

# **Southern California Strawberry Research Update**

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**UC Davis/UC South Coast REC**

# 2012-2013: A Difficult Production Season in Southern California

Low chill hrs at HE in late Sept-Oct

High temps during plant establishment

Initial plant growth was slow, but little or no die-out

7 frost/freeze events Dec-Mar - some crop losses

Heavy mite pressure mid-season (Oxnard)

Relatively high incidence of albino fruit

Mixed market conditions after Easter

Short harvest seasons for some growers

# Statewide Acreage Trends

Watsonville/Salinas : steady

Santa María : increasing

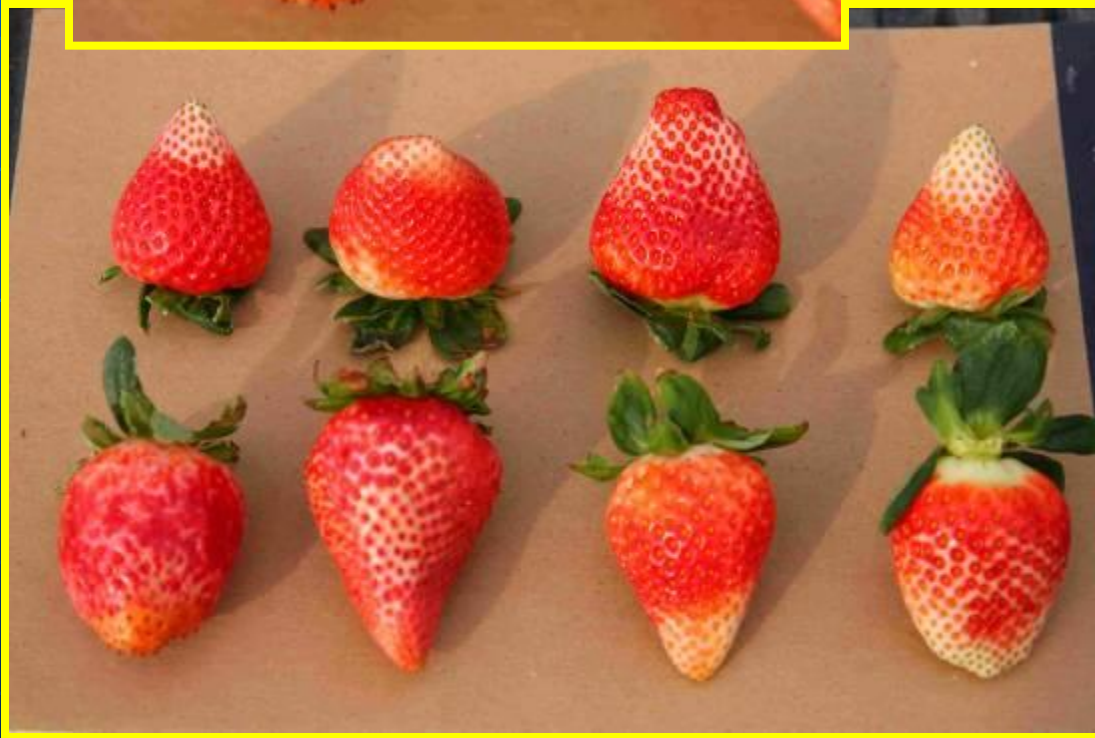
Oxnard : decreasing

OC : decreasing

Oxnard competes  
directly with Mexico and Florida

Some long-time Oxnard growers  
are no longer in the deal

**Relatively high  
incidence of  
Albino fruit**



**Oxnard  
April 18,  
2013**



**Heavy mite  
pressure**





**Mowing  
fields at  
peak yield**

**Oxnard  
April 18,  
2013**



# New short-day cultivar Merced



# Merced = C229



Fruiting plant of Merced in Irvine, CA



# Merced



# Merced



# New Cultivar Merced

Short-day cultivar

Compact plant

Early planting for So. California

Excellent fruit quality (flavor, color, firmness)

Weather tolerant

Fresh-dug plants (use 12-13" in-row spacing)

High productivity with frigo plants (Central Valley, Turkey, Colombia, Europe)

Performance of Albion, San Andreas and Camino Real with selection C229  
in traditional late-summer planting trials at the  
Watsonville Research Facility in 2010-12

Item	Yield (C/Acre)	Appearance Score (5=best)	Fruit Size (g/fruit)	Firmness
Albion	7,047	4.1	33.6	12.8
San Andreas	6,908	4.0	30.6	12.5
Camino Real	5,053	3.0	25.6	11.5
C229	9,148	4.2	34.2	12.1

WEO plants harvested in January, stored at -2C planted August 26 - September 9

Performance 'C229' and three comparison cultivars evaluated at the Watsonville Research Facility in 2010-12

Item	Early Yield (C/A)	Yield (C/A)	Appearance Score (5=best)	Fruit Size (g/fruit)	Firmness
Camarosa	1,634	6,198	2.9	28.5	11.7
Ventana	2,472	6,680	3.2	31.3	10.4
Benicia	2,357	6,196	3.5	34.2	11.1
C229	1,705	7,398	4.3	35.0	11.9

Macdoel plants harvested October 15-16, planted with 1 week storage  
(52" 2-row beds, 17,300 plants/acre)

## Performance of 'Merced' (C229) and four comparison cultivars at the South Coast REC in 2011-12

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Item	Early Yield (C/A)	Yield (C/A)	Appearance Score (5=best)	Fruit Size (g/fruit)	Firmness
Camarosa	2,307	5,331	2.3	28.0	3.3
Ventana	2,825	5,847	3.0	30.7	3.3
Benicia	3,172	6,469	3.2	33.4	3.6
San Andreas	1,718	4,580	3.3	31.2	3.7
C229	1,684	5,078	3.6	33.7	3.5

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Macdoel plants harvested September 28, planted October 2  
4-row, 64" beds with 16" in-row plant spacing (24,475 plants/acre)

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Consider 4-row, 64" beds with 13" in-row plant spacing (30,260 plants/acre)

# Advanced Short-day U.C. Selections



8.20-602

8.55-2



8.132-608



C235





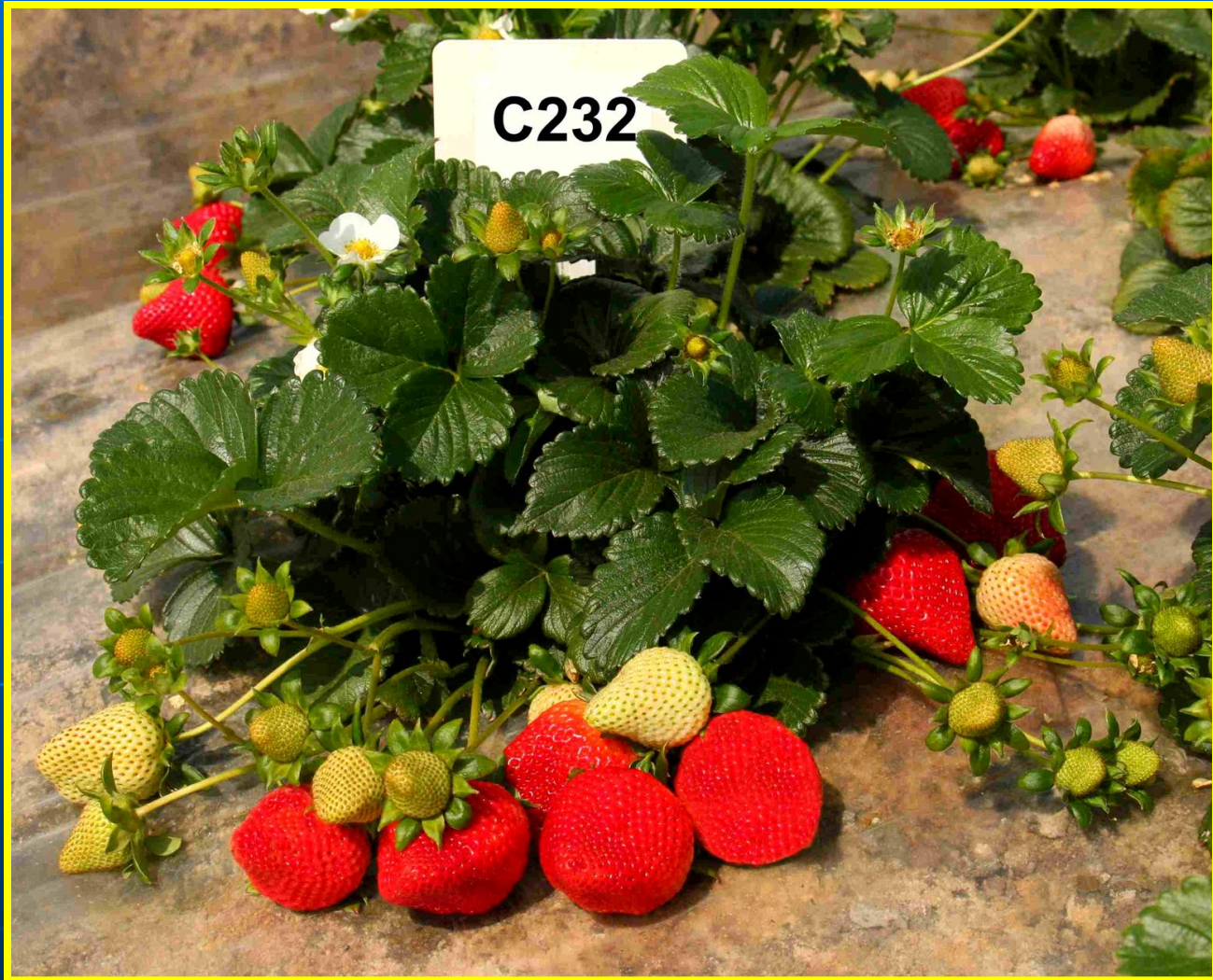
# C231 (8.20-602)





# C232 (8.55-2)





# C235 (8.132-608)



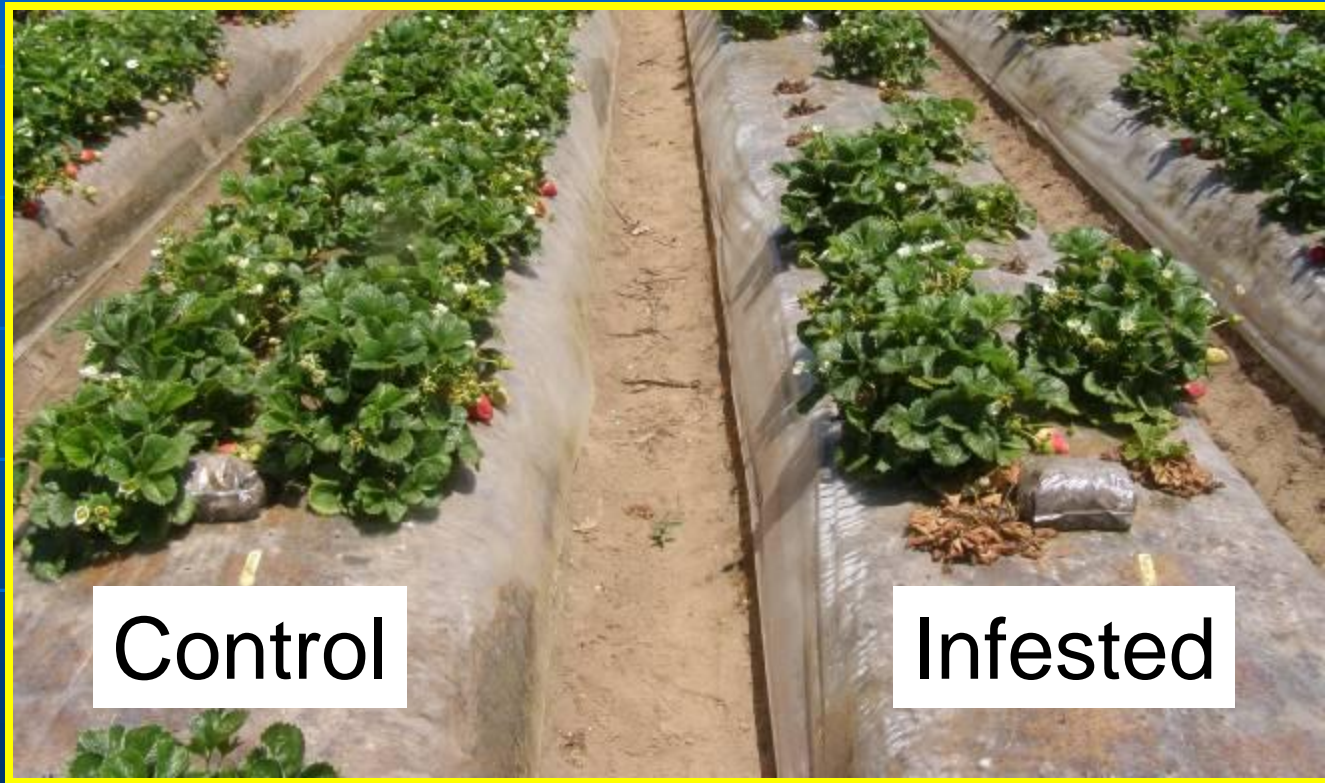


# Performance of Advanced SD Selections at the U.C. So. Coast R.E.C. – Irvine, CA in 2011-13

Genotype	C#	Yld to 4/1	Total Yld	App (1-5)	Fruit size (g)	Firm (1-5)
Merced	C229	2484	7097	3.7	34.7	3.7
8.20-602	C231	3519	7866	3.6	35.7	3.7
8.55-2	C232	3852	10616	3.9	36.2	3.8
8.132-608	C235	4397	9761	3.5	35.9	3.6

Macdoel plants dug Sept. 28, planted Oct. 1, 2011-13  
4-row beds, 64" wide, 24500 plants per acre, clear polyethylene mulch

# Monterey



Control

Infested

*Fusarium oxysporum* infection trial



San Andreas

Albion



*Fusarium oxysporum* infection trial

## Performance of Albion, Monterey, and San Andreas at the Watsonville Research Facility with *Fusarium* Infestation

Item	Treatment	Yield (C/Acre)	Appearance Score (5=best)	Fruit Size (g/fruit)	% Stunted
Albion	Control	5,510	3.9	31.7	
	Infested	4,417	4.1	33.6	26.4
Monterey	Control	6,275	3.2	32.4	
	Infested	3,482	3.0	31.0	50.8
San Andreas	Control	6,799	4.2	32.2	
	Infested	7,909	4.4	32.8	0

WEO plants, yield to August 20

# Table 1. Disease Resistance Scores for UC Cultivars, 2008-11

Genotype	<u>P.</u> <u>cactorum</u>	<u>V.</u> <u>dahliae</u>	<u>C.</u> <u>acutatum</u>	<u>F.</u> <u>oxysporum</u>	<u>M.</u> <u>phaseolina</u>
Camarosa	3.2	3.3	2.8	2.9	3.2
Ventana	2.5	3.1	3.0	4.6	3.2
Albion	4.5	3.9	3.1	2.3	1.9
Monterey	3.9	4.2	2.9	3.5	2.8
S. Andreas	4.1	4.1	2.8	5.0	1.6
Portola	4.1	3.8	2.2	5.0	1.9
Palomar	3.3	3.9	3.1	3.4	3.2
Benicia	3.7	2.2	2.7	3.0	3.1

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“1” indicates high susceptibility to disease;  
“5” indicates strong disease resistance

Table 2. Disease Resistance Scores for UC Cultivars, 2011-12

Genotype	<u><i>P.</i> <i>cactorum</i></u>	<u><i>V.</i> <i>dahliae</i></u>	<u><i>C.</i> <i>acutatum</i></u>	<u><i>F.</i> <i>oxysporum</i></u>	<u><i>M.</i> <i>phaseolina</i></u>
Ventana	2.5	3.1	3.2	4.3	3.7
Benicia	3.8	1.6	2.7	2.6	3.3
Merced	4.6	2.8	2.3	3.5	2.4

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“1” indicates high susceptibility to disease;  
“5” indicates strong disease resistance

**Thank You!**



