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**Bull Sheet** printed by Ever-Redi Printing, 5100 East Ave., Countryside, IL 60525.

The **Bull Sheet** is published once a month. All articles are required by the 10th of the month to make the next issue. Advertising is sold by the column inch, by the quarter page, half page, and by the full page. All artwork to be finished and in black and white. Circulation is over 600 issues per month.



## President's Message

**by Bruce R. Williams, CGCS  
President, MAGCS**

Our membership has spoken and your Board has heard you, loud and clear. Our recent MAGCS Survey gave the Class A and B members of our association an opportunity to present their views on the current state of the association. Your Board values this input and will develop our mid-range and long range plans based on the feedback we have gotten. About half of those receiving the survey returned them. In terms of statistical analysis this is a very relevant response. In addition to the multiple choice questions in the survey we left space for additional comments. A summary of those comments was printed in last month's **Bull Sheet**. I feel as though it would be appropriate to respond to some of the comments at this time.

Employment relations is an area in which we will never be able to make everyone happy. Unfortunately there is only one person who eventually is hired by a golf course after going through a list of many candidates and a handful of interviewees. The procedure by which a club chooses to select a Superintendent is up to each club and we, as an association, can only give the clubs guidelines on hiring Superintendents. We cannot force clubs to use our mailing service on job openings but we make every effort to provide that service to each golf course. Another sore spot with our members is the hiring of "outsiders" for Chicago area jobs. Upon close investigation there are really a small number of native Chicagoans in the ranks of the MAGCS. Most of our members have migrated here from other parts in the country at an earlier time in their career. Likewise we all have the freedom to relocate to any other spot in the country should we choose to do so. It is not surprising that many job applicants come from outside our area. After all, collectively we have the best maintained golf courses and quality of Superintendents in the country. Is it any wonder why someone would not want to be a part of that?

The Arrangements Committee, led by Dennis Wilson, has us in a position that we are now scheduling meetings for the 1991 calendar year. Our survey indicated that almost 50% of our members would consider hosting a meeting of the MAGCS in the future. Dennis is more than happy to make arrangements with any club. We try to have a good mix of private & public courses with a good geographical spread. While the cost of our meetings has risen over the past decade, we feel that the costs are in line for what we offer. When you consider that you receive lunch, golf, carts, drinks, hors d'oeuvres, dinner, prizes and education at a cost that ranges from \$45 to \$55 our meetings are indeed a bargain. Our survey indicated that the quality of our meetings has been good and the prices have been fair and reasonable. Without the generosity of our commercial sponsors we could not provide you with the type of meetings we have

at the cost you are currently paying. Thanks to Dennis and all of our great sponsors.

Several members responded that they were pleased to see a greater involvement in the association by more of our members. As your President, I have put a large emphasis on member involvement in our committee system. Each committee is now made up of a handful of members that do not serve on the board of our association. Each committee is chaired by one of our board members. The committees have met on several occasions giving direction to the MAGCS Board of Directors. We have established a broader base for running our association. At the same time we are able to develop other individuals for leadership roles in the association. This is very important when it comes to election time each year.

Due to the limitation of space a survey can only ask so many questions. Several members asked if we could include specific questions about fungicide & fertility programs in the future. I feel that the appropriate vehicle for the collection and dissemination of that information should be the new bulletin board service "Turftalk" which is being developed by Russ Fink, Supt. at Tamarack Golf Club. While it is hard to compare budgets of clubs, likewise it is difficult to compare fertility or fungicide programs. By submitting information to "Turftalk", each individual could pick and choose the data he requires for comparison. In this way you can compare courses in your own geographic location, club type (public or private), and level of conditioning required.

The level of education offerings is at an all-time high for the MAGCS. Don Cross has worked diligently with Joel Purpur to provide superb speakers and seminars for our association. Our survey showed that the members recognize the importance of our educational sessions. We know that it is difficult to have a full hour of speakers during the stress months so we have modified our speaker schedule and are offering a beefed-up educational offering in the off-season. I am confident that Don and Joel will continue to bring us a high quality educational program throughout the year.

The most gratifying portion of the comments from our survey was the positive criticism and kind compliments offered by our members. The following terms come to mind: "excellent association", "I'm proud to be a member", "great organization", "keep up the good work", "very nicely done", and "super association". Your board appreciates all of the comments that we received. We hear you loud and clear.

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**Kenneth R. Zanzig**

## **Director's Column**



It's hard to believe that after a couple more weeks of "The Dog Days", it should be smooth sailing and another season under our belts. Hopefully everyone took some time to smell the roses.

I think our profession of Golf Course Management has a great future because of the increasing number of courses with a shortage of turf graduates. I remember seeing about ten openings for assistants last spring. Even though the demands and standards for golf course maintenance are very high, salaries are also on the increase.

It's already been almost three years since coming to River Forest Country club where Ed Stewart retired after being Superintendent for over 35 years! I feel extremely lucky with my situation here. I've seen situations similar to mine where either the retiring Super won't let go of the reins, or won't give any input what so ever. Ed and Gene Stewart only give good constructive criticism. I can tell when it's coming when Ed says, "Just a suggestion...", or "Question?". Ed and Gene will be moving this year to Lake Wildwood, down around Peoria.

Ed was President of the MAGCS for two years in the late 50's, and also ran for office of the GCSAA. Myself and the MAGCS wishes the Stewarts the best of luck, you'll be greatly missed.

**Joel Purpur, Supt.  
River Forest Country Club**



*Gene and Ed Stewart*

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## Measurable Increases in Fairway Bentgrass Populations Associated with Lightweight Mowing

Randy Kane, U of I/CDGA Turfgrass Advisor

Dave Ward, Supt., Olympia Fields CC

Randy Wahler, Supt., Knollwood Club

Since the late 1970's and early 80's, increased attention has been focused on maintenance practices to improve manageability, playability, and aesthetics of fairways. These newer management strategies, the cornerstone of which is "lightweight" mowing, not only increases the quality of the playing surface, but also appears to favor bentgrass competitiveness over **Poa annua**. Dramatic increases in percentages of bentgrass in fairways have been reported after only one or two seasons of lightweight mowing.

Much discussion and experimentation among area superintendents has ensued, especially in regard to: which types of mowers should be used; whether to collect clippings; timing and amounts of irrigation, fertilization, and aerification; use and abuse of growth retardants; and other issues that may impact **Poa annua** survival, seed production, and competitiveness with the desired bentgrass.

The consensus at this time is that you can indeed see increases in bentgrass with changes in management. But how much of an increase in bentgrass can you get? And, how soon can you get it? In order to try to answer these two questions, we began a study in early 1986 to measure increases in bentgrass populations in fairways that were previously mowed in gang mowers, but were subsequently mowed with lighter weight units (triplex or pentaplex).

### Methods

Two Chicago-area country clubs were chosen where mixtures of bentgrass and **Poa annua** were indigenous in fairways, and where superintendents had recently (1983-86) introduced lightweight mowing and other management strategies to reduce **Poa** competition. Also, the clubs were selected to represent two different environmental and geographical areas.

To the north lies the Knollwood Club in Lake Forest, which is near the lake shore and exposed to cooler temperatures at various times of the year. At Knollwood, superintendent Randy Wahler has converted a number of fairways using Roundup, and has been on lightweight mowing of all fairways since 1983 or '84 (Jake HF-5's). Certain fairways at Knollwood have received treatments of Cutless and TGR as well.

On the south side, superintendent Dave Ward then at Ravisloe CC began lightweight mowing of fairways (GM 3's) on par 3s and decks in 1982. He added a few full fairways in 1984 and all fairways were used on the fairways during the study, as well as little or no N.

Two separate methods were used to assess the increase in bentgrass in fairways over the next two seasons. First, a visual assessment of percentage bent vs. **Poa** was made on large scale areas of fairways. Several candidate fairways were selected at each club, than % bent was estimated on rectangular segments (plots) of fairway delineated by sprinkler head locations. Most plots were 6-8000 sq. ft. Ratings were made in spring of '86 and again in spring of '88.

The second method used was to map and measure individual patches of bentgrass within certain defined, relatively small plot (cont'd. page 6)

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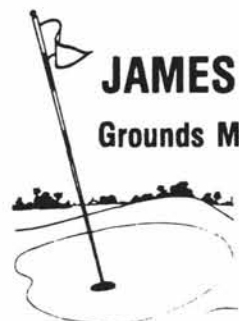
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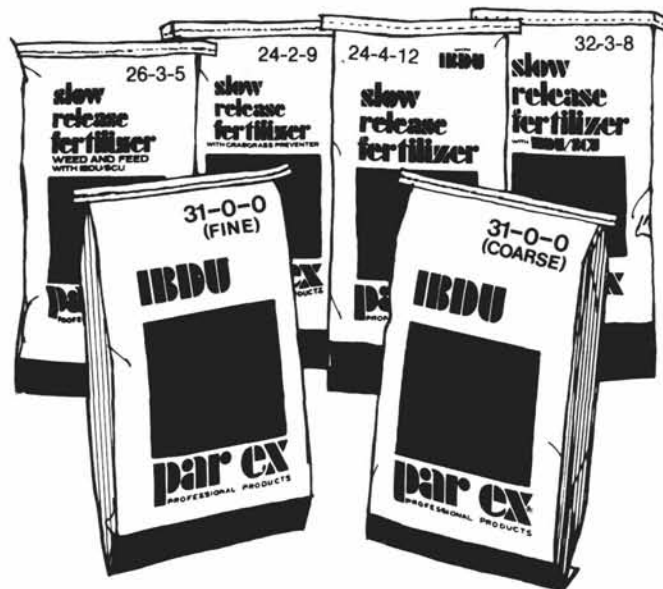
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(Lightweight Mowing cont'd.)

areas. These small plots were located near permanent markers such as sprinkler heads or valve boxes, and were mapped on clear plastic sheets. The sheets were marked so that they could be replaced in the exact same location season after season. In this way, changes in the size and shape of bent patches could be monitored over time, and the appearance of new patches could be detected. Patches were marked in the spring of '86, '86, and '88; patches were much more visible and easy to mark in spring because of color differences between bent, *Poa*, and rye.

Surface areas of the mostly irregular shaped patches were estimated using the average radius technique commonly used to measure putting greens and other irregular surfaces on the golf course:

$$\pi \cdot \left( \frac{\sum r(1..n)}{n} \right)^2 = S.A. \quad \text{where } r = \text{radius} \\ n = \# \text{ of radii measured}$$

where  $r$  = radius

$n$  = # of radii measured

### Results

A common measurement for superintendents is to estimate percent bentgrass of entire fairways (i.e. looking at the big picture). Table 1 shows over all results from the four Knollwood and five Ravisloe fairways that were studied. Note the 11.5% average increase in bentgrass for the 2 year period, also the amount of variability observed (6-22% increases).

TABLE 1. Large Area Visual Assessments - Entire Fairways, 1986-88.

Percent Bentgrass					
Fairway #	notes	1986	1988	change	
KWD 8	cutless	66	79	+13	
11	no pgr	68	74	+6	
16	cutl./tgr	62	69	+7	
18	cutless	65	78	+13	
RAV 2	1st year	58	73	+15	
8	1st year	60	69	+9	
10	3rd year	68	75	+7	
16	1st year	57	79	+22	
17	1st year	54	71	+17	
18	3rd year	73	79	+6	
mean		63.1	74.6	+11.5	

note: values for 1986 are the initial ratings  
Knollwood #16 received Cutless in '86 and Scotts TGR in '87  
Ravisloe #10 and #18 had been lightweight mowed for two years prior to '86; other fairways were in their 1st year of lightweight mowing

Also of note were the apparent effects of Cutless applications on Knollwood #8 and #18 vs. untreated #11. Knollwood #16 decreased in percent *Poa annua*, but increased in ryegrass. Fairways at Ravisloe that were in their 3rd year of lightweight mowing at the beginning of this study showed less increase in bentgrass compared to fairways in their 1st year of lightweight mowing. However, the initial bentgrass populations of fairways #10 and #18 were higher, which could account for this observation. (As % bent increases over time, further increases are slower and more difficult?)

Because of the variable nature of the turf population within a single fairway, we broke down the ratings within individual fairways as described in Figure 1. Tables 2 and 3 contain the results of these population estimates. Note that some areas increased by as much as 20-25% while other areas decreased by 7-10%. Again, on average, we saw an approximate 10% increase in bentgrass after 2 years of study. However, site to site variability is quite high, and in certain areas increases in bentgrass can be more dramatic than five or ten percent.

(cont'd. page 8)

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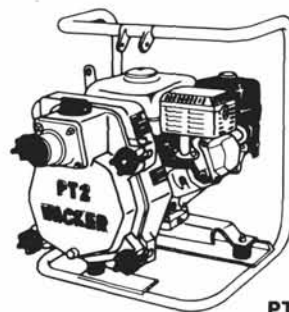
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(Lightweight Mowing cont'd.)

TABLE 2. Breakdown of Fairway Ratings - selected fairways at Ravisloe CC.

	Percent Bentgrass - Visual Ratings								
	#8 Fairway			#16 Fairway			#10 Fairway		
Site	'86	'88	% +/- <sup>c</sup>	'86	'88	% +/-	'86	'88	% +/-
turn <sup>a</sup>	42	62	+20	37	55	+18	55	67	+12
2-3	72	87	+15	57	95	+38	67	80	+13
4-5	55	60	+5	52	75	+23	67	82	+15
6-7	62	90	+28	62	82	+20	72	85	+13
8-9	57	60	+3	57	82	+25	77	77	+0
deck <sup>b</sup>	76	83	+7	76	85	+9	67	77	+10
mean	60	69	+9	57	79	+22	69	75	+6

<sup>a</sup>turn = tee end of fairway ("turnaround")

<sup>b</sup>deck = approach to green...

<sup>c</sup>% +/- = percent increase or decrease in observed bentgrass populations

TABLE 3. Breakdown of Fairway Ratings - selected fairways Knollwood Club.

	Percent Bentgrass - Visual Ratings								
	#11 Fairway			#16 Fairway			#18 Fairway		
Site	'86	'88	% +/- <sup>c</sup>	'86	'88	% +/-	'86	'88	% +/-
turn <sup>a</sup>	53	75	+22	55	67	+12	53	70	+17
2-3	67	75	+8	50	70	+20	73	80	+7
4-5	70	70	+0	57	50	-7	65	75	+10
6-7	70	60	-10	65	80	+15	63	75	+12
8-9	67	70	+3	67	80	+13	62	80	+18
10-11	57	70	+13	60	60	+0	57	70	+13
deck <sup>b</sup>	90	95	+5	77	75	-2	80	95	+15
mean	68	74	+6	62	69	+7	65	78	+13

<sup>a</sup>turn = tee end of fairway ("turnaround")

<sup>b</sup>deck = approach to green

<sup>c</sup>% +/- = percent increase or decrease in observed bentgrass populations

These dramatic increases in percent bentgrass in isolated areas are also evident when looking at the individual small plot/bentgrass patch measurements. Table 4 shows data from six such plot areas. These results include percent bentgrass (total area) for each plot and the number of patches measured. These plot areas had clearly defined bentgrass patches, but generally had lower percent bentgrass coverage at the beginning of the study

than other fairways areas. Some areas more than doubled in bentgrass coverage, up to as much as 90% bentgrass.

Note that as percent bent increased over time and patches expanded, the number of patches measured decreased, since many patches grew together ("coalesced"). Of note also is the plot that did not have a large increase in bentgrass (Knollwood 16a), but did increase in perennial rye as *Poa annua* populations decreased. The increase in ryegrass observed here may be related to use of Cutless and TGR growth retardants, which have no inhibitory effect on perennial rye.

TABLE 4. Small Plot - Individual Bentgrass Patch Measurements:

Plot #	Percent Bentgrass <sup>a</sup> (# of patches) <sup>b</sup>				Plot Area
	Spr '86	Spr '87	Spr '88		
RAV 2	42 (8)	61 (10)	91 (2)		21.2 ft <sup>2</sup>
RAV 8	31 (7)	61 (5)	90 (3)		16.3 ft <sup>2</sup>
RAV 10	55 (8)	74 (5)	88 (2)		47.6 ft <sup>2</sup>
RAV 16	41 (10)	70 (3)	86 (2)		28.0 ft <sup>2</sup>
KWD 16A <sup>c</sup>	19	20	28		39.3 ft <sup>2</sup>
KWD 16B	44 (11)	52 (9)	75 (4)		47.2 ft <sup>2</sup>

<sup>a</sup> Percent surface area covered by bent patches within a defined plot area.

<sup>b</sup> numbers in parentheses are the number of patches in each surveyed area.

<sup>c</sup> this plot contaminated by increasing amount of ryegrass - percent of *Poa annua* in plot decreased more dramatically than data indicates...

Table 5 shows data on selected individual patches of bentgrass. These numbers were included only as a summary of our observations on patches; many patches could not be followed over two years because of coalescence. Note that patch diameters increased two to three inches per year on average. These relatively small increases in patch diameter often led to as much as a doubling in surface area covered by the patch.

(cont'd. page 10)

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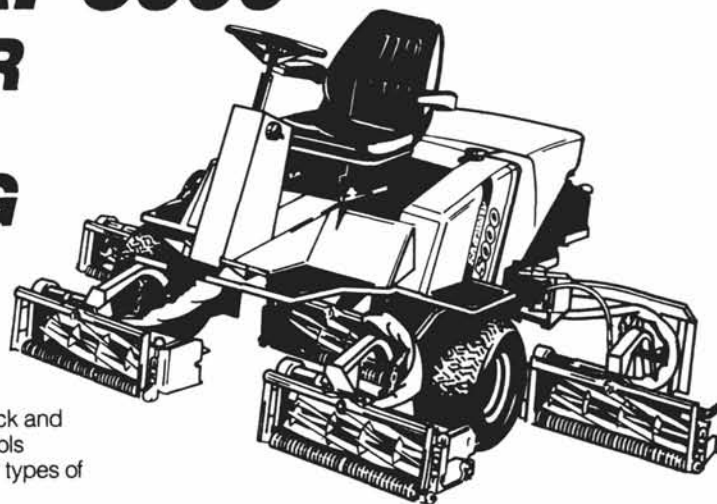
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TABLE 5. Increase in Diameter of Selected Individual Patches

patch #	patch diameter (in)			patch area (in <sup>2</sup> )		
	Spr 86	Spr 87	Spr 88	Spr 86	Spr 87	Spr 88
1	14.2	17.6	21.0	160	242	350
2	12.5	15.0	18.0	123	179	265
3	11.5	15.6	16.7	105	192	219
4	8.7	12.0	14.4	60	114	163

note: a 2 - 4 inch increase per year in patch diameter was often seen before patches coalesced.

### Summary

It appears that the claims of increased bentgrass populations following lightweight mowing have not been exaggerated! In some fairway areas the rapid increase in bentgrass was quite surprising. The reader should note that there were no control areas or check plots that were mowed with heavy gang mowers. Therefore, the observed increases in bentgrass may have been influenced by hot, dry weather patterns of 1986-88 or other environmental factors that we could not detect. In other years, we may not have seen these increases in bentgrass; for example, the weather in '89 may have been more conducive to *Poa annua*, but we have no data for this.

Also, other management factors probably play a role in increasing bentgrass populations. For example, at Ravisloe, very little fertilizer has been added to the fairways (virtually no N) for the past few years, and irrigation and aerification practices have been changed. Also, as mentioned at Knollwood, the use of pgr's may have had an effect. In any case, we have seen from this study what the potential for increasing bentgrass populations can be, given appropriate management inputs and favorable environmental conditions.

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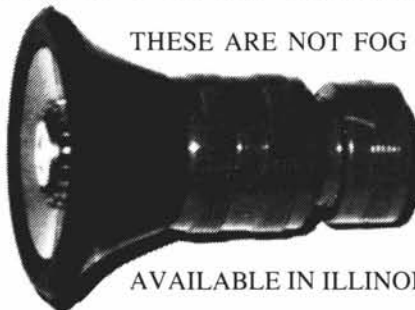


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