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Cultural Practices for Sweet Scarlet

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Sweet Scarlet (US Plant Patent 15,891*) is a mid-season red seedless table grape with a light, fruity muscat flavor developed by David Ramming and Ronald Tarailo of the USDA-ARS in Parlier, California. The cultivar, formerly known as A2 and A61-16, was released in 2004 and resulted from the cross of two red seedless USDA selections C33-30 X C103-41. The parentage of Sweet Scarlet is complex and includes Blackrose, Maraville, Tafafihi Ahmur, Divizich Early, Fresno Seedless,

Italia, Calmeria, Muscat of Alexandria, Agadia, Muscat Hamburg, Perlette, Flame Seedless, Autumn Seedless and Sultanina. The cultivar produces very large (approximately 1.6 kg./3.5 lb. untipped), medium to well filled, conical-shaped clusters with large shoulders. Natural berries are oval in shape and weigh approximately 3.6 grams, though berry weight and size is increased when clusters are tipped, vines are girdled and fruit is treated with gibberellic acid. The skin is medium in thickness and the flesh is firm. Sweet Scarlet ripens mid-to-late August, or about the same time as Ruby Seedless and fills the harvest window between Flame Seedless and Crimson Seedless. Only a few hundred acres of this cultivar have been planted to date.

Site Selection and Planting

Sweet Scarlet is moderately vigorous when planted on its own roots. Rootstock selection should be based on site-specific soil pest or soil chemistry problems. Although rootstock effects on vine performance have not yet been evaluated, it is likely that grafting to Freedom, Ramsey (Salt Creek) and other rootstocks common for table grape production will increase vine vigor and require greater attention to canopy management.

Training and Trellising Systems

Quadrilateral cordon training and spur pruning is preferred for maximum productivity and fruit size and quality. Depending on vine vigor and in-row spacing, 36 to 40, 2-bud spurs are normally retained on quadrilateral cordon trained vines. Quadrilateral cordon

trained vines may be trellised to either the standard California “T” or open gable systems, but the gable system is preferred. Bilateral cordon training is not recommended due to inadequate productivity. Cane pruning may offer an advantage over spur pruning in terms of yield but is not recommended due to the production of overly compact clusters with variable berry size resulting in reduced berry size and poorer color development.

Productivity and Crop Load Management

Based on limited experience, Sweet Scarlet yields are observed to be quite variable ranging between 700 to 1,400 (22 lb.) boxes per acre for vines trellised on an open gable system. Optimum crop load varies among vineyards, depending upon vine vigor, berry set and tipping practices. Cluster counts prior to bloom often range between 30 and 40 per vine. Untipped clusters may weigh over 4 pounds at harvest, making them difficult to harvest and pack. Cluster tipping is therefore used to reduce cluster size and decrease crop load. It is essential that large, conical clusters be tipped to the top 4 shoulders after fruit set (8-10 mm in berry diameter) in order to reduce crop load, and allow berries to reach optimal size and acceptable color. Cylindrical “carrot” clusters, or those without defined shoulders may be tipped to clipper length, or about 6-7”. Clusters tipped in this fashion typically weigh about 2 lb. at harvest. Based on this estimate, vines with 30 clusters per vine would produce about 2.7 packed boxes of fruit per vine or 1,240 10 kg. (22 lb.) boxes per acre (based on an 8 foot x 12 foot spacing).

Girdling and Gibberellic Acid

Berry thinning. Sweet Scarlet does not respond to gibberellic acid thinning sprays at bloom. Rates as low as 1-2 ppm do not consistently reduce berry set and will cause excessive post-harvest shatter.

Berry sizing. Preliminary research conducted indicates that girdling vines at fruit set (5-6 mm in berry diameter) combined with a treatment of gibberellic acid at the rate of 20 ppm, applied following fruit set (7-8 mm in berry diameter) will significantly increase berry size. Rates above 40 ppm have been observed to reduce yield the following year and increase post-harvest shatter.

Color Development

Experience has shown that to achieve adequate fruit coloration, Sweet Scarlet requires Ethrel (ethephon) at the 1 pint/acre rate at the onset of color break as well as leafing in the fruit zone and trimming or hedging row middles to improve cluster exposure to sunlight during ripening.

Canopy Management

Shoot thinning should be performed on vines when shoot length reaches 8 to 10”. Shoot positioning should be performed on the open gable or other divided canopy systems. It is critical that clusters be exposed to adequate, indirect sunlight during the ripening period (after veraison) for maximum coloration. The removal of interior basal leaves, tendrils and lateral shoots in the fruit zone is generally recommended. Leaf removal should be performed near berry set, and after fruit softening. Shoot trimming or

hedging in the row middle is typically performed to maintain canopy shape and improve cluster exposure to sunlight, as well as reduce humidity within the fruiting region. Early senescence of leaves has been observed on the canopy interior, but no detrimental effects have been reported.

** Sweet Scarlet is exclusively licensed to the California Table Grape Commission and inquiries regarding availability of Sweet Scarlet should be addressed to the commission at 392 W. Fallbrook, Suite 101, Fresno, CA 93711-6150.*



Sweet Scarlet grapes, Arvin, CA, 7/24/2007. Photo by Jennifer Hashim-Buckey.

Understanding California Grape Growers' Management of Powdery Mildew

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An online survey has been established to determine the use of disease forecasts in vineyard manager's disease control programs. The survey contains approximately 50 questions focused on the decision making process of disease management and the utility of the powdery mildew index (PMI). Vineyard managers are encouraged to complete this survey as the responses will be valuable and will ultimately help to improve disease forecast models so they are more useful and lead to more effective, more efficient disease management in practice. A cash prize drawing will be conducted upon completion of the survey period and the prizes are as follows:

- 2 participants to receive \$250
- 5 participants to receive \$100
- 20 participants to receive \$50

To participate in the survey, click on the "Grape Powdery Mildew Survey" link at:
<http://tlybbert.ucdavis.edu/>

The survey should take 15-30 minutes to complete and will be available until March 1, 2008.