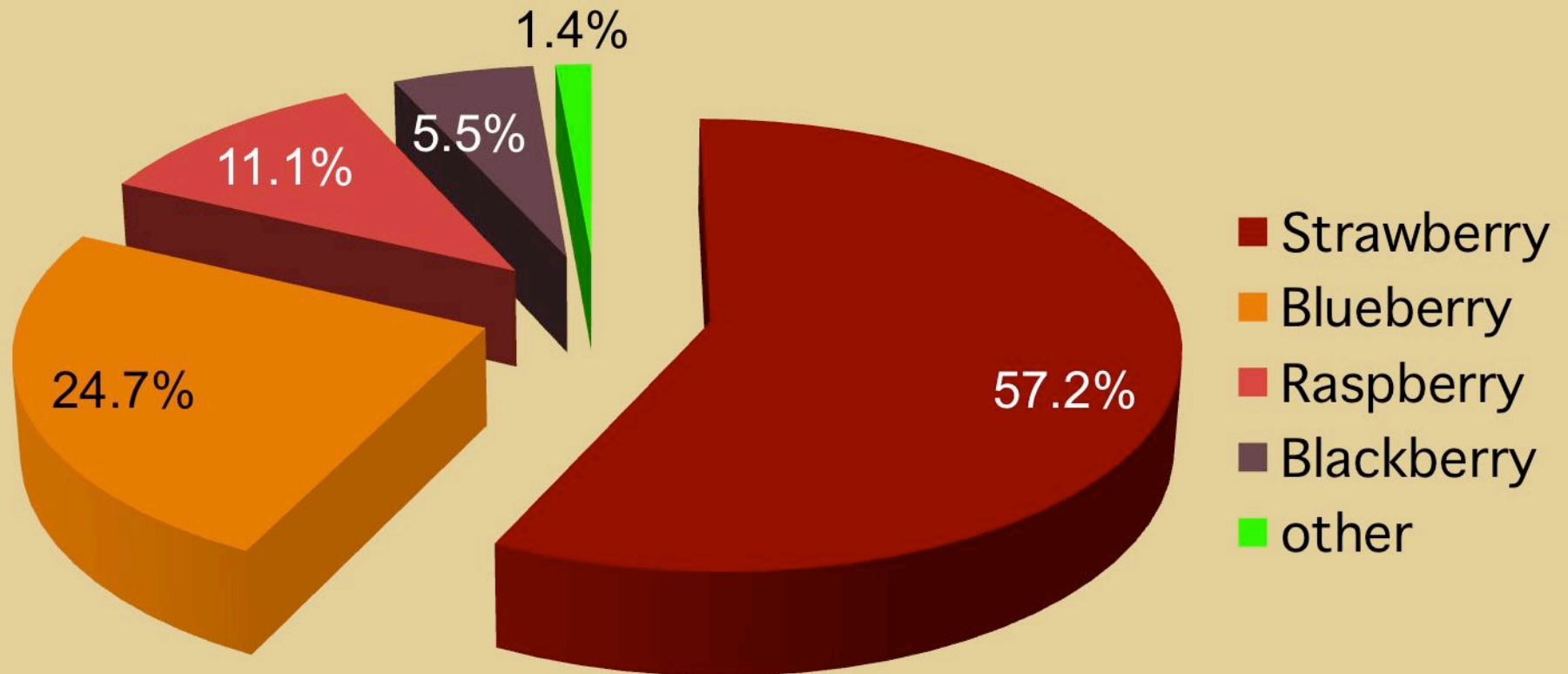


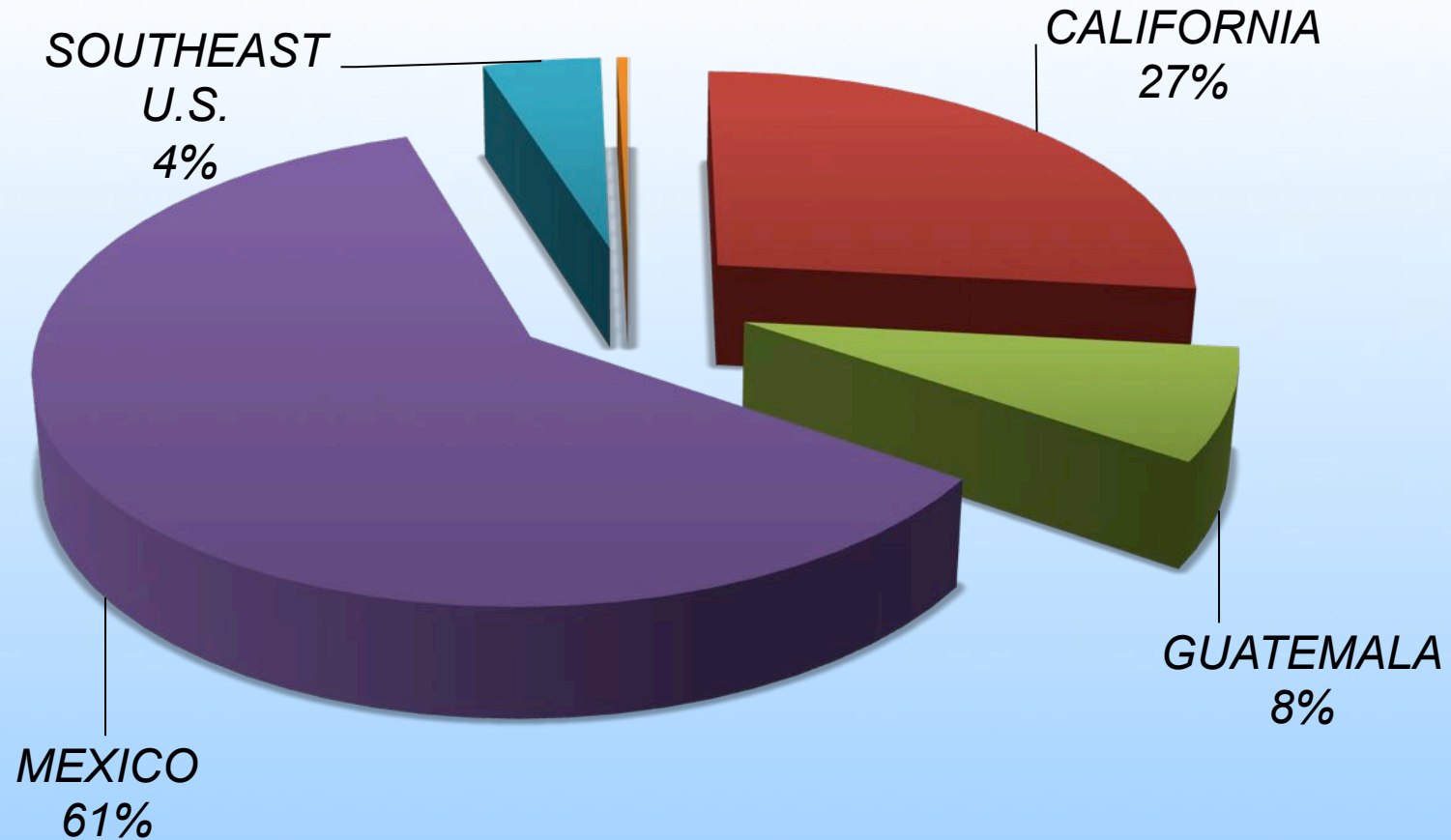


## *U.S. Sales of Small Fruits - 2008*



In 2015 ONLY Blackberry (of all berries) production is up compared to previous year:

## 2014 - US Fresh Blackberry Sales (flats)

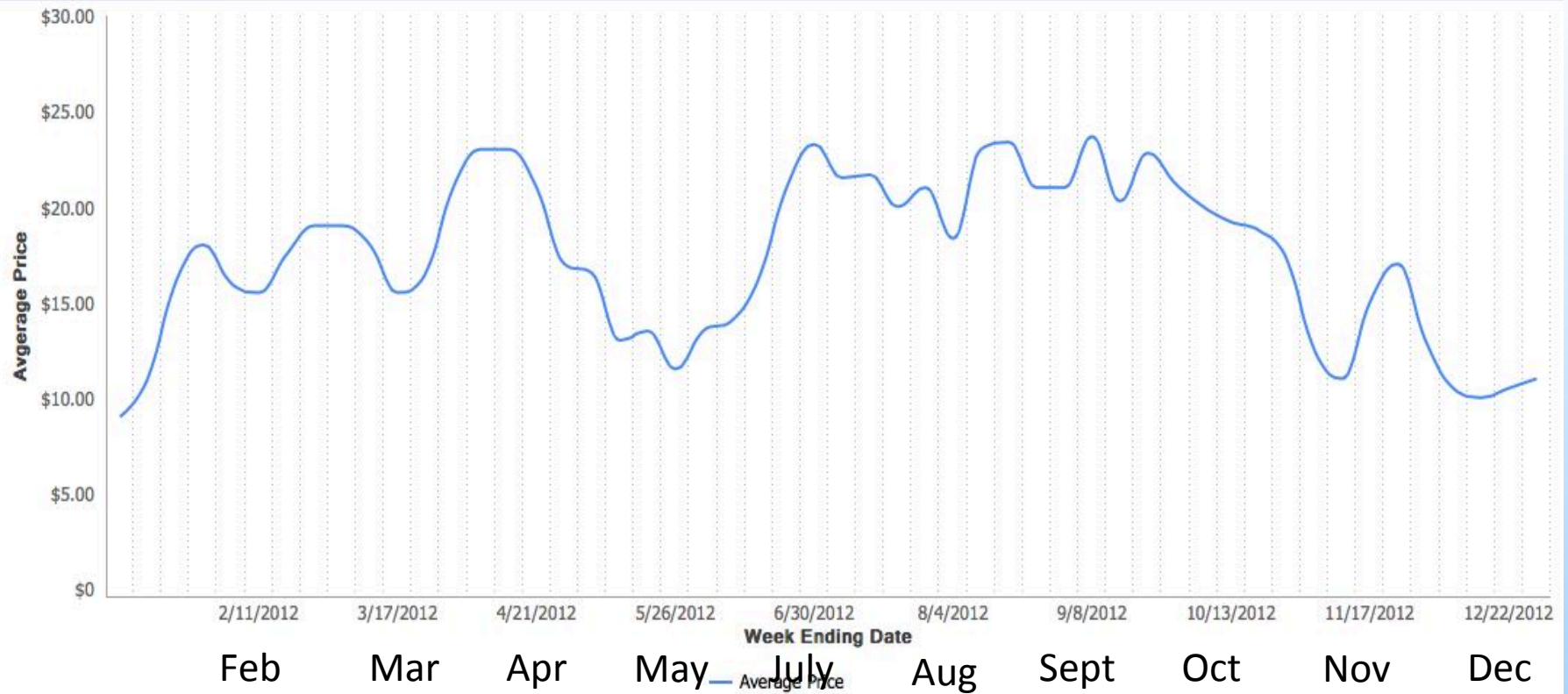


Other - Argentina, Colombia, <1%

# Blackberry - LA Terminal Market, per flat (12 \* 6-oz cups)

**\$18.74**

Average Prices Trend

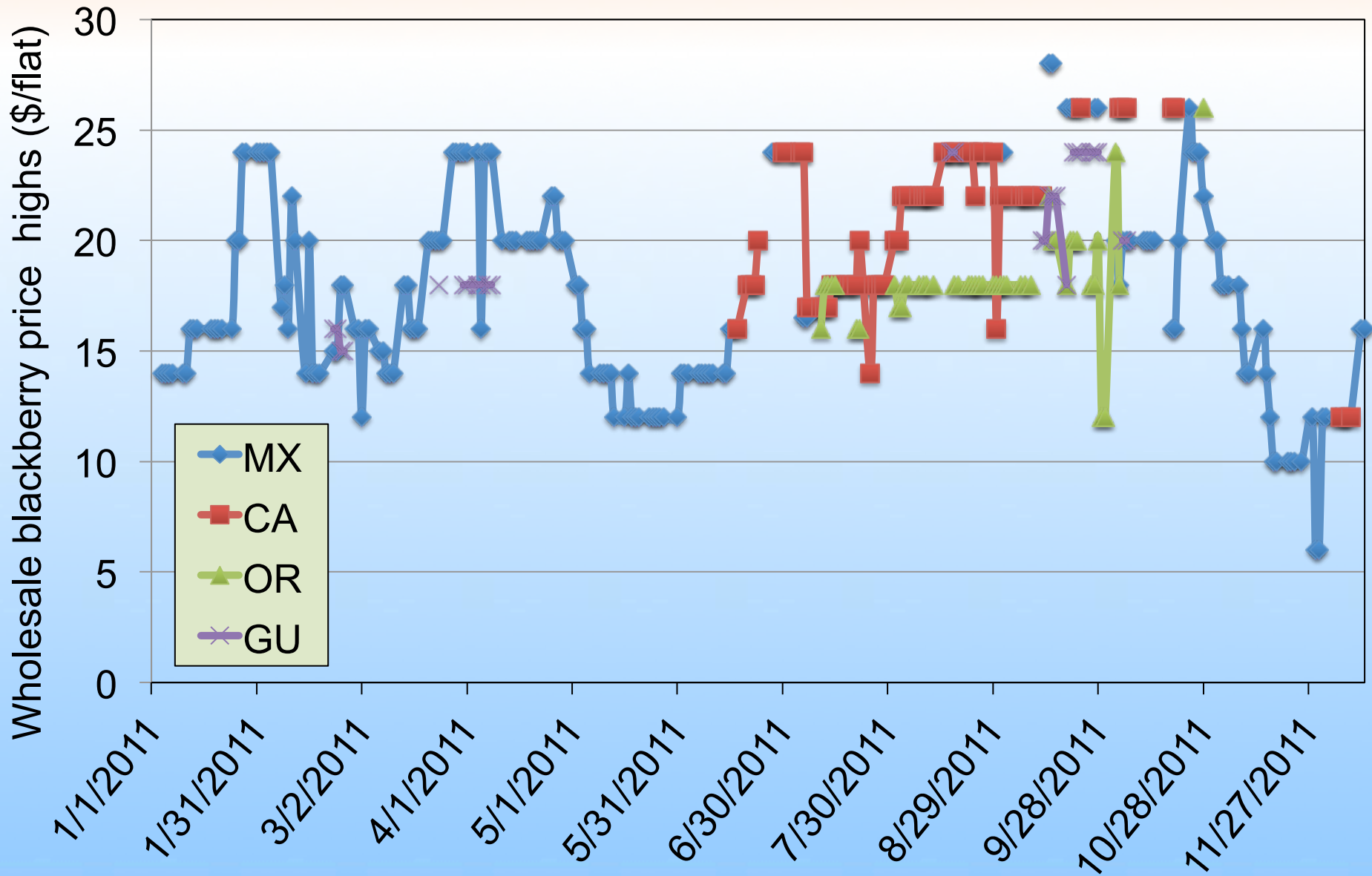




## Blackberries

- Among Fresh Trends' top 20 most popular fruits
- younger shoppers (age 21-39) more likely to buy than older shoppers
- Upper income >>> lower income
- Western > Eastern US
- 32% of blackberry buyers bought organic at least some of time
- **One of highest antioxidant levels of all fruits**
- **Fresh berries are an excellent source of vitamins A, C, E, K and minerals**

*Weekly Fresh Blackberry Wholesale Prices (highs)  
Los Angeles Terminal Market - 2011*



# USA

- California 1,200 acres
- The fruiting season is from mid-May through December
- Most of the varieties planted are proprietary
- Most varieties are floricanes under a natural system
- Primocanes varieties on the rise

# Potential Value of Primocane Blackberries

- Potential to schedule production based on primocane management
- Potential of two crops on the same plant in the same year (floricane followed by primocane)
- Reduction in pruning costs by mowing of canes (primocane crop only)

# Primo and Flori-canes

- Blackberries are a perennial plant with biennial canes
- Primocanes are the first-year canes that usually are vegetative only
- Floricanes are the second-year canes and these flower, fruit and die
- Primocane fruiting indicates that fruit is borne on first-year canes
- Normally, the remaining buds that did not fruit on primocanes develop and fruit on floricanes the following year
- Three types: Erect; Semi-erect and Trailing types

# Postharvest Blackberries

- No protective cuticle.
- High respiration rate.
- High rate of weight loss.
- Have to be picked near full ripeness.
- High rate of softening.
- Susceptible to gray mold (*Botrytis cinerea*).
- Blackberries can turn red.
- maximum shelf life is short (two days to two weeks).

DEFECTOS



18mm

19mm

20mm

21mm

22mm

23mm

24mm

25mm

26mm

27mm

28mm

29mm

30mm



**3 tipping times (45 cm from ground) at the ends of April, May and July**

**3 mowing times: Dec 1, Feb 1 and March 4.**



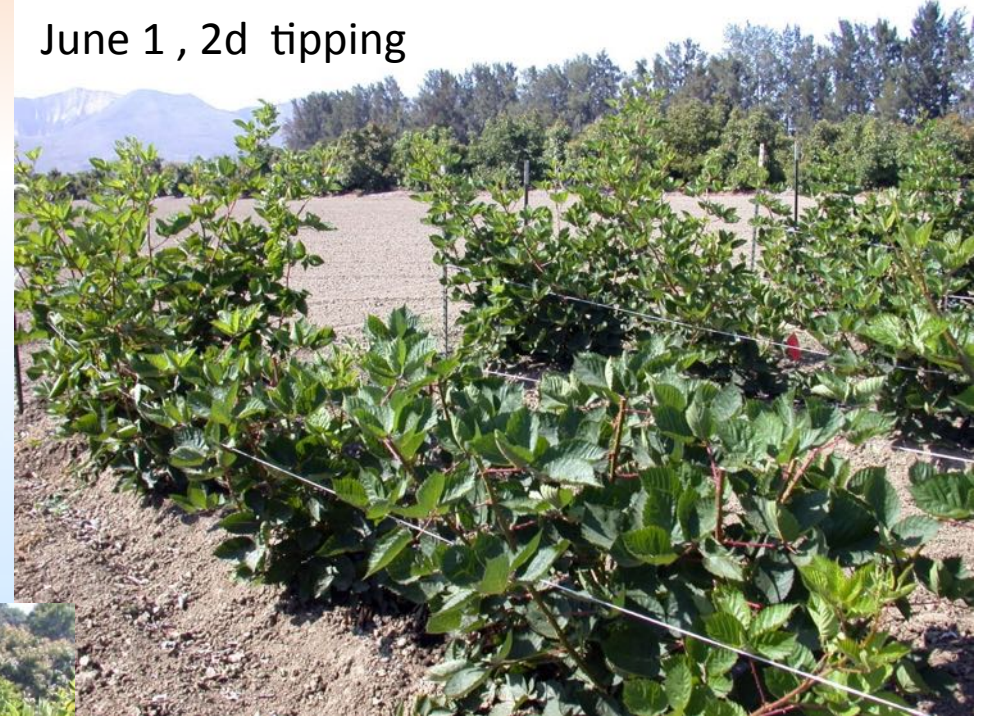
# PrimeArk 45 at UC Hansen REC

- Planted in October 2011 – small plugs
- Only pre-plant fertilizer: 500lbs 18-6-13
- Non-fumigated soil, no pesticides used in-season
- Posts and string for support
- Harvested by UCCE Master Gardener crew weekly

May 1 , after 1<sup>st</sup> tipping



June 1 , 2d tipping



July 25 , 3d tipping

New shoots appear 2-3 weeks after tipping



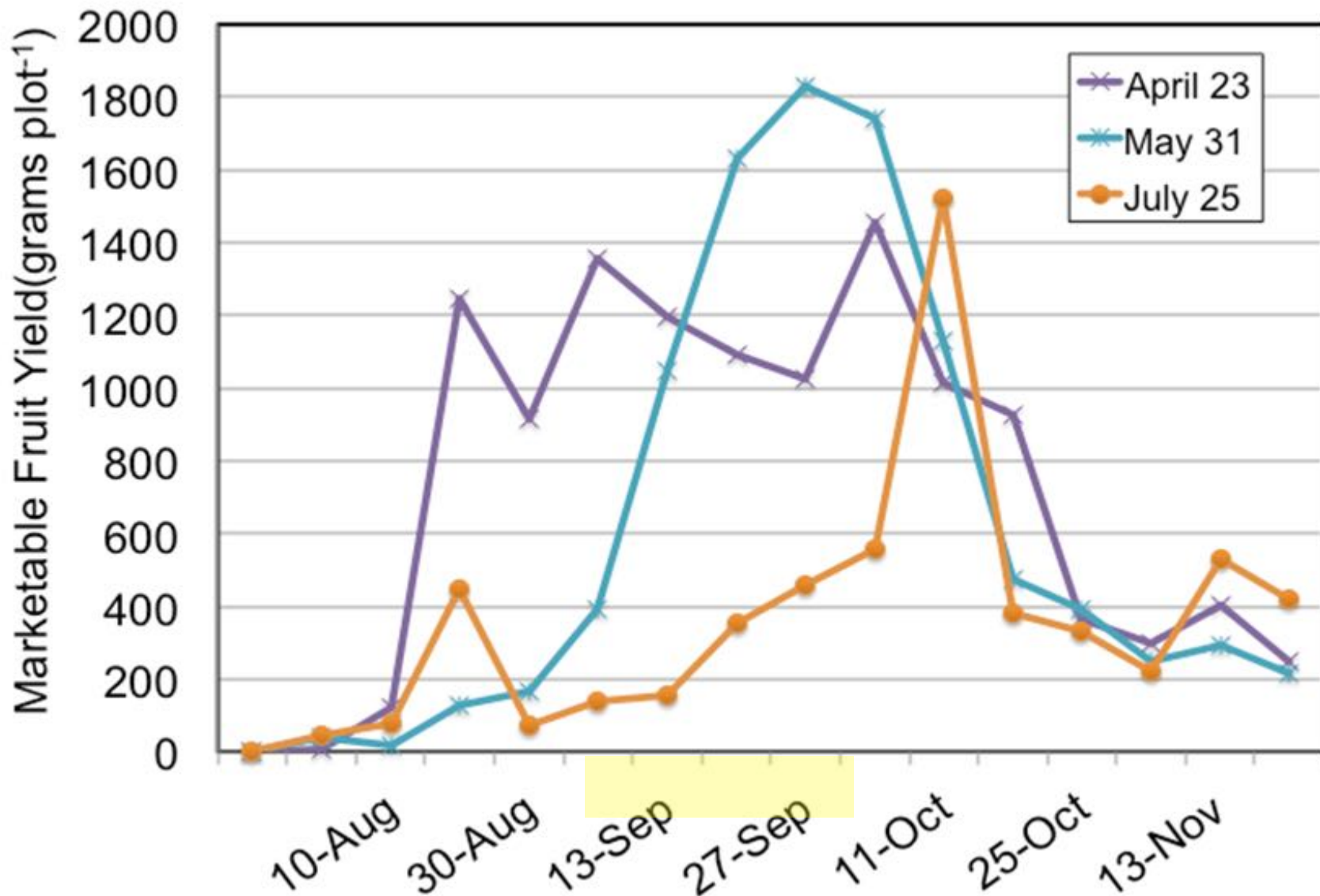
On 25 July plants tipped on June 1  
flower and set fruit



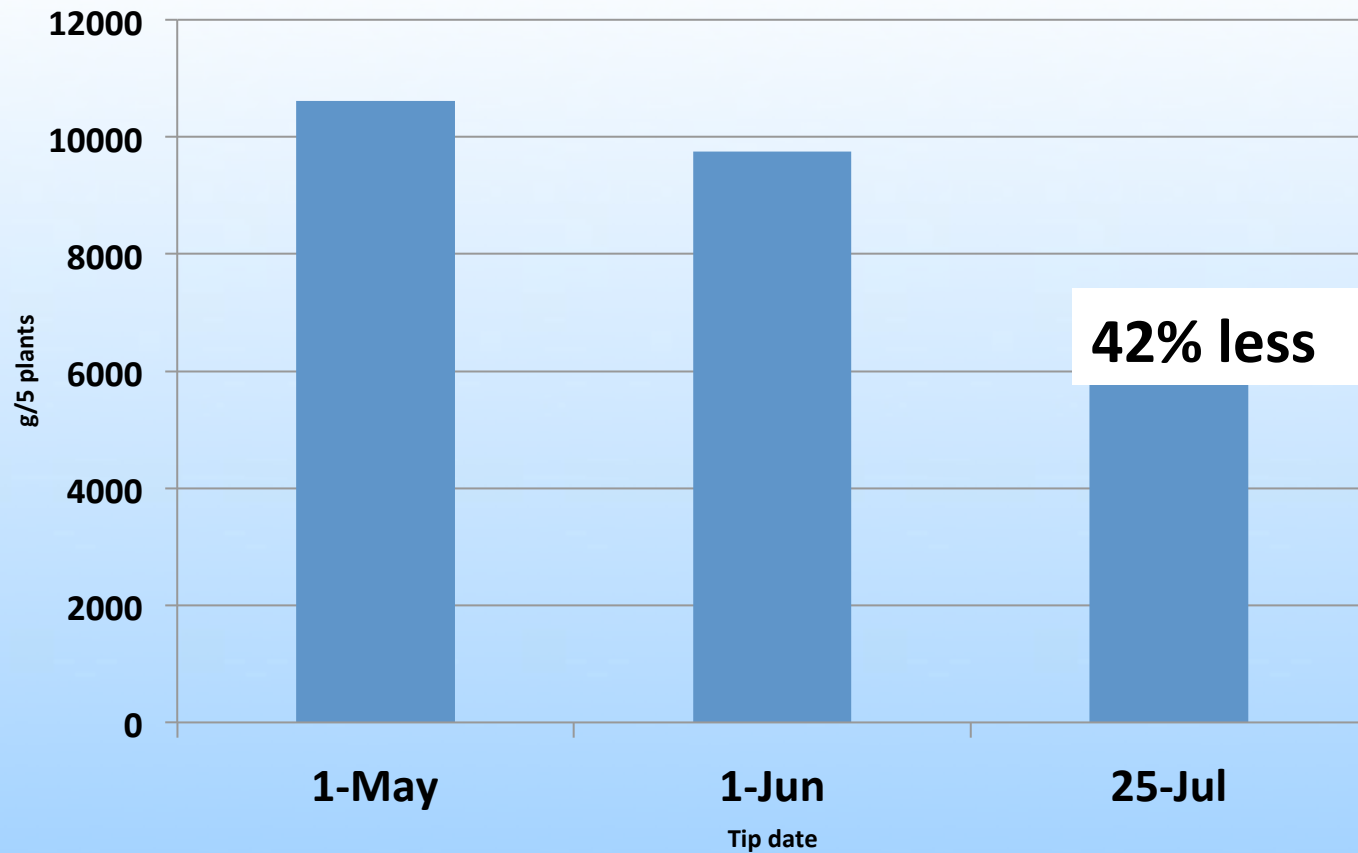
# September fruiting of earliest tipping



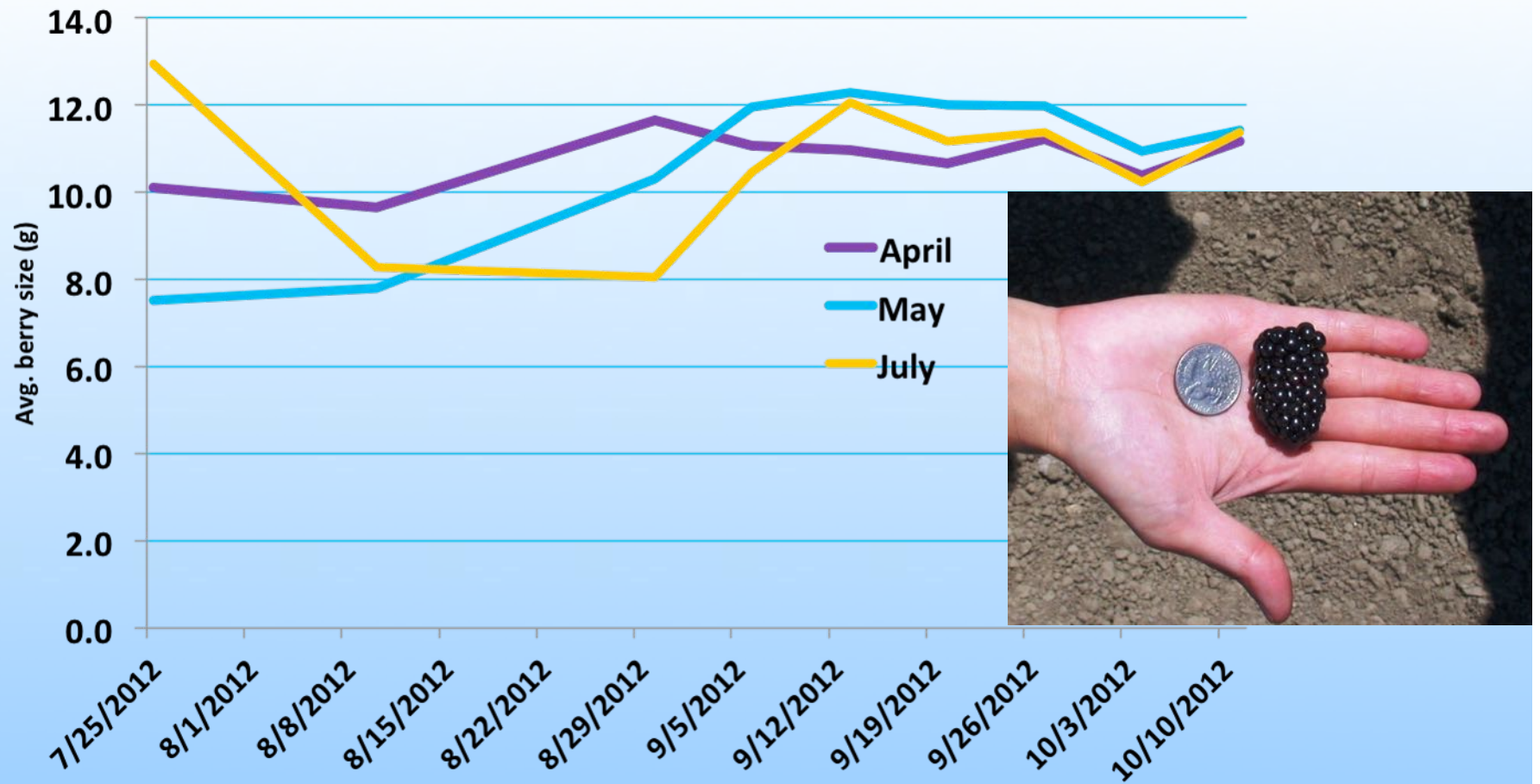
# 2012 fruit yield at 3 tipping times



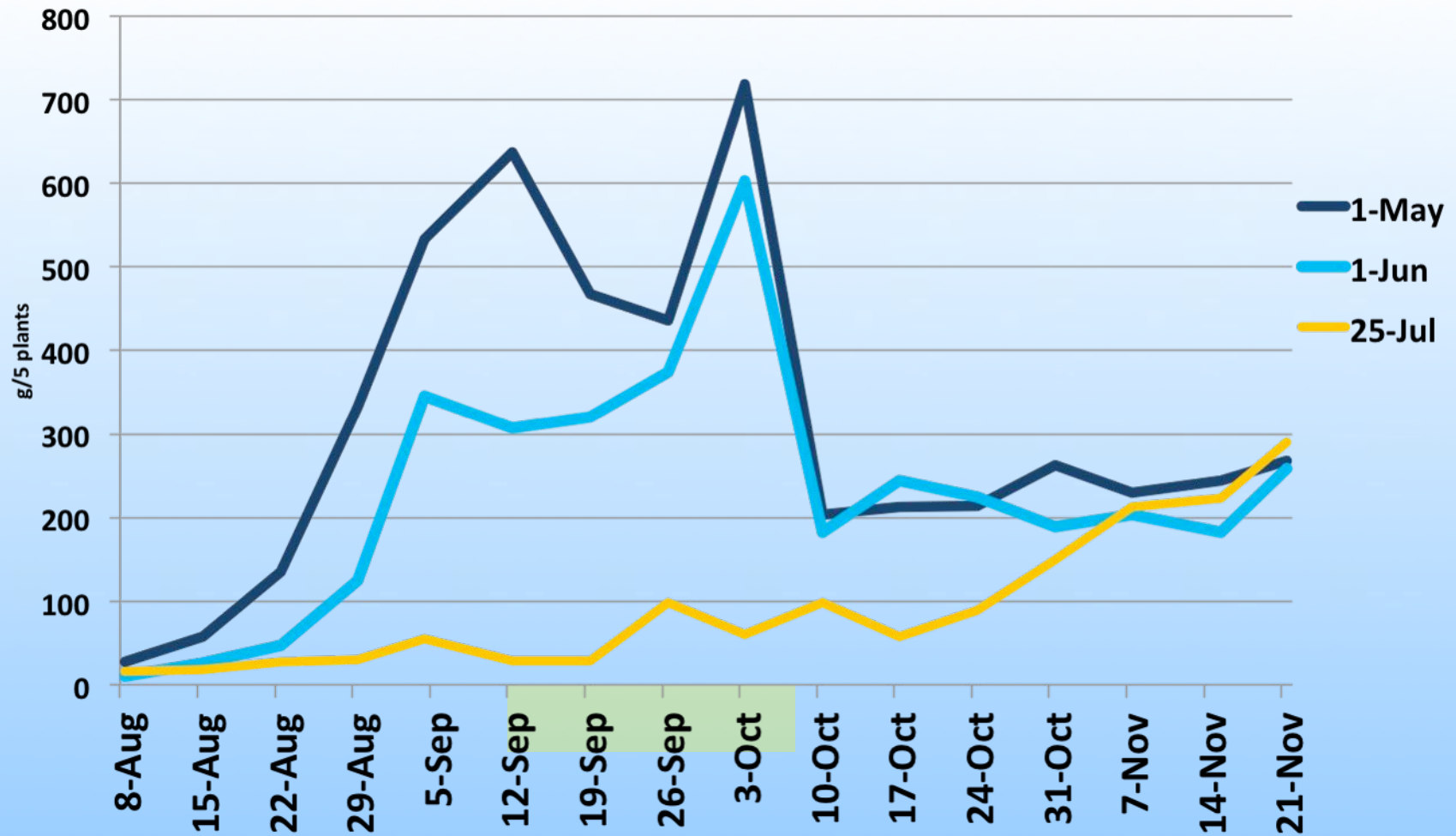
# 2012 fruit yield at 3 tipping times



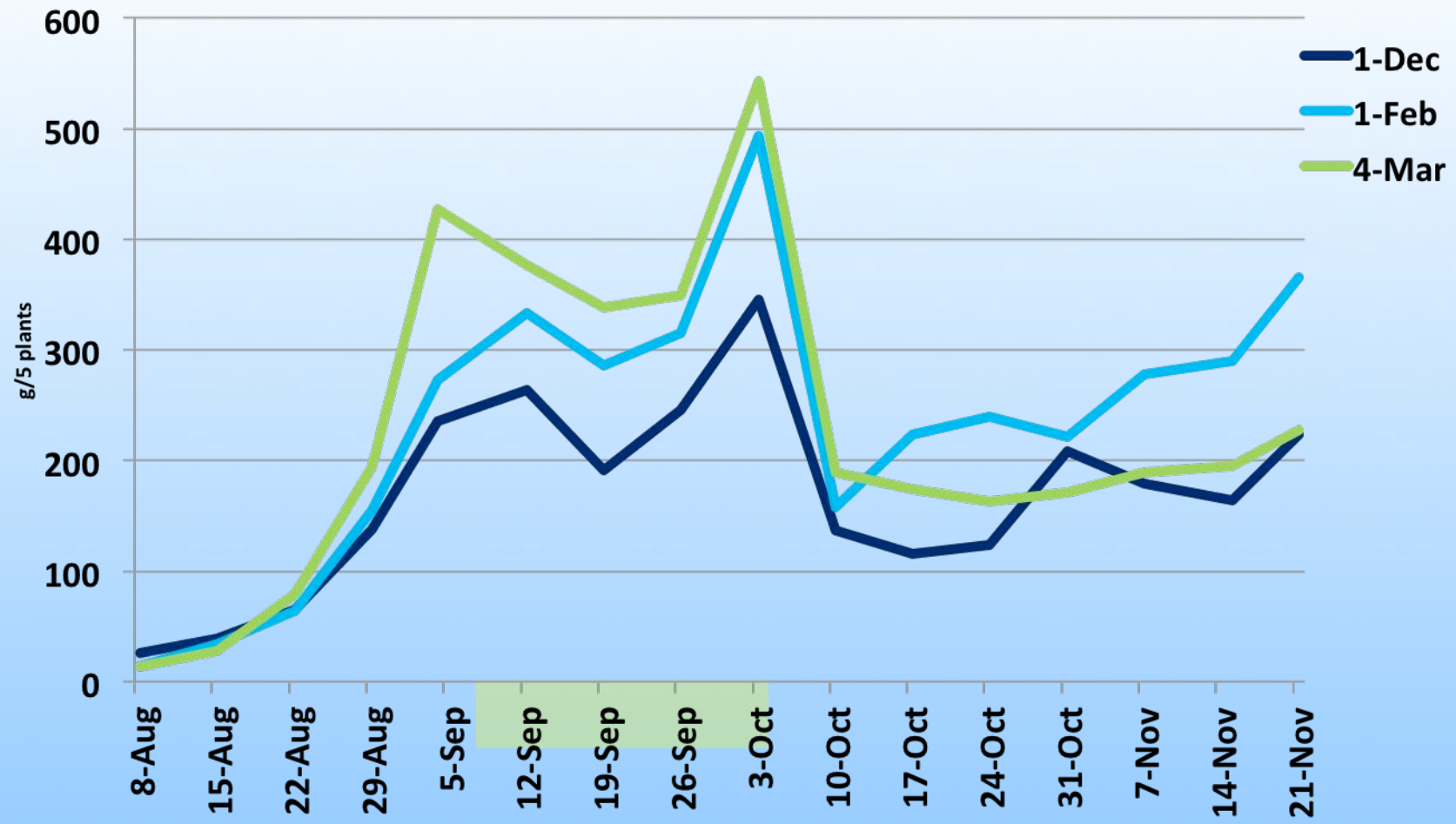
# 2012 fruit size at 3 mowing times



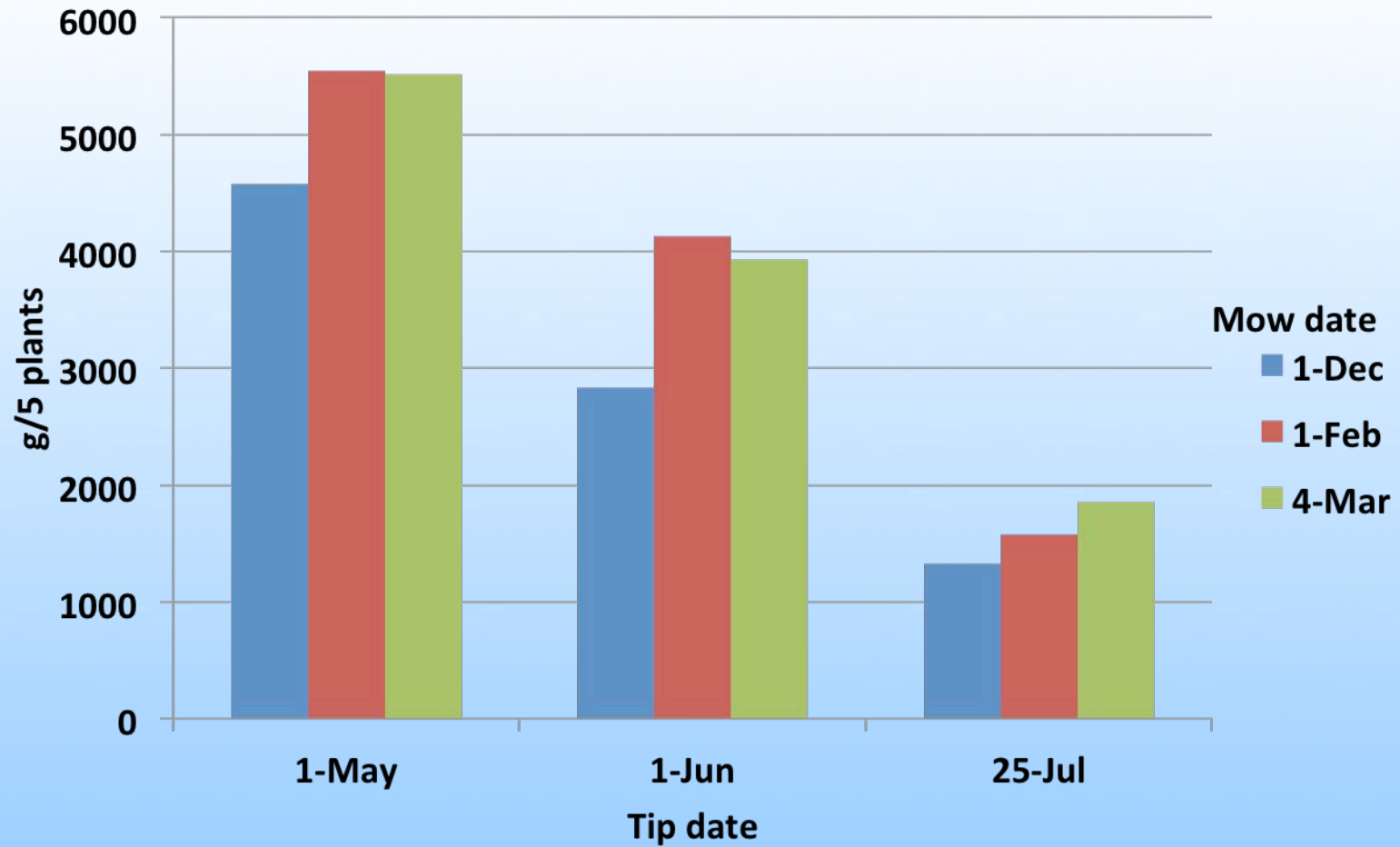
# 2013 fruit yield at 3 tipping times



# 2013 fruit yield at 3 mowing times



# 2013 fruit yield



# 2013 fruit size

- NO effect of mowing time but, **tipping:**

1 May = 8.73 g

1 June = 8.73 g

25 July = 8.14 g (significantly smaller)

# Regrowth after tipping in July 2013

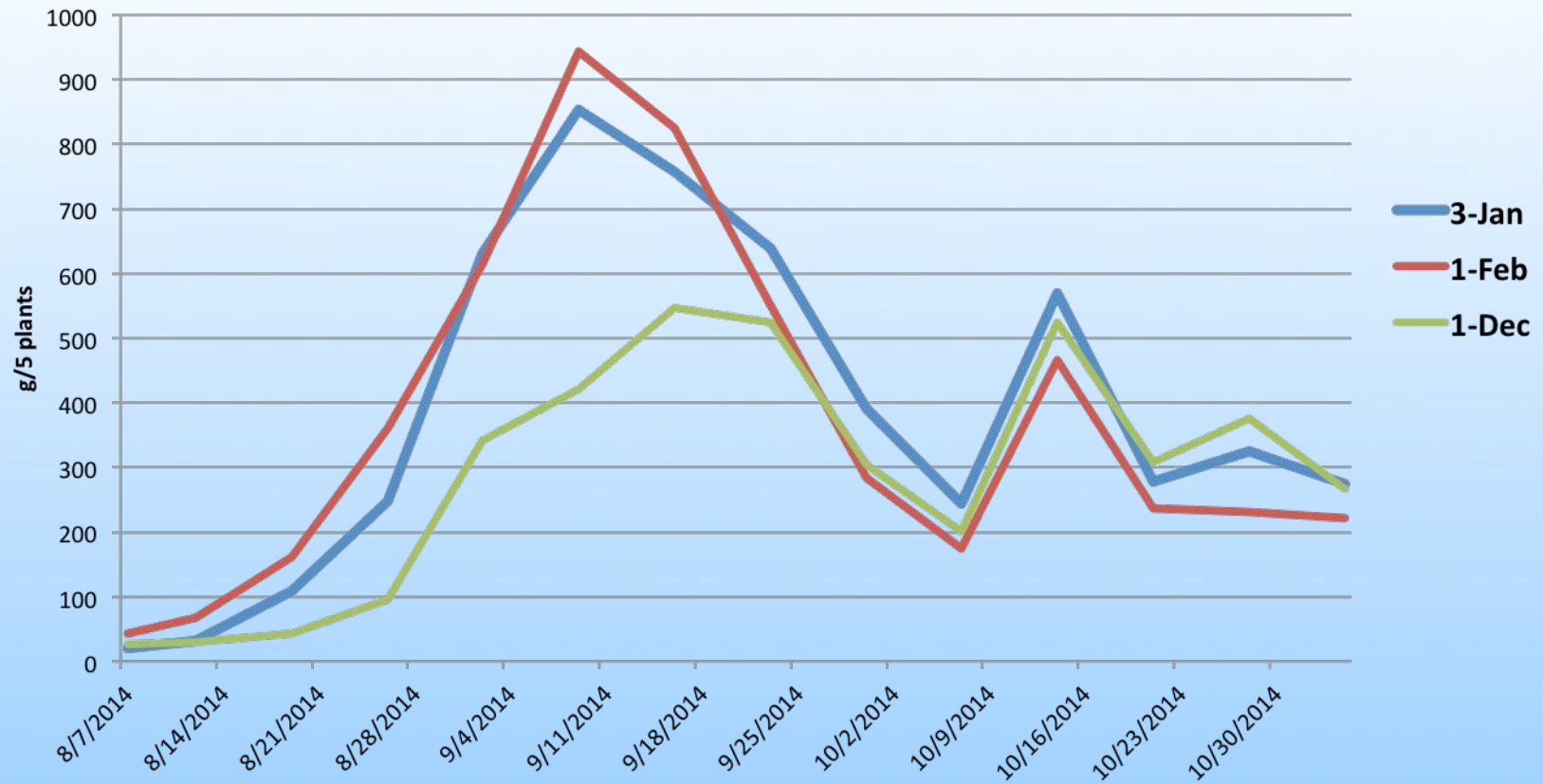


# 2014

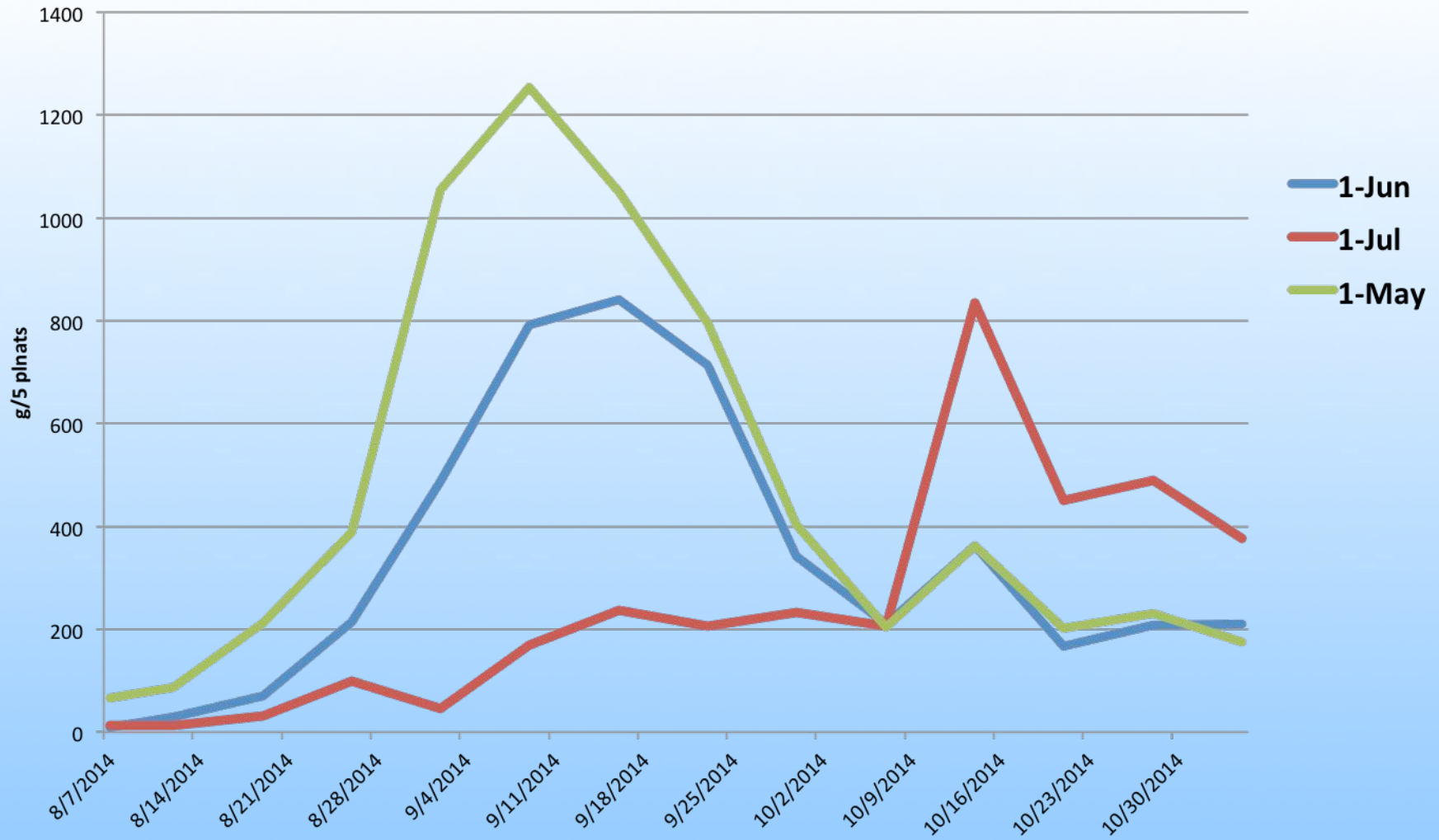


Fertigation with ~7-9 lbs /A per week starting in May

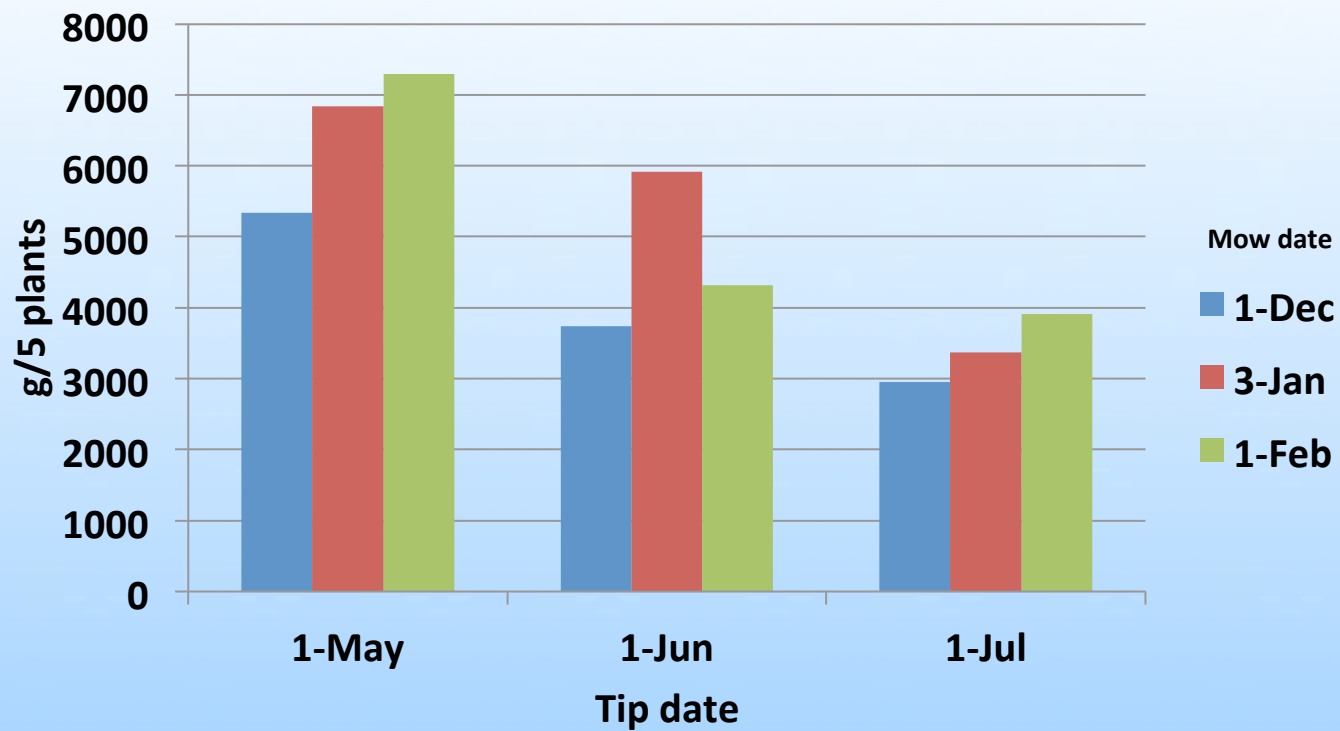
# Mowdown timing affecting yield, 2014



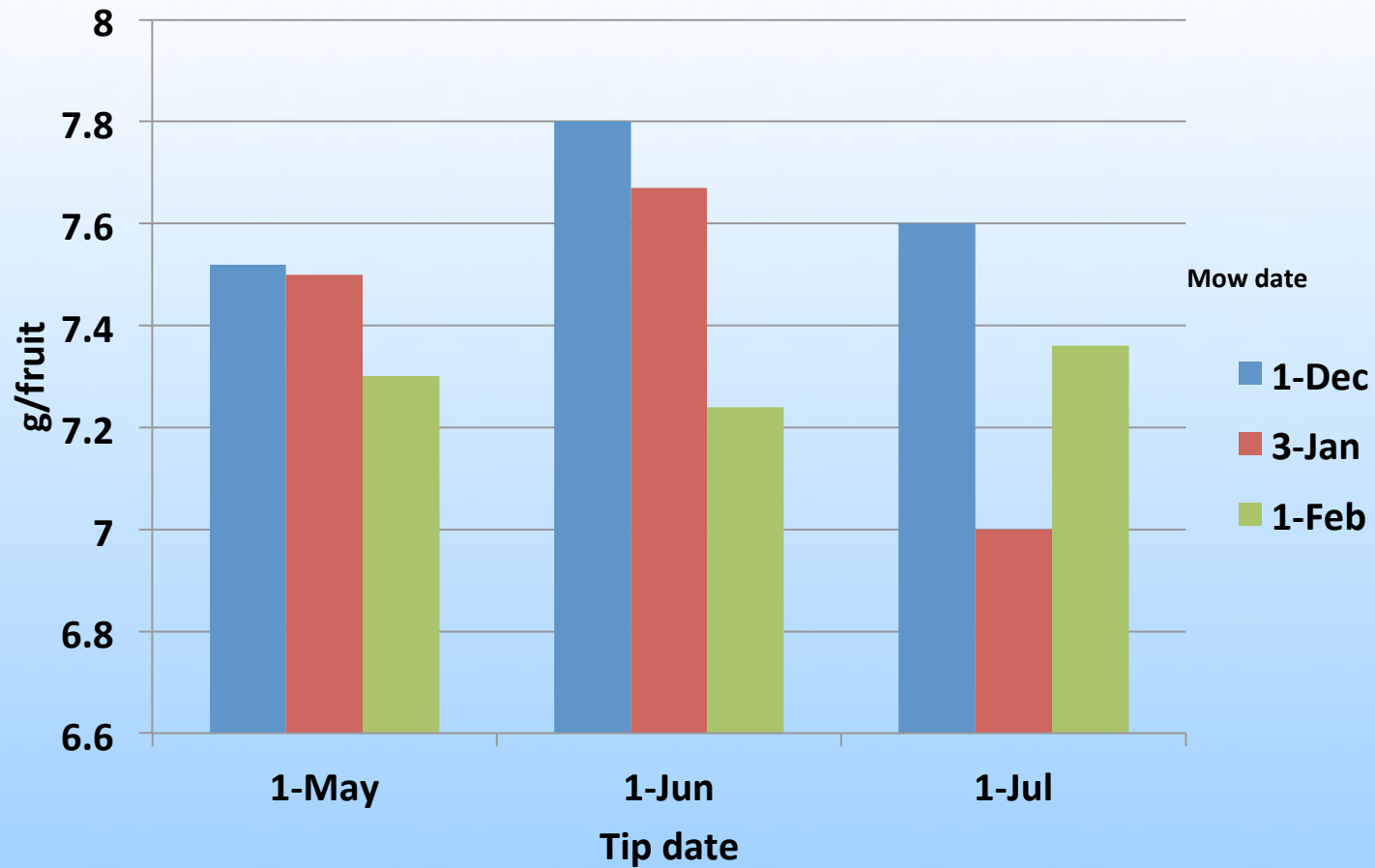
# Tipping timing affecting yield, 2014



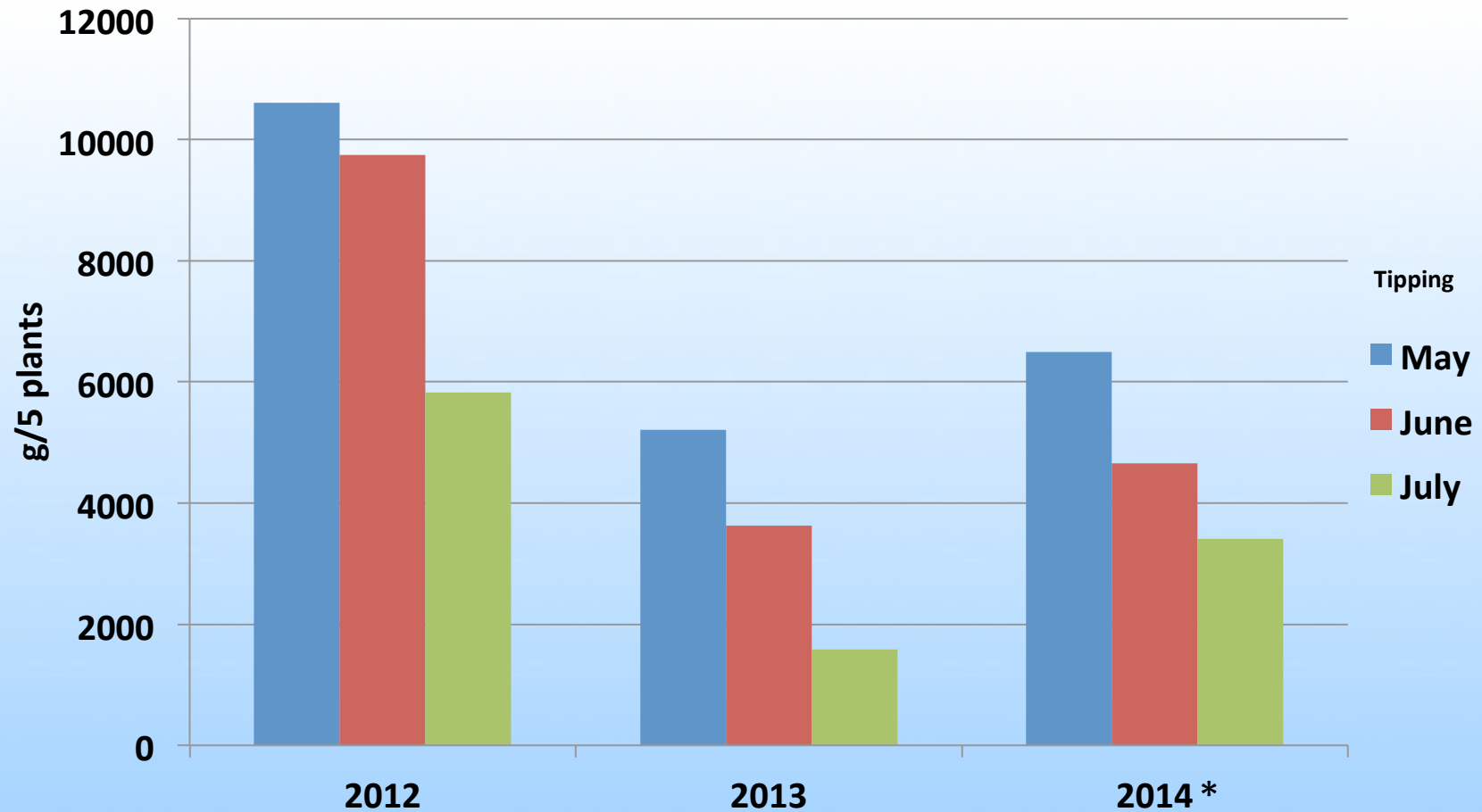
# 2014 fruit yield



# Fruit size: 2014

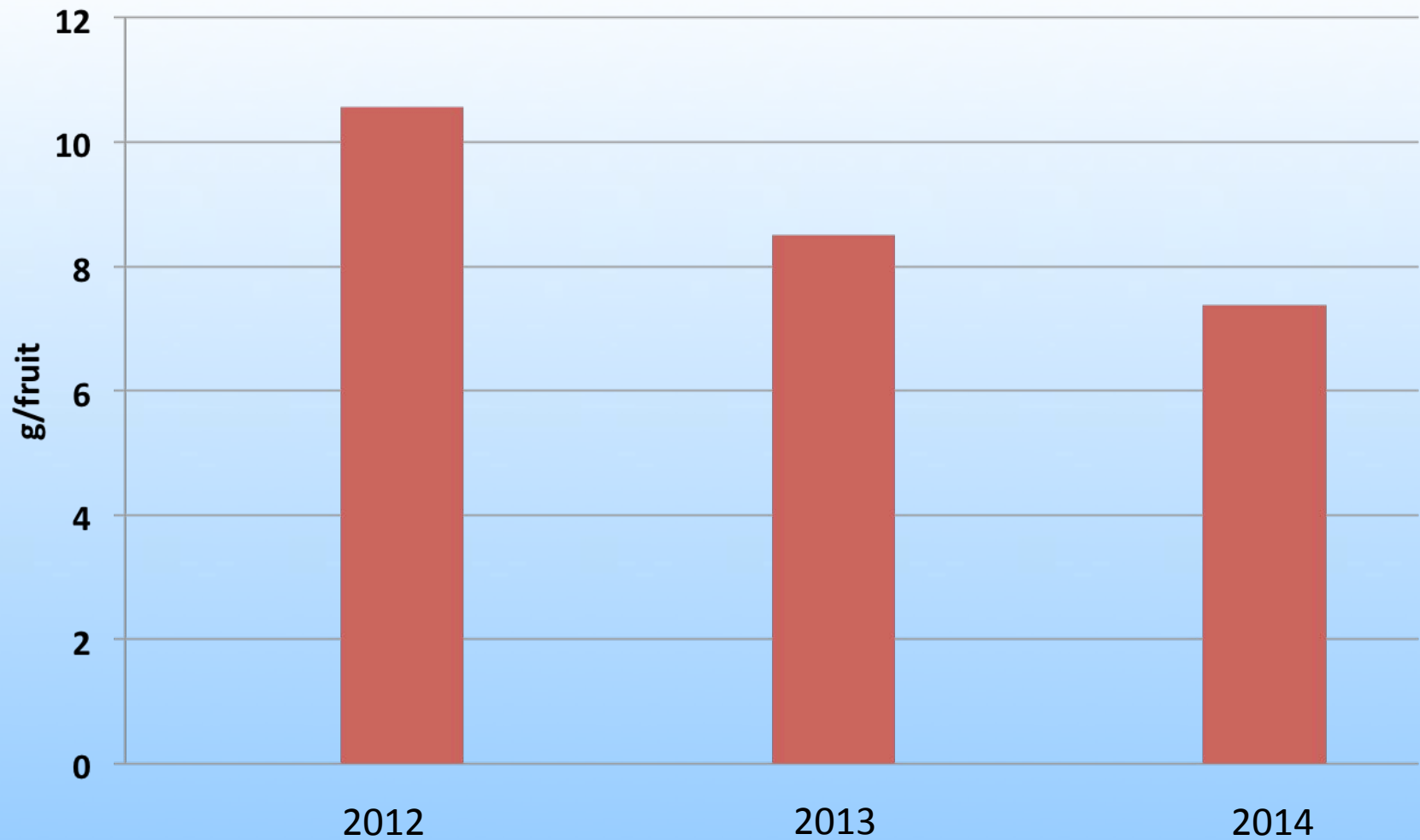


# First 3 years of production



\* Harvest discontinued 3 weeks earlier

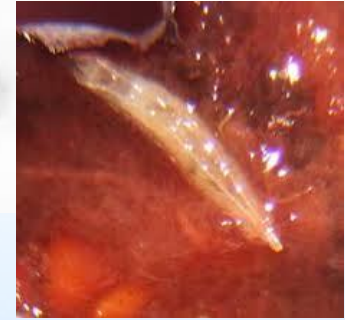
# Fruit size over 3 years



# Central California

- **Optimum mow-down of prior vegetative growth should occur in from January 1 to February 15.**
- **Optimum soft-tipping at a height of 46 – 60 cm to encourage branching. Earlier tipping favors earlier and higher production and one trial showed improved yield from a second tipping at 1.5m**

# Problems: Spotted-wing drosophila



- Traps and sanitation only (no sprays)
- Up to 60% fruit unmarketable during warmest weeks of the season
- Cold nights in November = no SWD damage
- Weekly harvest – not frequent enough , but all unmarketable fruit removed (fed to chickens)

# Problems: 2013 spring cane die-back



No pathogens isolated, 5-10% of canes dried



Problems: 2014 spring canes break off  
after strong winds in May.



# Problems: strong Santa Ana winds



# Other Problems:

- Birds
- Sunburn
- Scaring of fruit (wind and cane movement)
- Occasional red berry mite
- Botrytis after a rain (once in 3 years)

Thanks to Hansen fund and UCCE-  
Ventura MGs/Volunteers for support  
of this project!

