



Original clubhouse at Cascade Hills Country Club, Grand Rapids, Mich., has been expanded with new addition. Much of construction work for new parking lot, which was part of expansion program, was handled by regular course maintenance crew.

# Man-Hour Costing

## a system based on job hour records

BY J. DAVID HEISS

Golf Course Superintendent, Cascade Hills Country Club, Grand Rapids, Mich.

**O**PERATING costs are skyrocketing today. Even the most carefully planned budget can be wrecked by so-called non-recurring emergency maintenance problems, or by one big

impulse purchase of equipment. Or the board may meet and decide to rebuild a part of the course. This can happen at times without benefit of careful cost projections. When it does, few

golf course superintendents have maintenance budgets which can absorb the blow. Few can assume many extra costs unless they slight some other phase of their regular program.

Working models of new ground grids are shown here by J. David Heiss, course management supervisor at Cascade Hills. Heiss builds grids for board approval prior to any design changes. Costs are carefully projected in advance.

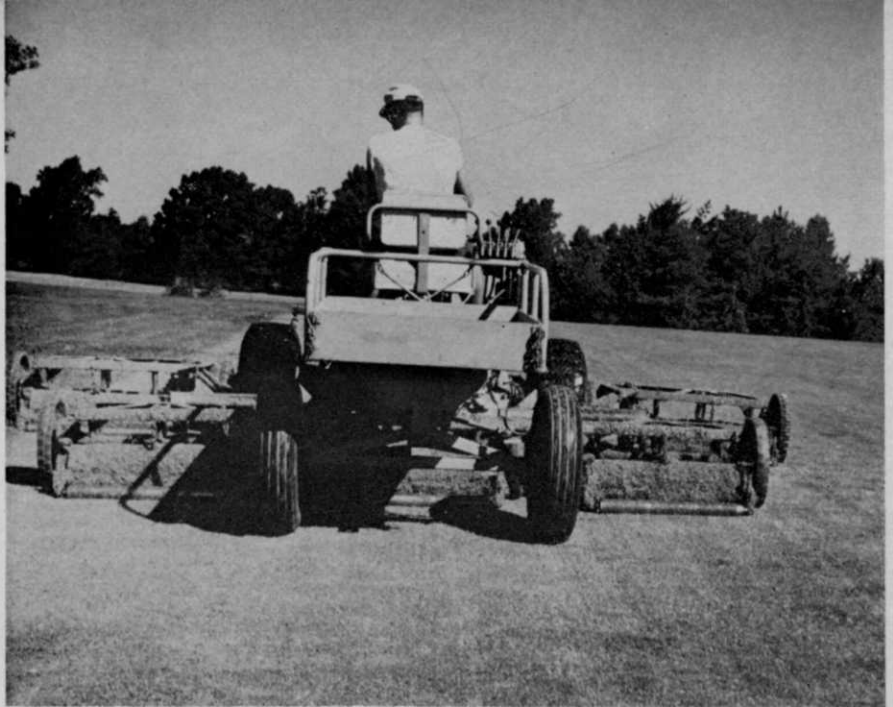


In order to pin down costs, by using current wage rates coupled with past experience, we have set up a system we call Man-Hour Costing. We record the number of hours it takes a man to do a certain job. We keep track of the hours for each job as it occurs. Then we use our records to project future costs or to budget for new maintenance problems as they arise. Our system is used in operation of Cascade Hills Country Club at Grand Rapids, Mich. But it could be used by anyone in the turf business. For example, the same system could apply for industrial park grounds, city or state parks, and other similar type areas.

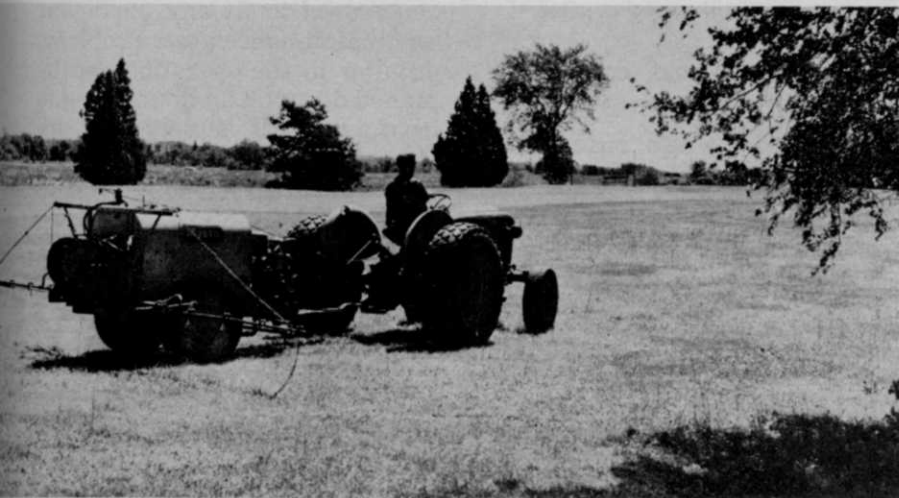
We have tried several methods of recording labor costs. We

settled on the man-hour system because the hours needed for a given job will vary but little. At the same time, the price you pay per hour may range from year to year. Fringe benefits, too, are unstable factors. A record of actual dollar costs in doing a job may be of little value in coming years. At the same time, the hours needed to do a job change only if you change the size of the area, or if you obtain more efficiency in the men and equipment doing the job.

A time distribution card is the key to our system. This card is issued to each employe once monthly. It has major headings for mowing, spraying, fertilizing and other jobs. We have additional breakdowns under each of these main headings to cover the



**Hydraulic fairway mower** is standard piece of equipment, maintained and operated by Kim Green, regular crew member.



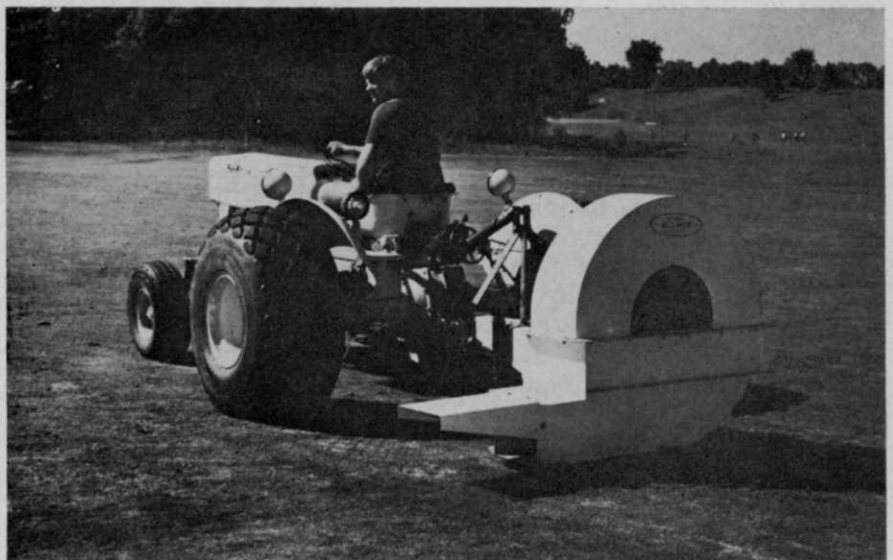
**Spray operator** who handles practically all of this technical phase of maintenance is Cecil Stanford, longtime member of the Cascade Hills crew.

mowed greens, racked sandtraps, or handled watering. Though the time spent on each job is recorded, employes are not paid on the basis of these cards. They are for cost analysis only. A time clock is used to record hours for employe wages.

With an accurate account of time spent for each job, it becomes a simple matter to transpose total hours worked to a master sheet. As hourly figures are recorded, noticeable trends develop for particular areas. It is easy to review time records on any problem areas. Those which consume large amounts of labor will stand out. We have found

exact job being done. For example, when a man is mowing, he can record whether he is mowing greens, tees and collars, fairways, or whatever. Besides these regular maintenance tasks, we have provided blanks on the card for special nonrecurring types of work. These are maintenance jobs which come up only at certain times of the year. Or they may be special or unusual jobs which last only one or two months. These are written in.

Time distribution cards have spaces for 31 days, thereby accommodating all months. At the end of the day, each employe enters his time worked on each job during the day. He may have



**Rogers blower** is used to free fairways of refuse following thatching or aerating. On blower is Bob Hislop, summer employe.



**New maintenance building** does much for employe morale. Building has locker room, lunch area, and storage for equipment and maintenance tools. It also houses the office of Heiss.

that a change in design is sometimes needed simply because the present design is requiring too much hand labor. Many times, the design change is needed to also improve the course. We have made changes in both types of cases. A slight change in design may permit more efficient equipment and less hand labor. If the job is taking too much time, and the design cannot be changed, there may be other possible approaches to the problem within the framework of your men and equipment. A change in maintenance procedure may reduce the hours needed for the job.

**System Helps Project Costs On Area Basis**

We find that a big advantage of the system is that we can easily figure costs of maintenance on an area basis. We project by figuring hours needed per 1000 square feet or by acreage, depending, of course, on the particular job and area. When faced with maintaining an expanded area, as we have in the past and as we are facing at the moment, we can easily project unit costs for the new area. When you know the hours required in each phase of maintenance on a square foot or

acreage basis, you can easily project future costs. By applying current wage rates and fringe benefits you can get a very accurate wage cost estimate. Naturally, downtime and equipment costs must be figured

on a similar basis to give the complete picture.

We believe the Man-Hour Costing System is a step toward standardization of information for the turf industry. Too often, wages are used to compare one operation with another. This is impractical. Labor costs for a golf course with an automatic water system cannot be accurately compared with those for a golf course with manual system. But a breakdown on man hours needed to operate each system gives an accurate basis for comparison. This can be the justification for purchase of the automatic system. When the savings are possible, they can easily be projected to show that the new system will pay dividends.

Man-hour costing can easily be tailored to fit any particular turf maintenance area. Problems peculiar to the operation can be pinned down on an hours-per-job basis. Records supply the information at the end of one year or of 5 years on which to prepare and justify a budget. Lost time is easily spotted. Expansion pro-

*(Continued on page 24)*

**Cutaway of time distribution chart** used to record hours spent daily on each specific maintenance job. Each employe fills out individual card at end of each day. Heiss transfers monthly totals to master sheet for analysis.

GROUNDS		TIME DISTRIBUTION										CASCADE HILLS COUNTRY CLUB												
Name _____		Mowing					Spraying		Fert.	Sand Traps		Miscellaneous					Month _____							
Date	Greens	Tees & Collars	Fairways	Roughs	Trees & Traps	Hand & Banks	Greens	Fairways	Green & Tees	Fairways	Rake	Edge	Club House	Tree Trimming & Removal	Change Cups & Towels	Leaf Removal	Top Dressing	Watering	Aerifying	Construction	Equip. Repair	Miscellaneous		
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ticularly in Florida where at one time the chinch bug problem was pretty much confined. But a not quite so well known fact borne out by Dr. Streu's study was the chemical's ability to curb nematodes when applied on a regular basis over a long period of time. One particular genus, *Tylenchorhynchus* numbered only 88 per 250 cc. of soil some 84 days after the first of 2 ethion treatments compared to a count of 1,280 nematodes in the untreated check (Table 3).

As noted earlier, crabgrass infestation was definitely held to a minimum in the ethion-treated turf. This was due to the increased vigor imparted to the turf by steady treatment with the chemical, enabling it to grow rapidly.

The chemical ethion was introduced as an insecticide-miticide in 1951, initially aimed at combating mites which had become a serious multicrop problem. Its commercial use on turfgrass is relatively new, having started in 1961. The compound, in addition to registration for

control of chinch bugs and sod webworm, is registered for use in halting Eriophyid mites on bermudagrass. It also shows considerable promise as a weapon against army worm on turf.

Generally, applications at the rate of 7¼ pounds actual ethion per acre are recommended to obtain effective control of chinch bugs and sod webworm. Many tests have shown several months of control at this rate. Where insect populations are unusually severe, higher dosage rates are suggested for best results. Current label registration accepted by the U. S. Department of Agriculture allows the application of as much as 10 pounds of actual ethion per acre when high dosage rates are considered necessary.

*Dr. B. C. Dickinson is an entomologist and former director of field research for Niagara Chemical Division of FMC Corporation. He currently serves the Division as Product Manager for insecticides.*

#### Man-Hour Costing

(from page 16)

grams can be accurately budgeted in advance. In short, man-hour costing can contribute greatly to developing a blueprint for management.

Heiss also serves as a consultant in golf course management. Most clients are operators of privately owned courses. Heiss sets up a management program and works with maintenance personnel in operation of the course. After some two years, he terminates such service, the consultant service resulting in a program which can be handled by a technician, or one which needs a full-time superintendent.

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