



Washington State
Tree Fruit Association

State of the Tree Fruit Industry in Washington

WSTFA

Serves the growers, packers, and marketers of tree fruit in Washington state through:

- Education and training.
- Data and industry information.
- Government and public affairs.

Enhance the value of all segments of the tree fruit industry.

Industry Associations

Washington State Tree Fruit Association formed from a merger of:

- Yakima Valley Growers-Shippers Assn.
- Wenatchee Valley Traffic Assn.
- Washington Growers Clearing House Assn.
- Washington State Horticultural Assn.

Agriculture in Washington

- \$10.7 billion in production in 2015.
- 2015 top crops:
 1. Apples \$2.39 billion (22% of state's ag value)
 2. Milk \$1.13 billion
 3. Cattle \$858 million
 4. Potatoes \$772 million
 5. Wheat \$600 million

Top Crops (Cont.)

6. Hay \$499 million
7. Cherries \$448 million
8. Eggs \$331 million
9. Grapes \$296 million
10. Hops \$280 million

All together, tree fruit averages about 27.5% of WA ag value at the farm gate.

The Big Apple

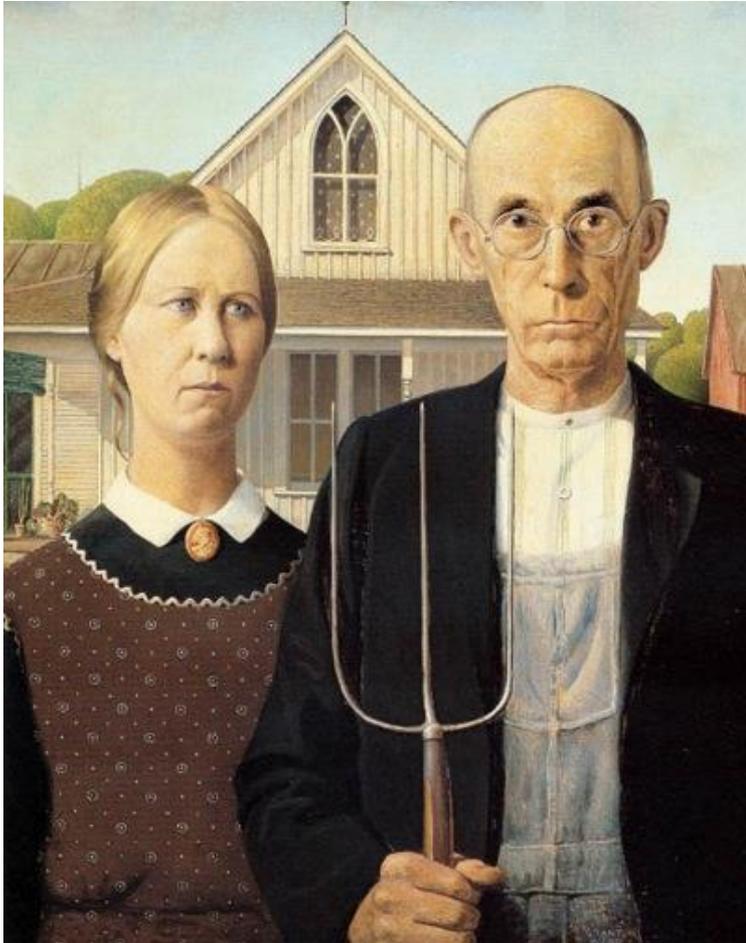
- \$3.4 billion in value after packing
 - \$254.4 million in state and local taxes
- \$7.5 billion in total economic impact
- 39,340 direct jobs (orchard to packing)
- 21,870 indirect jobs (transportation, suppliers)
- \$955 million in direct employee compensation
- \$1 billion in indirect employee compensation

This is the Place

- Ideal growing conditions.
- More than 60% of U.S. Apples produced in Washington State.
- 30% of our crop is exported overseas, where our quality is in high demand.
- Even in apple producing nations like China, which is number one at 9 times U.S. production.



Economic Future of Agriculture?



WA Farms with Apple Production

1910 – 27,150 farms

1920 – 35,535 farms

1935 – 44,293 farms

1954 – 10,318 farms

1964 – 6,364 farms

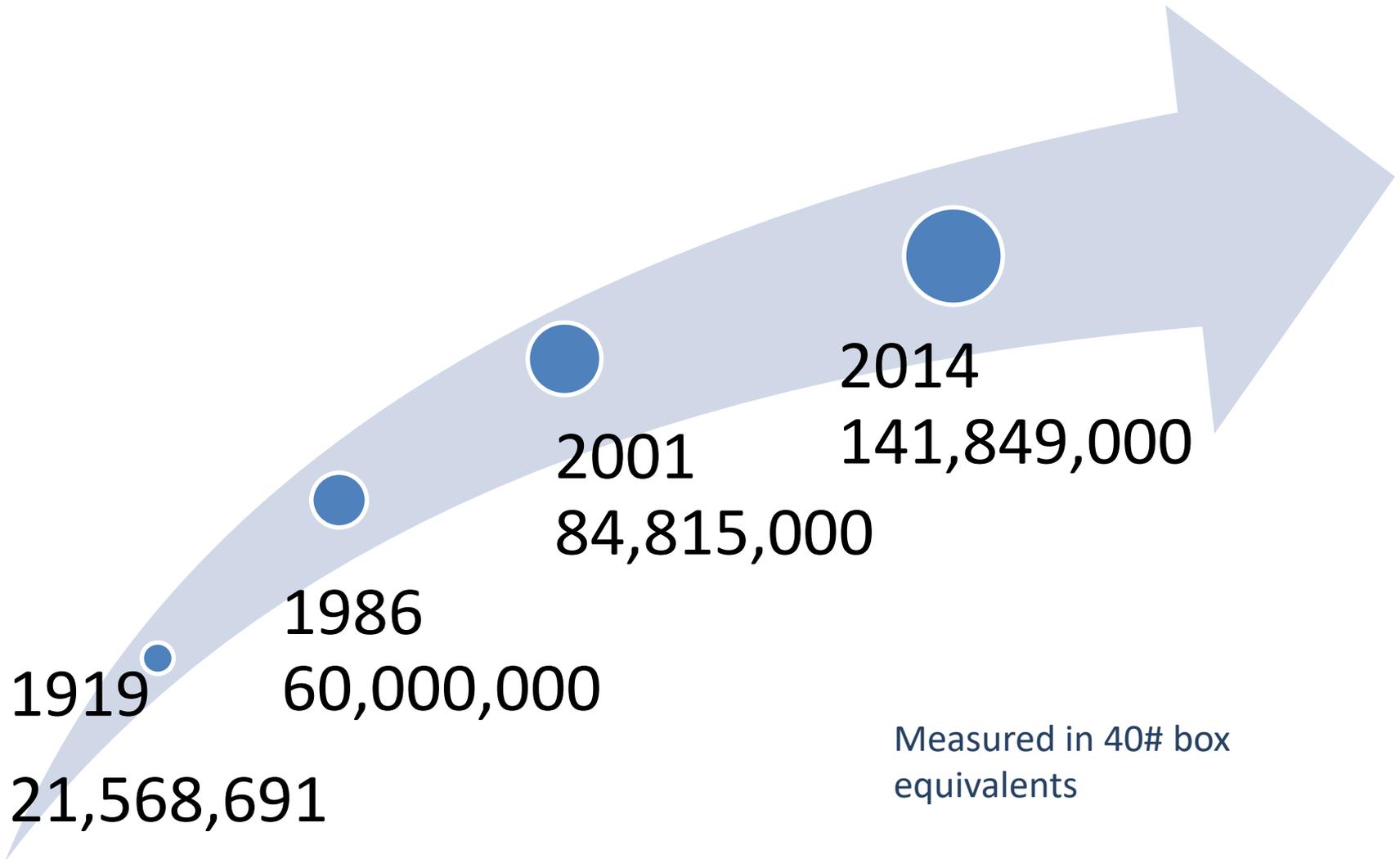
1987 – 5,169 farms

2007 – 3,052 farms

2012 – 2,839 farms



WA Apple Production: Spot the Trend



Round Trees, Flat Acreage



Declining WA Apple Acreage:
172,000 acres in 1993
167,489 acres in 2011
2.6% decline in acreage.



Productivity Drives Growth

Growth of Apple Production
in the same period:
83,088,000 boxes in 1993
128,294,000 boxes in 2012
An increase of **54.4%**.



UFOs sighted



Varietal Development

Apple Varieties in 1999:

51% Red Delicious

17% Golden Delicious

10% Fuji

8% Gala

8% Granny Smith

6% Other Varieties

2015 Crop:

25% Red Delicious

21% Gala

15% Granny Smith

13% Fuji

7% Golden Delicious

6% Honeycrisp

13% Other Varieties



New Varieties

- Where do they come from?
 - Random discoveries
 - Breeding programs
- Patented material and trademarked names
 - Cost to buy in
 - Bet the farm on the right one
- Establishment costs of \$50,000 per acre
 - \$1 million for a 20 acre orchard
 - 3-5 years until full production

2014-15 Apple Export Markets

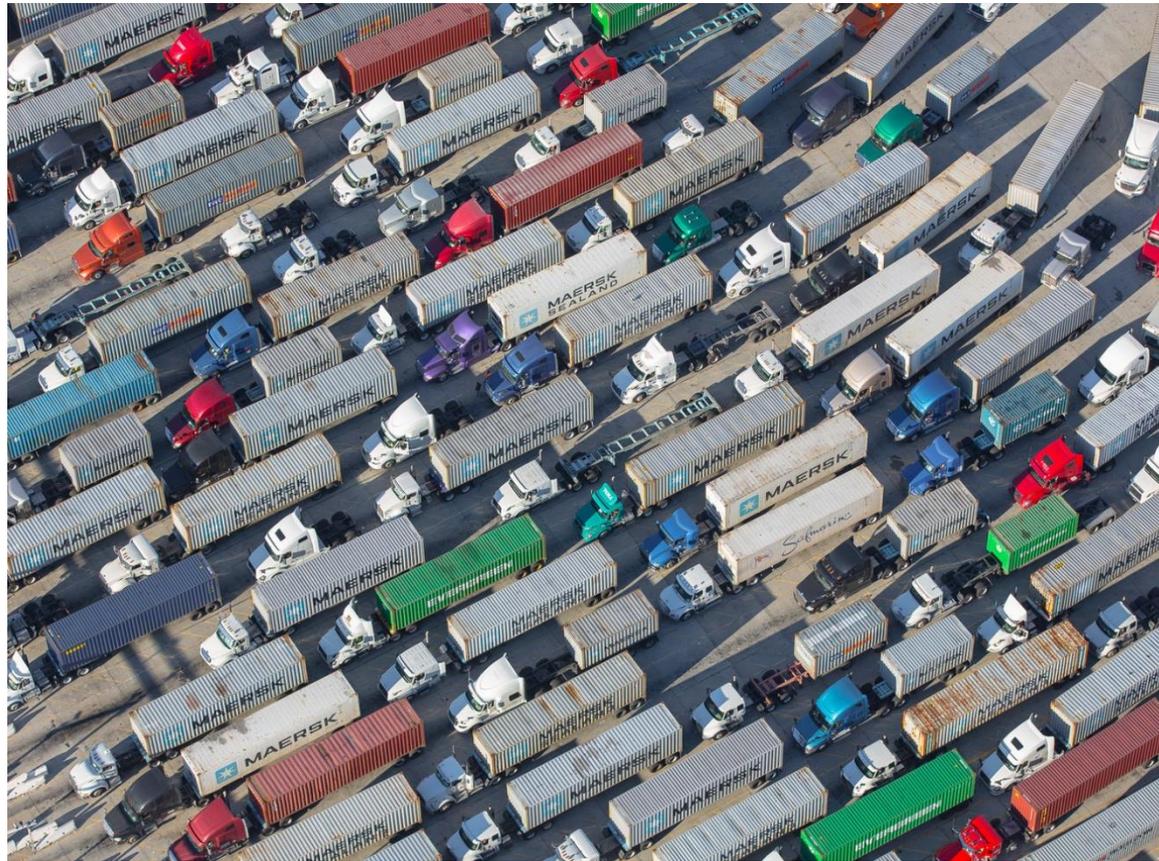
* In standard 40 pound boxes

1. Mexico 16,037,207
2. Canada 7,115,630
3. India 5,631,649
4. Dubai 3,313,081
5. Taiwan 3,184,389
6. Vietnam 1,706,694
7. Hong Kong 1,636,806
8. Saudi Arabia 1,405,350
9. China 1,350,642
10. Indonesia 1,325,850



Europe: 285,848

Market Disruptions



The 2014-15 port slowdowns began just as apple harvest completed and when peak Asian exports usually take place.

Disparate Price Impacts

- 2014-15 Average FOB
 - Red Delicious \$14.10 per box
 - Honeycrisp \$54.93 per box
 - Average packing charges \$10-\$11 per box
- Older varieties like Red Delicious are particularly dependent on the export market.
- Consumer segmentation.

This Is Not Manufacturing



Sorting and Standards

- Every variety of apple is sorted into multiple grades, from WA Extra Fancy Premium to US#1.
 - Also by size
 - Also by customer grading and specification
- Optical external and internal sorters
 - Lower packouts
 - Lower returns for anything less than perfect

Packaging	Size	Avg FOB*	High FOB	Low FOB	Total Boxes**
Buro Pack 3 Layer	117	\$19.50	\$22.00	\$18.00	1,298
Heavy Pack	56	\$16.00	\$27.00	\$12.75	705
Heavy Pack	64	\$21.00	\$31.25	\$13.75	1,675
Heavy Pack	72	\$21.75	\$31.25	\$16.00	4,201
Heavy Pack	80	\$19.75	\$26.75	\$15.25	10,063
Heavy Pack	88	\$20.50	\$24.75	\$14.50	18,847
Heavy Pack	100	\$20.25	\$26.25	\$15.50	69,242
Heavy Pack	113	\$19.75	\$27.00	\$10.75	153,552
Heavy Pack	125	\$18.50	\$26.50	\$11.00	118,293
Heavy Pack	138	\$18.25	\$25.00	\$11.50	84,141
Heavy Pack	150	\$17.50	\$31.00	\$7.75	121,013
Heavy Pack	163	\$16.75	\$25.00	\$7.75	139,138
Heavy Pack	175	\$16.00	\$27.00	\$7.75	117,880
Heavy Pack	198	\$15.75	\$23.00	\$6.50	118,294
Heavy Pack	216	\$14.25	\$29.75	\$7.25	44,660
Parta Pack	36	\$16.75	\$16.75	\$16.75	38
RPC	50	\$14.25	\$14.25	\$14.25	111
RPC	55	\$20.25	\$20.25	\$20.25	57
RPC	60	\$16.75	\$19.00	\$14.25	1,835
RPC	70	\$14.75	\$19.00	\$14.25	1,418
RPC	117	\$25.50	\$26.00	\$22.00	1,831
RPC 14/8#	2 1/2"	\$23.50	\$28.25	\$10.00	4,201
Tray Pack	48	\$18.50	\$31.00	\$7.75	2,233
Tray Pack	56	\$17.50	\$30.00	\$6.75	33,547
Tray Pack	64	\$18.50	\$33.50	\$6.75	87,541
Tray Pack	72	\$18.50	\$35.75	\$8.75	209,805
Tray Pack	80	\$18.50	\$35.00	\$7.75	287,439
Tray Pack	88	\$18.75	\$40.00	\$8.75	494,587
Tray Pack	100	\$18.00	\$30.00	\$7.25	596,643
Tray Pack	113	\$17.75	\$31.75	\$6.50	489,970
Tray Pack	125	\$17.50	\$30.50	\$5.25	439,381
Tray Pack	138	\$17.75	\$29.75	\$7.25	292,651
Tray Pack	150	\$14.75	\$23.75	\$6.75	26,252
Tray Pack	163	\$17.50	\$26.50	\$5.25	109,095
Tray Pack	175	\$14.75	\$28.50	\$6.75	17,814
Tray Pack	198	\$14.75	\$29.00	\$9.00	18,934
Tray Pack	216	\$12.50	\$15.75	\$11.25	195
Tray Pack 1 Layer	20	\$10.50	\$10.50	\$10.50	42
Tray Pack 1 Layer	22	\$8.50	\$10.75	\$6.75	568
Tray Pack 1/3 Layer	88	\$8.00	\$11.00	\$7.50	1,334
Tray Pack 1/3 Layer	100	\$8.00	\$8.00	\$7.50	412
Tray Pack 1/3 Layer	113	\$8.00	\$8.00	\$8.00	148
Tray Pack 2 Layer	36	\$10.25	\$11.50	\$10.00	1,972
Tray Pack 2 Layer	40	\$11.50	\$11.50	\$10.25	242
Tray Pack 2 Layer	44	\$8.75	\$14.00	\$7.50	1,428

Water

- Growers pay for water infrastructure, not water itself.
- Adaptation costs such as shade cloth in place of overhead cooling. \$4,000-\$8,000 per acre.



Labor and Legal Status

- 160,000 total agricultural workers in WA
- 90,000 seasonal at July peak (cherries)
- H2-A visa program in WA
 - 814 workers in 2006
 - 13,697 in 2016
 - Housing and transportation plus higher wage
 - \$12.69 minimum in WA in 2016
 - No guarantees that USDOL will meet deadlines

Labor Assistance

- Harvest equipment such as platforms, conveyors.
- Increases worker productivity, less physically demanding.



Our Robot Overlords

Robot harvester being tested now, may only be a few years from commercial release. During tests, picks up to one apple per second.



Organics

- 93% of US Organic apples are grown in WA
- 79% of US Organic pears are grown in WA
- 94% of US Organic cherries are grown in WA
- Tree Fruit is more than 60% of WA organic farmgate value and 23% of organic acreage
- Organic yields per acre are increasing as higher densities planted to organic, more acres being planted as well
- 11% of apple acreage is organic, about 7% of fresh sales

Conclusions

- Washington's tree fruit industry is poised for continued growth and global competitiveness.
- Policy decisions and market forces will continue to force growers to replace existing inputs with new capital investments.
- Smaller growers will find this environment most challenging.
- The long-term trend toward consolidation paired with growth is likely to continue.



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