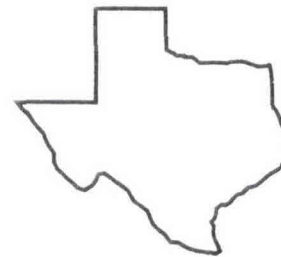
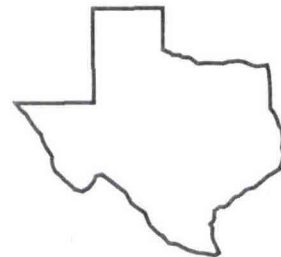


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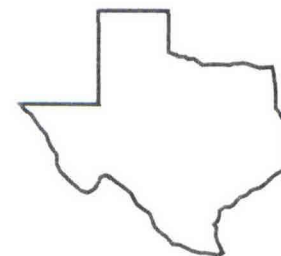
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Texas Agricultural Experiment Station
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Overton Field Day Report - 1994



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SCREENING ROSE PLANT MATERIAL FOR BLACK SPOT RESISTANCE - 1993

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Background. The black spot fungus (*Diplocarpon rosae* Wolf) is the most damaging rose disease in the world. It is more widespread and causes more damage than mildew or rust, two other common rose diseases. The rose has been one of the most important commercial ornamental species for centuries, but the number of plants sold in the United States has decreased steadily over the last 20 years. One of the major reasons for decreasing sales is the generally high inputs of fungicides and pesticides needed to grow roses in the landscape. Unfortunately, the vast majority of the commercially available rose cultivars, which are complex interspecific hybrids, are susceptible to several important diseases. However, several species of roses are resistant or immune to black spot.

To gain information on relative black spot resistance, 60 species, amphidiploids, private breeding lines, and old garden and modern hybrid roses have been planted in a replicated trial at the Overton Center and in plots in the Brazos River bottom near College Station. These plantings have been monitored for disease development for one growing season.

Research Findings. After observation for one growing season, the rose entries for this study were divided into 4 black spot resistance categories (Table 1). The incidence of disease was high at both locations, but was estimated to be 20-30% greater at Overton.

Application. The plants will be studied for an additional growing season to determine usefulness of entries for a breeding program with an emphasis on black spot resistance. The development of black spot resistant rose cultivars will decrease the use of fungicides in rose culture and increase the demand of rose plants for garden and landscape use.

Table 1. List of entries by black spot resistance category after one season of evaluation.

High Resistance: (0-25% defoliation, 0-25% black spot infected leaflets)

3002

3416

3016

74-193

90-69

88-1

84-131 (one plant at College Station now showing rust)

86-3

R. setigera serena (susceptible to rust)

R. rugosa

R. rugosa rubra
R. banksiae banksiae (no observed black spot)
R. banksiae normalis (no observed black spot)
R. roxburghii (no observed black spot)
R. laevigata
R. brunonii (no observed black spot)
R. moschata
The Fairy (susceptible to *Cercospora*)
White Meidiland
Pearl Meidiland
Sunflare
Sunbright (one plant may be showing presence of new black spot race)

Moderate Resistance: (25-50% defoliation, 25-50% black spot infected leaflets)

3703

R. x fortuniana
John Cabot
Lafter
Belinda's Dream
Reine Marie Henriette
Mary Manners (susceptible to powdery mildew)
Carefree Beauty
Pink Meidiland
Scarlet Meidiland (susceptible to *Cercospora*)
Alba Meidiland

Low Resistance: (50-75% defoliation, 50-75% black spot infected leaflets)

3626

3166 (susceptible to *Cercospora*)
Bonica
Carefree Wonder
Gartendirektor Otto Linne
Tournament of Roses
Ingrid Bergman
Salsa
Safrano
Old Blush (may have good tolerance)

Susceptible: (75-100% defoliation, 75-100% black spot infected leaflets)

3022

3042

905

All That Jazz

Honor

Intrigue

Sheer Elegance

Sexy Rexy

Impatient

America's Choice

Peace (somewhat susceptible to powdery mildew)