

Objectives of Pruning

1. To establish and maintain vines in a desired shape that will enhance productivity and facilitate various operations such as thinning, harvesting, irrigation, disease, and pest control.
2. To distribute the proper amount of wood over the vine so that large crops of high-quality fruit can be maintained over many years.
3. To regulate the amount of crop to lesson and reduce the amount of thinning needed later. Pruning is the cheap way to reduce the number of clusters per vine and thereby increase the foliage-to-fruit ratio. In other words = more leaves (photosynthesis) per cluster to ripen the fruit.

Definitions:

Trunk: is the undivided main stem of the vine

Arms: are branches older than 1 year

Cordon is the horizontal arm that is pruned back to every year.

Cane: is a mature shoot that has gone through lignification also known as “1 year old wood”. It has a smooth surface.

Shoot: the green growing branch that grows during the growing part of the season before lignification.

Spur: is the short part of the cane left after making a pruning cut. Most commonly left with 2 fruitful buds.

Fruitful buds: the buds on the spur that are the most likely to produce clusters of grapes during the growing season.

Renewal spurs: are intended to produce canes to be used for fruit canes for the following season.

Replacement spurs: are used to shorten or replace arms or branches.

Suckers: are water sprouts that develop from below the soil surface or from the trunk that are usually removed.

Vine Capacity: is the potential growth of the vine. The maximum amount the vine will bear without delaying maturation is termed a “normal crop”. As the crop increases beyond this point, the first effect is delayed maturity. Further successive increases in crop result in low sugar and low acid content along with reduced growth, immature wood, and poor fruit-bud formation. The latter will limit crop production of the following year.

Apical Dominant growth = show more growth at the highest part of the vine.

First 2 buds below pruning cut are stimulated to grow.

Basal buds: are located at the base of the canes where they are connected to the branches or trunk.

When to Prune? As late as possible and yet be finished before first bud break. Advantages = less #'s of fungal spores in the air in the spring that could infect open wounds on plant. Delays bud break by days or weeks if pruned right before bud break. (minimizes chance of frost damage to young shoots in early spring).

Training = only 2 ways to train = 1. Head trained. 2. Cordon trained.

Pruned = only 2 ways to prune = 1. Spur pruned 2. Cane pruned.

VSP trellis: Vertical Shoot Positioning.

Guidelines of Pruning

Have a plan.

Vine capacity for these Zin plants = 8 arms with one spur per arm on lower part of plant and 4 arms with 1 spur for the “umbrella” part of plant = 12 arms total. 12 spurs with 2 buds/spur = 24 shoots. 24 shoots x 2 clusters per shoot = 48 clusters of grapes expected for the whole plant.

Make cuts as far away from last kept bud to reduce chance of desiccating remaining buds.

Do not make pruning cuts parallel to ground to prevent pooling of water.

Do not leave any canes or shoots smaller than the diameter of a #2 pencil.

If only one bud of a spur points in an ideal direction consider leaving that spur as a single budded spur.

Remember that shoot positions should be approximately a fist apart after shoot thinning in the spring.

Look for leaving replacement spurs in order to control excessive height, size, or shape of plant.

Tie the trunk of developing vines to stakes often for the first 4-5 years to maintain straight trunks.

If vineyard is in a windy location choose buds and growing shoots that will compensate for the effect of the wind and still allow for proper shape to grapevine.

If you see signs of Eutypa or bot canker, cut back to clean wood, then cut off 12 more inches of arm.

Gauge out unwanted nodes = mostly nodes on underside of cordon.
Lessens pruning and shoot thinning in future years.

Develop shoots for future cordons with short internodes = better choices for permanent arm positions or growth spur sites.

Leave 1 spur per growth site unless there is a lack of available growth sites.

Mark infected vines with tape during growing season to identify them in winter for removal.

When 2 canes are growing out of the same spur from last year's pruning, consider using the lowest one for this year's spur.

When shoot thinning in late spring, look for shoots to leave for future arm positions.

Remember to loosen ties to prevent girdling.