

# "I wish my quarterbacks were as durable as this John Deere Tractor."

Coach Dan Spadoni, Dollarway High School, Pine Bluff, Ark.

Last season, Coach Spadoni had all four of his quarterbacks out at one time or another with injuries.

But his John Deere 850 Tractor never missed a day's work.

"In the two years we've had it, we've used it to mow both of our football fields, the practice field and the grounds around the school," says Coach Spadoni.

"And we've never had any problems. Even opposing teams have told us ours is the best field they've played on!"

Which, of course, is why Coach Spadoni and School Superintendent James Matthews decided to buy a John Deere 'Little-Big' Tractor in the first place.

## Not too big, not too small

They were looking for a tractor big enough to handle

\*Maximum PTO horsepower at 2600 engine rpm (by official test).

\*\*Maximum PTO horsepower at 2400 engine rpm (by official test for the 950, factory observed for the 1050).

a large-acreage mowing job. Yet small enough so it would be economical to buy and operate.

The 22-PTO-hp\* John Deere 850 filled the bill on both counts.

Its compact, water-cooled, 3-cylinder diesel engine has the power and stamina to run a rotary mower day after day, year after year. Yet being a diesel, it gives the kind of fuel economy a school's budget really appreciates.

## More than just a mower

Another reason Coach Spadoni picked the John Deere 850 is its versatility.

It has a well-spaced 8-speed transmission that can match up to just about any job you want to do, plus a differential lock.

It has a Category I 3-point hitch, 540-rpm PTO and adjustable drawbar, plus more than 20 power-matched implement options.

And it's available in a variety of different tire styles and sizes.

## Built to last

Of course, like all John Deere tractors, the 22-PTO-hp 850 is built to last.

"You can actually *feel* how solid it is when you ride it," says Dan Spadoni.

And to prove it, we ask only that you test drive one yourself at your nearby John Deere dealer.

Try out the 850, the 27-PTO-hp 950 or the new 33-PTO-hp 1050 with turbo-charged diesel engine:\*\*

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For more information, write John Deere, Dept. 63, Moline, Illinois 61265.



The little-big tractors from John Deere

*Leasing available—John Deere Tractors, Skid-Steer Loaders and matching equipment may be leased for commercial or agricultural use. For details, see your John Deere Consumer Products Dealer.*

turns brown. By this time, considerable damage may have occurred and corrective pruning will drastically alter the appearance of the plant.

Vigorous plants usually are not affected by cankers. Proper planting procedures and cultural practices should minimize or eliminate many problems caused by canker diseases.

Since many of the casual fungi invade plant tissues through breaks in the bark, care should be taken to avoid unnecessary injuries. In general, chemical control measures have been unsuccessful in the treatment of cankers, while bark tracing and excising small trunk or branch cankers has produced satisfactory results.

#### Wilt Disease

Wilting is due to a deficiency of water in the leaves and stems and can be caused by excess or insufficient water in the soil, injury to the root system or parasitic invasion of the vascular xylem which conducts water throughout the plant system.

The wilting caused by disease

organisms is the result of phytotoxic substances produced by these pathogens and by the clogging of water-conducting vessels with bacterial or fungal growth. In some cases cells surrounding the vessels are stimulated to form tyloses, extensions of the neighboring cells that grow into the vessels or tracheids, blocking active water transport. The wilt-diseased branch, in cross section, shows a discolored area in the sapwood. This may be confined to one annual ring or may be found in several rings. Frequently the discoloration takes the form of a closed or broken ring in one annual layer. When the stem is split lengthwise or the bark peeled back, the diseased layers show as lengthwise streaks in the sapwood.

Because wilt diseases are systemic, they are usually more important, and harder to control than localized spots or cankers. Often the fungus is present near the base of a tree while the first symptom of flagging, wilting or yel-

lowing of a branch occurs near the top.

Several vascular diseases caused by fungi seriously menace some of our important shade and ornamental trees. Verticillium wilt and Dutch elm disease are two of our most important diseases and both are caused by vascular wilt fungi. Some of the casual organisms of wilt are limited to one species or genus. Others may infect a number of species. Verticillium has been reported to infect over 50 different species of trees and shrubs.

Vascular wilt diseases are difficult to control after serious infection has occurred and preventative control has not been entirely successful. Removing and destroying infected trees will reduce the sources of inoculum. Where a disease organism such as verticillium can spread from plant debris remaining in the soil after an infected host is removed, susceptible trees and shrubs should not be replanted within the root zone of the diseased plant removed.

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Many cases have been reported where maples infected with verticillium have "walled-off" the disease by laying down new layers of tissue after being properly fertilized.

Plants should be maintained in a vigorous condition through pruning, watering and fertilizing and sprayed, where applicable, to control disease-carrying vectors.

#### Wood Rot Diseases

The wood rots may be divided into those which infect the heartwood and those which infect sapwood. The distinction between the two is not always clear. Some of the fungi which cause decay of sapwood are limited to the older, non-living layers. Others may attack the living outer layers which are actively engaged in water conduction.

Infection takes place by the germination of a spore, this spore having been produced in a fruiting body which protruded from the surface of another diseased area. These fruiting bodies are usually of the bracket type,

commonly called conks, and are among the most prominent of fungous growths. The under sides of these fruiting bodies are divided into a great many pores or have other types of openings on the inner walls from which the spores are produced.

After the spore germinates, the growing mycelium branches again and again. As it advances into the wood, the walls of the cells that lie in its path are dissolved or broken down and their substances used as food by the fungus. The wood changes in color and weight and becomes "punky" or "rotten". In addition to killing the living cells, wood rots greatly weaken the structural strength of trees and so make them more subject to being broken during storms.

The rot fungi enter through unprotected wounds — either pruning cuts or breaks due to mechanical or wind injury. Although there is some question concerning the value of wound dressings as a deterrent to fungal invasion, the addition of a fungicide which

inhibits rot fungi would be useful in preventing wood rot diseases. Protecting ornamentals from mower damage and other unnecessary wounds would also prevent rot diseases.

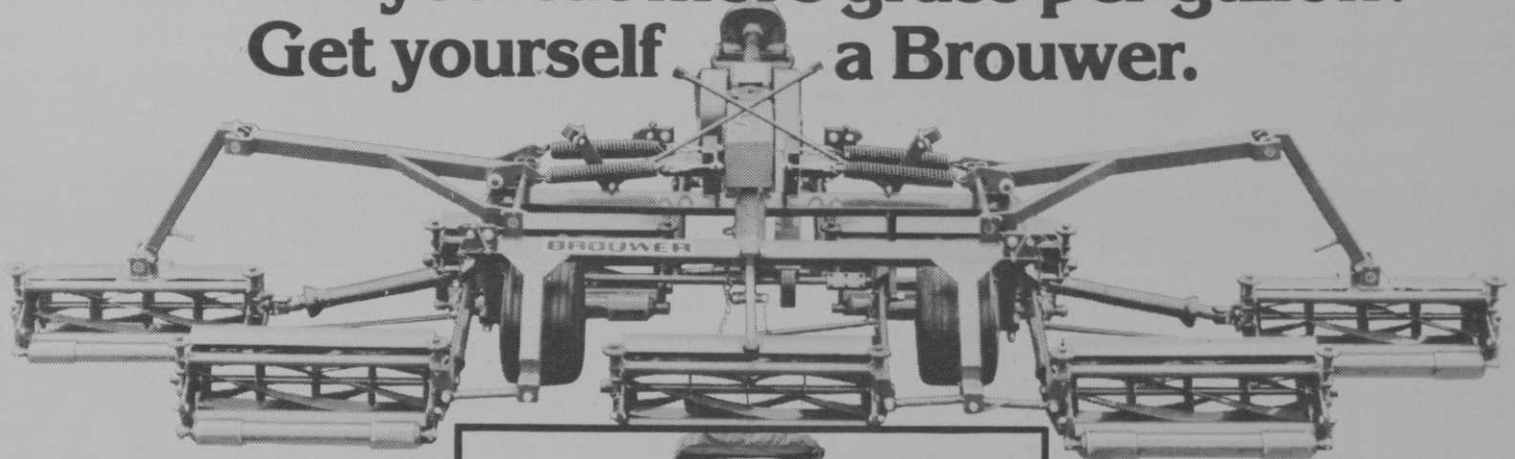
#### Root Diseases

Although the casual fungi of root rots are usually present in the soil, most become aggressive on living plants only when unfavorable growing conditions exist.

The main factors contributing to such stress conditions are drought, altered drainage patterns, soil compaction, waterlogging of soil, landfill over roots, wounding of roots, nutrient deficiencies and insect defoliation.

To prevent root rot diseases, both soil disinfection and removal of diseased roots or portions of roots have been tried, but with indifferent success. The most effective prevention would be to maintain favorable growing conditions. One cannot overstress the importance of fertilization and proper watering.

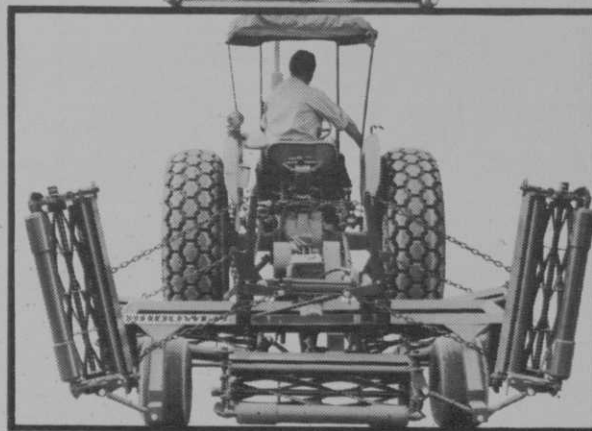
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# After the seed harvest A Fall availability outlook

Forecasting anything is treading on dangerous waters. There is particular danger in forecasting an agricultural crop. Just as a superintendent must cope with insects, disease and weather, so must the seed producer. Rust is a big factor in the yield of turfgrass seed crops. Yield is predicted, taking into effect the amount of rust.

The weather can affect the crop in several ways. Rain can delay harvest. If it rains while the seed is swathed on the ground, the rain can beat much of the seed off the stalks and it cannot be picked up. The yield would be significantly reduced from the forecast for the amount of seed standing. As I frequently heard in gathering this infor-

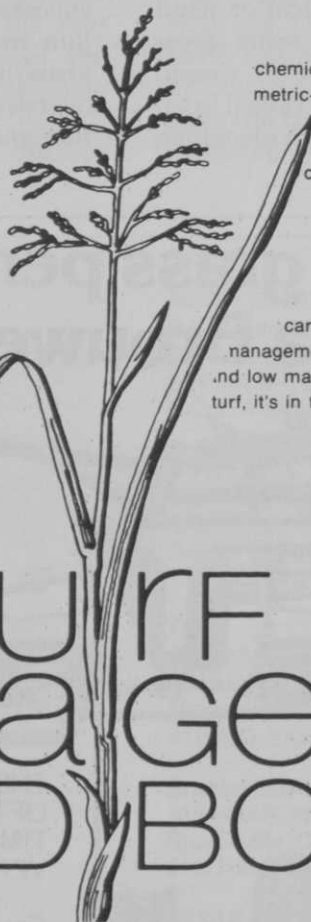
mation, **It's not in the bag yet!**

I have spoken with representatives of seed companies and what follows is their predictions based on the demand for a variety and how much of that variety they believe will be available to meet the demand. While most are in good supply, there are some that will be short. What this means to you is that if you are planning to purchase this variety, you should act promptly.

Ron Morris

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chemical applications, and extensive metric-imperial conversion. Business and technical aspects of turfgrass management are covered in this 424-page book. Planning, purchasing, hiring, construction, and plant selection are put together for easy on-the-job reference. Markets covered include lawn care, sod production, golf course management, cemeteries, athletic fields, and low maintenance areas. If it concerns turf, it's in the Turf Managers' Handbook.

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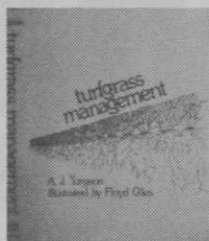
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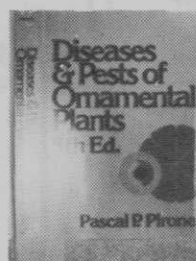
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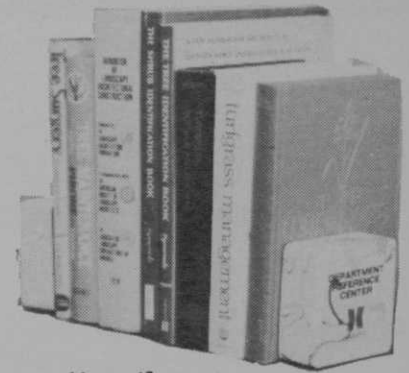
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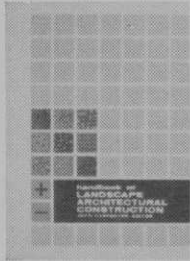


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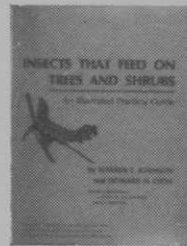


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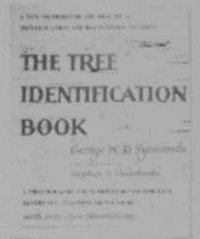


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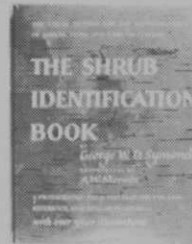
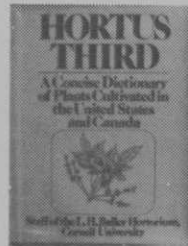


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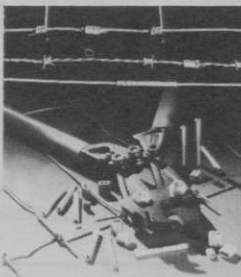
The new MTD Model 241-690 Leaf Blower is designed to spot blow leaves and turf litter into piles for easy pick-up. With an optional extension hose, it works as a close-in blower for tight, hard-to-reach spots. And it converts to a handy lawn vacuum with quick pulverizing and shredding action, with a nylon collection bag with its optional vacuum attachment.

The 5-hp, 97-pound unit is all steel with 10-inch adjustable rear wheels and swivel nose wheel. The unit's adjustable chute relector (left and right, up and down) directs leaves and litter, will remove light snow, and clears standing water from patios, tennis courts and walks. A similar leaf blower with a 3-hp engine is also available.

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## FENCE TOOL

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The Nicopress® Fence Tool No. FT-2345 will splice wire, remove wire sag, tension wire, remove staples and cut wire. The National Telephone Supply Co. says that, with their tool, fence can be spliced four times faster than twisting. The two wires to be spliced are inserted in a sleeve and the sleeve is crimped with the tool. The splice is as strong or stronger than the original wire.

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For selective weed control



The Lightning Hoe is the only wick applicator available for use in selective weed control throughout the United States, according to Hardy-Roberson, Inc. The lightweight unit can be used along fence lines, in and around ditches,

along property lines, buildings and other specialized spot applications. A version of the standard 4-foot Lightning Hoe is also available. The closed system wick applicator works on the same principle as the oil lamp. When the handle is filled one-half to one-third full of herbicide, it flows by capillary action to saturate the individual sections of specially constructed wick ropes. The Lightning Hoe becomes a herbicide brush that wipes a killing dose on unwanted weeds and grasses.

Write 205 on reader service card

## SALT METER

Indicates soluble soil salts level

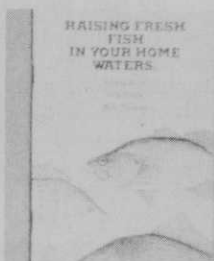


Advanced Marketing has introduced a meter that gives a five-second test to determine whether soluble salt in the soil exist at a "safe" or "danger" level. There is no battery required, the meter is permanently calibrated and guaranteed. Standards and performance are validated by a State Department of Agriculture Center, according to Stanley Blum, President of Advanced Marketing, Inc.

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## FISH BOOKLET

Available free from Otterbine®



Otterbine, located in Emmaus, Penn., and manufacturers of Otterbine Spray Sculpture Floating Fountains, have released a 33-page booklet on stocking fish. Titled "Raising Fish in Your Home Waters", the booklet contains valuable information for stocking beneficial varieties of fish and learning about their habitat.

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## PIPE JOINT STIK

For use on irrigation systems



A non-toxic, lead-free compound in stick form, the LA-CO Plasto-Joint Stik can be used on threads made of any kind of plastic, from A.B.S. to P.V.C., Polyethylene, Polystyrene, Nylon, Dralastic and Cyclocac. Manufactured by Lake Chemical Co., the compound withstands water, acids and alkalis. It is non-hardening and joints can be disassembled easily at any time.

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## INCREASE EARNINGS, SERVICE & SPACE Remodel your present storage space, update with NEW *Stafford* VERTICAL BAG RACKS

- Wear and tear of golf bags is completely eliminated
- Damp bags dry faster — no mildew
- Faster, easier storage
- Provides a neat appearance
- Easy to install and add more as needed

Your members will like the extra convenience and care. Your pro shop profits from 40% more space these racks make available. Double unit shown holds 16 bags, size 2' x 4' x 6'-6" high, gives 12" x 12" space for bags. Single unit holds 8, size 1' x 4' x 6'-6" high. Sturdy steel. Bags set solid on tapered shelves. Send us your floor measurements, we will plan a layout and quote you — no obligation. U.S. and Canadian patents. Send for folder.

**The A.G. STAFFORD Co.**

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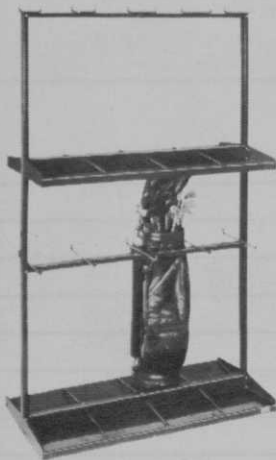
## GOLF CAR

Has self-adjusting brakes



Melex USA, Inc. has introduced the first golf car with self-adjusting brakes. Dubbed the Melex Turtle, both 3- and 4-wheel electric cars have new individual rear-wheel brakes, featuring precision machined drums. A new, simplified torsion bar seat brake is included as standard equipment, as are spike guards, sweater basket and mud guards.

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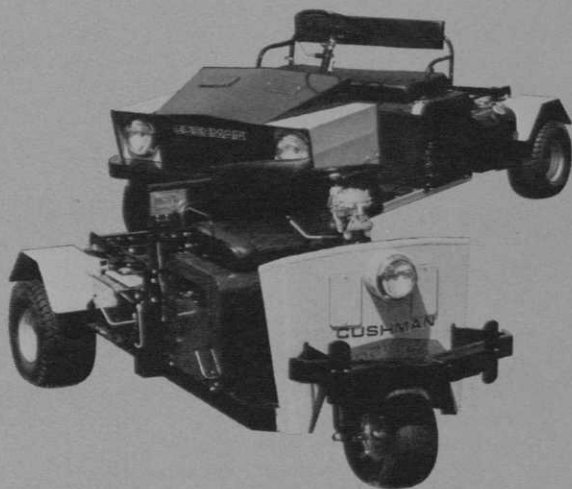
# We put a lot into our Turf-Truckster.

One of the most dependable vehicles for moving your crew around is the 3- or 4-wheel Cushman® Turf-Truckster. But it was also designed for more than just transportation.

Equipped with an optional PTO and hydraulic system, both models accept a wide range of special, add-on turf maintenance equipment. So with just one Turf-Truckster you can haul, dump, grade, seed, spray, spread, top dress, aerate and more.

But there's more to a Turf-Truckster than versatility. There's a rugged 18-hp engine that's built to take on your turf. It comes with a standard 2 to 1 auxiliary transmission. A transmission built to allow a gear driven PTO to be attached directly to it. And common sense engineering makes the Turf-Truckster steer clear of the repair shop, too.

The 3-wheel model gives you the maneuverability of a tight 17' turning circle, while the 4-wheeler has seating room for two. And it just takes minutes to



add any of the Turf-Truckster's accessory pieces, thanks to Cushman's pin-disconnect system. No bolting, no hitching. Just snap two or three pull pins in place and you're ready to hit the turf.

If a good transportation/hauling vehicle is all you need, though, look at the Cushman Runabouts. There's an 18-hp two-seater, and a fuel-stingy 12-hp one-seater model. Both Runabouts are economical to own. And like any Cushman vehicle, they're built tough.

There's nothing like a Turf-Truckster or Runabout to get more work done, in less time and with less manpower. For a closer look at what goes into, or behind, a Cushman vehicle, return this coupon today. 80-CUT-2

## Show me what you put into a vehicle, Cushman.

- I'd like a demonstration of the Turf-Truckster (3-wheel or 4-wheel). (Circle One)
  - I'd like a demonstration of the Runabout (12-hp or 18-hp). (Circle One)
- I'm interested in seeing these Turf-Truckster attachments:  Aerator;  Sprayer;  Top Dresser;  Grader/Scarifier;  Flatbed/Dump Box;  Cyclone Seeder/Spreaders.
- Send me your new 1980 catalog.

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## And a lot behind it.



**The  
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CUSHMAN  
The Labor-Saving  
Turf System.**

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August issue closes July 9  
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 October issue closes September 11  
 November issue closes October 9  
 December issue closes November 5  
 When answering ads where box number only is given, please address as follows: Box number, % Golf Business, Dorothy Lowe, Box 6951, Cleveland, Ohio 44101.  
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**MISCELLANEOUS**

YOUR CLUB HAS NO PROBLEMS that 100 new members won't cure. We obtained 134 members in a six month period for one club, in a small town. This expertise is now available in the mail, by club consulting firm. Proven methods. New members will help get your club in the black. Club Success Builders, 1118 Las Olas Ave., Santa Barbara, Calif. 93109.

NETTING: Designed and produced for use on golf courses and driving ranges. Great barrier for off-course golf balls. 25 feet by 100 feet, durable, easy to handle. J. A. Cissel Co., Inc., P.O. Box 339, Dept. B, Farmingdale, NJ 07727, 800 631-2234.

GOLF CART FLOOR MATS. New nylon reinforced rubber floor mats for 3 wheel Harley carts, \$15.75 per set. C.O.D. or send payment to Rice Die Cutting Co., 8831-33 Ave., Kenosha, Wisconsin 53142.

# Viewpoint



It seems as if I'm always ranting and raving about the EPA. But it always seems as if the EPA is up to something that is questionable. Now, 2,4-D is on the block and a lot of money is going to be spent to prove what they already know. I think the ear is bigger on the side the special interest groups speak into. The petition by Friends of the Earth is a prime example.

The petition is typical of these special interest groups in that it distorts and exaggerates the facts. That in itself could be ignored, as the petition itself should have been ignored. However, EPA saw fit to have the petition printed in the Federal Register. The petition also involves the Federal Aviation Administration as it is also directed toward aerial application of pesticides. Both agencies have asked for comment on the petition. That is good, but the point I'm making is that the petition has been given credence that is unwarranted. Another bogus issue that is going to cost a lot of money.

But what does that have to do with Superintendents? There would be a buffer zone of 250 feet adjacent to any land pesticides are to be ground-applied on, 1000 feet for aerial application. You could not apply pesticides in the buffer zone unless you obtained written permission from every resident within the zone. How many houses are less than 250 feet from the side of your fairways, greens and tees? Suppose there were twenty and you could only get permission from 19. Get the point? You really should sit down and write EPA, FAA, and your Congressmen.

*Lon Morris*

# Directory

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