Course Records that Help You Do the Job Better*

By CHARLES SCHALESTOCK Supt., Farmington Country Club, Charlottesville, Va.

Golf course records are as much a part of the duties of the golf course superintendent as maintaining high-quality turf. As a matter of fact, well-kept records make it possible to do the work much more effciently. Perhaps, in our intense desire to acquire and assimilate technical knowledge on matters pertaining to turf culture, we tend to minimize or overlook this very important aspect of our administrative responsibility! We are not concerned with a complex system of keeping records. That would require the assistance of a secretary. A golf course superintendent does not have the time nor a secretary to make out elaborate reports and records. He must confine his paperwork to essentials. Conditions prevailing at various clubs are not always similar; consequently it would be most difficult to lay down hard and fast rules in outlining a form of record for universal use. Whatever form of record you use, make certain to record all essential information.

For obvious reasons, it is poor practice to rely on memory, in the administration of business. Directing operations of a modern golf plant is big business. This is not meant to be a comprehensive discourse on the subject, but rather an outline of the more important aspects of it.

The superintendent is primarily interested in a simplified system of keeping records that will help him to do an efficient job, and enable him to furnish complete information to club officials at all times.

The records can be divided into two categories: Permanent and Operational. The former should consist of plats and photographs, showing sizes and locations of all areas and installations. The plats should show the sizes and locations of greens, tees, aprons, fairways, roughs, traps, water areas and woodland. They should also indicate all installations including: buildings, swimming pools, tennis courts, work shop, water lines, irrigation and drainage systems.

To manage turf efficiently, one must *Paper presented before GCSA annual Turt Contenence have a well calculated plan, blue-print, tools and the ability to organize and coordinate the forces of labor. Without the last mentioned qualification, there can be no successful management program.

Going back for a moment, let us consider inventory of equipment. A case history of each piece of equipment should be kept. This will enable you to appraise the current value of it. Depreciation and parts replacement costs should be analyzed, with the view of retiring the equipment when the repair costs become prohibitive. No Cost Analysis is possible if accurate records are not maintained. The case history of equipment should include the following information: Name and identifying number, date purchased, original cost, estimated life, depreciation rate; also the following data on repairs: - Unit, part number and name, cost, date installed and labor.

Inventory of Supplies

Inventory of supplies is a very important part of your records. A critical shortage of supplies and materials at an inopportune moment can prove to be disastrous. Certain chemicals are often needed at a moment's notice. A periodic check of your inventory will enable you to maintain an adequate supply. Apart from this operating advantage, there is an economy factor. Some materials, those that do not deteriorate should be purchased in bulk and at a time when the market is most favorable. With your background of past experience, and records of materials purchased in prior years it should be simple to estimate your needs. As an illustration let me cite the following case. A few years ago, the international situation resulted in a semiwar economy. The price of mercury practically doubled over-night. However, long before this developed, the trend was unmistakably evident. Many superintendents procured two years' supply before the rise in price. This foresight made it possible to save over \$500.00 on one item.

A carefully planned tentative work schedule can and should be outlined at the beginning of the year. Such a schedule is possible only if there is complete collaboration by the Greens committee, Golf committee, the professional and the



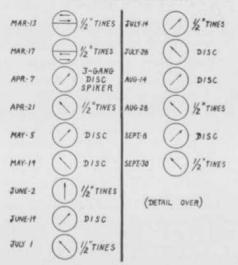


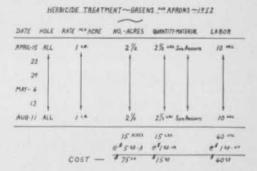
Fig. 1. This is a graphic record, showing regular and systematic aerification of greens. Please note: that this operation was carried out methodically at approximately two week intervals, throughout the growing season. From the above, you can see that this phase of maintenance could not have interfered with golfing activities, otherwise it would not have been tolerated.

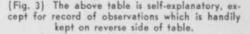
FAIRWAY FERTILIZATION-1952

DATE I	SAIR W	IN NATE-ACRE	NO ACRE	S QUMNTITY	MATERIAL	LAB	IOR
SEPT-3	1	600 ***	3 1/4	2100 -	6-10-4	4 1000	15 NIN
SEPT - 3	2	1	1	600	+	1	12
SEPT- 4	3		2%	1525		3	3
+	4		1%	1150		2	18
	5		2%	1525		3	3
	6		11/12	550		1	6
	7		4 %	2675	10	5	21
+	8		3 %	1875		3	45
SEPT- 4	9		3%	2375		4	45
SEPT-3	10		3%	1875		3	45
SEPT 5	11		3 %	2/75		4	21
SEPT-3	12		2%	1275		2	33
SEPT, 3	13		1%	950		1	54
SEPT: 5	14	1.1	4 1/2	2700		5	24
1	15		21/4	1475		2	57
	16		4%	2800		5	36
+	17		36	450	· •	0	54
SEPT: 5	/8	600 -	3%	1900	6-10-4	3	48
				15 Tes e# 5988		60 mi 1 1 12	
	COS	57 -	1955	18952		\$60 11	

(DETAIL OVER)

(Fig. 2) This table is self-explanatory. The operation was carried out with the use of a ten-foot Gandy spreader. superintendent. The prime function of the Greens committee in this situation is to see that the superintendent is not unduly hampered in the performance of his duties. The superintendent sits in on the meeting, to learn of the desires of the Golf or Tournament committee. He is happy to serve the membership in all possible ways. His work plans are flexible, and can be adapted to most any situation, providing he is given reasonable advance





INSECTICIDES - GREENS - 1952

DATE	NOLE	RATE "** ACRE	NO-ACRES	QUANTITY	MATERIAL	LABOR
MAY-22	ALL.	6 m. 9% +22	2%	16/2 100	CHLORDANE (40%)	10 -
JUNE-5	1	1	2%	16%	t t	10
JULY- 7			25	16%		18
3427-31			2%	16%		10
AUG-20	+		2%			10
SEPT-17	ALL .	6 car 9 % and	255	16/2	CHLORDANE (40%)	10
			15 A	99 Lat		60 HEL.
		COST-	119 41	FSqt	3	60 10

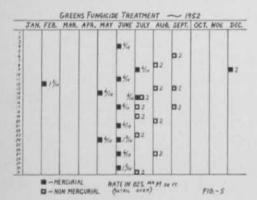
(Fig. 4) The above table is self-explanatory. Detail is recorded on reverse side. This detail explains the purpose of the treatment; whether it be for cut-worms, sod web-worms, chinch bugs or other insects.

notice. If there is a subsequent change in dates, the superintendent should be so advised at the earliest possible moment.

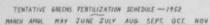
Routine work should be regularly scheduled and planned in a manner that will least interfere with the golfer. However, an extraordinary schedule should be in readiness, to provide for high-speed maintenance during special events such as tournaments and days of heavy play. For example; — On a routine day, a sevengang unit might cut fifty acres of fairway in eight hours; but, if a tournament were in progress, a seven-gang and a five-gang unit working together would be able to mow the fifty acres in four and a half hours. Such planning enables the maintenance crew to stay well ahead of the field. The application of this principle should be projected into all phases of maintenance.

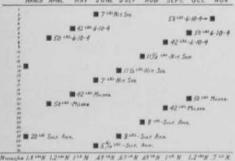
Time Study and Cost Analysis

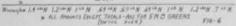
Time-study and cost-analysis is one of the most important considerations in these time of unstable labor. Maximum efficiency with a minimum of cost is the objective of everyone. If this can be achieved without too much fatigue of the personnel, an important point of friction between management and labor ceases to be a disconcerting factor.



(Fig. 5) The above graphic table is an actual record, but does not necessarily imply that it represents a sound standard practice of management. It happens to be part of a comparative test. A complete summary of the findings is not appropriate at this time, but the dates of treatment are significant. Note the months in which disease is most rampant.

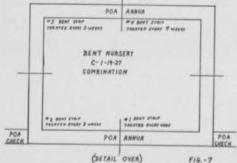






(Fig. 6) The above graphic table represents a well-balanced feeding schedule. Three factors worth noting: Each feeding is scheduled for a Monday, feeding is on a two week schedule, and the Nitrogen rate is reduced during the "disease season". All maintenance techniques should be constantly studied for refinement and reduced costs. Should a more effective and more efficient method be devised, is should be photographed. Photography can be used as a most useful adjunct in our work. A picture records detail much more effectively than volumes of descriptive literature. Just think how impractical it

EXPERIMENT - EFFECT OF SODIUM ARSENTE ON BENTS AND POA-ANNUA RATE - ONE POUND PER ACRE - PER TREATMENT



(Fig. 7) To determine the effect of sodium arsenite on bents and Poa annua. This drawing represents a 7500 sq. ft, nursery composed of C - 1, 19, 27 bents in combination, surrounded by a ten foot wide collar of Poa annua and silvercrab grass. The three foot wide strip of bent along the outside edge of the bent nursery and the Poa annua collar form the testing area. This area is quartered. Each quarter is treated with sodium arsenite at the rate of 1 lb. per acre per treatment. The dates of treatment and results, along with all observations are recorded on the back of the drawing.

are recorded on the back of the drawing,

would be to describe the installation of a drain-tile in a green. Such a picture is an excellent addition to your permanent records. Koda-slides of turf research plots are almost a necessary part of the project. Some of the most effective lectures are supplemented by slides. They illustrate a point so vividly.

Keep Accurate Data

Accurate data should be kept on all treatment of turf whether it be fertilization or the use of fungicides, insecticides, herbicides, lime, watering, aerifying, topdressing or spiking, etc. This phase of keeping records can be an endless task and a difficult one. After much study of this problem, I am inclined to believe that a system, based on graphs and tables may prove to be the most practical form. The outstanding advantage in this method is, that a graph enables you to see a whole picture in perspective. Of course, all records are not adaptable to this method, but graphs and tables should be (Continued on page 74)

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the tie-up of the grillroom and pro shop frequently is a necessity and quite a few of the smaller town pros do the job very attractively and effectively.

And why not? Some of the best pro department selling done at the larger clubs is when the pro is in the lockerroom talking over clubs with members, then leading them into the shop. Al Watrous at Oakland Hills; Wood, and now Harmon, at Winged Foot; and Joe Novak before the new pro shop was built at Bel Air; are merchandising stars who showed that locker-room selling as well as the lesson tee could be made tremendous factors in increasing shop sales volume.

COURSE RECORDS THAT HELP (Continued from page 42)

used whenever possible. They, along with the marginal notes should contain enough information for the superintendent to be able to intelligently report to his chairman the entire situation at any time. Although your methods of turf management may be highly effective, unless you can answer questions in a positive manner, backed up by recorded facts and figures, the club officials may hesitate to accept your conclusions.

Sound business practice provides for recognition of ability. Demonstrate that you are capable of handling the club's valuable investment. Too many worthwhile accomplishments go un-noticed only because the superintendent fails to submit a business-like report. There is a common tendency to be lazy. This is a vice, and like all vices, it is destructive. The appointment of committees often results in much apathy by its members. If such a condition prevails at your club, don't succumb to the same course of inaction. The committee usually has a brief tenure of office. You, on the other hand, are engaged in a profession which requires full time concentration. Do your job well; even if you are never called on, to make a report. Think of the valuable reference material contained in your records.

Maintain Library

Speaking of reference material, the superintendent should maintain a library. It is just as important to him as it is to other professions. Set up an index file. It will enable you to put your finger on any subject you wish to study. Treating turf is not unlike treating humans for illness. Did you ever notice that a medical doctor

maintains a library? Therapeutics is a complex art and science. It would be impossible to memorize all the knowledge on the subject. It is common practice for a doctor to prescribe "sugar pills" to his patient on his initial visit to the doctor's office. Actually, in such a case, the doctor is merely delaying treatment until he has had time to consult his textbooks. A superintendent may well use information culled from his library. It will enable him to analyze his problem and to outline its solution in a practical manner. Unfortunately for the golf course superintendent, he does not have a margin for error as great as the doctor. When a doctor's error of judgement results in the death of his patient, he graciously disposes of the body by arranging for a decent burial. However, when the superintendent's patient, the green, dies he is subjected to the humility of presiding over an endless wake. The green cannot be buried. The cadaver is a constant reminder to the golfer, that the superintendent lacked skill to save it. This analogy, morbid as it is, serves only to emphasize the handicap under which we work. It means little to the golfer, that extenuating circumstances over which the superintendent has



Mr. Oscar Witzleb, owner of Plum Hollow golf club, Dixon, Ill., states: "after only 3 applications of liquid Gra-Green (less than 3 weeks) a large dead area consisting of approximately one-quarter of our No. 2 green has completely revived." He concludes: "It's not only easy to use—but works like magic."

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ned to hose. Spray gun automatically mixes 1 pint Gra-Green to 1.5 gallons of water. 1 pint covers approximately 2000 sq. ft. For fairways, use ordinary mounted sprayer. Mix 2 gallons Gra-Green with 8 gallons water, use 10 gallons per acre nozzle. Weed killer may be mixed with solution and both sprayed on one time

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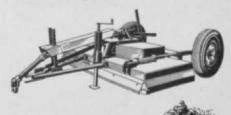
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no control have caused the loss. These extenuating circumstances would be the most thought-provoking revelations if ever brought to light. It would astound club officials in general, to be bluntly shown how they are responsible for a sure and rapid degenrative process that is taking place in the field of turf management. Such a topic is not in order at this time, so, let us continue with golf course records.

The accompanying graphs, although they are actual records, do not necessarily represent a standard of form to follow. They merely illustrate one method of maintaining records. In conclusion, let me reiterate: Make your records serve a definite purpose, whether it be to meet the requirements of club officials or to provide reference material for yourself. In any case, you will become more proficient by maintaining well-kept golf course records.

HOW TO PLAN FERTILIZING (Continued from page 49)

late. I have not kept track of this nitrogen because it is such a small amount. There is another reason too -I don't know how to figure gallons into pounds.

After Labor Day it's time to start thinking about "When" again and getting ready for the fall program.

This takes some time usually because of the heat and I consider myself lucky if I can get a small amount on before the first of October. The quantity can be increased up to one pound per thousand per application as the weather gets cooler. By the end of October, 3 lbs. have been applied. Just before cold weather and before the last mowing, I like to feed 1 lb. all organic nitrogen, which, by breaking down slowly, helps to feed the roots over winter. The last cut is made without the grass catcher on the mower so as not to pick up any of the material. This makes 4 lbs. of nitrogen used during the fall for a total of 71/2 lbs. for the year plus a small amount put on in liquid form and by the use of cyanide in top dressing. All material used on greens is broadcast by hand from pails. With a little practice a man can start on one side and make a pail of mix cover the entire green evenly without running out twothirds of the way across. We divide the material and crisscross the green in as many directions as there are pails to be applied in order to assure even distribution.

I don't believe in the use of straight inorganic nitrogen except in certain cases,