

ROSE

AGRONOMIC PROGRAM



 **Ornamentals**

syngenta[®]

Rose Production

Roses remain one of the top ornamental plants grown for the retail market. They come in many shapes, sizes and colors, which make them suitable for growing as cut flowers, in containers for the patio or for transplanting into the garden. Rose production can take place throughout the year, so there are many different pests and diseases to watch out for depending on the season. Mites, downy mildew and powdery mildew, for example, can affect roses from spring through fall. Preparing for these pressures before they develop can help you limit their spread while producing high-quality crops.

Roses are produced in greenhouse and outdoor nursery environments. In both production scenarios, proper plant spacing is critical to allow good air flow between plants. This helps reduce humidity levels within the plant canopy and the incidence of foliar diseases. Along with proper cultural practices, using the most effective plant protection tools can help keep plants healthy and looking their best. The following agronomic programs provide a framework with product recommendations and timing for successful rose production indoors and out.



Nursery Production | Spring

Target Insects & Diseases	FRAC #	Fungicide Treatment (per 100 gal)	IRAC #	Insecticide Treatment (per 100 gal)
March (Early - Mid) Downy mildew, Leaf spots, Rust, Overwintering mites	M	Mancozeb Product (Protect™ DF)	UN	Insecticidal Soap or Horticultural Oil
March (Mid - Late) Downy mildew, Leaf spots, Rust, Powdery mildew, Overwintering mites	4/M	Subdue Maxx 1-2 fl. oz. (Drench or apply as spray with a Mancozeb product)	UN	Insecticidal Soap or Oil
April (Early - Mid) Botrytis, Downy mildew, Leaf spots, Rust, Aphids, Overwintering mites	M+3 40	Concert® II 35 fl. oz. + Micora 8 fl. oz. (Spray)	6	Avid 0.15EC 8 fl. oz. (Spray)
April (Mid - Late) Botrytis, Downy mildew, Leaf spots, Rust, Aphids, Overwintering mites	M+3 49	Concert II 35 fl. oz. + Segovis 1-2 fl. oz. (Spray)	6	Avid 0.15EC 8 fl. oz. (Spray)
May (Early - Mid) Botrytis, Downy mildew, Leaf spots, Rust, Aphids, Mites, Thrips, Whiteflies	9+12 40	Palladium 4-6 oz. + Micora 8 fl. oz. (Spray)	9A 21A	Endeavor® 5-10 oz. Sanmite® SC 8 fl. oz. (Spray)
May (Mid - Late) Botrytis, Downy mildew, Leaf spots, Rusts, Aphids, Mites, Thrips, Whiteflies	7+11 49	Mural 6-7 oz. + Segovis 1-2 fl. oz. (Spray)	9A 10B	Endeavor 5 oz. TetraSan® 5 WDG 8-16 oz. (Spray)

Drench option: Subdue Maxx and Segovis can be applied as a drench for four to six weeks of downy mildew control.

Nursery Production | Summer

Target Insects & Diseases	FRAC #	Fungicide Treatment (per 100 gal)	IRAC #	Insecticide Treatment (per 100 gal)
June (Early - Mid) Botrytis, Downy mildew, Leaf spots, Powdery mildew, Rust, Aphids, Leaf-feeding Beetles, Mites, Thrips, Whiteflies	3+7 40	Postiva 14-20 fl. oz. + Micora 8 fl. oz. (Spray)	28 23	Mainspring GNL 4-8 fl. oz. Savate™ 2-4 fl. oz. (Spray)
June (Mid - Late) Botrytis, Downy mildew, Leaf spots, Powdery mildew, Rust, Aphids, Leaf-feeding Beetles, Mites, Thrips, Whiteflies	3+7 49	Postiva 14-20 fl. oz. + Segovis 1-2 fl. oz. (Spray)	28 10B	Mainspring GNL 4-8 fl. oz. TetraSan 13.7 oz. (Spray)
July (Early - Mid) Botrytis, Leaf spots, Powdery mildew, Rust, Mites, Leaf-feeding beetles, Whiteflies, Thrips	9+12	Palladium 4-6 oz. (Spray)	3 21A	Scimitar® GC 5 fl. oz. Sanmite SC 8 fl. oz. (Spray)
July (Mid - Late) Botrytis, Leaf spots, Powdery mildew, Rusts, Mites, Leaf-feeding beetles, Whiteflies, Thrips	7+11	Mural 6-7 oz. (Spray)	6	Scimitar® GC 5 fl. oz. Avid 0.15EC 8 fl. oz. (Spray)
August (Early - Mid) Botrytis, Leaf spots, Powdery mildew, Rust, Aphids, Leaf-feeding beetles, Mites, Whiteflies	3+7	Postiva 14-20 fl. oz. (Spray)	28 21A	Mainspring GNL 4-8 fl. oz. Sanmite SC 8 fl. oz. (Spray)
August (Mid - Late) Botrytis, Leaf spots, Powdery mildew, Rust, Aphids, Leaf-feeding beetles, Mites, Whiteflies	3+7	Postiva 14-20 fl. oz. (Spray)	28 23	Mainspring GNL 4-8 fl. oz. Savate 2-4 fl. oz. (Spray)

Nursery Production | Fall*

Target Insects & Diseases	FRAC #	Fungicide Treatment (per 100 gal)	IRAC #	Insecticide Treatment (per 100 gal)
September (Early - Mid) Botrytis, Downy mildew, Leaf spots, Powdery mildew, Aphids, Whiteflies, Thrips	9+12 40	Palladium 6 oz. + Micora 8 fl. oz. (Spray)	9A 25A	Endeavor 5-10 oz. (Spray) Sultan™ 13.7 fl. oz. (Spray)
September (Mid - Late) Botrytis, Downy mildew, Leaf spots, Powdery mildew, Aphids, Whiteflies, Thrips	7+11 49	Mural 6-7 oz. + Segovis 1-2 fl. oz. (Spray)	9A 21A	Endeavor 5-10 oz. (Spray) Sanmite SC 8 fl. oz. (Spray)
October (Early - Mid) Botrytis, Leaf spots, Powdery mildew, Rust, Overwintering Mites, Thrips	3+M	Concert II 35 fl. oz. (Spray)	6	Avid 0.15EC 8 fl. oz. (Spray)
October (Mid - Late) Botrytis, Leaf spots, Powdery mildew, Rust, Overwintering mites, Thrips	7+11 49	Mural 6-7 oz. + Segovis 1-2 fl. oz. (Spray)	25A	Sultan 13.7 fl. oz. (Spray)
November (Early - Mid) Botrytis, Leaf spots, Powdery mildew, Rust, Overwintering mites	9+12	Palladium 6 oz. (Spray)	UN	Horticultural Oil (Spray)
November (Mid - Late) Botrytis, Leaf spots, Powdery mildew, Rust, Overwintering mites	3+M	Concert II 35 fl. oz. (Spray)	UN	Horticultural Oil (Spray)

*During winter months, alternate sprays of Mancozeb and Daconil® Ultrex /Weatherstik® fungicides



All photos taken by Nancy Rechcigl, Syngenta.

Greenhouse Production

Week	Disease Control Rotation			Insect & Mite Control Rotation		
	Target Diseases	FRAC #	Fungicide Treatment (per 100 gal)	Target Insects	IRAC #	Insecticide Treatment (per 100 gal)
1	<i>Pythium</i> , <i>Phytophthora</i> , Downy mildew, <i>Rhizoctonia</i> , <i>Fusarium</i>	4 + 7+11	Subdue Maxx® 1 fl. oz. + Mural® 2 oz. (Drench)	Fungus gnats, Shore flies <i>Treat plants, floors and under benches</i>	17	Citation® 2.66 oz. (Drench) <i>Repeat as needed on a 7-14-day interval</i>
2	Botrytis, Bacterial & Fungal leaf spots, Powdery mildew, Rust	3+7	Postiva™ 14-16 fl. oz. (Spray)	Broad mites, Two-spotted spider mites, Thrips, Aphids, Whiteflies	6	Avid® 0.15 EC 8 fl. oz. (Spray)
3	Downy mildew and <i>Phytophthora</i> diseases	40	Micora® 4-8 fl. oz. (Spray)	Thrips, Aphids, Whiteflies	28	Mainspring® GNL 4-8 fl. oz. <i>Spray four-inch pots and smaller, for crops six inches and larger, drench using 8 fl. oz. rate</i>
4	Downy mildew and <i>Phytophthora</i> diseases	49	Segovis® 1-2 fl. oz. (Drench for residual protection or Spray)			
5	Botrytis, Bacterial & Fungal leaf spots, Powdery mildew, Rust	3+7	Postiva 14-16 fl. oz. (Spray)	Thrips, Aphids, Whiteflies	28	Mainspring GNL 4-8 fl. oz. <i>Spray four-inch pots & smaller</i>
6/7	Botrytis, Fungal leaf spots, Powdery mildew	9+12	Palladium® 4-6 oz. (Spray)			
8/9	Botrytis, Downy mildew, Fungal leaf spots, Powdery mildew, Rust	7+11	Mural 6-7 oz. (Spray)	Broad mites, Two-spotted spider mites, Thrips in flowers	6	Avid 8 fl. oz. (Spray)
10/11	Botrytis, Bacterial & Fungal leaf spots, Powdery mildew, Rust	3+7	Postiva 14-16 fl. oz. (Spray)	Thrips in flowers	5/ OR 5+4C	Conserve® 6 fl. oz. OR XXpire™ 3 oz. (Spray)
12/13	Botrytis, Fungal leaf spots, Powdery mildew	9+12	Palladium 4-6 oz. (Spray)	Broad mites, Two-spotted spider mites, Thrips in flowers	6	Avid 8 fl. oz. (Spray)
14/15	Botrytis, Bacterial & Fungal leaf spots, Powdery mildew, Rust	3+7	Postiva 14-16 fl. oz. (Spray)	Thrips in flowers	5/ OR 5+4C	Conserve 6 fl. oz. OR XXpire 3 oz. (Spray)

Syngenta Solutions

	Daconil Weatherstik / Ultrex	Concert II	Mural	Postiva	Palladium	Subdue Maxx	Segovis	Micora
Bacterial leaf spot				✓ Suppression				
Black spot	✓	✓	✓	✓				
Cercospora leaf spot	✓	✓	✓	✓	✓			
Anthrachnose	✓	✓	✓	✓	✓			
Botrytis	✓	✓	✓	✓	✓			
Downy mildew			✓			✓	✓	✓
Powdery mildew	✓	✓	✓	✓	✓			
<i>Rhizoctonia</i>	Aerial	Aerial	✓	✓	Aerial			
Rust	✓	✓	✓	✓				
<i>Phytophthora spp.</i> (foliar, root & stem rot)			✓			✓	✓	✓
<i>Pythium spp.</i> (root & stem rot)			✓			✓		

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