

Rose variety reaction to powdery mildew under minimal input growing conditions, 2001.

A two-year study with 107 commercial rose varieties evaluated the response to naturally occurring powdery mildew at the Texas A&M University Research Center at Dallas. Roses were planted on native or grafted rootstocks 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. Powdery mildew infection was moderate for year one, but there was no powdery mildew infection in the second year. The collection of roses employed in this study had no particular reference to known powdery mildew susceptibility. Plants were rated empirically each month (April-August) for severity of powdery mildew using a disease scale of 0-3 max where 0=no powdery mildew and 3=severe powdery mildew symptoms.

Over half of the varieties tested (58.6%) had no symptoms of powdery mildew during the two year study. A high number (40%) had a low level of powdery mildew during the first year and no disease during the second year. Eight of the rose varieties, including La Marne, Nearly Wild, Georgetown Tea, Kronprinzessin Viktoria, Perles des Jardins and Apricot China, were most susceptible during the first year.

Variety	2000		2001		2 yr Mean	Variety	2000		2001		2 Yr Mean
	No. obs	Mean	No. obs	Mean			No. obs	Mean	No. obs	Mean	
American Beauty	20	0.00	16	0.00	0.00	Madame Gregorie	20	0.00	16	0.00	0.00
Annie's Red	20	0.00	16	0.00	0.00	Maggie	20	0.00	16	0.00	0.00
Baronne Prevost	20	0.00	16	0.00	0.00	Maman Cochet	15	0.00	8	0.00	0.00
Baty's Pink Pillar	20	0.00	16	0.00	0.00	Marchesa Boccella ...	20	0.00	16	0.00	0.00
Belinda	19	0.00	16	0.00	0.00	Marechal Niel	16	0.00	16	0.00	0.00
Belinda's Dream	20	0.00	12	0.00	0.00	Marie Daly	20	0.00	16	0.00	0.00
Bonica	18	0.00	16	0.00	0.00	Monsieur Tillier	20	0.00	16	0.00	0.00
Buff Beauty	20	0.00	16	0.00	0.00	Mr. Lincoln	20	0.00	16	0.00	0.00
Caldwell Pink	20	0.00	16	0.00	0.00	Mrs. Dudley Cross	15	0.00	12	0.00	0.00
Cecile Brunner	20	0.00	16	0.00	0.00	Mrs.B.R. Cant	20	0.00	16	0.00	0.00
Comtesse du Cayla	19	0.00	16	0.00	0.00	Mutabilis	20	0.00	16	0.00	0.00
Consuelo	20	0.00	16	0.00	0.00	Natchitoches Noisette	16	0.00	16	0.00	0.00
Dame de Coeur	19	0.00	16	0.00	0.00	Oklahoma	20	0.00	16	0.00	0.00
Don Juan	19	0.00	16	0.00	0.00	Peace	20	0.00	16	0.00	0.00
Dortmund	18	0.00	16	0.00	0.00	Perle d'Or	20	0.00	24	0.00	0.00
Double Delight	18	0.00	12	0.00	0.00	Pinkie	20	0.00	16	0.00	0.00
Easy Going	20	0.00	16	0.00	0.00	Queen Elizabeth	18	0.00	16	0.00	0.00
Else Poulsen	20	0.00	16	0.00	0.00	Raspberry Twist	18	0.00	12	0.00	0.00
Europeana	19	0.00	16	0.00	0.00	Red Cascade	20	0.00	12	0.00	0.00
Fragrant Cloud	20	0.00	16	0.00	0.00	Red Ribbon	20	0.00	16	0.00	0.00
Francis Dubreuil	19	0.00	16	0.00	0.00	Reve d'Or	20	0.00	12	0.00	0.00
Gartendirektor Otto Linne	20	0.00	16	0.00	0.00	Sea Foam	20	0.00	16	0.00	0.00
Gold Medal	20	0.00	16	0.00	0.00	Showbiz	18	0.00	16	0.00	0.00
Graham Thomas	20	0.00	12	0.00	0.00	Sombreuil	20	0.00	16	0.00	0.00
Hermosa	19	0.00	16	0.00	0.00	Sun Flare	19	0.00	16	0.00	0.00
Iceberg-climbing	20	0.00	16	0.00	0.00	The Fairy	20	0.00	16	0.00	0.00
Juane Desprez	19	0.00	16	0.00	0.00	Tournament of Roses	19	0.00	16	0.00	0.00
Katy Road Pink	20	0.00	16	0.00	0.00	Tropicana	20	0.00	16	0.00	0.00
Knockout	20	0.00	16	0.00	0.00	Trumpeter	20	0.00	16	0.00	0.00
La France	20	0.00	16	0.00	0.00	Westerland	20	0.00	16	0.00	0.00
Lafter	20	0.00	16	0.00	0.00	Archduke Charles	20	0.05	16	0.00	0.03
Livin' Easy	20	0.00	12	0.00	0.00	Blaze	19	0.05	16	0.00	0.03
Madam Antoine Mari	19	0.00	12	0.00	0.00	Chrysler Imperial	20	0.05	16	0.00	0.03
Madame Alfred Carriere	20	0.00	12	0.00	0.00	Gene Boerner	19	0.05	16	0.00	0.03
LSD (P=0.05)		0.36		0.00		LSD (P=0.05)		0.36		0.00	

Variety	2000		2001		2 yr	Variety	2000		2001		2 Yr
	No. obs	Mean	No. obs	Mean	Mean		No. obs	Mean	No. obs	Mean	Mean
Gruss an Aachen	20	0.05	16	0.00	0.03	Celine Forestier	20	0.30	12	0.00	0.15
Heritage	20	0.05	16	0.00	0.03	Louis Philippe	20	0.30	16	0.00	0.15
Margaret Merrill	20	0.05	12	0.00	0.03	Sara Van Fleet	20	0.30	16	0.00	0.15
Red Radiance	20	0.05	16	0.00	0.03	Pam's Pink	17	0.35	8	0.00	0.18
Paul Neyron	20	0.10	16	0.00	0.05	Crimson Glory	19	0.37	16	0.00	0.19
Madame Joseph Schwartz	19	0.11	16	0.00	0.06	Granada	18	0.39	16	0.00	0.20
Valentine	18	0.11	12	0.00	0.06	Sir Thomas Lipton	20	0.40	16	0.00	0.20
Angel face	16	0.13	12	0.00	0.07	Sunsprite	20	0.40	16	0.00	0.20
Blush Noisette	20	0.15	16	0.00	0.08	Safrano	14	0.43	16	0.00	0.22
Bon Silene	20	0.15	16	0.00	0.08	Eutin	17	0.47	12	0.00	0.24
Pascali	19	0.16	12	0.00	0.08	Lindee	18	0.50	16	0.00	0.25
First Prize	18	0.17	16	0.00	0.09	La Marne	20	0.70	16	0.00	0.35
Old Blush	17	0.18	16	0.00	0.09	Nearly Wild	20	0.70	16	0.00	0.35
Duchess de Brabant	20	0.20	16	0.00	0.10	Souvenir de la Malmaison	19	0.79	16	0.00	0.40
Puerto Rico	20	0.20	16	0.00	0.10	Souvenir de St. Anne	20	0.95	16	0.00	0.48
Spice	20	0.20	16	0.00	0.10	Georgetown Tea	15	1.00	16	0.00	0.50
Marie Pavie	14	0.21	16	0.00	0.11	Kronprincessin Viktoria ...	19	1.05	16	0.00	0.53
Lamarque	20	0.25	16	0.00	0.13	Perle des Jardins	15	1.20	16	0.00	0.60
New Dawn	20	0.25	16	0.00	0.13	Apricot China	20	1.40	16	0.00	0.70
Zepherin Drouhin	20	0.25	16	0.00	0.13						
LSD (P=0.05)		0.36		0.00		LSD (P=0.05)		0.36		0.00	