

## How much water Careful programming do you need?

can improve your turf and lower your water bill.

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arefully programmed automatic irrigation is very important for the modern superintendent who is thinking in terms of better and better turf. This is especially true as the numbers of players seem ever increasing.

Before programming, each superintendent will need answers to the following questions. What kind or kinds of soil are found on the course? What is the nature of the surface and sub-surface drainage? What kind of grass is he trying to produce for the player? Since some superintendents have more than one kind of grass to water, this will take more than one kind of water application. From these factors it can be seen that the water needs for each situation should be wisely programmed.

Programming irrigation boils down to how each superintendent wants to use whatever hours he has in one day to water his course. Most superintendents will average 10 hours in a day's time. Some may need more and some less, but, for an example, let's program a 10hour day. We can split the system up into three catagories; tees, greens, fairways. Now, in 10 hours, all or part of these three areas must be watered.

Since most superintendents consider greens most important, let's program them first. If you have been using 30 minutes of water a night on each green, and you can water six greens at one time, this gives a total of one and one-half hours running time for the greens. If the tees require the same, three of the 10 hours watering time have been used. The fairways can be programmed to use all or any part of the seven hours remaining. If the average number of fairway heads on the course is 280, in seven hours time all of these heads can water for 30 minutes at a time. This type of automatic irrigation system would require 1,000 g.p.m. and a good source of water.

The amounts of water just indicated can be programmed on the clocks in very different ways. Here are two programs that are very different but arrive at the same amount of time and water.

Program I-The greens come on at 8:00 o'clock and turn off at 9:30. The tees turn on at 9:30 and turn off at 11:00 o'clock. The fairways come on at 11:00 p.m. and turn off at 6:00 a.m. The total running time is 10 hours, and all is well, or is it? In watering with automation this way, unless your soil is 100 per cent sand, you are doing more harm than good-both soil-wise and plant-wise. There will be run-off and saturation and neither one does any good for the grass that you are trying to grow. Always remember that automatic irrigation puts out the maximum effort. The least amount of water that you can use at any given time, the better off you will be.

Program II-Set the greens to water six times at five minutes each time. This will give a total of 15 minutes soak-in time for each five minutes of water allowing total absorption of moisture without blocking air or pore spaces. Program tees the same as the greens. Water the fairways for five minutes every hour and 10 minutes. This greatly reduces run-off and has other side benefits.

Program the fairways first at night and work them to 3:00 o'clock in the morning a total of six times at five minutes each. Do the tees next until 4:30. six times at five minutes each. Water the greens last to get the morning dew off the plant as well as to water it properly. Rest 15 minutes in between each fiveminute cycle.

Other advantages of the five-minute cycle include the ability to cool your grass during the day. You can cool all tees in 15 minutes, all greens in 15 minutes, and all fairways in one hour and 10 minutes. On five-minute cycles. you can put on any amount of water up to 30 minutes in one night, or in any given time of day if you will use Program II on a 24 hour-a-day eveling time on your clocks, using the skip-a-day part of your clock to say yes or no to any part of your program.

Remember, program automatic irrigation to apply water only as the soil and the plants can take it! .

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