

Automatic Irrigation for Disease

Control.

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Irrigation on a golf course means more than just watering to make things grow. The average Superintendent knows the importance of disease control, especially during those hot months. The true value of a watering system is its use as a management tool and the speed and timing involved.

When it comes to disease control many of us have found that chemicals alone are not enough. You need a good cultural program of preventative maintenance using your irrigation system as one of the tools.

If you think of the circumstances surrounding disease occurrence it will be easy to see why automatic systems can save you time and money like they advertise so often. In order for a disease to occur, there must be an interaction between the plant, pathogen and environment. What the irrigation system can do is control this environment by removing or washing off residues brought on by dew, fertilizer and pesticides that have sustained themselves in the growth medium of the soil.

The environment we are speaking about is the combination of the soil chemistry and the temperature-humidity index which work together in a natural phenomenon to move extracts of amino acids and salts up from the soil and out through the open stomata and clipped ends of the grass plant. This is usually associated with dew, but the residues of salt left by fertilizer and pesticides that accumulate in the soil are just as bad. Sudden

changes in temperature, particularly at night, where there is a faster rate than the ability of the atmosphere to evaporate the exudated water which accumulates and creates a perfect environment for the fungus. The amino acids and salts weaken the grass by drawing moisture and starches out of the plant.

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An automatic irrigation system will do a super job of washing away dew in the early morning and syringing in the afternoon without the harm of overwatering which might happen with manual systems and human nature. The automatic system can be programmed to put out an estimated time of one minute per thousand square feet of green. For example, if a green is 5000 square feet, set the timer to water for five minutes. This would give you the approximate time required to cover the green completely without overwatering.

If the automatic irrigation system is used in this way it will lessen the chance of disease and the fungicide will do a better job, especially those systemic types that must be watered in after application.

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