	0.829	Price	0.736
Produced in Missouri →	10.353	Produced in Missouri →	20.731
Produced in the US	5.334	Produced in the US	4.257
Imported	Baseline	Imported	Baseline
Organic production	1.307	Organic production	4.28
Conventional production methods	Baseline	Pesticide-free production	3.888
		Conventional production methods	Baseline

National Survey 2006: Chestnut buyers



Most sales are fresh chestnuts

National Survey Results 2006

Chestnut Prices

- Highest prices paid by restaurants, on-line customers, health and natural food stores, farmers markets, and on-farm
- Lowest prices are offered by discount grocery stores, distributors, and wholesalers
- Large range of prices received
 - Farmers markets: \$0.75 to \$6
 - On-farm: \$1.50 to \$6
 - Restaurants: \$2.00 to \$7

Chestnut Prices

- Full-time farming operations received better prices.
- Producers obtained higher prices if they:
 - grow chestnuts from cultivars
 - grow organic chestnuts
 - sell under a brand name

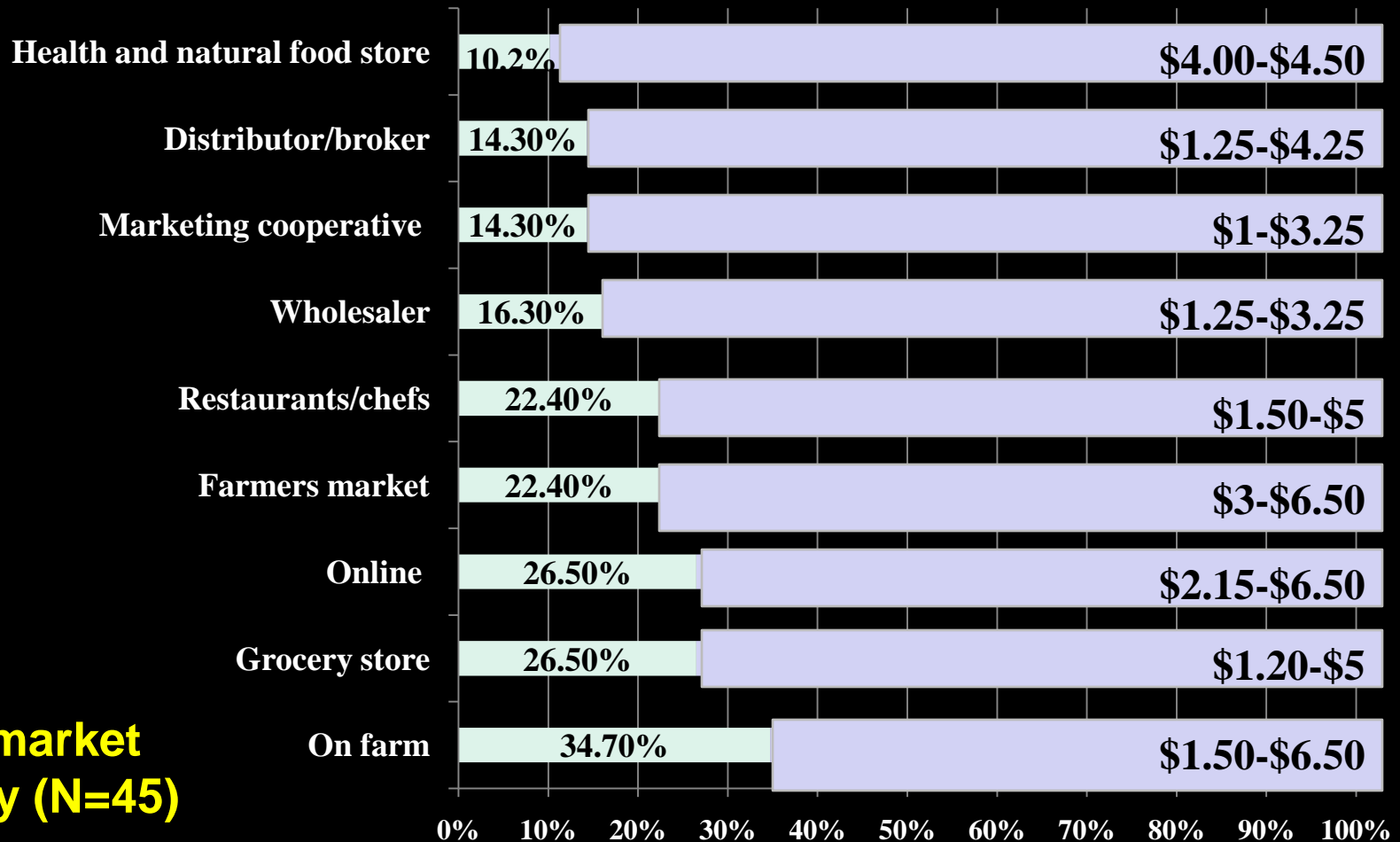
Chestnut Prices

- ✓ Chestnut Charlie sells direct to consumer at Missouri Chestnut Roast for \$4.00 to \$6.50 per pound depending on size
- ✓ Clovers in Columbia, Missouri retailing locally grown chestnuts for \$5.29 per pound, 2008&2009
- ✓ Center for Agroforestry sells at Columbia Farmers Market for \$5.00 per pound.
- **CAUTION:** DO NOT UNDERMINE THE DEVELOPING CHESTNUT RETAIL (niche) MARKET BY UNDERCUTTING THE GOING PRICE (higher is better - quality is key).

The status of our knowledge - 2009

➤ What we do know

Direct-to-market retail /wholesale prices are high



**2009 market
survey (N=45)**

Crude Chestnut Financials

- Under a well managed orchard, yields should reach up to 2,000 lbs per acre by age 10 (from graft).
- Wholesale prices range from \$1.00 – 3.50 per pound.
- Retail prices are \$2.15 – 6.50 per pound.
- Gross profit per acre ranges from \$2,000-\$7,000 per acre wholesale.
- Gross profit per acre ranges upward of \$10,000 per acre if crop is sold retail.

Chestnut Decision Support Tool\$

Not yet ready for prime time

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Chestnut Decision Support Tool																	
2	Version 1.0																	
3	Establishment Decisions:									Harvesting and Marketing Decisions:								
4	Site Prep:	Herbicide only (1 qt/ac.)																
5																		
6	Spacing (Ft):	30	x	30														
7																		
8	Layout/Design:	Rectangular/Square																
9																		
10	Site Quality:	Good																
11																		
12	Planting Stock:	Grafted Seedlings	Graft	Technique														Professionally Grafted
13																		
14	Fertilization:	Good early growth (> 8")																
15																		
16	Tree Staking:	Steel conduit pipe																
17																		
18	Irrigation system:	Drip Irrigation																
19																		
20	Management Decisions:									Financial Results								
21	Thinning:	10%	Enter a % of trees removed (i.e. 50%, 33%)															
22																		
23	Fertilization:	Bearing trees (46% N)																
24																		
25	Pruning:	Spring prune																
26																		
27	Weed Control:	Herbicide (Roundup TM)																
28																		
29	Pest Control:	Lorsban 4E/Nufos 4E																
30																		
31	Disease Control:	Abound																
32																		
33	Deer Control:	Game Deterrent Fencing																
34																		
35																		

Initial Number of Trees/ac	48.4	If you want to use a mechanized harvester, you must have at least 1.20 acres.
Expected Price/lb for nuts	\$ 2.50	
PV of Revenues/ac @ 5%	\$22,926.23	
PV of Costs /ac @ 5%	\$6,061.07	
NPV/ac @ 5%	\$16,865.15	
Rate of Return (MIRR)	9%	
Years to Break Even	5	
AEV/ac @ 5%	\$890.96	

Chestnut Decision Support Tool\$

You make the decision

2	Version 1.0		
3	Establishment Decisions:		
4	Site Prep:	Herbicide only (1 qt/ac.)	
5			
6	Spacing (Ft):	30	x
7			
8	Layout/Design:	Rectangular/Square	
9			
10	Site Quality:	Good	
11			
12	Planting Stock:	Grafted Seedlings	Graft Technique Professionally Grafted
13			
14	Fertilization:	Good early growth (> 8")	
15			
16	Tree Staking:	Steel conduit pipe	
17			
18	Irrigation system:	Drip Irrigation	
19			

Chestnut Decision Support Tool\$

Harvesting and Marketing Decisions:

Harvest Method:

Nut wizard

Expected Rate of Return:

5%

enter a percentage return for this investment

Expected Price/lb for nuts

\$

2.50

Chestnut Decision Support Tool\$

Management Decisions:

Thinning:

10%

Enter a % of trees removed (i.e. 50%, 33%)

Fertilization:

Bearing trees (46% N)

Pruning:

Spring prune

Weed Control:

Herbicide (Roundup TM)

Pest Control:

Lorsban 4E/Nufos 4E

Disease Control:

Abound

Deer Control:

Game Deterrent Fencing

Chestnut Decision Support Tool\$

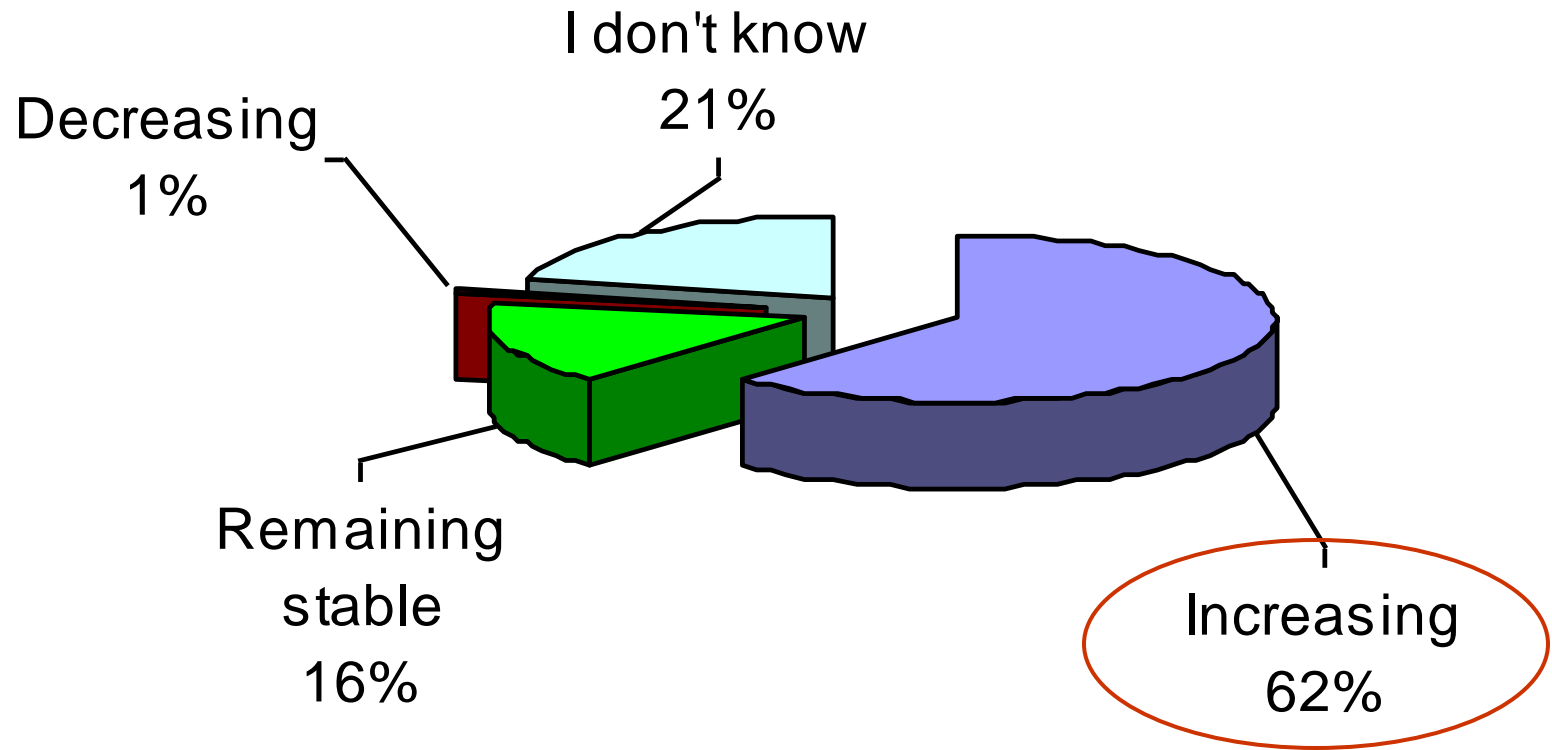
Financial Results

Based on the information that was entered in the model, this Chestnut Orchard will have the following financial performance over a 70 year period:

Initial Number of Trees/ac	48.4
Expected Price/lb for nuts	\$ 2.50
PV of Revenues/ac @ 5%	\$24,369.46
PV of Costs /ac @ 5%	\$6,234.89
NPV/ac @ 5%	\$18,134.57
Rate of Return (MIRR)	9%
Years to Break Even	5
AEV/ac @ 5%	\$958.02

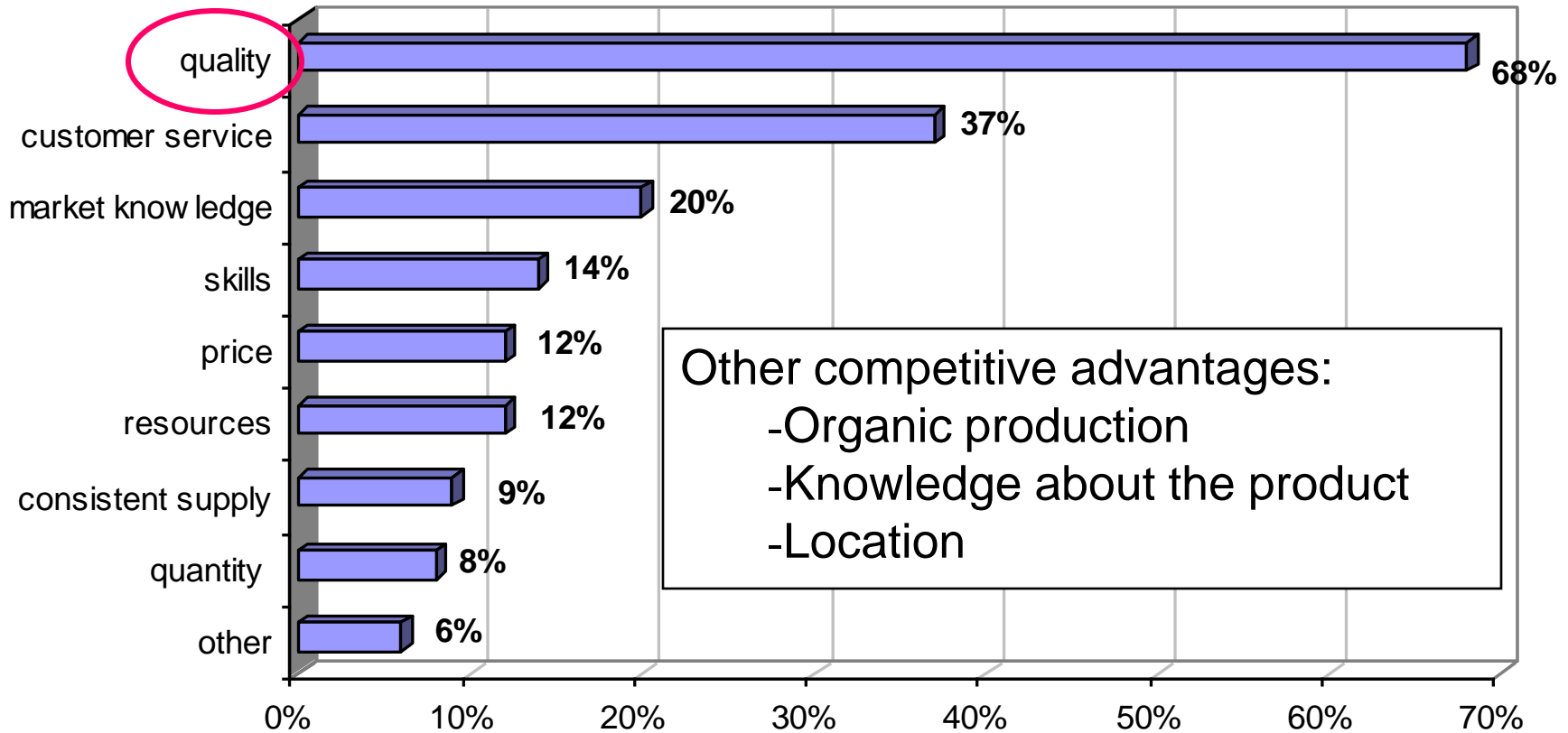
If you want to use a mechanized harvester, you must have at least 1.16 acres.

Demand Trends - Next 5 Years (2006)



Producers are optimistic about future sales demand

Competitive Advantages



Producers feel that quality is critical

Reach New Consumers Missouri Chestnut Roast





Fresh chestnuts available Oct - Dec

Jumbo -- >1.5" diameter
\$5.50/lb

Large -- 1.25"-1.5" diameter
\$5.00/lb

Medium -- 1.125-1.25" diameter
\$4.50/lb



Dried chestnuts are available all year. Rehydrate and use as you would fresh nuts

1 lb dried chestnuts = 2 lbs 6 oz fresh in the shell

\$9.50/lb singly **Dried Chestnuts**

\$7.50/lb in a 6-pak -- total \$45.00

Value Added Products



Large Holiday Gift Box -- \$35.00

Handcrafted wooden gift box with 4 lbs of our large and jumbo sized nuts packed in natural excelsior with a chestnut knife. Shrink-wrapped with a raffia bow and gift card.

Small Holiday Gift Box -- \$28.00 -- same as the Large Holiday Gift Box but contains 2 lbs 12 oz of our large and jumbo sized

nuts.

Cornbread Mix



Chestnut 'N Honey Cornbread Mix -- \$4.90/ea

If you're tired of mush cake-like cornbread you'll love this "real" cornbread texture with the mellow flavor of chestnuts and honey. Makes 16 generous pieces.

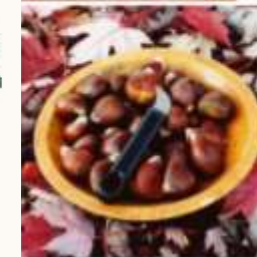
Ingredients: chestnut flour, yellow cornmeal, wheat flour, dried buttermilk, brown sugar, honey, baking soda, baking powder, salt



Chestnut Supper Box -- \$18.00

A combination of the Chestnut Bisque Mix and the Chestnut 'N Honey Cornbread mix. Packed in a handcrafted wooden box in natural excelsior and shrink-wrapped with a gift card.

Chestnut Bisque



Chestnut Knife -- \$5.50

The little knife with the curved blade is perfect for scoring the nuts before roasting or for helping remove the last bit of pellicle. We import these direct from the manufacturer in Italy. (Shipping weight 8 oz)

The CHESTNUT in GASTRONOMY: HORS D'OEUVRES and SIDE DISHES

Let's Review:
What Can
You Do With
Chestnuts?
Everything!

Stuffing, Salad
Chestnuts in
Italy



Toasted bread, white ricotta, marmos, walnuts and truffle



Some variations regarding the sauce to be spread on toasted bread (for example butter) ...



... or the filling for not so hard (for example very fresh cheese, but marmos are always present

ELVIO BELLINI



Toasted slice of marmos, with a slice of tomato



Slice of slice of toasted bread with a natural marmos stuffing



Spinach salad, marmos and pine seeds, with good extra virgin olive oil and balsamic vinegar



Sliced marmos for many uses



Side dish of red cherry, with the addition of suspended fried marmos



Another side dish of suspended fried chestnuts, that can be married with nutty salad, Taramisato or other cherry



Tasteful of mixed vegetables, marmos or chestnuts, mixed with eggs



Vegetable pudding with marmos



Course of spiced roast pork with liver & some of tomato and basil and sandwich with chestnut puree

The CHESTNUT in GASTRONOMY: FIRST COURSE

Soup
Dumplings
Bread



Vegetable soup, with chunks of bread and mushrooms



Almond tagliatelle with ricotta cheese



Almond gnocchetti with meat sauce

ELVIO BELLINI



Chestnut ravioli with sauce and truffle



Baked lasagne with sauce, mushrooms and bechamel



Another dish of chestnut flour with meat sauce



Small dumplings made from chest flour and potatoes



Chestnut tortelli of ricotta with cow's milk or parmesan cheese



Porridge of vegetable and mushrooms with toasted bread



Porridge of chestnut porridge and milk. It was prepared by the...
see the contribution of the Chamber of Commerce of Florence



'Pani di tupe' bread made of wheat and chestnut flour



Traditional chestnut bread of chestnut flour at the 'Fiera delle Castagne' of Maremma

Cooked with:
Turkey, ham,
rabbit,
roast beef,
wild boar,
cod pie(?),
corn meal

The CHESTNUT in GASTRONOMY: SECOND COURSE



Carpaccio with the Parmesan cheese and marrows



Smoked ham with



Rabbit in sauce with marrows



Turkey stuffed with marrows



Cod pie with sauce and marrows



Corn meal mash with meat sauce and marrows



Braised veal fillet with marrows



Braised veal with sauce and marrows



Papant stew of wild boar and marrows



Special roast pork with pair of chestnuts



Table with various dishes of marrows and chestnuts ready for the transmission "La Voce di Firenze" - RAI UNO television, 1994 (Oliviero Agostini "Piano Rosso" - Mirafiori)



Other table with gastronomic dishes prepared with marrows and chestnuts, prepared in the same television transmission (A. Agricola "Il Querceto" - Mirafiori)

With the contribution of the Chamber of Commerce of Florence

ELVIO BELLINI

The CHESTNUT in GASTRONOMY: DESSERT



Mousse of marrone with the Strada liquor



Mixed cake of chestnuts / Noci / filled with ricotta and whipped cream



Ice cream cup of real cake filled with puree of chestnuts and cream

ELVIO BELLINI



Ice cream of marrone in Gelateria Ina - Alghero



Ice cream of chestnuts with sabigiana cream



Ice cream of chestnut and prunes in Gelateria Ina - Alghero



Pasticcini filled with marrone cream



Pasticcini filled with marrone cream



Pastry filled with marrone cream



Cake filled with puree of marrone



Pasticcini filled pastry of chestnut filled with ricotta



Chestnut cake (Torta di Castagna) with pine-nuts and almonds

Everything Chestnut - Italy

The CHESNUT in FOODSTUFFS: INDUSTRIAL PRODUCTS



Some typical European industrial products based on chestnut spread distribution.



Industrial chestnut in sweetened spread with pure or pure & the 100% Castanaceae del Trentino Alto Adige.



100% pure Castanaceae in sweetened spread with various textures (Aromatized, Masticated, Textured).

ELVIO BELLINI



Small product chestnut in sweetened spread with sugar (3 years - Switzerland).



Small product chestnut in sweetened spread with vanilla (3 years - Switzerland).



Three of broken chestnut pieces and chestnuts in color and purity (3 years - Switzerland).



Other examples of pure chestnut and chestnuts (Cortina - France and Spain).



Various small chestnut and chestnuts (3 years - Switzerland) pure & sweet, ready to be used.



Various chestnut products of Spanish origin (Castro and Daza - Spain) ready to be used.



100% pure chestnut and chestnuts (3 years) (Switzerland) (Marroni della Valle) (Les Indulgences F. Chamoisepiquet).



100% pure chestnut and chestnuts (3 years) (France) ready to be used (France - France).



100% pure chestnut and chestnuts (3 years) (France) ready to be used (France - Switzerland).



Various jars with liquid chestnut (Italy) ready to be used.



100% pure chestnut and chestnuts (3 years) (France) ready to be used (France - Italy).

With the contribution of the Chamber of Commerce of Florence

Everything Chestnut - Italy

MARRON and CHESTNUT in the PASTRY SHOP



Collective display of marrons and related ingredients ready to eat



"Pasticcini" made of chestnut



Another display in shop windows of the "Sagra del Castagno" of Chiavari

ELVIO BELLENI



Tart filled with cream of marrons and hazelnut



Small shortbreads with honey



Chocolates with chestnut cream



Fresh marrons glacés



Chestnut shells from Castiglione



Pastries filled with mixtures of marrons and chocolate



Marrons made from chestnut flour

With the contribution of the Chamber of Commerce of Chiavari



Small tarts with marrons mixture



MAR biscuits mixed with chestnut flour

Everything Chestnut - Italy

MARRON and CHESTNUT FLOUR in the HOME-BAKED CAKES



Tart of marrone, chestnut and chestnut flour-baked cake of Marech



Ring-shaped cake with flour of chestnuts and wheat



Marronhorce, not to be confused with other similar cakes

ELVIO BELLINI



Campagnone, chestnut cake with chestnut and pine nuts (typical substance can also be used)



Tart of marronhock for chestnut of marrone



Ring-shaped cake of chestnuts and pine-nuts



Pine cake of chestnut flour



Chestnut pudding



Tart of chestnut flour filled with cream



Cake of chestnuts from Garfagnana



Chestnut roll cake another filled with pieces of marrone



Tried tortibus with vanilla sugar



Everything Chestnut - Italy

The CHESNUT in FOODSTUFFS: HAND-CRAFTED PRODUCTS

Flour,
biscuits,
lasagna,
chocolates,
honey



Chesnut flour of various origins and packages



Sweet chesnut flour ("suvicci") of Garfagnana (LL)



Marese flour stone milled in a water mill (Lunigiana, Cinqueterre) - Mugello

ELVIO BELLINI



Chesnut biscuits (La Fucinaipolis - Antico Dogliero - Mugello)



Suvicci biscuits (Forno Angiola - Castel-Garfagnana (LL)



Chesnappone - biscuits of sweet chesnut and white flour (Antico Dogliero - Mugello) (LL)



Chesnut lasagne (Antico Dogliero - Mugello)



Luxury glass jars only marese of Mugello



Chesnappone - biscuits of sweet chesnut and white flour (Antico Dogliero - Mugello)



Jars of honey from the chesnut flowers, a typical taste



Some excellent handcrafted products of chesnuts and marese



The bags of marese flour of various origins



Marese glass jars handcrafted production (the Fucinaipolis)



Display of products made from marese and chesnuts



Products of chesnuts and Japanese sorghum

With the contribution of the Chamber of Commerce of Florence

Accademia dei Georgofili
Logge Uffizi Corti - Firenze

E-mail: elvio.bellini@unifi.it

Dipartimento di Ortoflorofruitticoltura
Polo Scientifico dell'Università di Firenze

The CHESNUT in FOODSTUFFS: DRINKS and LIQUORS



Castagna beer with low alcoholic content (Castagna, produced in Switzerland)



Chester beer "Pietra", produced in Canada



Chestnut and pear "CROSTINA" liqueur is well incorporated with nut chestnuts

ELVIO BELLINI



Marmos liqueurs for sale at the "Sagra della Castagna" of Almeria (Auton. Diputación)



Various types and packaged liqueurs of chestnuts and marmos



Marmos cream and liqueurs displayed in small and long packages (Auton. Diputación of Almeria)



Products made from chestnuts and marmos with its assortment of liqueurs in the crates



Products of marmos fruits framed by chestnut fruits (Accademia dei Geografi, Firenze, 1996)



Marmos liqueurs with sweetest alcoholic content (Auton. Diputación of Almeria)



Various bottles of "Arcañol" liqueurs of Andalus and



Various bottles of "Pellin" liqueurs (Aut. Diputación)



Three various packages of marmos cream (Auton. Diputación)



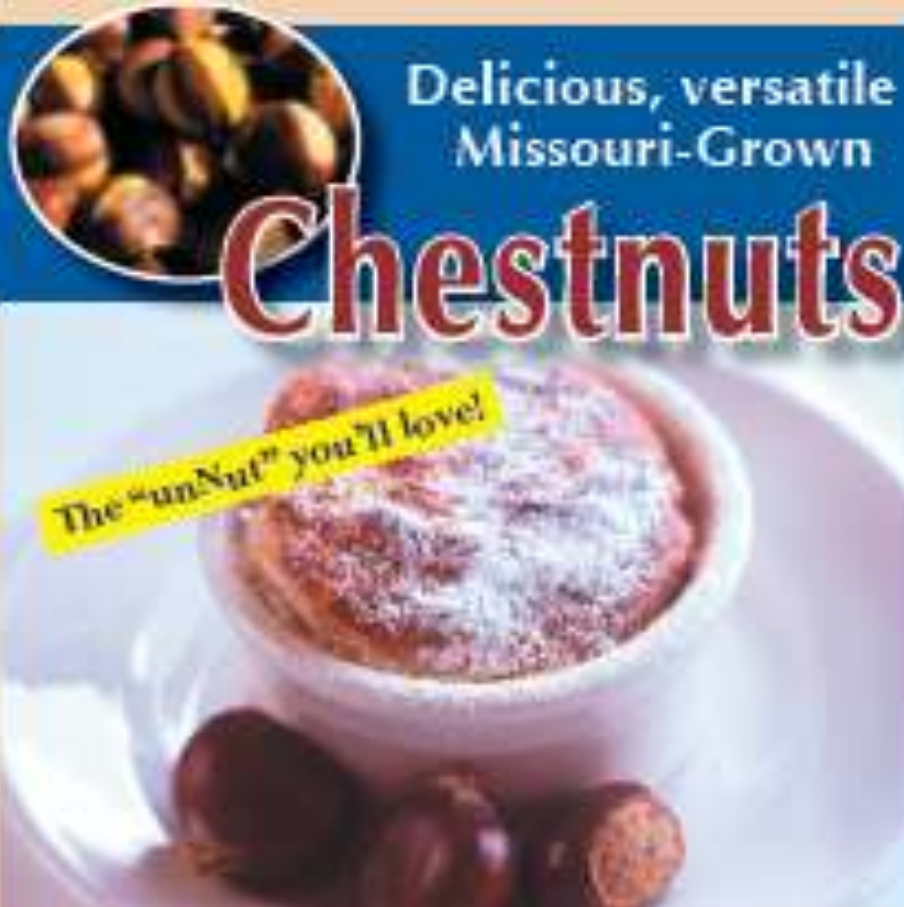
Various bottles of chestnuts in various packages

All prepared by Elvio Bellini

Where to Market Your Chestnuts

- ✓ Internet sales
- ✓ On-farm sales
- ✓ Farmers market
- ✓ Restaurants (local high end or ethnic)
- ✓ Micro-breweries
- ✓ High end specialty hog farms (market for culls)
- Create value added products
- *Grocery chains (Schnucks, HyVee, etc.), *brokers
- *Restaurants (national chains featuring Italian cuisine like Macaroni Grill, Olive Garden)
- *If you have “tonnage” to meet potential demand

Educational Information to Use with Fresh Chestnuts



Delicious, versatile
Missouri-Grown

Chestnuts

The "unNut" you'll love!

Recipes and preparation instructions from the
University of Missouri Center for Agroforestry

www.centerforagroforestry.org

NUTrition and Your Health

Chestnut, the "unNut" that's high in nutrition, low in calories!

- Nutritionally, chestnuts are similar to whole grains and offer a sweet, subtle flavor.
- Unlike pecans and walnuts, chestnuts contain just a trace of fat, due to their high water content.
- Good source of fiber and cholesterol-free.
- Chestnuts contain just one-third the calorie content of peanuts and cashews!
- They are high in complex carbohydrates for energy.
- Chestnuts contain as much ascorbic acid (vitamin C)

Nutrient composition of 1 ounce
(3 chestnuts/ounce) roasted chestnuts:
(source: USDA; www.nal.usda.gov/fnic/foodcomp/)

Protein:	1.2 grams
Fat:	0.3 grams
Carbohydrates:	14.4 grams
Fiber:	1.4 grams
Vitamin C:	11 milligrams
Calories:	68
Cholesterol:	0
Sodium:	23 mg
Potassium:	608 mg

Also a source of magnesium and phytonutrients.

Learn more about the nutritional value of chestnuts, pecans and black walnuts at www.centerforagroforestry.org

Work with Chefs - in store recipes



Chestnut, Garlic & Mushroom Salad

Serves 6

Howard Neil, Food Consultant,
Melbourne, Victoria

55g butter
2tbs olive oil
2 red onions, finely chopped
6 cloves of garlic, sliced
400g fresh chestnuts, peeled & halved
or 300g frozen peeled
250g button mushrooms, sliced
200g swiss brown mushrooms, sliced
250g portobello mushrooms, sliced
250g enoki, and hon shimeji, trimmed
and shitaki, soaked overnight and
drained*
1 heaped tbs fresh thyme, finely
chopped
100g low fat yoghurt
3tbs port
150g chestnut puree **
salt and freshly ground black pepper

Heat oil and butter in a heavy-based frying pan and cook onion and garlic for 5 minutes until soft. Add chestnuts and mushrooms. Cook for 10 minutes so chestnuts are cooked through but haven't lost shape. Add thyme and cook for a further 30 seconds.

Add yoghurt, port and chestnut puree and cook for 2 minutes, stirring all the time. Season with salt and pepper to taste. Serve on lettuce leaves with crusty brown bread. Can be served warm or cold.

* If you don't have these mushrooms top up with a further 250g portobello mushrooms
** 300g fresh chestnuts (120g-130g frozen peeled chestnuts) boiled and blended with a little stock will make 150g of chestnut puree



Steamed Chocolate Chestnut Pudding

Serves 6-8

Howard Neil, Food Consultant,
Melbourne, Victoria

500g chestnuts, pureed
½ tsp vanilla
¼ cup cocoa
2 cups milk
¼ cup brown sugar
2tsp butter
2 eggs
1tbs amaretto or sherry

Preheat oven to 200°C. Peel chestnuts using small, sharp knife and leaving inner skin. Place chestnuts in shallow heatproof dish and bake 10 to 15 minutes, or until skin dries and peels off easily. Rub cooked nuts in rough cloth to remove skins. Place chestnuts in

saucepan with vanilla and water to cover and bring to a boil over high heat. Reduce heat, cover and simmer for 25 to 30 minutes, or until very tender. Drain chestnuts, put through food mill or sieve, or puree in a food processor. Set aside.

In a saucepan, combine cocoa, milk, sugar and butter and cook slowly over hot water for 10 minutes, stirring constantly. Add pureed chestnuts and eggs and stir well.

Butter a 1½ litre bowl and pour in mixture. Place the bowl in a pan of hot water and bake in a moderate oven 180°C for about 45 minutes until pudding is firm. Unmould carefully and serve with cream.

Work with Chefs – Public Cooking Demonstration – Chestnut Roast



Red Chestnut: 1400g (3.1lb) chestnuts for 1000g (2.2lb) net weight.
 Yellow Chestnut: 1400g (3.1lb) chestnuts for 1000g (2.2lb) net weight.
 On 100g (3.5oz) scale, use 100g (3.5oz) chestnuts for 100g (3.5oz) net weight.
 Yellow Chestnut: 1400g (3.1lb) chestnuts for 1000g (2.2lb) net weight.



To Prepare

1. Use chestnut in recipe.
2. Cut in score halfway around the chestnut and peel.

To Cook

- To roast or boil: Preheat oven to 200°C. Cook peeled chestnuts in oven with olive oil and butter for 20-30 minutes. Preheat oven to 200°C. Cook peeled chestnuts in oven with olive oil and butter for 20-30 minutes. Preheat oven to 200°C. Cook peeled chestnuts in oven with olive oil and butter for 20-30 minutes.
- To fry: Fry peeled chestnuts in oil for 2-3 minutes until skin is crisp and chestnut is soft.
- To grill: Grill peeled chestnuts at the end of sticks and heat through. Using fork of tongs, turn over and grill for 2-3 minutes until skin is crisp and chestnut is soft.
- To puree: Peel cooked chestnuts. Place in a bowl and puree with olive oil and butter.

To Peel

- Wash cooked chestnuts in a hot bowl. Remove outer shell and inner membrane of chestnut with warm and damp.

To Store

- Store chestnuts in an airtight container or plastic bag in the cooler section of the refrigerator.

nutritional content of chestnuts

Chestnuts contain carbohydrates and are high in fibre and low in sodium and fat. They are also a good source of vitamin C, B1 and B2 and protein. Chestnuts are the only nut allowed on the Paleo Diet.
 Chestnut is a natural heart friendly food.

For a recipe book or further information visit www.chestnutgrowers.com.au

australian chestnuts

food for the body & soul

versatile chestnuts



For a recipe book or further information visit www.chestnutgrowers.com.au

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snack



Chestnut Dip with Toast

Serves 2-3
 100g chestnuts, peeled
 100g olive oil
 100g butter
 100g cream
 100g parmesan
 100g chestnuts, baked and chopped in large chunks

Cook peeled chestnuts in stock, using just enough to cover chestnuts. When cooked, the liquid should be considerably reduced. Push through a sieve if necessary. Melt with a dash of water in a food processor until a smooth paste is formed. Return the paste to the pan, add a pinch of salt and butter to thicken. Add cream and parmesan to the paste and mix until smooth. Serve with toast, cheese and sliced, garnished with a thin slice of apple.

pasta



Potato and Chestnut Gnocchi with Lemon, Spinach and Blue Cheese Sauce

Serves 4
 100g olive oil
 100g parmesan
 200g chestnuts, baked and chopped in large chunks

Dry bake whole unpeeled potatoes until soft (see prep and cook) or cut through a food mill or sieve. While still hot, mix with flour, salt to taste, butter and parmesan. Shape into balls to cook, then lightly roll in chestnuts, coating evenly. While baking a pot of water with a pinch of salt, not adding rice into a garbage disposal and cut the stem in half. Drain the boiling water and scoop out when they have risen to the top. Drain in colander. Flour lightly over the top and garnish with parmesan.

To make the sauce, melt butter and add olive oil to fry chestnuts. Add chestnuts and reduce by half. Add cream and bring to a simmer. Add thyme, parmesan and lemon juice. Season with salt and pepper. The sauce should be quite thin. Add chopped garlic and butter, bring over gentle heat.

soup



Chestnut and Pumpkin Soup

Serves 2
 100g chestnuts
 100g pumpkin
 100g olive oil
 100g butter
 100g cream
 100g parmesan
 100g chestnuts, baked and chopped in large chunks

In a large saucepan, combine olive oil, pumpkin, chestnuts, butter and chestnuts. Bring to a boil. Reduce to a low simmer and allow to cook for 20 minutes. Add cream and bring to a simmer. Add thyme, parmesan and lemon juice. Season with salt and pepper. The soup should be quite thin. Add chopped garlic and butter, bring over gentle heat.

pasta



Spaghetti with Cured Salmon and Chestnuts

Serves 4-6
 100g chestnuts
 100g olive oil
 100g butter
 100g cream
 100g parmesan
 100g chestnuts, baked and chopped in large chunks

Cook spaghetti in stock. Drain and mix with olive oil. Add chestnuts and parmesan. Season with salt and pepper. The sauce should be quite thin. Add chopped garlic and butter, bring over gentle heat.

How to Market Your Chestnuts

Publicity is free!

- Develop a great website
- Get on local radio programs to promote your product at a charity event
- Roast (and sell) chestnuts at fairs, events, festivals, charity fundraisers, ...
- Contact the food editor in the local paper to run a story on your business with some great recipes
- Mentor an FFA Chapter !!!

Roasting at Columbia Farmers Market Folks love it!



“Living Windows” Downtown Columbia Holiday Spirit



Future Market Growth

- Create value added products
 - Chestnut flour and associated product mixes
 - Baked goods
 - Chestnut puree
 - Chestnut honey
 - Peeled frozen, dried
 - Chestnut (acorn) reared pork products
 - ❖ From Spain



Another niche
market value added
opportunity

Chestnut flour -
gluten free



gluten
solutions

Buy Food

◀ Home



[Gluten Free Foods](#) --> [Flours](#) --> Italian Chestnut Flour - NEW!

BUY

Review This Product

◀ Back

Name: Italian Chestnut Flour - NEW!

SKU: Dowd-4

Brand: Dowd & Rogers - No wheat, gluten, casein, dairy, egg, corn, potato, soy.

Price: \$7.95

Quantity: 78

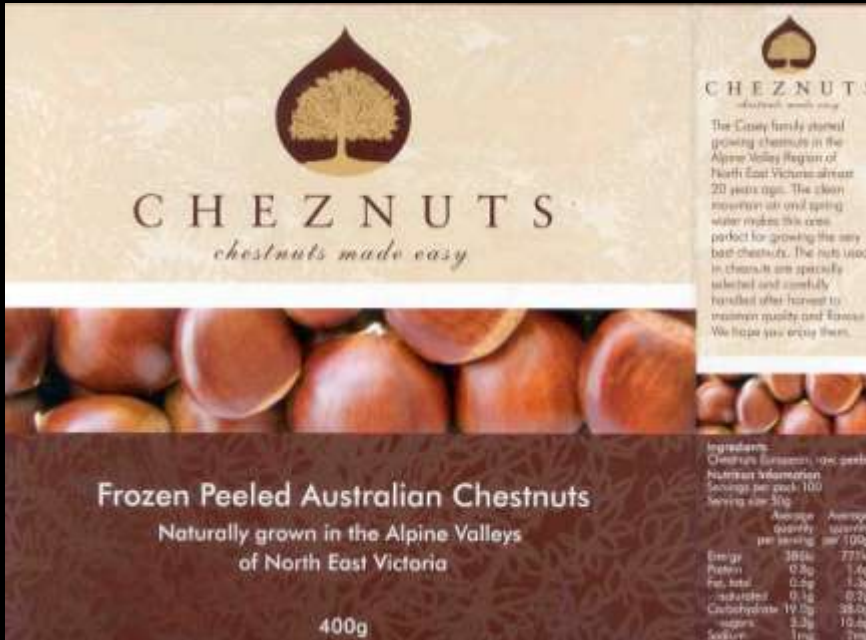
Size: 14 Oz. Box

Description: Imported from Italy, our chestnut flour is full of sweet, nutty flavor. The perfect ingredient for adding more flavor to all your baked goods. Substitute up to one-third of the recommended flour in your favorite recipes with chestnut flour. And unlike other nut flours, chestnut flour is remarkably low in fat -- a single serving contains only 1 gram of fat!

INGREDIENTS: 100% Italian Chestnut Flour.



With our “ready to eat” culture - frozen, peeled chestnuts may dominate future sales volume (personal opinion)



Australia - Cheznuts

Michigan - CGI



Chestnut Beer! ☺

JOLLY PUMPKIN ARTISAN ALES

DEXTER, MICHIGAN

Here at **Jolly Pumpkin Artisan Ales** we take pride in our beers and production methods. With our focus on open fermentation, oak aging, and bottle conditioning we are dedicated to elevating the craft of brewing into an art! **Read more** exciting details about our brewing process.



Fuego del Otoño - To catch a bit of soft radiance in each bottle, we wait for fall colors to begin their bright and fleeting glow before brewing this wonderful ale under their autumn fire. Gentle amber malt blend smooth caramel notes, gently lapping against a shore of distant forgotten spice. A beer to sip, contemplate and enjoy.

Seasonal released in October
6.1% Alc./Vol.
750ml bottles



Value Added: Acorn (Chestnut) Reared Pork



Herb and Kathy Eckhouse of La Quercia, Des Moines, Iowa

NY Times Magazine

January 29, 2009

Field Report

Aging Gracefully

By

Christine Muhlke



Chestnut honey?

Join the Chestnut Growers of America



Chestnut Growers of America
(formerly known as Western Chestnut Growers' Assn.)
Your Resource for Chestnuts and the Chestnut Industry

HOME RECIPES NUTRITION HISTORY EVENTS GROWERS CONTACT

NEWS AND EVENTS

CGA Annual Meeting

July 21-22, 2007
Michigan State University
East Lansing, MI

More information to come

NNGA Annual Meeting

National Chestnut Week

Sunday, Oct. 14 -
Saturday Oct. 20
Look for chestnut festivals
and other special events in
your area

American Grown Chestnuts ... ask for them in your store

You'll find them at the orchard or in your local supermarket from September through December. Ask your produce manager to make sure they were grown in the U.S.

You can also buy direct from many growers. Go to "GROWERS" and select "DIRECTORY" to find a grower in your area of the country.



Chestnut Growers of America

represents chestnut growers, researchers and others throughout the United States and Canada. They advocate the delivery of high quality chestnuts to the marketplace and to your family's table.



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www.chestnutgrowers.com



Summary - Barriers to Success

- Lack of information for producers, retailers and consumers
- 5 to 10 year time lag to get a return on investment
- Shortage of available chestnut cultivars for commercial production.
- Potential problems related to pest and disease control
- Affordable commercial harvester needed
- Markets and market structure are undeveloped

Final Thoughts

- **Establishment of viable chestnut industries for the family farm will depend on:**
 - **consumer market development = inc. demand**
 - **increased production**
 - **active collaboration among producers**
 - **a quality product that can be sold for a good price**
 - **value added product development**

Questions?

