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GRAPE CULTIVAR AND ROOTSTOCK EVALUATIONS FOR THE TEXAS SOUTH PLAINS, 1975-76

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Research is in progress at The Texas Agricultural Experiment Station, Lubbock, to determine the feasibility of wine-grape production on the Texas South Plains. In 1974 research at the Abernathy vineyard was terminated and a new planting established at the Lubbock station. The new planting was established to expand wine-grape variety evaluations and to study rootstock effects on variety performance. Final evaluations of the Abernathy planting determined which of those varieties warranted continued evaluations.

Of 239 varieties under study at Abernathy over a 4-7 year period, 50 were retained as warranting further study and the remainder discarded as having no potential. Yields and juice quality of many of these varieties were very encouraging to the developing wine industry.

The Lubbock planting, established in 1974, came into production in 1976 with outstanding performance from such varieties as Zinfandel, Burger, Palomino, Mission, and Carignane. In 1976, the leading Vinifera varieties were significantly more productive than leading hybrids or American types. Juice quality was adversely affected in 1976 with sugars lower and acids higher than in previous years as a result of excessive rainfall and lower than normal temperatures in July. Some individual plant yields exceeded 8.2 tons per acre. Average sugar levels were 20.5 percent Brix with pH 4.1 and titratable acidity 0.850 percent (see table).

It is too early to properly evaluate rootstock effects on variety performance, but it is apparent that varieties respond differently.

The ability to withstand sub-zero temperature conditions has been a major concern for grape production on the South Plains. Vinifera types are more susceptible to extreme temperatures. In freeze-damage evaluations, cultivars most severely damaged were primarily Vinifera. However, non-vinifera types such as Canada, Muscat, Missouri Riesling, and Cayuga White also sustained considerable cane damage.

With 2 more years of evaluation planned, information from this area and other areas of the State will be accumulated for use in a developing wine industry.

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The complete report, MP-1319, "Grape Cultivar and Rootstock Evaluations for the Texas South Plains, 1975-76," with a bibliography and 10 tables is available from the Associate Editor, Experiment Station Publications, Department of Agricultural Communications, Texas A&M University, College Station, Texas 77843. Allow one month for delivery.

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Varieties expressing extremes of various characteristics

Characteristic	Varieties	
Most severe winter kill:	Burger	Valdepenas
	M. of Alexandria	Mission
	Carignane	Cynthiana
	Grenache	
Earliest bud swell:	Foch	SV 20365
	Thompson	S 7053
	W. Riesling	Baco Noir
	Chenin Blanc	Interlaken
	Rubired	M. Riesling
	Royalty	ARK 1211
	SV 12375	DS 26205
	BS 2862	Landott 4511
	SV 5276	Rabavitt 51
	Canadian Muscat	Meunch
	Vinered	Ellen Scott
	Flora	Cayuga White
Latest bud swell:	Mission	Barbera
	Zinfandel	Vidal 256
	M. of Alexandria	Cynthiana
	Peverella	Souzao
	Grenache	S 13666
	Herbemont	
Most vigorous vines:	Thompson	Vidal 256
	Barbera	Peverella
	SV 12-375	F. Columbard
	S 10878	Palomino
	Landott 4511	
Least vigorous:	Cayuga White	Flora
	Foch	Vinered
	DS 26-205	
Largest bunches:	Carignane	Mission
	M. of Alexandria	Peverella
	ARK 1049	Burger
	Palomino	Red Veltliner
	Thompson	SV 20 365
Smallest bunches:	Meunch	Cynthiana
	Wine King	
Top yielding Vinifera (5000+): grams/vine	Carignane	Zinfandel
	Chenin Blanc	M. of Alexandria
	Burger	Palomino
	Mission	Red Veltliner
Top yielding hybrid (4000 - 5000): grams/vine	SV 12-309 (Roucaneuf)	SV 5-276 (SeyVal)
	Vidal 256	SV 20-365
	ARK 1049	S9110 (Verdelet)
Top yielding American (<4000): grams/vine	Niagara	Iona
	Ellen Scott	Blk. Spanish