

*Golf course owner trims costs by converting and then installing system himself.*

## Automatic irrigation on a shoestring

**S**oaring labor costs and a desire for better coverage were the primary reasons the Maple Leaf Golf Course in Linwood, Mich., decided to convert its quick-coupling irrigation system to a fully-automatic one, according to A. J. Jezowski, owner of the nine hole, semi-private course.

"Maintenance costs have been rising steadily during the four years that our course has been in operation," he explained. "And, since labor constitutes the major portion of our maintenance budget, we decided that we had to improve our management practices if we were to keep costs within reason. The installation of an automatic system (which began a year ago and will be completed this fall) is expected to result in substantial savings in labor and watering costs," he said.

Mr. Jezowski was also able to save money on the actual installation. Since he converted, rather than have a new system put in, he saved approximately one-half the cost. The price of putting in a new setup for a nine-hole course is \$24,000. The conversion cost was \$12,000. Further savings, of about 20 per cent, are being realized because Mr. Jezowski is doing the installation himself. However, this is the exception rather than the rule. Unless you are well qualified, have it installed by an expert.

Once Mr. Jezowski made the decision to convert to automatic irrigation, he spent several months evaluating different types of available sprinkler heads and controls. "We chose the Moist O' Matic valve-in-head sprinklers by Toro Manufacturing Corporation because they seemed best suited to our conversion needs."

The valve-in-head sprinklers, he feels, promise: initial savings in installation costs; better performance under a range of water pressures; a wider selection of watering patterns; and fewer maintenance problems.



Before beginning the actual installation, Mr. Jezowski, formerly in the trenching and water main business, enlarged an existing pond on the course by 50 per cent, installed a new six-inch main trunk line from the pump house to the branches, dug a new well, and installed an additional pump. (See photo). These changes were made to increase water capacity in order to meet the demands of the increased coverage the new system would provide.



He is using his own equipment and labor to make the conversion which is being done piecemeal so that use of the fairways is not interrupted.

In most cases, little digging has been necessary to convert the quick-coupling system to an automatic one. The existing quick-coupling connections were simply removed and the new heads put in their place. (See photo). Excavation was necessary only where new pipe was laid for additional fairway coverage. (The course has a single row system in the center of the fairway).

Mr. Jezowski anticipates cutting watering labor costs by as much as 75 to 90 per cent per year as a result of the conversion. "And, the new system permits us to put water where we need it, when we need it and in the proper amounts. Because it's all automatic, waste from overwatering is eliminated."

The gear-driven, two-speed valve-in-head sprinklers are ex-

pected to save water because they eliminate "puddling" and "scalping" by providing even water distribution through the overlap and side areas of the sprinkling pattern. The two-speed rotor accomplishes this by driving the sprinkler nozzles through the overlap areas at twice the rate that it travels through the side of the pattern. Heads are capable of watering areas ranging from 180 to 225 feet in diameter.

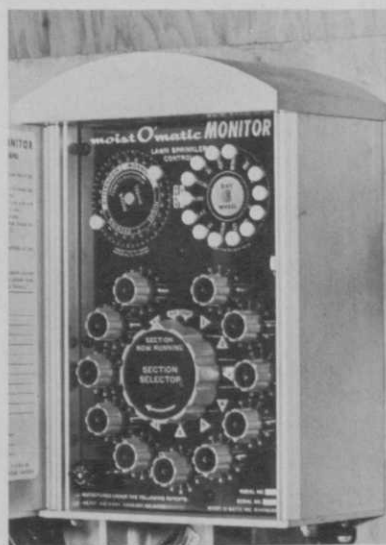
The heads are installed flush with the ground and out of the way of turf maintenance equipment. When the system is activated, the heads pop up to deliver a low-angle uniform spray that can be varied to deposit from .3 to .4 inches of water per hour, Mr. Jezowski explained. The full circle heads pop down when the system is deactivated.

Mr. Jezowski also anticipates a substantial savings in maintenance costs since the heads may be cleaned and inspected in the field without excavation. (See photo). "All we need to do is unscrew the cap, lift the sprinkler and its automatic valve from its case for cleaning or inspection, then reinstall it," he explained. He doesn't foresee many maintenance problems since the sprinkler heads are resistant to shock, abrasion and corrosion. Gear-drive mechanisms are insulated and sealed in oil to prevent corrosion and contamination by foreign particles. The first sprinkler heads which were installed last fall were not hurt at all by winter freezing, he added.

The control stations are located between three fairways. Sprinklers are activated automatically in groups by the controllers which can be pre-set to water on any day or combination of days over a two-week period. Each section can be programmed to water from

one to 60 minutes. "Once a sprinkler cycle has been established," he explained, "everything is automatic. The controller determines when the cycle starts, how long it lasts and how often it will be repeated." (See photo).

Mr. Jezowski firmly believes, "With the shortage and high cost of labor, any other type irrigation system is obsolete. Besides permitting us to program our watering patterns and reduce labor costs, the automatic system can be activated during night hours to avoid interrupting play on the course." □



*Photo on opposite page was taken before installation of automatic system. Pool was enlarged, a six-inch main trunk line was put in and a pump was added. The conversion was simplified because all the old pipe (photo at top of page) was utilized. The quick coupler connections were removed and replaced with valve-in-head sprinklers. Then it was only necessary to add a control line to the heads. Photo at bottom left shows sprinklers being serviced above ground without excavation. An insertion tool is being used to replace valve through open casing. Photo above is of one of 3 11-station controllers located between fairways.*

