

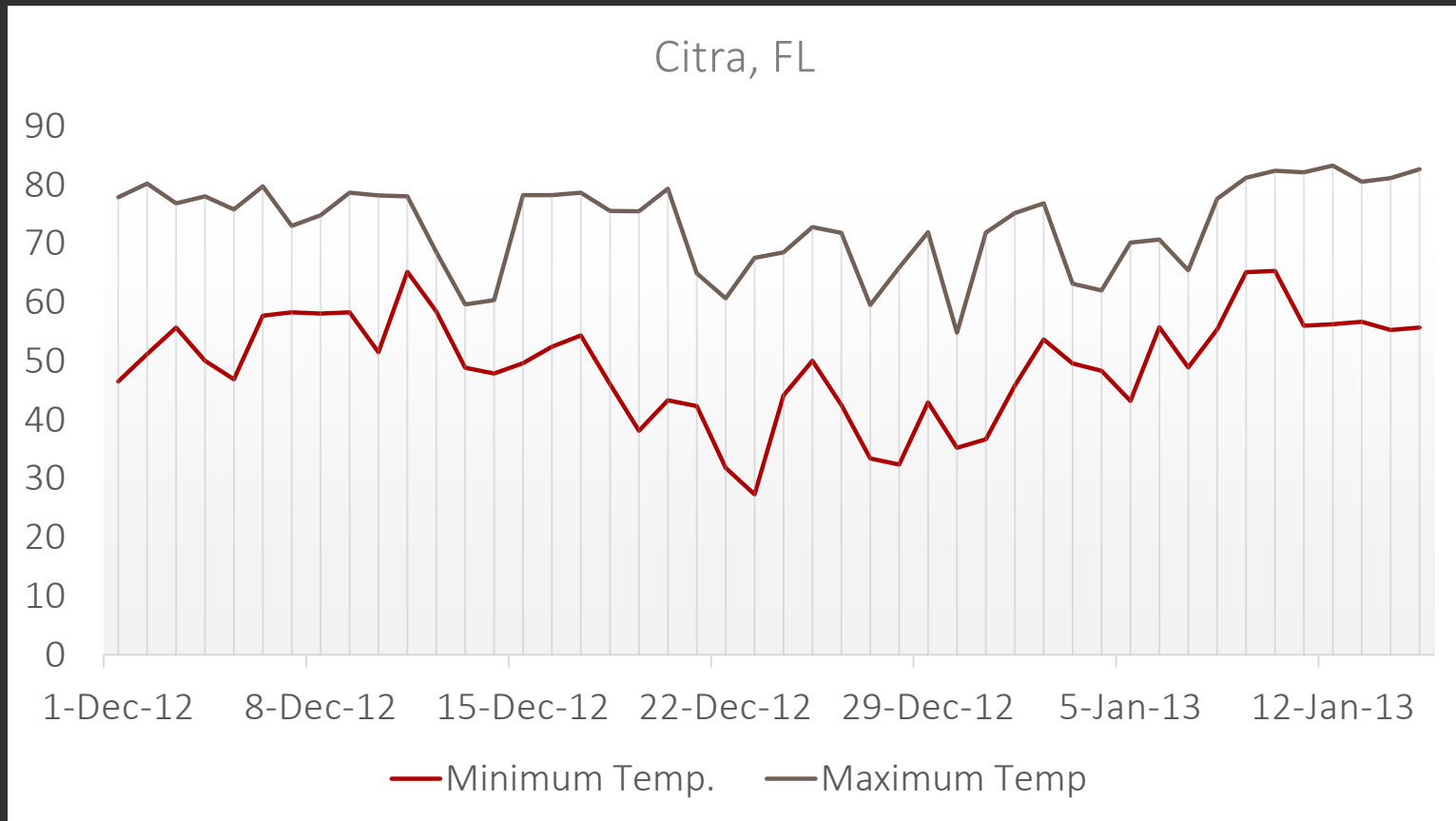
2013 Peach Review & Upcoming Challenges

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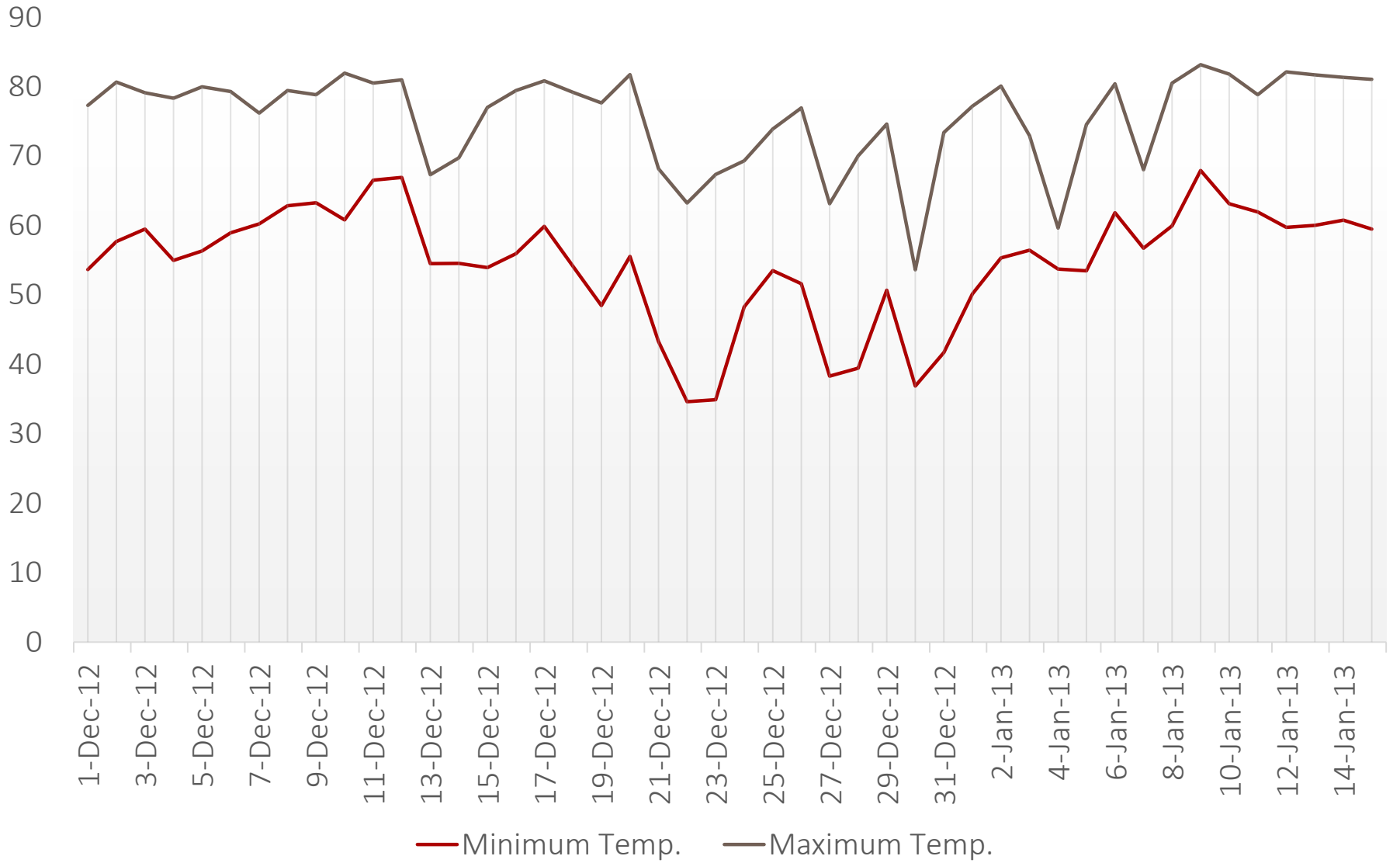
2013 Winter Pruning Workshop

2013 Weather

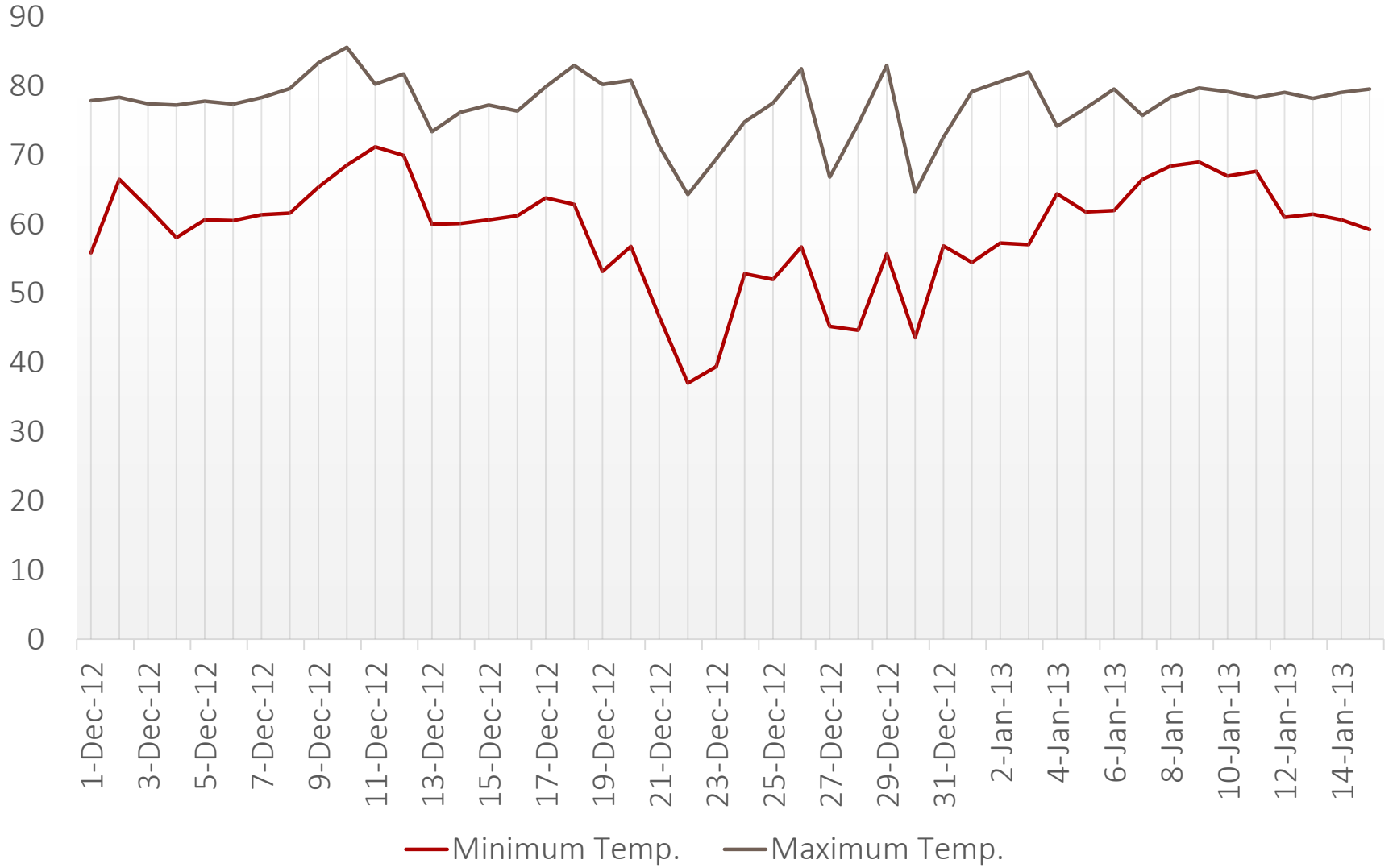
Warm...then cold!



Lake Alfred, FL



Fort Pierce, FL



How Do We Accumulate Chill?

Different varieties require different amounts of chill

Flower buds need less cold weather than the **vegetative** buds

Vegetative buds are necessary for good fruit quality, so this is often what contributes to poor sugar accumulation and flavor development in low-chill accumulation years.

Carbohydrates produced via photosynthesis = sugars for fruit

Ecodormancy

Buds on the fruit or nut tree/bush/vine are dormant due to environment.

Water stress

Cold temperatures

Shortening of the daylength (photoperiod)

Photoperiod – length of light and dark periods affect plant processes

Endodormancy

Buds are dormant due to internal physiological blocks

Despite ideal environmental conditions

Chilling conditions above freezing end physiological block

Advantages:

Keeps plants dormant during fluctuating temperatures

Subtropical climate and frequency of entering this stage?

Chilling requirements

Measured based on different models

Standard method – chill hour

Anything less than 7.2°C = chill unit accumulation

Utah chill model (Richardson et al., 1987)

Temperatures between 1.6-12.5°C promote chill accumulation

7°C is ideal (1 hr. @ 7°C = 1 chill unit)

Dynamic method – chill portion

e.g. 1 portion = 28 hours at 6°C

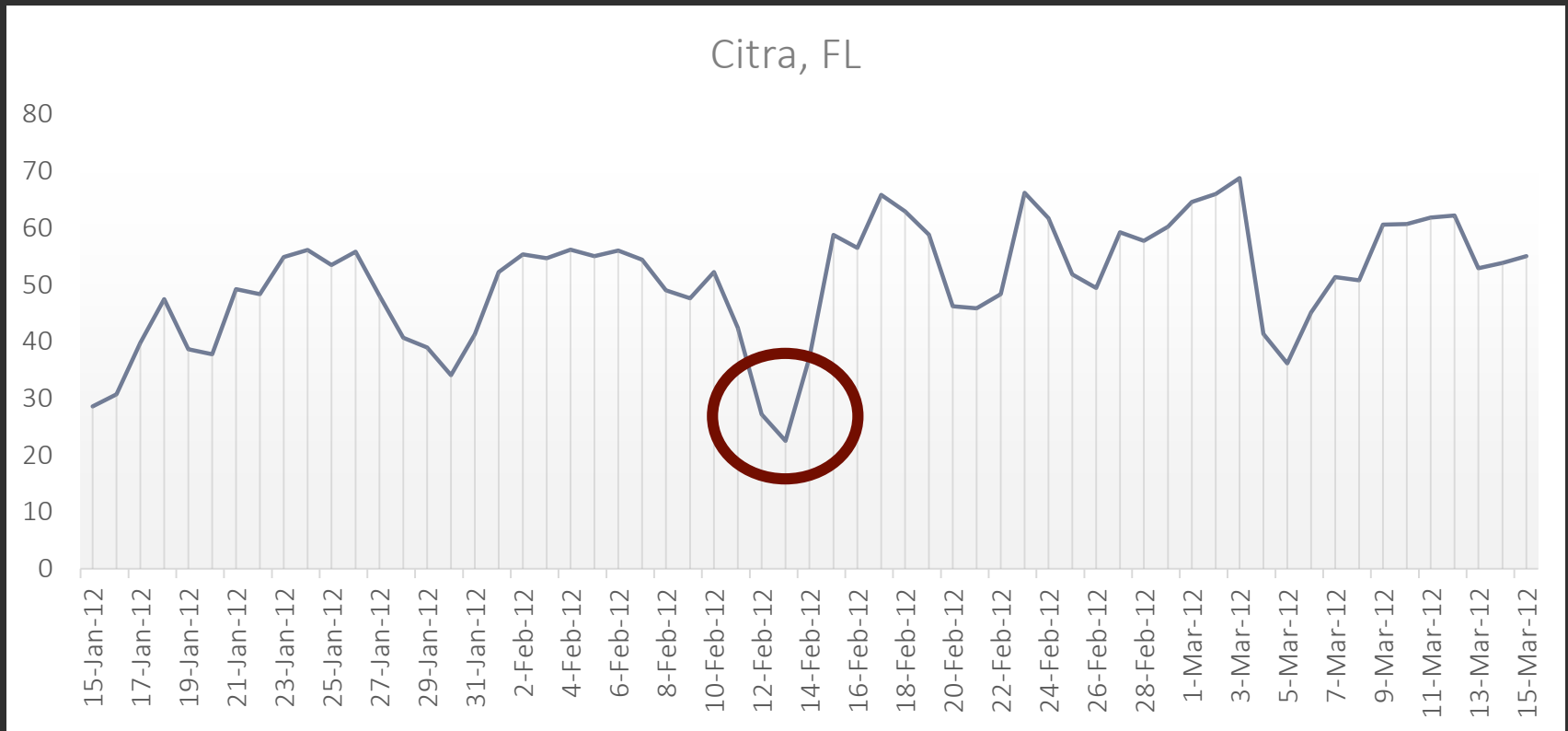
More recent, used with chemical rest-breaking agents such as hydrogen cyanamide (cherries in California)

Utah Chill Model

Allows for addition and subtraction of chill units accumulated over winter

Temperature	Chill Unit
< 34.5°F	0.0
34.7 – 36.5°F	0.5
36.6 – 48.4°F	1.0
48.5 – 54.3°F	0.5
54.5 – 60.6°F	0.0
60.8 – 64.4°F	-0.5
> 64.5°F	-1.0

Frost Events



February 12, 2013 = 27 degrees

February 13, 2013 = 22 degrees

Precipitation and Flooding June 1 – August 1, 2013

FAWN Station	Rainfall (in.)
Citra, FL	23.85
Lake Alfred, FL	26.95
Fort Pierce, FL	18.48

Washed out nutrients in the soil

Stunted trees

Root damage from flooding = early defoliation, early bloom

Effect of Fertilization Method on Growth, August 2013



Weather Effects

Frost reduced potential yields

Warm winter = extended bloom period

Diseases and insects worse with precipitation in late June/July

Leaf rust

Scale



White Peach Scale

Upcoming Challenges – Early Bloom!

Be sure to get your oil sprays on for scale control – those that sprayed it did not appear to defoliate trees.

