## What's Your Line In Irrigation?

by CLIFFORD A. WAGONER, Superintendent, Del Rio Golf & Country Club, Modesto, California

Considering a new irrigation system? If so, you —the maintenance superintendent—should first search out all the facts well before installation begins. Is it to be galvanized steel, cast iron, plastic, cement asbestos, automatic, semiautomatic or quick coupling? The trend has turned to automation, but because it may be good for your neighbor, it might not necessarily be feasible for your course.

What is the length of your irrigation season? How much water will be needed for the area you wish to cover? What of the availability of labor; the number of golfers, and the time available for irrigation each day? Will the water supply be adequate?

These are just a few of the questions that must be considered before making decisions about the new system.

The golfer, your customer, should be given primary consideration. If your present watering schedule delays starting times and if you must water throughout the day, causing inconvenience to the golfer, you should seriously consider automation. If labor is not available for night watering, automation is a "must." Unionization is steadily making its way into golf course maintenance and therefore every superintendent should closely check the restrictions and added costs it places upon management.

It is important to select the correct equipment for your installation, particularly if you are going automatic. Hydraulic or electric valves, cam, gear or impact heads and the type of controller setup are a few more of the decisions that must be made. The terrain, water supply, soil, and climatic conditions should be taken into consideration when deciding on hydraulic or electric. Purity of water will have an effect on the lasting qualities of sprinkler heads. Wind, terrain and desired coverage will determine whether your design should be a two-or-three row system. Soil porosity will be a guide to nozzle sizes and controller design.

Suppliers of equipment should be selected carefully, not only to assure prompt delivery on initial equipment, but for future service as well. I have found the best service exists when the supplier has a close liaison with the manufacturer.

Once a decision has been made as to the type of system, its design and the equipment to be used, the greatest task still lies ahead: hiring and controlling the installation contractor. The very best design and the very best equipment is of no value unless they are properly laid out and installed. Some very successful systems have been installed by golf course maintenance crews, but this should not be undertaken unless you are absolutely certain you have qualified help and have had experience in irrigation installations.

Very exact specifications must be drawn up



## ABOUT THE AUTHOR

Since 1952, Clifford A. Wagoner has been Superintendent of Del Rio Golf and Country Club, Modesto, Calif., where automatic irrigation has played a vital role in course development. He has been a member of the USGA Green Section Committee for eight years and is now serving for the second time as President of the Northern California Golf Course Superintendents Association.



An irrigated rough (1) compared to a non-irrigated rough area (2) at Del Rio Country Club. With little summer rain in the San Joaquin Valley, total irrigation is essential.

for a contractor and he should be notified as to the inspection procedure. You, as superintendent, should have the authority to stop the installation at any time if the specifications are not being followed closely or if changes must be made in the field. Assuming you are assigned the inspection job, no pipe should be laid until depths of ditches are checked; no wire or tubing laid until pipe is bedded in: no ditches filled until blueprints are checked making sure all fittings, wires and valves are correctly in place; and no sod laid until back-fill is compacted to avoid settling. Every length of pipe should be checked for cleanliness, no foreign matter should be allowed in the inside to lodge in sprinkler screens or valve parts. During installation you, as superintendent, should devote full time to make certain that no corners have been cut by the contractor. The success of the system very definitely depends upon exactness of installation. An "as installed" blueprint should be in your hands within 30 days after job completion.

Putting the system into operation is simple if wiring or tubing has been connected properly, if the stations at the controller are marked correctly, and all the foregoing items are completed.

It is now that you will really appreciate your search for facts at the project's outset. It is now that your decisions on the type of system, the make and type of equipment, the method of installation, and the careful inspection procedures will pay off. And the decision of the governing body to have selected you, the superintendent, to be responsible for the system's success will be most gratifying and rewarding. You will have made a substantial and long-lasting contribution to your golf course.

## COMING EVENTS Texas Turfgrass Field Day July 11, 1967, Texas A & M University, College Station, Texas U.S. Dept. of Agriculture Turfgrass Field Day August 3, 1967, Department of Agriculture Plant Industry Station, Beltsville, Maryland Chairman—Dr. F. V. Juska Northwest Turfgrass Conference September 20-22, 1967, Harrison Hot Springs Hotel, Harrison Hot Springs, British Columbia, Canada Chairman—Dr. Roy L. Goss Arizona Turfgrass Conference September 25, 1967, University of Arizona.

September 25, 1967, Universitiy of Arizona. Tucson, Arizona Chairman—Dr. W. R. Kneebone

Texas Turfgrass Conference

December 4-6, 1967, Texas A & M University College Station, Texas

Cornell Turfgrass Conference

February 26-29, 1968, New York State College of Agriculture, Ithaca, New York Chairman—Dr. J. F. Cornman