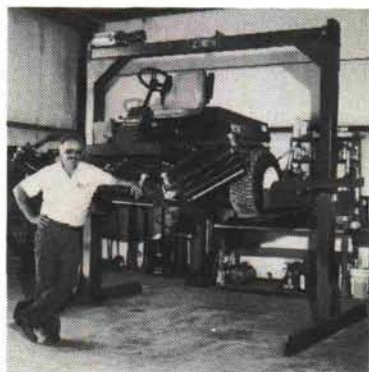


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converted from a traditional IRA to a Roth IRA). In addition, Roth IRA withdrawals after age 59 1/2 are tax-free as long as investments have been in the account for five consecutive years. Remember, any withdrawals made before either IRA's minimum holding period are subject to a 10% IRS penalty and ordinary income tax rates.

A similarity in both IRA types of withdrawal provisions is the "Special Purpose" distribution created under the new tax laws. You are allowed to make penalty-free withdrawals from either IRA type for a first-time home purchase (up to \$10,000) and/or qualified higher education expenses, in addition to the existing pre-59 1/2 distribution exceptions.

## MANDATORY DISTRIBUTIONS

**Traditional:** You are required to take minimum withdrawals from a traditional IRA once you reach age 70 1/2.

**Roth:** There is no requirement to receive minimum payments from your Roth IRA at any time.

If you plan to convert your traditional IRA assets into a Roth IRA, those assets will be subject to ordinary income taxes. These taxes may be spread over the four subsequent years if you convert in 1998. You must also have AGI of less than \$100,000 to be eligible.

So, which IRA do you choose? It still depends on your personal needs. Make sure you carefully evaluate each IRA choice to see how it meets your investment objectives, tax conse-

YEAR	AGE	TRADITIONAL IRA	ROTH IRA
1998	41	\$2,000	\$2,000
2003	46	14,298	14,672
2008	51	31,543	33,292
2013	56	56,237	60,648
2018	61	88,520	98,845

quences and, most importantly, your comfort level.

## Which IRA Should You Contribute To?

Rest assured that your traditional IRA will continue to provide an opportunity for tax-deferred growth on assets and provide payout options for beneficiaries (which may allow continued tax-deferred growth potential with minimal immediate taxation). However, both types of IRAs can provide substantial opportunities for growth until retirement. Which IRA you choose to contribute to will depend on the benefit you wish to receive:

- A current tax deduction (if eligible)
- Tax-deferred growth potential
- Tax-free distributions

For example, assume there are two investors who are age 40 and file individual tax returns. One investor contributes \$2,000 to a Roth IRA; the other investor contributes the same amount in a traditional account. Both invest in their IRAs over 20 years. Let's assume the investments earn an average rate of return over this time of 8% and both investors are in the 28% marginal tax bracket. As you can see in the chart below, the Roth IRA investor has realized \$10,325 more in after-tax value than the after-tax value of assets of the traditional IRA investor. ■





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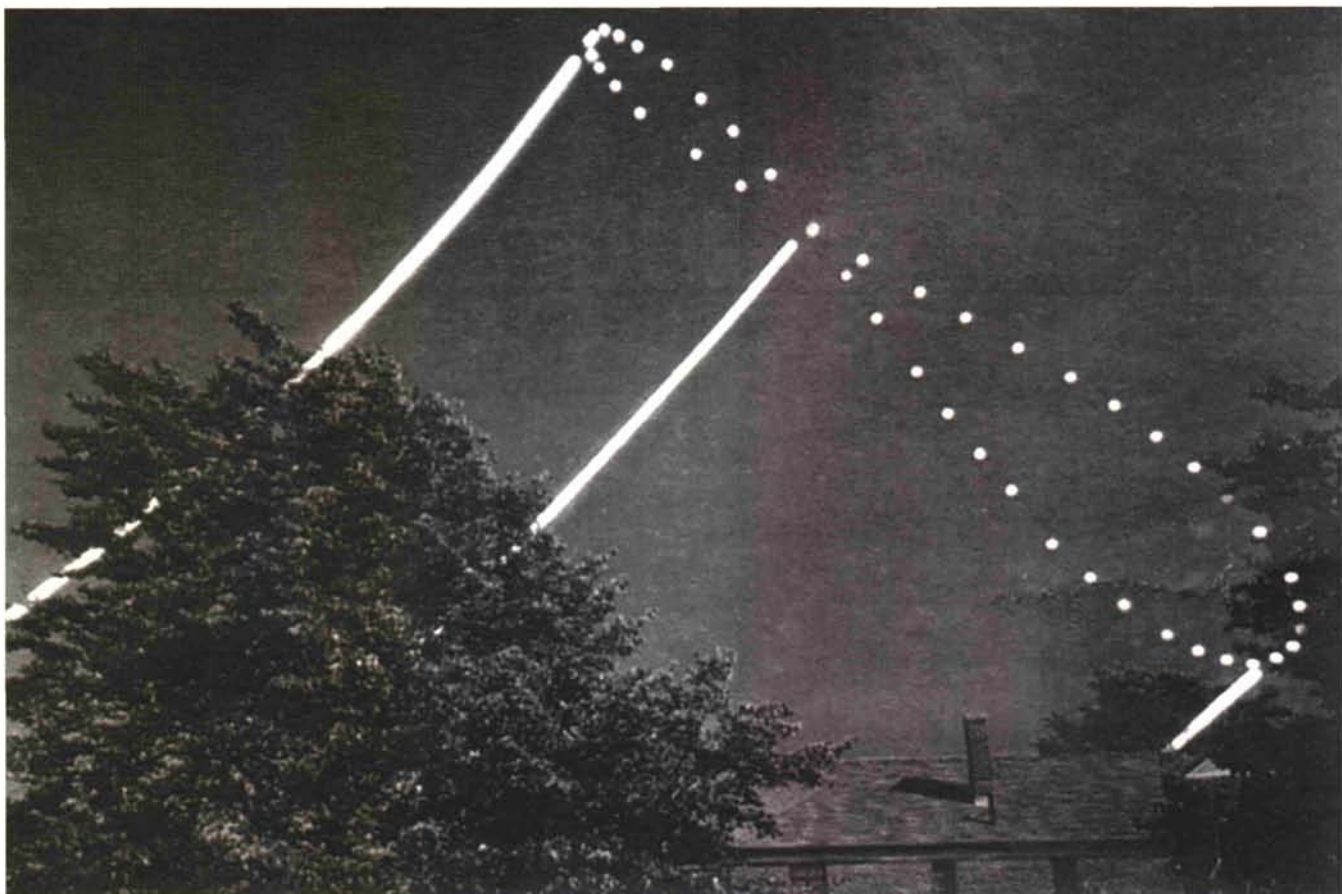
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*This is a time-elased photo showing the sun's position throughout the year at 8:30 a.m. It demonstrates the need to take into consideration the sun's position during the growing season.*

# The Ace in the Hole: Bringing Sanity to the Greens

*Bob Christensen  
ArborCom Technologies*

**P**eople have had a long-standing love for the game of golf. The attraction of the greens and fairways is irresistible to so many. Walking the course, enjoying the scenery, or making a good score are all part of the draw that keeps so many coming back to the great clubs and courses. There remains, however, an ongoing problem for those who must manage these courses: balancing the aesthetics of many trees with the demanding needs of top-quality turfgrass. Much misunderstanding exists on the parts of those who make critical decisions on golf courses as to the

removal and pruning of trees to allow maximum light exposure. This is where the golf course superintendent finds his calling—making trees and golf course turfgrass compatible.

Agronomists have long recognized the importance of light as a key growth factor for a number of plant species and have attempted to maximize its effect, largely for commercial reasons. One group that increasingly finds it difficult to balance the light requirements of plants with the need for trees is golf course superintendents. These skilled professionals find themselves in a challenging situation in attempting to balance the need for trees

on golf greens for depth perception for the golfers with the need of the turf on golf greens to have large, extended amounts of direct sunlight. Many golf courses are placed in heavily wooded areas, and decision-makers at these courses want to retain the existing trees while, at the same time, maintaining healthy, vigorous turfgrass. Much of the leaf surface is maintained at a short height making it even more difficult for the greens to gather the required amount of direct sunlight.

The challenge becomes removing only those trees that directly hinder the penetration of light to the green without aesthet-

*(continued on page 30)*



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# the Bull Sheet

## DATES TO REMEMBER

February 2-8 — GCSAA Conference & Show, Anaheim, CA.

February 23-27 — Indiana-Illinois Turfgrass Short Course, Holiday Inn, Willowbrook, IL. For information, call Jack Lagershausen at 312-201-0101.

March 6 — MAGCS monthly meeting at Nordic Hills G.C. Annual Charity Gin tournament to follow the meeting.

March 19 — CDGA Green Seminar at Butterfield C.C.

April 27 — MAGCS monthly meeting at Schaumburg G.C.

May 14 — ITF Combined Meeting at "The General," Eagle Ridge Resort

June 15 — MAGCS monthly meeting at Hughes Creek G.C.

I apologize for not giving credit to Alan Goldstein of Aerial Images Photography for taking the picture that appeared on the front cover of the January 1998 issue.

For Sale: 1993 Mill Creek spreader, \$1,900 new; 1987 SDI 100-gallon sprayer, \$800; 1977 Dedoes aerator, \$300; 1985 Roseman hydro-gang mower, \$500; 1989 Quick Trench, \$900; Roseman 5-gang mower, \$1,000; and a 1972 4-wheel Cushman (runs), \$750. Questions, call Brian at Biltmore C.C., 847-381-1963.

Don Cross and Skokie C.C. will be hosting the 44th USGA Senior Amateur Open Championship, September 12-17.

Congratulations to Tiffany and Paul Yerkes on the birth of daughter Maddison Taylor born December 6, 1997. Maddison weighed in at 8 lbs. 4 oz. and was 20 1/2 in. long.

The Distinguished Service Award presented by the International Association of Golf Administrators was presented to Carol McCue at their annual meeting in November. Carol, a former executive director of the CDGA and a winner of the NGF Graffis Award, was the executive director of the CDGA for over 40 years and was responsible for creating the CDGA Foundation in the 1940s. Carol is an honorary member of the MAGCS.

The members of the Midwest Association of Golf Course Superintendents would like to extend their condolences to Peter and Paul Voykin on the death of their mother on December 19. Julia Voykin was 90 years old when she passed away in her sleep in Saskatoon, Canada.

Paul Voykin was unable to go to his mother's funeral for he was admitted into the hospital on December 18 and underwent gall bladder surgery on the 19th. His bladder had ruptured, and gangrene had started to set in. Today Paul is fine and back at work.

A Good Samaritan: Jim Baker, delivery driver for Arthur Clesen, Inc., was the first on the scene of an auto accident he encountered on his way home from work on December 31. The woman driver was ahead of Jim at one time and was driving okay. But a little later when she pulled away from a stop sign on Gilmer Road, she speeded up and drove very rapidly. When Jim came around a corner of the road, he found she had run off the road and into a tree. The car was on fire at the time, but Jim was able to pull her to safety and got her into his truck to call the police. The police later charged her with DUI.

Superintendent wanted: Bon Vivant C.C. in Bourbonnais, IL, is looking for a golf course superintendent. For information, please call Merlin Karlock, manager at 815-935-0403, or fax your resume to 815-935-8011.

If anyone would like a 26-min. video of "Calibrating Golf Course Boom Sprayers," please give Kerry Anderson a call at 815-923-1323.

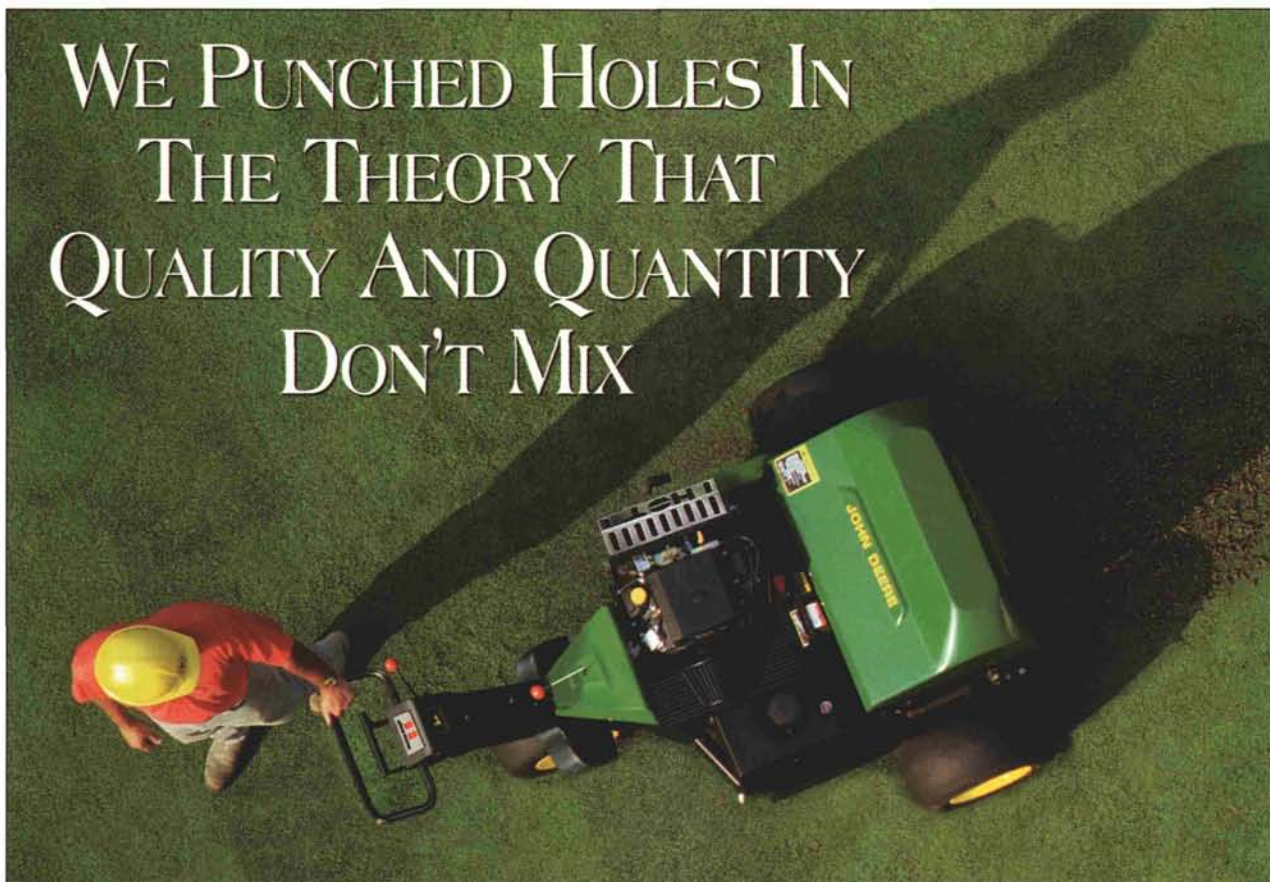
Talk about an in-house project. Brian Thomson, Biltmore C.C., and his crew are installing 4,000 ft. of a PVC double-wall, 18-in. drainage line across his course. The depths go to 5 ft., and he estimates he will use over 50 semi-loads of pea gravel alone. He has to complete this project this winter when the ground is firm. The tile line is going into an area where it is all peat to improve the drainage and be able to get the course in play sooner in the spring and after rains.

Peter Leuzinger was flown to Pasadena for the Rose Bowl and Parade by Rain Bird Irrigation. Reason? Rain Bird Irrigation is

(continued on page 28)



# WE PUNCHED HOLES IN THE THEORY THAT QUALITY AND QUANTITY DON'T MIX



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## the Bull Sheet

(continued from page 26)

the sponsor of the GCSAA Environmental Steward Award which Peter won in 1997. For the last couple of years, Peter and Ivanhoe have been the bridesmaids, but this year, they went all the way. Congratulations to both Peter and the Ivanhoe Club.

Henry "Hank" Wilkinson has been promoted to full professor in the Department of Natural Resources and Environmental Sciences. Hank has been the turfgrass pathologist at Illinois since its inception in 1982. Hank, congratulations, and it is well deserved.

Also at the University of Illinois, Dr. Andy Hamblin has joined the staff, and his responsibilities and efforts will be in the science of

breeding and genetics of new turfgrass species. Welcome to Illinois, Dr. Hamblin; we look forward to meeting you.

From Kerry Satterwhite: At the NCTE, there was some discussion about using barley straw as an algaecide. While there was some interest, no one seemed to have a source. Oscar Miles and I have been working on this together, and I have located a source in Missouri, but the minimum order would be 200 bales. I was wondering if there are others who would be interested enough for me to bring in 200 bales and then distribute them to those interested. Please give me a call at 815-625-7923 or fax to 815-625-7318.

Samuel L. Jock: Searching for an assistant superintendent's position. Over eight years of experience including supervision. Fluent in Spanish with prior work in Mexico. GCSAA member. Bachelors and Associates degrees. Looking for a learning opportunity. Please contact 303-694-1210 for resume and references.

## MAGCS Annual Gin Rummy Tournament Friday, March 6, 2 p.m. Nordic Hill C.C.

The tournament will take place after the regular MAGCS business meeting. The entry fee will be \$50. Please pay with your personal check. For over a decade, proceeds from this social event have helped Midwest members in need with their medical expenses. Defending champion is Paul Voykin.

## Rub of the Green

(continued from page 12)

I have the greatest respect and admiration for Augusta National. I marvel each April witnessing the immaculate conditions of the Masters. But these conditions should not be the standard by which golf maintenance is judged. Even Augusta National gears its maintenance practices to one spectacular week each year. Valdarama, host of this year's Ryder Cup matches, has been designed and maintained as a bird sanctuary for migrating flocks. What a marvelous marketing tool.

Good examples of championship courses that illustrate sound design with an environmental awareness are Shinnecock Hills in New York, Spyglass, Spanish Bay and Cypress Point in California, Prairie Dunes in Kansas and Pine Valley in New Jersey and are consistently rated as the best golf courses in the world year after year. Each of these courses has significant out-of-play

grassing schemes and native planting throughout the golf course, adding to its mystique and "sense-of-place."

Most of us are in this industry because we have an appreciation for our environment and its remarkable ability to inspire. If you do not, you are in the wrong business. Aldo Leopold, a noted ecologist, wrote in his book, *A Sand County Almanac*: "A thing is right when it tends to preserve the stability, integrity and beauty of a biotic community. It is wrong when it tends otherwise." We as professionals should fight for environmental awareness, sensitivity and cooperation; we should each make decisions that reflect this statement by Aldo Leopold.

Golf is an environmental encounter. The beauty of a golf course site is sometimes in its simplicity. Examine Pine Valley, Shinnecock Hills, Cypress Point or even Augusta. The greatness of

those golf courses is not a factor of maintenance, but rather a clear visibility and understanding of its distinctive topographical, vegetative and environmental characteristics. A current project of mine, Rich Harvest Links not only works around and through site-sensitive areas such as woodlands and wetlands, but it also introduces prairie, wet meadow and wetland plant mixtures into other areas of the design. The result is a unique "sense of place."

If "wall-to-wall" maintenance can be reduced and aesthetics increased, even at older, more prestigious clubs, without compromising the integrity of the course, everyone wins. Expanding naturalized areas will increase the inherent beauty of the site while reducing maintenance and introducing a new strategic feature into the design of the course. This should be the goal of every golfer, superintendent, architect and club committee member. ■



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### The Ace in the Hole . . .

(continued from page 24)

ically affecting the green or making a major impact on the playability of the course. If we are to prune only those limbs or trees that are blocking the sun, we need to know exactly where the sun is. Though multiple methods have been used through the years, with varying degrees of success, a new technology is making this task into an exact science with a user-friendly, highly applicable tool.

Putting this technology to work can produce impressive results. It minimizes the impact, aesthetically, on the trees involved in many of situations, including recreational areas, residential lighting needs, gardening requirements, in addition to golf course needs.

Complex astronomic algorithms take into consideration all of the factors influencing sun position. These algorithms can output exact quadrants that can be translated into a position by a sun location instrument. A computer generates the sun's coordinates in one-minute increments for every day of the year for a given geographic location. These coordinates are computed on site and are recomputed for each individual course. The sun location equipment is then set up in the shadiest portion of the turf area in question. Coordinates for a chosen time and day are entered into the equipment, which then indicates the position of the sun. By inputting multiple dates and times, sunlight and shade patterns can then be computed for various time periods throughout the year with equal accuracy.

Edgewood Valley Country Club had five greens and one tee deck where light was believed to be a limiting factor. Ron McCarthy, the club's superintendent, and a USGA consultant



*New technology allows the consultant to go onto a golf green in January and determine the position of the center of the sun in June within 1/16 in. at 200 ft. from the sun location instrument.*

identified light as the limiting factor on these areas. Realizing that he needed hard data to make good recommendations, McCarthy hired ArborCom Technologies to do three major tasks. The first task was to show exactly how much light the green and tee decks were getting May through October. The second was to provide recommendations on how to improve the light so the greens

and tees would get eight hours of direct sunlight per day with as much light as possible in the morning. Finally, ArborCom was asked to prepare a presentation that communicated the findings, using digital photos and charts to the Green Committee so they could approve the removal or pruning of trees, as required, to get more light penetration.