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## JOBTALK

### A little makeup enhances the real thing

#### by Bill Rhymes

We are surrounded by fakery everywhere, from capped teeth to Grecian Formula. Debate continues over fakes in the ornamentals industry. We have seen artificial grass and flowers. Most people do not like them.

Who wants to walk or lie down on plastic grass or be in a restaurant or shopping mall surrounded by plastic plants? Is there any place in the turf and ornamentals industry where a little fakery is acceptable by all? Yes, in the use, at certain times, under certain conditions, of colorants to enhance the beauty of the real thing.

The color of well-managed growing grass, as well as most foliage plants and trees, is green, of course. Green colorants are used in several ways on grass and foliage plants. These green colorants (GCs) are of several types, such as wettable powders, liquids used "as is" and concentrated flowables diluted with water. The last is by far the most economical to use.

The chemical formulations can be organic dyes (OD), inorganic dyes (ID) and specially formulated "paints" of acrylic/latex types (P).

Generally, ODs are short-lived and are used primarily as spray indicators. They are not a natural green grass color, but that does not matter since they fade rapidly and serve their purpose. IDs are natural green color, last several days, and are excellent as spray indicators or for touching up offcolor turf. Ps are more enduring, lasting several months, and are non-staining when dry. All are formulated to be safe (non-phytotoxic) to grassplants and non-toxic to mammals, including man.

The widest use of GCs is on dor-

Landscapers have begun using paint on foliage plants for a more uniform look.

mant grass. For years, superintendents of major sports stadiums have used GCs to "paint" dormant or offcolor turf. However, dormant turf is not the only candidate, as there is a growing use of GCs on actively growing grass.

Several areas in which GCs are used on turf include:

• Athletic fields. Type P on dormant or off-color grass to give a natural instant "summertime" green color.

• Golf course greens, fairways, tees. P used in place of overseeding certain areas. IDs used to touch up offcolor and diseased areas, and as a spray indicator. OD used as spray pattern indicator.

• Landscape contractor. Paint on new sod jobs can give a finished, natural look until sod is "pegged down" and growing.

• Professional lawn care. P is used on dormant home and commercial lawns. ID to touch up diseased or damaged areas; OD as spray indicator.

• Miscellaneous. Some odd but successful uses of P have been reported such as: lake dye; mixed with soil to replace divots (would be cheaper to fill divots with soil, then spot spray on top with P); and P on sod sample prior to display at trade shows.

The use of GCs on ornamentals,



while not as extensive as on turf, is growing. Paint is used extensively on freshly cut Christmas trees prior to shipment to return the natural, uniform color where insects or disease might have caused damage.

Landscapers have begun using paint on foliage plants for a more uniform, finished look. In this use, however, care must be taken because too much color on tree branches and trunks can turn them an unnatural green.

#### **Choose wisely**

It is important to pick the right product for the right job. An OD, which fades rapidly, should not be used to color dormant turf. Conversely, a paint should not be used as a spray indicator since it is longer lasting. ID should be used only sparingly in mix as a spray indicator because it stains.

Cost-in-use should be studied carefully when selecting a P. A number of products on the market are low cost per gallon, but often that gallon is used as is, or mixed with just six to eight gallons of water. They can also look artificial, with an unnatural color on grass and ornamentals.

The best brand on the market is only slightly more per gallon, and can be mixed with up to 70 gallons of water. It is also the most natural looking, and once dry, won't rub off on uniforms, clothing or equipment.

Some of these products can be phytotoxic to grass and plants. Care should be taken to find one specially formulated to be safe for vegetation and humans. Also, don't be afraid to consult other superintendants, growers, stadium managers and the like. Most will be happy to help in finding the right products for a particular application. Products mentioned in this article are well-known to distributors. They, too, can be helpful in finding the right product.

Nothing is better than a diseaseand insect-free, well-managed, natural growing plot of grass or ornamental plant. But when problems occur and nature has taken its course, even the best must use colorants. Using colorants in a wise and timely fashion can improve appearance. Though perfection can't be reached, image can be improved and a lot can be gained.

Bill Rhymes is executive sales representative of specialty agricultural products for Mallinckrodt, Inc. He is based in Shelby, N.C.



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## **PROBLEM SOLVERS**

by Balakrishna Rao, Ph.D

### Managing pesky bermudagrass

**Problem:** We use fabric and Roundup to get rid of bermudagrass and it still gives us fits. How do we get rid of it? (Kentucky)

**Solution:** Your Roundup treatment should give better results. Make sure that the mixing and application are done correctly. Bermudagrass management is difficult. However, proper application of Roundup is the best approach to the problem.

Bermudagrass spreads by producing lateral stems called stolons. Often stoloniferous plants require several applications. Therefore, repeat treatments as needed. Read and follow label specifications.

### Spruce gall aphid control

**Problem:** Every year we have problems managing spruce gall aphids. We are primarily interested in the one which produces galls at the tips of branches. We have used Sevin in the past. What are we doing wrong? When is the best time to apply chemicals? (New York)

**Solution:** The problem you describe is commonly referred to as Cooley spruce gall aphid. The causal agent, *Adelges cooleyi*, is closely related to aphids yet is not an aphid; it is an adelgid.

Success in managing this pest depends on (1) understanding their life cycle, and (2) using the proper material at the proper time.

The adelgid has a complicated life cycle. It may alternate between spruce and Douglas fir and complete cycles may occur on both. Aphids overwinter as immature females at the base of the buds of spruce and Douglas fir. They mature in early spring to become a "stem mother," produce waxy filaments, and then lay several hundred eggs underneath.

After the eggs hatch, the nymphs migrate to the new growth where they feed at the base of the growing needles. This feeding stimulates gall formation which envelopes the young insects. By July or August, the adelgids migrate through an opening at the base of each needle on the gall to the top of the needles and transform into females with wings. These winged females may fly to Douglas fir or spruce and lay eggs on needles. These hatch and the nymphs overwinter as immature females.

On Douglas fir they lay eggs on the needle and a generation of "woolly aphids" is produced. The next summer these adelgids remain on Douglas fir or fly back to spruce. Sometimes Douglas fir may be so heavily infested that the needles will be covered with white woolly mass. No gall is produced on Douglas fir, but extensive feeding can produce distinct yellowish spots and bent or distorted needles.

To manage Cooley spruce gall adelgid problems, apply superior oil or oil plus ethion in April on spruce. Oil may temporarily remove the bluish color from blue spruce for up to four weeks but it may come back. Application should be done thoroughly to cover the crevices of bark or terminal twigs and base of buds on spruce and Douglas fir. After the galls open in late July or early August, apply either lindane, Sevin or Dursban on spruce or Douglas fir.

### Maple scale treatments

**Problem:** What is the best way to manage cottony maple scale on maple? Can we use oil? Would a general scale management approach, including one dormant oil spray plus a crawler stage application in summer, take care of the problem? (Michigan)

**Solution:** Reports indicate that a dormant oil spray may be used before growth starts in the spring. Make sure to read and follow the manufacturer's recommendations. Some varieties of maple are extremely susceptible to oil injury.

If in doubt, spray the trees with Sevin, malathion, Orthene or diazinon around July 1 and again in 10 days. Be sure to cover the lower leaf surface with spray. Repeat applications as needed to manage the crawlers.

### The right lime

**Problem:** What are the different types of lime and what kind would you recommend for lawns? (Pennsylvania)

**Solution:** Several different kinds of lime are available. Ground agricultural limestone (carbonate forms of calcium and magnesium) is the most commonly used. Calcium carbonate is known as calcite, while magnesium carbonate is referred to as dolomite. The use of dolomite is recommended if the soil is tested and found to be low in magnesium.

Two other forms of lime are available to correct the soil acidity—calcium oxide, sometimes called burnt or quicklime; and calcium hydroxide or hydrated lime. Calcium oxide has twice the neutralizing capacity, while calcium hydroxide has 150 percent the neutralizing power of ground agricultural limestone.

Both calcium oxide and calcium hydroxide may be difficult to apply because of their powdery form. Therefore, agricultural limestone is preferred by most lawn care companies because of its ease of application and lower burn potential.



#### Balakrishna Rao is Director of Lawn Care Technical Resources for The Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Solvers, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

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economical, easy-to-use water dispersible granule formulation also means less bulk. At 2.5 pounds of PRE-M per acre, a 900-pound pallet of material treats 360 acres. Registered for use on the majority of northern and southern turfgrasses, LESCO PRE-M is spray tank compatible with most fertilizers and pesticides.

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### LETTERS

### Safe athletic fields

To the editors:

We are grateful to your magazine and staff for the fine set of articles dealing with the safety of athletic fields in your September issue. Those of us who have been working for their improvement truly appreciate your interest.

Now, if we could only get the articles to those in the schools who need them. I'll get them to Texas schools if you can tell me how I can get permission?

William E. Knoop, Ph. D. Texas A&M University Dallas, Texas

(We are in the process of having the articles reprinted. Watch future issues of WT&T for instructions on obtaining the reprints.—Ed.)

To the editors:

I am the school-community relations director for the Wayne County Public Schools. The article ("Sidelined," September) is an extremely important informational tool to our administrative staff and athletic coaches on the conditions of athletic fields, with their relationship to injuries.

Your magazine has been extremely valuable in giving us a better knowledge of athletic turf. The articles in your publication stress all areas of landscaped design, athletic fields and golf course management. Please keep up the good work in providing the latest research in these areas.

> Terry Pilkington Wayne County Public Schools Goldsboro, N.C.

To the editors:

The articles on treacherous turf were very informative and somewhat depressing. As a field manager, I find it very difficult to put in the time and effort it takes to improve the athletic fields.

Right now, we have three practice fields and a football field. The practice fields are in the baseball outfield and one is at a far corner of the school property on somewhat bumpy ground.

Schools today just do not provide enough dollars or manpower to get these jobs done at the time they should be done. Borrowing equipment takes extra time and limits your ability to do what you would like to do. I sometimes get the impression that the Superintendent of Buildings and Grounds is the goat between those who constantly call for more maintenance and those who say we've spent enough.

Needless to say that if superintendents were given more discretionary powers and communications were more open, we could do a lot more. However, I live in a realistic state: probably not a lot will be done until someone gets hurt badly or these suits that are wrecking the country subside.

P.S. Two men to mow four schools and related fields (over 100 acres), repair and maintain 13 vehicles and several mowers, deliver supplies, and maintain three playground areas, 13 ballfields, paint five fields once a week in the fall, track in the spring and plow snow and refurbish equipment in the winter is no fun job. There just is not enough time to even properly consider field maintenance. Planning programs without a real possibility of implementing them is almost hopeless.

> Howard Parker Newfane Central Schools Newfane, N.Y.

To the editors:

I have always enjoyed reading your publication and appreciate receiving it monthly. You should be commended for the series on sports turf injuries. I was unaware of such things ans as a sports turf manager, appreciate the enlightenment. The articles were well-written and get the point across.

I plan to implement an improved program here with safety to player as a more important parameter.

Thank you.

Robert F. Michaels Ricks College Rexburg, Idaho

To the editors:

My hat's off to you. Fred Grau and a lot of other people have been working very hard to generate the type of exposure given in your September issue. People are starting to wake up to the dangers of artificial and poorly maintained athletic turf, and they will soon start demanding an improvement.

I thought the series was well done and aimed at the right audience, the professional turf managers. We have the expertise and the resources to do more. I believe with articles such as these, we will.

Jon Scott Grand Traverse Resort Acme, Mich.

(Golf course superintendent Jon Scott has hosted benefit tournaments for the last two years. Monies raised by five such state tournaments go to the Musser International Turfgrass Foundation, the parent organization of the National Sports Turf Council.—Ed.)

To the editors:

The impact of your September issue has only begun to penetrate. What a service you have rendered!

We volunteers wondered how we would reach the people who care and who want to help. Wonder no longer: the media has opened the doors.

It was thrilling to get a letter from a concerned parent. These are the people we want to reach!

We started with an appeal to the National PTA. Dr. Eliot Roberts' article in "PTA Today" elicited no response. Undismayed, we pushed on. Now, with your help, all we have to do is "sandbag the dikes to keep ahead of the flood."

Thank you for the great boost you've given to safer sports turf.

Fred V. Grau National Sports Turf Council College Park, Md.

(Dr. Grau and Dr. Roberts report renewed interest among field managers, judging by the inquiries they've been receiving. Dr. Jack Harper at Penn State University reported an average of six inquiries per day shortly after the September issue mailed. One nursery owner and parent who happens to be on his city's Board of Education, wrote Dr. Grau: "I have been concerned about the condition of our playing fields and practice fields. I have been reading the September issue of WEEDS TREES & TURF concerning safer athletic fields. I have convinced our athletic booster club and school board that it is time to do something about our athletic fields." Thank you readers.-Ed.)





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#### **Preventative medicine**

To the editor:

I think the time has come for us in the landscaping industry to take action regarding the use of pesticides. I believe that the continued application of chemicals to the environment will cause even greater health problems than we are presently experiencing.

Stop and think how many chemicals enter the environment. The Earth is not a sponge that will continually absorb all our wastes. We will not be able to throw it away like a used oil or air filter.

Although there may not be conclusive evidence that chemical A causes cancer B, I am convinced that many cancers are linked to the environment. I am not going to wait for conclusive evidence that this is so. I want everyone's and my children and grandchildren to inherit a clean and safe environment.

The question is, then, what should we do as an industry? Before the finger turns to point and include us as polluters, we should have enough foresight to increase our efforts at using cultural, non-polluting alternatives: hand-weeding, insecticidal soaps, integrated pest management and so on.

This will mean the cost of doing business will rise and we'll have to charge more for our services. However, this is worth doing in terms of protecting the environment, and will be less expensive than chemical contamination suits. Preventative medicine is less expensive than major surgery.

We can, as landscapers, be caretakers and stewards of the land and set a leadership example. Or we can continue to do business as usual and suffer the consequences.

Robert Mulder Amsterdam Landscaping Raleigh, N.C.

### **On fertigation**

To the editors:

In the June issue, I was and am interested in the article "Two Birds with One Stone," about fertilizing a golf course through the irrigation system.

Back in 1968, I was very much interested in developing a system to fertilize our golf course through the irrigation system. After two years of experimenting, I developed a method that was very successful. It took about only half the water, and I am sure we had fewer disease problems.

We used this method until the course was sold and I left—I did not care to work for the new owners. After this, the idea was discontinued due to the fact that I did not care to leave my method intact after how I was treated by the new owners.

I thought I'd pass this on for what it might be worth.

Harvey C. Dreibelbis 118 B Lowens Strasse Freehold, N.J.

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## **PRODUCTS** A mower for tomorrow from Kubota Tractor

Kubota Tractor Corporation has introduced the industry's first fully remote-operated mower, the PX-2100.

It's available now, but be prepared. Its price tag: \$22,000.

"It isn't something that will be sold in large volume," says Russ Green, tractor sales manager for Kubota.

"It's not priced in a range that most landscape companies will be able to justify," he notes.

The PX-2100 is designed to operate under radio control mode on grades too steep for conventional, self-propelled mowing devices, says Green.

"There's been a lot of interest in it. We've had the product at eight major shows and it's been viewed by a million people," says Green.

Green tells WT&T the tractor has been under development in Japan for three years. "The Japanese golf courses are hilly and traditional tractors are impractical," says Green. The PX-2100 arrived in the United

The PX-2100 arrived in the United States in April and received its final engineering release for sale this fall.

Practical applications include the ability to mow steep embankments



The Kubota PX-2100 control box which controls the tractor up to 300 feet in ideal conditions.

around interstates, reservoirs, lakes, dams, railway rights-of-way, and powerline property.

What makes the PX-2100 ideal for steep inclines is the "crab" steering feature (4-wheel parallel) which helps counter drift on hillsides.

Two other steering modes are standard: conventional front wheel, and 4-wheel opposed steering for tightest turning radius (six feet).

The PX-2100 won't replace the need for a worker. The worker guides the mower with a battery-powered hand-held control box.

The box allows control from a distance of up to 300 feet in ideal conditions. The machine shuts down when the radio frequency is interfered with.

Other features include fully remote or manual operational control; automatic intermittent fan reversal to prevent overheating in prolonged usage periods; and automatic differential lock which allows all four wheels to turn at the same time.

The tractor has built-in safety over-rides that automatically stop the engine in a number of situations such as a power voltage drop, low fuel, low oil pressure, or high coolant temperature.

The machine stops in the unlikely event that the brakes fail. When fuel supply gets below two gallons, the Kubota D-950 engine automatically shuts down.

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