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The Mosage Tomato

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INTRODUCTION

Many home gardeners in the Midwest have expressed a desire for a large-fruited, productive, main-season tomato with a higher level of wilt resistance than Rutgers or Marglobe and which is adapted to either "staked" or "down" culture. It is also desirable that the plants have sufficient disease resistance, heat tolerance and vigor to fruit throughout the season, being terminated in the fall by frost.

Of numerous breeding selections and varieties tested in the Missouri Experiment Station Trials and by gardeners throughout Missouri, Mosage has been one of the most promising. Mosage, previously designated Mo. S-28, has proved to be a very versatile variety, producing well when grown "on the ground," "staked" or for forcing under glass.

Mosage was included in the Southern Tomato Evaluation Program trials in 1956 (as STEP 270) where it was rated high in fruit size and uniformity and medium in earliness, productivity and general appearance.

PEDIGREE

The resistance of Mosage to the prevalent form (race 1) of the fusarium wilt organism, Fusarium oxysporum F. Lycopersici (Sacc.) Snyder and Hansen, is of the immunity type contributed by Missouri Accession 160 of Lycopersicon pimpinellifolium Mill. The genetic history of Missouri Mosage is as follows:

Earliana X Lycopersicon pimpinellifolium #160 X Break-O-Day X Bonny Best X Break-O-Day, open-pollinated, selfed for two generations, X Rutgers, selected 14 generations.

Vigorous indeterminate growth habit of the plant contributes to the productiveness and versatility of Mosage. Plant is highly resistant to fusarium wilt.

VARIETAL DESCRIPTION

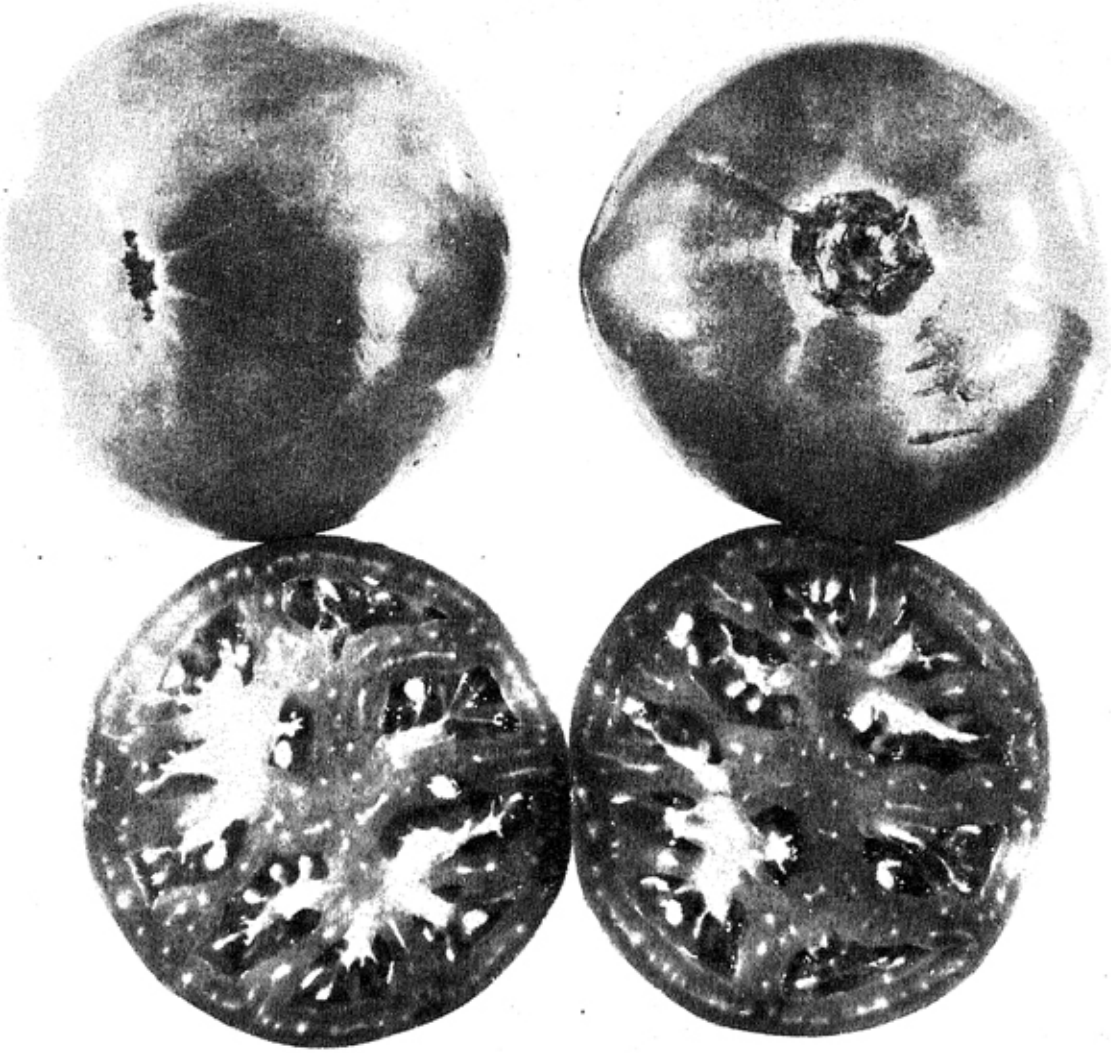
Fruit

The fruit of Mosage are large in size, moderately flattened with smooth shoulders and shallow stem attachment. Under good cultural conditions the fruit size averages 6.8 ounces early in the season and approximately 5 ounces over the entire production season. Although relatively free of concentric cracks, it is only slightly superior to Rutgers in resistance to radial cracking.

The fruit are "meaty" with thick locular walls and septa, and possess five to many locules. The interior color is slightly inferior to Rutgers but comparable with most other varieties and acceptable for canning.

Plant and Foliage

Mosage produces a vigorous, rangy, indeterminate vine with adequate foli-



Mosage fruit are large, moderately flattened, with smooth shoulders. Numerous small locules contribute to "meatiness."

age cover. When grown untrained and unstaked on fertile soil, a space requirement of 15-18 sq. ft. per plant should be provided. For "staked" culture provide at least 8 square feet per plant. The leaflets are medium in size and dark green in color.

The plant has sufficient vigor and heat tolerance to withstand "droughty" periods and to continue growth and fruiting until killed by frost.

PERFORMANCE TESTS

In approximately 10 years of performance testing by the Missouri Agricultural Station, Mosage has consistently been among the highest yielding varieties. Since it is mid-season in maturity and has heavy foliage, one is not particularly impressed by the variety early in the season. It has the capacity, how-

ever, to continue growing and producing throughout the season and in areas having a long growing season will fruit abundantly.

The performance of Mosage in replicated test plantings under unstaked culture is summarized in Table I.

TABLE I--COMPARATIVE PERFORMANCE OF MOSAGE WITH COMMONLY-GROWN TOMATO VARIETIES, HORTICULTURE EXPERIMENTAL FARMS, COLUMBIA, MO. 1953-1957

Variety	Yield of Marketable Fruit Tons per Acre				Average Fruit Size for Season Ounces per Fruit			
	1953	1955	1956	1957	1953	1955	1956	1957
Mosage (S-28)	8.5	20.7	25.5	25.8	4.7	6.1	4.8	5.1
Rutgers	2.8	10.6	14.0	15.2	4.2	4.8	3.5	4.5
Homestead	3.1	---	15.3	22.4	4.0	--	3.9	4.4
Urbana	3.8	---	12.1	---	3.9	--	3.6	--

The productiveness of this variety appears to be associated with its large fruit size and its ability to set successive flower clusters. Unlike the Mozark variety, it does not concentrate its set of fruit.

The indeterminate, rangy habit of growth makes the variety adaptable for training to a stake. The following data taken during the 1957 season (Table II) indicates it compares favorably with some of the commercial hybrids now being grown "staked" in this area.

TABLE II--COMPARISON OF YIELD AND FRUIT SIZE OF MOSAGE WITH TWO COMMERCIAL HYBRIDS, HORTICULTURAL EXPERIMENTAL FARMS, COLUMBIA, MO. 1957

Variety	Yield of Marketable Fruit Pounds per Plant				Average Size of Fruit (Oz)	
	to 7/11	to 7/19	to 7/30	Season	to 7/30	for Season
Mosage	0.78	3.07	3.74	8.38	7.3	5.8
Moreton Hybrid (F_1)	0.95	2.80	3.68	8.63	6.9	5.4
Burpee Hybrid (F_1) 6113	0.80	2.52	3.18	9.07	6.4	5.4

The unusual versatility of the variety was further established during the 1956 season (Table III), in a spring greenhouse planting which included the most common forcing varieties grown in this area.

These data are given to substantiate the unusually wide adaptability of the variety and should not be interpreted as a recommendation of the variety for forcing purposes. At the present time, hybrids of Tuckers Forcing possessing resistance to Cladosporium leaf mold are considered superior for commercial greenhouse forcing.

TABLE III--COMPARATIVE PERFORMANCE OF MOSAGE AND PROMINENT FORCING VARIETIES, UNIVERSITY OF MISSOURI HORTICULTURAL GREENHOUSES, 1956

Variety	Marketable Yield Pounds per Plant	Total Yield Pounds per Plant	Average Fruit Size (Oz.)
Mosage	9.5	10.4	5.7
Valiant	9.9	11.3	5.6
Tuckers Forcing	6.5	9.9	4.1
Ohio WR_3 (pink)	8.7	9.6	5.7
Michigan State Forcing	4.9	6.7	4.1
Waltham Moldproof Forcing	6.9	10.6	3.7