THE BULL SHEET, official publication of the MIDWEST ASSOCIATION OF GOLF COURSE SUPERINTENDENTS.

1988 Board of Directors

President	Dave Meyer (Penny) Prestbury G.C.	Home: 820-1040 Office: 466-4177
Vice-Pres.	Bruce Williams (Roxane) Bob O'Link G.C.	Home: 680-1074 Office: 432-0088
2nd Vice Pres.	Alan Fierst Oak Park C.C.	Home: 456-7815 Office: 453-7525
Sect'y.-Treas.	Roger Stewart (Sue) Stonebridge C.C.	Home: 961-2803 Office: 898-6139
Exec. Sec.	Penny Meyer (Dave) MAGCS (Mailing Address) P. O. Box 248, Eola, IL 60519	Office: 820-8181
Board	Michael Bavier Inverness G.C.	Home: 382-7654 Office: 358-7030
	Timothy Kelly (Linda) Vill. Links of Glen Ellyn	Home: 858-8174 Office: 469-2077
	Joel Purpur (Debbie) River Forest C.C.	Home: 832-6763 Office: 941-1651
	Ray Schmitz (Jan) Flossmoor C.C.	Home: 815-469-2773 Office: 798-2498
	Dennis Wilson (Pat) Sunset Ridge C.C.	Home: 441-8387 Office: 446-5222
Pres. Emeritus	Mike Nass (Jean) Cantigny Links	Home: 462-1547 Office: 668-3730

Official Photographer Raymond Schmitz

Dr. Randy T. Kane, Turfgrass Advisor (312) 954-2753
University of Illinois & CDGA

ECKHOFF AWARD

For Excellence In Golf Journalism

NGF™
NATIONAL GOLF FOUNDATION

Editor —
Fred D. Opperman, CGCS
1022 Shady Lane
Glen Ellyn, IL 60137
Phone (312) 469-3444 or **(312) 858-0601**

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 Dave Meyer

Did Spring seem short to you? The ground temperature just would not warm up to bring things to life. It was almost the end of May until everything popped, with 26 degrees one Saturday morning in mid May. This is very tough weather to bring a golf course to readiness.

This Spring has been a great challenge for me. Being an owner and operator of a golf course, gives one a different prospective of everything. I used to worry about the grounds and golf course, now with a clubhouse added, it makes the days and weeks pass quickly. I do not know about other areas, but good qualified help has been a problem for us this Spring. When help wanted ads are run for a week in the papers and two people reply, it becomes discouraging. I do not see any immediate solutions. Word of mouth has resulted in some hired help, but without the help of my family we would have been short handed.

The entire Board of Directors have been very busy this Spring, so we have not had a board meeting in May. Plans for the tent at the Western Open are complete and the Arrangements Committee have filled the dates for the rest of the seasons meetings. Watch the **Bull Sheet** for the dates, places and times of the Associations meetings.

America the Beautiful

by Fred D. Opperman, CGCS

From your Editor: I recently had the pleasure of driving across the country with my son, who is going to a summer job in the forests of Idaho. Since we all work outdoors, I have to presume we all get a kick out of seeing the different wildlife that frequents our golf courses (and I am not speaking of the two-legged variety, unless it has feathers), and our travels unveiled some memorable wildlife sights.

On the road from my mother-in-law's home in Arkansas, our starting place, we watched white tail deer jumping the pasture fence heading for the dogwood-filled hollows that are so common to the nothern part of that state and skirted numerous painted turtles coming out of hibernation crossing the roads for the nearest water.

Further along the road in Colorado, antelope grazed on the high sagebrush plains where white cumulus clouds almost touched the ground due to the elevation. Little pika scurried through the rocky cliff sides of the Rocky Mountain National Park. At 6,000 feet elevation, mule deer were plentiful and fed along the snow-covered banks of streams and they also ran across the road in Utah, where the aspen were almost pure white with junipers at their bases, the forest floor a sea of waving emerald green grass.

Crossing into Utah at an elevation of 3,000 feet plus, we traveled from the rocky outcroppings to the sagebrush plans to find dozens of road-killed prairie dogs that only wanted to find a mate or greener grass on the other side of the road. Their mounds or burrows were no more than ten yards apart for miles on this one section of road. We watched a coyote search his ear, just like the family dog, but in a setting of ferns and wild flowers with towering pines in the background and snow-capped mountains beyond.

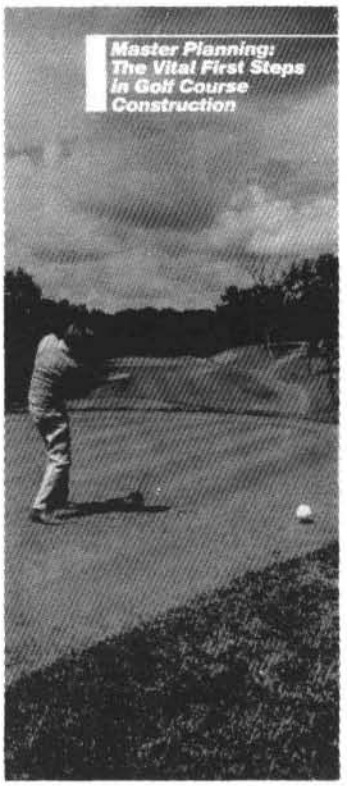
Our national bird, the American Eagle, sat proudly on the top of a dead lodgepole pine alongside Jackson Lake with the beautiful snow-topped Tetons as the background.

In Yellowstone on a dead stump killed by the minerals of the geyers at "Old Faithful", a marmot soaked up the sun. The ever-prevalent elk browsed on fields of succulent new grass which sprouted after the wildfires of the summer of 1988, while bison contentedly grazed with their young alongside the road by Hellsfire Creek. Imagine wading into the ice cold Yellowstone River up to your belly and dining on newly sprouted water weeds. The moose didn't seem to mind.

A Wyoming beaver pushed a branch down a mirror-like pond to stem the flow of water at his dam, the pond reflecting the mosaic hillside where the fires of Yellowstone skipped across the mountainsides burning some areas completely, scorching others, while leaving green oases in the middle. A hawk flew overhead, framed against the red walls of the Flaming Gorge, with a snake grasped in its talons.

The sight I cherished most took place on a forest road in northern Idaho about 50 miles from British Columbia. A black bear loped across the road with its back hunched, swinging its head from side to side, sniffing the air, and no doubt not liking what it smelled as it disappeared into the second-growth bush of a logged area.

It was a good trip — father and son together for a week at a time in life when a young man starts to go his own separate way, seeing "America the Beautiful," and being thankful for good health and a free country in which to come and go as we please.



New Brochure on Master Planning Offered by American Society of Golf Course Architects

"Master Planning: The Vital First Steps in Golf Course Construction," which has been developed for those planning to remodel a golf course as well as those planning a new one, is now available from the American Society of Golf Course Architects.

This new brochure contains information on tees, fairways, bunkers, ponds, irrigation systems, greens, and landscape treatments.

It also includes guidelines on how to budget a golf course project, as well as the services included in a master plan. For those interested in renovation, the brochure demonstrates how various parts of the plan can be phased in over a period of years as funds become available.

To obtain a free copy of this master planning brochure, write the American Soceity of Golf Course Architects, 221 N. LaSalle St., Chicago, IL 60601.

Beauty in July

by Edwin Wollenberg, Retired Supt.

Many golf course superintendents all over the country have initiated their members to a panoroma of beauty with their wild flower plantings in non-playing areas.

July, and the early weeks of summer, bring into focus two of my favorite flowering plants and, which, I would incorporate into my mixture if I were still an active superintendent.

One is considered by horticulture standards a weed and, the other as an old-fashioned plant that dates back to the colonial days. I am referring to the milkweed found along roadsides, ditches and fence lines, and the stately hollyhocks persisting beside old cellar ruins and abandoned farm dwellings, as well as in tended and cultivated gardens.

The common milkweed with its tasselly tufts of small lavendar and white flowers, are full of sweet fragrance that permeates a vast area where it habitats. My first awareness of this nature dispensing Chanel #5 aroma was, while still employed at the Innsbrook Country Club. It took me several days to track down the source of this pleasurable and exotic scent along the fence line separating it from the now 13th hole. I couldn't believe a so-called weed could generate so much fragrance.

The milkweed, weed though it is, has other qualities beyond a pretty flower and sweet scent — although not considered important anymore today. Its milky sap contains a raw material for rubber, and which was tested by rubber researchers during World War II. Also, the fluff from the mature pods was substituted for life-vest and other buoyant products, when kapok from the tropics was no longer available because of Japanese invasions in those areas during the Big One.

The flowers, or florets as they should probably be referred to, are fertilized by bees and ants. Many times when stopping to smell or admire a milkweed flower, I noticed dead bees and ants. I have been told that by some quirk of nature, each floret is an insect trap. One misstep and the ant or bee fertilizing the flower is caught by a leg and doomed to a starving death. But for centuries they have fertilized the milkweed bloom, never learning. Insects never learn, it seems, perhaps because their lives are too short to do more than obey simple impulses and instinct. And so the milkweed survives and multiplies. Thank God, for the world is a sweeter place for it.

Hollyhocks are as old as the country itself, and I can remember them as a small boy in my grandparents garden and adjacent landscapes. Because they are too persistant and will crop up in abandoned places, the oldtimers called them ''escapees or volunteers''. They are tough hardy independents which have adapted themself to a hard way of life and, which grow and reproduce not only without help, but often in the face of man's opposition. I admire their beauty, vigor and independence.

To me they are a welcome symbol in a world of insistent conformity. They go their own way, meet conditions as they are, and survive by sheer persistence. They need no coddling. They chose their own soil and climate. They have fought their own battle to survive for generations.

It does my heart good to see a rejected and neglected hollyhock blooming in a place where all the odds seem to be against success. I love a pretty fighter.

"Water Management Tools to Maximize Plant Survival"

by Demie Moore

The bad news is that too many transplants do not survive — the good news is that there are products available to help when water is the problem.

"It was a healthy plant from a reliable source when it was bought. Pretty careful attention was given to preparing the planting hole and it was watered well after installation — still it didn't make it ..."

"The addition of some ornamentals had been planned for a long time and the membership was looking forward to it — but more important maintenance needs took precedence, so it was late spring before the planting could be done. Then it got hot and dry, but the new trees were planted anyway. We watered a lot but they still dried out faster than we could get back to them — guess they didn't really have a chance ..."

"That slope had always been an eyesore — eroded and bare. Seed always got washed off so we decided to try some ornamentals and mulch. Unfortunately the planting holes overflowed when we watered, so the water ran off anyway and the plants didn't survive. Now we have erosion *and* dead plants — what a mess!"

Too Much or Too Little Water

These are three "worst case" type scenarios, but we have all experienced them or at least seen them happen to someone else. What happened in all these cases? Why do these planting failures happen far too often? The answer, not always but very often, is ineffective water management — not *lack* of water management — just *ineffective* water management.

Actually, ineffective efforts to supply the water requirements of new transplants is the most common cause of problems with transplant survival. Problems — with the movement of water into and through soils, with keeping water where the plant needs it, or problems with imbalances in transpiration needs and capabilities — are common, and all result in too much or too little water where the plant needs it, when the plant needs it. Drowning, desiccation and/or dying of thirst, i.e. transplant failure, are the eventual consequence of these problems with too much or too little water.

Bad News, Good News

That's the bad news, but there's good news too. Water management tools, specifically soil wetting agents, superabsorbants and transpiration minimizers, are available products that directly affect the efficiency of water delivery to the plant and water use by the plant.

None of these products are new, but their use for maximizing transplant survival is sometimes overlooked. Becoming more familiar with how each of these products work and how they can be used will give turf and landscape managers greater control over the fate of their landscape efforts. Let's look first at soil wetting agents, then at superabsorbants and finally at transpiration minimizers.

Wetting Agents Allow Water to Move

Wetting agents are widely used in many different industries. They were first formulated and patented for horticultural use by Aquatrols Corporation of America in the mid-1950's. These soil wetting agents are products which, when applied to a soil, improve the ability of that soil to be penetrated by water.

(cont'd. page 8)

(Water Management cont'd.)

This happens because wetting agents reduce water's tendency to cling to itself and other things. The result is that applied water (rain or irrigation) moves quickly and uniformly into, throughout and on through all kinds of soils rather than running off, puddling or channeling through unevenly.

A good wetting agent should work in all soils and should have several months residual effectiveness. The residual effect will ensure continuously efficient dispersion of water throughout the plant's old and new rootzone area. This is important to avoid "too wet" as well as "too dry" situations. One application of a good wetting agent at installation should be sufficient to aid in transplant survival.

Super Absorbants Allow Water to be Held

Superabsorbants were first developed for horticultural use by the USDA in 1973. Early forms of the product were starch based, although most currently available products are synthetic materials which are more economical and longer lasting.

As their name implies, superabsorbants are products which absorb large amounts of water. This happens because of an attraction between the water and the absorbant particles which causes a swelling of the particle. Water is held within the particle, forming a gel-like mass, and can be extracted as needed by plant roots.

When mixed into a soil, or used in a transplanting hole, superabsorbants allow more water to be held in that area. The result is an ability to keep water in the area where it is most needed for transplant establishment.

Credit: Greenmaster

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Continuing Education & Public Service CEPS

EXTRAMURAL COURSE OFFERINGS

Department of Horticulture

Fall, 1989

East Moline - Hort 251: Arboriculture: Evaluates criteria for ornamental woody plant selection, cultivation, valuation, and maintenance; links the technical skills and practices for commercial arborist to an understanding of woody plant physiology and anatomy; emphasizes marketing and promotion of horticultural expertise.

Meeting Time and Place: Wednesdays, Sept. 6-Dec. 6, 89, 6:30-9:45 p.m., Room to be arranged, CES Building, 1188 John Deere Road.

Registration, Credit, Tuition: Registration is at first class meeting. Tuition and credit: 3 hrs., $210, plus $15 instructional support fee. Tuition and fees are subject to change prior to beginning of class.

Instructor: Prof. David J. Williams

To preregister for the above course, send the form below to: Ms. Robbin Nelson, Office of Statewide Programming at Rockford, 1601 Parkview Ave., Rockford, IL 61107, phone (815) 395-5592.

Glencoe - Hort 212: Landscape Contracting: Interpretation of the landscape architect's plans and specifications; estimating quantities of materials; and computing costs and procedures for bidding and executing landscape construction. Prerequisite: Hort. 211. Registration limited to horticulture majors, students in the ornamental horticulture curriculum, or students in the agricultural occupations for secondary teachers only.

Meeting Time and Place: Wednesdays, Sept. 6-Dec. 6, 1988, 6:30-9:45 p.m., Room to be arranged, Botanic Garden Ed. Center, Lake-Cook Road, East of Edens.

Registration, Credit, Tuition: Registration is at the first class meeting. Tuition and credit: 3 hours - $210; plus $15 instructional support fee. Tuition and fees are subject to change prior to beginning of class.

Instructor: Prof. Floyd A. Giles

To preregister for the above course, send the form below to: Mr. Richard Casper, Office Of Statewide Programming, 300 W. Golf Road, Mt. Prospect, IL 60056, Phone: (312) 255-3320.

----------cut here----------

Please reserve a place for me in Hort 212 _____ or Hort 251 _____. Send no money.

NAME _____

HOME ADDRESS _____
No. & Street City State Zip

Fertility Assay of Sands

by Jack A. Paul, Dept. of Environmental Horticulture
University of CA

Use of sand as growing media either as a component in soil mixes or alone stems from desirable physical properties imparted by sands, not their fertility. Generally, sands are thought of as being poor nutritionally. Under those circumstances where sand is used in potting soil, the fertility of sand is not important since nutrition in container culture is easily effected with combinations of chemical amendment, liquid fertilization, controlled-release and dry fertilizers. Under conditions where sand is used as a sporting turf soil (putting green, football field) and will not receive the intense fertilizer management of a container soil, inherent fertility is important. If sand can provide some of the plant nutrients, management is easier. Fertility of sands, as a separate class of soil, has not been evaluated, yet it would be useful to have this information.

The purpose of this work was to assess fertility of sands suitable for horticultural purposes with particular references to sands used for turf. The present study evaluates nitrogen (N), phosphorus (P), potassium (K), and sulfur (S) status of 35 sands using the pot testing method (Jenny, Vlamis and Martin, 1950). Soil testing for estimating available P and K in sands is also presented.

Before discussion the results on fertility, it is worthwhile to review briefly the reason for using sand as a traffic soil. It is not necessary that all turf soils receiving traffic be constructed of sand. Under conditions of low to moderate traffic and with good management, soil other than sand can and will support good turf growth. Heavy traffic can cause extra demands on management to keep the soil permeable to water and air, and it is under such conditions that sands are most useful.

Soils containing silt and clay are more or less in a state of aggregation. Under a compactive force, moist soil aggregates deform and flatten, filling in the large air- and water-conditioning pores between the aggregates. The remaining pores are very small and conduct water slowly. Sands form rigid networks of grains that can withstand compaction. After compaction, there is little change in numbers of conducting pores between grains, and so permeability to air and water is preserved. This ability to withstand compaction is the principal reason for preferring sand rather than finer textured soils.

Particle size distribution

Since natural sands are generally unsorted sediments, particular attention should be given to the particle size distribution. Not all sands are ideal for growing plants or for managing. See Table 1.

Silt is 0.05 mm and clay is less than 0.002 mm. Fine gravel is greater than 2.00 mm. Sands having a broad particle size distribution, i.e., a fairly continuous particle size representation, are poor horticultural sands, because the finer grains fit into pores between larger grains, and if silt and clay are also present (8 to 10% by weight), the problem is further aggravated. The resulting mixture is a very dense (bulk densities of 1.9g/cc), tough matrix with only fine pores. We seek uniform sands in horticulture, medium sands for sport turfs and medium-coarse sands for potting soils. Uniform medium and medium-fine sands are permeable after compaction (6 to 12 in./hr.) and contain adequate available water (1¼ to 1½ in.) in the surface 4 inches of a 12-inch depth following drainage. Medium-coarse and

(cont'd. page 13)