

FAIRWAYS AND THE ROUGH . . .

arise, provision for workmen's compensation, and property and liability insurance.

Having the golf course crew install the system under the superintendent's supervision may reduce initial costs; however, course maintenance usually suffers, sometimes beyond simple renovation repair. Many superintendents prefer to have outside contractors do the work, meanwhile keeping close watch as the project progresses.

It is good business to require a performance bond equal to the full cost of installation and it should remain in full force until the job is completed. The system should be guaranteed for a specific period and those installing it should fill the superintendent in on all details of operation.

If an experienced designer and contractor have been employed in the installation of the system, they can offer much good advice for use of the system. A capable superintendent will quickly learn how to use it efficiently.

The types of grasses to be en-

couraged or discouraged will be a big factor.

The tendency is usually to water too much initially in particular areas with a new system and only experience can be the teacher in this respect. General advice normally given to start off the use of an overall automatic system under average conditions is to set the controller and clock for the first month or so to a maximum of 1/4 inch of water per hour. If a fairway sprinkler delivers 60 gallons of water per minute to an area 180 ft. in diameter at about 70 lbs. pressure at the sprinkler head, approximately 1/4 inch of water per hour will be applied. After some experience and observation at about this rate of watering the experienced superintendent can soon learn to adjust his system up and down for the various areas and needs of his course. Rainfall, topography, soil and drainage conditions, type of grasses and other factors will of course enter into the daily decisions in regard to water use.

BLUEGRASSES AND FESCUES

JAMES L. HOLMES, Midwestern Agronomist, USGA Green Section

Editor's Note—This is a condensation of an article appearing in the November, 1964 issue of the USGA Green Section Record.

Bluegrass and fescue turf is deep rooted and relatively drought resistant. It requires thorough, infrequent irrigations. Because it is composed of "high-stooling" plants, bluegrass and fescue turf cannot survive extremely close mowing.

The prevalence of automatic watering systems and a general trend toward light frequent irrigations coupled with growing demands for close-cut turf has mitigated against bluegrass and fescue as fairway grasses. The close mowing weakens and thins

out these grasses and the frequent irrigations provide an advantage to invading species such as *Poa annua* and bent.

Bluegrass-fescue turf is more cheaply maintained than the species which will tolerate close mowing and frequent watering and such turf will withstand more adversity. However, when the golfers at a club want close-cut, heavily watered turf, they have little choice except to support the cost of a bentgrass-*Poa annua* fairway.