

Rose Powdery Mildew

Powdery mildew occurs primarily during the spring and fall when dry warm days are followed by cool, humid nights. The disease is caused by *Sphaerotheca pannosa* var. *rosae*. This fungus is an obligate parasite and must have a rose host for its survival.

SYMPTOMS

Powdery mildew is characterized by white powdery growth, masses of spores on young leaves, shoots and buds and occasionally, fully opened flowers. Foliage may be distorted, and shoots stunted or swollen. There may be yellow, reddish or purple blotches as seen on the upper leaf surface.

Badly infected immature leaves can become curled and distorted. The mildew growth can turn browner as it ages. Spores of powdery mildew are usually wind-borne through natural air movement or fans. Upper, lower or both leaf surfaces can be affected.

CULTURAL CONTROL

If possible avoid growing cultivars which seem highly susceptible to powdery mildew. There are extreme differences among rose cultivars and lines but only your experience will be reliable under your conditions.

Optimal conditions for powdery mildew are very broad and usually cannot be controlled in most



nurseries. Try to supply the right level of fertilizer without high nitrogen to avoid lush growth that is prone to mildew attack. Space plants to allow for more air movement that reduced the relative humidity around the roses. Try to irrigate when leaves will dry quickly or use drip irrigation. Check your light levels and increase them where possible. Full sun is optimal for production of most roses at least part of the year.

Scouting your roses routinely and frequently is the best way to make sure that a powdery mildew problem does not become serious. If an outbreak occurs on a few plants or branches of the plants, consider pruning and discarding them.

The table summarizes trials performed on powdery mildew.

Product	FRAC Group (s)	Efficacy range
Banner MAXX	3	very good to excellent
Camelot O	M1	poor to very good
Cease	nc	good to very good
Compass 50WDG	11	very good to excellent
Concert II	3 and M5	excellent
Dithane Rainshield 75DF	M3	some
Eagle 20EW	3	very good to excellent
Heritage	11	very good to excellent
Junction	M1 and M2	fair to very good
KleenGrow	nc	some to very good
MilStop	nc	very good to excellent
Mural	7 and 11	excellent
Pageant Intrinsic	7 and 11	very good to excellent
Palladium	9 and 12	good
Phyton 27	M1	good to excellent
Protect DF	M3	good to very good
Regalia	P5	some to very good
Strike Plus	3 and 11	excellent
Terraguard 50W	3	very good to excellent
Tourney	3	excellent
Triact 70	nc	very good to excellent
Triathlon BA	44	some to very good
Trinity	3	excellent

FUNGICIDES FOR CONTROL

Some of the most effective products are found in the triazole group (Banner MAXX, Eagle, Terraguard and Strike). Those found in the strobilurin group (also very effective) include Heritage and Compass. Always rotate fungicides between FRAC groups to minimize the chances of developing resistance. Some products are best used at the beginning of production due to residue appearance. The products with low residue should be used near crop finishing or sale.