ROSE (*Rosa* sp. 'Pink Simplicity')
Rust; *Phragmidium* sp.
Black Spot; *Diplocarpon rosae*
Powdery Mildew; *Sphaerotheca pannosa* var. *rosae*

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EFFECT OF PLASTIC TENTS AND FUNGICIDES ON ROSE DISEASES, 2002: Fungicide treatments were arranged in a randomized complete block design in a block of 'Pink Simplicity' roses on 'Dr. Huey' rootstock planted in 1999 on 6 x 6 ft spacing. Each treatment consisted of 7 single bush replicates, except plastic shelters, which covered 2 plants in each replicate. Fungicide treatments were applied using a pump-style backpack sprayer at a rate of 86 gal water/A. Approximately 0.5 gal of a spray suspension were applied per 7 bushes (except on 18 Apr when 0.75 gal were used per 7 bushes). Treatments were applied on 20 Mar (bud break and early shoot growth), 3 Apr, 18 Apr, and 2 May. Additional applications were not made due to low disease pressure and phytotoxicity of some treatments. Open ended, Quonset style plastic shelters were built around plants during Mar, however, the plastic was not installed until 21 Mar. Plastic shelters were removed on 3 Jun. Small caliper canes were removed while large caliper canes were pruned to 2 buds on 5 Mar. These prunings were mowed down and blown out of the plot on 11 Mar, along with past leaf debris, for eventual burning. Weeds were controlled using Roundup Ultra Max (3 qt/A) applied on 4 Dec 01, Casoron 4 G (150 lb/A) broadcast on 1 Feb 02, and Glyphos (2.56 fl oz/gal water) applied on 3 May 02. Plots were fertilized with a 16-16-16 fertilizer at 2.3 oz/bush on 22 Mar. Insecticides were applied to the entire block on 23 Apr (Marathon G 1% at 2 Tbsp/bush) and 3 May (Diazinon Plus at 1.33 oz/gal) for selective management of aphids. A rose plant heavily infected with powdery mildew was moved into the trial area on 3 May to encourage disease development. Phytotoxicity due to interactions between pesticides was evaluated on 17 May by rating each bush on a 0 to 10 scale where 0 = healthy plants and 10 = all leaves necrotic. The incidence of a leaf spot suspected to be rust was determined on 7 Jul by examining all leaves from 10 vegetative shoots (average of 65 leaves) randomly selected from each bush.

Spring and summer weather conditions in Western Oregon were considered dry with below normal rainfall. Disease pressure was considered very low. Rust was observed on 22 May but only as very small spots on only a few widely scattered plants. There were no significant differences in rust control between the various treatments. Black spot was observed on 13 Jun also on only a few plants. Black spot was observed on 4 out of 7 plants of the nontreated bushes on 19 Jun but on no more than a few other plants throughout the trial. Rust, black spot and powdery mildew were not observed as significant diseases until very late in the growing season during Oct. It is suspected that the pruning, destruction of infected plant debris, weed control and lack of wet weather all combined to result in very little disease. It is also suspected that the lack of rainfall contributed to the phytotoxicity observed in the trial. Bushes treated with Kop-R-Spray developed small puckered leaves and some necrotic spots by 19 Apr. Growth regulator activity also known as the "draw string effect" developed on leaves of bushed treated with Chipco Triton by 19 Apr. A wide variety of leaf spots and necrosis was observed on various treatments on 17 May. Bushes treated with Funginex, Phyton 27, Halt or Chipco Triton had phytotoxicity ratings that were not significantly different from nontreated bushes. Bushes treated with Daconil had the highest phytotoxicity ratings.

Treatment & Rate/gal	Leaves with Rust spots* (%)	Phytotoxicity* (1-10 rating scale)**
Nontreated ……	29	0.8 gh
Plastic Shelters……..	13	1.3 fg
Rose Pride Funginex 0.5 fl oz …….	14	0.6 h
Hi Yield Captan 50 WP 3.2 oz…….	18	2.4 cd
Ortho Daconil 2787 Multi Purpose Fungicide 0.3 fl oz ……..	12	5.8 a
Kop-R-Spray 1.5 fl oz ……..	19	1.9 de
Immunox 1 fl oz ……	19	2.6 c
Safer Garden Fungicide 1.5 fl oz ……..	27	1.5 ef
Phyton 27 at 30 fl oz/100 gal ……	20	0.7 h
Halt 1.25 oz ……..	16	0.7 h
Ortho Daconil 2787 Multi Purpose Fungicide 0.3 fl oz alternate Immunox 1 fl oz …….	16	3.9 b
Chipco Triton 2 fl oz/100 gal plus TADS 13093 at 16 fl oz/100 gal ……..	17	0.5 h

* Means followed by same letter do not differ significantly based on Fisher's protected LSD (P=0.05). Means without letters were not significantly different.

** 0 to 10 scale where 0 = healthy plants and 10 = all leaves necrotic.