



CGA Annual Market Survey 2018-2019

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The Center for Agroforestry
University of Missouri

A Global Center for Agroforestry, Entrepreneurship and the Environment

Overall US Chestnut Industry Has Grown Inconsistent Between States – # Farms and #Acres is UP!

Fruits and Nuts: 2012 and 2017

Table 31.

(D)=Withheld to avoid disclosing data for individual farms.

(US Census of Agriculture)

Chestnut farms and acreage decreased in California and Florida

	Total		Bearing Age Acres		Nonbearing age acres	
	Farms	Acres	Farms	Number	Farms	Number
United States						
Total	2012 919	3,784	591	2,046	526	1,378
	2017 1,587	4,228	841	2,185	975	2,043
<u>Selected states:</u>	2012/2017	2012/2017	2012/2017	2012/2017	2012/2017	2012/2017
Iowa ↑	35/68	191/333	13/37	47/135	30/50	144/198
Michigan ↑	115/143	617/675	79/70	442/360	54/94	175/316
Missouri ??	34/59	199/143	25/28	76/(D)	24/44	124/(D)
Ohio ↑	41/75	239/332	21/40	128/163	28/47	111/170
Virginia ↑	53/62	228/299	23/24	157/154	38/48	72/146
Pennsylvania ↑	64/131	137/157	31/88	102/71	42/58	35/86

CGA Market Survey

- Conducted annually since 2010
- Survey CGA members
- To provide an updated information on chestnut production, harvesting and marketing.



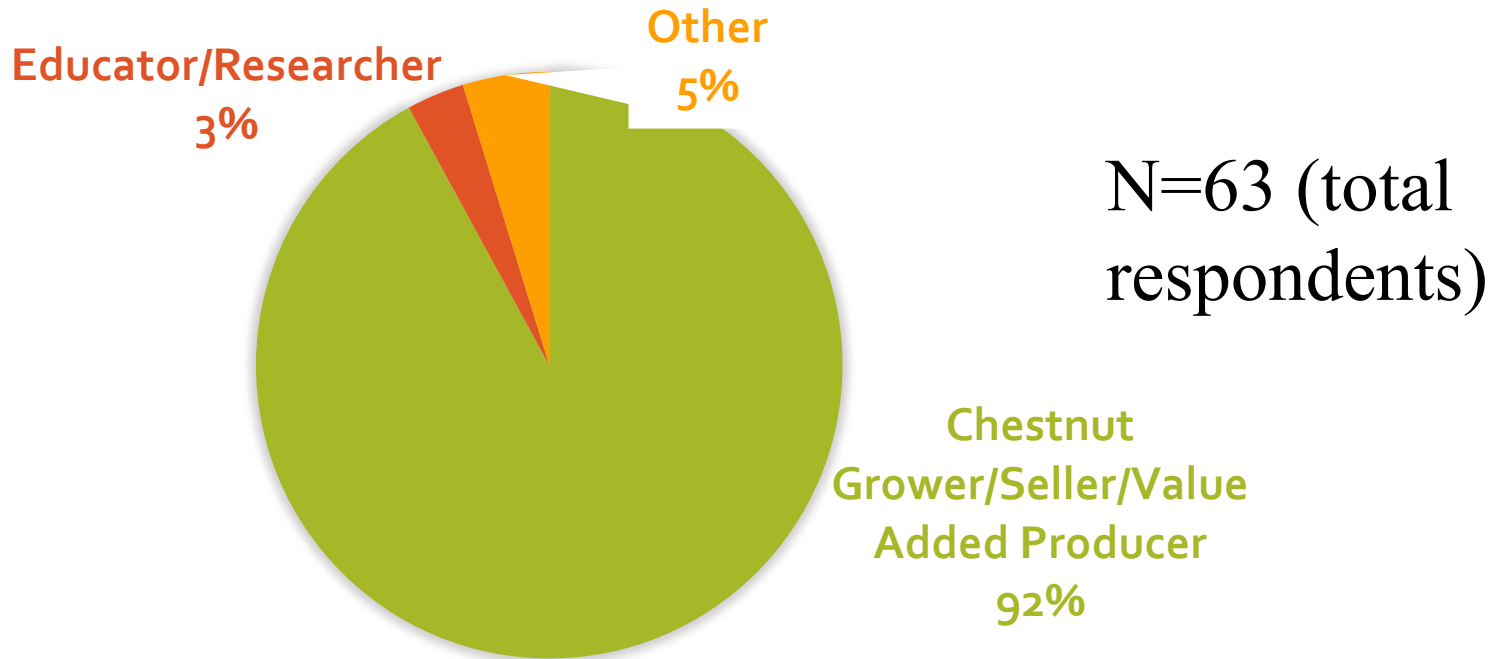
The 2018-2019 CGA Market Survey

- Added
 - Information on orchards that are at least 15 years old
 - Information from co-op members
 - Compared results with past three years
 - Brief information on chestnut cooperatives



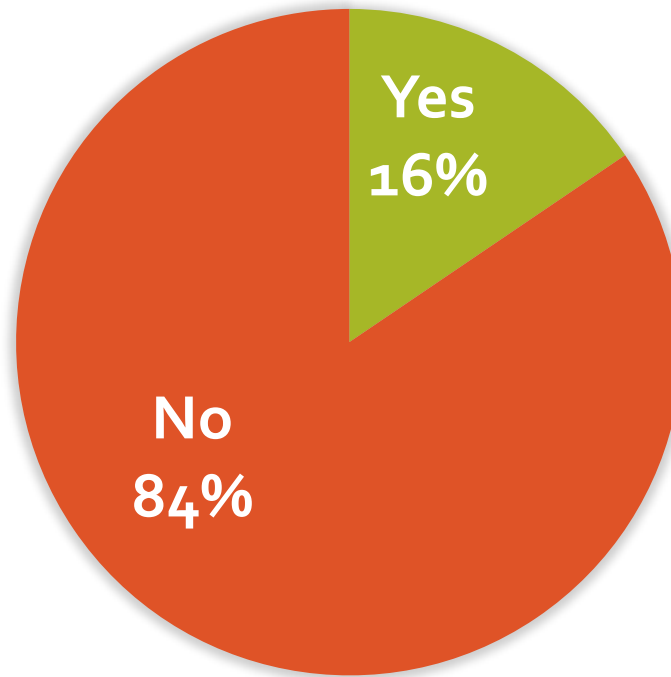
Survey participants-Activities

WHICH OF THE FOLLOWING BEST DESCRIBES YOU?



	2018-2019	2017-2018	2016-2017	2015-2016
Chestnut Grower / Seller / Value added Producer	92%	96%	82%	81%
Educator / Researcher	3%	0%	2%	8%
Other	5%	4%	16%	11%

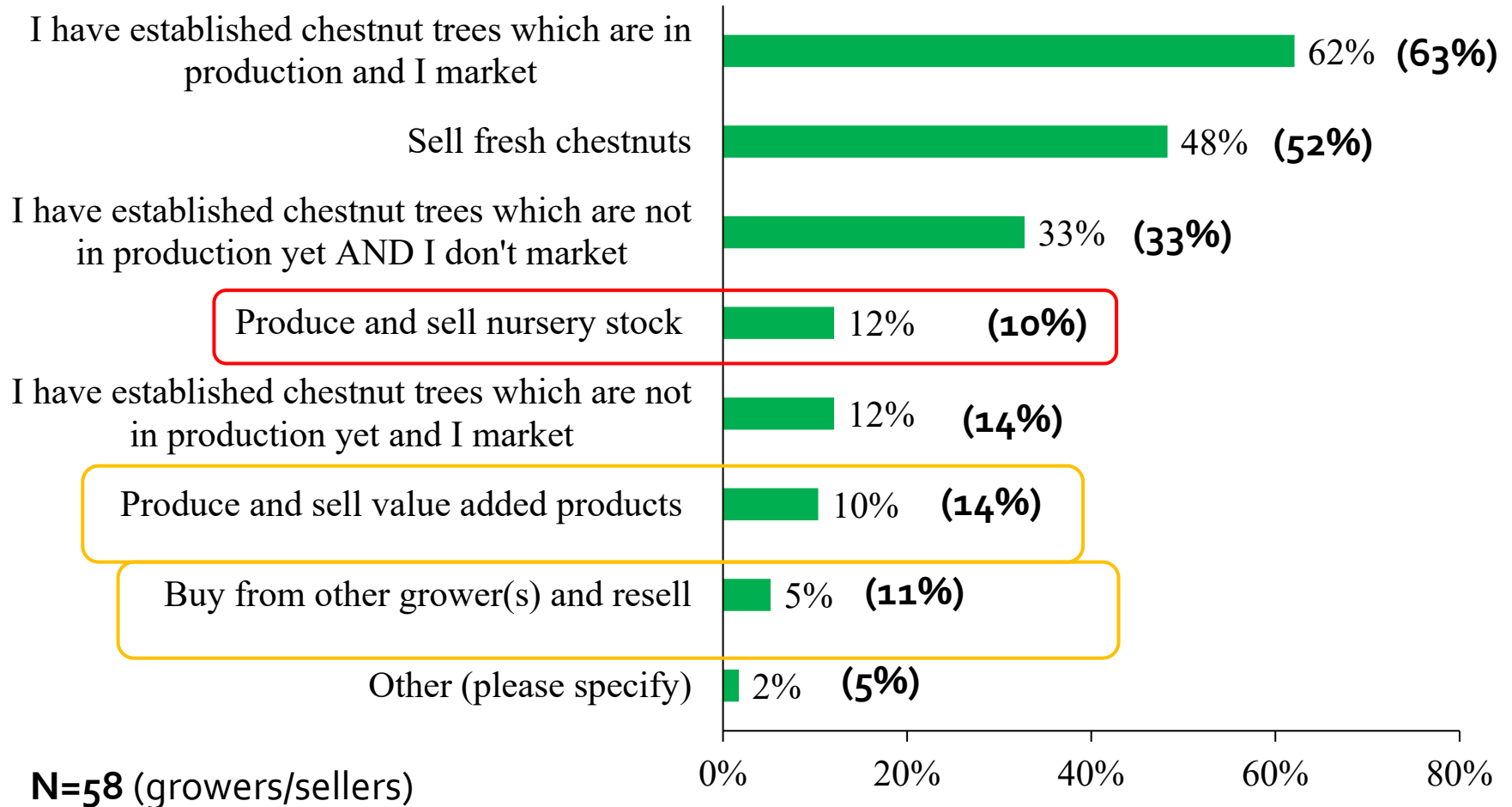
Membership - Chestnut Cooperatives



N=58

- Chestnut Growers, Inc. (5)
- RT 9 co-op (2)
- Prairie Grove Chestnut Growers (2)

Survey participants-Activities



Numbers in parentheses are averaged results from past surveys conducted in 2016, 2017, and 2018.

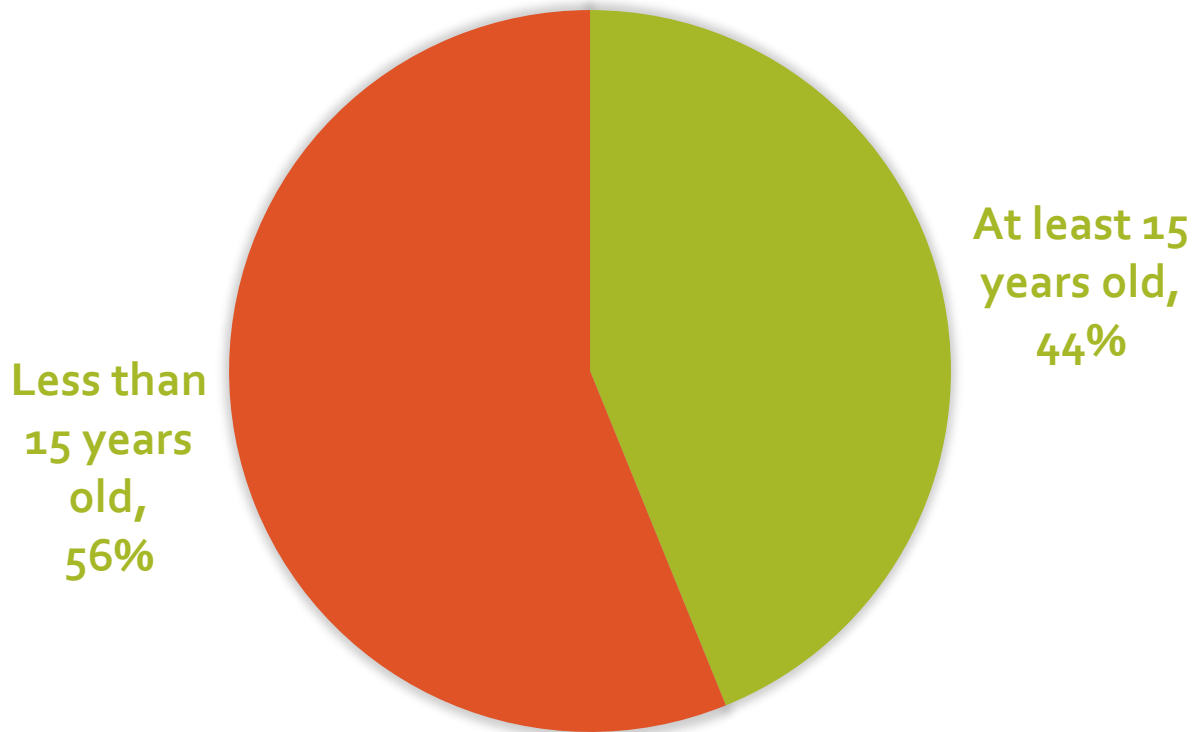
Survey participants – Orchard Location – 24 States*

State	# of orchards	State	# of orchards
AL	1	NE	1
CA	4	NY	1
FL	1	NC	3
GA	1	OH _(coop)	2
IA _(coop)	5	OK	2
IN	1	OR	3
IL	7	PA	1
KS	1	SC	1
MA	1	TN	1
MI _(coop)	6	VA	3
MO	6	WA	4
MS	1	WV	1
		Total	58

* Increased from 17 states (41%) since 2015. The 2015-2016 survey also received 58 responses.

Production Operation: Orchard Age (2018/19)

HOW OLD IS YOUR ORCHARD?



Co-op members (N=8)

- 38% less than 15 years old
- 62% at least 15 years old

N=57

Production Operation - 2018/2019

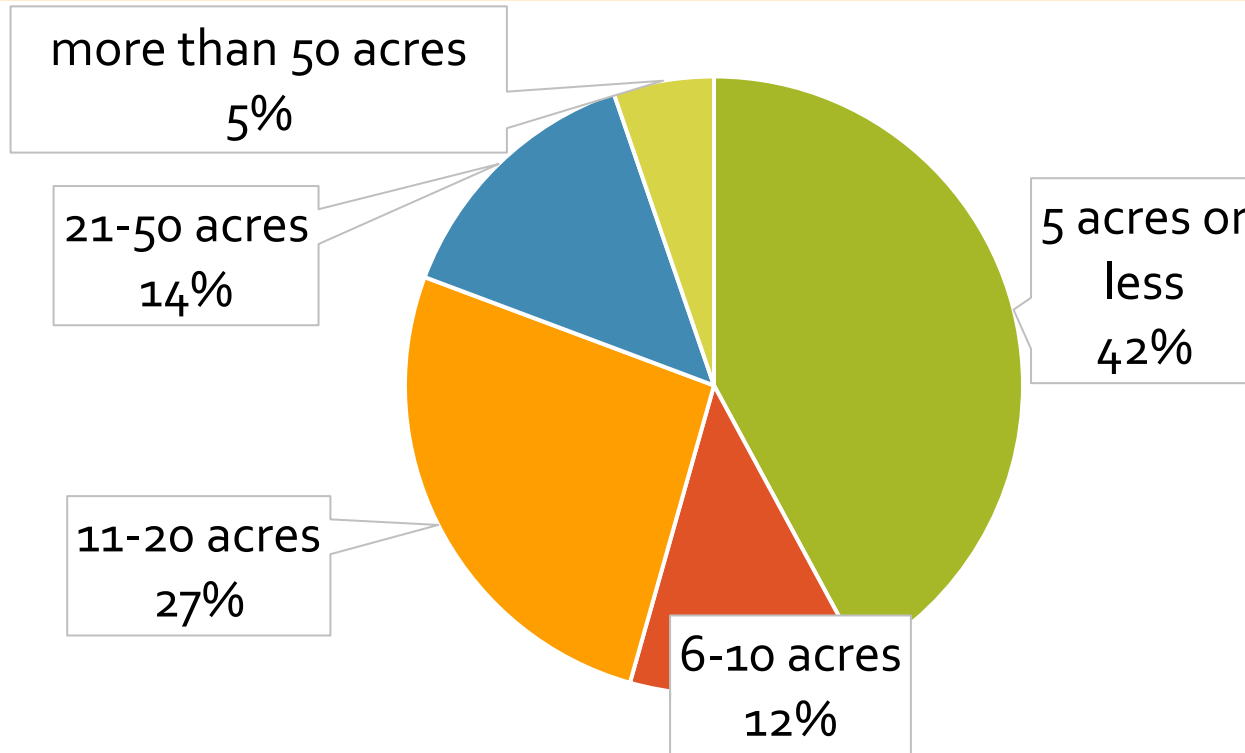
- 824 acres in total planted in chestnuts (out of 4,228 USA)
 - 277 acres (34%) are at least 15 years old
 - 247 acres (30%) are from co-op members (27 acres per co-op member)

	2018-2019	2017-2018	2016-2017	2015-2016
Total acres planted in chestnuts	824 ac* (19 ac/resp)	663 ac (15 ac/resp)	554 ac (17 ac/resp)	655 ac (12 ac/resp)
Commercial production	397 ac (2,185 USA) (9 ac/resp)	239 ac (6 ac/resp)	279 ac (8 ac/resp)	384 ac (6 ac/resp)

* “resp” = respondent

Production operation - 2018/2019

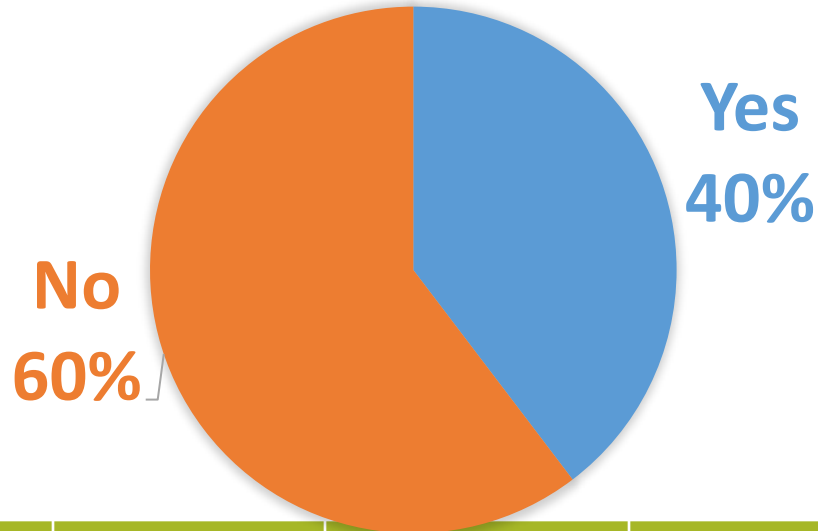
- 54% have less than 10 acres planted
- 44% of co-op members have less than 10 acres planted



	2018-2019	2017-2018	2016-2017	2015-2016
<10 acres planted	54%	51%	49%	66%

Production operation: Plans (2018/19)

ARE YOU PLANNING TO EXPAND
YOUR ORCHARD?

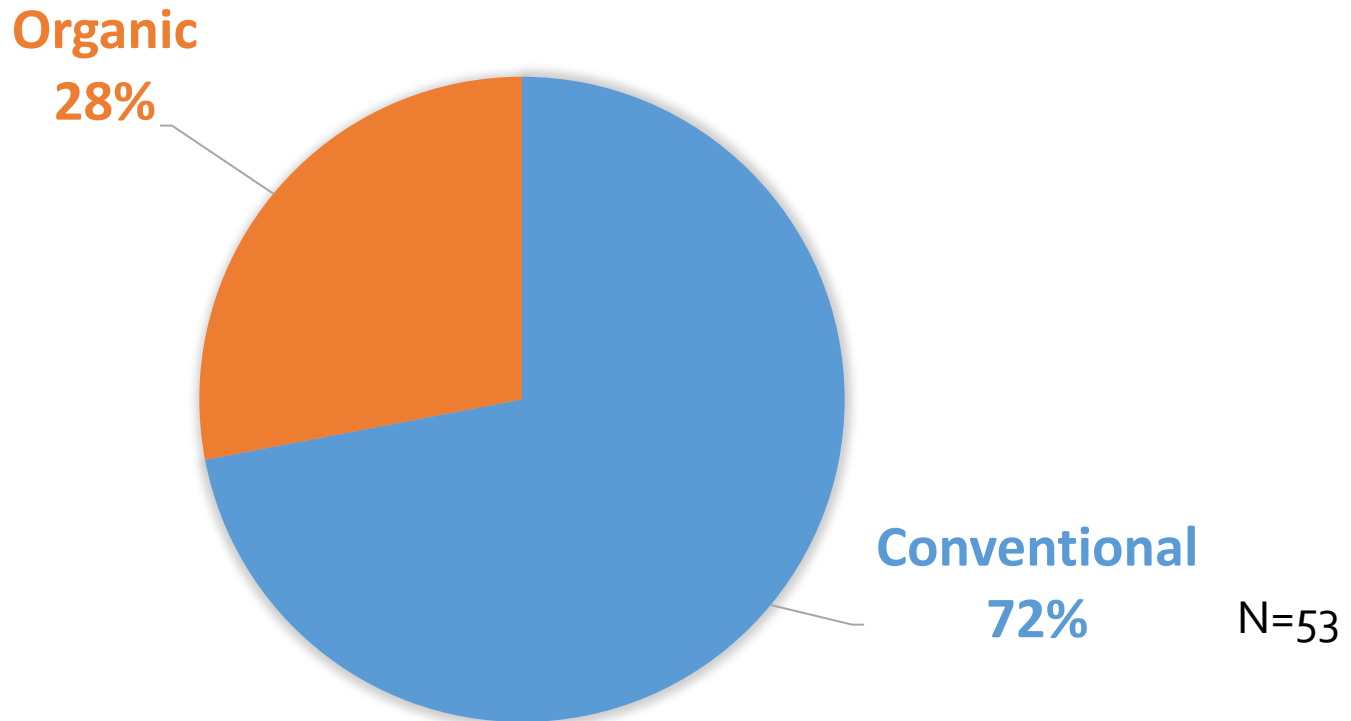


236 new acres and
10,740 new trees
planned to be planted

N=58

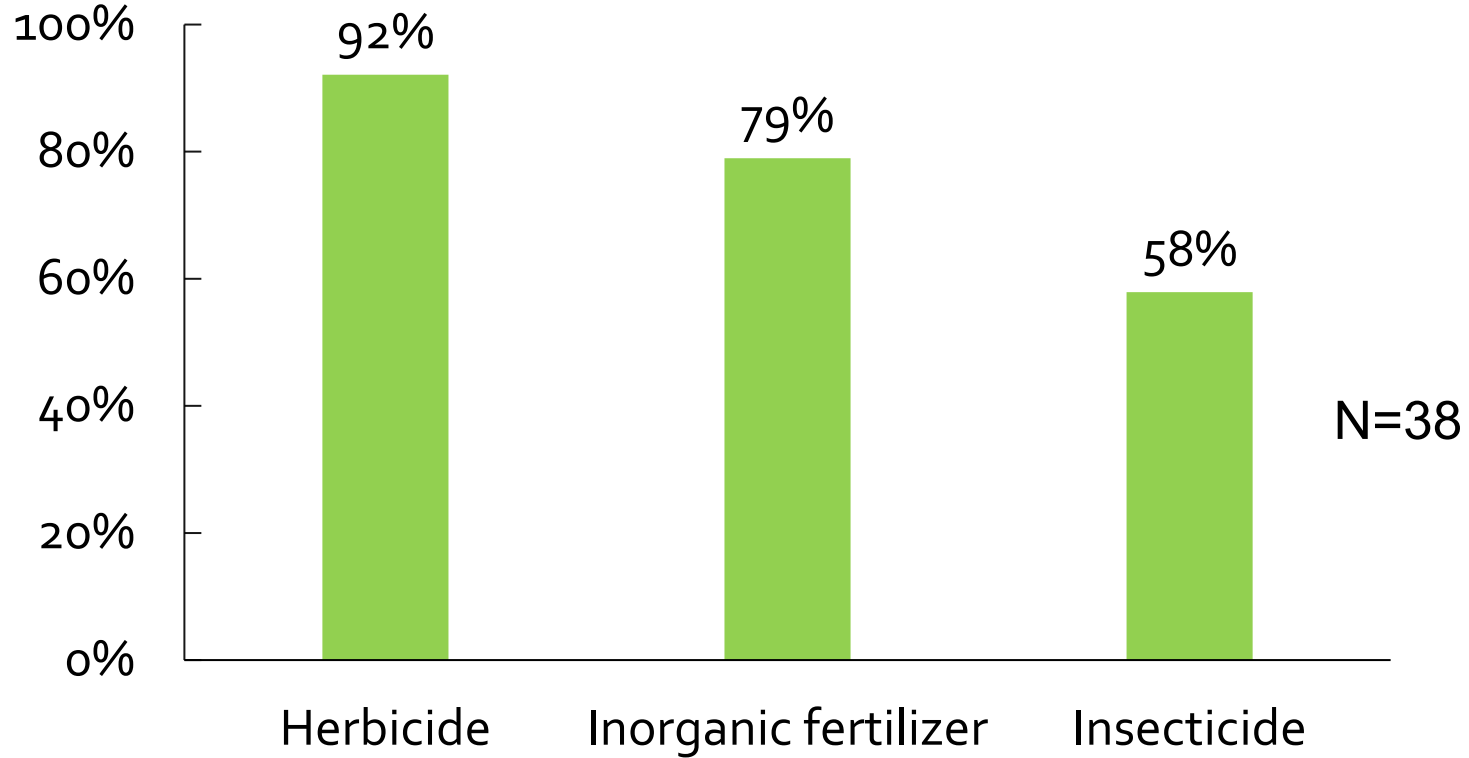
	2018-2019	2018-2019 (Co-op) N=9	2017-2018	2016-2017	2015-2016
Yes	40%	44%	39%	45%	43%
No	60%	56%	61%	55%	57%
New Acres	236	27	157	66	167
New Trees	10,740	3,050	15,000	3,490	8,127

Production operation: Production process



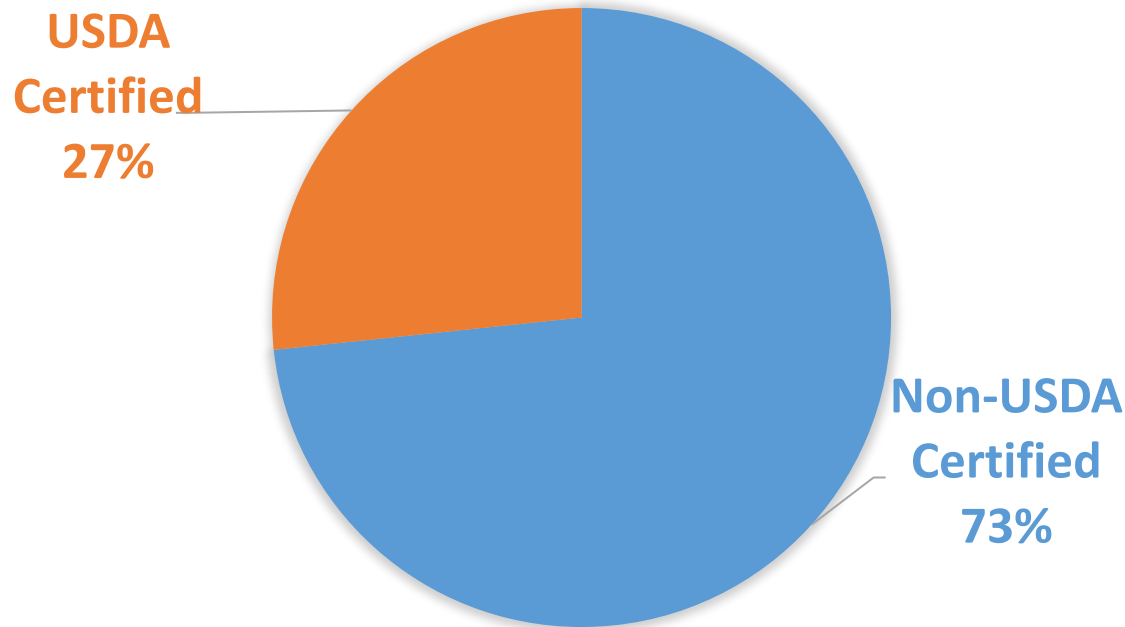
	2018-2019	2018-2019 (Co-op)(N=9)	2017-2018	2016-2017	2015-2016
Organic	28%	11%	27%	23%	22%
Conventional	72%	89%	73%	77%	78%

Conventional Production



	2018-2019	2018-2019 (Co-op) (N=8)	2017-2018	2016-2017	2015-2016
Use herbicide	92%	86%	85%	78%	78%
Use inorganic fertilizer	79%	100%	58%	56%	54%
Use insecticide	58%	100%	82%	81%	80%

Organic Production



N=15

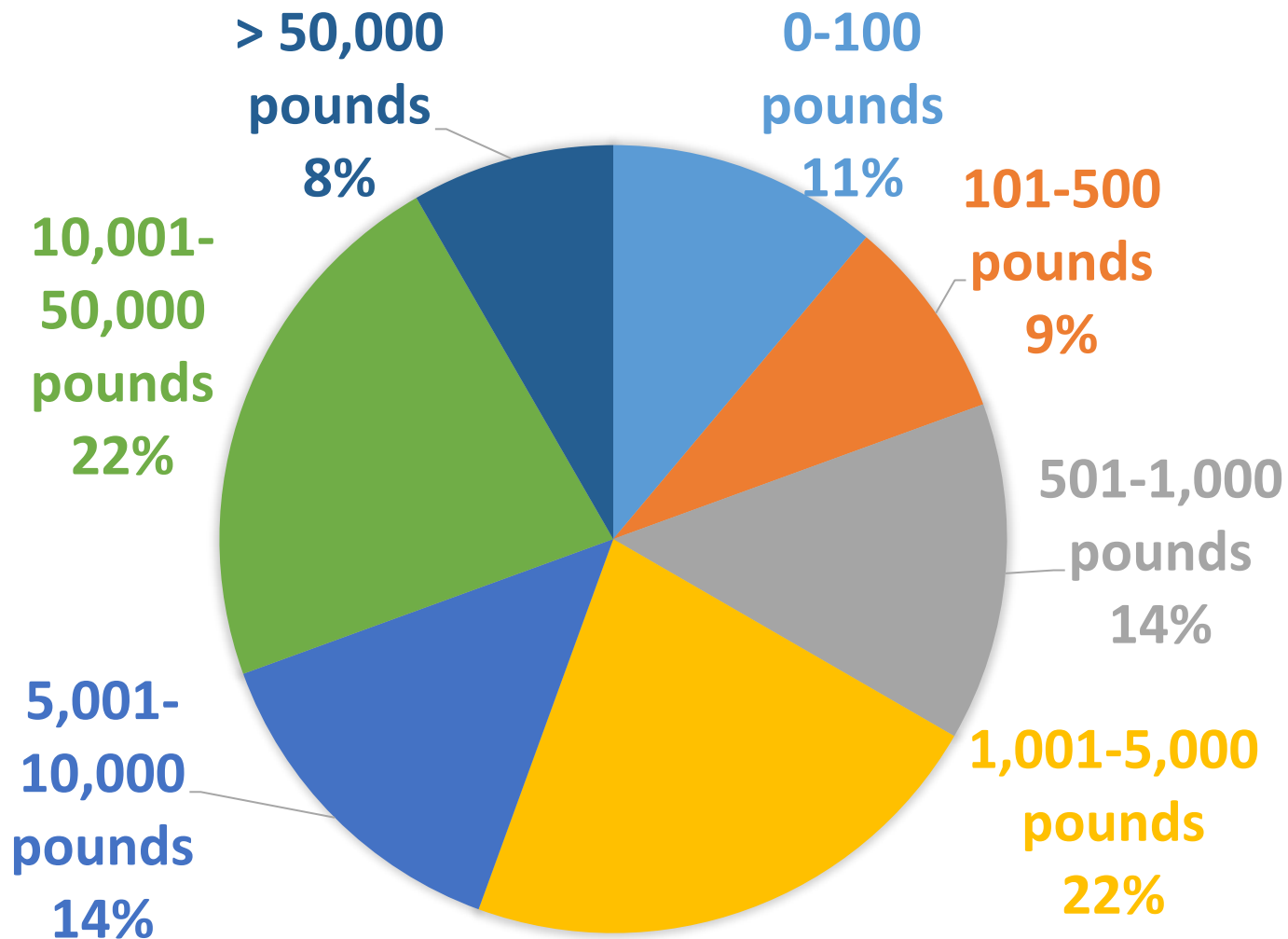
	2018-2019	2018-2019 (Co-op) (N=1)	2017-2018	2016-2017	2015-2016
USDA Certified	27%	0%	23%	29%	23%
Non-USDA Certified	73%	100%	77%	71%	77%

2018-2019 Production Season

- Total pounds of chestnuts harvested:
 - 469,706 lbs
 - 90% (421,945 lbs) from orchards at least 15 years old
- Orchards younger than 15 years: 209 lbs/ac (avg)
- Orchards at least 15 years: 961 lbs/ac (avg)

	2018- 2019	2018-2019 (Co-op)	2017- 2018	2016- 2017	2015- 2016
Chestnuts harvested (lbs)	469,706	138,460	363,975	294,452	477,424

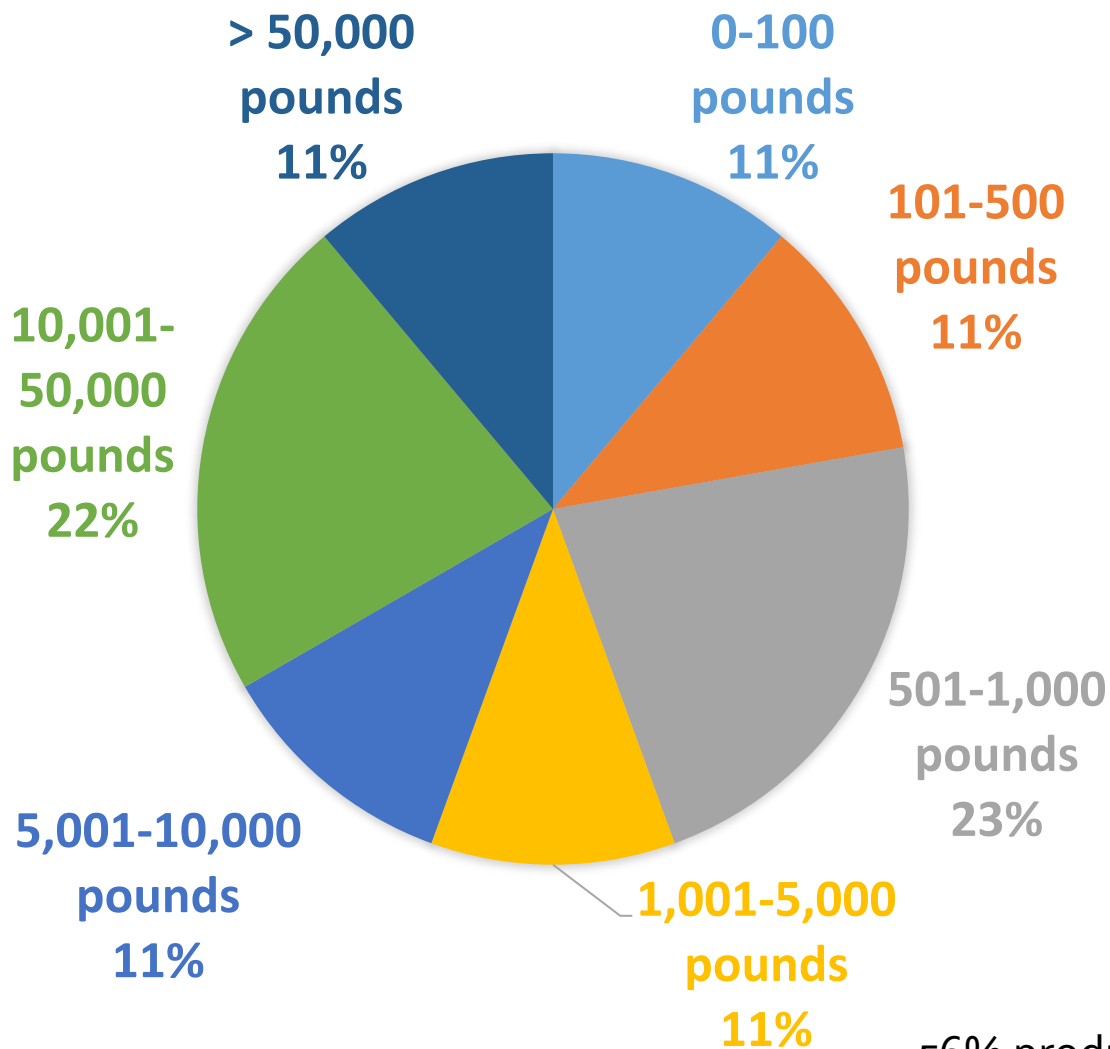
2019 Production Season – Pounds Produced



N=36

56% produce 5,000 lbs or less

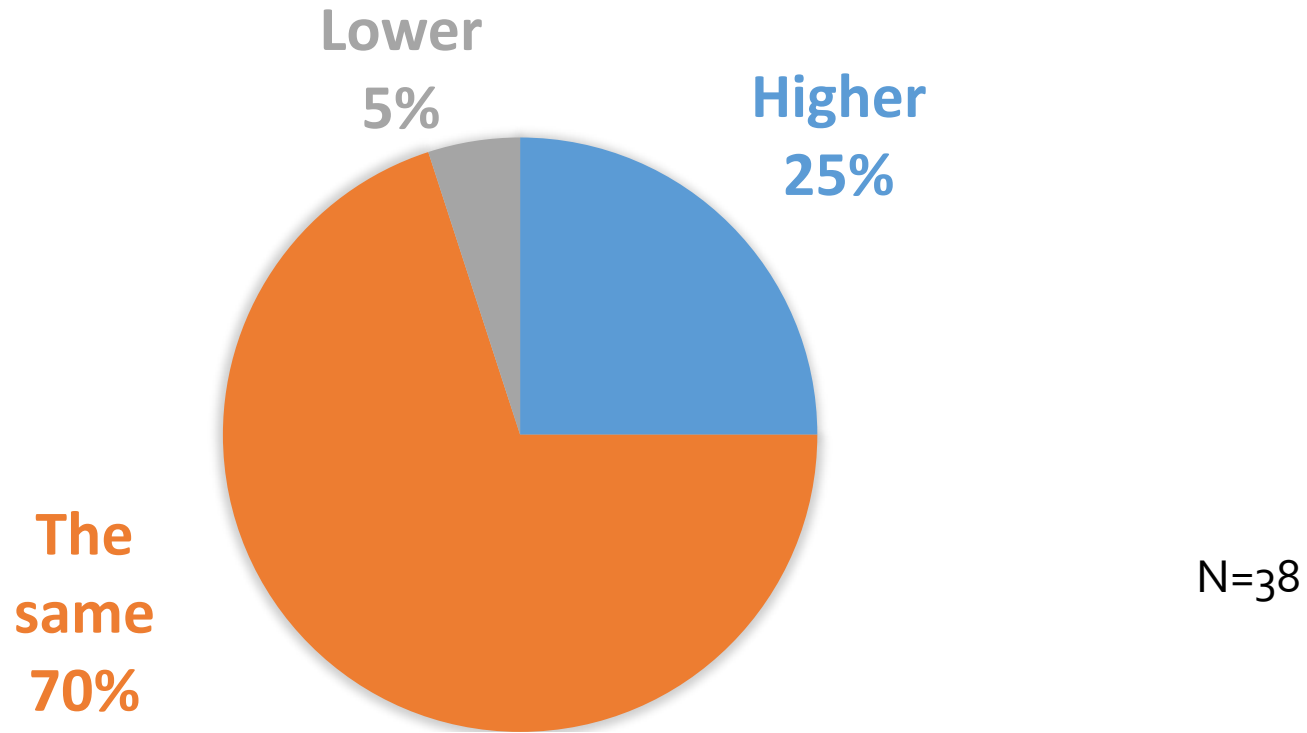
2019 production season (Co-op members)



N=9

56% produce 5,000 lbs or less

2018 Yields: Comparison to 2017



	Lower	Higher	The Same
2018-2019	6%	69%	25%
2017-2018	40%	32%	28%
2016-2017	30%	57%	13%
2015-2016	15%	63%	22%

2018 Yields: Comparison to 2017

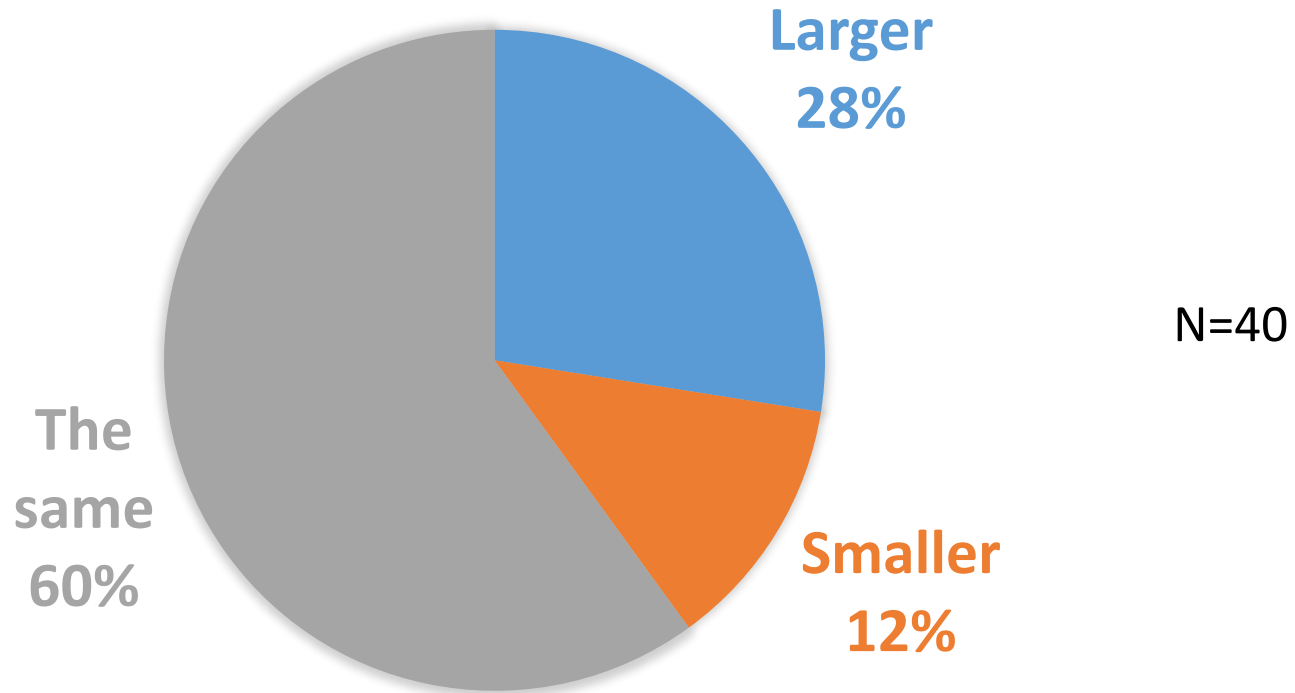
Higher yield

- Trees grew and coming into production
- Less decay
- Good weather at harvest and adequate moisture
- Good pollination
- Very dry year, use of water and fertilizer
- 2017 was a down year

Lower yield

- Had a lot of rain and reduced sunny days in the last month of the growing season
- Lack of fertilizer and Japanese Beetle infestation
- Storms
- Due to drought and lack of irrigation, I had a large number of chestnuts, but they were too small to sell
- Blossom end rot issues

2018 Chestnut Size: Comparison to 2017



	Smaller	Larger	The Same
2018-2019	12%	28%	60%
2017-2018	32%	16%	52%
2016-2017	13%	39%	48%
2015-2016	20%	29%	51%

2018 Chestnut Size: Comparison to 2017

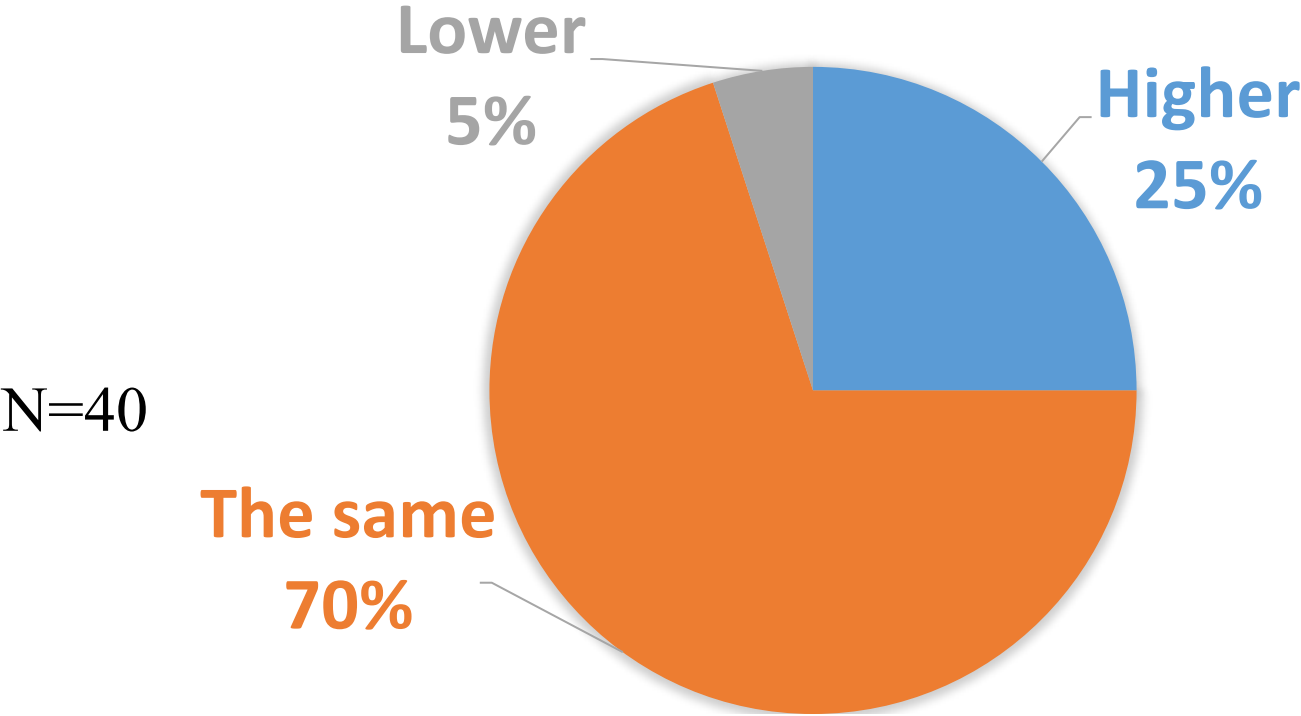
Larger size

- More favorable growing conditions
- Irrigation, timely rains
- Fertilizer

Smaller size

- Too much rain, not enough sun.
- Drought

2018 Chestnut Quality



	Lower	Higher	The Same
2018-2019	5%	25%	70%
2017-2018	21%	8%	71%
2016-2017	18%	32%	50%
2015-2016	10%	28%	62%

2018 Chestnut Quality

Higher quality

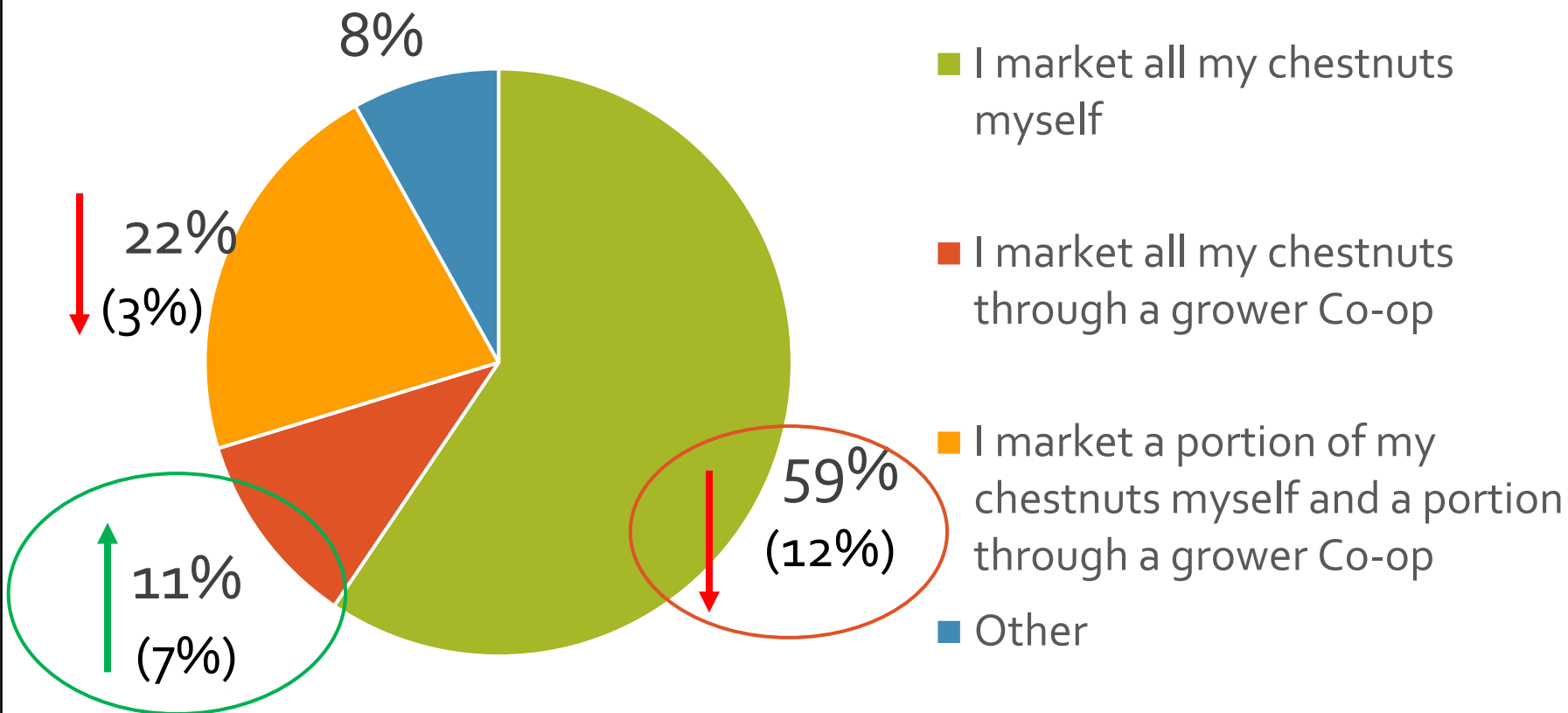
- Healthy
- Prompt harvest
- Less mold
- Size improvement
- Larger nuts, no splits
- Weather during pollination was much better

Lower quality

- Mud
- Blossom end rot

Survey participants - Marketing

(% Change from 2017)



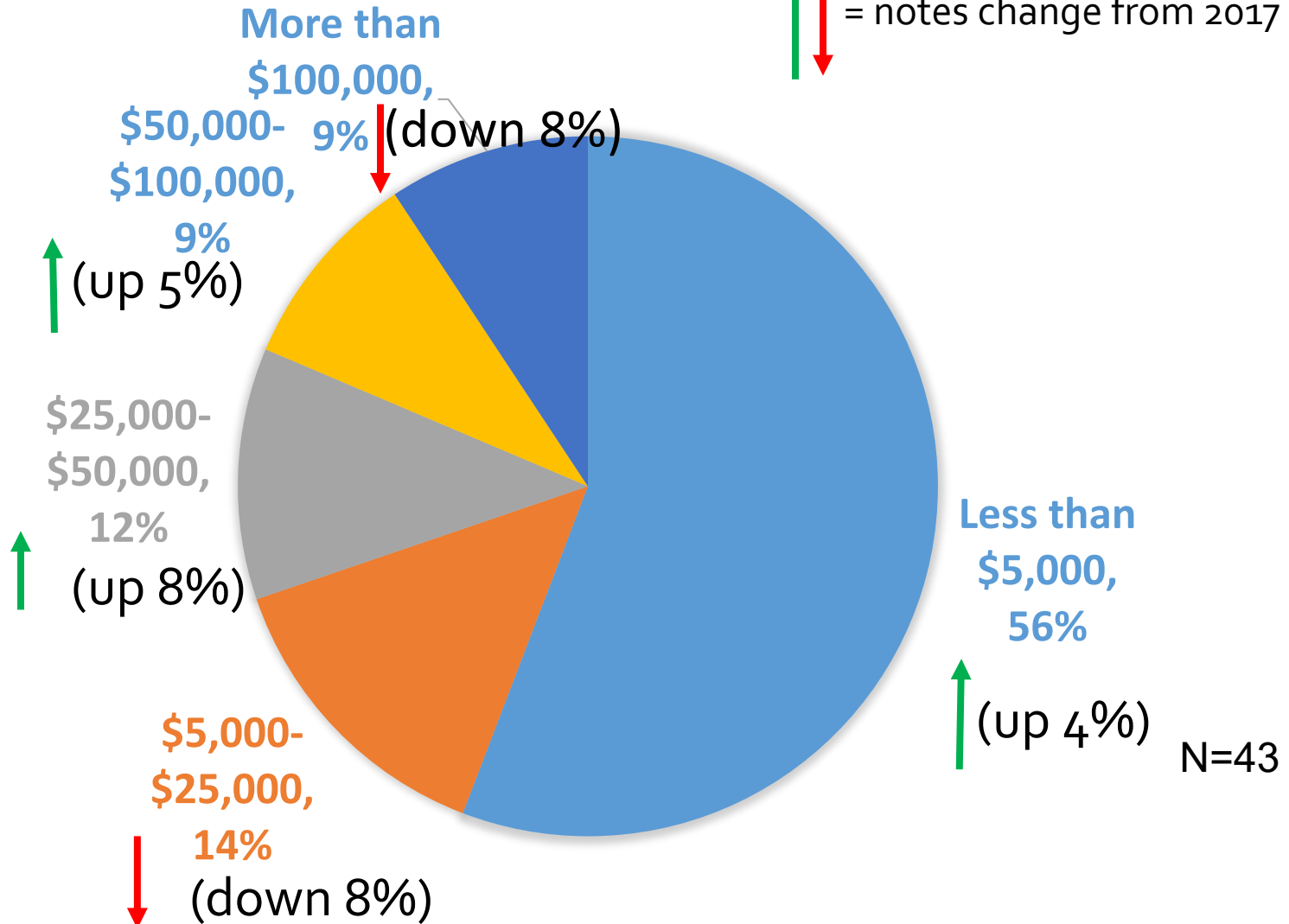
↑ ↓ = notes change from 2017 survey

N=37

The 2018/19 Marketing Season

Approximate annual gross sales figure from chestnuts in 2018
excluding shipping and delivery

↑ ↓ = notes change from 2017 survey



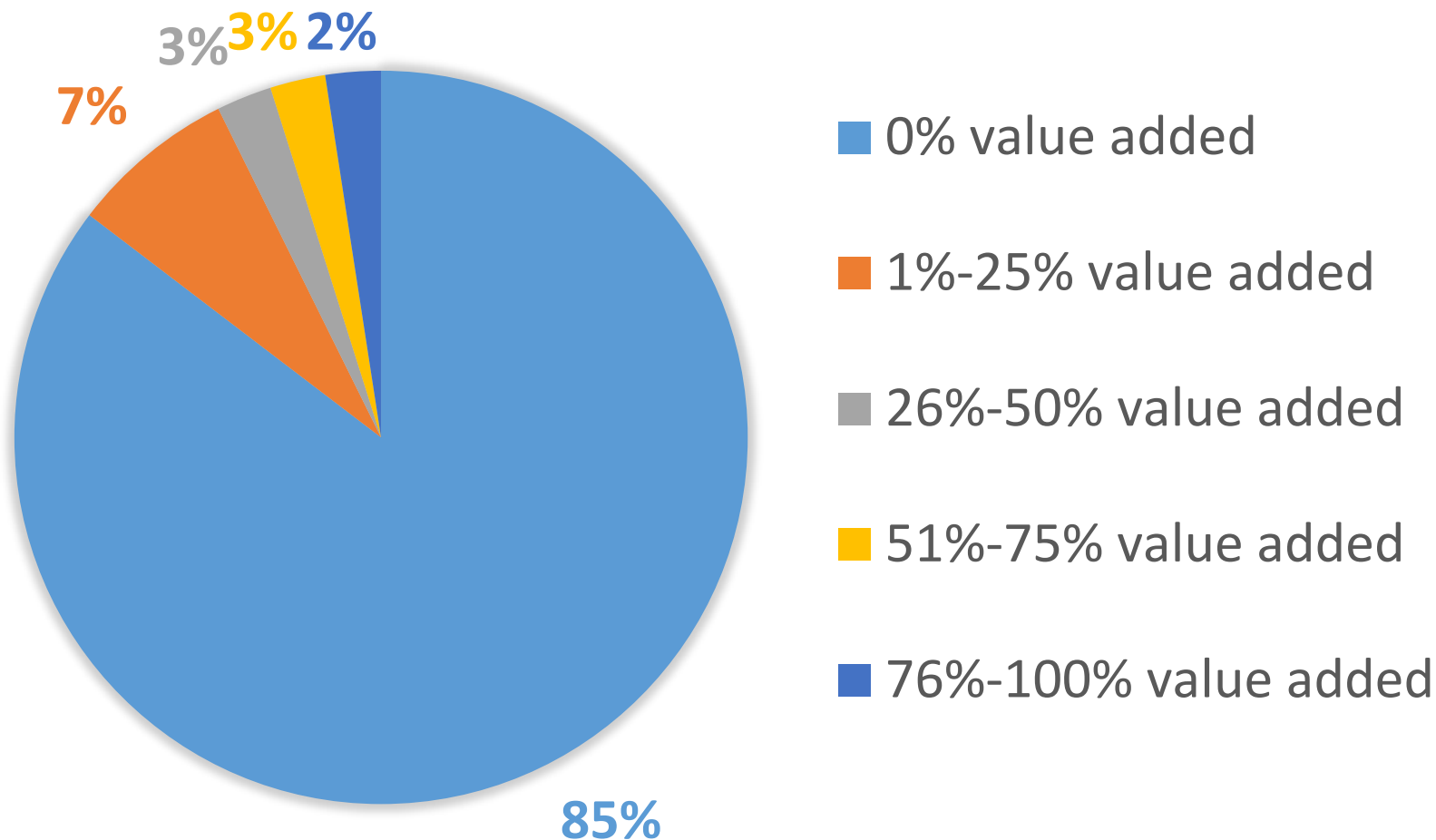
The 2018/19 marketing season

Approximate annual gross sales figure from 2018 - excludes shipping and delivery

	2018- 2019	2018- 2019 (Co-op)	2017- 2018	2016- 2017	2015- 2016
Less than \$5,000	56%	56%	52%	57%	41%
\$5,000-\$25,000	14%	22%	22%	9%	31%
\$25,000- \$50,000	12%	0%	4%	4%	13%
\$50,000- \$100,000	9%	11%	4%	13%	5%
More than \$100,000	9%	11%	18%	17%	10%

The 2018/19 marketing season

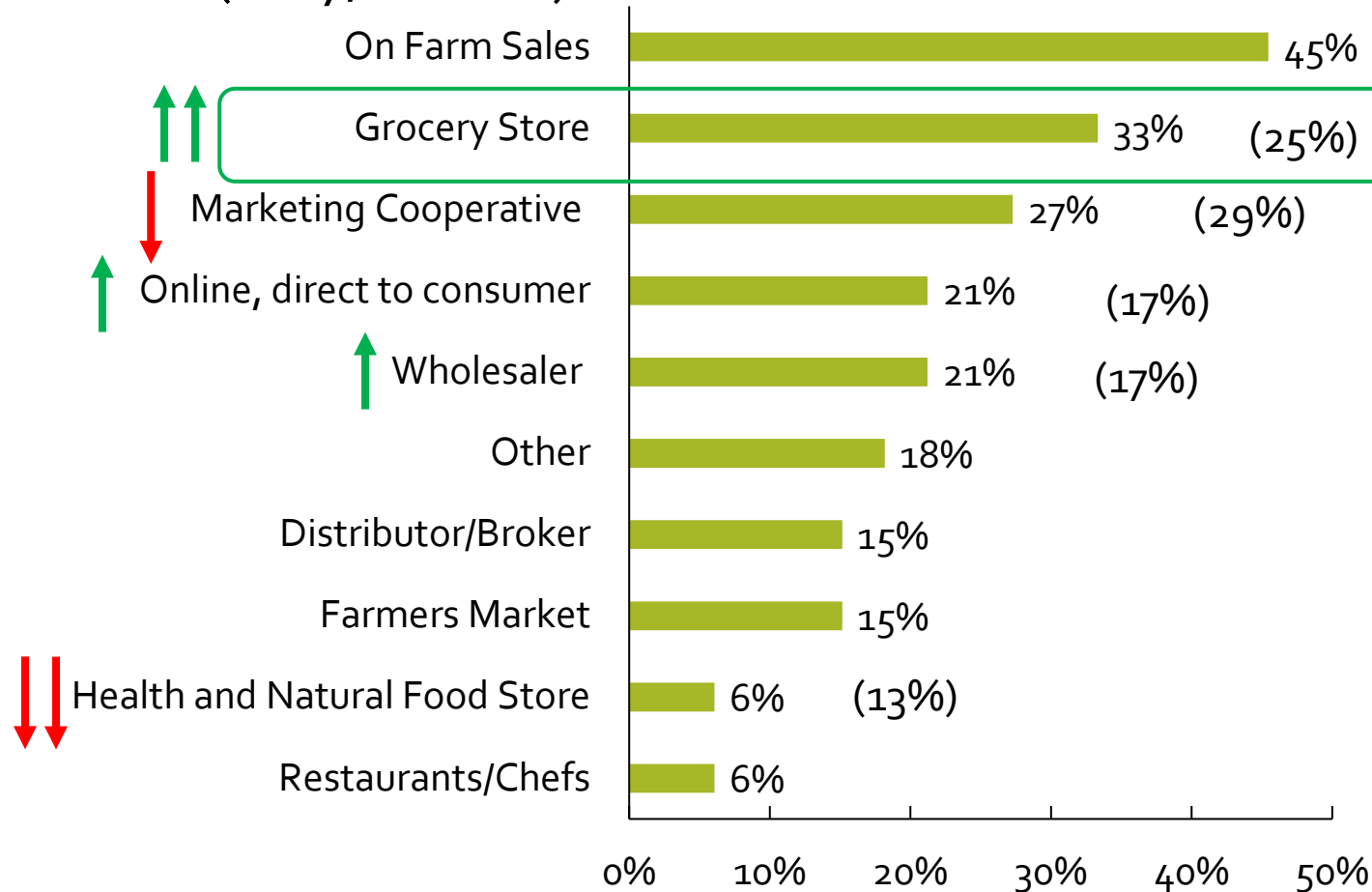
*Percentage of value added in the gross annual sales figure



*Bottom Line - Very Limited Value Added Sales

N=41

The 2018/19 marketing season vs (2017/18 data)



↑ ➤ Up in Grocery Store, Online, and Wholesaler

↓ ➤ Drop in Market Coop sales, Health and Natural Food Store

N=33

The 2018/19 marketing season

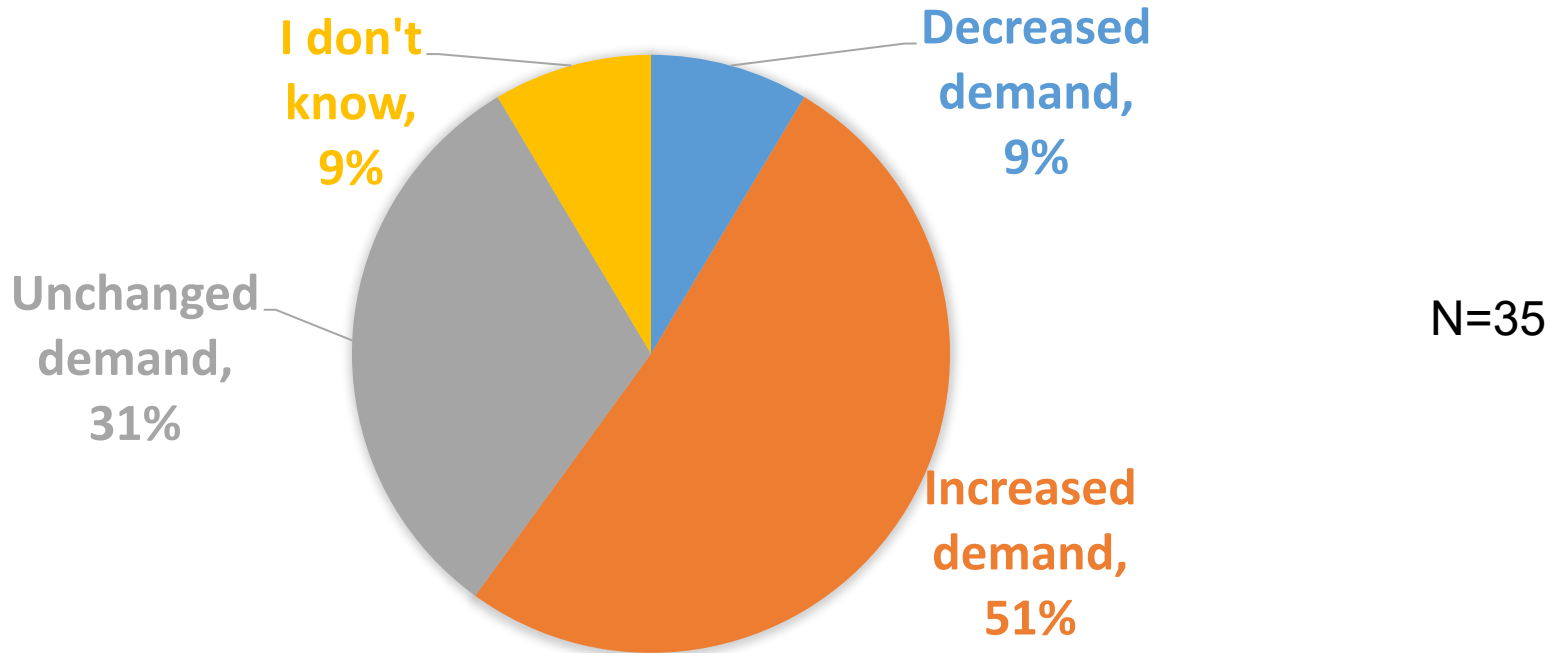
Outlet	Price Range			
	2018-2019	2017-2018	2016-2017	2015-2016
Marketing cooperative	\$1.60-\$2.80	\$1.50-\$4.50	\$1.00-\$3.75	\$1.90-\$4.00
Farmers market	\$2.00-\$6.75	\$4.00-\$6.00	\$5.50-\$7.00	\$2.00-\$7.00
Restaurants/chefs	\$3.50-\$5.50	\$3.50	\$5.50	\$3.50-\$5.50
Distributor/Broker	\$2.85-\$5.50	\$3.50-\$4.10	\$1.00	\$0.75-\$3.25
Health and natural food store	\$4.00-\$4.60	\$2.25-\$5.75	\$4.65	\$4.25
Grocery store	\$3.10-\$6.00	\$3.25-\$4.10	\$1.00	\$2.00-\$6.00
Wholesaler	\$2.00-\$7.00	\$3.50-\$4.00	\$1.82-\$3.81	\$1.00-\$5.80
Online, direct to consumer	\$5.00-\$6.75	\$5.50-\$8.00	\$3.50 - \$8.40	\$3.50 - \$6.85
On farm sales	\$1.00-\$6.50	\$2.00-\$8.00	\$2.50-\$8.40	\$2.00-\$7.00

NOTE: Overall price per pound remains high, fewer sales under \$2.00 per pound

N=33

The 2018/19 marketing season

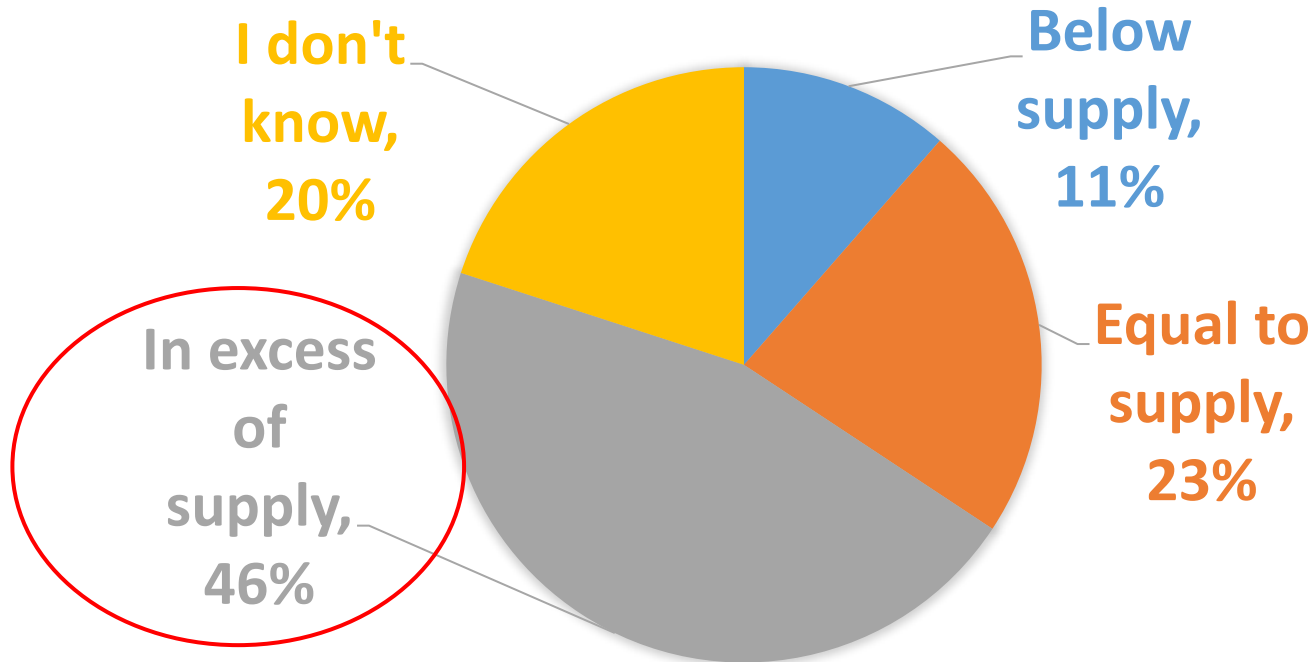
Demand for fresh chestnuts compared to previous year



	Decreased demand	Increased demand	Unchanged	I don't know
2018-2019	9%	51%	31%	9%
2017-2018	12%	56%	20%	12%
2016-2017	4%	74%	13%	9%
2015-2016	13%	62%	22%	3%

The 2018/19 marketing season

Current demand for fresh chestnuts

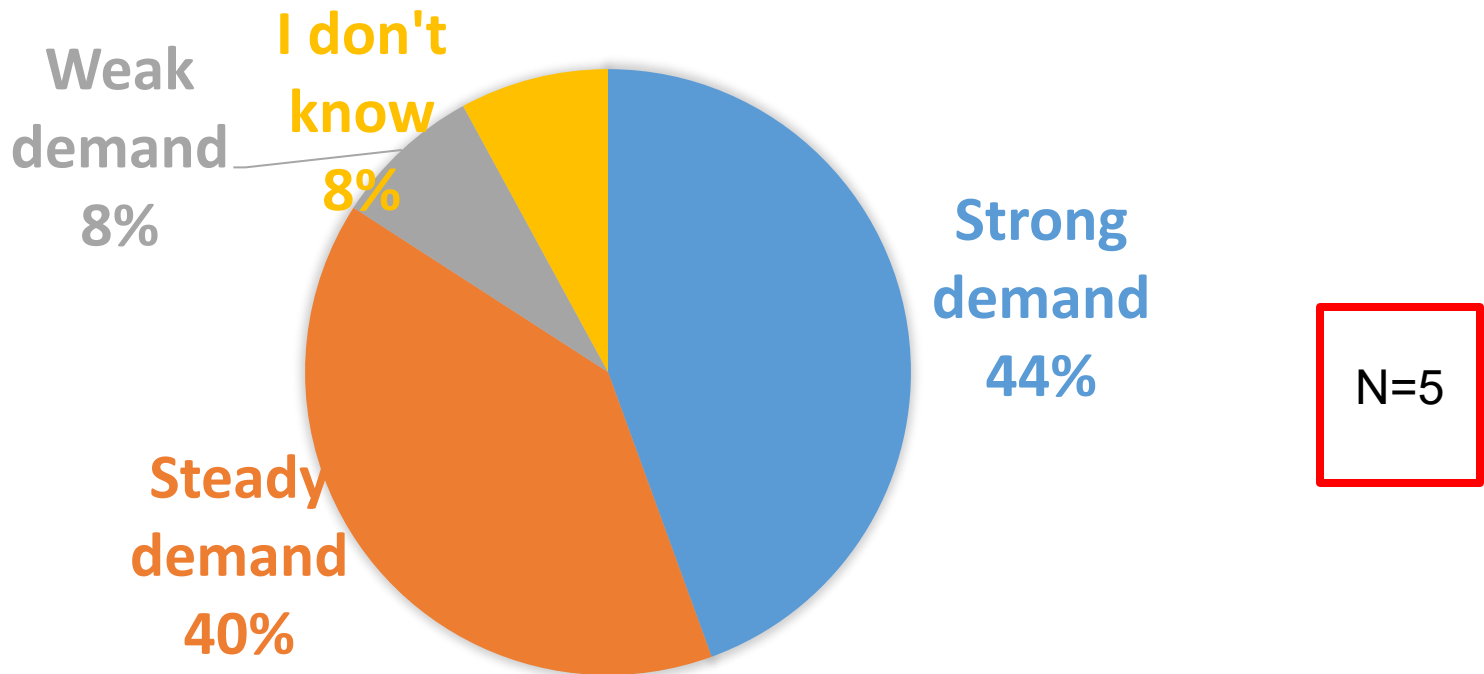


N=35

	Demand below supply	Demand equal to supply	Demand in excess of supply	I don't know
2018-2019	11%	23%	46%	20%
2017-2018	20%	16%	56%	8%
2016-2017	13%	22%	48%	17%
2015-2016	10%	10%	62%	18%

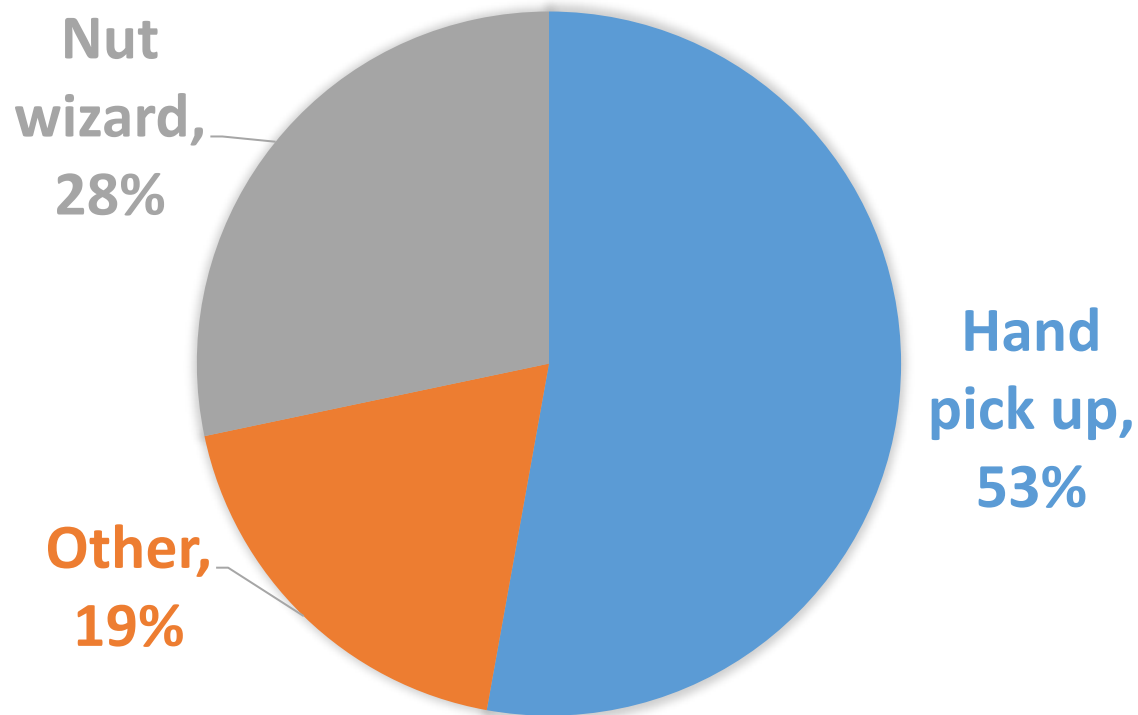
The 2018/19 marketing season

Current demand for **value added products**



	Strong demand	Steady demand	Weak demand	I don't know
2018-2019	44%	40%	8%	8%
2017-2018	33%	0%	0%	67%
2016-2017	40%	0%	0%	60%
2015-2016	42%	29%	0%	29%

Harvest Methods



- Tarp under a tree and shaking the branch
- Mechanical harvester
- Sweeper and Harvester
- Vacuum System
- Hired Chestnut Orchards Solutions to harvest mechanically
- U – pick



Chestnut Cooperative Representative Survey



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Results

- Two cooperatives reporting
- ~50 members/co-op
- Only sell fresh chestnuts
- Start selling: September and October
- Finish selling: November and December
- Pounds of chestnuts sold
 - 2018: 152,000
 - 2017: 52,500
 - 2016: 139,500
- Most chestnuts were sold to:
Illinois, Iowa, Georgia, Michigan, and New York
- 0.5% of the chestnuts sold are organic



Price

- Retail: \$3.00/lb - \$7.00/lb
Wholesale: \$2.50/lb - \$3.50/lb
- Different outlets
 - Restaurants/chefs: \$4.00/lb
 - Distributor/broker: \$3.45/lb
 - Grocery: \$3.60/lb
 - Wholesaler: \$3.50/lb
 - Online, direct to consumer: \$5.50/lb

Thank You!



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