

Four Popular Myths About Turf

By Dr. Wayne R. Kussow, Department of Soil Science University of Wisconsin-Madison

MYTH #1: Conversion of farmland into turf areas increases surface and groundwater contamination with sediment, nitrogen and phosphorus.

This myth persists because the public is uninformed, misinformed, or certain groups choose to ignore current scientific evidence. The facts are that while the amounts of runoff water from agronomic crops and turf may be similar, losses of sediment, nitrogen, and phosphorus are worlds apart. This is evidenced by the research data presented in Tables 1 and 2. The data show:

- Sediment losses from agronomic crops are measurable in terms of tons per acre. Losses from turf range from zero to 15 to 20 pounds per acre.
- Nitrogen in runoff water totals 100 to 200 times more for agronomic crops than for turf, even though annual nitrogen fertilization rates for turf often equal or exceed those for agronomic crops.
- Phosphorus in runoff water averages 1 to 6% of the amount from agronomic crops.
- Nitrogen leached each year from cropland often is in the range of 20 to 40 lb/acre. The figure for turf is 0.2 to 2.2 lb/acre.
- Nitrate-nitrogen concentrations in leachate from agronomic crops often exceed the U.S. drinking water standard of 10 mg L-1 by 25 to 100%. Nitrate-nitrogen concentrations in leachate from turf are commonly 35 to 95% below the drinking water standard.

MYTH #2: Subsoil compaction during building construction and the layering of topsoil over subsoil for turf establishment greatly increases runoff and must be regulated.

TABLE 1. Runoff loss of water, sediment, nitrogen, and phosphorus from agronomic crops and turf.

References	Situation	Water runoff	Sediment	Nutrient loss	
			loss	Nitrogen	Phosphorus
		inches/yr	T/M/yr	lb/A/yr	
Burwell et al. (1975)	Continuous corn or corn-oat-hay rotations 10-year study	1.87 to 5.2 Avg 3.14	<0.1 to 7.4 Avg. 4.2	4 to 20 Avg. 32	<1 to 17 Avg. 10
Kussow (1995)	Simulated urban lawn; compacted subsoil, etc. 2 years	1.02 to 1.91 Avg. 1.35	0	0.20 to 0.28 Avg. 0.24	0.21 to 0.59 Avg. 0.32
Gross et al. (1990)	Kentucky bluegrass— T. fescue lawn 2 years	0.05 to 0.36 Avg. 0.20	0.001 to 0.007 Avg. 0.005	0.15 to 0.16 Avg.0.16	0.005 to 0.026 Avg. 0.016\

TABLE 2. Leaching of nitrogen from agronomic crops and turf.

		Nitrogen leached		
Reference	Situation	Total Amount		
Logan et al. (1980)	Numerous crops and years Midwest USA	21.0	20.5	
Randall et al. (1995)	Continuous com 11 years Minnesota	37.6	12.7	
Kussow (1995)	Simulated urban lawn 2 years	2.2	2.8	
Gross et al. (1990)	Lawn 2 years Maryland	0.17	0.94	
Mitner et al. (1996)	Lawn 2 years Michigan	1.4	0.47	

The fact is, in climates such as that in southern Wisconsin, 60% or more of the annual runoff from turf is from frozen soil (Table 3). During the growing season, the influences of subsoil compaction and topsoil layering on runoff are negligible except when 2 inches or more of rain falls

on already wet soil. The net results are that subsoil compaction and topsoil layering have no significant or consistent effects on runoff or nitrogen and phosphorus losses (Table 3).

Particularly noteworthy in Table 3 are the data that show that, on average, more than 60% of the nitrogen and 80% of the phosphorus in runoff water from turf comes when soil is frozen. This observation is consistent with reports that the phosphorus load in urban stormwater is primarily in snow melt. A secondary flush of phosphorus is associated with leaf fall in autumn.

MYTH #3: Natural organic fertilizers are less contaminating than "synthetic" fertilizers.

As noted by other researchers, the data in Table 4 show that nitrogen and phosphorus losses from turf fertilized with natural organic or synthetic are equally low and do not differ significantly.

The same holds true for liquid versus dry forms of fertilizer (Gross et al., 1990).

(Continued on page 43)

Greensmix Pulls The Plug On The Myth That All Topdressing Sands Are Created Equal.

Don't be fooled by thinking that all topdressing sands are created equal.

They're not...not by a long shot. Non-dried sands may contain up to 8% water. **Greensmix** Kiln-Dried Topdressing Sand is dry sand. That means you can use it immediately. And it's sterilized, so there's never anything growing in it. We also pre-test Greensmix Kiln-Dried Topdressing Sand to ensure consistent gradation with each load. We'll even include sand analysis test results with your order. Don't get stuck with some watered-down topdressing sand. Use the best. Greensmix Kiln-Dried Topdressing Sand.



A DIVISION OF FAULKS BROTHERS CONSTRUCTION INC.

- Rootzone Mix
- Top Dressing Mix
- Top Dressing Sand

- Cart Path Material
- Decorative Stone
- Horticultural Planting Compost
- Soil Amendments: sphagnum peat moss; reed sedge peat moss; peat humus

(Continued from page 41)

MYTH #4: Banning fertilizer use on turf in urban areas will protect or improve surface and groundwater quality.

The fact is that failure to fertilize turf leads to declines in ground cover and stand density. After a single year without fertilization, runoff from unfertilized turf may exceed runoff from fertilized turf by 30% or more (Table 4). This, in turn, leads to more runoff loss of nitrogen and phosphorus from unfertilized than fertilized turf.

Nitrogen leaching from turf may be increased somewhat by fertilization (Table 4), but clipping management has even greater effects. Mulch mowing, as compared to clipping removal, may increase the amounts of nitrogen leached by 50% or more.

References

Burwell, R.E., D.T. Timmons, and R.F. Holt. 1975. Nutrient transport in surface runoff as influenced by soil cover and seasonal periods. Soil Sci. Soc. Am. Proc. 39:523-528.

Gross, C.M., J.S. Angle, and M.S. Welterlen. 1990. Nutrient and sediment losses from turfgrass. J. Environ. Qual. 19:663-668.

Kussow, W.R. 1995. Soil disturbance effects on nutrient losses from turf. Wis. Turf Research: Results of 1994 Studies 22:95-100.

Kussow, W.R. 1997. Runoff and leaching losses of nutrients from Kentucky bluegrass turf. Wis. Turf Research: Results of 1996 Studies 24:4-8.

Logan, T.J., G.W. Randall, and D.R. Timmons. 1980. Nutrient content of tile drainage from cropland in the North Central region. Ohio Agric. Res. Develop. Ctr. Res. Bull. 1119.

Mitner, E.D., B.E. Branham, E.A. Paul, and P.E. Rieke. 1996. Leaching and mass balance of 15N-labeled urea applied to Kentucky bluegrass turf. Crop Sci. 36:1427-1433.

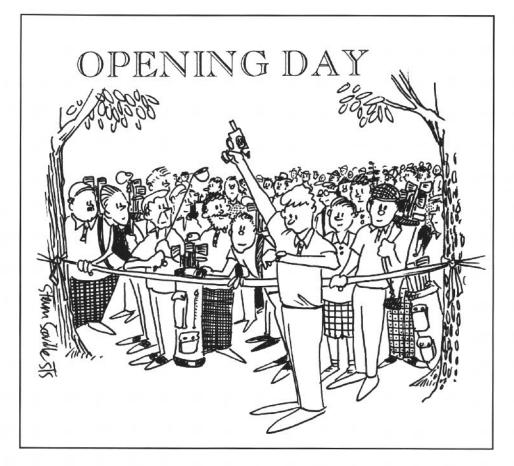
Randall, G.W., and V. Iragaverapu. 1995. Impact of long-term tillage systems for continuous corn on nitrate leaching to tile drainage. J. Environ. Qual. 24:360-366.

TABLE 3. Subsoil compaction and topsoil layering effects on runoff loss of water, nitrogen and phosphorus from a simulated urban lawn in southern Wisconsin (Kussow, 1995).

	Runoff water		Nitrogen loss		Phosphorus loss	us loss
Soil treatment	Summer	Winter	Summer	Winter	Summer	Winter
	Inches/yr			/yr		
Subsoil						
Not compacted	0.60	0.96	0.20	0.57	0.09	0.85
Compacted	0.44	0.84	0.21	0.25	0.08	0.42
Topsoil						
Not layered	0.48	0.83	0.26	32	0.07	0.68
Layered	0.51	0.92	0.14	0.25	0.09	0.45

TABLE 4. Fertilization and clipping management effects on runoff and nitrogen and phosphorus losses from a southern Wisconsin lawn (Kussow, 1997).

	Clipping management		Nitrogen		
Fertilization		Water	Nitrogen	Phosphorus	leached
		inches/yr	lb/A/yr		lb/A/yr
None for	Mulched	1.55	0.17	0.41	3.2
2 years	Removed	1.60	0.17	0.46	1.8
174 lb N/A/yr	Mulched	1.04	0.11	0.25	4.9
As Milorganite 6-2-0	Removed	1.15	0.14	0.20	1.5
174 lb N/A/yr	Mulched	1.07	0.13	0.25	3.0
As Scotts Turf Builder 29-3-8	Removed	1.53	0.14	0.32	1.5





A New Solution For An Age Old Problem

By Oscar Peterson Assistant Golf Course Superintendent Blackhawk Country Club

It was in late fall when I talked to Ric Lange, superintendent at Meadowbrook Country Club in Racine, about repainting Blackhawk's cast aluminum ballwashers. This was the first time that I had heard the words powder coating. Powder coating is a new alternative to solvent based painting. The process bakes a powder (ground resin plus pigment) onto the part. Given the alternative method, which was automotive paint either sprayed or brushed on, it sounded very appealing to me.

It turns out that quite a few things around the maintenance building are powder coated. Most office furniture is powder coated as well as some of Ransome's equipment. In fact, if you buy anything from Par-Aide in 1997, chances are it has been powder coated. Anything that can withstand high heat and conduct electricity can be powder coated. It is a growing industry.

Here is a brief explanation of the process. The part must be clean and free of any rust or previous paint. Next, the part is prebaked for a period of time at 450 degrees F. The grounded part is sprayed with an electrostatically charged powder. The charge keeps the powder in place and distributes the exact amount

needed. The part is then cured at 450 degrees F again. This baking makes the powder melt and "coat" the part.

Powder coating is becoming popular because it can actually be cheaper than conventional painting, while providing a superior finish. There is no overspray loss because the excess powder is collected and reused. There is no reason to ventilate the building which saves on heating and cooling costs. The finish has the hardness of automotive paint without the runs, drips, and brush marks associated with liquid paints. Ric claims powder coating lasts

Terra

Proudly Serving the Turf Industry in Wisconsin

Terra's full line of turf industry products includes:

- Herbicides
- Insecticides
- Fertilizer
- Grass Seed
- PGRs

- Fungicides (Including Thalonil™ 90DF and 4L)
- Colorants
 (Including Terramark[™] SPI and Terramark Lake Colorant)

For the products, services and advice you need, **Talk to Terra**



Terra International, Inc. • 3525 Terra Court • Sun Prairie, WI 53590 Conrad Stynchula CGCS • (800) 456-0948 (office) • (608) 235-4999 (mobile)

longer than the automotive paint he was using. He is able to get by with waxing his ballwashers yearly, and only recoats every three years.

After learning more about the whole process we decided to give it a try at Blackhawk. Our first task was getting the 10+ years of paint off of our parts. It could either be blasted off or chemically removed. I was unable to locate any places or products that could chemically strip off our finish; blasting the paint off was our only alternative. When it comes to having your parts blasted—beware and shop around!! I couldn't believe the differences in prices out there.

The preferred way to strip aluminum parts is bead blasting; small plastic beads blasted onto the surface chip away the paint. These beads are round and resilient. They will not open the pours of a cast part and they provide a very smooth finish. The only problem is that these beads are then filtered and reused making it expensive. As a result, this method isn't the most economically feasible.

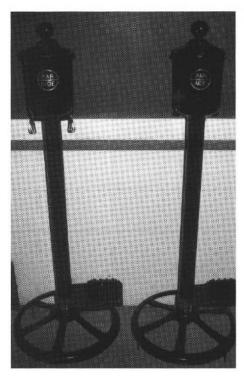
We opted to have our parts sand blasted. The sand works faster than beads and can be discarded or reused as decided by the operator. The size, shape and how hard the sand is thrown determine how rough the finish will be. Generally the smoother the finish, the longer it takes and the more expensive it is.

The powder coating is extremely thin and will not hide any surface imperfections so the smoothest finish possible is the real goal. It is important to find a happy medium between price and finish. The people who sandblasted our parts were experienced with powder coating so they knew how to provide the best finish while keeping the cost low.

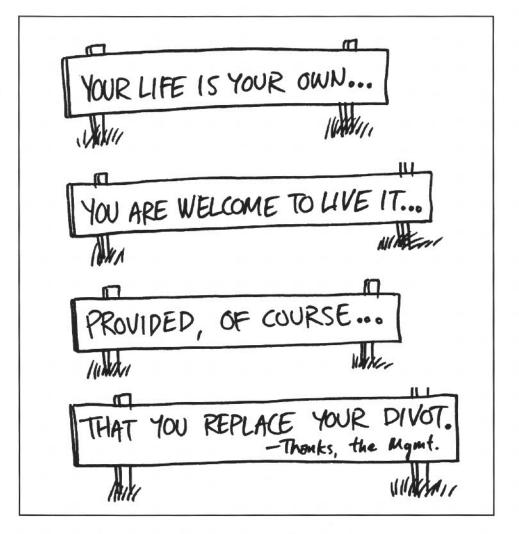
In order to compare, I dropped parts off at two different places to be coated. The price was about the same at around \$13 for a complete ballwasher. But the finishes, however, were drastically different. It turns out that casted aluminum releases gas when it is heated. If it isn't prebaked properly the gases will release through the coating, creating bubbles in the finish. One company knew about this and the other did not. Needless to say we picked the more experienced company who knew what they were doing.

I arranged to have all of our parts sand blasted and dropped them off on a Monday. At the same time, I arranged to have the parts coated. So that Wednesday I picked the parts up and dropped them off at the powder coaters. They were done that Saturday, a total of 6 days. The longest part of this whole job was doing all of the leg work!

Overall, our 28 ballwashers and 12 litter caddies were blasted and painted in one week for \$1,234. This is probably cheaper than we could have done it ourselves when considering they should last for three years. We are extremely pleased with the end result. The pieces all look brand new. Thanks to Ric we were able to spend a minimal amount of time and money on our tee equipment, while providing a fantastic finished product. I encourage the rest of you to discover powder coating and see the results for yourself! W



The ballwasher station on the left is new; the one on the right was sand blasted and powder coated. The refurbished station looks new despite its age of 25 years!





ANOTHER LOOK AT WISCONSIN'S GOLF HERITAGE

By Gene Haas

Editor's Note: Why go 'across the country' when we have an excellent reprint piece right here in Wisconsin? Again this spring, the WSGA's Wisconsin Amateur Golfer's NEWSLETTER is jam packed with news and information about everybody involved in golf in Wisconsin. It is an epic publication, and it is singular in its effort to record the annual history of amateur golf at the state level. Gene Haas and the WSGA staff deserve high praise for the great job they do with it.

One article in particular caught my attention as I was paging through the magazine at the USGA regional conference in Kohler. Gene took time to both look back and look ahead at the great players who play the courses we manage. It is an excellent historic piece that is both interesting and fun reading. It is reprinted here with permission of the author, and appeared originally on pp. 12 and 13, Volume 20, No. 1 of Wisconsin Amateur Golfer's NEWSLETTER.

Recently, I was reading a review of the golf history of the State of Georgia that appeared in an article in the *Georgia Golf Magazine*. It was written by Mike Waldron, the Georgia State Golf Association Executive Director, and it listed some of the great players that came out of the Georgia golf program. Some of those listed were Bob Jones, Charlie Yates, Danny Yates, Davis Love Sr. and Jr., Allen Doyle, David Duval, Rosie Jones and a host of others. Certainly Georgia has a great tradition of golfing greats.

In the spring of 1995 on a trip to Nashville, I stopped at the Tennessee Golf Association executive offices located in Franklin, TN. This old antebellum mansion was renovated and expanded to house the TGA's offices, Junior Golf Foundation, and the newly created Tennessee Golf Hall of Fame. Some of the inaugural inductees were legendary golfers Cary Middlecoff, Mason Rudolf and the late veteran

golf writer **Waxo Green**, along with other well known Tennessee golf personalities.

A recent visit a few months ago to the Texas Golf Hall of Fame at the Woodlands Golf Resort, located about 20 miles north of Houston, was most impressive. This edifice, containing about 15,000 sq. ft. of exhibit space, displays many photographs, portrait paintings, golf artifacts and other historical books and items that help tell the story of the game as it grew in Texas. There is even a short 15 minute film that quickly shows off some of the Texas greats and renders a hasty education of the growth of the game —Texas style.

A quick perusal of their Hall of Fame members is most impressive, starting with Byron Nelson and Ben Hogan, two contemporaries who are considered by most golf aficionados as arguably the greatest of all time. Both Nelson and Hogan started their pro careers in the early 1930s, along with another all-time Texas great, Ralph Guldahl. These three players would win over twenty major golf titles in their careers. Other Texas title-holders in the Hall of Fame are Ray and Lloyd Mangrum, Jimmy

Demaret, Bo Wininger, Billy Maxwell, Gus Moreland, Jack Burke, Sr. and Jr., Don Cherry, Homero Blancas, Marty Fleckman, John Mahaffey, and many others. Yes, Texas can certainly be proud of its golf heritage.

A quick glance to some of the other warm-weather climate areas such as Florida, California, Louisiana, Arizona, etc., which exhibit great golf-breeding grounds, shows that California has had many great ones—Ken Venturi, Harvey Ward, Billy Casper, Johnny Miller, Crosby and Hope, Mark O'Meara—and now perhaps the greatest-to-be—Eldrick "Tiger" Woods.

The purpose of this article isn't to exploit the golf talents of other states but to analyze how Wisconsin stacks up to the rest of the country. It's been pretty much of a written rule that the Green Bay Packers have a great football program, especially when the weather hovers around the zero temperature mark. We're also near the top in the number of deer killed each year and the world's record muskie was "fished" out of a northern Wisconsin lake. Golf? you say! Well, Wisconsin certainly hasn't



been on the lips of golf writers throughout the country—but, perhaps it should be.

A year ago we were visiting a central Florida golf resort and a major men's collegiate golf tournament was in progress. So, I ventured over to the site and introduced myself to some of the coaches hanging around the first tee as being from Wisconsin. For some reason when I mentioned Wisconsin all of the coaches' heads lifted and turned my way. They came over and one-by-one wanted to know if we had any young collegiate prospects coming up the ranks. They acknowledged some of the finer collegiate players of the past few years. i.e. Steve Stricker, J.P. Haves, Dave Miley, Mark Wilson, Tim Cantwell. Ben Walter, Ron Wuensche, Mario Tiziani, and on, and on, and on! And now they're looking for more! This is far removed from the statement of a few years ago made by a former USGA Executive Director, who used Wisconsin as an example of where golf is not considered to be "big time".

A recent "overhaul" of the WSGA offices saw the Hall of Fame area being relocated. This afforded me another opportunity to glance over some of the legends of the past—and present.

The first Hall of Fame inductees in 1964 were great amateurs, W.P."Ned" Allis of Milwaukee CC; Billy Sixty, Sr. of Blue Mound G & CC; Wilford Wehrle of Racine Meadowbrook CC; and Lynford Lardner of Milwaukee CC, who later

became a president of the USGA. In 1967 Madison's gifted golfer **Steve Caravello** was elected, along with **Ray Billows** of Racine CC, who twice was a finalist in the USGA Amateur. In 1968 **Harry Simonson** of Maple Bluff CC, considered by many to be Wisconsin's No.1 golffanatic of all-time, was elected. **Bowden Davis** of Tripoli CC and **Burleigh Jacobs**, **Jr.** of Westmoor CC, joined the Hall of Fame in 1970.

It wasn't until 1971 that professionals, public links players and female golfers were allowed to be inducted. This created a "catch-up" and in 1975 four all-time greats were elected. They were professionals Manuel de la Torre of Milwaukee CC, considered by many as one of the greatest teachers in the history of the game; Francis Gallet of Blue Mound G & CC, who was one of the pioneer golf professionals from Scotland who taught, crafted clubs and marketed the game to many; Johnny Revolta of Tripoli CC, who won the PGA Championship in 1935 and was one of the leading tour players in the midthirties; and Joyce (Ziske) Malison, who helped develop the LPGA tour as one of the leading players during the 1950s.

Other notable inductees were Jim Milward of North Hills CC, in 1977, who followed the ranks of the PGA tour in the mid- and late thirties before he settled down to the duties of a club professional. In 1978 all-time great Bob Brue of North Hills CC and Ozaukee, was elected. Brue has won more major titles in Wisconsin than any other golfer and recently "concluded" a ten year tour

on the PGA Senior Tour, where he consistently was in the Top-Twenty Senior Tour players.

Thomas "Tommy" Veech of North Hills CC, was inducted in 1979 after a tremendous career as an amateur and professional golfer. In 1980, the legendary "guru" of public links golf. Archie Dadian of Whitnall Park GC, became the first publisher to be inducted. Archie was honored as the USGA's public links player of the decade (1970s) having placed 2nd twice, 3rd once, and with two other top five finishes in the USGA Amateur Public Links Championship. Archie has won seven major WSGA titles in addition to numerous other major championships. Steve Bull of Tripoli CC, and Carol (Sorenson) Flenniken of Janesville CC, were elected in 1983. In 1964 Flenniken won the British Women's Amateur. Western Amateur and the Trans Amateur. She is also a member of the Colorado Golf Hall of Fame. Bull continues to play at a high level and is the current WPGA Senior and Senior Open champion.

In 1986 **Dick Sucher** of Ozaukee CC was elected. Sucher is a two-time WSGA Amateur and three-time Senior Amateur Champion, in addition to a myriad of other titles. Former touring pros **Don Iverson** of La Crosse CC, and **Dennis Tiziani** of Cherokee CC, and **Andy North** of Nakoma GC, were elected in 1988, 1989 and 1990, respectively. Tiziani has won numerous state PGA titles and is currently one of the leading college coaches and golf instructors in the country at the UW-Madison.

(Continued on page 49)



How to Keep Things From Turning Ugly.

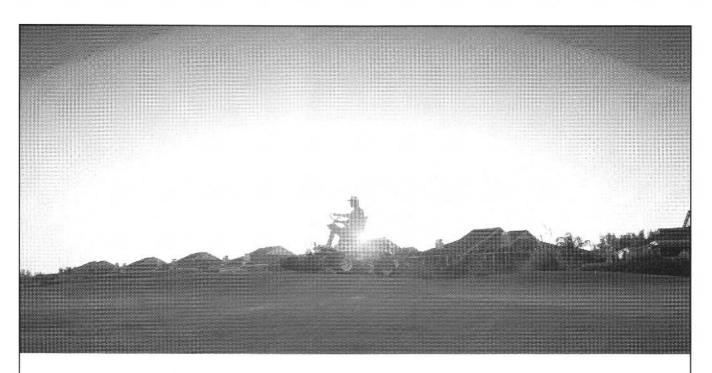
From nutsedge to nightshade, fire ants to fungi, nobody works harder to protect your turf and ornamentals than Ciba-Geigy.

For All Your Turf and Ornaments Needs See ...

Tim Klein • CIBA-GEIGY CORP. 311 Pendryn Hill Curve Woodbury, MN 55125



1-612-702-0701 Bus. • 1-602-702-9205 Fax



A Sound Investment

The Ransomes® All-Electric E-Plex™ Generates Income From Earlier Tee Times

Invest in the electric E-Plex greens mower and it will quietly make money for you. Because the E-Plex is virtually noise free, you can mow at the crack of dawn, allowing for earlier tee times. The extra income from additional rounds will pay for the E-Plex in no time. And, for ongoing savings, maintenance and operational costs for the electric

E-Plex are significantly less than for conventional mowers Add the economic benefits to the highest quality of cut, superior performance and the elimination of damage from

hydraulic leaks, and your E-Plex isn't just a greens mower, it's a sound investment.

For a free demonstration or the name of the dealer nearest you, call

1-800-FAX

E-PLEX PAYBACK

Earlier tee times mean more rounds and more revenue!

Example: 4 tee times x 4 players = 16 additional rounds each day.

Additional
Rounds Per Day

16

\$40
\$60
\$960
\$80
\$1,280

Divide the unit cost of the E-Plex by the extra daily revenue to determine the payback period.

© Ransomes America Corporation 1995. All rights reserved.

Hanley



Driven to be the best.

Hanley Company, Inc. 641 W. Main St. Sun Prairie, WI 53590 1-800-279-1422

(Continued from page 47)

Andy North won the WSGA Amateur title in 1969, the Western Amateur in 1971 and became one of Wisconsin's all-time heroes when he won two USGA Open Championships in 1979 and 1984.

Mark Bemowski of Johnson Park GC, who has won three WSGA Amateur titles and the Wisconsin State Open title in addition to many other championships, was honored in 1991. Alex Antonio of Ozaukee CC, who is considered by many to be one of the great shot-makers in Wisconsin golf history, was selected to the Hall of Fame in 1992. Jeff Radder of Sheboygan CC, who won three WSGA Junior titles along with a WSGA State Amateur title, became a Hall of Fame member in 1994.

Some of the leading women players who have been honored as members of the Hall of Fame are Goldie Bateson (1981), and Paula (Clauder) Garzotto (1984), both of Westmoor CC. Mary (McMillan) Fossum of Oneida G & RC was elected in 1990. In 1993, Katie (Ahern) Falk of North Shore CC and Marilyn (Klumb) Williams of West Bend CC joined the Hall of Fame. Falk won the prestigious Women's Western title in 1974 and Williams was a three-time WWSGA champion. Mary Beth Nienhaus of Winagamie GC, who won consecutive WWSGA State Amateur titles in 1968 and 1969, was elected to the Hall in 1994. Martha Nause of Sheboygan CC was the most recent inductee into the Hall of Fame, having been elected in 1995. Nause remains one of the leading players on the LPGA tour.

Who's the next person to be elected to the Hall of Fame? Well, first of all, the rules say you must be at least 40 years of age. So, some of the leading players today will have to wait a few years. One of the leading candidates in John Pallin, 45, of Kenosha CC. Pallin has won 14 major WSGA championships in addition to many other awards and is the current five-time WSGA Player of the Year. Other players who have performed admirably for many years are Randy Warobick of West Bend CC, who won the WSGA Match Play title in 1979 and was runner-up three other times. Steve Paradise, 47, of Kenosha CC, has won six consecutive WSGA Bestball titles along with another one in 1979 and has been a leading contender for the past 20

years. Another well-known veteran candidate is **Frank Tenfel** of West Bend CC, who annexed six WSGA Senior titles. **Bob Mann**, formerly of North Shore CC and now a leading golf club professional in Indiana, won two junior titles and played on the PGA tour.

Now, let's take a look at the "current crop" of golf standouts. Probably the leading candidate for future Hall of Fame consideration is Steve Stricker, 29, of Cherokee CC. Stricker has one three State Open titles in addition to two WSGA Junior titles and a WSGA State Amateur Championship in 1985. Stricker is now performing famously on the PGA Tour, having won two events in 1996-the Kemper Open and the prestigious Western Open title. Steve officially bankrolled \$1,383,739 in tour earnings in 1996, placing 5th overall, and collected huge additional earnings in "non-official" events. Stricker is well liked and highly respected by his peers and should remain a powerful force on the tour for years to comeif everything goes according to "plan."

Other Wisconsinites who continue to perform well on the "national" scene are John (J.P.) Hayes of Buttes des Morts GC, who finished 14th on the PGA Nike Tour. Hayes recently qualified at Tour School for his third "Fling" on the PGA Tour. Hayes won two WSGA State Amateur and two WSGA State Match Play titles. "Skip" Kendall of Brown Deer GC, captured a spot on the PGA Tour by finishing 9th on the Nike Tour. This is Skip's third try on the big one and he is recognized as one of the premier players on the Nike and mini tours. He now hopes to expand that recognition to the big tour.

Jerry Kelly of Maple Bluff CC appears to be the next "big name" on the PGA Tour. Kelly, a former WSGA Match Play champion, was the 1995

money leader on the Nike Tour and placed 59th on the PGA Tour in 1996 with earnings of \$336,748. He failed to win a PGA event in 1996, losing a playoff to **Loren Roberts** in the Greater Milwaukee Open.

Another hopeful who is currently displaying his skill on the mini-tour is Mario Tiziani of Cherokee CC, who just narrowly missed getting his PGA playing card at the Tour School. Former State Open and Amateur champions Ben Walter Menomonee and Tim Cantwell, Jr. of Westmoor CC failed in their attempt to obtain a playing card in 1997 and will also play on the minitour. Mark Scheibach of Rolling Meadows GC recently won his first mini-tour event and looks to move up the ladder of pro golf. Jim Schuman, as assistant pro at Maple Bluff CC, won the 1997 State Open at Kenosha CC and then capped off the year with a strong record-setting victory in the PGA National Assistant Professional Championship.

Some of the collegians who are making a mark on the NCAA golf scene are headed by Mark Wilson of Oconomowoc GC and the University of North Carolina where he is the current Atlantic Coast Conference champion and is listed at the top of the NCAA men's individual list. Joellyn Erdmann of Fox Valley CC is the WAC Conference Women's champion as a member of the University of New Mexico golf team. The University of Wisconsin men's team is headed by Dave Roesch, Chris Caulum and Ryan Helminen. The Badger gas are led by Rheba Mabie of Timber Ridge CC.

Once again, an evaluation of the history of the development of the game of golf in Wisconsin, its past and present, reflects that we can be proud of our heritage—and look favorably into the future.

NATURAL ATHLETIC TURF INC.

GOLF COURSE CONSTRUCTION & IMPROVEMENTS

Specializing in Greens - Tees - Bunkers - Fairway Construction - Feature Shaping - Drainage Systems

By Contract or "T & M" basis. Also Astroturf Top Dressing drag mats

11040 N. Buntrock Ave., Mequon, WI 53092 • (414) 242-5740 ROY G. ZEHREN • FAX (414) 242-5740 • JOHN "JACK" WALLISCH



We Drive The World To Work And Play.

You may know Club Car as the most prestigious name on the golf course. But our Carryall Utility Vehicles are powerful enough to take on the toughest jobs at any work site, any day of the week. So no matter how hard you work or play, count on Club Car for world-class performance and the power to drive you there.

Club Car, Inc. Wisconsin Branch

4485 South Racine Avenue • New Berlin, Wisc. 53146 Telephone: 414/896-9570 • Fax: 414/896-9578