



Texas A&M AgriLife Extension Service

Viticulture Newsletter

Texas High Plains - Fall 2016

POST-HARVEST VINEYARD MANAGEMENT CHECKLIST

The post-harvest period up to leaf-fall is so important to lay the foundation for grape quality and yield success next season. It is a primordial time for restoration of carbohydrate and mineral nutrient reserves.

The early season development of the grapevine from budburst until flowering requires mineral nutrients and carbohydrates from the roots, trunk and arms where they are stored as reserves.

As leaves are the main source of carbohydrate production via photosynthesis, they need to remain healthy, well hydrated and fully functional after harvest. This means that care should be taken to minimize leaf loss due to water stress, pests and fungal diseases and machine harvesting until the leaves naturally senesce and fall.

IRRIGATION AND MINERAL NUTRIENTS

In order to ensure adequate leaf function for the remainder of the season so to ensure normal restoration of carbohydrate and mineral nutrient reserves, vines should be watered normally during the autumn. Regarding minerals, in general they are acquired from the soil but in autumn significant amounts move from the leaves to the roots and woody parts of the grapevine before the leaves fall. A healthy, functional, hydrated leaf canopy is important for continuity of transpiration and photosynthesis on which mineral nutrient uptake depends.

To do: Maintain the grapevines in a non-deficit water status (root-zone at close to field capacity). Irrigation requirements can be estimated from evapotranspiration and rainfall.

Post-harvest fertilization might be necessary based on results from petiole and soil samples analysis to ensure that adequate nutrient reserves are already in the plant in spring,

To do: Apply proper amount of fertilizers if needed.

P.S. The objective is not to encourage vegetative growth. An over-irrigation or over-fertilization will cause a delay of vine dormancy.

DISEASES

Defoliation caused by diseases may reduce the photosynthetic capacity of the canopy after harvest. If diseases have been well controlled during the growing season then there is generally little requirement to apply spray after harvest. However, if there has been a build-up of diseases earlier in the season and autumn is wet, post-harvest fungicide sprays may be required. In west Texas, autumn conditions generally favor development of diseases that if left uncontrolled can have negative impacts on grapevine growth and yield in the following season.

Powdery mildew

If left unchecked after harvest, powdery mildew can develop overwintering spores from which infection can spread in the following season. Severe infections can disrupt the production and storage of carbohydrates needed for the following spring. Apart from impaired reserves, affected vines fail to harden-off and are susceptible to winter chill. It is also important to prevent the powdery mildew from establishing in the buds of young grapevines associated with self-infecting flag shoots, for season to come.

To do: a single sulfur application will prevent the infection.

WEED CONTROL AND COVER CROPS

Post-harvest is a good time to look at weed control and cover crops for soil erosion protection.

Application of herbicide against weeds in the vine row is easier when vines have been hedged for harvest.

To do: Spray a systemic herbicide to kill weeds like Bermuda grass, Johnson grass and Silverleaf nightshade. Pay attention to herbicide drift!

Post-harvest is also a good time to plant cover crops. Planting cover crops as wheat or rye at this time will help to reduce wind and water erosion.

To do: Plant a winter annual cover crop in the vine rows.

Finally, take a tour around the rows and see what needs attention and repair in terms of trellis, and vines. If you noticed vines with red leaves, curly leaves or other symptoms, these are candidates for virus, and should be tagged and tested. Count missing vines and order replants.

Get out to the wineries and taste your wines especially the lots that are not yet blended. Taste with the winemaker and discuss together what was good and bad about the vintage.

Sit down and review the season. How was the canopy management and overall vine balance? What was the water status of your vines? Were there any vine nutrition issues? How was the vineyard floor management? How was the disease and pest control programs?

Try to figure out the good and the bad!

As always, please don't hesitate to contact me with any questions, suggestions or comments.

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