

## Pocket-Size Slide Chart Developed By Toro

The Irrigation Division of the Toro Company has developed a handy pocket-size slide chart to help contractors design residential and commercial irrigation systems. Made of sturdy paperboard, it can be purchased for 40 cents from any Toro irrigation distributor.

The slide chart can be easily used to calculate friction loss in pounds per square inch/per hundred feet for the four most commonly used types of pipe: Class 200 p.v.c., polyethylene, Type K copper and galvanized steel; losses for water flow in pipe sizes of 1/2"-1 1/4" and up to 36 gallons per minute are shown on the slide chart.

A sliding scale also provides for direct reading of friction loss in 5/8", 3/4" and 1" water meters with a water flow up to 50 gallons per minute.

It also has a scale to show the arc, radius or diameter, pressure at the base of the head, gallons per minute, recommended spacing, and the precipitation rate in inches per hour for 34 different models of Toro sprinklers.

A fixed scale shows friction loss for seven different models of Toro's Series 200 automatic valves.

## Comparison Of Irrigation Methods Discussed

Putt on a bentgrass green when the grass is being watered and never get wet?

You bet, using a system discussed by Dr. Gordon V. Johnson, soil scientist in the University of Arizona.

He described three irrigation methods under comparison, sprinkler irrigation; sub-surface irrigation with a stable water table one foot below the putting surface; and sub-surface irrigation with a fluctuating water table. In the case of both sub-surface methods, a plastic sheet lies buried two feet below the surface and water is piped into the built-up green below its surface. Bentgrass was used in his tests.

"Like growing grass in a bathtub," described Johnson.

In the University of Arizona trials, Johnson said sub-surface irrigation using a fluctuating water table has panned out best. This method calls

for filling the basin formed by the plastic tarp periodically to within two inches of the green surface. Then, when the grass roots have almost exhausted the supply of water, you refill it.

"We find the green needs refilling every two weeks during the summer months; about once each three months the winter season," he said.

With a stable water table held that way with an automatic float valve system, the scientist found it hinders nitrogen nutrition.

As well as disrupting golfers when the above ground sprinklers are turned on, the scientist said bentgrass needs cooling by watering 1 or 2 times daily during the hottest afternoons to keep it from wilting.

There was no color difference in the grass with any of the three irrigation systems so long as nitrogen fertilizer was applied directly on the putting surface.

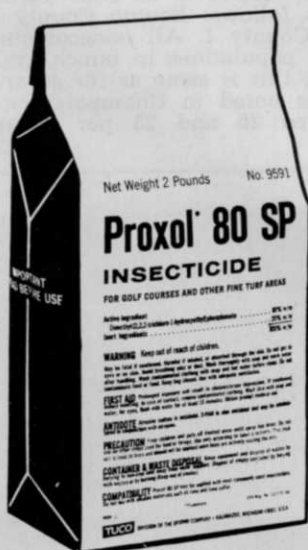
Earlier, he attempted to add nitrogen using the buried pipe system, but this resulted in a pale green putting surface.

"With sub-surface irrigation, there is less chance of losing bentgrass greens through drying," Johnson concluded.

# Take the guesswork out of turf insect control

## Diagnostic Aid from **TUCO**

Many turf insect larvae are night feeders, so the first evidence of their activity frequently is damaged turf. Diagnostic Aid, applied to turf as directed, causes insects to emerge to the surface within 10 minutes. They can be identified and counted to determine the level of infestation and whether an insecticide should be applied. It also can be used after insecticide application to measure the control obtained.



## Proxol\* 80 SP Insecticide from **TUCO**

Proxol is the one insecticide developed especially for use on fine turf and ornamentals. Sod webworms and cutworms are two major groups of turf insects controlled by Proxol. It is estimated that each sod webworm larva can chew up 20 square inches of turf in its average life span of 20 to 40 days; the cutworm larva can devour up to 36 square inches. With 300 to 500 larvae generated from each adult in a period of 10 to 21 days, it becomes apparent why early detection and control are desirable. Using Diagnostic Aid and Proxol together lets you program insect control.

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One bottle of Diagnostic Aid FREE in each case of Proxol 80 SP.

# TUCO

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