



COLORADO FLOWER GROWERS ASSOCIATION

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Note on Rose Mildew

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Rose powdery mildew is a major problem for rose growers in Colorado. Mildew outbreaks are usually a problem in the spring and summer with damage ranging from none to severe. Any infection reduces the vigor of the rose and the quality of the cut flowers. We are presently involved in work at Colorado State which we hope will enable us to pinpoint the environmental requirements of the fungus and develop cultural guidelines which will reduce the mildew problem. We have been able to make preliminary observations and wanted to pass these on to you in time for the upcoming season.

Last summer we placed thermohumidigraphs in several commercial rose ranges in the Denver area. Mildew conditions ranged from no mildew to virtually 100% infection. Hair elements on our instruments were very inaccurate, but the temperature recordings gave a good picture perhaps why some growers were less severely affected than others. Sulfur generators and mist systems are effective in inhibiting mildew. Growers

using neither system were unable to control the fungus. Many growers use sulfur and/or mist but still have a significant mildew problem. What else can be done? Turning off pads early enough in the afternoon (to allow them to dry) so that fresh, dry outside air can be brought into the greenhouse reduces relative humidity at night. Several researchers have suggested that high relative humidities at night encourage spore production, germination, and infection by the fungus. Heating in the early evening appears to be a very important practice in preventing mildew. Growers doing this had very little if any mildew present. The length of time that heat was supplied varied among the individual growers from 30 minutes to two hours, with the time of application being somewhere between 5 and 8 p.m. depending upon when night temperatures were approached.

Now is the time to begin thinking about the mildew problem. Most growers have mist systems and use some type of sulfur vaporization. Growers should consider shutting off pads before sunset while fans are on, and introducing heat for a 30 to 60 minute period around sunset or just before. Such a program, combined with the necessary spraying when required, should reduce the mildew problem. Be ready for spring!

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