

## Predicting Peach Harvest

Peach harvest timing can be predicted based on the heat units accumulated driven by temperature the first 30 days after bloom. Temperatures those first 30 days are critical and what happens after that typically has a much smaller effect on harvest date. Weather near harvest coupled with soil, tree nutrition, water status, etc. can also have some effect on harvest date. On the average, we accumulate about 6000 growing degree hours (GDH) during the first 30 days after bloom. This March and early April was warmer than normal so we can expect an earlier peach harvest in 2013 based on GDH.

The table below lists full bloom dates and growing degree hours (GDH) 30 days after bloom using the new Sutter County Verona CIMIS weather station for 2013. The Colusa CIMIS station was used in 2012 since the Nicolaus CIMIS station was unavailable. Years 2004-2011 were calculated using the Nicolaus CIMIS station which was used historically. For comparative purposes, the Colusa station averaged 440 more GDH<sub>30</sub> from 2007-2011 (data not shown). The table also includes the general harvest timing from 2004-2012 and the prediction for 2013.

Year	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004
<b>Full Bloom</b>	Mar 13	Mar 8	Mar 14	Mar 12	Mar 16	Mar 10	Mar 9	Mar 14	Mar 3	Mar 9
<b>GDH<sub>30</sub></b>	7,397	4,621 (Colusa)	4,963	5,060	6,117	5,548	7,420	4,375	6,153	7,788
<b>Harvest Timing</b>	Predicting Early	Later than normal	Later than normal	Later than normal	Slightly later than normal	Normal	Early	Very late	Normal	Very early

## Sizing Peach Fruit

The rate of early fruit development is very dependent on the weather; the warmer the weather, the faster the fruit develop with a demand for carbohydrates 5 to 10 times higher than during a cooler spring. Anything limiting carbohydrate accumulation by the fruit can ultimately lead to smaller fruit. During cool springs like 2010, 2011, and 2012, fruit takes much longer to develop and there is more time to accumulate necessary carbohydrates for fruit development and to obtain larger size. Although the model predicted the potential for a better fruit sizing year, 2012 will be remembered as having small fruit size. According to UC Davis Pomologist Ted DeJong, other factors than just the temperatures 30 days after bloom affected

2012 fruit size. Although there is no definitive answer, one explanation for the small fruit size was the lack of rainfall from November 2011 through February 2012 failing to recharge the soil profile with water which may have affected pistil (fruit) development at or prior to bloom (however, at this time this is speculation and not based on any specific research).

When thinning peaches, keep in mind that sizing peach fruit is more difficult when GDH 30 days after bloom are **above** 6,000 whereas it is generally a better fruit sizing year when springtime temperatures are cooler and GDH<sub>30</sub> is **below** 6,000. The GDH<sub>30</sub> for 2013 however, is 7,397 which is similar to 2007 and 2004 when small fruit size was a problem in the earlier varieties. This year so far, extra early and early varieties have a good set. Since an early harvest is predicted, the sooner growers can thin, the better the potential to size the fruit. Late and extra late varieties are on the light side so may not be as affected by an earlier harvest as the extra early and early varieties.