

**Pruning And Mechanization**  
Lodi-Woodbridge Winegrape Commission  
29 November 2006

**Reasons for Pruning**

Establish and maintain vine form to facilitate vineyard operations.  
Distribute bearing wood according to the vine capacity for balance.  
Regulate crop level.

**Principles of Pruning**

Pruning has a depressing or stunting effect on the vine and reduces total capacity.  
Crop is also depresses the capacity of the vine for following year(s).  
Capacity of the vine is related top the number of shoots (buds) that develop.  
Shoot vigor is inverse to number of shoots and to crop level.  
Bud fruitfulness is inverse to shoot vigor.  
Large canes or vines can produce more than small ones and carry more buds.  
Vines can nourish and ripen only a certain amount of fruit. Capacity is limited by history and environment (and quality goals).

**Vine Vigor and Capacity**

Soil  
Previous crop  
Irrigation  
Fertilization  
Variety  
Rootstock

**Effects of Pruning**

Crop Level (direct)  
Fruit Quality (direct and indirect)  
Disease (vine and fruit)

**Evaluating Vine Balance**

Compare average vine yield to average vine pruning weight.  
Crop: Prunings Ratio  
< 3 a problem?  
3 – 5 optimum for fruit quality?  
5 – 7 good 8 – 9 fair  
> 10 poor quality and problems