

# Introducing Warren's® WEED ARREST™



MULCH UNDERLINER



There are 5 important reasons new Warren's WEED ARREST mulch underliner is the best premium weed control fabric you can use:

**WEED ARREST does a better job and lasts longer . . .** because it's 100% premium *polyester* (not polypropylene), it resists the sun and the soil environment and harsh chemicals far better. The mulch areas on your jobs will stay cleaner years longer than your competitors' who make do with polypropylene fabrics or inferior plastic products.

**WEED ARREST is easier to handle and install . . .** because of its 100% needlepunch bonding, it's extra strong yet soft and flexible so you can install it faster. It also conforms and sticks to landscaped contours better than old-fashioned heat-bonded fabrics that are stiff and hard-to-handle.

**WEED ARREST helps keep mulch in place . . .** because of its high coefficient of friction, bark, wood chips and other mulches stick to it better. So it does a lot better job combating mulch erosion on tough grades.

**WEED ARREST lets water pass thru FAST! . . .** because it's needlepunch bonded (not high-temperature bonded between high-pressure rolls), water, fertilizer and air pass through it easily so soil and plants stay healthier!

**WEED ARREST saves you money on every job . . .** because it's easier to install, conforms to terrain better, holds mulch better, does a far better job controlling weeds and lasts years longer, your jobs go in faster and hold their beauty . . . *plus* you'll continue to save time and money because you'll have fewer callbacks and less costly rework with Warren's new WEED ARREST mulch underliner.

University tests prove it does a better job controlling 12 of the toughest weeds in the business.

It's also the only 100% *polyester*\* weed control fabric that meets the tough standards of today's turf professionals.

Test conducted by Clemson University.

Large Crabgrass	Dandelion	Yellow Nutsedge	Wild Garlic	Florida Pusley	Buckhorn Plantain
100%	26.5%	20%	0%	4.25%	31.25%
0.25%†	0%	0%	0%	0%	2.75%
Bare Soil	Weed Arrest	Bare Soil	Weed Arrest	Bare Soil	Weed Arrest
<b>PLANTING RATE</b>					
4 grams per 20 sq. ft.	11 grams per 20 sq. ft.	12 nutlets per sq. ft.	10 bulblets per sq. ft.	9.25 grams per 20 sq. ft.	6.40 grams per 20 sq. ft.

Percents refer to the percentage of area covered by weeds. †0.25% means 1/4 of 1%

Pigweed	Bahiagrass	Sandbur	Johnsongrass	Purplevetch	Lambsquarter
50%	51.25%	15%	81.25%	53.75%	41.25%
0%	2%	0%	0%	0%	1.5%
Bare Soil	Weed Arrest	Bare Soil	Weed Arrest	Bare Soil	Weed Arrest
<b>PLANTING RATE</b>					
3.25 grams per 20 sq. ft.	6.90 grams per 20 sq. ft.	10 burs per sq. ft.	4.40 grams per 20 sq. ft.	15 seeds per sq. ft.	5.80 grams per 20 sq. ft.

**Before you buy any weed control fabric, compare it with Warren's new WEED ARREST mulch underliner.**

Ask your Warren's Turf Professional for your FREE WEED ARREST sample or call the TOLL FREE number listed below.

**WEED ARREST mulch underliner is now available from Warren's distributors throughout the U.S. Call us for the name of the stocking dealer nearest you. Call 1-800-828-TURF (8873) In California call: 1-800-828-8882.**

\*Made from Trevira® (Reg. TM of Hoechst AG)

"It always costs less to put in the best."

## Warren's®

TURF PROFESSIONALS

Corporate Offices: Crystal Lake, Illinois 60014

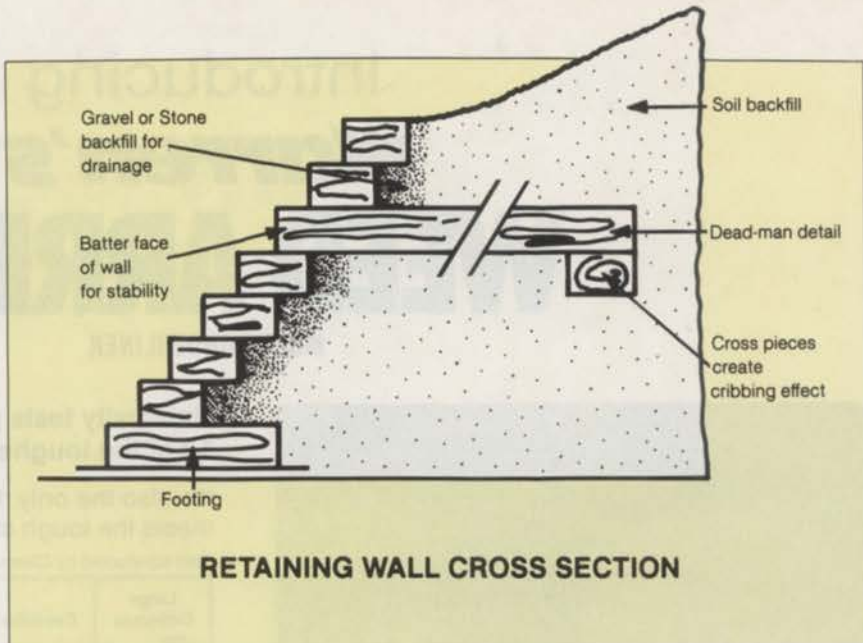
For specific product information contact: Warren's Seed & Special Products Division, P.O. Box 459, Suisun City, CA 94585

Circle No. 153 on Reader Inquiry Card





**One creative use for railroad ties is as a mailbox.**



**RETAINING WALL CROSS SECTION**

riprapping of banks, facing slopes, parking lot car stops, mailbox holders and bollards are some of the possible uses for used railroad ties.

Depending on the project to be undertaken, once a source of railroad ties has been located, begin stockpiling what is anticipated being needed.

Place the prime or soundest ties in one pile, those with only one or two good sides in another, those badly warped or disintegrated in a third pile.

In building a retaining wall, perhaps the most complex project undertaken using railroad ties, all three classes of ties would be used. The soundest, heaviest ties would make up the footing for maximum long-range stability, those with a good face or two can be the ties used to raise the wall and those which are warped or decayed, can be used as deadmen (see sketch).

Since used railroad ties are approximate in size, care will be needed in using them for anything other than simple edging.

In wall building, use the best quality, soundest ties as footings, making sure they are level by sighting with an engineer's level set on a tripod. The footing tie should be buried about one-half to two-thirds its width into the soil, or it can be set below grade depending on wall size.

Where the soil is unstable, drill holes through the ties in three evenly spaced places with a 1/2-inch auger, then use a sledge to drive a #4 concrete rebar into the holes and soil beneath.

With each succeeding course of ties going up, stagger the ties so that the ends line up over every other course. Each course should also be battered slightly into the slope. To secure into place, use six-inch spikes, toenailing at the end of each tie, three spikes along the face and two spikes along the backside of the course. For additional stability drill through two at a time with a 1/2-inch auger and drive the #4 rebars into place. This is especially important where pressure from landscape waterings and hard freezes in the winter are experienced.

In the third to fifth course of ties, deadmen should be installed. These are usually warped or badly scarred ties which go back into the bank or slope and are secured to a cross-piece tie for additional stability.

Generally, two to three more courses of ties are placed above the deadmen course. If the wall must be much higher, it is suggested that it be tiered to make handling of the ties easier and to keep the wall from being so imposing looking.

Once the wall is erected, it is a good idea to line the

backside with polypropylene mesh to minimize the seeping of stone and soil through the face of the wall. Where heavy rainfall is experienced, it is suggested that perforated ADS pipe also be laid along the base of the wall to carry the excess water away.

Then begin the backfilling process, with coarse stone or gravel going against the ties for about six inches. Encase the stone or gravel in a polypropylene envelope to keep silting to a minimum. Then add backfill soil for the balance of the fill. Make sure the surface area which will be planted to landscape plants has decent soil (modified with peat moss, sand or vermiculite if necessary) to a depth of six to eight inches.

With the passage of time, the plantings mature, providing a satisfactory setting for the railroad-tie encircled landscape.

If wall building is beyond the scope of intention, other uses of railroad ties not only abound, but are far simpler in execution.

**Typical tools needed:**

1. Gasoline or electric powered chain saws are a necessity to save labor. Be sure to have at least one extra sharpened chain to get through a day's cuttings.
2. For wall building, the engineer's level on a tripod to make sure each course is laid level. To accomplish this objective some hacking with a mattock or axe may be necessary. If no wall is intended, then a carpenter's level will keep the ties true enough over a normal course.
3. A supply of six-inch spikes and at least 20-oz. hammers to drive them. Often three-pound sledges can accomplish the task quicker, but muscle fatigue is greater.
4. A 1/2-inch power driven auger with an extension to go through two ties, and a supply of #4 rebars. The rebars are about 1/16-inch larger than the auger, providing a "grip" on the ties.
5. The usual collection of shovels, rakes, picks and work gloves.

**Beware**

While used railroad ties provide a rugged and rustic appearance to the landscape, care should be taken not to ruin the effect with sloppy workmanship. Lines should be straight, courses level and the corners neat.

With some imagination, common sense and hard work, the use of used railroad ties in the landscape can be both aesthetic and functional lasting a quarter of a century or longer.

**LM**



Look closely at this course. No dollar spot in sight. Not even resistant dollar spot, thanks to Rubigan.

Rubigan controls dollar spot on your tees, greens and fairways for only about 10 cents per 1,000 square feet per day. That's all. And you get a full 28 days control with just one 0.4 oz. application per 1,000 square feet.

Now look closer. Notice there's also no fusarium blight, necrotic ring spot, summer patch or take-all patch. And no large brown patch, either, with a Daconil 2787® tank mix.

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**Dollar for dollar, nothing controls dollar spot better than Rubigan.®**





JOHN DEERE 4B

DANGER



# You're looking at 4 tough problems our walk-behinds are built to survive.

## And 4 more they're built to solve.

No slam to your staff, but most commercial grounds care laborers aren't exactly a sensitive group.

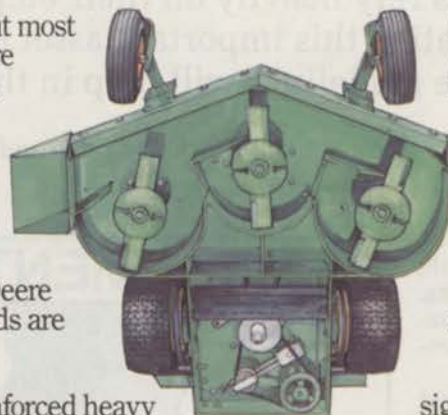
In fact, some of them give a new meaning to the term "normal operating conditions."

Which is why John Deere commercial walk-behinds are built the way they are.

**Tough.**

With welded and reinforced heavy gauge steel throughout the deck for long life. An under-belly shield to keep drive components protected. And heavy caster-mounted pneumatic wheels up front that stay on where others snap off.

*Overlapping blade design provides a more uniform cut and helps eliminate stripping—even in wet mowing conditions.*



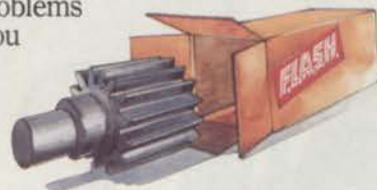
*The center-spindle-forward 48-in., 17-horsepower model shown here features a baffled under-deck design that improves air-flow for less windrowing and good bagging.*

They're also designed to give you one of the cleanest cuts in the business, too.

With a baffled under deck design that improves the airflow for less windrowing and good bagging. An overlapping blade design for cleaner cutting without stripping. Plus precise hand clutch steering for responsive turning in tight areas.

And to keep you cutting, crew after crew, John Deere's FLASH™ parts system can even get you temporarily out of stock items quickly. In most cases overnight.

Ask your dealer for more facts on his four commercial walk-behinds with cutting widths from 32 to 52 inches. See how a mower built to survive tough mowing problems can help you survive in a tough business.



*If your dealer doesn't have the part you need in stock the John Deere FLASH parts support system can fill your order fast. With most deliveries in 24 hours.*

*Hand clutch steering allows independent control of each drive wheel for precise turning around obstacles. Seven speed transmission lets you match mowing speeds to changing ground conditions on the go.*



Nothing Runs Like a Deere®



1837-1987  
**150**

Circle No. 111 on Reader Inquiry Card

# PERSONNEL EVALUATION

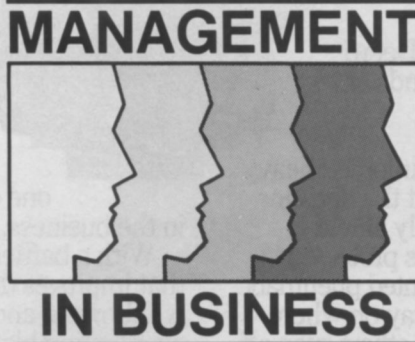
Landscape managers rely heavily on their employees for good work and good business. Evaluating this important asset is often done improperly, or not at all. These guidelines will help in the evaluation process.

by Rudd McGary and Ed Wandtke

**T**he development of your company's personnel plan should consist of separate recruiting, interviewing, hiring, training, evaluation, compensation and career progression plans for your employees.

The development of a personnel evaluation/appraisal system for non-management employees should be an integral part of a larger plan for your employees. The purpose of this system should be to answer the following questions for each employee:

- What aspects of the job performance skills does each employee have that are considered strengths of the individual?
- What aspects of the job performance skills does each employee have that are below standard and need improvement?
- How does an individual's effort on the job contribute to the company goals?
- What skills and proficiencies are



needed for promotion?

- When will each employee have the competence necessary for advancement in your company?
- What will the opportunities for promotion be in your company during the next three to five years?

While it will not be possible to keep all individual subjectivity out of an evaluation system, assessing as many evaluation factors as possible on a quantitative basis will help.

The basis of successful evaluation/appraisal systems is to have all employees in a specific job rated with the same evaluation factors and comparatively scaled against each other. This is helpful as you start operating more than one location and need to identify the personnel who have the potential to be future managers within the organization.

The evaluation/appraisal system developed should include the following areas: sales, operations, administration, safety, truck and equipment maintenance, resource sharing, technical knowledge, procedures and practices, customer service and facility maintenance.

You, as the owner, know many aspects of your operation. You may also assume that all of your employees have a basic knowledge of how to perform their job. This system should help reduce assumptions on your part.

Often we hear of employers having unusual turnover, believing the problem is in the recruiting of new employees. The real problem may be that management doesn't have a consistent standard of performance evaluation and training to identify employees who need additional training to become proficient in their job. This often results in employees who do not yet have the skill proficiency needed for a job being erroneously discharged for not performing a job well. The reality of the situation may have been that they didn't have the needed training to perform the task.

In developing your evaluation system, you should decide whether an employee is skilled, needs training or doesn't need the particular skill being evaluated. Another part of the evaluation/appraisal plan should be a quantitative evaluation of the employee's job performance.

This rating should be on a scale of one to five. Five is assigned to performance significantly above expectation, four being the attainment of performance above expectation, three for meeting the job expectations, two for performance below expectation, and one for unsatisfactory performance.

This evaluation system will provide the owner/manager a comparative rating system that will identify the highest and lowest performers in the company. This ranking, together with observing the individuals, should serve as the basis for identifying your company's potential future managers, those employees needing training and those employees who need to be replaced.


Implementing a system of employee evaluation/appraisal will identify for the owner/manager those employees who have demonstrated technical competence, business understanding, sales performance, and a comparison with other employees.

LM



Wandtke and McGary are senior consultants with All-Green Management Associates in Columbus, Ohio. Dr. McGary focuses on marketing and management issues. Wandtke focuses on operations and financial questions.





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**SANDOZ CROP PROTECTION**

# PROBLEM MANAGEMENT

by Balakrishna Rao, Ph.D.

## Controlling crabgrass

**Problem:** We are thinking of seeding a number of our client's lawns in spring. We are going to use tall fescue grass and are concerned about crabgrass problems. Is it a good idea to use Tupersan to deal with crabgrass? (Ohio)

**Solution:** If it is possible, wait and do the seeding in fall around Labor Day for best results. Success in spring seeding depends upon providing sufficient water during establishment. During the slow establishment period, both grassy and broadleaf weeds present a problem in many lawns. To deal with crabgrass problems, several options can be considered.

First, seed this season but do not attempt to control crabgrass. Instead, manage the problem next year. Another choice is to use Tupersan, a pre-emergence herbicide from Du Pont, at planting time. At least 1/2 inch of water must be provided by rainfall or irrigation within three days after treatment. Tupersan is reportedly safe on newly-seeded grass. It is expensive but it will do the job.

The third option is to use post-emergence herbicides, such as MSMA (Daconate 6), DSMA or Acclaim! after the turfgrass is well-established and actively growing. All of these work well when used on small crabgrass plants. Therefore, success with this approach depends upon proper timing and good coverage. Some of these can produce foliar discoloration. Read and follow label specifications for best results.

## Pine beetles

**Problem:** During a severe storm, many pine trees were blown over in some of our clients' properties. Clients are concerned about pine beetle infestation. The question is how quickly will the fallen trees be infested by beetles? Will beetles move from the fallen trees to other nearby trees? How can we manage this problem? (North Carolina)

**Solution:** Among many beetles, Southern pine beetles are the most destructive insect in the Southern U.S., Mexico and Central America. These beetles can build up in number very quickly and can cause extensive damage. Depending upon the latitude and elevation there may be four to seven generations per year, with overlapping generations.

During their activity period, beetles can attack all pines. Stressed or weakened plants, like the storm-damaged trees, would be more susceptible to beetle infestation. Once the beetles attack a tree, they can build up in numbers very quickly within a month. They often attack other pines nearby.

The first sign of an infestation is discoloration of tree crowns. Needles become yellowish first and then in about one to two months they turn reddish brown. Generally, pines are killed in groups of a few to several plants. Look for beetle entry point as evidenced by pitch tubes—small yellowish white resin,

1/4 to 1/2 inch in diameter.

During very dry periods, there may not be any pitch tube. Instead, only reddish boring dust can be seen. In these areas, bark trace the trunk and look for S-shaped egg galleries on wood. Sometimes eggs, larvae or even adults can be found in these galleries. Affected trees should be removed. Beetle broods in these trees can be killed by felling the infested trees and spraying the bark with lindane. It is important to spray the bark surface thoroughly, turning infested trees to cover all surfaces. Where feasible, burning of infested tree bark also gives a good control. Infested areas should be re-examined periodically for any new infestation.

## Cool season weed control

**Problem:** Can Surflan or Treflan be used for pre-emergence weed control in cool-season turfgrass? If so, what rates, and does anyone make a fertilizer/herbicide combination available to turfgrass managers for professional use? (Ohio)

**Solution:** Yes, Treflan is available in combination with Balan for pre-emergence annual grassy weed control on cool-season turfgrasses. This combination product is called "Team," manufactured by Elanco Company. Apply two to three pounds active ingredient per acre to manage annual grassy weeds. Team is a granular product. It is available in several fertilizer combinations from Lebanon Chemical Company. Read and follow label specifications for best results.



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

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