

# WALKING GREEN MOWERS: Solution or Problem?

Carefully analyze several factors  
before determining the best plan.

BY BOB RANDQUIST

When triplex green mowers were introduced into the golf course equipment market in 1968, they were welcomed with open arms by golf course superintendents who recognized the potential cost savings and convenience these mechanical marvels would provide for golf course maintenance operations. I remember very well my first experience mowing greens with a triplex green mower in 1971 at Trooper Park G.C. in Oklahoma City. It was very exciting to be able to mow all 18 greens and the practice greens by myself in only 3 to 3½ hours time. I was usually one of the three employees who spent 2½ to 3 hours each morning mowing greens with a walking green mower and racing to finish ahead of the early morning golfers. Mowing with the new triplex green mower made this task so much easier for us and allowed the superintendent I worked for to assign two other employees to other important jobs. By 1975 the use of triplex green mowers became the preferred method for mowing greens at many golf courses.

Unfortunately, wear pattern and stress-related problems on greens and surrounding areas began to appear as triplex green mowers were used to mow greens over an extended period of time. The simple solution for many of these problems was a return to the use of walking mowers for greens. By the early to mid-1980s, many golf

courses began to eliminate the use of triplex green mowers and return to the use of walking green mowers for mowing greens. In response to this trend, I wrote an article published in the November/December 1983 issue of the *USGA Green Section Record* entitled "Should You Change from Triplex Green Mowers to Walking Green Mowers?" that explained why we changed back to using walking green mowers to mow the greens at Southern Hills C.C. in Tulsa, Oklahoma. Since that time, the debate has continued.

## THE QUESTION

Is walk mowing greens the best solution for problems caused by triplex mowing greens, or does walk mowing create too many problems for golf course superintendents due to budgetary and/or staffing limitations?

As we attempt to correctly answer this question, let's examine the factors that must be considered: the problems that triplex green mowers cause and some possible solutions for these problems, and the challenges associated with walk mowing greens.

## TRIPLEX GREEN MOWERS: PROBLEMS AND POSSIBLE SOLUTIONS

- **Triplex Ring.** One of the first problems that appears with the use of triplex green mowers is a thinning of the turf where the cleanup cut is made around the perimeter of the putting



surface. This thinning is caused by two factors: large areas of turf are double cut each day due to the space required to properly lift and lower the mower attachments, and the centrifugal force exerted on the triplex tires as the triplex mower travels in a circular motion around the green. The additional abrasion caused by these factors often adds stress to or physically damages the turf in these cleanup pass areas. This stress can be reduced by slowing the triplex mowing speed, only mowing a cleanup pass every other day, or by mowing the cleanup pass with a walking green mower. In most situations,





Above: With labor costs having increased dramatically over the past few years, options for increasing efficiency without compromising quality are being reviewed at all courses. Left: Turning the triplex green mower too quickly and too sharply resulted in wilted turf. Depending on weather conditions the next day, the result could be brown turf and a slow recovery process.



walk mowing the cleanup pass is the only solution that solves the triplex ring problem.

A triplex ring around the green perimeter is unacceptable to golfers for both aesthetic and playability reasons. Labor savings associated with triplex mowing are often significantly reduced by efforts to eliminate this problem.

• **Wear on turf areas surrounding greens.** Damage to turf areas surrounding greens often occurs as triplex green mowers repeatedly turn on these turf areas. This is especially true when maneuvering room for the triplex green mowers around greens is limited

due to bunkering, vegetation, water features, or cart path curbs. This damage to surrounding turf areas greatly increases as cool-season grasses are subjected to heat-related stresses in the summer, or warm-season grasses are dormant or trying to break dormancy in the spring. Matted turf, thin turf, bare ground, or increased weed populations often are the result of this daily triplex mower traffic. Additional costs associated with correcting these problems must be considered when comparing costs for triplex mowing versus walk mowing greens. When adequate maneuvering room is available around greens, this problem can be overcome by properly training equipment operators to make wide, slow turns with the triplex mower. If this is not the case, walk mowing greens is usually the best solution to this problem.

• **Increased soil compaction of a green soil profile.** The argument is often made that the total weight of triplex mowers (1,100 to 1,200 lbs. with operator) causes added soil compaction of a green's soil profile. This point is debatable due to the even distribution of the weight across the three reels and the triplex mower tires. With current aerification tools and methods, this potential compaction can easily be eliminated. The only time this triplex mower weight may be a factor is when

mowing is done on very wet greens and triplex tire tracks may be somewhat visible. This is not usually a valid reason for switching to walk mowing greens.

• **Hydraulic leaks.** Unsightly hydraulic leaks on greens will always be a risk when mowing greens with triplex green mowers. Good preventative maintenance, leak detection devices, or the use of readily visible dyes in the hydraulic fluid certainly lessen the potential for excessive damage on putting greens caused by these leaks. However, walk mowing greens is the only way to insure that hydraulic leaks will not be a problem.

• **Uniformity of mowing height.** It can be difficult to keep three separate mowing units on one triplex green mower cutting at the same height and with the same quality over the course of mowing 9 or 18 greens. This is especially true when greens have been recently topdressed with sand. If quality or cutting height changes on one unit and not the other two, the difference may be visible to golfers and the green may appear to be mowed unevenly. With walk mowing, the changes that may occur are not as noticeable since the change tends to be uniform throughout the green being mowed. Proper attention to mowing quality by operators, supervisors, and mechanics



can solve this problem with triplex mowing.

● **Change in the original shape of the green.** When greens with irregularly shaped perimeters are mowed with triplex mowers, triplex mower operators tend to soften the turning radius and round the turns in areas where severe turns are required. Over a period of time much of the original design character of this type of green becomes lost as the green becomes more rounded. In severe cases, interesting hole locations and putting challenges may be sacrificed as a result of triplex mowing greens. This problem usually does not occur with walk mowing greens.

## CHALLENGES OF WALK MOWING GREENS

● **Increased cost compared to triplex mowing.** Golf course superintendents and their employers need to carefully examine the difference in costs for triplex mowing vs. walk mowing greens. Several factors affect this cost difference: size of greens and labor hours required for mowing; hourly labor costs for equipment operators; ease of maneuverability around greens and possible resulting costs for additional aerification, traffic damage repair, and additional weed control caused by triplex mowing; initial cost, ongoing maintenance costs, and projected life span of mowing equipment.

While these factors and costs vary from one golf course to another, the net savings realized by triplex mowing greens is usually in the range of \$10,000 to \$25,000 per year. For almost all golf course operations, this cost difference represents only a small percentage of the total golf course budget. This is a small price for any golf facility to pay for having the best possible putting and aesthetic greens conditions. The importance of providing consistent, quality playing conditions in areas immediately surrounding the greens should not be underestimated. Golfers expect good playing conditions for the numerous shots they will play from these areas during every round of golf.

● **Staffing limitation problems.** When considering walk mowing greens as a solution to the problems associated with triplex greens mowing, the challenge for many golf course superintendents is having daily availability of the 3 or 4 employees needed to walk mow 18 greens. When golf facilities restrict or refuse to allow employee overtime, this can present a real obstacle to walk mowing greens. One excellent solution for this problem is to mow greens with walking mowers on weekdays and mow greens with triplex mowers on weekends. This compromise tends to prevent many of the problems caused by triplex mowing from ever occurring without added un-

desired overtime labor costs. This issue is primarily a matter of convenience for supervisors and their employees. With creative and flexible scheduling, this problem can usually be solved.

Are walking green mowers the solution or the problem? For any golf facility, only the golf course superintendent and those he works for can answer this question correctly. It is our joint responsibility to carefully analyze all the relevant factors before making the recommendation to use triplex mowers or walking mowers for mowing greens at our golf facility. For most golfers, the improved quality of putting greens and the surrounding playing areas is worth the minimal investment and creative, flexible staff scheduling that walk mowing greens requires. Be open minded and objective when considering the possibility that walking green mowers may be the solution and not the problem for mowing your golf course's greens.

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Walk mowing of putting greens is the only way to totally avoid hydraulic oil leaks and damage.

