

Steps for Producing Large Prunes

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Early observations of prune set in the Sacramento Valley look good. Of course, it is a long time before harvest and many things can happen. With a large crop comes the potential for small fruit. Growers should talk with their handler to determine desirable fruit sizes. Most will likely say that they need pitable stock (A and B screen) and that is likely where the best money will be. What can you do to produce good size fruit?

Pruning is the first line of defense against excess cropping. Pruning can help improve fruit size, drying ratios and reduce the negative impact of excessive crops. Blocks that received a good dormant pruning will be less likely to over crop than those that did not. Keep this in mind as you watch the crop develop and make decisions to manage the crop you set.

Irrigation. Prune trees have been shown to be relatively tolerant of water stress. Moderate water stress may result in modest increases in return bloom and improved drying ratios without a reduction in yield. More severe water stress, particularly during stage II growth (early May to mid July) will reduce fruit size and this effect will be more dramatic in heavy crop years.

Potassium Nutrition. Adequate levels of potassium (K) are necessary to ensure consistent production of high quality fruit. One of the consequences of K deficiency is reduced fruit size. In the past there has been a tendency to focus on potassium to the point where K levels were sometimes excessive. In survey work done during the late 1990s, no beneficial relationship was found between fruit size, drying ratio or dry yield when spring or summer (June or mid July) leaf K levels were greater than 2%. It is important to note that K demand will be greater with larger crops and leaf levels can drop dramatically in late summer. If K levels are marginal, with a heavy crop, it may be necessary to apply foliar applications to keep trees from going deficient.

Mechanical Thinning. Thinning fruit early in the season will allow remaining prunes to grow larger, increase sugar content and improve the drying ratio. Mechanical thinning with harvest equipment is the most practical way of reducing crop load. A short description of this procedure follows. More details can be found in the May 2008 edition of this newsletter (http://ceglenn.ucdavis.edu/newsletterfiles/Orchard_Facts13993.pdf).

Experience and past production history will allow you to estimate the tonnage you can produce at the desired fruit size and determine how many fruit per tree at harvest will result in this yield. For example, 4 tons (8000 lbs) X 70 dry fruit per pound divided by 150 trees per acre = 3733 fruit/tree at harvest. Adjust this number upward by the estimated pre harvest drop (20% is the commonly used value) to determine how many fruit should be left after thinning. Using 20% drop, 3733 divided by .8 = 4666 fruit per tree after shaking.

The earlier thinning is performed the more likely it will achieve the desired results. In early May estimate the number of fruit per tree by shaking and or picking and weighing all the fruit on several representative trees. Weigh a representative sample (at least 100 fruit) and count the fruit to determine the count per lb. Smaller yellow fruit in the sample which are about to drop are not counted. Total weight in pounds times the fruit count per pound will estimate total fruit per tree Subtract the desired fruit per tree from the estimated fruit per tree to determine how much to remove. Shake a tree and, using the same methodology, calculate how much fruit was removed. Adjust the shaker time and repeat the procedure until the desired amount of fruit is removed.