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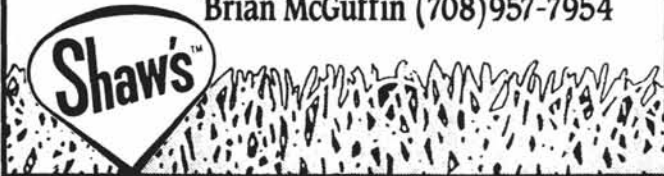
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# 1994 Dinner Dance River Forest G.C.

Photos by John Meyer



*Host & Hostess, Joel & Debbie Purpur*



*Marion Trometer & Ken Goodman*



*Rich & Joan Mika with Bridget & Tom Fahey*



*Dave Blomquist with Amy Pasko*



*Tom & Jeanette Jauch*



*Lynn Wesson along with Steve & Karen Stewart*



*Kevin DeRoo & Dave Blomquist*

# Spray Adjuvants: Matching the Spray with the Goal

by Vicki Robb

"The most expensive spray is the one that fails to accomplish the purpose for which it is applied." According to an article in the *Journal of Arboriculture*, "Spray Adjuvants Are Management Tools," part of the problem with matching the spray with the goal has been the consistency regarding the use of certain words and terms, and what they mean. Dan Shemon, from Benham Chemicals, provided information from the *Journal* which defines the numerous words that are related to spray adjuvants as well as some guidelines for matching the appropriate type of spray with the desired results. The definitions are not "dictionary precise" but relate directly to spraying and the role of the adjuvant.

## Spreader, Wetting Agent and Surfactant

are synonymous terms referring to a broad group of surface active agents. Chemicals that reduce the surface tension of spray solutions so droplets spread out, covering a greater surface area. The word surfactant is coined from the phrase SURFACE ACTIVE AGENT. Spreading action is especially important for achieving good spray coverage on waxy or pubescent (hairy) plant parts, for getting spray into cracks and other small openings such as leaf sheaths and under bark scales, and to help move systemic chemicals or contact herbicides through waxy cuticles into the plant tissue. Surfactants are divided according to their chemical reactivity and may or may not be labeled as nonionic, anionic or cationic, or combinations like nonionic/anionic blends. Nonionic surfactants do not ionize in water, they are essentially non-reactive. Anionic surfactants ionize into negatively charged ions in water, they are negatively reactive. Cationic surfactants ionize into positively charged ions in water, they are positively reactive. They are also phytotoxic and almost never used in spraying. Nonionic spreaders are the surfactant group most commonly recommended.

**How Spreaders Work.** A spreader (surfactant) molecule is somewhat like a tadpole: the "head" is soluble in aliphatic substances (oils, petrosolvent, etc.) and is water repellent (hydrophobic). The "tail" is insoluble in aliphatic substances and is water attracted (hydrophilic). In water, the water repellent "head" moves the molecule to and through the water surface, while the "tail" remains in the water. Wherever a molecule penetrates the surface, surface tension is broken and reduced. The greater the number of breaks, the more surface tension is reduced.

Pubescent (hairy) plants and plant parts have a special spraying problem; the surface tension of water sprays holds spray droplets on the hairs of pubescent plants and prevents wetting of the actual plant surfaces. The addition of a spreader will permit the droplets to move down the hairs, onto the leaf or plant surfaces.

High rates of spreader are as bad as low rates. Excessive spreader causes water sprays to run off or flow into depression areas of the sprayed surface, mainly off, onto the ground. Poor coverage and insufficient redistribution of the pesticides with reduced effectiveness can be the result.

Surfactants are called "emulsifiers" when they are used in aliphatic substances so they will mix with water.

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Emulsifiable oils are very special oils containing specially blended emulsifiers (about 1-2%) so they will mix with water. When an oil spray strikes the spray target, the oil separates out onto the sprayed surface while the water carrier and emulsifier run off onto the ground or evaporate away. The oil is then without emulsifier, is no longer water miscible, and is not readily washed off the spray target. (NOTE: Stickers, if used at high rates, can hold pesticide residues so tightly they are literally entombed and useless).

An adjuvant with both spreading and adhesive qualities is called a spreader/sticker. (NOTE: The greatest misrepresentation, confusion and misunderstanding in the whole subject of spray adjuvants is the promiscuous use of the term "spreader/sticker". Many products labeled "spreader/sticker" are nothing more than a nonionic spreader, having no adhesive quality whatsoever).

Acid adjuvants to lower the pH of alkaline spray solutions are called acidifying agents, acidifier or buffer. Defoamers or anti-foam agents are used to break or prevent foam formation in spray tanks. Every sprayer should have some defoamer with it at all times, just in case a foam problem develops. Defoamers are much cheaper than down time.

Drift control agents are adjuvants that reduce the breakup of sprays into fine droplets that can drift out of the spray zone. Spray drift is double jeopardy; first, it reduces the effectiveness of the spray application; second, it creates contamination hazards for adjacent properties, crops and people with a potential for serious legal implications.

Adjuvants that increase the amount of pesticide actually deposited on spray targets are called desposition aides and thickeners, and dispersants that maintain more uniform dispersions of chemicals in spray solutions are called suspending agents.

A functional knowledge of adjuvants is important in order for spray managers to obtain maximum benefits and returns from every dollar spent for spray chemicals.

#### Consider the Following When Making Your Decisions:

- Select adjuvants as carefully as pesticides. Read the pesticide labels and select adjuvants that meet label requirements and the conditions under which the spray will be applied and expected to perform.
- Buy spray adjuvants, as well as spray chemicals, from reliable, professional suppliers.
- Bottle test spray mixtures for compatibility. If anything in a spray mix is new or different (the water source, the pesticide mix, the brands of chemicals), test before mixing a full batch of spray.
- Check the spread of some drops of the spray mixture on the plants to be sprayed. Somewhat mounded spray drops that stay in place are what is wanted. High standing, round drops that fall off or shake off easily indicate the need for more spreader. Flat drops that tend to slide easily off of the plant surfaces, leaving a wet line, indicate too much spreader. For hairy plants, drops should flow down among the hairs but not readily flow off a vertical leaf surface.
- If a rain or heavy dew is likely before the next regular spray, use a sticker.
- If it is windy, the humidity low, or there is a temperature inversion near the ground, use a drift control agent.

- When using alkaline spray water, lower pH to below 7.0 with an acidifying agent. Lower the pH to about 6.0 if the spray must stand in the tank overnight or longer than a normal application time.
- When spraying a solar heat or ultraviolet radiation sensitive pesticide (a surprising number are), use an extender.

Credit: A Patch of Green, May/June 1993

## MAGCS 42nd Turf Clinic Speakers

Photos by John Meyer



Don Ferreri



Dave Ward



Conner Shaw

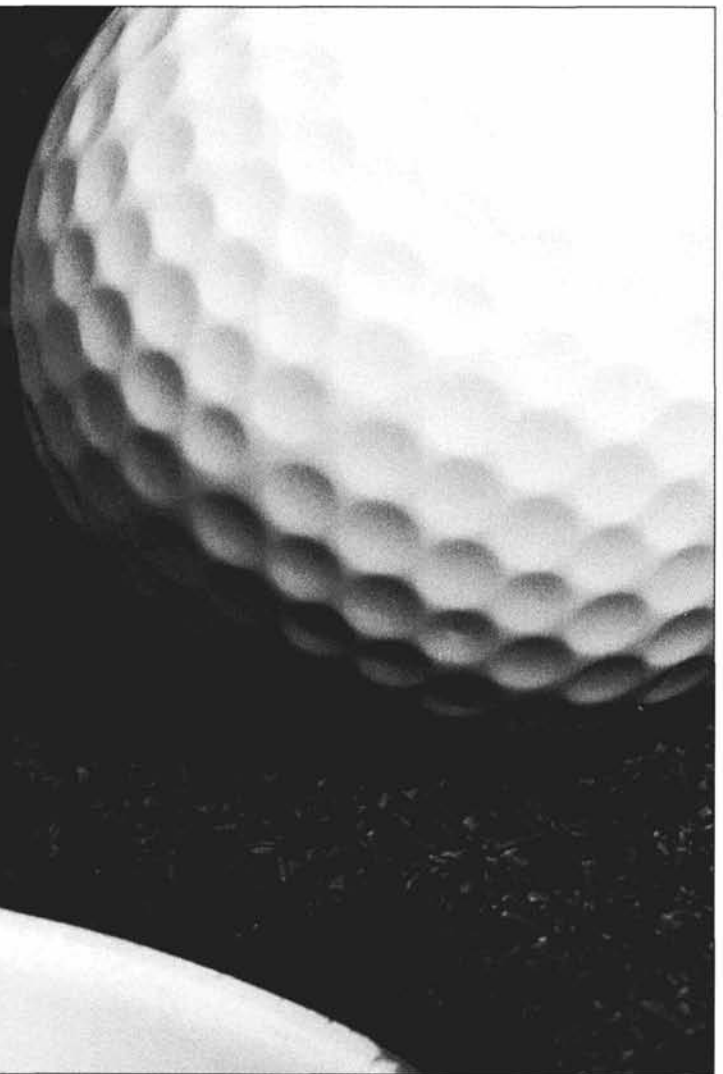


Joseph O'Brien, GCSAA COO



Ed Hightower, NCAA Basketball Official

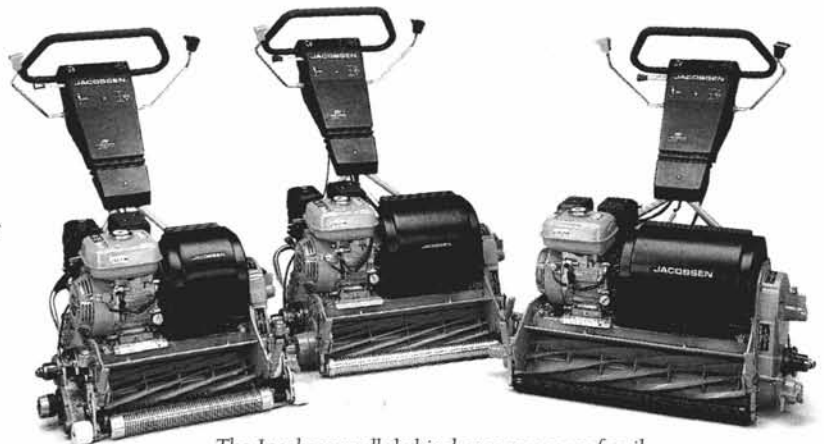
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**Upcoming Events — Mark Your Calendar**

**December 7** — CPR Seminar at Oak Brook Hills Resort, Oak Brook, IL

**January** — MAGCS meeting at Arrowhead G.C.

**January 17-19** — Midwest Turf Expo, Indiana Convention Center, Indianapolis, IN

**February 12-17** — Indiana-Illinois Turfgrass Short Course

**February 20-27** — GCSAA Conference & Show, San Francisco

**March** —

**April** — MAGCS meeting at Ruffled Feathers G.C.

**May 5** — Past MAGCS Presidents Golf Outing at Geneva G.C.

**June** — MAGCS meeting at River Forest G.C.

**July** —

**August** — MAGCS meeting at Mount Prospect G.C.

**September** —

**October** — MAGCS meeting at Sportsman G.C.

**November** — Midwest Clinic

-----  
Your new Board of Directors for 1995 are:  
President — Joel Purpur, River Forest G.C.  
Vice President — Don Cross, Skokie C.C.  
Secretary/Treasurer — Ed Braunsky  
Directors — David Blomquist, Robert Maibusch  
Newly Elected — Brian Bossert, 2 year term; Kevin Czerkies, 2 year term; Donald Ferreri, 2 year term; Luke Strojny, 1 year term. President Emeritus — Alan Fierst.



*1995 Board of Directors*

*Back row, left to right: President Emeritus, Al Fierst; President, Joel Purpur; Vice President, Don Cross; Sec./Treas., Ed Braunsky; Director, Bob Maibusch, Don Ferreri, Kevin Czerkies & Brian Bossert. Front row: Joan Minnis, Executive Secretary; Director Dave Blomquist & Luke Strojny. Absent from picture, Fred Opperman, Editor of "The Bull Sheet".*

The 42nd annual Midwest Turf Clinic is history. The Education Committee did a great job with the program this year. All of the speakers were excellent. Joseph O'Brien, COO from the GCSAA was impressive with the fresh outlook that our national association is taking. There are some new programs to help us all coming soon. He emphasized the importance of working for us and needing our input, wants, and desires. Ed Hightower, the NCAA Final Four Basketball Official was very interesting and held everyones attention with his stories. He stressed the fact to take responsibility to make a difference everyday. He was good.

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Sunday, October 30, 1994, the Inverness Country Club held an afternoon party to celebrate Mike Bavier's 25 years of service. In attendance were about a dozen fellow superintendents and personal friends, plus close to 75 members. Some of Mike's friends "roasted" him and others praised and paid tribute to him. Past presidents and green chairmen spoke highlighting the many accomplishments and projects that took place during the past years. When it was Mike's turn to speak, he spoke of the many friends that he had made at the club, both past and present. He thanked many of them for helping him to do his job. That afternoon was truly a mutual admiration get-together.



*Mike Bavier, daughter Holly; girlfriend Mary Florek; and son, Michael Jr.*



*Mike Bavier, Wade Thompson, and Carl Dillfaver presenting a plaque of appreciation to Mike.*

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Congratulations to Bill Kennedy who became the new Superintendent at Cress Creek C.C. Bill was the assistant to Kurt Galisdorfer at Exmoor C.C.

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Jim McNair at Orchard Valley G.C. is looking for a mechanic. Call 708/907-8998.

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Caroline & Bret Rush became proud parents of baby Marie on November 7th. Congratulations on the new addition to the family.

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(continued page 19)

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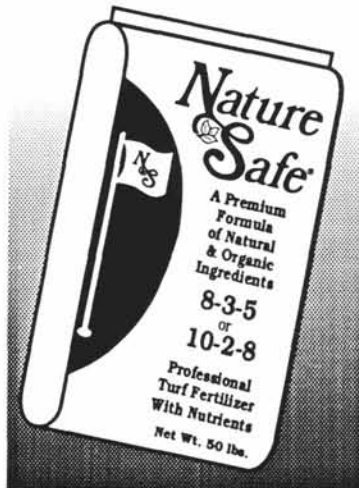
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(Midwest Breezes continued)

DeAnn & Pete Leuzinger are going to be grandparents in 1995. Their son Jeff and wife, Marcie announced this the Friday before Pete ran in the Chicago Marathon. Jeff is the assistant at the Glenview Club. Pete completed the 26 + mile run on Sunday, October 30th. Congratulations on both major events.

Gil Velazquez has been busy this past fall in building another 9 holes at White Eagle G.C. Eight of the holes were seeded and sodded by late October and the 9th hole needed final grading and no doubt is by this time. Tree planting was also completed with over 500 trees being used. In a couple of years another 9 holes will be built as the property expands and housing is completed. Gill also broke his wrist in early November. We hope he has a speedy recovery.

Your Editor, Fred Opperman, has changed jobs the beginning of November. Fred has joined the sales group at Arthur Clesen, Inc. He will be calling on the customers that Bob Baker called on. Bob is retiring from the road after many years of loyal service. The sales territory will be roughly north of I90 and west of Route 83.

Jim Latham is retiring from the USGA at the end of the year. We will miss Jim in our area. He was always a source of information and was the Superintendent's true friend. He saved many a job by being the go-between with the green committees and club officials. I will try to get one more "Lathamism" out of Jim for our January issue. Jim & Lois, we all wish you the very best, health and happiness, thank you for sharing so much with us.



The College of Lake County in Grayslake is offering an Introduction to Turfgrass class starting January 24 on Tuesdays evenings at 6 p.m. The course is being taught by Bruce Williams from Bob-O-Link Golf Course. For more information contact Admissions at 223-6601, ext. 2573 or Mark Zampardo at 223-6601, ext. 2320.

For Sale: 2 Toro estate mowers, 2 Toro 21" walking Greenmasters, mod. 04211, 1 Toro Sand Pro 77, 8 hp.; 1 Toro 1957 80" Whirlwind rotary mulcher; 1 Woods C-80-1980 rotary mulcher. Also 1927 Chevy dump truck C-30, 350 CID V8 4 spd. trans., snow plow, 30K mi. 2 year old box, rebuilt trans. & clutch. Call Bob at Glen Oak C.C., 708/469-6220.

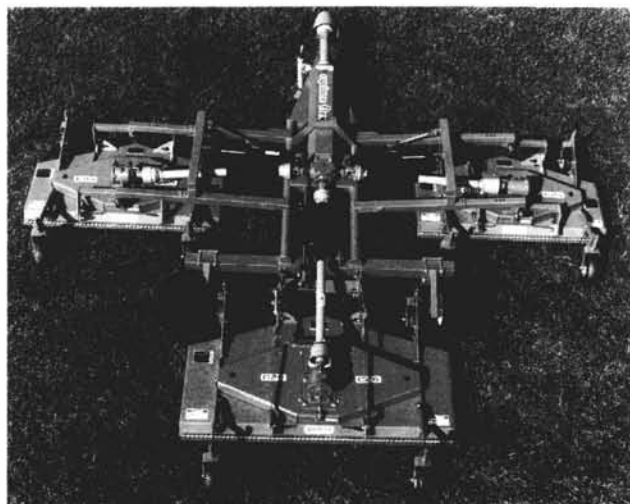
(continued page 20)

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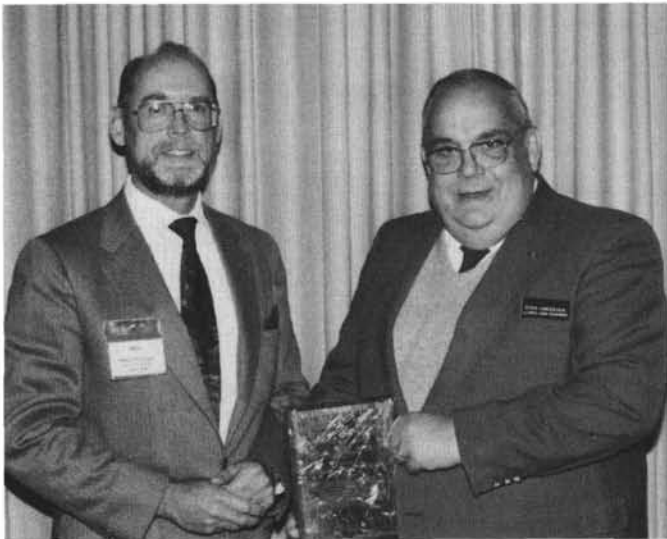
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Fred Opperman, Editor, presenting Peter Vandercook with the "1995 Editors Award" for the many articles he wrote on the history of the MAGCS.

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For Sale: Foley Reel Grinder, good condition. Call Art at Pinecrest Golf Club, 708/669-3130.

-----  
Rick Wilson, Glenview Park District Golf Course has been returfing and leveling a few tees this fall. He also likes top-dressing with push spreaders using dry sand for his greens.

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Bill Aiston, Lake Shore C.C. spent his time removing the bent from the banks of his greens and resodding with bluegrass.

-----  
Tom Lively, Ruth Lake G.C. will be directing construction traffic on the rebuilding of a new clubhouse. The old clubhouse and pool were torn down to make way for the new. Trailers were set up in the parking lot to serve as the clubhouse during construction.

-----  
Bob Maibusch, Hinsdale G.C. is also going through clubhouse remodeling and he too will be directing traffic. Bob is also building a new green and dredging out and enlarging a corner of his lake.

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Dan Dinelli at North Shore C.C. has a new toy; a weather station that does everything except apply the chemicals when needed. It has all of the "bells & whistles" from soil moisture sensing of a green, dew, wind, humidity, air temperature at 6" and other sensing features. Also call Dan and ask what he is doing with hydrogen peroxide and black layer.

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A contribution is being donated to the American Cancer Society in the name of Terry Petric, a deceased MAGCS member. These funds are from the June meeting at Aurora C.C.

-----  
The Forest Preserve District of Dupage County/Oak Meadows Golf Course in Addison has openings for full-time Greensman positions. Responsibilities include: wide range of activities involved in golf course maintenance/construction; such as equipment operation, minor mechanical maintenance; applications of fertilizers and pesticides; irrigation/drainage installation and repairs. Requirements: basic knowledge of fertilizer and pesticide applications and ability to obtain an Illinois Pesticide Operators' License within 6 months of employment. Must be able to work varying hours, including weekends and holidays. Preferred candidate will have experience in golf course or landscape maintenance and coursework in horticulture, turf management or related field. Please send resume with social security # to/or apply in person at: 185 Spring Avenue, Glen Ellyn.

-----  
Congratulations to Dr. Bill Meyer who received two prestigious awards in November at the American Society of Agronomy meeting. The first award is called the ASA Fellows Award, which is awarded to a small percentage of the whole membership. This is called the highest honor of the Society. The other award is called the Fred Grau Turfgrass Scientist Award, which is given each year by the Crop Science Division of the ASA. Bill's parents Tony & Marge Meyer were in attendance to see the awards given.

-----  
For Sale: 1 Cushman core harvester for the 1991 Cushman and older - \$1800.00; 1973 O'Brien Sewerking model 250, works OK, make offer; 3 Cushman engines, 1 runs, 2 good for parts - **FREE**; 1 Cushman Greensaver aerator kit, make offer. Call Glenn at Sunset Ridge C.C., 446-5268.

-----  
Kurt Galisdorfer at Exmoor C.C. has a position for a technician/2nd assistant. Interested candidates can call Kurt at 708/433-1177 for more information.

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Bob Lively at Glendale Golf Club is looking for a mechanic. Call 708/529-6264.

-----  
Mike Hubbard of Hidden Meadows G.C. is looking for an assistant. Please call 708/747-0303.



Joel Purpur presenting outgoing president Al Fierst with a plaque of appreciation.