



TOTAL TURF CARE IS HERE!

Get a full course of protection against weeds and disease.

Dacthal®
 Start your Total Turf Care this year with Dacthal W-75 herbicide. Or use the convenient 5 percent granular form if you like.
 Dacthal gets the jump on most annual grasses and broadleaf weeds. This preemergence herbicide prevents weeds as they germinate. Crabgrass and *Poa annua* don't have a chance. Yet, Dacthal is a truly selective herbicide that will not affect established grass. It's even safe for new grass when used according to label directions.

Just one application in early spring will control weeds for a full season. In the case of *Poa annua*, another application in late summer keeps this late germinating pest out of sight. Don't worry about residue build-up either. Dacthal degrades in one season; it's not persistent in the soil.

Dacamine®
 For those areas where broadleaf weeds are a problem, use Dacamine herbicide to sustain your Total Turf Care. Postemergent Dacamine kills dandelion, plantain, poison ivy and most other broadleaf weeds.

Dacamine is a special form of 2,4-D, non-volatile, yet very effective. It combines the weed-killing power of an ester with the safety of an amine. So Dacamine stays put—kills the weeds you spray it on but won't vaporize and damage valuable plants nearby.

Dacamine is an oil soluble concentrate. This allows it to penetrate waxy leaves and move all the way to the roots—killing the whole plant.

Daconil 2787®
 Total Turf Care includes broad-spectrum disease control. Daconil 2787 is the one fungicide that solves most disease problems. Why use a group of fungicides to do what Daconil 2787 can do by itself?

Use Daconil 2787 to prevent or cure: Brown Patch, Copper Spot, Dollar Spot, Leaf Spot, Melting Out, Pink Snow Mold (in Washington and

Oregon only) and more. Many leading golf courses use Daconil 2787 in their disease prevention program.

Daconil 2787 has performed well on over 25 grass species and varieties. Excellent turf tolerance allows you to use it even in hot, humid weather.

Just mix Daconil 2787 with water and spray. You don't need a surfactant. It's compatible with many commonly-used pesticides. Follow label directions for exact usage.

Daconate®
 Round out your Total Turf Care with Daconate postemergence herbicide. Get those escape weeds that slipped by your preemerge. Daconate will effectively control crabgrass, chickweed, wood sorrel and other hard-to-kill weeds. It's economical, too.

Daconate is a ready-to-use arsonate liquid, pre-mixed with the right amount of surfactant for maximum coverage and control. Since it is an organic arsenic compound, it does not have the more toxic properties of inorganic arsenic compounds, such as calcium or lead arsenate. For best results, spray Daconate during warm weather when weeds are actively growing.

FREE!
 Get this Total Turf Care dial to help you solve many turf problems. Just a twist of the wrist helps you identify a problem and select a treatment. Send the coupon today for your Total Turf Care dial. Always remember to follow the label directions when using any chemical.



Be Diamond Sure!

Agricultural Chemicals Division
 Diamond Shamrock Chemical Company
 300 Union Commerce Building
 Cleveland, Ohio 44115

Gentlemen: Please send me _____
 Total Turf Care dials.

Name _____

Position _____

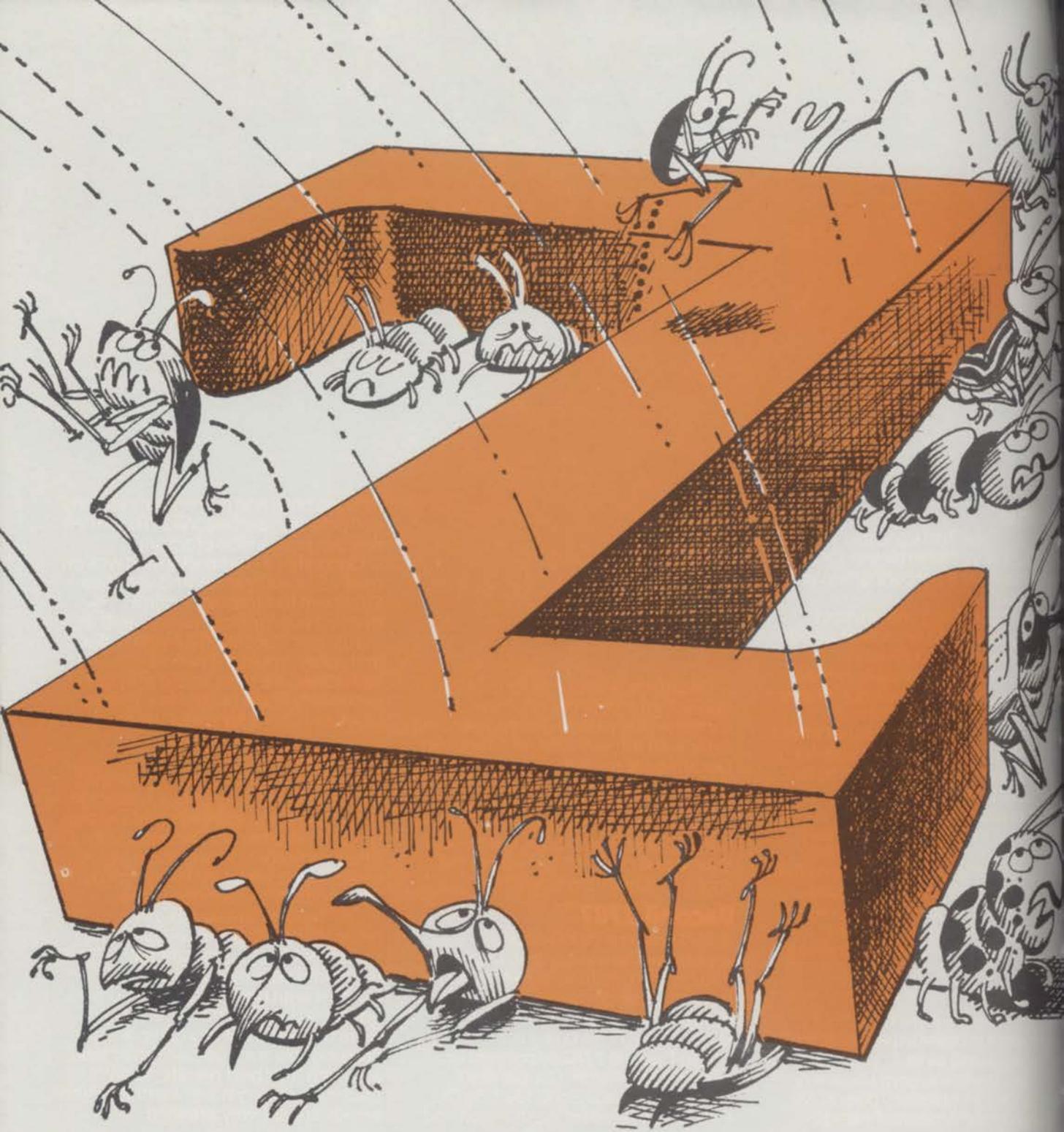
Street or PO Box _____

City _____ State _____ Zip _____



**Diamond Shamrock
 Chemical Company**

A UNIT OF DIAMOND SHAMROCK CORPORATION



Ag-Organics Department, Midland, Michigan 48640

How to make a lasting impression on bugs. Give them a dose of ZECTRAN* insecticide—the big, powerful, broad-spectrum insect killer. The one that works on almost all major foliage-feeding insect pests—even effective on the hard-to-kill kinds. And it's easily the most versatile. Use ZECTRAN on over 600 different flowers, ground covers, trees, shrubs, house plants and turf. It's biodegradable, non-staining, easy to apply. In liquid or powder. In our formulation, or to mix with yours. Get ready, bugs!

*Trademark of The Dow Chemical Company



DOW CHEMICAL U.S.A.

◆ For More Details on Preceding Page Circle (110) on Reply Card

For More Details Circle (111) on Reply Card

Sure it's ugly,



but it does a beautiful job.

Slow-open, slow-close remote control valve stops water hammer damage.

It's an ungainly looking thing. But in doing its job, our Series E valve is absolutely beautiful.

Because it's the only slow-opening, slow-closing, grit-filtering son-of-a-gun like it on the market.

Explaining how it works is simple. Because it works just fine. With a slow-opening and closing action that takes all the strain off pipe and sprinkler heads. And a built-in grit filter that eliminates solenoid hang-up. And really, when it comes to remote control valves, who gives a hang about looks? After all, a remote control valve isn't meant to be seen. Or heard!

RAIN  BIRD®

GLENDORA, CALIFORNIA 91740

WEEDS TREES and TURF

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<i>Like most everything else in the Lone Star State, vegetation problems are Texas size. Environmental demands have added increased concern among the public and vegetation maintenance firms to insure that weed and brush control is accomplished effectively. Here's a report on the 7th annual Industrial Weed Control Conference at Texas A&M University.</i>	
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<i>Mobile home communities are gaining in importance in an effort to ease the need for housing. A few permanent buildings, pads and mobile homes can make excellent housing in short order. Add sod and the result is practically an instant "green" community.</i>	
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The Cover

Several hundred "green industry" members were in attendance the day this photo was taken. Most were busy listening to the speaker who was demonstrating equipment. Others were thinking about a delicious fish dinner and an impending shower that had overcast the Florida sky. To those few who have guessed what kind of equipment is shown here, we offer our congratulations. It's the boom of the Directa-Spray nozzle suspended from an air boat. The photo was taken at the USDA Experiment Station at Fort Lauderdale, Fla. We believe it depicts a segment of the "green industry" and is appropriate for the cover of the Suppliers Guide and Equipment Directory which begins on page 23. It is followed by a comprehensive Article Index and Author Index on page 71.

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For More Details on the Following Page Circle (147) on Reply Card

Your third step to healthier turf 3

Fall is the time to take it



If you're following the DuPont TERSAN 1-2-3 Disease Control Program, you've already got spring and summer turf diseases licked.

Now's the time to prevent fall diseases—take your third step to healthier turf, the application of TERSAN SP on tees, fairways and greens.

TERSAN SP gives superior control of Gray Snow Mold and Pythium. These diseases will be the major problem, depending on your area, during the fall and early winter months.

TERSAN SP, like the other DuPont TERSAN fungicides, is non-mercurial, low in human toxicity and has a large safety factor on turf.

Now is the time to take the third step in your DuPont Disease Control Program or, if you haven't been on it, it's the time to start. You'll find the TERSAN Program is highly effective, economical...and *complete*. Prevents or controls all major turf diseases on all common grasses all year long.

NOTE: Applications of DuPont TERSAN 1991 turf fungicide should be used in the late fall and early spring in areas where Fusarium Patch (Pink Snow Mold) is a problem.

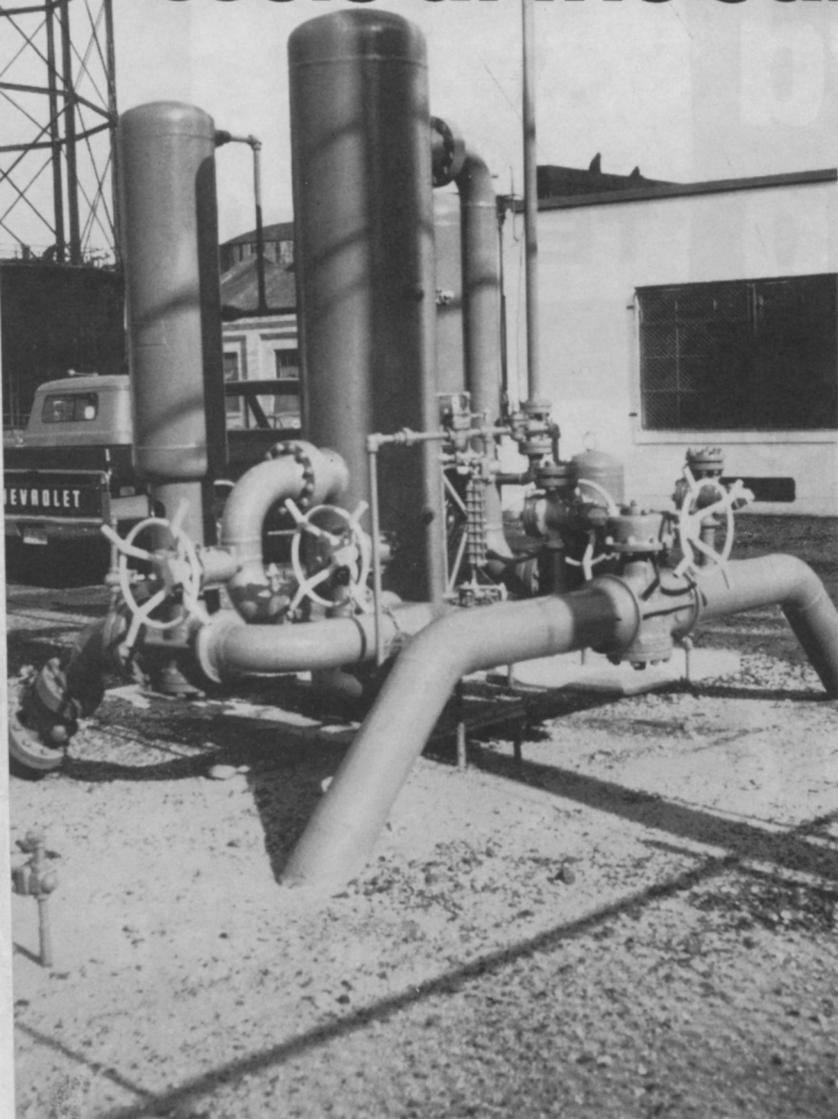
Your golf course supplier has complete details on the program and a supply of TERSAN fungicides. Give him a call today.

With any chemical, follow labeling instructions and warnings carefully.



TERSAN[®] SP
 TURF FUNGICIDE

How to control weeds and costs at the same time.



In industrial applications, as shown here, Tandex controls weeds along fence lines, parking areas, ditches, pipelines, sidings, storage areas, tank farms, and sign posts.



Weeds are expensive.

They are everything from a fire hazard to a haven for unfriendly rodents.

They can corrode a fence line.

Make people sick.

Destroy the drainage efficiency of a railroad's right-of-way.

Millions of man-hours and thousands of machines are fighting the war against weeds.

A very expensive war.

Weeds hit some harder than others

The weed onslaught is particularly damaging to such operations as railroads, utilities, oil fields and highways, as well as general industry.

This message is especially addressed to operations like these—it is a message about Tandex®, the soil sterilant that can drastically cut the cost of weed control programs.

Tandex—what it is and what it does:

Tandex is a urea-carbamate compound that's demonstrated exceptional control over weeds, grasses, vines, brush and the hard-to-kill woody species.

Tandex does its weed-killing job by being absorbed through plant roots.

Once applied, Tandex can last a whole season, or longer. Yet it's relatively non-hazardous to man, animals or fish.

A distinct advantage of Tandex is its stability in the soil. Put another way, this means it has minimum lateral movement—which reduces the danger to nearby trees and shrubs you *don't* want to lose.

Tandex can be sprayed or applied in dry granular form. It can also be combined with other herbicides for special control situations.

For more information, write to Industrial Chemicals Dept., Niagara Chemical Division, FMC Corporation, Middleport, New York 14105.

Tandex®

Herbicide

It gets to the root of weed problems

Industrial Chemicals Dept.,
Niagara Chemical Division,
Middleport, New York 14105
Tandex® is a registered trademark
of FMC Corporation.



Noise, the non-melodious sounds in an action environment, is under something more than a silent attack by the Federal government. Recently released criteria, developed by the Office of Research and Standards Development, National Institute for Occupational Safety and Health, carries strong evidence that workers in the country are being exposed to excessive noise levels. If the criteria and standards are accepted by the Department of Labor, we can expect them to be implemented through the Occupational Safety and Health Act of 1970 (OSHA).

The study was conducted under the auspices of the Secretary of Health, Education and Welfare. Called "Occupational Exposure To Noise," it clearly states that the exposure limits are primarily designed to conserve hearing since this is recognized as the most serious physical problem that noise may cause in humans.

Currently, rules and regulations of OSHA as published in the Federal Register set 90 dBA occupational exposure level for an 8 hour day as the maximum. If the study is accepted and made part of OSHA, an 85 dBA, 8 hour exposure level to all newly designed occupational exposure environments would become effective within 6 months

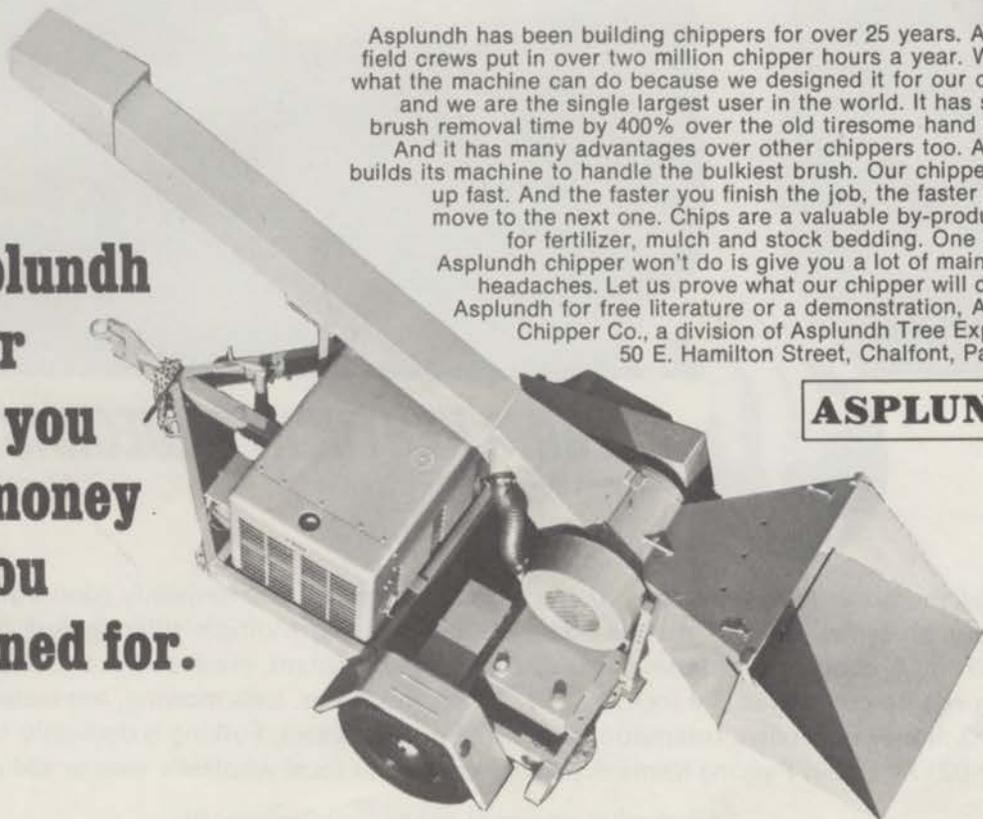
from date of acceptance. Those occupational exposure environments (industries) currently in operation but for which no data has been collected would have additional time in which to comply. No one currently knows how much.

The crux of this report is that many parts of the "Green Industry" are in big trouble. Tractors, mowers, chain saws, chippers — nearly every mechanical piece of equipment — stand a good chance of creating noise levels in excess of the maximum limits. For example, audiograms on 53 tractor drivers of different horsepower tractors showed noise levels ranged from 92 dB to 106 dB, and occasionally as high as 114 dB. While data is not available, contrast this in your mind to a chipper chewing on a three-inch log or a chain saw winding through a seven-inch limb.

But many of these operations are only temporary; that is, lasting only a few minutes at a time. The study takes this into account. At least three different rules have been proposed in order to assess the hazard of exposure to intermittent noise.

What can "Green Industry" personnel do? The study is not without recommendations. It initially advises the consultation of an acoustical engineer
(continued on page 79)

**An Asplundh
Chipper
makes you
more money
than you
bargained for.**



Asplundh has been building chippers for over 25 years. Asplundh field crews put in over two million chipper hours a year. We know what the machine can do because we designed it for our own use, and we are the single largest user in the world. It has speeded brush removal time by 400% over the old tiresome hand method. And it has many advantages over other chippers too. Asplundh builds its machine to handle the bulkiest brush. Our chipper eats it up fast. And the faster you finish the job, the faster you can move to the next one. Chips are a valuable by-product used for fertilizer, mulch and stock bedding. One thing an Asplundh chipper won't do is give you a lot of maintenance headaches. Let us prove what our chipper will do. Write Asplundh for free literature or a demonstration, Asplundh Chipper Co., a division of Asplundh Tree Expert Co., 50 E. Hamilton Street, Chalfont, Pa. 18914.

ASPLUNDH

Devilishly
Hard
To Match



FYLKING KENTUCKY BLUEGRASS

U. S. Plant Patent 2887

Where in the north temperate zone of the world can you find so devilishly good a grass as Fylking Kentucky bluegrass lawn? This fine-textured, low-growing, multiple tillering turf has everything going for it. A good mixer, disease, drought and weed resistant, green earlier and later than others, Fylking can be cut low as 3/4 inch, even 1/2 inch and thrive. Less mowing, less watering mean less time and money expended. Internationally tested over 12 years, Fylking is devilishly hard to match. Ask for 0217® Brand Fylking Kentucky bluegrass at your local wholesale seed or sod distributor.

Another fine product of Jacklin Seed Company Div.
THE VAUGHAN-JACKLIN CORPORATION

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