

a chance and it'll grow on you.



Untreated, there'll be a bigger crop next time, make no mistake. With your fertilizing and watering, crabgrass plants become fully-equipped seed factories in ten weeks.

Balan puts crabgrass out of business. Other annual weedgrasses, as well. A pre-emergence weed killer, Balan forms its protective zone where seeds germinate. Kills 'em, despite heavy rains and irrigations.

Works economically even on big areas. Costs \$17 to \$33 an acre. (Certain warm-season areas require

two applications at a heavier rate for year-around control.)

Balan is convenient, too — granules are easily applied with your equipment. Make Balan's crabgrass control a key step in your lawn-care. See your turf supply and equipment distributor now. Or contact us for the name of the distributor nearest you.

Elanco Products Company, a division of Eli Lilly and Company, Dept. E-455, Indianapolis, Ind. 46206, U.S.A.



One of Elanco's dependable weed-control crew

ELANCO

Balan

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Spray trains are efficient on mainlines in wide-open territory where it is possible to spray over 100 miles per day.

The ABC's of Railroad Weed Control

By DON N. JOHNSTON
Union Pacific Railroad

CLASS I American Railroads spend over \$20 million annually on chemical vegetation control on about 200,000 miles of track. Practically all railroad operations are influenced to some degree by weed control.

Controlling vegetation provides proper drainage of the ballast section, a clear walkway for railroad workmen, improved sight distance for inspection of trains as well as at grade crossings and reduces the hazard of fire around bridges and other structures.

The loss of one structure can cost more than the cost of treating all structures on an entire railroad system for one year.

Weed control prevents slippage and makes it possible to inspect and work on the track section. Brush control prevents the fouling of signal and communication lines. Weed control is also necessary to conform to state and local laws requiring general weed control such as city laws not allowing weed growth over 24 inches high. Almost all states have noxious laws which require property owners, including railroads, to control certain weed species that are considered harmful to agriculture. New federal track standards also set certain standards for weed and brush control.

Herbicides are used in certain instances to establish fireguards to protect adjoining property from railroad-caused fires. Railroads are not only responsible for any damage caused to adjoining property, but in many sections of the country, railroad companies are required to pay fire suppression costs.

Annual spray programs provide for application of residual herbicides and in many instances contact and systemic herbicides in a set spray pattern over the ballast section on main lines and branch lines for bare ground weed control. Railroad yards and industrial trackage are also sprayed and granular herbicides containing residual herbicides are used on bridges and other structures mainly for fire protection.

Several major railroads employ vegetation control engineers who have the responsibilities to plan and carry out an annual vegetation control program. This program designates the chemical to be used, the

(continued on page 38)

NEW RYAN REN-O-THIN

You're looking at a unique machine built to catch the thatch it removes. The Deluxe Ryan Ren-O-Thin. Our all-new, professional model power rake with optional catcher attachment.

The new Ren-O-Thin power rake and catcher make thatch removal for turf renovation a once-over job. Together, they're a rugged pair built to take the punishment of professional use, and make your thatch clean-up job a little easier.

With or without its unique catcher, our new Ren-O-Thin is quite a machine. With its 4- or 7-hp engine it'll handle deeply embedded thatch. Ten-inch rear wheels help make the going easy. And a floating front axle smooths out the bumps to keep blade height even.

A spring-loaded clutch is hand-held at the handlebar and disengages the reel drive when it's



Ryan

TURF
EQUIPMENT

released. The handle itself may be reversed on the machine for back milling to break up aeration cores on the turf.

A flail bladed reel and several rigid blade reels are available and easily changed.

The new Deluxe Ren-O-Thin. A good piece of machinery. A unique piece of equipment. Ask your Ryan dealer for a demonstration or write for more information.

Ryan Turf Equipment, OMC-Lincoln, a Division of Outboard Marine Corporation, P.O. Box 82409, 2110 Cushman Drive, Lincoln, Nebraska, 68501. 74-RY-13

The power rake that catches what it rakes.



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Lo-Drift™ puts your spray on target.

Lo-Drift™ spray additive is your most economical solution to many spraying problems, whatever your equipment. By causing large, heavy drops to form, Lo-Drift reduces spray fines. It controls drift by getting the spray to fall faster. By putting your spray where you want it, Lo-Drift helps maximize the effectiveness of your herbicides. At the same time, the hazard of drift to adjacent areas is minimized. You also make more productive use of personnel and equipment. Read what users have to say about Lo-Drift. Then, for more information, write Lo-Drift Product Manager, Amchem Products, Inc., Ambler, Pa. 19002.

Lo-Drift. It brings spray problems down to earth. New. Now Registered for Crop Use.



"Lo-Drift has increased our productivity about 25%."

"We're flying in the roughest places in the timber spraying business—hills, mountains, canyons. You can't terrain-fly this stuff. With Lo-Drift, our herbicides fall in larger, heavier droplets from 100 feet with accuracy you don't get unless you fly at 10 feet. It's impossible to get down to 10 feet in these parts."

"On extremely hot days when you normally have a lofting effect, Lo-Drift keeps those satellite droplets from flying. This has been the worst year for wind we've had. But we've had no complaints about drift since we began using Lo-Drift."

J. H. Henley, General Manager
Aero-Ag, McAlester, Okla.

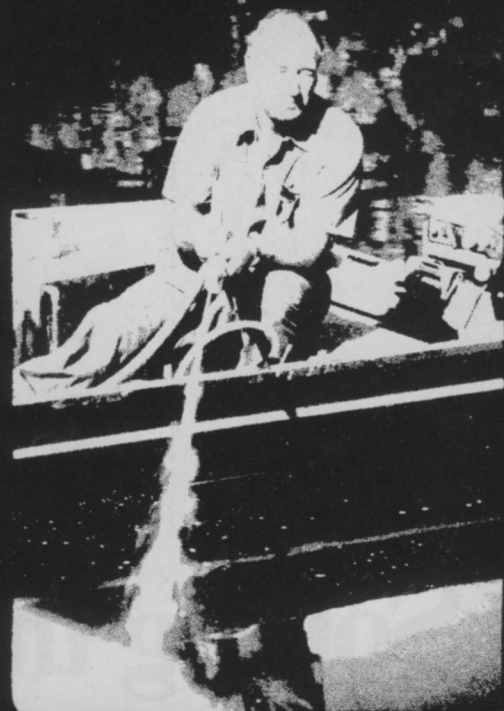


"We have noticed a better kill with our herbicides because we're getting more chemical on target" (railroad right-of-way).

"I don't think we're getting better kill because of Lo-Drift—we're getting more on target.

"In an extreme case, we may lose a third of the chemical. Because we get less control, we need to raise the rate 33%. The chemicals are expensive and it costs us to do this. With Lo-Drift, we can confine swirls, minimize fines, and hold the spray where we want it."

David Mobley, Vice President
Mobley Company, Inc., Kilgore, Texas



"Lo-Drift sticks to leaves. You can actually see where you sprayed and avoid double coverage."

"Lo-Drift will leave blobs—white film—on vegetation. Same as putting dye in the water. There's no mistake where you have and haven't been. Where you can get into trouble is in residential areas. (Without Lo-Drift) the stuff drifts off the lake and up into houses.

"We generally use both 2,4-D and MSMA. We used to cut off the 2,4-D near cotton. Now (with Lo-Drift) we spray right on by it. You can do more spraying and you don't need as much equipment. You use more equipment for more hours. Drift control is a lot cheaper than insurance claims."

Nelson Virden
Virden Weed Control Service, Jackson, Miss.



"When you're spraying medians with insecticides, you don't want traffic driving through a mist, and you don't want mist coming back on a crewman."

"Lo-Drift also helps us hit target areas along roadsides. A passing truck creates enough wind to blow a man's hat off. We lost a lot of chemical because of this. With Lo-Drift, we spray the same amount of chemical and do a better job because we get more chemical on target. Recently, we accidentally sprayed along a tomato patch with 2,4,5-T, where just the fumes will kill tomatoes. But we had mixed Lo-Drift with the spray and did no harm to the tomatoes."

Ned Crenshaw, Regional Landscape Superintendent
Tennessee State Highway Department, Nashville, Tenn.



"Lo-Drift reduces drift by 60%. It means a better kill for the farmer."

"Spray can settle better with Lo-Drift. You don't have the fog going up like you do without it. And if you have a shower. Lo-Drift hangs on the plant.

"With Lo-Drift, you have less evaporation. During aerial application, you can lose 20%. If you get 20% more chemical down, you're getting more coverage. It's inexpensive insurance if you use it right.

Bob Aukes, Owner and Manager
Central Aero Service
Jacksonville, Ark.

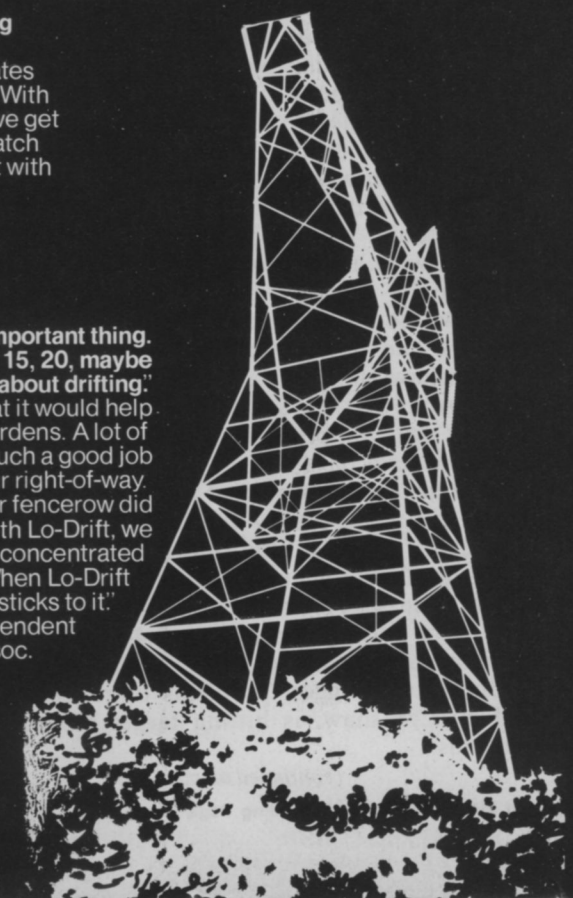
"Public relations is the most important thing. Make one enemy and you've got 15, 20, maybe 100. No complaints this year about drifting."

"What sold us on Lo-Drift is that it would help us keep from killing people's gardens. A lot of people ask us what we used to do such a good job of controlling brush only in our right-of-way. Some were disappointed that their fencerow did not get gleaned of brush too. With Lo-Drift, we got a better kill because of concentrated material and drift elimination. When Lo-Drift hits the plant, it sticks to it."

Leon Pippin, Operating Superintendent
East Mississippi Elec. Power Assoc.
Meridian, Miss.



AMCHEM PRODUCTS, INC., AMBLER, PA.



Solving the Drift Problem

SEVERE WIND and drift problems have long plagued highway spraying crews, who must not only battle Mother Nature's breezes, but must contend with winds generated by passing traffic as well.

In an effort to help reduce these drift problems, the Tennessee Highway Department last year conducted an evaluation of a drift inhibiting additive for their median and roadside spraying operations. And they report successful and unexpected benefits.

"Drift control is a problem that has always been with us," says Ned Crenshaw, regional landscape superintendent for the Tennessee Highway Department. "Drift has been a significant factor in reducing the number of days we can operate each year because of stiff breezes, and it's also caused a potential safety problem from chemicals being blown onto passing vehicles and onto nearby property.

"So we decided to do something about it."

"Tests were conducted with Lo-Drift, an Amchem product, which was mixed and applied with both herbicides and insecticides.

"We found that we were not only able to control drift, but were able to spray on more windy days when we normally couldn't have," says Crenshaw. "This meant we could get more spraying done in a year's time," he adds.

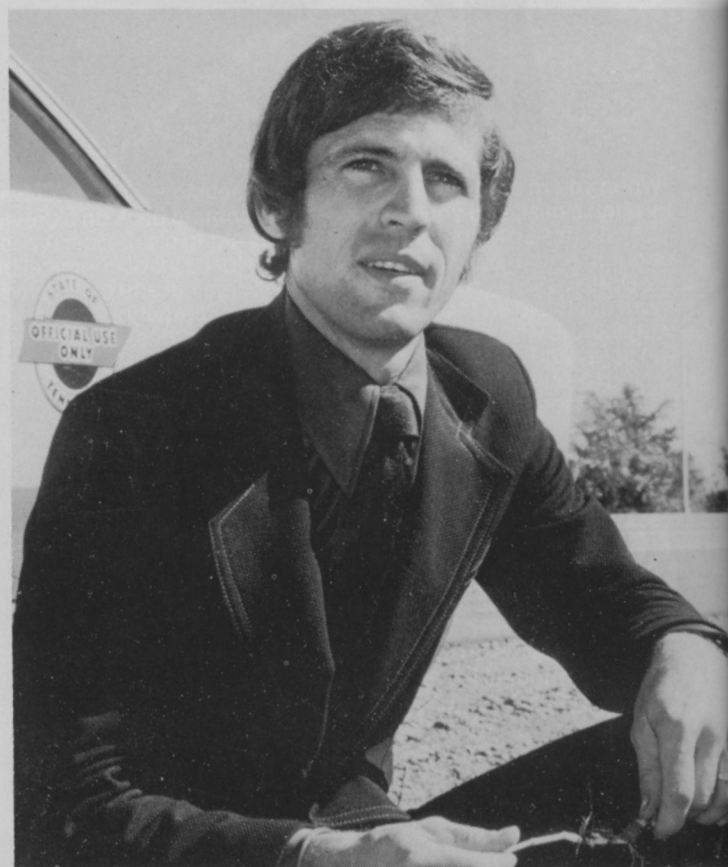
Crenshaw said that changes in weather previously limited some of their spraying operations, but that the use of a drift inhibitor has extended their operational time by several days.

"We have always wanted to make a grand slam on thistles with 2,4-D during the spring when they are most vulnerable," he says. "But during that time of year the wind is hard and the number of days we could spray was limited." He says with the help of a drift additive his crews were able to apply more 2,4-D this year during that important spring season.

One of the biggest problems of roadside spraying cited by Crenshaw, is hitting target areas with their chemicals.

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Chemical drift problems have limited the number of operating days for most highway spray crews. New additives are extending operational time and insuring on-target spray.



Ned Crenshaw, regional landscape superintendent for the Tennessee Highway Dept., says a drift inhibitor allowed his crews to spray roadsides and medians more accurately, without having to worry about drift.



Beautiful turf is no accident. Make it happen with Acti-dione® 4-season disease control

The old saying that beauty is more than skin-deep is nowhere more applicable than on a golf course. Beautiful turf will not retain its beauty unless it remains healthy. In addition to normal wear and tear from golf play and stress from variable weather conditions, fungi are an ever-present health threat to turf. There's little you can do about golf play and weather, but you can control fungal diseases. An effective, economical way to combat fungal growth all year long is to use Acti-dione® Thiram and Acti-dione TGF® in a four-season disease control program. With fungi out of the way, turf has a better chance to grow strong and healthy — to resist weed infestation, to bounce back from injury and to survive adverse weather conditions. See your TUCO distributor today for complete information and assistance in planning a four-season disease control program with Acti-dione turf fungicides.

In Spring, watch out for Leaf Spot

The same conditions that promote spring growth can open the door to leaf spot, dollar spot and melting-out. For best results, apply Acti-dione TGF every 7 to 10 days, starting right after the first mowing.



Use Proxol® 80SP to help prevent insect damage

TUCO

Division of The Upjohn Company, Kalamazoo, Michigan 49001

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Prairie Grasses The Vista-Makers

By ARNOLD H. WEBSTER

THERE'S an old way to get a new look for highways, nature trails, recreation areas, and most dramatic of all, hard-to-mow roadsides. In two words, it's Prairie Grasses.

Our pioneer forefathers, newly arriving in the prairie midwest, saw miles of colorful grasses. As rapidly as they could, they plowed up those acres to get the fertile cropland so vitally important to our nation. Now only a few prairie remnants live to tell us mutely how their kind furnished the excellent grazing required by the multitudinous buffalo herds, or how their deep fibrous roots held soil from being blown away by ceaseless winds. Rains capable of moving acre-inches of plowed soil in hours could not erode those rolling prairie grasslands. Indeed, the grasses were a major conservator of moisture, a beneficent soil builder and as we're beginning to realize anew, a feature of magnificent, inspiring beauty.

These remarkable remnants grow on soil so sandy it's not worth an Iowa farmer's time to plow. It holds securely what is descriptively called "blow sand," so called because wind can and does literally blow it away when the protective mantle of grass is opened or removed. The grass roots and roots of myriad flowers (Liatris, Prairie Clover, Gentian, Compassplant, Potentilla, Spirea, etc.) have held the soil in place against the centuries of relentlessly tugging and whipping winds. Gracefully yielding to the buffeting of their tops while re-

(continued on page 34)

Left: Prairie grasses can provide low-maintenance roadside beauty to hard-to-mow slopes as well as the flattest berms.



MY THREE MEN FERTILIZED 700 TREES IN A DAY AND A HALF...



"My three men fertilized 700 trees in a day and a half with Jobe's Tree Food Spikes. I couldn't believe it... so I went around and checked behind them. Sure enough, they'd fertilized all 700 trees. Beautiful," says Richard Boehm, Superintendent, Military Golf Course, Wright-Patterson Air Force Base, Dayton, Ohio.

"I want to keep my trees growing strong and beautiful. That's why I used Jobe's Tree Food Spikes. I just couldn't believe that Jobes could save so much time but we did the entire course in a day and a half," concludes Dick Boehm.

"And you can see the difference they make. Similar trees were put in on the other side of the road. Ours are greener," confirms Boehm.

Jobe's Spikes can save just as much time for you. Each spike is a premeasured amount of the right combination of plant foods for trees and shrubs. This eliminates the chance for mistakes, while saving time and money. And they've proven effective in University tests.

Order direct or from your jobber-distributor. \$30 per case (105 spikes) for 5 cases; \$25 per case for 15 cases. Shipped pre-paid.

Jobe's MAKES TREE FEEDING EASIER **TREE FOOD SPIKES**

INTERNATIONAL SPIKE, INC.,
462 EAST HIGH STREET
LEXINGTON, KENTUCKY 40508

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How to get the best drift control for the



Aquatic use in drainage systems keeps ditches and canals weed free.
Roadside application of Visko-Rhap adjacent to cropland.



Visko-Rhap clears right of way along railroad tracks.
Power lines cleared by Visko-Rhap of unwanted foliage.

