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## April 2001 Grapevine Notes

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## Welcome Aboard !

*By Dr. Sara Spayd*

Dr. Markus Keller has accepted the position as Associate Horticulturist in Viticulture at Washington State University's Irrigated Agriculture Research & Extension Center, Prosser. He is a Swiss citizen who was educated in his native country and received his Ph.D. in 1995. His doctoral research was at the Swiss Federal Research Station for Fruit Growing, Viticulture and Horticulture and investigated partitioning response of wine grapes to environmental stress. He was a post doctoral fellow at Cornell University, Geneva, New York, working on viticulture and enology; and at Charles Sturt University, Wagga Wagga, NSW with research on grapevine disease resistance and effects of elevated UV radiation.

Since April, 1999, he has been Senior Lecturer of Viticulture with the School of Wine and Food Sciences at Charles Sturt University. He has nine peer reviewed papers and numerous abstracts, he has supervised graduate student education, has successfully acquired extramural support, and has established a positive relationship with industry. When search committee members were inquiring about who we should be recruiting for this position, the individual most frequently named was Markus Keller. Dr. Keller will join the WSU faculty in Prosser effective July 1, 2001.

Northwest Minor Crops Field Symposium:

The Washington State Grape Society is proud to be a sponsor of this tour to education federal and state regulatory and legislative officials on actual production practices used to grow and process selected minor crops in the Northwest.

The Symposium will give valuable first-hand information on the use of pest control measures and their importance to the region's growers and processors. This three day event is based in Pasco and is scheduled for August 20-23, 2001. For more information, please call Ann George at (509) 453-4749.

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## Drought Advisory for Grapes

The severity of drought conditions in a short water year will depend on numerous

factors that are specific to individual vineyards. Timing of water delivery; amount of water available; timing, intensity and duration of hot spells during the summer; soil depth and method of irrigation will determine a grower's ability to reduce severe water stress in vineyards. This information, along with other advisories on irrigation management and efficiency, outline critical management concerns and possible solution for growers during periods of inadequate availability of water.

### **Grapevine Water Use**

Given a deep soil profile, grapevines will produce an extensive root system; vines are excellent foragers for water. Concord or labrusca type vines have somewhat smaller root systems than wine grape varieties. Under all but the most extreme drought situations, vine survival is probable, although crop quality and yield may be low.

Severe water stress in vines can be most damaging during late spring and early summer, when shoots grow rapidly and cell division occurs in the berries. Poor berry set and smaller berries result from severe stress in late spring and early summer. A second critical period is late summer, when cell expansion takes place in the berry. Severe water stress during this late summer ripening stage can reduce berry size and may delay or under very severe conditions, prevent fruit maturation.

### **Culture Practices Under Water Deficit**

Until grape growers know the extent and nature of water rationing, consider the following cultural practices to provide the most efficient use of water:

1. Fertilize and prune vines to produce moderate growth and yields.
2. Keep cover crops mown; plan to spray them out if drought conditions become severe.
3. Thin heavy crops to more moderate levels.

### **Irrigation Practices**

Drought conditions may require using water with utmost efficiency. Growers should constantly monitor soil moisture and apply water only when needed or at strategic times during the delivery period.

Improve irrigation systems so water is applied as efficiently as possible. Scientific irrigation scheduling will increase water savings and avoid over watering. Other supplemental drought advisories are available at Extension offices to help growers with soil moisture monitoring, improving irrigation efficiency, and irrigation scheduling.

The timing of water delivery will determine how growers should use available water. Drip irrigation would be the best system to use if low levels of water are available for an extensive part of the growing season. If 100% of normal supply is available for short periods, rill or sprinkler irrigation systems would allow application of large quantities of water over a short period of time.

Use early irrigation, as soon as water is available, to fill the soil profile. Avoid over irrigation, which can result in inadequate iron and zinc uptake and leaf chlorosis. Be sure the soil moisture level is high at the irrigation cutoff date.

### **Other Considerations**

Consider alternate sources of water. These would include wells, tailwater and stream or storage water. The large investment needed to obtain alternate sources of water

may be justified, as water reservoirs will probably be depleted again after this year's irrigation season.

Crop insurance is available for grape growers and will cover drought. Owners of grape blocks on drought susceptible land might consider this option, in the future.

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## Educational Enhancements for the Grape Industry

Washington State University and other south central Washington community colleges are increasing class offerings in viticulture and Enology. The objective is to eventually have a full fledged B.S. degree in viticulture and Enology. The ultimate goal of both the industry and the educational institutions is to have a Washington grape industry second to none in the world.

The first step of this endeavor is to assess the region's (Washington, Idaho, Oregon and British Columbia) need for these classes and the hireability of students graduating from such courses. The assessment is in the form of a questionnaire that you will be receiving soon. It is vitally important that you fill it out and return it! Your response will determine how much effort will be placed on establishing these educational programs.

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