

Foliage disease resistance In Texas: Trials in College Station

Brent Pemberton, Stella Kang, Ellen Young, Jeekin Lau, Seza Noyan,
Natalie Anderson, David Byrne

Material and Methods

- Fields in College Station, TX were evaluated during spring, summer and fall seasons 2016 and 2017.
- Evaluated traits: flower intensity, black spot, black spot size, cercospora, defoliation, flower cleaning and flower rating.
- >300 rose accessions: cultivars and species
- Rating scale was from 0-9

2016

Top Hybrid Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Miracle on the Hudson	2.5	2.0	0.1	1.5	4.7
Oso Easy Double Red	2.5	2.9	0.2	1.5	5.5
91/100-5	2.5	1.0	1.0	2.0	
10037 N046	2.5	1.4	0.0	0.9	3.5
Pink Home Run	2.8	2.4	0.2	1.6	4.5
Knock Out	2.8	2.1	0.1	2.0	4.8
Peachy Keen (2015)	2.8	1.6	0.3	1.5	3.0
X566-B1 Own Root	2.8	3.5	1.3	1.6	3.8
Lemon Fizz	2.9	1.6	0.7	1.9	2.3
Innocencia Vigorosa	2.9	2.1	1.8	1.5	3.8
12052 N002	2.9	3.5	0.0	2.1	4.6
D14-2-17	3.0	2.7	0.7	1.7	3.3
Home Run (2001)	3.0	3.1	0.3	1.9	4.9
10049 R7P76	3.0	2.6	0.9	2.1	3.4
Baby Betsy McCall	3.0	5.0	3.0	3.0	5.0
J06-30-3-3	3.0	0.0	0.0	2.0	3.0
My Girl (1997)	3.0	2.4	0.7	1.9	3.4
Phloxy Baby	3.0	2.9	2.7	2.3	4.1
Belindas Dream	3.0	2.3	0.3	2.4	3.2
Kashmir	3.0	2.2	0.1	1.5	4.3

Top Hybrid Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Miracle on the Hudson	2.5	2.0	0.1	1.5	4.7
Oso Easy Double Red	2.5	2.9	0.2	1.5	5.5
91/100-5	2.5	1.0	1.0	2.0	
10037 N046	2.5	1.4	0.0	0.9	3.5
Pink Home Run	2.8	2.4	0.2	1.6	4.5
Knock Out	2.8	2.1	0.1	2.0	4.8
Peachy Keen (2015)	2.8	1.6	0.3	1.5	3.0
X566-B1 Own Root	2.8	3.5	1.3	1.6	3.8
Lemon Fizz	2.9	1.6	0.7	1.9	2.3
Innocencia Vigorosa	2.9	2.1	1.8	1.5	3.8
12052 N002	2.9	3.5	0.0	2.1	4.6
D14-2-17	3.0	2.7	0.7	1.7	3.3
Home Run (2001)	3.0	3.1	0.3	1.9	4.9
10049 R7P76	3.0	2.6	0.9	2.1	3.4
Baby Betsy McCall	3.0	5.0	3.0	3.0	5.0
J06-30-3-3	3.0	0.0	0.0	2.0	3.0
My Girl (1997)	3.0	2.4	0.7	1.9	3.4
Phloxy Baby	3.0	2.9	2.7	2.3	4.1
Belindas Dream	3.0	2.3	0.3	2.4	3.2
Kashmir	3.0	2.2	0.1	1.5	4.3

Top Hybrid Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Miracle on the Hudson	2.5	2.0	0.1	1.5	4.7
Oso Easy Double Red	2.5	2.9	0.2	1.5	5.5
91/100-5	2.5	1.0	1.0	2.0	
10037 N046	2.5	1.4	0.0	0.9	3.5
Pink Home Run	2.8	2.4	0.2	1.6	4.5
Knock Out	2.8	2.1	0.1	2.0	4.8
Peachy Keen (2015)	2.8	1.6	0.3	1.5	3.0
X566-B1 Own Root	2.8	3.5	1.3	1.6	3.8
Lemon Fizz	2.9	1.6	0.7	1.9	2.3
Innocencia Vigorosa	2.9	2.1	1.8	1.5	3.8
12052 N002	2.9	3.5	0.0	2.1	4.6
D14-2-17	3.0	2.7	0.7	1.7	3.3
Home Run (2001)	3.0	3.1	0.3	1.9	4.9
10049 R7P76	3.0	2.6	0.9	2.1	3.4
Baby Betsy McCall	3.0	5.0	3.0	3.0	5.0
J06-30-3-3	3.0	0.0	0.0	2.0	3.0
My Girl (1997)	3.0	2.4	0.7	1.9	3.4
Phloxy Baby	3.0	2.9	2.7	2.3	4.1
Belindas Dream	3.0	2.3	0.3	2.4	3.2
Kashmir	3.0	2.2	0.1	1.5	4.3

Top Hybrid Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Miracle on the Hudson	2.5	2.0	0.1	1.5	4.7
Oso Easy Double Red	2.5	2.9	0.2	1.5	5.5
91/100-5	2.5	1.0	1.0	2.0	
10037 N046	2.5	1.4	0.0	0.9	3.5
Pink Home Run	2.8	2.4	0.2	1.6	4.5
Knock Out	2.8	2.1	0.1	2.0	4.8
Peachy Keen (2015)	2.8	1.6	0.3	1.5	3.0
X566-B1 Own Root	2.8	3.5	1.3	1.6	3.8
Lemon Fizz	2.9	1.6	0.7	1.9	2.3
Innocencia Vigorosa	2.9	2.1	1.8	1.5	3.8
12052 N002	2.9	3.5	0.0	2.1	4.6
D14-2-17	3.0	2.7	0.7	1.7	3.3
Home Run (2001)	3.0	3.1	0.3	1.9	4.9
10049 R7P76	3.0	2.6	0.9	2.1	3.4
Baby Betsy McCall	3.0	5.0	3.0	3.0	5.0
J06-30-3-3	3.0	0.0	0.0	2.0	3.0
My Girl (1997)	3.0	2.4	0.7	1.9	3.4
Phloxy Baby	3.0	2.9	2.7	2.3	4.1
Belindas Dream	3.0	2.3	0.3	2.4	3.2
Kashmir	3.0	2.2	0.1	1.5	4.3

Top Rugosa Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Sir Thomas Lipton	3.0	0.9	0.0	0.9	1.0
Purple Pavement	3.5	1.9	0.3	3.8	0.9
Frau Dagmar Hastrup	3.3	1.0	0.1	2.9	1.0
Rosa rugosa alba		0.1	0.3	4.1	1.0
Moje Hammarberg	3.3	1.2	0.0	2.3	1.2
Hansa	3.3	1.3	0.2	3.4	0.9
Basyes Purple	3.4	3.3	1.0	4.0	2.0
Therese Bugnet	3.2	2.4	0.6	2.0	1.0

Top Rugosa Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Sir Thomas Lipton	3.0	0.9	0.0	0.9	1.0
Purple Pavement	3.5	1.9	0.3	3.8	0.9
Frau Dagmar Hastrup	3.3	1.0	0.1	2.9	1.0
Rosa rugosa alba		0.1	0.3	4.1	1.0
Moje Hammarberg	3.3	1.2	0.0	2.3	1.2
Hansa	3.3	1.3	0.2	3.4	0.9
Basyes Purple	3.4	3.3	1.0	4.0	2.0
Therese Bugnet	3.2	2.4	0.6	2.0	1.0

Rugosa Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Sir Thomas Lipton	3.0	0.9	0.0	0.9	1.0
Purple Pavement	3.5	1.9	0.3	3.8	0.9
Frau Dagmar Hastrup	3.3	1.0	0.1	2.9	1.0
Rosa rugosa alba		0.1	0.3	4.1	1.0
Moje Hammarberg	3.3	1.2	0.0	2.3	1.2
Hansa	3.3	1.3	0.2	3.4	0.9
Basyes Purple	3.4	3.3	1.0	4.0	2.0
Therese Bugnet	3.2	2.4	0.6	2.0	1.0

Species Rating

Name	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average
R. roxburghii plena-RVR	0.2	0.4	1.3
R. nitidia-RVR	3.2	0.8	2.8
R. carolina-FF	2.6	1.2	3

Species Rating

Name	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average
R. roxburghii plena-RVR	0.2	0.4	1.3
R. nitidia-RVR	3.2	0.8	2.8
R. carolina-FF	2.6	1.2	3

2017

Top Hybrid Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
10049 R7P76	2.3	2.5	0.3	0.6	2.1
Knock Out	2.6	1.4	1.1	1.4	2.6
10037 N046	2.7	0.9	2.2	0.9	2.1
Miracle on the Hudson	2.7	1.4	2.1	1.6	2.1
12052 N002	2.8	1.4	0.6	1.5	2.5
10038 N001 Japan	2.8	0.2	3.0	1.4	2.5
Sunny Knock Out	2.8	1.3	1.0	1.0	2.4
D14-10-24	2.8	1.2	0.3	1.7	1.4
Oso Easy Double Red	2.9	2.1	2.0	1.9	2.8
Kashmir	2.9	2.0	0.5	2.0	1.6
Oso Happy Petit Pink	2.9	1.3	1.4	1.8	2.1
Peachy Keen (2015)	2.9	1.8	0.9	1.6	1.9
D14-11-10	2.9	1.3	0.2	2.1	1.4
Pink Home Run	2.9	1.3	2.3	2.0	2.2
X566-B1	2.9	1.9	1.6	1.9	1.6
Home Run (2001)	3.0	1.3	2.7	1.9	2.6
Limoncello	3.0	2.5	1.1	2.3	3.5
Screaming Neon	3.0	2.1	0.3	1.8	1.9
J06-20-14-3	3.0	0.7	3.0	1.5	1.9
D14-13-39	3.0	2.3	0.1	2.2	1.8

Top Hybrid Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
10049 R7P76	2.3	2.5	0.3	0.6	2.1
Knock Out	2.6	1.4	1.1	1.4	2.6
10037 N046	2.7	0.9	2.2	0.9	2.1
Miracle on the Hudson	2.7	1.4	2.1	1.6	2.1
12052 N002	2.8	1.4	0.6	1.5	2.5
10038 N001 Japan	2.8	0.2	3.0	1.4	2.5
Sunny Knock Out	2.8	1.3	1.0	1.0	2.4
D14-10-24	2.8	1.2	0.3	1.7	1.4
Oso Easy Double Red	2.9	2.1	2.0	1.9	2.8
Kashmir	2.9	2.0	0.5	2.0	1.6
Oso Happy Petit Pink	2.9	1.3	1.4	1.8	2.1
Peachy Keen (2015)	2.9	1.8	0.9	1.6	1.9
D14-11-10	2.9	1.3	0.2	2.1	1.4
Pink Home Run	2.9	1.3	2.3	2.0	2.2
X566-B1	2.9	1.9	1.6	1.9	1.6
Home Run (2001)	3.0	1.3	2.7	1.9	2.6
Limoncello	3.0	2.5	1.1	2.3	3.5
Screaming Neon	3.0	2.1	0.3	1.8	1.9
J06-20-14-3	3.0	0.7	3.0	1.5	1.9
D14-13-39	3.0	2.3	0.1	2.2	1.8

Top Hybrid Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
10049 R7P76	2.3	2.5	0.3	0.6	2.1
Knock Out	2.6	1.4	1.1	1.4	2.6
10037 N046	2.7	0.9	2.2	0.9	2.1
Miracle on the Hudson	2.7	1.4	2.1	1.6	2.1
12052 N002	2.8	1.4	0.6	1.5	2.5
10038 N001 Japan	2.8	0.2	3.0	1.4	2.5
Sunny Knock Out	2.8	1.3	1.0	1.0	2.4
D14-10-24	2.8	1.2	0.3	1.7	1.4
Oso Easy Double Red	2.9	2.1	2.0	1.9	2.8
Kashmir	2.9	2.0	0.5	2.0	1.6
Oso Happy Petit Pink	2.9	1.3	1.4	1.8	2.1
Peachy Keen (2015)	2.9	1.8	0.9	1.6	1.9
D14-11-10	2.9	1.3	0.2	2.1	1.4
Pink Home Run	2.9	1.3	2.3	2.0	2.2
X566-B1	2.9	1.9	1.6	1.9	1.6
Home Run (2001)	3.0	1.3	2.7	1.9	2.6
Limoncello	3.0	2.5	1.1	2.3	3.5
Screaming Neon	3.0	2.1	0.3	1.8	1.9
J06-20-14-3	3.0	0.7	3.0	1.5	1.9
D14-13-39	3.0	2.3	0.1	2.2	1.8

Top Rugosa Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Sir Thomas Lipton	2.7	0.7	0.0	1.0	0.9
Purple Pavement	3.1	1.1	0.2	2.6	0.8
R. rugosa alba-RVR		0.1	0.1	4.5	0.4
R. rugosa alba-BAILEY		0.4	1.4	2.0	0.9
Moje Hammarberg	3.5	0.4	0.1	3.3	0.8
Basyes Purple	3.8	1.9	2.2	5.0	0.6
Star Delight	3.5	3.8	0.2	4.1	1.0
Hansa	3.4	0.9	0.3	3.5	0.4
Frau Dagmar Hastrup	3.2	0.5	0.0	2.8	0.7

Top Rugosa Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Sir Thomas Lipton	2.7	0.7	0.0	1.0	0.9
Purple Pavement	3.1	1.1	0.2	2.6	0.8
R. rugosa alba-RVR		0.1	0.1	4.5	0.4
R. rugosa alba-BAILEY		0.4	1.4	2.0	0.9
Moje Hammarberg	3.5	0.4	0.1	3.3	0.8
Basyes Purple	3.8	1.9	2.2	5.0	0.6
Star Delight	3.5	3.8	0.2	4.1	1.0
Hansa	3.4	0.9	0.3	3.5	0.4
Frau Dagmar Hastrup	3.2	0.5	0.0	2.8	0.7

Top Rugosa Landscape Rating

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Sir Thomas Lipton	2.7	0.7	0.0	1.0	0.9
Purple Pavement	3.1	1.1	0.2	2.6	0.8
R. rugosa alba-RVR		0.1	0.1	4.5	0.4
R. rugosa alba-BAILEY		0.4	1.4	2.0	0.9
Moje Hammarberg	3.5	0.4	0.1	3.3	0.8
Basyes Purple	3.8	1.9	2.2	5.0	0.6
Star Delight	3.5	3.8	0.2	4.1	1.0
Hansa	3.4	0.9	0.3	3.5	0.4
Frau Dagmar Hastrup	3.2	0.5	0.0	2.8	0.7

Species Ranking

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Little Mermaid	3.1	2.3	0.4	2.7	1.4
Bracteata 17-15-20	.	0.1	0.3	0.5	0.4
R. carolina	.	0.4	4.0	4.0	0.3
R. folialosa	.	0.3	0.1	1.5	0.3
R. fortuniana	.	0.5	0.9	3.2	0.1
R. palustris EB	.	0.9	0.4	2.3	0.3
R. roxburghii plena	.	0.8	0.5	3.1	0.4

Species Ranking

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Little Mermaid	3.1	2.3	0.4	2.7	1.4
Bracteata 17-15-20	.	0.1	0.3	0.5	0.4
R. carolina	.	0.4	4.0	4.0	0.3
R. folialosa	.	0.3	0.1	1.5	0.3
R. fortuniana	.	0.5	0.9	3.2	0.1
R. palustris EB	.	0.9	0.4	2.3	0.3
R. roxburghii plena	.	0.8	0.5	3.1	0.4

Top roses 2016-2017

- 10037 N046
- 10049 R7P76
- 12052 N002
- Home Run (2001)
- Knock Out
- Miracle on the Hudson
- Oso Easy Double Red
- Peachy Keen (2015)
- Pink Home Run
- Sir Thomas Lipton
- Top Gun

RRD Resistant Roses

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
10037 N046	2.6	1.2	1.1	0.9	2.8
Sunny Knock Out	2.8	1.3	1.0	1.0	2.4
10043 N049	3.1	2.5	0.4	2.2	3.2
M4-4	3.3	1.9	0.9	2.2	2.3
Lafter	3.3	1.8	0.5	2.9	1.8
Brite Eyes	3.4	1.5	0.9	2.9	1.9
10043 N019	3.6	3.2	1.1	3.5	3.6
Sorcerer	3.7	2.6	0.0	3.6	2.7
Winter Sun	3.7	4.4	0.3	3.7	1.9
Morden Centennial	3.7	3.8	0.8	4.9	0.8
66-84-18	3.8	4.3	0.3	4.3	0.9
218-97-17	3.9	2.7	0.5	4.5	0.3
John Davis	3.9	1.1	4.5	4.9	1.1
Winnipeg Parks	3.9	3.5	0.4	4.1	1.2
2-30-07	3.9	2.5	0.0	3.9	2.1
Little Buckaroo	4.0	2.9	0.2	5.4	2.1
G02-2-1	4.0	3.0	0.3	5.6	0.0
4-48-07	4.2	2.3	0.5	5.6	2.4
Morden Fireglow	4.5	3.6	0.3	5.8	0.6
FF	4.5	3.3	0.1	5.6	0.9
88-3A	.	0.4	0.4	1.0	2.5
R. manettii-FPS	.	3.2	0.5	6.1	0.0

RRD Resistant Roses: Rugosa

Name	Landscape Rating Average	Black Spot Rating Average	Cercospora Rating Average	Defoliation Rating Average	Flower Intensity Average
Therese Bugnet	3.2	1.5	1.6	2.4	0.7
Frau Dagmar Hastrup	3.3	0.8	0.1	2.8	0.9
Purple Pavement	3.3	1.5	0.2	3.2	0.9
Moje Hammarberg	3.4	0.8	0.1	2.8	1.0
Hansa	3.4	1.1	0.2	3.5	0.6
Star Delight	3.4	3.7	0.2	3.8	1.8
Fuzzy Wuzzy Red	4.2	2.8	0.1	5.6	1.1