

**2006 State Report to the SERA-14 Grape Research Committee
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Fortunately, most muscadine grape vineyards along the Gulf Coast (including Poplarville) were only light to moderately damaged during hurricane Katrina, and few trunks were actually split. Where trellises had been damaged but repaired, yields in 2006 were remarkably high.

Unfortunately, Katrina had a more detrimental effect on obtaining 2005 research results. Crosses had not been harvested prior to the storm, and storage and nutraceutical quality studies were lost due to the lack of electricity and cold storage for samples (2nd consecutive year). Storage quality studies of muscadine grape cultivars and breeding lines are being completed successfully in 2006. Crossing was conducted in 2006 with considerable emphasis on utilization of breeding lines with high nutraceutical content for enhancement of these properties in improved germplasm.

Research efforts between the USDA-ARS and U. of FL. Have resulted in the pending joint release of a new muscadine grape cultivar, 'Eudora'. Eudora, tested as CD8-67, was selected at Leesburg Florida in 1981 by J.A. Mortensen from a cross between 'Fry' and 'Southland'. Plants of Eudora are vigorous and productive, and in South Mississippi yields are comparable to the most productive cultivars. Flowers are pistillate and produce medium - large, round, firm, purple-skinned berries with high sugar content, excellent eating quality and flavor. Skin texture is moderately tough but flavorful and edible and pulp is only moderately muscelagenous. Berries contain an average of 3.2 seeds per berry. Testing indicates that skins of 'Eudora' possess higher concentrations of ellagic acid, a potent antioxidant, than that found in many other muscadine grape cultivars. Less than half of ripe berries have wet picking scars and berries store well under refrigeration with little shrinkage or shriveling. Some berry clusters are tight and suitable for cluster harvesting and packaging in clamshells. Ripening occurs from late August through late September in the Gulf-Coast Region. 'Eudora' has not shown symptoms of Pierce's disease, and has shown good resistance to various fruit rot organisms.