

One Management System To Check Skyrocketing Costs

by **GREGORY R. DAVIS**, Superintendent
Normanside Country Club, Elmsmere, N.Y.

In the middle of the period of skyrocketing costs, I became the Superintendent of Normanside Country Club, in Elmsmere, N.Y. When developing our management system, we continually looked for inefficiencies to eliminate, and areas in which to make cost reductions. I was determined to maintain good golfing conditions and high quality turfgrass to uphold the reputation of the club and my own reputation as well.

Since labor is our largest expense, it was dealt with first. A highly qualified assistant was hired and the number of seasonal employees reduced. Each crew member is trained to do all of the regular maintenance jobs on the course. This gives a smaller, more flexible, highly efficient crew requiring less supervision while accomplishing just as much as a larger crew at less cost.

Most of our operations are completely mechanized now, with very little need for hand labor. Three new pieces of equipment were purchased within two years: a triplex greensmower, a large hydraulic spray rig and a utility vehicle with a small hydraulic spray rig.

The new triplex greensmower was much faster than the old because of a higher transport speed and a shorter turning radius. For the same reasons, the old triplex greensmower replaced the tee mower on tees, aprons and approaches, which are all cut at the same height.

Labor savings for both operations were excellent (including reduced weekend overtime). The greens were cut with equal quality, and tees, aprons and approaches were cut better! Time sav-

ings allowed us to enlarge some approaches. This improved them by allowing the big fairway mowing unit to make turns farther away from the greens, thereby reducing wear.

The new spray rigs brought about savings in three ways: reduced time to apply pesticides, reduced costs of pesticides (more concentrates and less pre-mixed formulations), and reduced labor to apply pesticides (eliminated most walking applications).

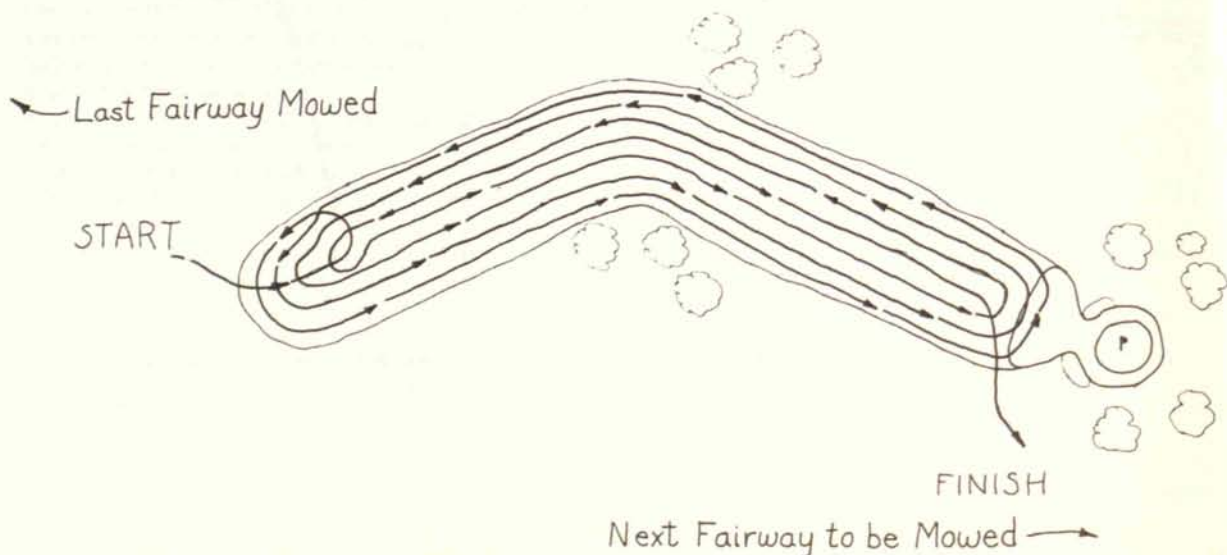
Strict preventive maintenance and thorough winter overhauls keep our equipment as reliable as possible. The expense of preventive maintenance and the expense of buying new equipment are indirect ways of saving money by reducing seasonal repairs and downtime.

NEW SHAPES AND SIZES

The original design of Normanside Country Club brought about an excellent "mating" of the golf course with our rolling, sometimes hilly terrain. In fact, only minor changes have been made during Normanside's 50 years of existence. Considering its age, the course was surprisingly well adapted to our increased mechanization.

To reduce costs, design was altered somewhat by reducing the size and shape of fairways. Not an easy task, but once accomplished, allowed faster applications of fertilizer, herbicides, etc., and more importantly, reduced mowing time. The beginnings of fairways were moved farther out from the tees, and the sides of fairways were narrowed and/or

A fairway mowing pattern; saves time, money and turf.



straightened. Parallel sides allowed fewer passes with the fairway mower and less turning around. Altered widths allowed the exact number of passes required to start mowing at the end of the fairway nearest the last fairway mowed, and to finish mowing at the end of the fairway nearest the next fairway to be mowed. This eliminated a lot of wasted transport time. (See illustration)

PREVENT LESS—CURE MORE

Some of the measures taken in this category will not be found in recommendations for growing high maintenance turfgrass! The degree to which another golf course might take these measures would be very specific to that particular course based on the number of rounds of golf played, soil, climate, member's desires, turfgrass species, etc.

First of all, seed purchases were cut to the point that only the greens are completely overseeded every year. Only par-3 and "problem" tees are overseeded, and only small repairs are seeded on fairways. No sod is purchased. We construct very little, and can use what sod we grow ourselves.

Sand purchases have been reduced by redistributing what we already have in the traps. Lower areas always tend to have deep sand that can be shoveled back up on sloped areas. We use less costly brown sand, and some out-of-the-way bunkers have been converted to rough.

I have been regulating fertilizer rates for the last few years to determine how little could be applied and still maintain healthy turf. Spring and fall fertilizer rates were cut in half and midseason applications eliminated. One or two mid-season applications were eliminated on tees as dictated by the weather and amount of play during certain periods. I have used as little as three pounds of nitrogen per 1,000 square feet on greens, but they were weaker, less dense and more subject to wear, so I now use about five pounds per 1,000 square feet. A **maximum** of $\frac{1}{2}$ pound of N per 1,000 square feet is used per application.

A close watch on turf density in all areas with reduced fertilizer rates is maintained. The weather helped during the last few seasons by providing the rainfall and growing temperatures necessary for adequate growth at Normanside. If density declines and weeds start encroaching into thinning areas, or if the weather is less favorable in future years, I will adjust the rates again.

Our greens fertilizer has tiny granules; it seems to spread more uniformly than its counterpart with larger particles. The tiny granules also require less irrigation to wash them below the mow line and less is mowed off. This, of course, allows us to apply less fertilizer with the same results!

Fertilizer needs are determined from soil tests. Our greens and tees require non-phosphorus analyses which are less expensive than complete fertilizers. Choosing an analysis that matches the soil deficiencies enables more exacting applications, providing a proper balance of nutrients without wasteful or detrimental excesses.

I avoid most "combination" fertilizer products. They may suffice for preventive pest control, but we use mostly curative controls here. I rarely need or want to apply a fertilizer *and* a pesticide on the same area at the same time. Separate pesticide and fertilizer products are less costly and more flexibly applied by rates and time.

Most of the pesticides we buy are chemical concentrates to be mixed and applied with our new spray rigs. The more expensive preformulated granular types are purchased for winter and early spring applications when we cannot move our spray rigs onto the course.

Fungicide purchases have been reduced by increasing the time between preventive applications on greens, and by making only curative applications on approaches, tees and fairways. Massive outbreaks of disease are controlled on fairways, but not minor ones. My assistant and I keep a very close watch for disease outbreaks with daily checks on the course, especially during midsummer stress periods. Dollar spot and melting out are more common occurrences here than Pythium blight. Our varietal blends of turf types which have developed on our fairways over the last 50 years, help in resisting massive outbreaks of disease.

Herbicide purchases have been drastically reduced by spreading out the time between selective applications from annually to every two or three years. One year I may control broadleaf weeds, the next year crabgrass, and the third year only spot treatments on either. By making detailed weed surveys each season, the actual amount of herbicides used have been reduced too. Paper

*An old, but still efficient landmark
at Normanside CC.*



sketches of the golf holes are marked with proportionately-sized areas corresponding to the areas of weeds on the course. Total acreage for each weed type is estimated and chemical purchases are determined.

Insecticides are only used as curatives on all turf areas. Again, we have had no epidemic-sized attacks of *Hyperodes* weevil, chinch bug, *Ataenius* beetle, etc. We do have a Japanese beetle problem, but we do not apply any chemical controls to the grub stage in turf. There are several deciduous trees on the course where the adults accumulate and feed (Norway maples, mountain ash, basswood, etc.). These concentrated areas are sprayed with carbaryl (Sevin). This is less expensive than the chemicals recommended for grub stage control, and much less is needed to spray several trees than would be needed to cover our large acreage of turf. We have not had serious damage from Japanese beetle grubs on our turf in the last few years. Perhaps the winters have been cold enough to reduce population size and perhaps the summer turf growth has been good enough to mask the damage, but, maybe our control method is also working well!

CONSOLIDATION AND CUTBACKS

One cost-saving method used was to incorporate as many jobs as possible into a smooth, timely operation. For example, while one person mows greens, another person changes cups, handles the flagstick so the greensmower need not stop continuously, checks ball washers, trash cans and towels, changes tee markers, and hand mows one or two small shaded tees. The workload is divided when the two people switch positions half-way around.

Using a mechanical bunker rake and skipping undisturbed areas has reduced trap maintenance costs.

Tee maintenance has been cut back by not mowing any slopes on tee edges or between terraced tees. These areas are now rough.

The only additional way to reduce costs in scheduling jobs was to limit the actual number of times each job was done. Priorities, desires of the members, needs of the golf course, etc. all come into play. Edging bunkers was eliminated and may become an alternate year operation. Aerating and topdressing of tees and fairways have not been done at all in the last few years. Hopefully, reduced growth from decreased fertilizer applications will limit thatch buildup. I am watching this closely, plus looking for any signs of increased pest problems. I am not sure of the eventual scheduling of these operations, but it will not be done again this year.

Less grooming is done early and late in the season. This saves on labor and equipment use.

Fairways, tees, aprons, and approaches are only mowed twice a week. Reduced growth has made this possible too. This is a tremendous savings in labor and equipment use.

We use "striped" mowing patterns only on greens. Other areas are mowed using elongated clockwise and counterclockwise patterns.

WRITTEN RESULTS

Detailed records are kept to see how money and time are being spent or saved. Year-end summaries reflect cutbacks and determine their value. Each employee maintains a daily worksheet which is summarized. Equipment maintenance sheets are kept to record everything from adding oil to complete overhauls on each piece of equipment we have. Purchases are recorded throughout the year and a running record helps us remain within budgetary bounds at all times. Pesticide and fertilizer application records are also kept and "comments" regarding new products or new application rates are used to determine the need for changes in the future.

At year's end, summaries of all records provide information for developing the next year's work schedule, equipment needs (potential repairs and replacements), supply needs, and of course, a breakdown of next season's proposed budget. Peak efficiency is impossible without thorough, accurate records.

KNOWLEDGEABLE PEER GROUPS

It is impossible to put a dollar value on the many savings that have been realized at Normanside based on information I have gleaned from the different facets of the turf industry. Membership and participation in national and local GCSAA, USGA Green Section and state and local club associations is essential. Keeping up-to-date on publications, major textbooks and periodicals is most helpful. A good educational background and attendance at turf conferences, seminars and equipment clinics is very important. But perhaps most important of all is talking with people in the field of golf course maintenance such as consulting agronomists, technical sales representatives and other golf course superintendents. All areas provide important knowledge necessary for the increased effectiveness of a superintendent's management policies.

CONCLUSION

Many cutbacks have been made to reduce costs involved with maintaining the golf course. Hopefully, most of the cutbacks were implemented in a manner that brought about the least amount of unfavorable change in playing conditions of the course. I attempted to accomplish this by reducing operations collectively. For example, fairway mowing and fungicide applications could be reduced only by reducing fairway fertilization and reshaping. Cost reduction measures are still short term, but minimums are only determined gradually and with continuous supervision.

Normanside Country Club celebrates its 50th anniversary this year. I am hopeful that, with cost reductions and increased efficiency, we will be able to provide the best playing conditions possible under reduced operating costs!