

water from three to four fairways at a time, going over some of them twice a week. Due to the fact that our soil is sandy loam it requires a great amount of artificial irrigation, therefore, it is necessary for us to use over 600,000 gallons of water every twenty-four hours. Thank Heaven we don't have to purchase it by the gallon.

I am well aware that when to apply water has been a controversial subject among greenskeepers and others interested in the proper maintenance of golf courses. Here in Texas where the weather gets very hot in the summer one cannot confine his efforts to night watering alone—we just have to water continually.

## Check Up on Your Records of Course

By C. A. TREGILLUS

**I**N GOLF greenkeeping, as in other lines of human endeavor, we are living in an age of eager progress: something new and better is recorded in each succeeding issue of our journals. With every new purchase of mechanical equipment, with every change in method, there is an unconscious speculation on how long before it will be superseded by something a little more up-to-date, a little more efficient and a little more scientific. We are breathless with expectancy that some improvement will steal a march and catch us unawares.

The urge for efficiency—perfection—has brought untold benefits to the modern golfer, and newcomers to the game little realize the fullness of their inheritance. To assist with the formation of new courses and metamorphosis of old ones, there are unlimited funds of information available from many sources, both commercial and academic; information based on practical experience and scientific investigation; so that new ventures may be launched on the wave-crest of advanced ideas. But, no matter how crammed with information, equipped with the last word in mechanical appliance, or provided with the most serviceable seeds or turf, there is still much to be gained before any club can be considered properly established in its greenkeeping methods. The missing quantity is individual experience, which must be gathered on the spot. A greenkeeper, though well informed and expert in his vocation, swallows a gilded pill when he takes charge of a new course. No two individual courses are identically alike. Those side by side have much in common, but retain their singularities, both as regards layout and turf, in spite of all attempts at standardization in methods. He must build

up a history of experience and observation to reinforce his technical skill before he feels competent to understand and manage the peculiarities of his new charge.

All improvement and all progress is based upon previous experience; the changes that are made this year depend upon what happened last season and the season before; the improvements in machines put on the market this year result from the behavior of earlier models and so on.

### How Are Our Records

The whole point of the story is this: are we logging our course along the river of progress and are we holding on to the experience of today to use it tomorrow? The keeping of full records of all that happens upon the course cannot be too strongly urged. The bare facts, that so much was spent upon labor, seed, fertilizer, chemicals etc., convey only a bookkeeping idea of the general trend of maintenance that must be checked against an actual survey of the links. The real facts, the facts that properly tell the story, are locked up in the heads of those who had the actual spending of the money provided for the purpose. Many interesting vital items remain memories when they should have been recorded and filed away for future reference.

The dearth of full, complete records is appalling. Take, for one example, the water system. In spite of carefully prepared plans rarely does the finished system correspond to the last detail. Topography, and physical object may change slightly the location of the pipe lines; drips are put in where it is deemed advisable when laying, and unions placed for easy dismantling. All this data, together

with depth of pipe is not shown on the original and for lack of revision, fairways are torn up in search of pipes ruined by frost; all because the information of such details was not properly filed. Have you a really accurate plan of the drainage systems operating on the course; have you detailed information on the construction of each green; are you keeping a diary of the happenings on every green, fairway and tee, and the rough; do you score the greens at given periods to compare their condition throughout the season; do you check the number of players on the course with its condition?

These facts and many more, are worth while items to put on record, where they can be later analyzed to the profit of the club and as a guide to future operations. Commercial clubs especially, cannot have too much information of this sort, because it all has such a direct bearing upon net revenue.

### A Valuable History

And in addition, records of this nature provide a chain of continuity, a valuable

history, to be passed to succeeding committees and officials. They give the newly appointed committee something to work from and in greater degree it assists the new superintendent to grasp quickly the essential facts regarding his new work.

To keep a log of this is not a heavy imposition. The greenkeeper should be required to hand in to the office each day a summary of the work done, materials used and itemized, repairs, etc. together with simple observations on weather, general conditions and unusual happenings. This may be typed out with further information gathered by the manager, as, number of players who teed off and criticisms on course conditions, etc. Three copies may be made; one for the office, one for the green chairman, and one returned to the greenkeeper. Postings from this day sheet may be made to the individual pages for each tee, fairway and green. The cost of this in comparison with the total outlay for the season would be negligible and the information gleaned from a proper discernment of the facts tabulated, would yield handsome dividends.

---

## How to Wage Battle Against Mosquitoes

**M**OSQUITOES are a nuisance about any country club. They not only annoy the members in the evening, but frequently are just as annoying during the daytime, particularly on the moist, windless days of late summer.

Many a member has refrained from playing his usual number of rounds because of the discomfort he knows he will suffer from the mosquitoes, and it is not uncommon, during the height of the mosquito season, for a course to be almost deserted for many days, with a consequent loss of revenue to the club.

In fact, the prevalence or absence of mosquitoes is frequently the deciding factor between an operating profit and an operating loss, and therefore a subject which should be of keen interest to country club officials responsible for running expenses.

Are mosquitoes a necessary evil? Positively not, unless your club is surrounded by swamps and, even then, the case is not hopeless.

On the contrary, the pest can be elim-

inated, or at least greatly abated, by any club willing to follow a few simple preventive measures, for the mosquitoes of a given area are for the most part hatched from eggs laid in the immediate vicinity. In its lifetime, the mosquito rarely travels far from its birthplace, for it is a notably poor flyer. From the viewpoint of the country club, therefore, the problem of eliminating the mosquito amounts to no more than adopting the necessary precautions on the club grounds.

### Mosquito's History

It is well to consider the salient details of the mosquito's life history. The eggs are deposited in any available body of stagnant water. A day or so later they hatch into larvae or "wigglers," as popularly called. These wigglers feed on the bottom but must come to the surface periodically to breathe. As the days pass there are some unimportant changes in the wigglers' appearance but within ten days, generally less, the adult mosquito forms. Thus it can be seen that during the course of the