

Highlights from the Managing Water in California Vineyards Symposium and the 2016 ASEV National Meeting

The 67th Annual Meeting of the American Society for Enology and Viticulture was held in Monterey, California at the end of June. The day before the meeting there was a one-day symposium on Managing Water in California Vineyards.

Highlights:

Irrigating for impact with limited water.

If you have very **little water** available the best strategy is to **irrigate once at veraison**. (Mike McCarthy, South Australian Research and Development Institute)

Micro blocks for irrigating using NDVI from Landsat.

NDVI images from the Landsat satellite are compared with **soil maps** and **yield maps** to create a **“pixelated” irrigation system**. Irrigation blocks are 15m X 15m. Each “pixel” is **irrigated independently and automatically based on the most current NDVI picture** from Landsat. This technology is currently being used by Gallo and is being commercialized by Netafim. (Luis Sanchez, E&J Gallo)

Breeding vines for powdery mildew resistance.

Genetic loci have been identified in vines which are **associated with resistance to powdery mildew**. Progress is being made toward **breeding multiple genes** that confer **different modes of resistance** into the same vine. **Stacking allows multiple resistances** and therefore **lower likelihood** of powdery mildew **developing resistance** to or overcoming those pathways. (M. Andrew Walker, UC Davis)

Adopting preventative practices for grapevine trunk disease.

Adopting preventative practices such as double pruning, delayed pruning, and fungicide/sealant sprays in vineyards as **young as three years old** can **increase the economic lifetime** of a vineyard **by > 50%**. (Jonathan Kaplan, CSU Sacramento)

Machine harvested Pinot noir makes same quality wine as hand-picked fruit when optically sorted.

Pinot noir fruit was **machine harvested**, run through a crusher-stemmer and then **optically sorted**. **The same was done with hand-picked fruit**. Wines made from these treatments were **not meaningfully different**. **Optical sorting decreases or removes differences** in harvesting technique. (Anita Oberholster, UC Davis)

Remotely piloted helicopter is viable for spraying vineyards.

The necessary permissions from various agencies have been worked out and **spraying vineyards using a remotely piloted helicopter is now commercially viable**. Application speeds are between 3 and 7 mph. (Ken Giles, UC Davis)

Salt tolerant wild Vitis species for grafting.

Cabernet Sauvignon scions were grafted onto accessions of **wild American Vitis species** and several commercial rootstocks. **Two wild species**- *V. acerifolia* and *V. treleasei* -**outperformed Ruggieri 140** under **high salinity** conditions in terms of chloride accumulation under greenhouse conditions. (Kevin Fort, UC Davis)