

Economics of Grove Management

Citrus Expo
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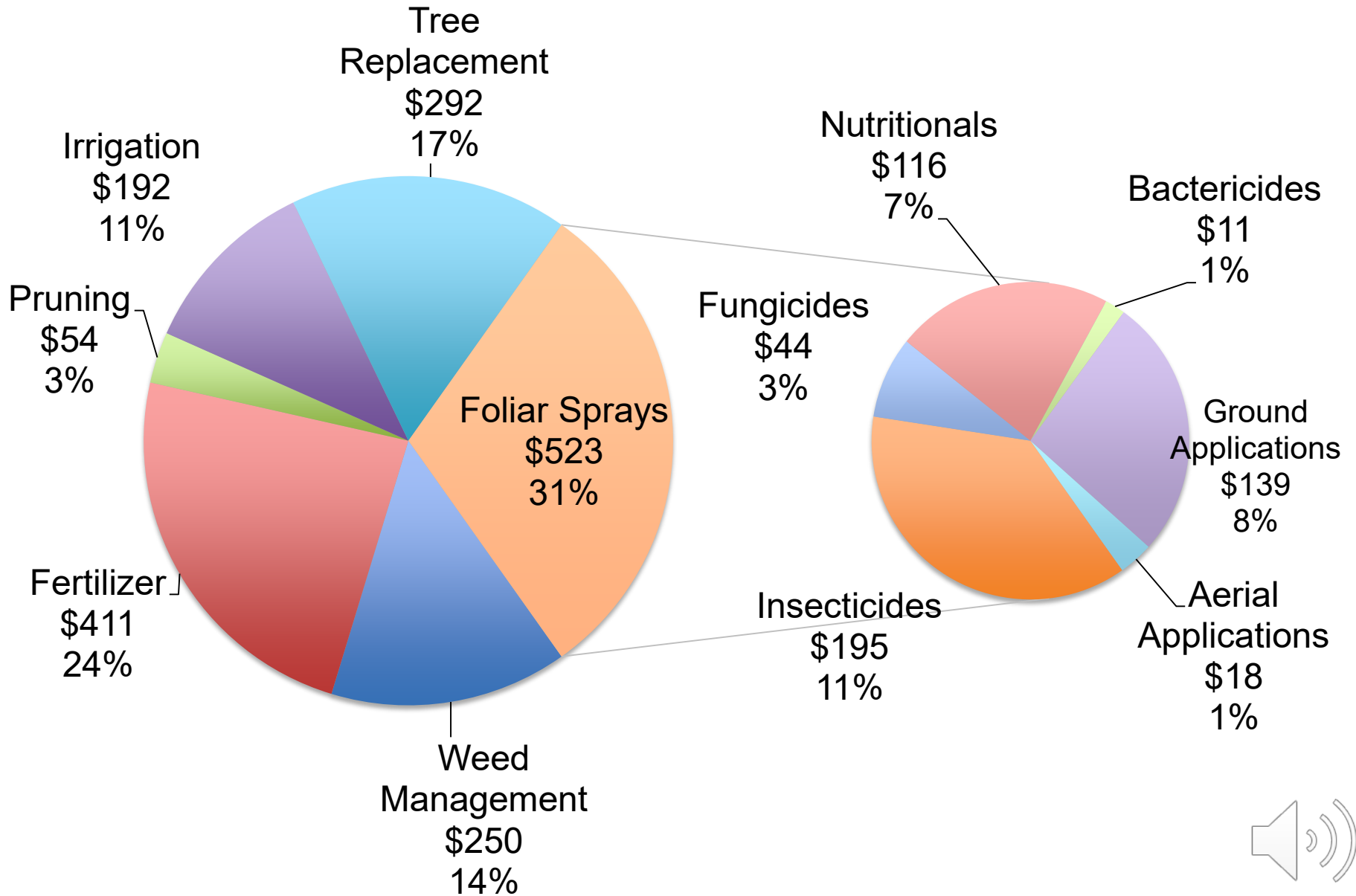
Cultural Cost of Production per Acre for Processed Oranges in Southwest Florida, 2019/20

Costs represent a mature grove (10+ years old) including resets

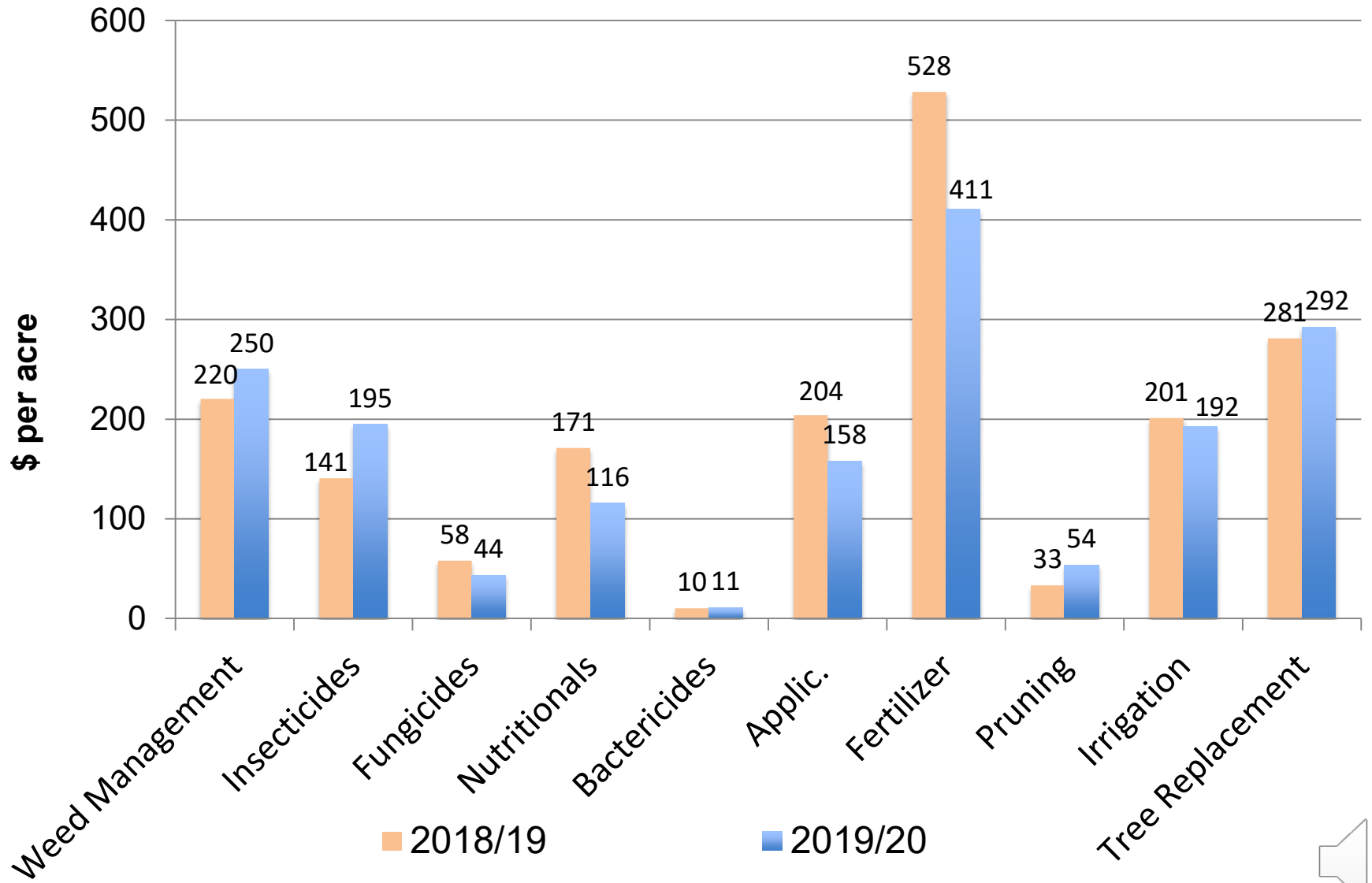
	Cost per acre (\$)
Weed Management	249.96
Foliar Sprays	522.81
Fertilizer	410.51
Pruning (topping, hedging, chop/mow Brush)	53.84
Irrigation ¹	192.41
Total Cultural Costs without Tree Replacement	1429.53
Tree Replacement (6 trees)	292.46
Total Cultural Costs with Tree Replacement	1721.99



Cultural Cost of Production per Acre for Processed Oranges in Southwest Florida by Program



Cost of Production for Processed Oranges in Southwest Florida by Program



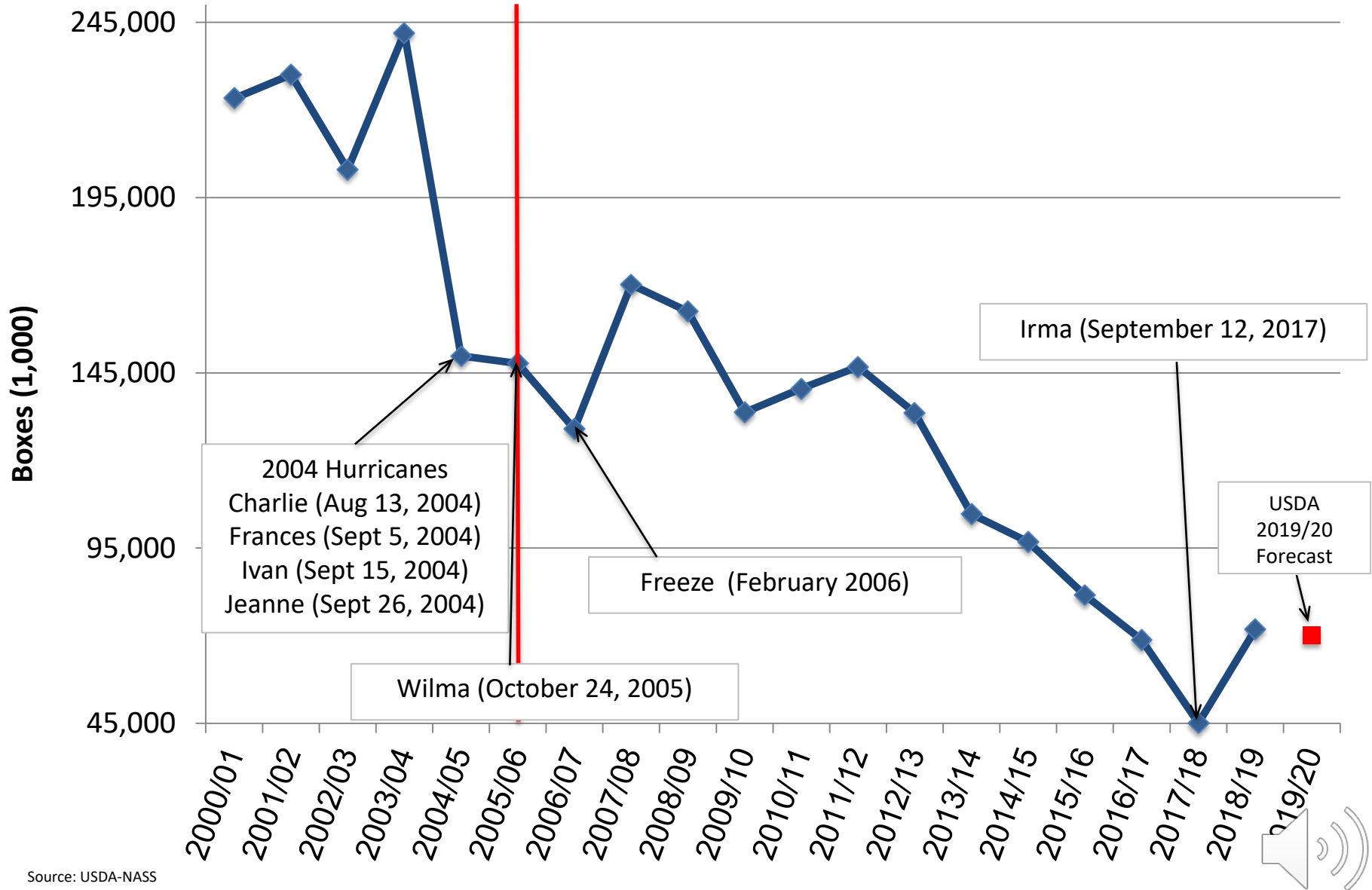
Total Cost of Production per Acre for Processed Oranges in Southwest Florida, 2019/20

	Cost per acre (\$)
<hr/> Total Cultural Costs	1721.99
<hr/> <u>Other Costs</u> Interest on Operating (Cultural) Costs	86.10
Management Cost	136.69
Property Tax/Water Management Assessment	28.73
Interest on Average Capital Investment	121.55
<hr/> Total Other Costs	373.06
<hr/> Total Costs	2095.05

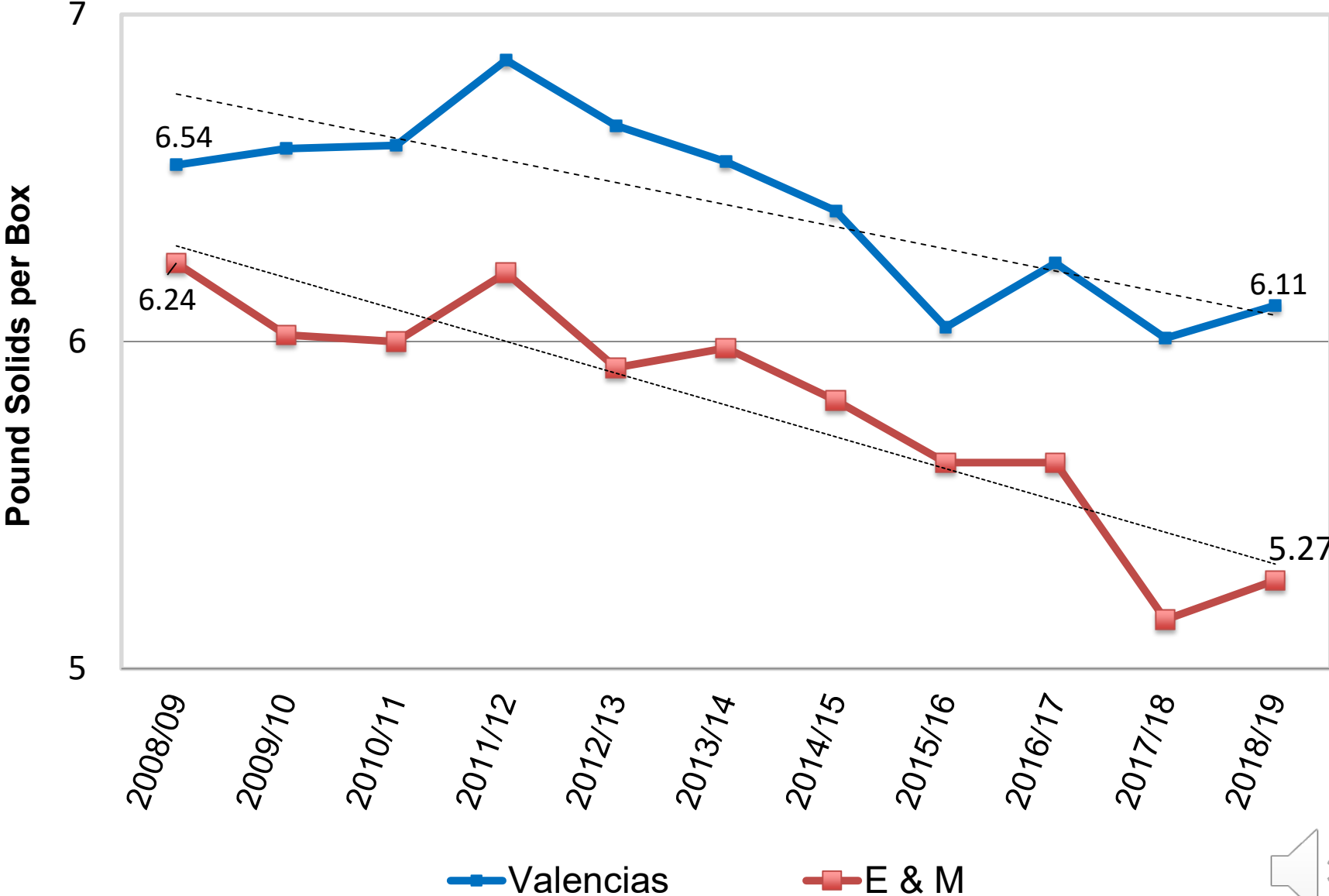
Source: University of Florida, IFAS, CREC



Orange Production in Florida



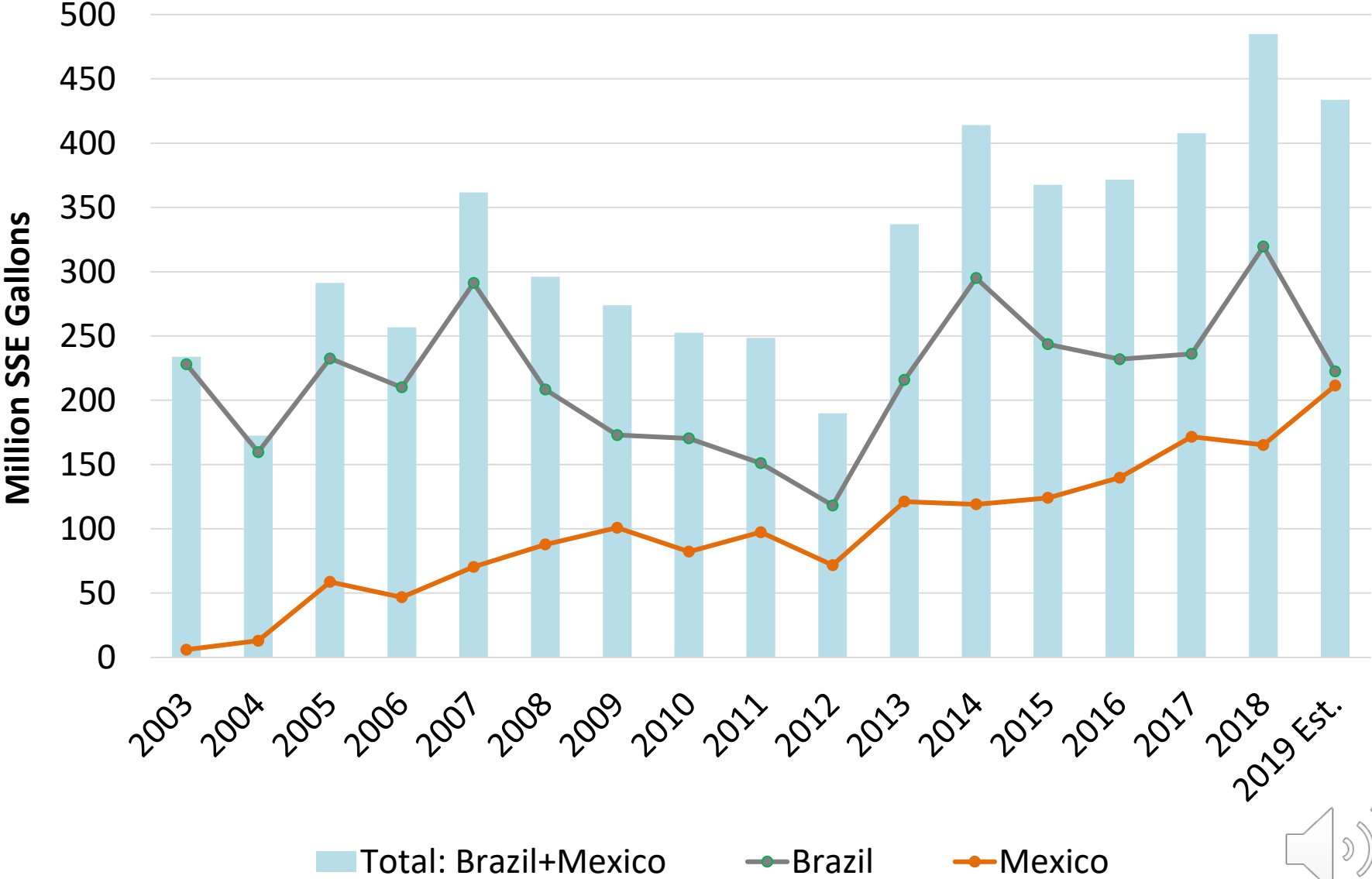
Florida Oranges Pound Solids per Box



Source: FDOC



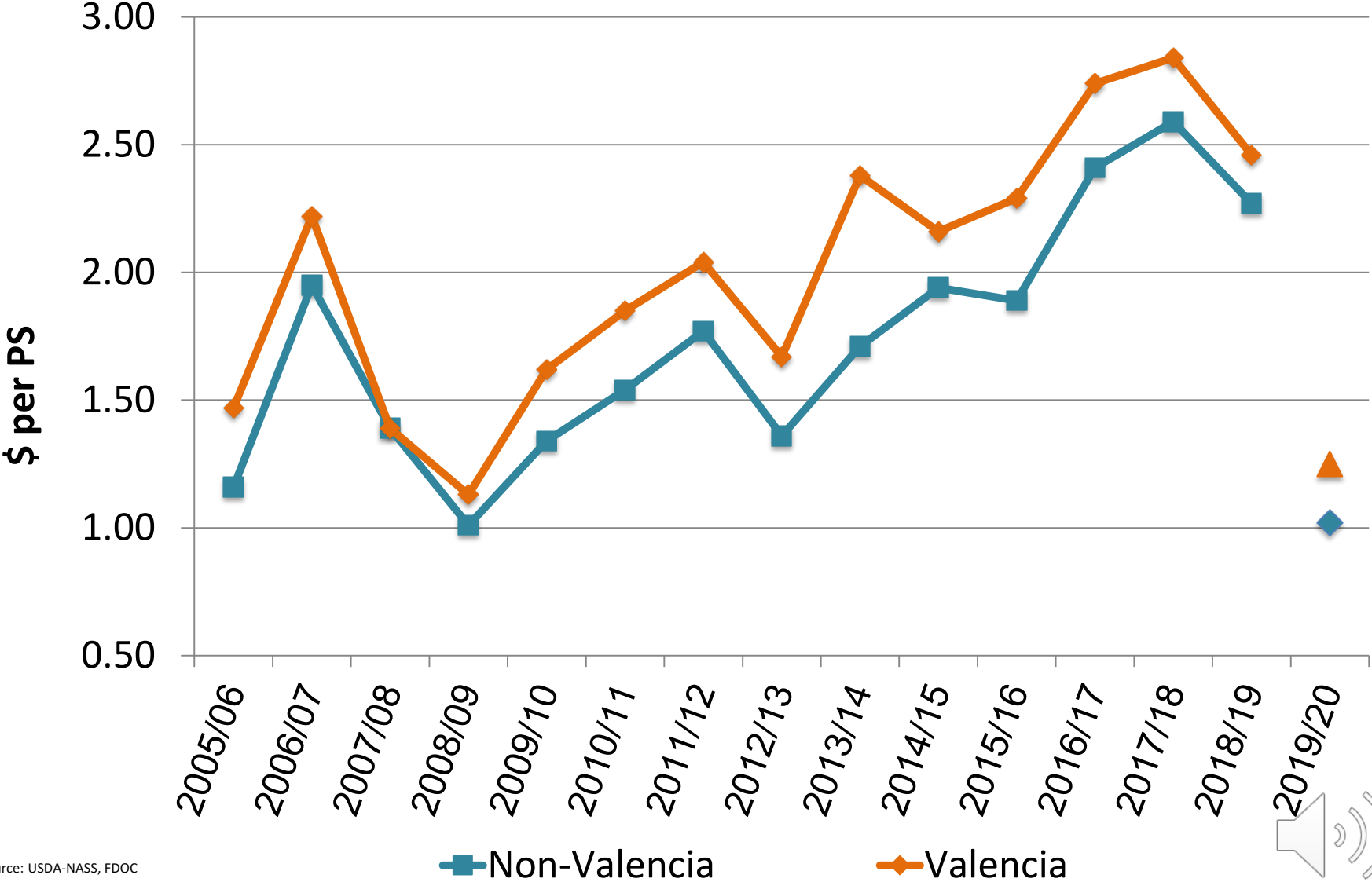
Orange Juice Imports from Brazil and Mexico into U.S.



Source: USDA-NASS



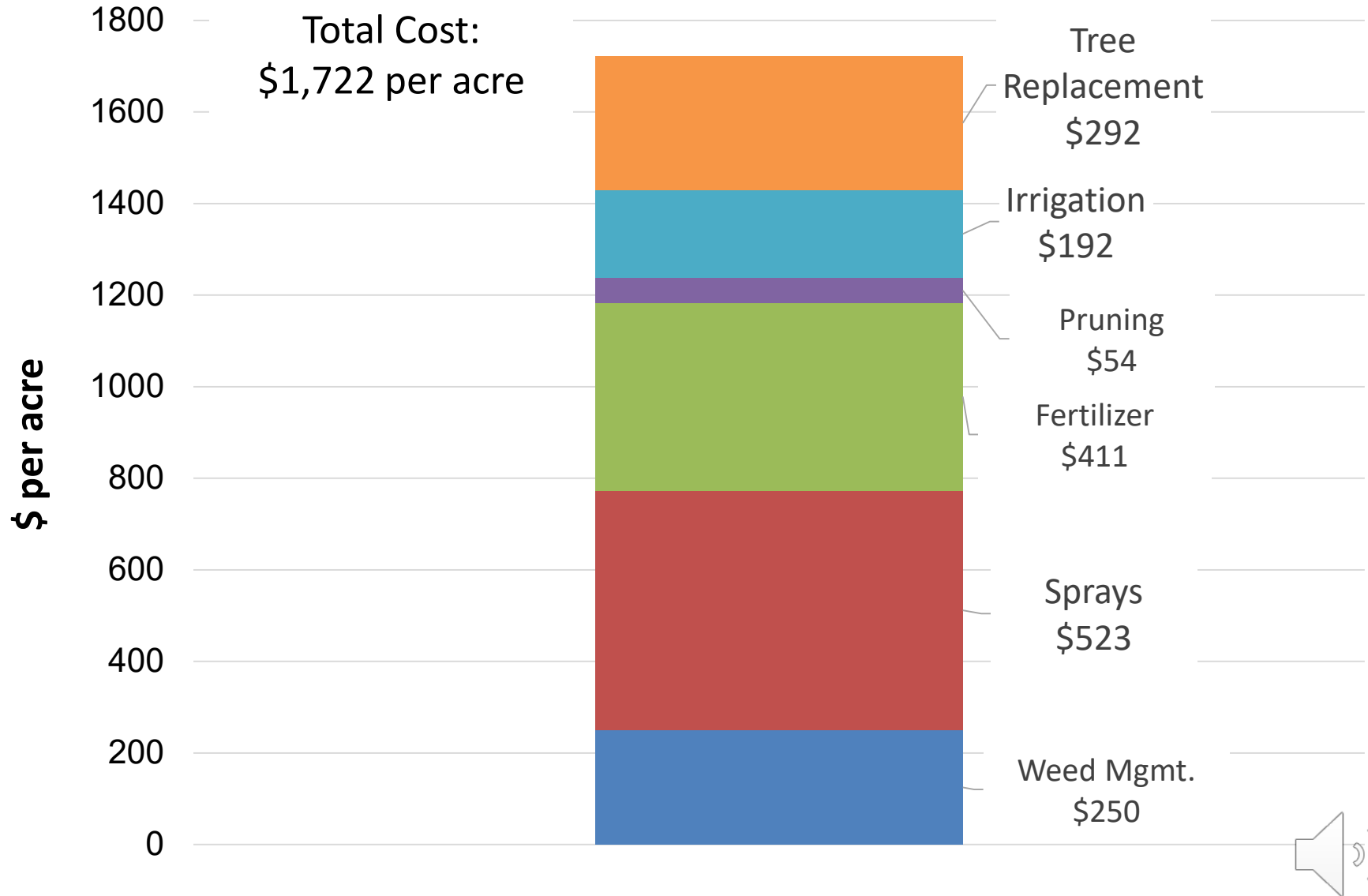
Delivered-in Prices for Processed Oranges in Florida



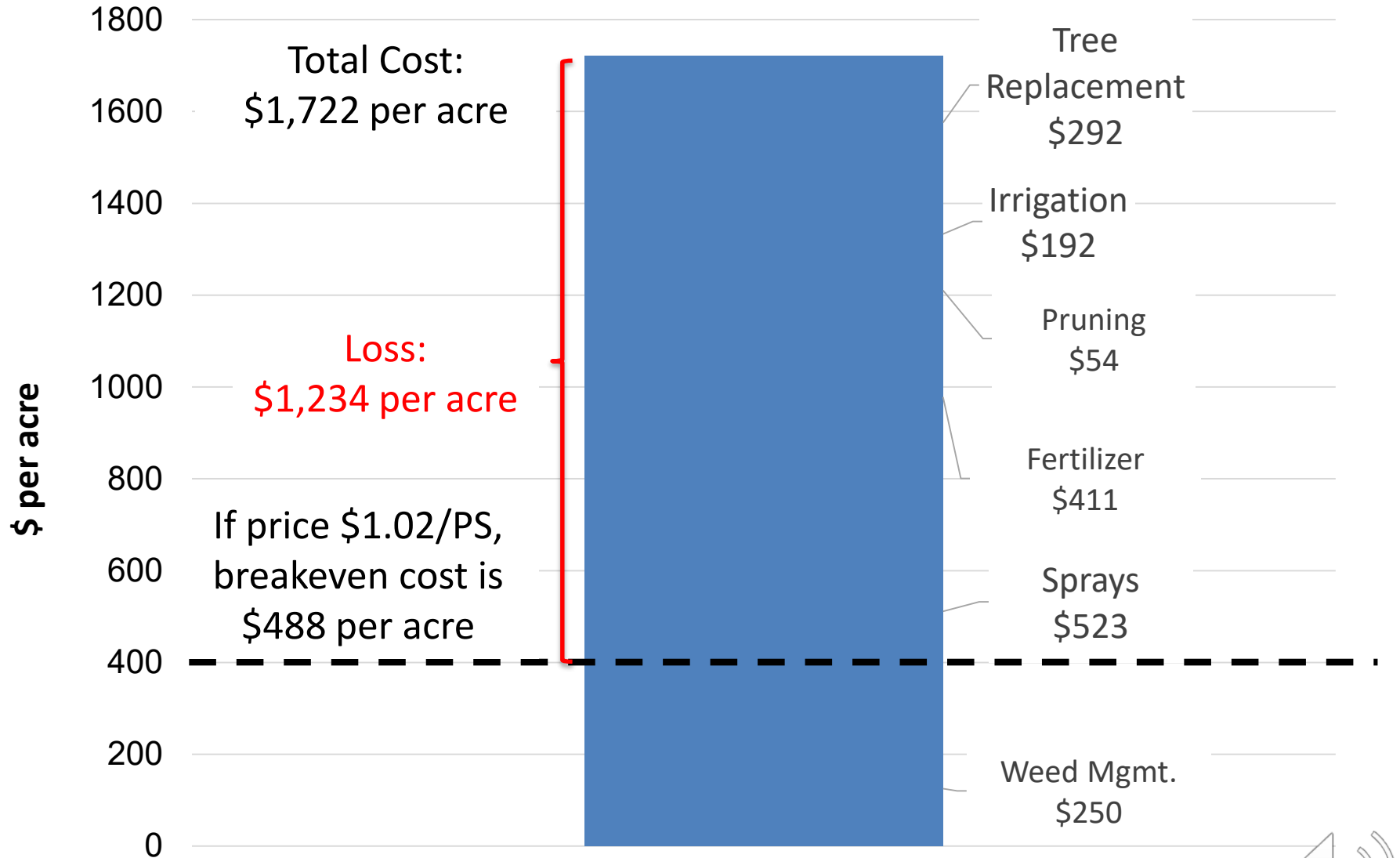
Source: USDA-NASS, FDOC



Cultural Cost of Production per Acre for Processed Oranges in Southwest Florida by Program



Cultural Cost of Production per Acre for Processed Oranges in Southwest Florida by Program



Assuming 5.41 pounds solids per box; harvesting \$2.97 per box; FDOC assessment \$0.07 per box



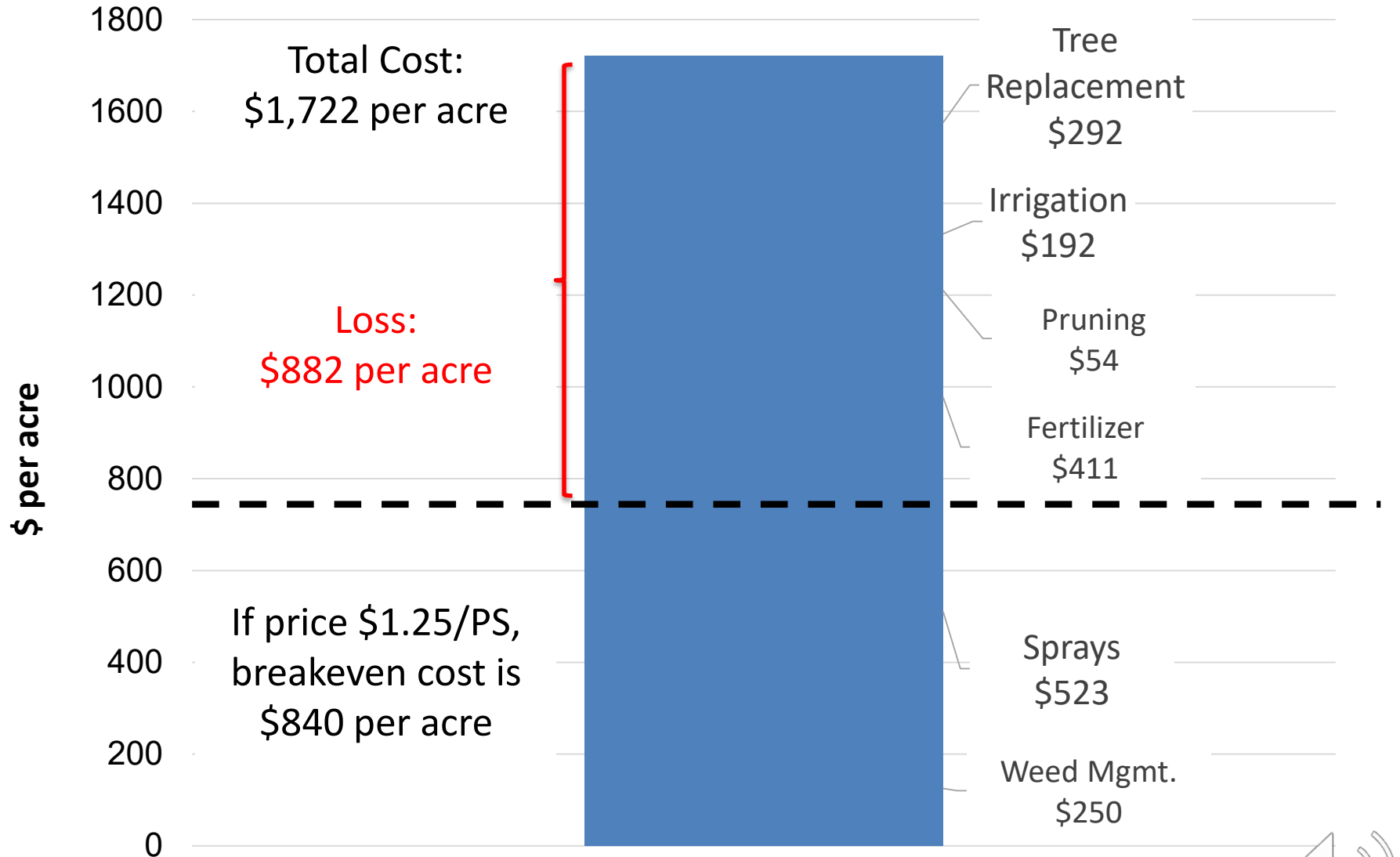
Breakeven Yield for Early and Mids

Cost per acre (in dollars)	Price per pound solids delivered-in (in dollars)								
	0.85	1.02	1.25	1.50	1.90	2.05	2.18	2.50	2.53
	Yield per acre (in boxes) needed for breakeven								
488	313	197	131	96	67	61	56	47	46
600	385	242	161	118	83	75	69	57	56
700	449	282	188	138	97	87	80	67	66
800	513	323	215	158	111	99	91	76	75
900	577	363	242	177	124	112	103	86	85
1000	642	404	269	197	138	124	114	95	94
1100	706	444	296	217	152	137	126	105	103
1200	770	484	322	236	166	149	137	114	113
1300	834	525	349	256	180	161	149	124	122
1426	915	575	383	281	197	177	163	136	134
1585	1017	640	426	312	219	197	181	151	149
1600	1027	646	430	315	221	199	183	153	150
1700	1091	686	457	335	235	211	194	162	160
1722	1105	695	463	339	238	214	197	164	162
2095	1344	845	563	413	289	260	239	200	197

Assuming 5.41 pounds solids per box; harvesting \$2.97 per box; FDOC assessment \$0.07 per box



Cultural Cost of Production per Acre for Processed Oranges in Southwest Florida by Program



Assuming 6.11 pounds solids per box; harvesting \$3.05 per box; FDOC assessment \$0.07 per box

Breakeven Yield for Valencias

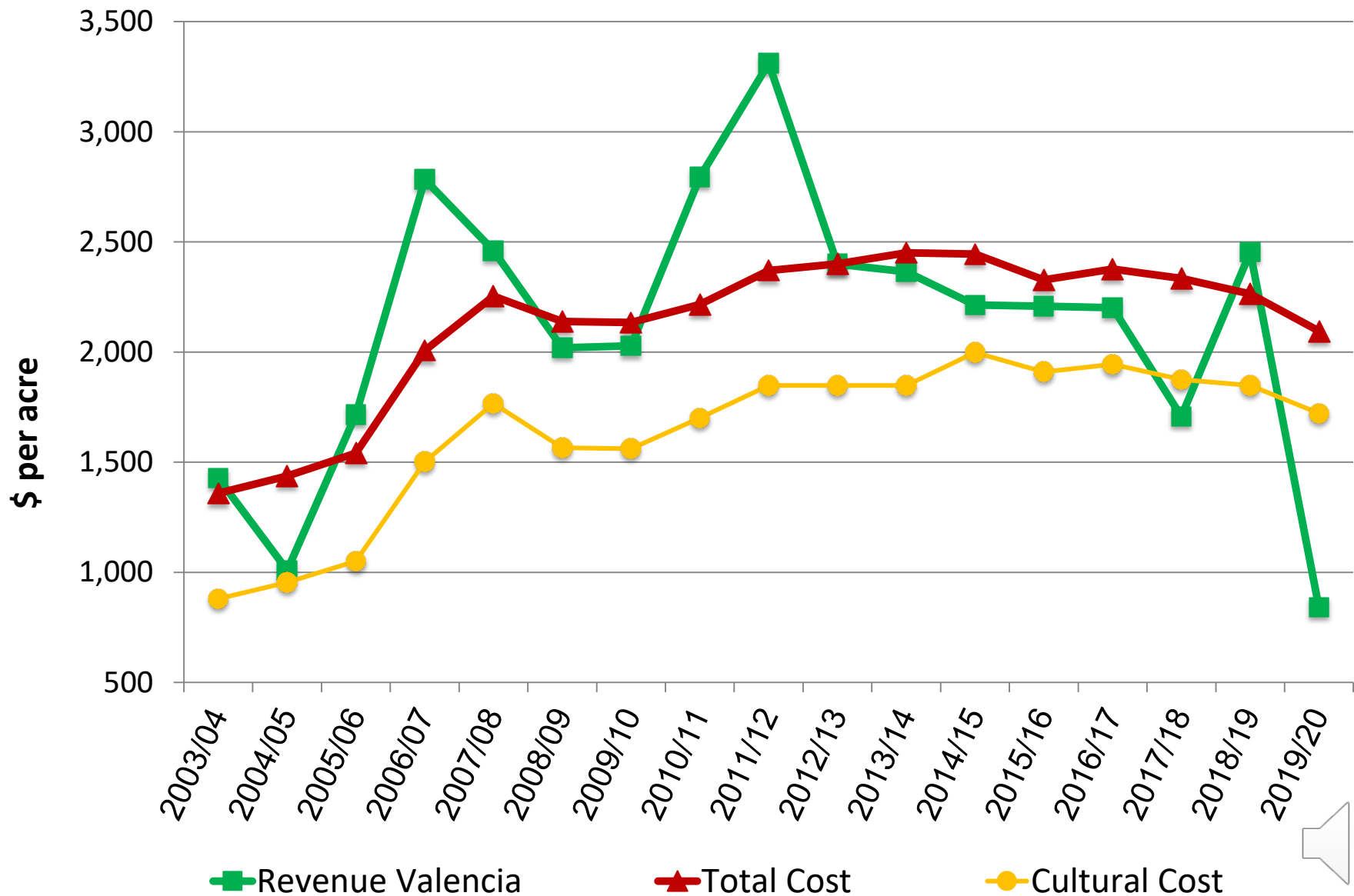
	Price per pound solids delivered-in (in dollars)								
	1.00	1.25	1.40	1.60	1.80	2.03	2.20	2.36	2.60
Cost per acre (in dollars)	Yield per acre (in boxes) needed for breakeven								
500	167	111	92	75	63	54	48	44	39
555	186	123	102	83	70	60	54	49	43
700	234	155	129	105	89	76	68	62	55
840	281	186	155	126	107	91	81	75	66
900	301	199	166	135	114	97	87	80	70
1000	334	221	184	150	127	108	97	89	78
1100	368	243	202	165	140	119	107	98	86
1200	401	266	221	180	152	129	116	106	94
1300	435	288	239	195	165	140	126	115	102
1400	468	310	258	210	178	151	136	124	110
1500	502	332	276	225	190	162	145	133	117
1600	535	354	294	240	203	173	155	142	125
1700	569	376	313	255	216	183	165	151	133
1722	576	381	317	259	219	186	167	153	135
2095	701	464	386	315	266	226	203	186	164



Assuming 6.11 pounds solids per box; harvesting \$3.05 per box; FDOC assessment \$0.07 per box

Source: CREC, UF/IFAS

Revenue and Cost per Acre for Processed Valencia Oranges in Southwest Florida



Summary

- Cultural and total cost of production for 2019/20 estimated at \$1,722 and \$2,095 per acre, respectively. Down \$125 and \$175 compared to last year, respectively; largest reductions in fertilizer and nutritionals
- Those reductions are a response to the significant decrease in prices this season
- Taking into account only cultural cost, on average, growers sustained a loss of \$1,234 and \$882 per acre for early and mids and valencias, respectively
- Taking into account total cost, on average, growers sustained a loss of \$1,606 and \$1,254 per acre for early and mids and valencias, respectively
- Reducing cost of production to adjust to lower prices will have long-run consequences on grove productivity



Considerations for 2020/21

- A high percentage of fruit will be out of contract in 2020/21
- Production is down in Brazil and in Mexico
- Processors that were not in the market this season likely to come back (due to their contracts with suppliers abroad expiring)
- Contract prices: What cost of production do they cover? Any margin left?
- Would an industry-wide advertising program stimulate demand?
- How to increase brix to compete with Mexico?
- Impact of Covid-19 on supply and demand



Thank you for attention

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