



Tree Spacing for Satsuma

Trifoliolate orange 15' x 20' = 145 trees/acre

Swingle 20' x 25' = 87 trees/acre

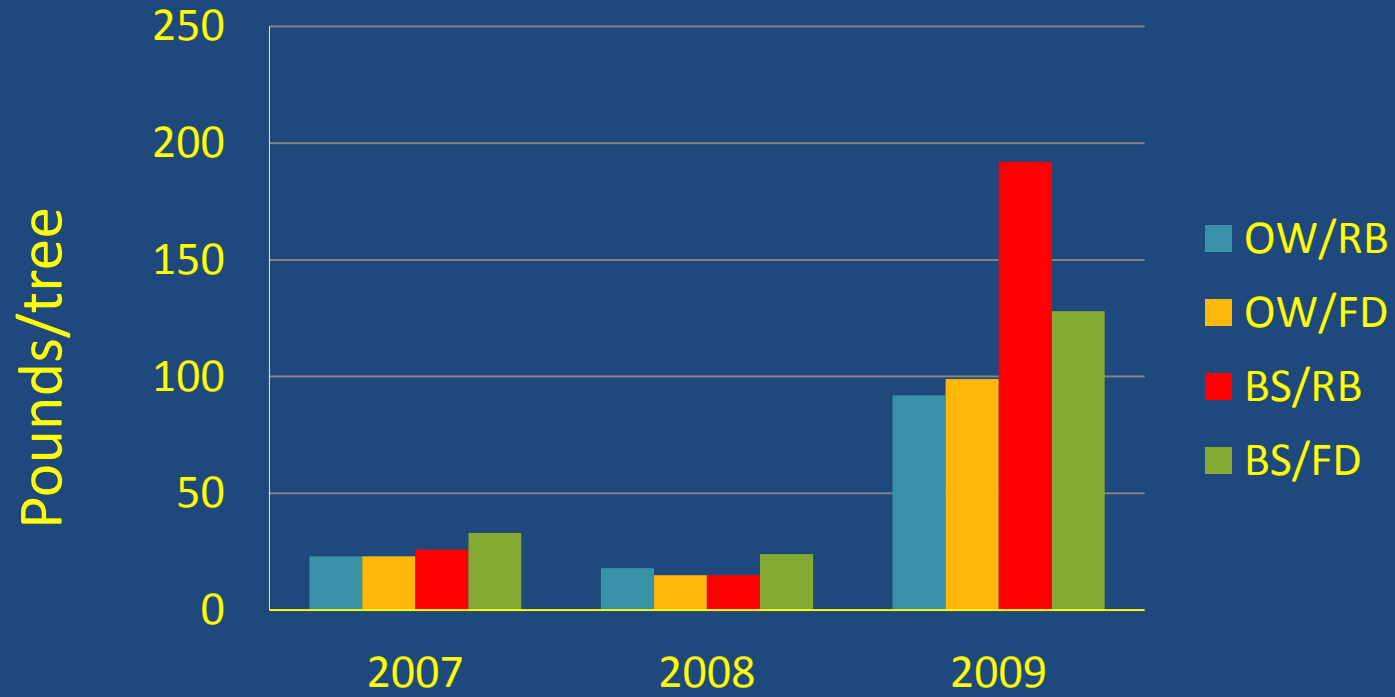
Flying Dragon 10' x 17' = 256 trees/acre or 8' x
15' = 363 trees/acre

Advantages of close spacing include increased yield per acre and frost protection efficiency

Irrigation requirements

- Young trees: 5 to 10 gallons every 1 or 2 days.
- Mature trees: 50 to 100 gallons every week.

Yield

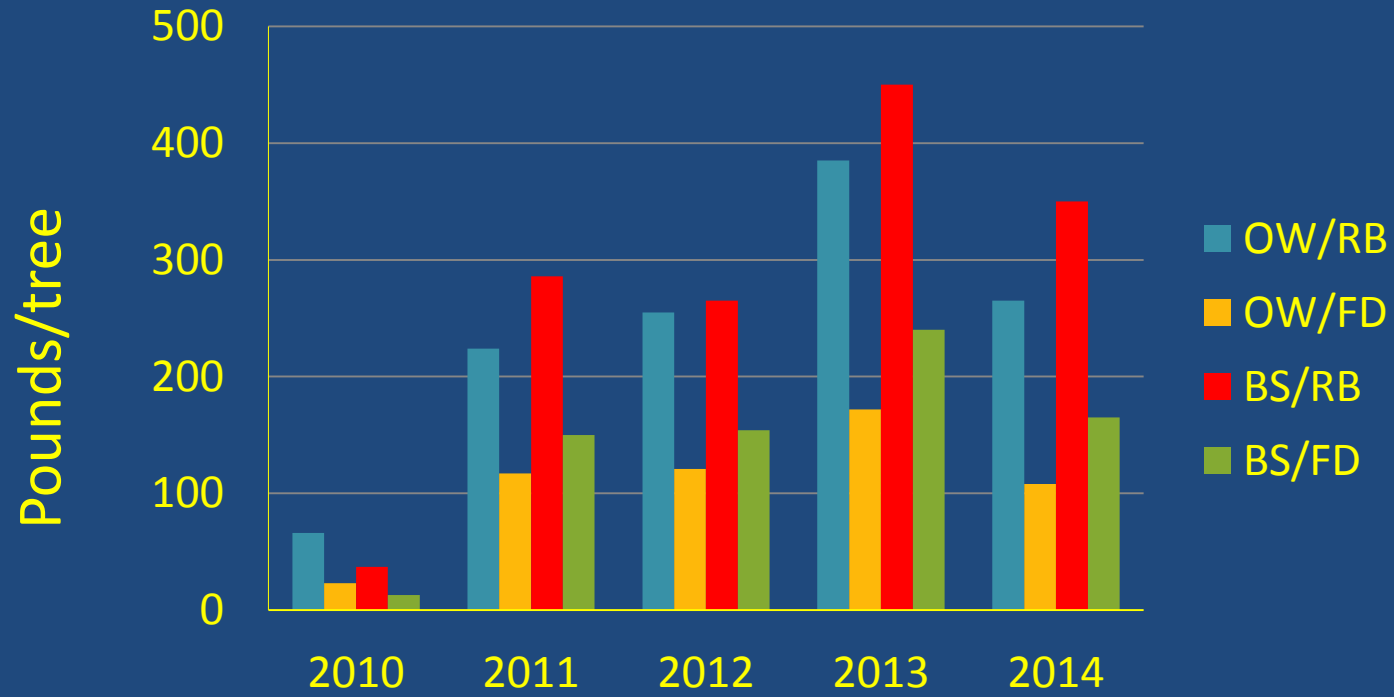


Yield (pounds/tree)

<u>Statistics</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Scion	NS	NS	* * *
Rootstock	NS	NS	* *
Scion*Rootstock	NS	NS	NS

NS=not significant, * = $P < 0.05$, ** = $P < 0.01$, *** = $P < 0.001$

Yield

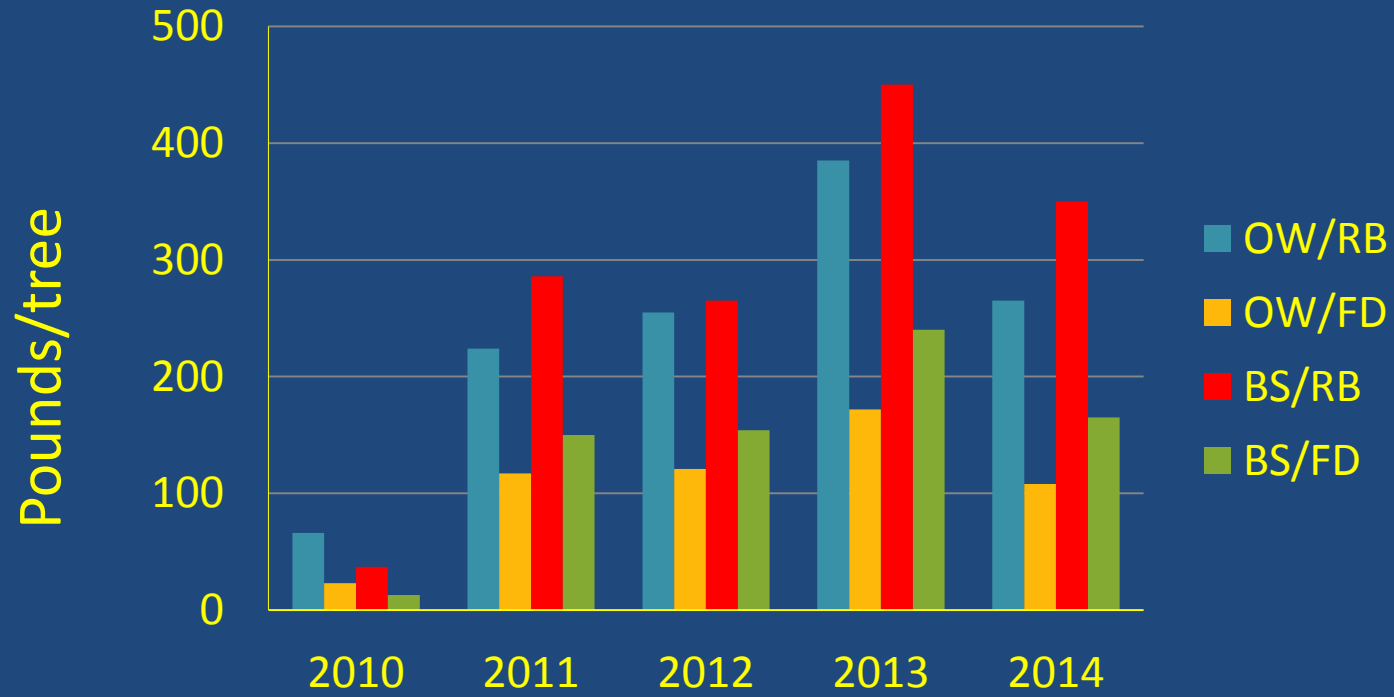


Yield (pounds/tree)

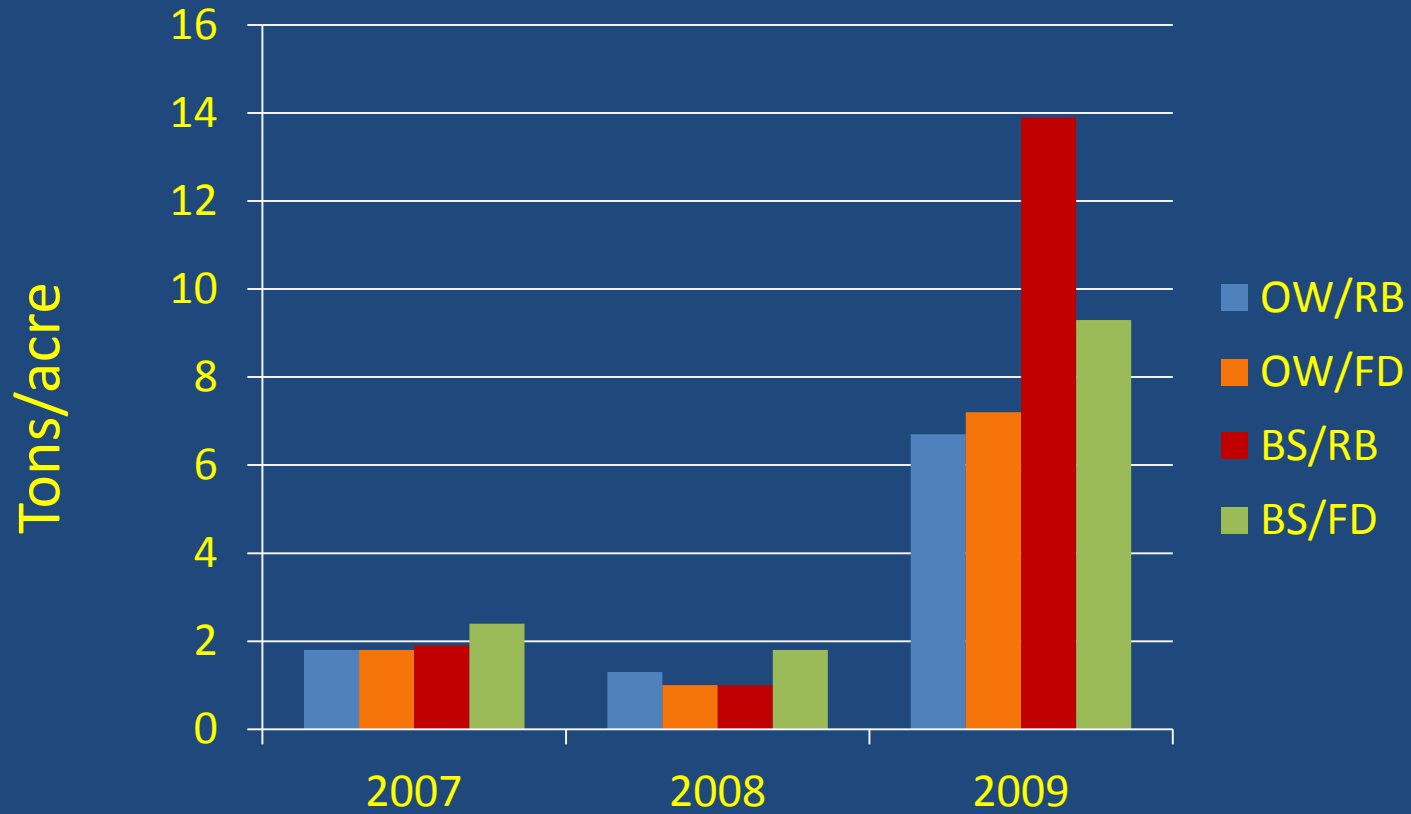
<u>Statistics</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Scion	*	*	NS	**	* *
Rootstock	***	***	***	***	***
Scion*Root stock	NS	NS	NS	NS	NS

NS=not significant, * = $P < 0.05$, ** = $P < 0.01$, *** = $P < 0.001$

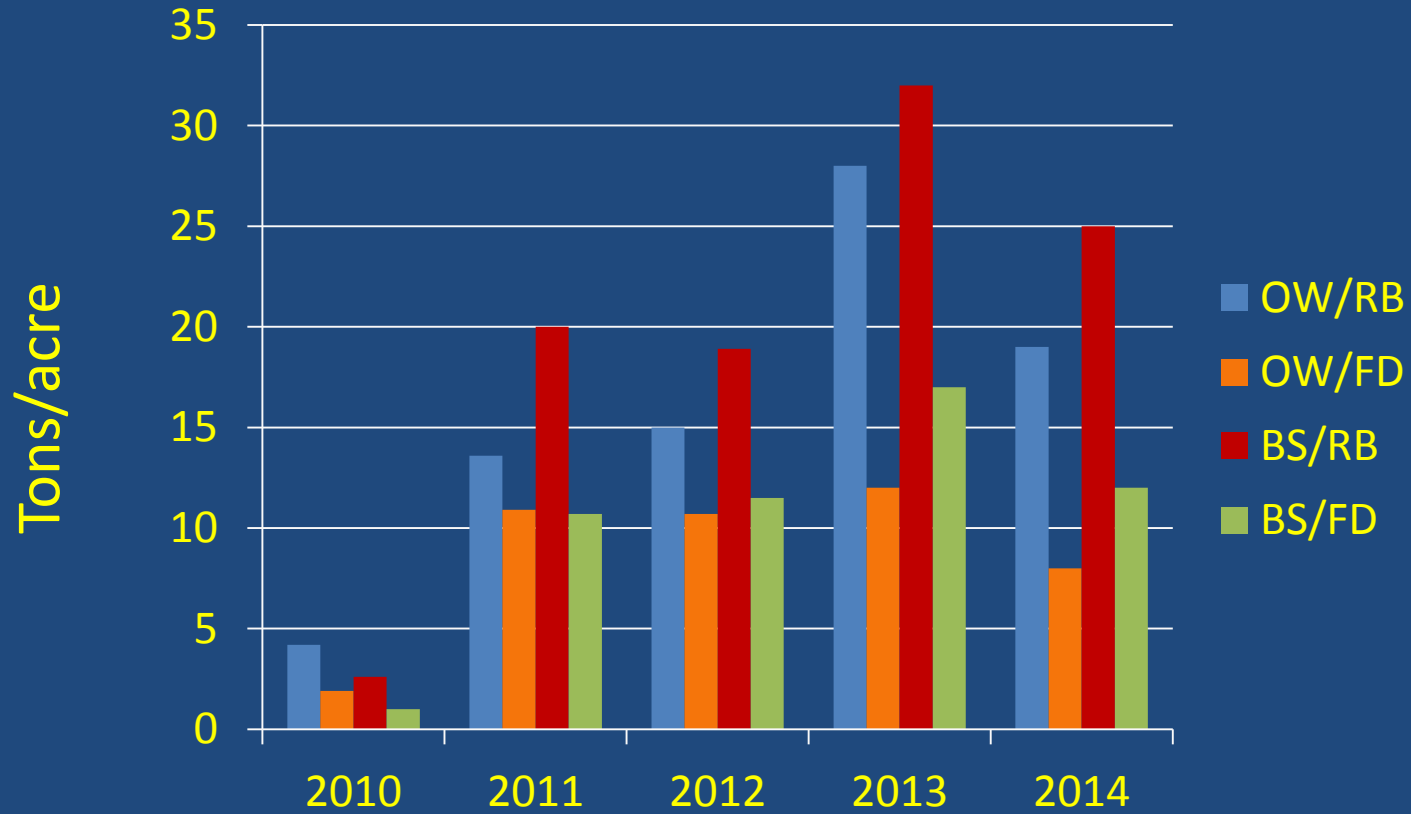
Yield



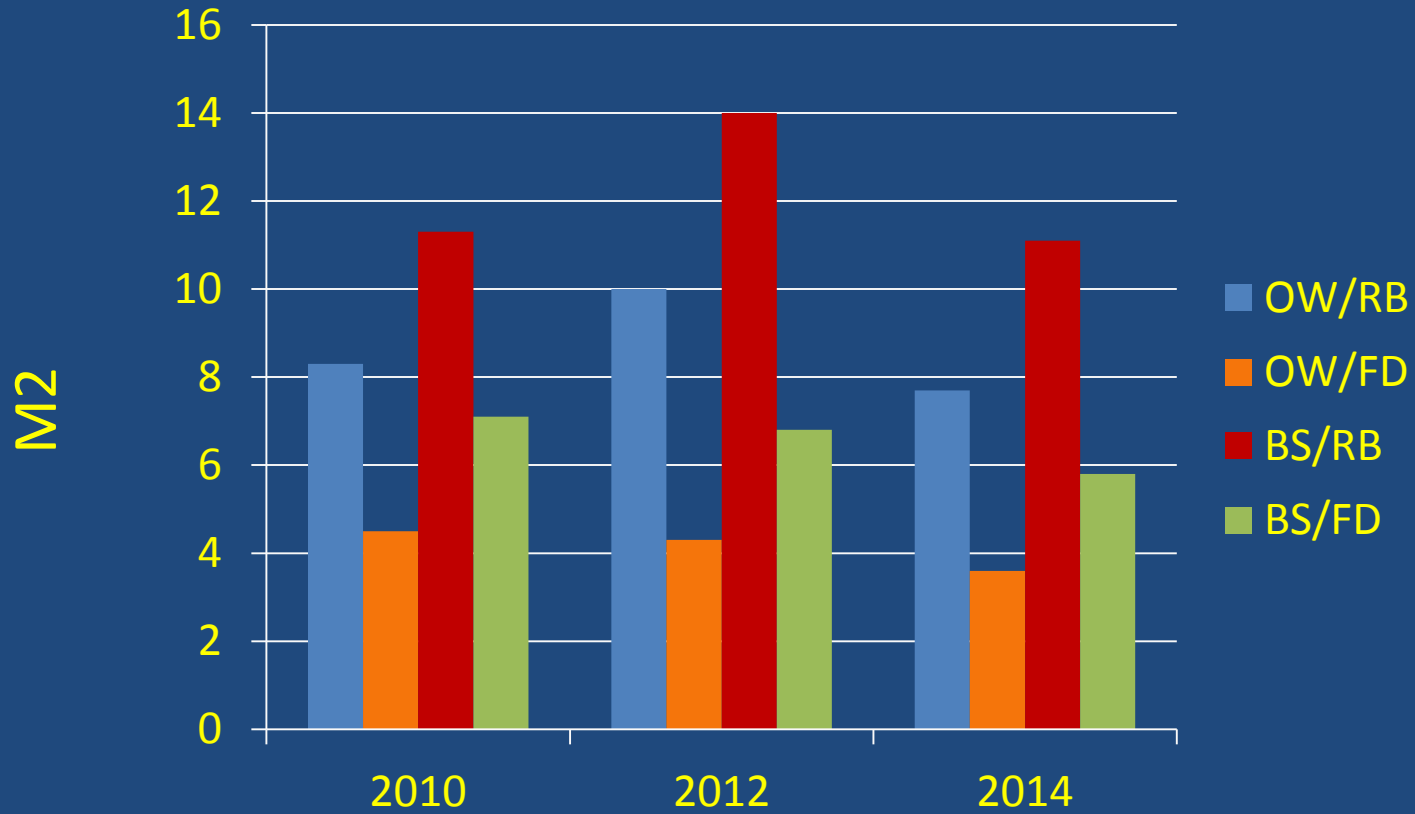
Yield



Yield



Tree Canopy Area

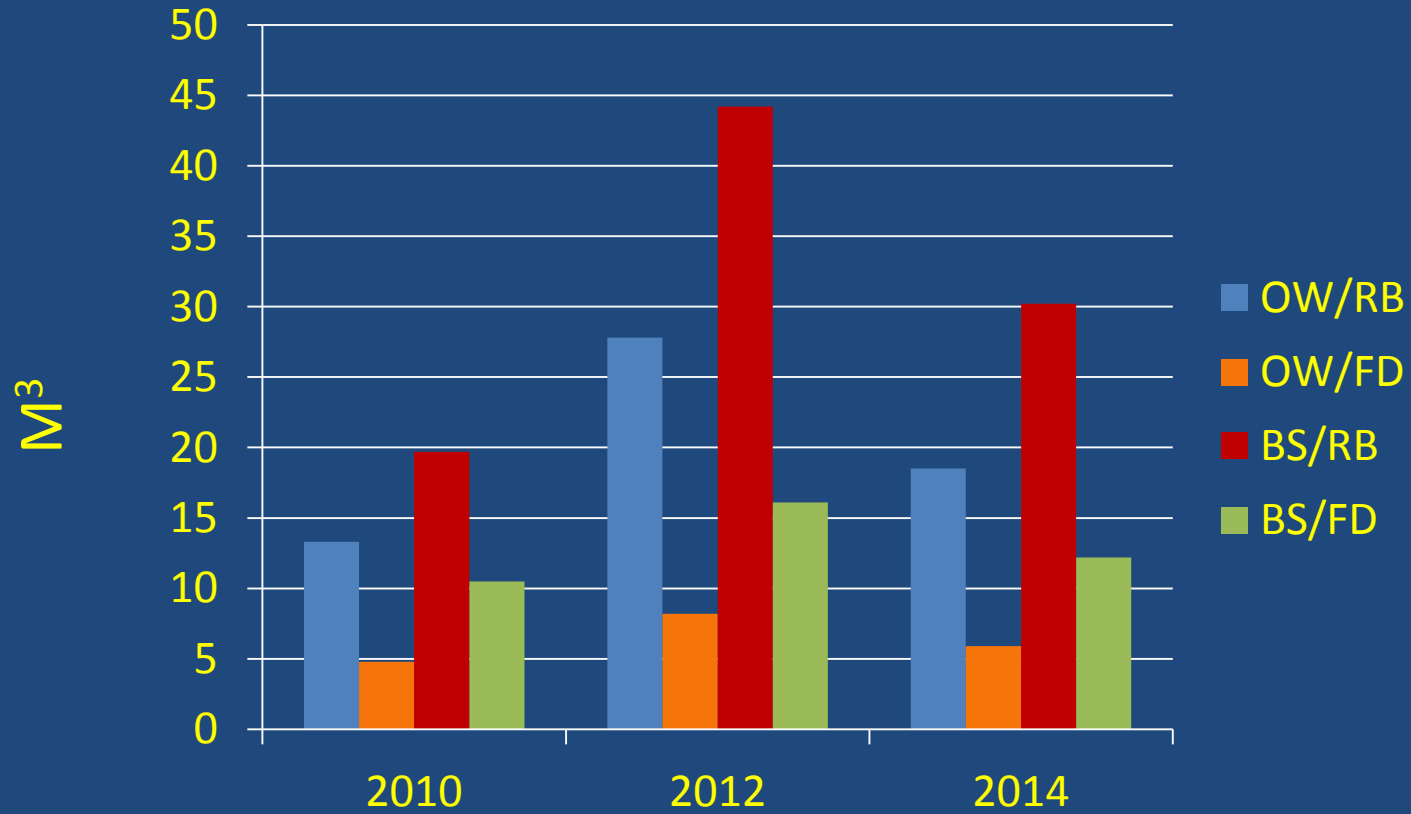


Tree Canopy Area (m²)

<u>Statistics</u>	<u>2010</u>	<u>2012</u>	<u>2014</u>
Scion	***	***	* * *
Rootstock	***	***	***
Scion*Rootstock	NS	NS	NS

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Tree Canopy Volume

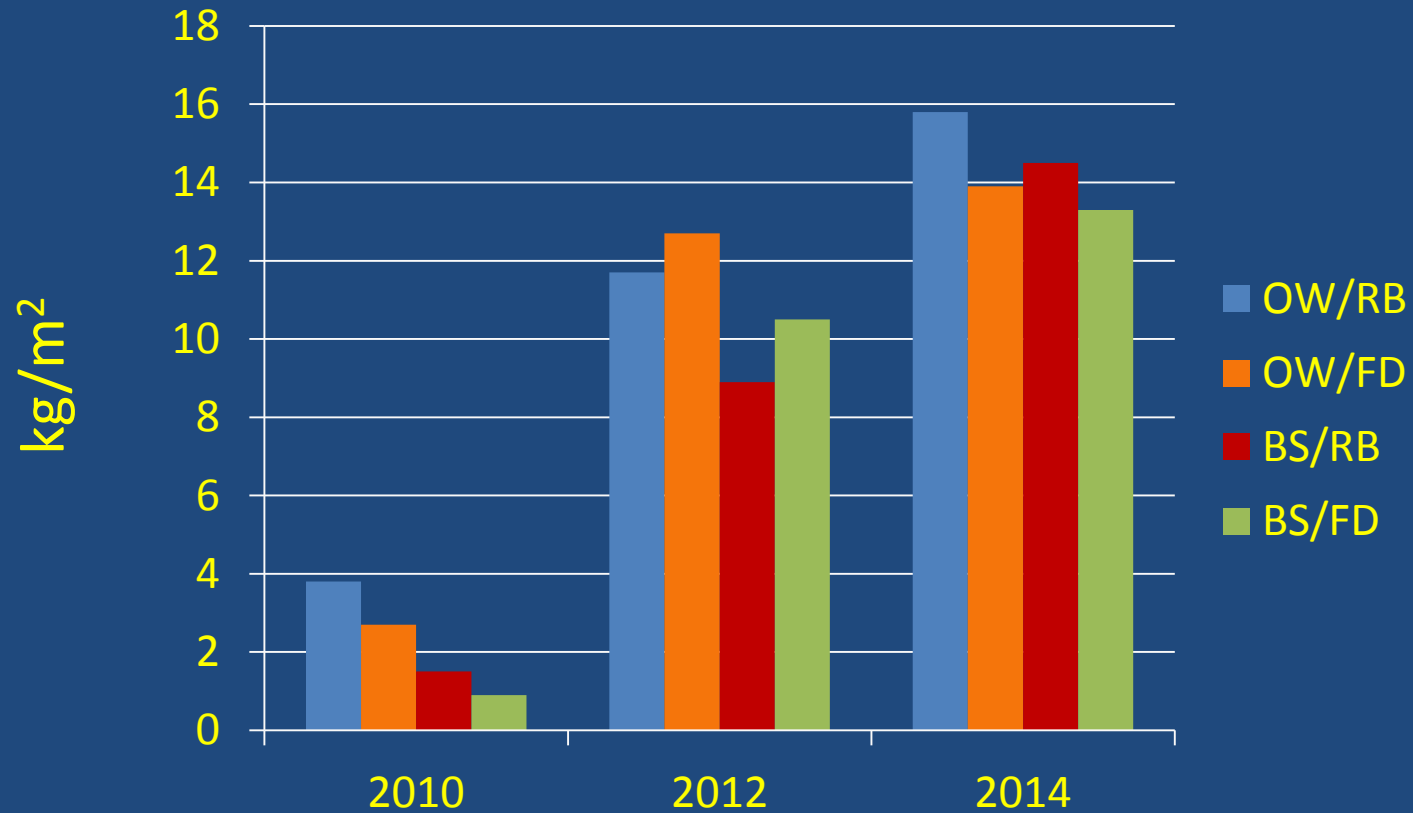


Tree Canopy Volume (m³)

<u>Statistics</u>	<u>2010</u>	<u>2012</u>	<u>2014</u>
Scion	***	***	* * *
Rootstock	***	***	***
Scion*Rootstock	NS	NS	NS

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Yield/Tree Canopy Area

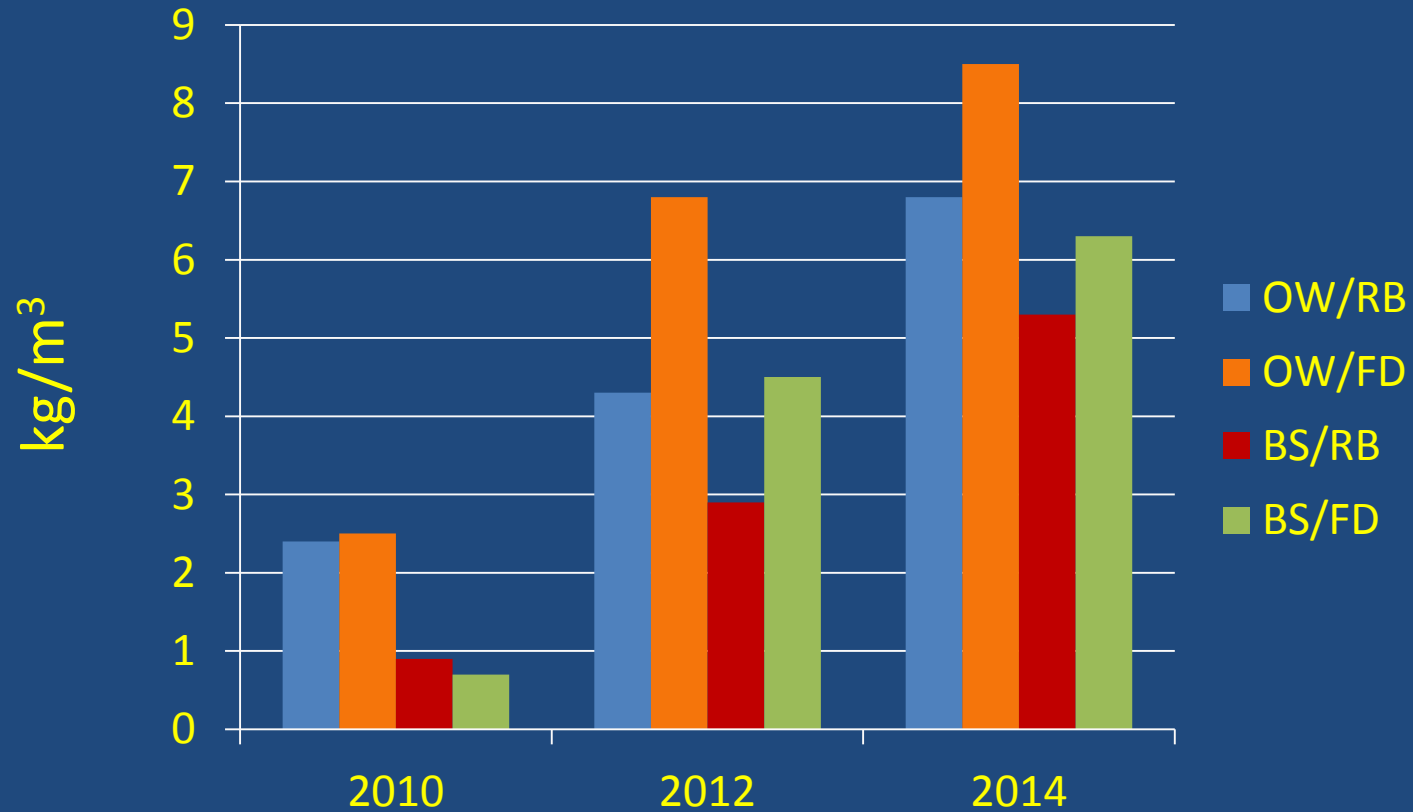


Yield/Tree Canopy Area (lb/m²)

<u>Statistics</u>	<u>2010</u>	<u>2012</u>	<u>2014</u>
Scion	**	NS	NS
Rootstock	NS	**	NS
Scion*Rootstock	NS	NS	NS

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Yield/Tree Canopy Volume

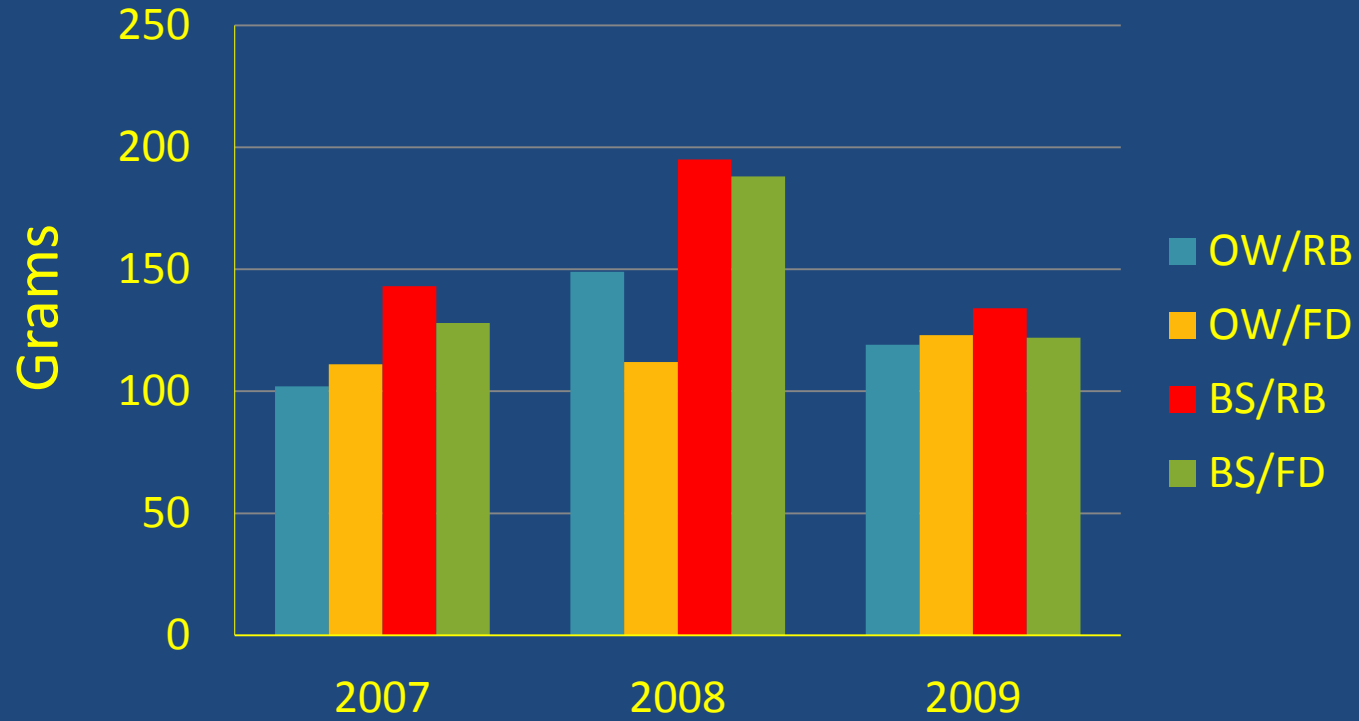


Yield/Tree Canopy Volume (lb/m³)

<u>Statistics</u>	<u>2010</u>	<u>2012</u>	<u>2014</u>
Scion	**	***	**
Rootstock	NS	***	*
Scion*Rootstock	NS	NS	NS

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Fruit weight

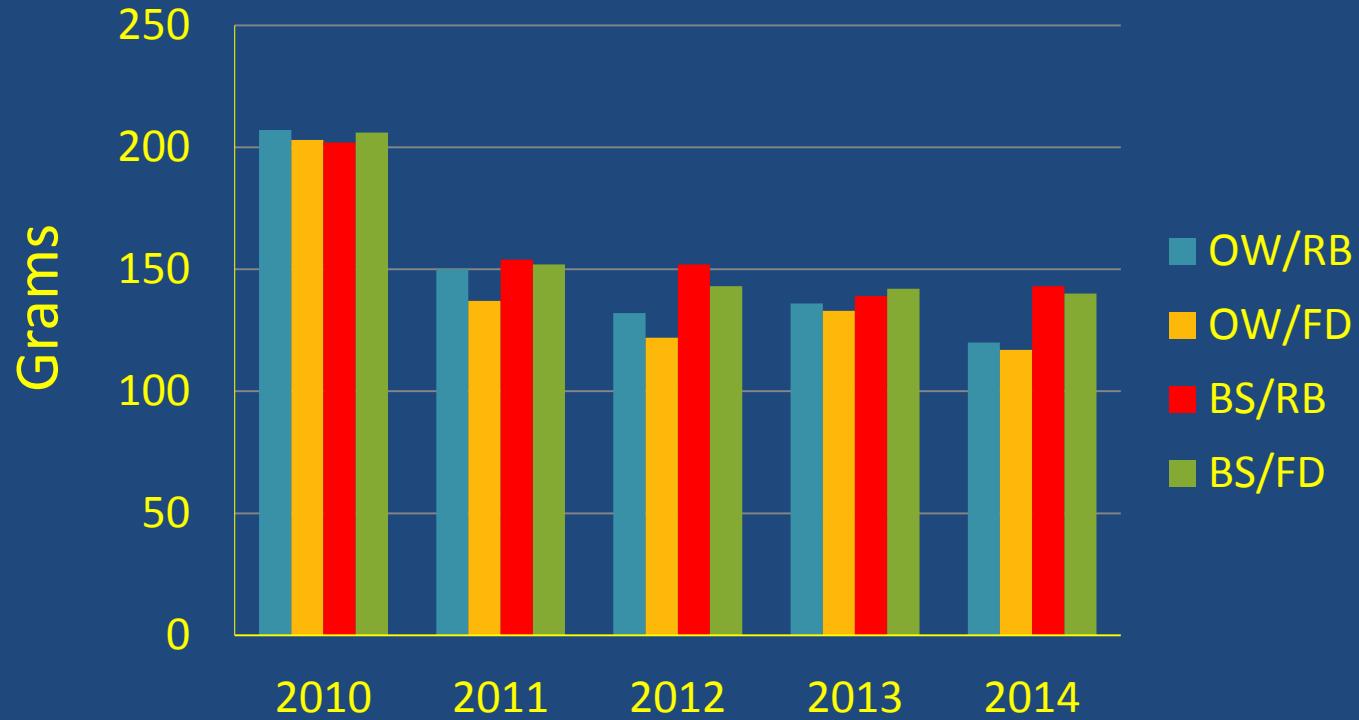


Fruit weight (g)

<u>Statistics</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Scion	* * *	*	*
Rootstock	NS	NS	NS
Scion*Rootstock	NS	NS	* * *

NS=not significant, * = $P < 0.05$, ** = $P < 0.01$, *** = $P < 0.001$

Fruit weight

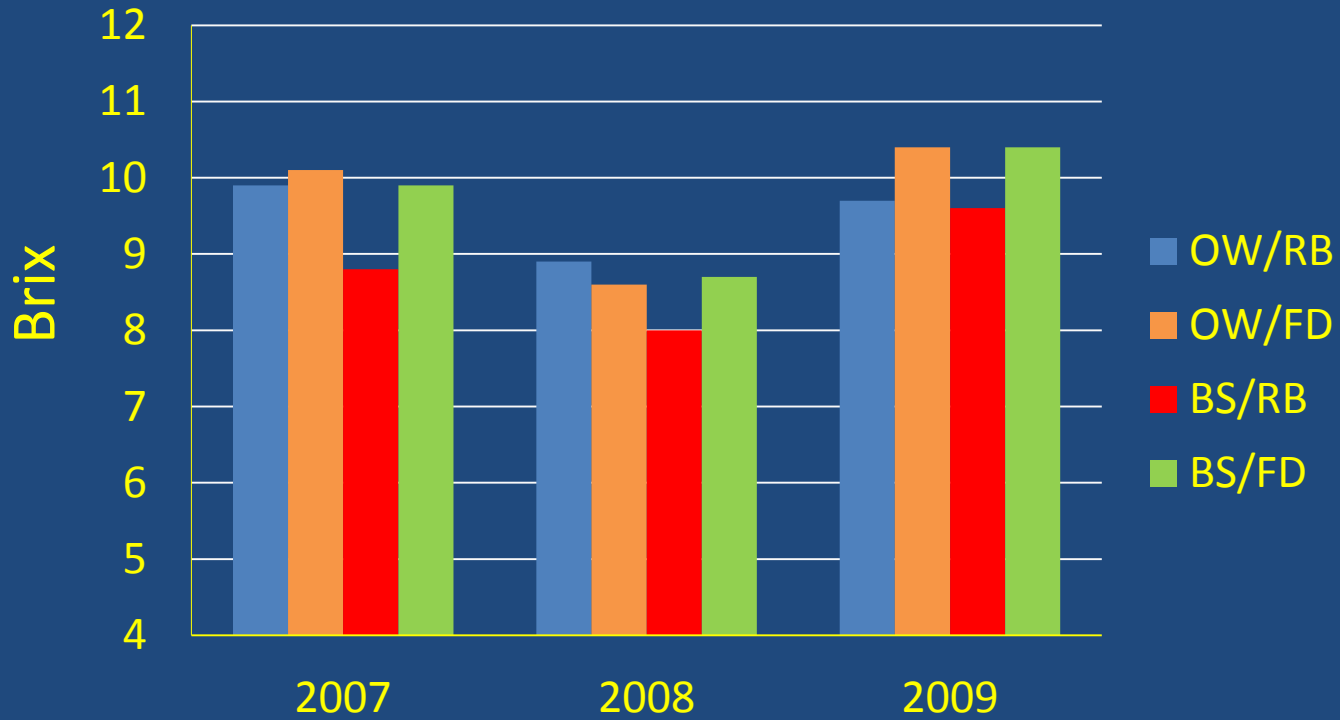


Fruit weight (g)

<u>Statistics</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Scion	NS	*	**	NS	* *
Rootstock	NS	NS	NS	NS	NS
Scion*Root stock	NS	NS	NS	NS	NS

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Soluble Solids

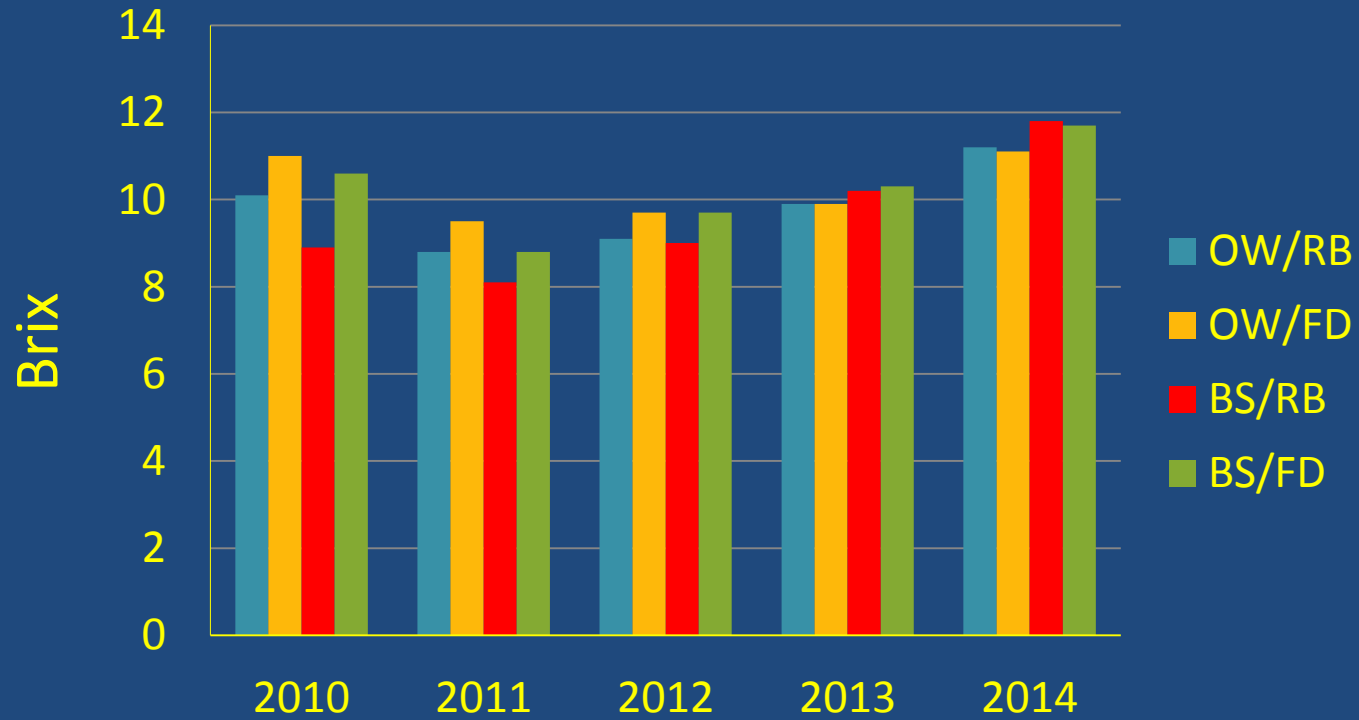


Soluble Solids (Brix)

<u>Statistics</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Scion	* * *	NS	NS
Rootstock	* * *	* * *	* * *
Scion*Rootstock	*	NS	NS

NS=not significant, * = $P < 0.05$, ** = $P < 0.01$, *** = $P < 0.001$

Soluble Solids

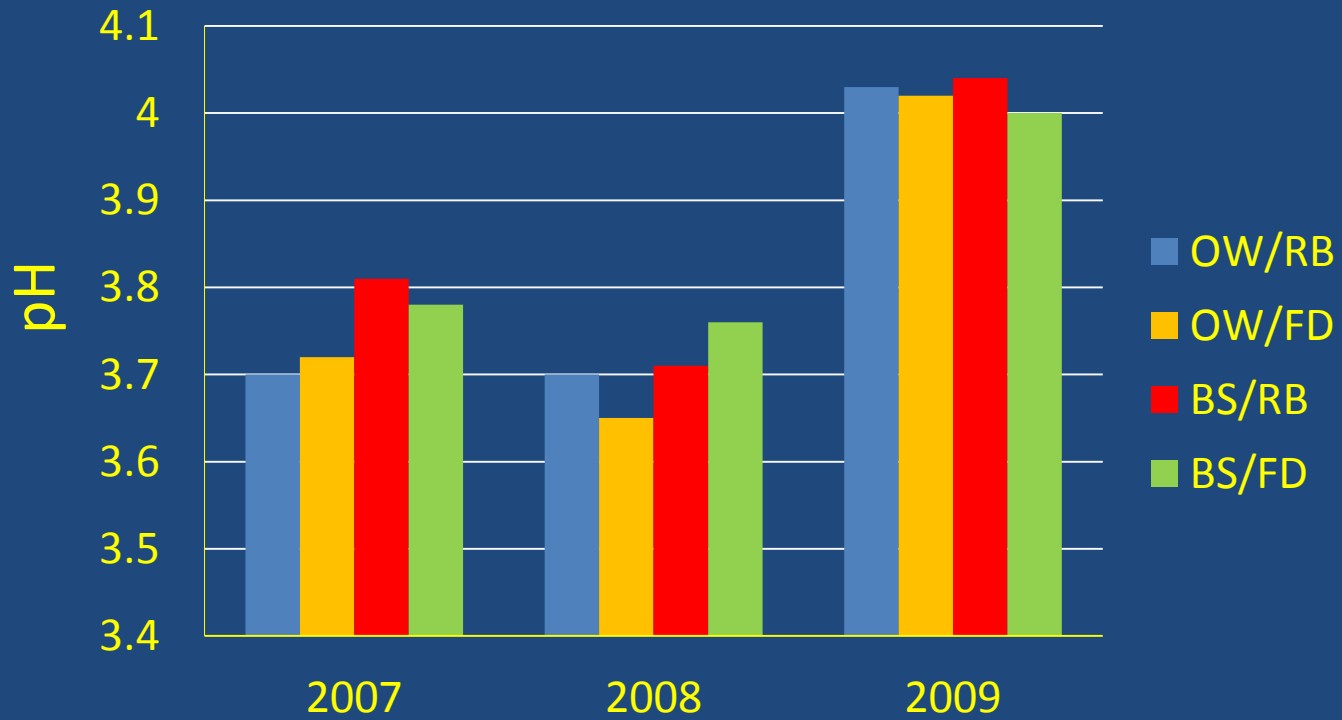


Soluble Solids (Brix)

<u>Statistics</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Scion	*	**	NS	NS	*
Rootstock	**	**	**	NS	NS
Scion*Root stock	NS	NS	NS	NS	NS

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Acidity

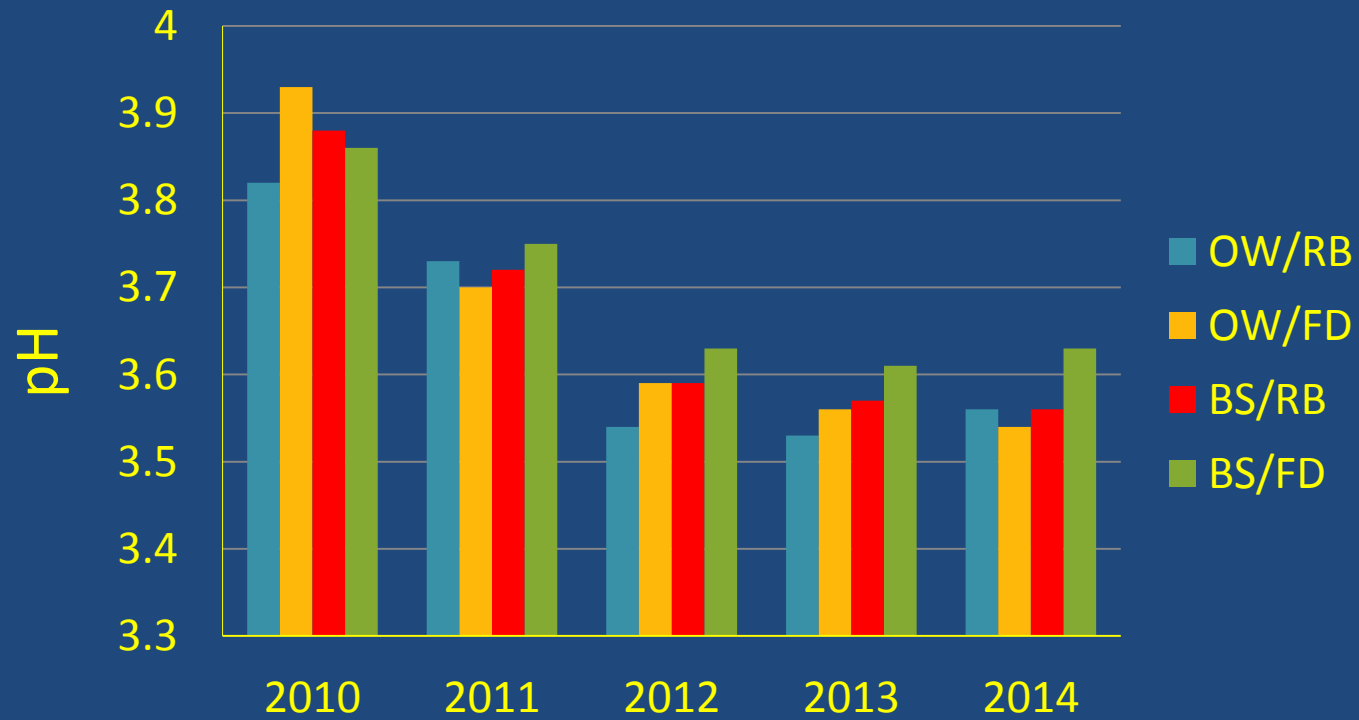


Acidity (pH)

<u>Statistics</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
Scion	*	*	NS
Rootstock	NS	NS	NS
Scion*Rootstock	NS	NS	NS

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Acidity

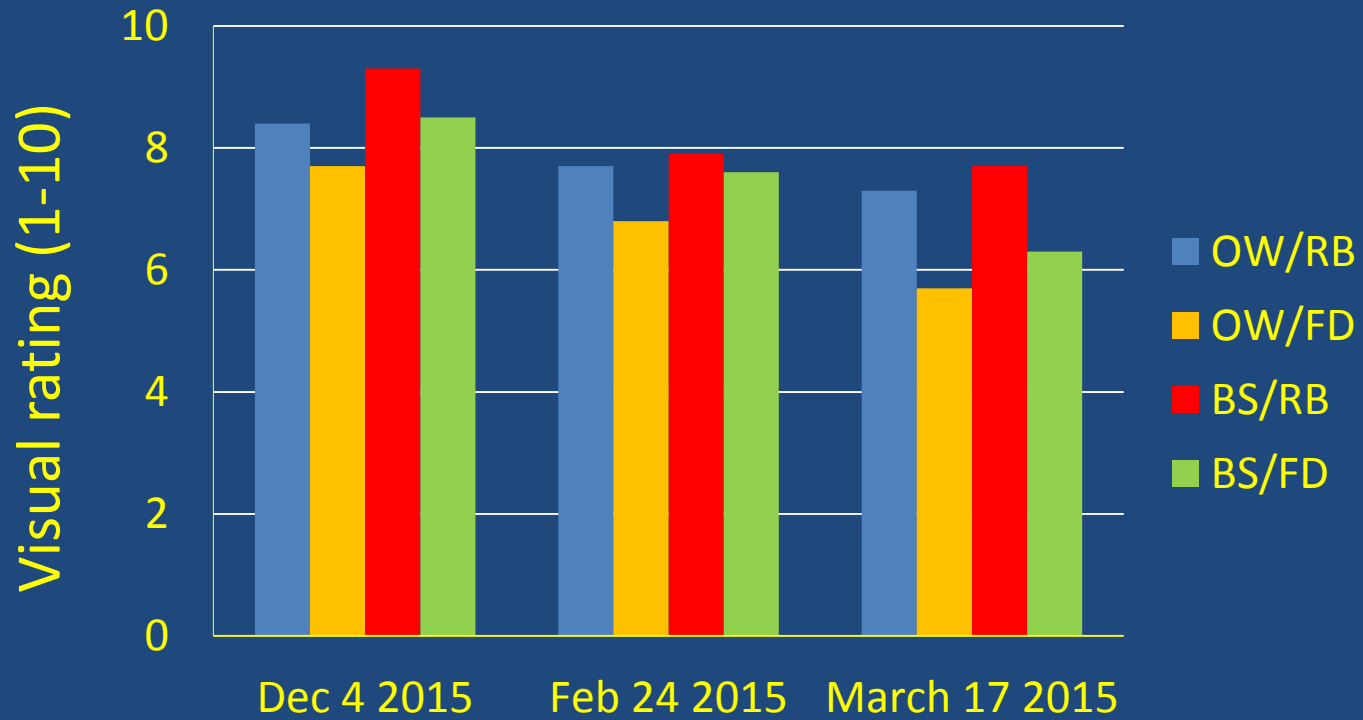


Acidity (pH)

<u>Statistics</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Scion	NS	NS	NS	NS	NS
Rootstock	NS	NS	NS	NS	NS
Scion*Root stock	NS	NS	NS	NS	NS

NS=not significant, * = $P < 0.05$, ** = $P < 0.01$, *** = $P < 0.001$

Cold Hardiness



Cold Hardiness

<u>Statistics</u>	<u>Dec. 4 2014</u>	<u>Feb. 23 2015</u>	<u>March 17 2015</u>
Scion	*	NS	NS
Rootstock	*	NS	NS
Scion*Rootstock	NS	NS	NS

NS=not significant, * = $P < 0.05$, ** = $P < 0.01$, *** = $P < 0.001$

Average tree size, yield and quality for mature trees (2009-2014).

Scion/Rootstock	Tree Canopy Area	Yield per Year		Fruit wt.	Soluble Solids	Fruit acidity
	(m ²)	(lbs/tree)	(tons/acre)	(g)	(Brix)	(pH)
'Brown Select'/ 'Flying Dragon'	6.6	143	10.4	151	10.3	3.75
'Brown Select'/ 'Rubidoux'	12.1	246	19.2	154	9.4	3.73
'Owari'/ 'Flying Dragon'	4.1	107	7.8	139	10.3	3.73
'Owari'/ 'Rubidoux'	8.7	218	15.8	144	9.8	3.70

Bumpy
Fruit
Syndrome

