

**Have questions? Send them to Dave at: ISU, Hort. Dept., Ames, IA 50011.**

by Dr. Dave Minner

*My new job is groundskeeper of an 18-acre sports complex. We just completed renovation with an 11-zone automated irrigation system and booster pump. On fields without automatic irrigation, we are using water cannons. What would be the best way to get the fields irrigated outside of having a system professionally designed?*

—Bryan Ryan

I certainly advocate automatic irrigation systems for all sports fields. Too many times I hear the comment, "My yard grows just fine, and I only water it once all summer — I don't need a fancy automatic irrigation system." I respond, "Can we schedule football practice in your yard?" This usually ends the conversation.

Even in high-rainfall areas of the United States, an automated irrigation system provides many benefits. Let's face it, we will always have to deal with worn-out sections of fields that need to be re-established. Seed, sod, and sprig establishment require light and frequent irrigation that can only be applied by an automatic system.

We need grass, and we need it fast. Forcing establishment and growth during the short time when the field is not being used requires precise placement of the correct amount of water. Occasional rain may be fine for the home lawn or field crop, but it just doesn't cut it for sports turf.

Watering cannons are often used to help a facility get by until it can purchase an automatic irrigation system. For \$3,000 to \$6,000 you can purchase a single unit that can be moved from field to field to water established grass. A buried service line or booster pump will be needed to supply 70 to

130 psi to the machine. Flow rates range from 50 to 130 gallons per minute.

These units typically require one full day to water a football field, so one unit will usually be needed for every seven fields. They are sufficient for watering established grass, but they don't work very well for the light and frequent watering required to establish grass from seed.

Watering cannons are better than no watering system at all. At least they allow for some turf growth and ground softening during dry conditions. However, your goal should be to install an automatic irrigation system with pop-up sprinklers and a controller.

### **What's the best way to get fields irrigated without having a system professionally designed?**

Proper design is a must with irrigation systems. If you don't know what you're doing, get some help.

On large, complicated jobs, you should have a certified irrigation specialist design your system. Questions that involve water source size, pump size, flow loss from elevation change, and similar issues usually require a design specialist to put together an entire system.

On the other hand, I have completed a number of smaller jobs by using the expertise of companies selling irrigation equipment. Many of the reputable irrigation suppliers provide some design expertise. Their irrigation literature will have several schematic drawings for specific irrigation layout of all types of sports fields.

As the field manager, you will certainly want to customize the system to fit your needs. Here's how I customize

a football field layout:

1) I don't place any heads in the center of the field; that's where they rut it out.


2) I zone a block system to match traffic patterns, i.e. special zones for the field center and bench areas.

3) I prefer Hunter I-42 fast rotor heads for syringe cycle on seedling turf in wear areas.

4) I maintain a direct line of sight between the field and the controller.

The designer will need a few other pieces of information, like pipe size at tap on location, flow rate gpm, and water pressure psi. From this information, the irrigation supplier/designer can come up with the materials list and system layout.

Irrigation companies are very competitive. Those with a good reputation will not only supply quality equipment, they will also help design small projects at minimal or no cost.

Even if you're going to install the system yourself, you'll need an irrigation plan and parts list. Let the irrigation supplier provide this service. And don't forget to appreciate good service when the next job rolls around. 

*David D. Minner, Ph.D., is an associate professor with the Department of Horticulture at Iowa State University. He serves on STMA's Certification Committee. Send your questions to Dave at: ISU, Hort. Dept., Ames, IA 50011; or call: (515) 294-2751, fax: (515) 294-0730, or e-mail: dminner@iastate.edu.*