Growth regulator cuts hand-mowing time 50%

"The grass around our ponds used to be so thick and grow so tall that I'd have to take a hand scythe and wade into the water to cut it," says Dan DeMars, golf course superintendent at the Dellwood Hills Golf Club, located near White Bear Lake, Minn.

That represented quite a bit of work, since the Dellwood Hills course has ponds on 16 of its 18 holes.

When the grass finally was cut, keeping it trim presented another set of problems. "We couldn't get close enough with our tractor-pulled mowers to trim around some ponds, so we'd use a 21-inch rotary mower in those spots," says DeMars. "But even so, there were hazards. In one area, for example, we have a very steep embankment that leads down to water that's 20 feet deep. It's very dangerous working down there, at that grade. The rotary could conceivably get out of control, flip over, and go into the water, still running."

Because the time spent mowing turf represents a considerable investment to a golf course superintendent, DeMars was willing to evaluate an experimental 3M plant growth regulator, commercialized in 1978 as Embark 2-S.

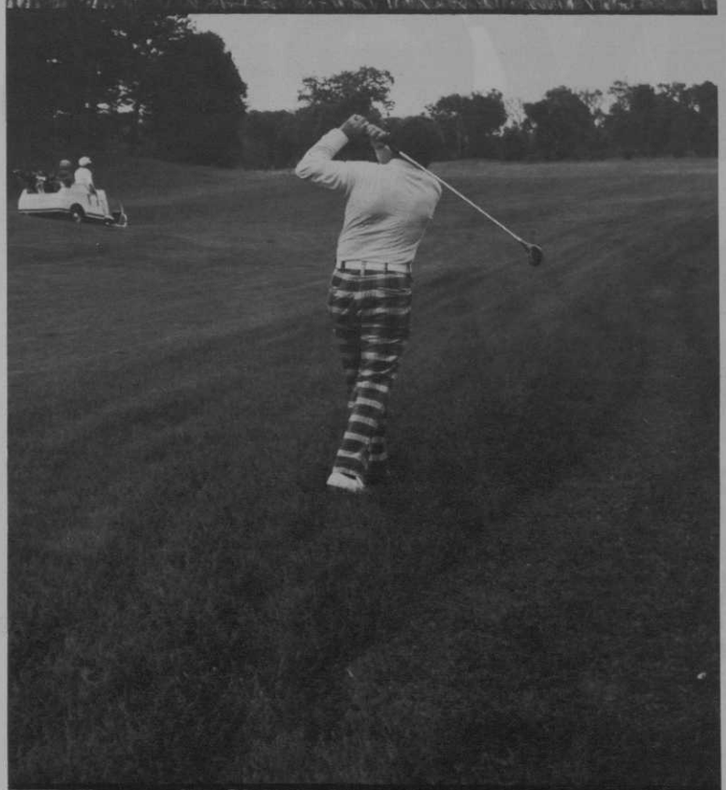
On a trial basis, he applied the experimental chemical to a few especially hard-to-mow areas on his course early in the summer of 1977. Because DeMars keeps accurate daily time cards on work done — and has for several years — he was able to determine exactly how much hand-mowing time was saved as a result of applying the growth regulator.

His records show that while 184 hours were spent hand-mowing during a typical July, only 91 hours were necessary in July 1977.

Encouraged by these results, DeMars and his associate, John David, applied the product the following spring to a semicircle of turf around each pond, so that half the area at each pond was treated.

"We'd let the turf we were going to treat grow to the height that we wanted, then we'd apply the regulator," says DeMars. "We'd let the grass grow

Dellwood Hills Superintendent Dan DeMars (center), John David, and a 3M representative compare treated and untreated turf after application of growth regulator.



Strip of tall turf in center of photo was untreated. Turf at right, treated with Embark, remained at desired height for 8 weeks.

This unlucky golfer's ball rolled just a few inches past strip of turf that was treated with growth regulator.

for another 3 to 5 days, then cut it smoothly. The grass virtually stayed at the cutting height for the next 6 to 8 weeks."

TIME SPENT HAND-MOWING AT DELLWOOD HILLS GC

	typical year	1977	1978
June	176	83	40
July	184	91	50
August	117	99	33
Yearly total	558	383	191

Again, time comparisons were impressive. While 91 hours were spent hand-mowing in July 1977, only 50 hours were necessary in July 1978 when half the turf around each pond was treated.

In mid-summer, when he noticed the effectiveness of the product on the treated grass around the ponds, DeMars made an additional application, this time on the remaining untreated grass surrounding the ponds.

As a result, his records show that instead of the 117 hours spent hand-mowing in a previous, typical August, and the 99 hours spent in August 1977, only 33 hours were required in August 1978.

What is even more impressive about the reduction in hours is that the summer of 1978 was especially rainy.

With the growth regulator, the total time spent hand-mowing in a summer was reduced from 558 hours in a typical year to 383 hours in 1977 and 191 hours in 1978 — a reduction by one-half from 1977 to 1978.

If a conservative figure of $8 per man-hour is used (for labor and equipment costs), and if that figure is multiplied by the nearly 200 hours saved in 1978, that represents an approximate savings of $1,600. Subtracting the cost of the plant growth regulator and time used to apply it, there is still a savings of some $1,350.

"I work on a very tight budget," says DeMars. "And I can certainly use the money I saved for other projects. Besides, now my crew can do more creative things around the course, like building new paths."

According to a 3M spokesman, the cost of the product "varies with quantity, starting at a suggested list of $150 per gallon for 1 to 4 gallons, $145 for 5 to 95 gallons, etc. Perhaps most meaningful is the average cost of around $28 per acre." The product is a liquid that is mixed with water in a ratio of 1½ pints to 15 to 50 gallons of water; 4 pints if used on bermudagrass.

You can apply the growth regulator with a variety of conventional types of spray equipment with calibrated nozzles to assure uniform and proper coverage. Embark is labeled for Kentucky bluegrass, tall fescue, and common bermudagrass, but has shown growth suppression on some other species, the spokesman said. It is not labeled for use with other chemicals.

Since turf repairs itself from wear via growth, this product which dramatically slows the growth is not recommended for high-traffic areas. It isn't seen as a general replacement for mowing, 3M says, but as a way to reduce the more time-consuming and dangerous mowing.

Was the treated turf as trim as it was when hand-mowed? Says DeMars, "I'm very particular. You can spend a lot of time taking care of the fairways, but if you don't keep the edges trimmed, the whole effect is spoiled. I'm fussy about the tuff being trim *everywhere*, all summer long. That's important to me. And the treated turf was as trim as I wanted it to be."

Regarding plans for 1979, DeMars adds, "We'll apply the growth regulator to all the turf around the ponds, like this year. In addition, we'll use it to control the trim around the trees so we can cut out the time spent hand-mowing there." □