

2004 Mississippi State Report to the SERA IEG-14 Annual Meeting

Stephen J. Stringer
Geneticist
USDA-ARS Small Fruit Research Station
PO Box 287
Poplarville, MS, 39470
(601) 795-8751
sjstringer@msa-stoneville.ars.usda.gov

The Mississippi Muscadine Grape Industry and the 2004 Season.

Despite increasing consumer awareness of the health benefits associated with consumption of muscadine grapes and related products, increases in acreage devoted to their production are negligible, and acreage remains at approximately 500. Production in the Gulf Coast Region in 2004 was adversely affected by nearly daily rainfall events throughout May and June. In some cultivars, persistent cloudy / rainy / wet conditions during bloom adversely affected fruit set and resulted in excessive vegetative growth. Heavy disease pressure resulted in reductions in fruit quality in most cultivars.

Research Activities

Data were collected on the horticultural performance of over 70 muscadine grape cultivars and advanced selections. This represents the 4th year of observations, and the data generated are being summarized for publication.

Samples collected in 2003 from an advanced muscadine grape strain obtained from North Carolina State University were determined to contain relatively high levels of resveratrol in the juice (skins and seeds were removed before analysis). Samples collected in 2004 are being analyzed again this year in two different labs. Additionally, samples are being analyzed for pigment stability, and for juice and wine quality.

Samples were also collected in 2003 on a number cultivars and advanced muscadine grape selections obtained from defunct breeding programs in Georgia, North Carolina, and Florida in order to screen germplasm for anthocyanin content. Several strains were

identified as having anthocyanin concentrations equivalent to that of 'Noble'. Further testing will be conducted and the more promising strains will be evaluated for pigment stability and juice and wine quality.