

golf business

Modern maintenance equipment reduces manpower needs

by Stan Metsker



Like the one pictured above, the traps at the Country Club of Colorado are well-groomed by one worker using a Toro Sand Pro motorized trap rake.

While the cost of operating a golf course has been increasing during the last decade, the size of course maintenance crews has been decreasing, and also the portion of the budget devoted to labor costs. In his 1929 book *Golf Architecture in America*, George C. Thomas, Jr. reported that, "Roughly speaking, it should take 20 men to care for the average 18-hole course properly."

At Cherry Hills Country Club in 1958 a course maintenance crew of about 14 was used in the summer, and seven in the winter. At the Country Club of Colorado we are now doing the job with nine workers in the summer and five in the winter. The reduction in crew size is largely due to automation. The effect on the budget is a sizeable reduction in the percentage of the budget allocated to labor. From two-thirds to three-fourths of the maintenance budget was normally spent on labor 10 years ago. For 1976 and 1977 the figure at the Country Club of Colorado was 48 percent.

In the comparison chart below showing the number of men used per job, each man represents 40 hours of work at that job.

It is difficult to compare the requirements at different golf courses, but any golf course that has not been able to hold labor costs down should take a hard look at what automation can do.

Turf care

Irrigation and mowing are the two main areas where automation has helped the most. During these years we have gone from quck coupler systems to semi-automatic to full automatic. With these changes we not only acheived a reduction of manpower from four night watermen to just one daytime technician, but we have also gained much better control of the water. Short intervals of irrigation can be applied, which allows better infiltration and less runoff. The total

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JOB	1958	1977	CHANGE	COMMENTS
Irrigation	4	1	-3	Due to automatic system
Care of greens	2	½	-1½	Due to triplex mower
Raking traps	1	½	-½	Due to motorized trap rake
Small area trimming	1	1	0	Same
Rough mowing	1	1	0	Same
Fairway mowing	1	1	0	Easier with hydraulic lifts
Large area trimming	1	1	0	Same
Mechanic	1	1	0	Works harder than ever
Foreman	1	0	-1	Not needed due to smaller crew
Spray & construction	0	1	+1	Does work formerly done by foreman
Superintendent	1	1	0	Does more work and less supervising
Total	14	9	-5	Savings of salaries and fringe benefits

amount applied can easily be controlled down to the minute.

The reason the modern-day waterman should be called a technician is that he must not only know how to fix the usual plumbing problems, but he must also understand and be able to repair the control system and the more complicated sprinkler heads and valves.

The inventory of parts that must be kept on hand has also changed. It is not unusual to have to wait for parts these days; therefore in order to keep everything running, it is necessary to have a well-stocked parts inventory. Three thousand dollars worth of parts on hand for an 18-hole golf course is not too much.

Mowing practices are a little more difficult to measure than irrigation. We have undoubtedly saved labor in most areas due to better equipment, but it is especially obvious in the mowing of greens. Where we formerly

used four men for 2½ hours (10 man-hours), we now use one triplex greens mower with one operator for 4 hours.

The quality of the cut between the two methods is very close to being the same. When everything was working good and with a good operator, we probably got a better cut with the walk-behind units, but the triplex unit does a good job and has fewer mechanical problems. The triplex certainly has the advantage on weekends when crews are hard to get and overtime must be paid. This is also true for the trap raking.

Trap care

The motorized trap rake does a better job of keeping the sand loose than raking by hand. Not only that, but it is now possible to find personnel who really do not mind the job because they get to drive a motorized vehicle as opposed to walking several miles — many of them through hot, loose sand



The advantage of hydraulic lifts on fairway and rough mowing tractors is not so apparent in mowing as it is in transporting the mowers from one part of the course to another. The operator doesn't even have to get off the tractor.

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All of the color photos on this page were taken by Superintendent Stan Metsker on his course. This National riding mower is used for trimming.

— dragging a rake behind. We now use one person for 4 hours, compared to the four persons we used to use for 2 hours each (8 man-hours).

The other areas of mowing are not quite as dramatic. We have saved many hours of trimming around trees with small walk-behind rotary mowers by going to the larger 60-inch, riding-type mower. A little time has been saved by using hydraulic lifts on the fairway and rough mowing units, but the main advantage is the ease with which these machines can get around the golf course.

At many clubs time saved in the above-mentioned areas is probably being used to do a better job. At Cherry Hills Country Club, for instance, there is more area under intensive grooming today than there was in 1958. With the advances in machinery and technology in the golf course maintenance field, there is no doubt that labor reduction is now possible. □



Five-gang mowers cut the rough at the Country Club of Colorado, making it a one-man job.



Greens at the Country Club of Colorado are mowed by a triplex mower like this Toro Greensmaster 3.



Larger gang mowers cut the fairways.

Motorized maintenance vehicles quickly move men and materials around the course.



Howard up-front riding rotary makes fast work of trimming around trees, shrubs, and other obstacles.

