courses have very little grass. Clover, chickweed, knotweed, and poa annua predominate. It is useless to re-seed without first eliminating the clover and weeds. They can be killed with sodium arsenite or arsenic acid and then re-seeding can follow without stopping play. This is a drastic procedure, but it is the only one aside from plowing which will produce turf on some courses. Treatments should start in July or August and seeding should follow during early fall.

Local conditions govern choice of seed and rate of seeding. It is impossible to make specific recommendations which have general application. As a rule, Kentucky blue grass is the most dependable grass for fairways. It can be used on watered and unwatered courses. Success with it depends upon providing enough fertility, especially phosphate and lime, and not to cut too close. Fescue will not survive on heavily watered fairways anywhere, and is not dependable in the region below Philadelphia and Chicago. Farther north it may prove better than blue grass on sandy soil and on dry hillsides. By using both grasses in the mixture, the one best suited will predominate and is most likely to survive. When used in a mixture, the percentage by weight for fescue should be 40 to 50, and the rate of seeding should be increased somewhat because individual seeds are large.

On watered fairways it is customary to include some colonial bent in the mixture. The amount seldom exceeds 10 percent. The balance may be all Kentucky blue grass.

Fairway watering is still a subject for debate. Each side has its ardent supporters. Overwatering, extreme close cutting, and failure to follow an adequate fertilizer program has ruined many fairways. On the other hand, there are exceptionally fine fairways on some of the watered courses. They have watered judiciously, cut wisely, and fertilized consistently.

Some clubs have decided to discontinue watering altogether. The decision is not necessarily wise. They should ban overwatering. Instead of stopping altogether, clubs should water sensibly and not permit grass to suffer badly during periods of severe and prolonged drought.

Bent grasses predominate on some watered courses. If watering is stopped abruptly, most of the bent will disappear as sure as night follows day, and then clover and weeds will take over. Mention has been made of chinch bug damage in the East. Injury was more severe on unwatered than on watered fairways. Chinch bugs do not like moisture. That and close cutting are reasons why they are less troublesome on greens than on the adjacent aprons.

A club in Cleveland and another in New York had identical unique experiences this summer. Both were unable to obtain a night waterman. Instead of watering in daytime, fairway sprinklers were allowed to run all night in the same spot. Fairways got water every second or third week, instead of twice every week. The proportion of good blue grass increased and crab grass was less prevalent. Both greenkeepers remarked that it took a war to teach something they would never have learned otherwise. The scheme seems sensible, provided turf is mostly blue grass, or a mixture of blue grass and colonial bent. Where poa annua and creeping bent predominate, it will fail from the golfers' viewpoint. Poa annua will die during midsummer and clover increase. Such fairways must have water constantly. The other alternative is to curb clover and weeds with sodium arsenite or arsenic acid, reseed and then revise watering practices.

Those contemplating the installation of a fairway watering system should recognize its disadvantages as well as its obvious advantages. Watering complicates rather than simplifies maintenance. As stated above, overwatering and close cutting ruins rather than improves turf. Fertilizer must be used regularly and more generously than on unwatered fairways. More frequent mowing is another added expense. Unless the members are willing and able to bear these additional costs, the project should be abandoned.

If the decision is to install an irrigation system, water should be used judiciously. The aim should be to preserve the good grasses, rather than have turf a vivid green color and fairways very soft underfoot. When used that way, water can be an asset rather than a liability, which has been the experience in altogether too many instances. The pressure from members to overwater has been irresistible.

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