

## MAT WATERING AND PLANT DISEASES

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During the past few years many new innovations and changes in technology have been introduced for commercial flower production in greenhouses. Mat watering, one of these new innovations, will also affect other greenhouse practices, especially disease control techniques. Mat watering is a new technique and consequently little research information is available on its effects on disease development, the spread of disease-causing organisms or on disease control programs.

Watering systems that supply water to the soil without wetting the leaves (such as mat watering) generally help reduce the incidence and severity of many foliar diseases caused by fungi and bacteria. Many of these pathogens are spread from leaf to leaf or plant to plant in splashing water and many need water on the foliage for infection.

Diseases that could be enhanced with mat watering are root rot diseases caused by such fungi as Pythium, Phytophthora, Fusarium, Rhizoctonia, etc. These fungi are capable of moving from pot to pot through the wet mat. They can also remain in the mat from one crop to the next crop.

We have had little or no experience with sterilizing mats between crops. Thus far, we have not observed any root rot problems with mat watered plants. However, growers should take extreme precautions to avoid root rot diseases with mat watering. This can usually be accomplished by starting with disease-free plants, using sterilized media, using sterilized mats, and new or sterilized pots.

One common problem with mat watering is the growth of algae on mats. Many growers are using the fungicide Cyprex to control algae. Cyprex is not registered for this use and it cannot be recommended.