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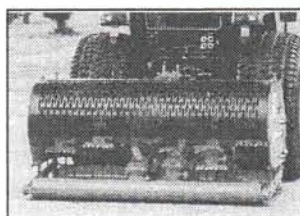
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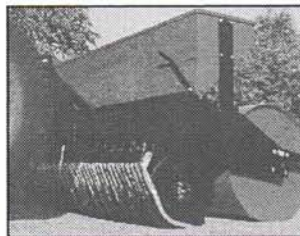
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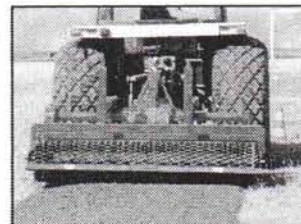
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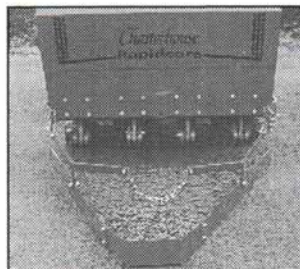
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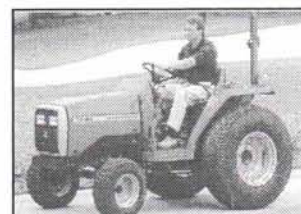
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developments in this area (technology and practice), site-specific management may be implemented in a variety of areas.

The following examples illustrate how site-specific management strategies might be applied to both agronomic pest management and equipment/resource management.

AGRONOMIC MANAGEMENT (PEST MANAGEMENT)
Data Collection

Scout and map locations (i.e., GPS) with pest problems.

Refined Data Collection

Identify and map additional site data that might affect pest problems.

Data Analysis

Use technology (i.e., GIS) to analyze map data with goal of determining causal agents contributing to pest problems; understand interrelationships among site conditions where pests exist.

Data In Addition To Knowledge

Utilize experience and site knowledge to determine cultural, chemical and/or other solution(s) to pest problems; identify solutions to accommodate spatial variances (site-specific solutions).

Data-Founded Applications

Perform application(s) to alleviate pest pressures accounting for spatial variances; manage problems with solutions specific to the instance.

EQUIPMENT/RESOURCE MANAGEMENT
Data Collection

Log equipment performance data (i.e., hours, location).

Refined Data Collection

Expand data-logging to include additional performance data (i.e., fluid temperatures, pressure, reel or implement position, material output, etc.); possibly transfer data from field to office via real-time communication link; tag data to equipment location instantaneously.

Data Analysis

Analyze equipment data to automate service, determine service intervals, monitor performance with goal of optimizing machine

performance; identify equipment performance by location on golf course.

Data In Addition To Knowledge

Introduce experience and knowledge to determine how equipment fleet might be better utilized; optimize machine, crew and application performance.

Data-Founded Applications

Optimize machine and crew performance through more efficient and effective resource allocation; automate equipment service; track equipment locations and performance.

(continued on page 24)

AGRONOMIC MANAGEMENT (PEST MANAGEMENT)	
Data Collection	Scout and map locations (i.e. GPS) with pest problems.
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Data Analysis	Use technology (i.e. GIS) to analyze map data with goal of determining causal agents contributing to pest problems; understand interrelationships among site conditions where pests exist.
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Information Is The Key . . .

(continued from page 22)

NEXT STEPS

As site-specific management affords many potential benefits through its systematic approach to detailed site management, it starts with data collection and organization. The foundation that is set through data collection and organization will be a key determinant in the future of site-specific management, the extent to which it is applied and its ultimate effectiveness.

Detailed data collection and organization are two practices that a site manager may implement now through existing technologies and products. Implementation of these practices offers potential for added future advantages as a solid foundation of understanding site conditions and management intricacies is built. In implementing these basic concepts, one must remember that collection in itself offers no real benefits. It is only once collected data is integrated into a systematic process of data collection, data organization and analysis, data in addition to knowledge and data-founded applications, that its benefits will be realized and maximized.



¹Blackmore, Simon. *Precision Farming: An Introduction. Outlook on Agriculture.* 23:4. 275-280. 1994.

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the Bull Sheet

John Gurke
Contributing Editor

DATES TO REMEMBER

February 14-15 — GCSAA Golf Championship, Mobile, Alabama

February 14-20 — GCSAA International Conference and Show, New Orleans, Louisiana

February 17-18 — MAGCS Hospitality Suite at New Orleans Marriott, 6 to 10 p.m. each night.

March 13 — MAGCS monthly meeting at Dave -n- Buster's.

March 16 — CDGA Green Seminar at Butterfield Country Club, Oak Brook.

April 24 — MAGCS monthly meeting at Elgin Country Club, Tod Hopphan host.

June 24 — World Shotgun 2000

Congratulations to Alan Perkinson, former assistant to Jeff Leuzinger at Glen View Club, who is the new superintendent of Broken Arrow Golf Club in Lockport. Alan is a '97 University of Illinois graduate, and began his new life (which he'll soon find out means lack of a life) as a golf course superintendent on January 24.

On a related note, Glen View Club is accepting applications for an assistant golf course superin-

tendent. Interested parties should contact Jeff Leuzinger—in his words—as FAST as possible!

Tom Vieweg, golf course superintendent at Cary Country Club, is accepting applications for an experienced assistant superintendent. Call 847-639-1001 for

details. Resumes may be sent to: Cary Country Club—Attention Green Superintendent, 2400 Grove Lane, Cary, IL 60013.

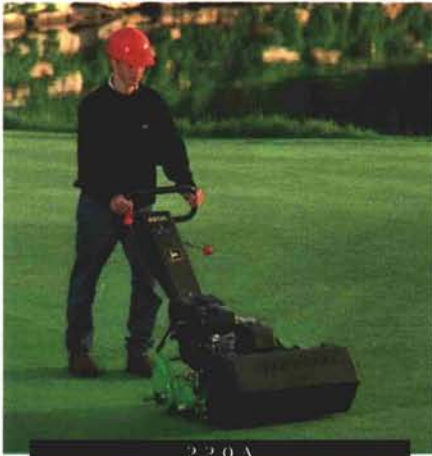
Dr. Tom Watschke, Penn State University's professor of turfgrass science, has been selected to receive the GCSAA's 2000 President's Award for Environmental Leadership at the 71st International Golf Course Conference and Show in New Orleans. Local Penn-Staters can show your support by attending the Golf General Session on

(continued on page 28)



Bill Kennedy at Cress Creek Country Club received a nice Christmas morning present—a call from his green chairman. What Bill thought was to be a Christmas greeting turned out to be a minor disaster at the club. It seems a six-inch city water main that runs under the course broke, leaving a large lake and river on the fourth fairway where such water hazards never existed previously. After surveying the situation with the city, it was decided to make repairs on Monday the 27th. The main serviced only four homes, so they valved down the pressure to a reasonable level and tackled the work then. Bill says the project went well, and he was amazed both at how quickly the ground drank up the huge amount of water and at the incredible earthworm carnage.

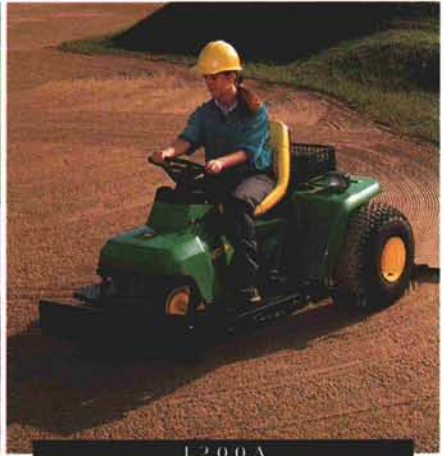




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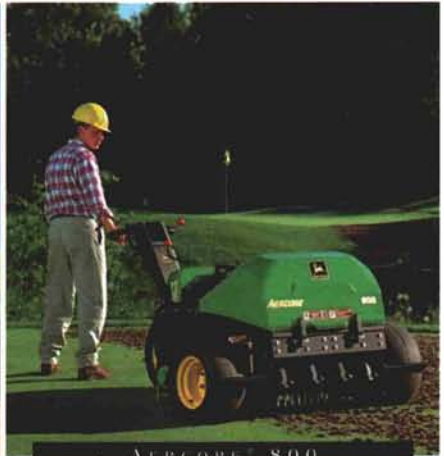
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(continued from page 26)

February 18 at 8:45 a.m. (yeow!), where President Dave Fearis, CGCS will present this prestigious honor.

.....
Gary Hearn, golf course superintendent at Salt Creek Golf Course, is looking for an assistant superintendent. Call Gary at 630-773-4790 for more information, or submit resumes to: Salt Creek Golf Course, 701 West Thorndale Avenue, Wood Dale, IL 60191.

.....
Gary Galecki, golf course superintendent at Ridge Country Club, is in the assistant superintendent market as well. For more details, call Gary at 312-233-8490. Or forward resumes to Ridge Country Club—Attention Golf Course Superintendent, 10522 S. California, Chicago, IL 60655.

A hearty congratulations to MAGCS member Dan Mosblack, superintendent at Janesville Country Club since 1996, for earning the Certified Golf Course Superintendent (CGCS) designation from the GCSAA. "Dan Mosblack, CGCS" sure has a nice ring to it!

.....
Y2K Shop Clearance Sale: Priced to sell! Only a few left: 11 Toro VT4 and five VT3 satellites for sale. Very good condition. Contact Bill Kennedy at 630-355-5736.

.....
For sale: Express dual grinder with attachments AND Foley Auto Bedknife grinder with flood coolant. Great condition, \$6,500. Will consider separating grinders, but they WOULD like to stay together! Call Brian or Jake at Biltmore C. C. at 847-381-1963.

WANTED: Kifco water wheel. Nonprofit youth soccer group is looking for this to water five soccer fields. Contact Bruce Schweiger at 608-756-3912.

.....
For sale: Two 1989 Toro GM3000, 1988 Toro GM3, two 1985 Toro GM3, 1979 Toro GM3. The following reels are available: (15) 11-blade with groomers, three 11-blade without groomers, (16) 5-blade reels, four 8-blade reels. Toro 7-gang rough unit with five spare cutting units. 1992 New Holland 155 Manure Spreader with Slurry Pan (yuck). 1991 Toro 223-D fairway mower with 8-blade reels. Four 1965 Toro 21" Power Greens-mowers. Contact Stacey L. Wallace at 847-432-6730 (Northmoor C. C.).

.....
Too good to be true! Scott Witte at Cantigny Golf Club is practically giving away the following equipment: 1991 (or so) Toro

In Memoriam—Charles F. Shiley



*Charles F. Shiley
(from the On Course
photo archives)*

Longtime MAGCS member Charles F. Shiley died October 28, 1999 at the age of 90.

A 57-year GCSAA member, Mr. Shiley began his career

as a laborer at Rolling Green C.C. (Arlington, IL) in the 1930s. For three years, he was greenkeeper at Bon-Air C.C. (which became Windsor C.C.) in Barrington, and from 1938-43, he was superintendent at Illinois C.C. in Northbrook. After World War II, he joined the staff at Tam O'Shanter C.C. in Niles as assistant superintendent and remained there until 1951. From 1951-71, he was superintendent at North Hills C.C. in Menomonee Falls, WI. In 1972, Mr. Shiley became superintendent at Plum Tree National C.C. in Harvard, where he worked until his retirement in 1982.

In addition to the MAGCS, Mr. Shiley belonged

to the Mid-West Greenkeepers Association and was president of the Wisconsin GCSA from 1956-57. He received his 50-year pin at the GCSAA's 1992 conference in New Orleans. Writes Mr. Shiley's wife of 60 years, Mary, "He died three days after Payne Stewart and Bruce Borland. My son Chuck said that now they have an architect, a superintendent and a golfer in heaven getting a golf course up there."

On behalf of the MAGCS, heartfelt condolences to the four sons, nine grandchildren and six great-grandchildren Mr. Shiley leaves behind, and to wife Mary (N84W17147 Menomonee Ave., Apt. 108N, Menomonee Falls, WI 53051).

Groundskeeper 72" Rotary with gas engine, good condition—\$1,500 OBO; 1991 (or thereabouts) Jacobsen LF-100 diesel in good condition—\$2,000 OBO; and 1993 (best guess) Toro Reelmaster 216 with fixed heads, good condition—\$800 OBO. Call Scott for details at 630-260-8179.

For sale: 1981 300-gallon FMC single-axle sprayer with 1995 Chem Pro 20' boom w/ electric controls—great for fairways. 1989 Toro Greens Aerator—excellent condition. 1983 Jacobsen Greensking IV triplex including three extra cutting units—all 9-blade reels—good condition. Contact Kurt at Exmoor C. C. at 847-433-1177.

Mulligan

The following photo should have been published in conjunction with the Fall Dinner Dance article that appeared in our January issue. It was inadvertently omitted. Apologies to author/photographer John Gurke and the lovely ladies pictured herein.—CMR



Michelle Blomquist (Dave), Tiffany Yerkes (Paul), Cheryl DeRoo, Debbie Purpur and Kristin McKone (Erwin). Tiff is known as the "classroom cut-up," but on this night Michelle had her in stitches (make no butts about that).



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Treatments Save Crabapple Trees

by Laura Smies, Arborist
Autumn Tree Care

Cool, wet weather, as we experienced last spring, can be very destructive to flowering crabapple trees—especially larger, susceptible varieties. The rainy weather provided a favorable environment for the "apple scab leaf fungus" that grows in nearly all landscapes with flowering crab trees. With spring just a month away, a prudent course of action is to monitor precipitation and stay alert to the possibility of apple scab.

Once infected with the fungus, flowering crabs require timely treatments to prevent early defoliation and loss. Apple scab begins at bud break and requires three consecutive fungicide applications. If the first treatment is missed, applications should be immediately scheduled for the following season.

Proper diagnosis requires an onsite examination of the flower cluster leaves, since they are the first to be exposed as the buds open. By mid-summer, blotchy

brown areas on the leaves become evident, making trees look wilted and sick (see photo). Early defoliation is the most common sign.

Defoliation weakens the tree, and the effects can be life-threatening if treatment is not administered and a tree is infected year after year. Mid-summer leaf loss compromises the tree's ability to produce food and store it over the winter. The problem becomes even more complicated when infected trees expend a second flush of leaves, further depleting their energy.

Horticulture to the rescue

Proactively planting apple scab-resistant trees is one solution. A list of genetically tolerant and resistant crabapple trees is available through reputable nurseries, tree care companies, the Chicago Botanical Gardens and the Morton Arboretum. These lists specify crabapple varieties that are not susceptible to *Venturia inaequalis*, the fungus that causes apple scab. Thus, they will not require the timely fungicide treatments as part of their plant healthcare.

Solutions for infected trees are available through ISA-member tree care companies. Fungicidal treatments, applied by licensed professionals, are highly effective. Furthermore, pruning and fertilization are critical measures for building a tree's natural defenses.

Using a licensed applicator ensures safety to the family, community and environment. It also assures quality, because the applications should be finely misted over the trees, which is best accomplished by a professional.

Never too late

Heavy apple scab infections, season after season, can result in the loss of a tree. If you have spotted early defoliation in previous years, you should sign up for treatment immediately. Even though a specimen may look healthy now, the tree is almost surely infected. Starting with a fertilization program this year can minimize damage and build necessary food reserves for next winter.

