

Rose variety reaction to blackspot disease under minimal input growing conditions, 2001.

A two-year study with 107 commercial rose varieties evaluated the response to naturally occurring rose blackspot disease at the Texas A&M University Research Center at Dallas. Roses were planted on native or grafted rootstalks as they were offered commercially. All of the rose varieties were planted in four randomized blocks during the spring of 1999 and disease evaluations were made monthly during spring and summer months of 2000 and 2001. During the evaluation period, test plants were given no fertility or pesticides, and irrigation was minimal to stimulate minimal growing conditions for Dallas, Texas. Blackspot infection occurred by natural infection during the five month observation period during both years. Plants were rated empirically each month (April-August) for severity of black spot using a rating system that considered both the amount of lesions on the leaves and defoliation of the whole plant, with 0=no black spot, 1=slight defoliation, 2=minor defoliation, 3=moderate defoliation, 4=severe defoliation, and 5=complete defoliation.

Conditions for blackspot infection were very good during both years of the study. Despite high inoculum levels and favorable conditions for infection, some of the varieties had consistently low disease during both years. The varieties Sir Thomas Lipton, Knockout, Rec Cascade, SeaFoam, Caldwell Pink, The Fairy and New Dawn were among the most resistant to the disease, while Spice, Juane Desprez and Perle d'Or were also very resistant but demonstrated variations in disease reaction during the two year study. Among the 107 varieties used for evaluation, 90% were determined to be moderately (40%) or highly (50%) susceptible while 10% were considered to be highly tolerant or resistant to the disease.

Variety	2000		2001		2 yr Mean	Variety	2000		2001		2 Yr Mean
	No. obs	Mean	No. obs	Mean			No. obs	Mean	No. obs	Mean	
Sir Thomas Lipton	20	0.15	16	0.00	0.08	Safrano	14	1.43	16	2.00	1.72
Knockout	20	0.20	16	0.25	0.23	Blush Noisette	20	1.55	16	1.93	1.74
Red Cascade	20	0.55	16	0.38	0.46	Gartendirektor Otto Linne	20	1.60	8	1.90	1.75
Sea Foam	20	0.70	16	0.23	0.46	Trumpeter	20	1.85	16	1.65	1.75
Caldwell Pink	20	0.30	16	0.73	0.51	Belinda	20	1.53	16	2.05	1.79
The Fairy	20	0.55	12	0.80	0.68	Dortmund	19	1.89	16	1.73	1.81
New Dawn	20	0.85	16	0.80	0.83	Lamarque	20	2.05	16	1.63	1.84
Spice	20	1.40	16	0.35	0.88	Westerland	20	0.55	16	3.13	1.84
Juane Desprez	19	1.00	16	0.80	0.90	Kronprinzessin Viktoria	19	2.32	12	1.37	1.84
Perle d'Or	20	1.20	16	0.65	0.93	Bonica	19	2.37	16	1.33	1.85
Louis Philippe	20	1.10	16	0.95	1.03	Marie Pavie	14	2.36	16	1.35	1.86
Red Ribbon	20	1.25	16	0.80	1.03	La France	20	2.05	16	1.70	1.88
Apricot China	20	1.05	16	1.03	1.04	Monsieur Tillier	20	1.40	16	2.35	1.88
Lafter	20	1.05	16	1.13	1.09	Souvenir de St. Anne	20	2.00	16	1.75	1.88
Mrs.B.R. Cant	20	1.20	16	1.05	1.13	Iceberg-climbing	20	1.95	24	1.88	1.92
Marechal Niel	15	1.00	12	1.27	1.13	Souvenir de la Malmaison	19	2.21	16	1.70	1.96
Archduke Charles	19	1.68	16	0.65	1.17	Marie Daly	20	2.30	16	1.63	1.96
Old Blush	16	1.00	16	1.43	1.21	Crimson Glory	19	2.32	12	1.63	1.98
Comtesse du Cayla	20	1.35	16	1.15	1.25	Perle des Jardins	15	1.93	12	2.03	1.98
Madame Joseph Schwartz	19	1.58	16	0.95	1.27	American Beauty	20	2.15	16	1.83	1.99
Katy Road Pink	20	1.45	16	1.10	1.28	Maman Cochet	15	1.80	12	2.20	2.00
Francis Dubreuil	20	1.70	16	1.08	1.39	Puerto Rico	20	2.25	16	1.85	2.05
Sun Flare	20	0.32	16	2.55	1.44	Sunsprite	20	0.75	16	3.40	2.08
Madame Gregorie	20	1.60	12	1.33	1.47	Easy Going	20	0.90	16	3.30	2.10
Lindee	18	1.67	16	1.30	1.49	La Marne	20	2.20	16	2.00	2.10
Natchitoches Noisette	16	1.88	16	1.15	1.52	Eutin	16	2.06	16	2.18	2.12
Reve d'Or	20	1.55	16	1.53	1.54	Raspberry Twist	18	2.22	16	2.05	2.14
Baty's Pink Pillar	20	1.85	16	1.30	1.58	Buff Beauty	20	2.10	16	2.18	2.14
Sara Van Fleet	20	1.80	16	1.38	1.59	Bon Silene	20	1.80	16	2.50	2.15
Ducher	17	1.59	16	1.60	1.60	Valentine	17	2.41	16	1.90	2.16
Gruss an Aachen	20	1.55	16	1.70	1.63	Mutabilis	20	1.90	16	2.45	2.18
Georgetown Tea	15	2.00	12	1.27	1.63	Livin' Easy	20	1.15	16	3.23	2.19
Hermosa	18	1.72	12	1.60	1.66	Pinkie	20	2.40	16	2.08	2.24
Belinda's Dream	20	2.45	12	0.90	1.68	Maggie	20	2.10	16	2.45	2.28
LSD (P=0.05)		0.68		0.83		LSD (P=0.05)		0.68		0.83	

Variety	2000		2001		2 yr Mean	Variety	2000		2001		2 Yr Mean
	No. obs	Mean	No. obs	Mean			No. obs	Mean	No. obs	Mean	
Duchess de Brabant	20	2.25	16	2.35	2.30	Pascali	19	2.58	12	2.97	2.77
Nearly Wild	20	2.10	16	2.50	2.30	Else Poulsen	20	2.30	16	3.25	2.78
Madam Antoine Mari ...	19	2.05	12	2.57	2.31	Red Radiance ...	20	3.00	16	2.58	2.79
Tournament of Roses ...	19	2.21	16	2.43	2.32	Angel Face	16	2.88	8	2.75	2.82
Granada	20	2.25	16	2.48	2.36	Don Juan	20	2.65	16	3.10	2.88
Europeana	19	2.58	16	2.18	2.38	Gold Medal	20	2.55	16	3.23	2.89
Pam's Pink	17	2.53	12	2.27	2.40	Tropicana	20	2.75	16	3.08	2.91
Mrs. Dudley	15	2.47	12	2.33	2.40	Annie's Red	20	3.05	16	2.80	2.93
Zepherin Drouhin	20	2.30	16	2.55	2.43	Mr. Lincoln	20	2.80	16	3.05	2.93
Cecile Brunner	20	2.30	16	2.58	2.44	Consuelo	20	2.90	12	3.00	2.95
Dame de Coeur	19	2.89	12	2.00	2.45	Heritage	20	2.60	16	3.30	2.95
Gene Boerner	20	2.80	16	2.10	2.45	Graham Thomas	20	2.65	16	3.28	2.96
Marchesa Boccella	20	2.05	16	2.85	2.45	Oklahoma	20	2.75	16	3.25	3.00
Madame Alfred Carriere	20	2.15	16	2.85	2.50	Chrysler Imperial	20	2.80	16	3.23	3.01
Fragrant Cloud	19	2.95	16	2.13	2.54	First Prize	20	3.55	16	3.53	3.54
Margaret Merrill	19	2.32	16	2.78	2.55	Baronne Prevost .	20	3.05	16	4.05	3.55
Showbiz	18	1.72	16	3.43	2.57	Paul Neyron	20	3.15	16	4.08	3.61
Celine Forestier	20	2.10	16	3.28	2.69	Peace	20	3.50	16	3.83	3.66
Blaze	19	2.53	16	2.88	2.70	Queen Elizabeth .	19	3.53	16	3.85	3.69
Sombreuil	19	2.84	16	2.63	2.73						
LSD (P=0.05)		0.68		0.83		LSD (P=0.05)		0.68		0.83	