

Pennfine Perennial Ryegrass.

Maybe it's got a weakness, but nobody's found it yet.

For three years now, the professional turf community has been putting certified Pennfine Perennial Ryegrass to the test. The results are in:

Pennfine has consistently outperformed other fine-leaved ryegrasses in trials from Pennsylvania to Florida.

More importantly, Pennfine has consistently matched or exceeded the expectations of turf management people on golf courses, athletic fields, sod farms, parks,

cemeteries and public grounds from Maine to California.

No one has reported a real weakness. All the characteristics the Penn State researchers were seeking when they developed Pennfine have proven out in actual application.

Soft fibres to facilitate mowability were the foremost consideration in breeding Pennfine. Both trial data and feedback from the professionals who've used it indicate that Pennfine is the cleanest cutting ryegrass available today.

Pennfine's excellent disease resistance, exceptional decumbency, persistence under a variety of management conditions, fine texture and compatibility with both Kentucky Bluegrass and fine fescue have also been demonstrated. And in the production fields of the Pacific Northwest, a major effort is being made to meet the already heavy demand for certified Pennfine Perennial Ryegrass.

If you would like specific information, write: Pennfine Perennial Ryegrass, P.O. Box 923, Minneapolis, Minnesota 55440.

Pictured is one of the select seed production fields of the Pacific Northwest — this one in the Willamette Valley of Oregon — where certified Pennfine Perennial Ryegrass is produced under controlled growing conditions.



Clean-cutting Pennfine Conventional Ryegrass

Test it yourself, on your own turf with the new Pennfine Test Kit.

It's free. And it contains enough seed to develop a 100 sq. ft. Pennfine test plot, along with technical data and evaluation sheets. So now you can see for yourself, under your own conditions, if Pennfine is really as good as we say it is. You will be able to test it for establish-

ment, mowability, management requirements, persistence and any other qualities that interest you.

If turf quality is important enough to you to warrant this kind of testing, send us the coupon and we'll send you a Pennfine Perennial Ryegrass Test Kit.


PENNFINE PERENNIAL RYEGRASS TEST KIT EVALUATION FORM

The Pennfine Perennial Ryegrass Test Kit

Everything you need to plant and evaluate
your own 100 square foot plot of Pennfine.



SEED

NAME _____
CERTIFIED
GROSS WT. _____
NET WT. _____
PURITY _____
GERMINATION _____
VITALITY _____
DATE OF ANALYSIS _____
LABORATORY _____
ANALYST _____
DATE _____

- Please send me the free Pennfine Perennial Ryegrass Test Kit.
- Yes, I'm responsible for turf purchase decisions.



NAME _____

TITLE _____

CLUB OR COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PLEASE NOTE: This offer is restricted to turf professionals, people whose livelihood depends on the establishment and maintenance of quality turf.

MAIL TO: Pennfine Test Kit, P.O. Box 923, Minneapolis, MN. 55440
WTT-11

WEEDS TREES and TURF®

November 1974, Vol. 13, No. 11

THE COVER—Dr. William Daniel, Robert Linton and Melvin Robey stand before the newly installed P.A.T. field at Purdue University's Ross-Ade Stadium. Daniel and Robey take credit as co-inventors of the system. Linton holds exclusive rights for installation. See page 12 for related story.

Editorial Director
Donald D. Miller

Assistant Editor
Roger E. Yount

Assistant Editor
Jean A. Rohrer

President
Hugh Chronister

Publisher
Arthur V. Edwards

Director of Circulation
D.D. Langley

PRODUCTION SERVICES

Advertising Production
Darrell Gilbert
9800 Detroit Avenue
Cleveland, Ohio 44102
216+651-5500

ADVERTISING SALES OFFICES

HEADQUARTERS
Cleveland, Ohio 44102
9800 Detroit Avenue
216-651-5500
Jean Neuendorf
Executive Assistant
Richard H. Swank

New York, N.Y. 10017
757 Third Avenue
212-421-1350
Russell B. Bandy

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P.A.T. Takes to the Field—With four installations in 1974, the Prescription Athletic Turf (PAT) system is gaining favor among players and coaches. Mud, standing water and slippery conditions will be in the past as PAT takes to the field 12

Pesticides, Politics and Professionalism—International Pesticide Applicator Association's annual meeting report 20

Water—Its Action in the Rootzone—Water is one of our most unique natural resources. It can be help or hindrance. Golf course superintendent, Donald Clemans, discusses water and its effects on turf rootzones 30

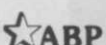

Skill, Hard Work Revive Dying Course—When Charlie Meaker purchased Rogala Public Links he was up to his neck . . . in weeds. In less than a year, Meaker repaired the equipment and put the course into playing shape ... 32

Pre-Selling Shade Tree Care—There's more to do during the cold months than repair equipment and order supplies. The telephone presell can be one of the most productive tools a treeman can use 34

Fewer Weeds, Better Drift Control—Robert Eddy, general foreman of the public works, El Toro Marine Air Station, tells how he controls weeds and chemical drift 41

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WEEDS TREES and TURF

Today, more than ever, Ditch Witch makes \$ense.

With an uncertain economy, it's more important than ever to get the most out of every dollar spent. That's especially true in the construction industry: you've got to get more out of what you have and expect more out of what you get. And when it comes to underground equipment, Ditch Witch makes real dollars-and-sense on both scores!

BUY ONLY WHAT YOU NEED . . .

Pick the model that's right for *your* job requirements. With models ranging from 7- to 195-horsepower, there's a Ditch Witch that suits your needs exactly. You don't have to buy more machine than you really need — (but if your needs are great, we can handle them!)

GET BETTER PERFORMANCE THROUGH BETTER DESIGN . . .

The superiority of Ditch Witch design has been proven over the years by dependable performance on the job. Things like a rigid, one-piece frame for strength, stability and safety; four-wheel drive, rubber tire mounting that gets you where you need to go with minimum turf damage; production efficiency, using a Ditch Witch-designed drive that permits working functions and mobile drive system to be operated independently — features that give you maximum job control; simple, efficient hydraulics for power convenience and trouble-free operation.

BUY ONE BASIC MACHINE — ADD "MODULES" AS YOU GO

The basic Ditch Witch design made the Modularmatic concept a logical step in equipment development. Maybe we ought to call it our "Inflation-Fighter Series" because you can buy one basic vehicle which can handle multiple job requirements. You save money because you cut

down on total equipment purchases. Interchangeable, socket-mount modules adapt your Modularmatic vehicle for up to 11 different jobs. Buy what you need now, add components as they're needed. Modularmatic models include R30, R40 and R65 series in power ranges from 30- to 65-horsepower.



NEW MODELS, NEW "MODULES"

Our engineers are at work today on tomorrow's new products so that, when you need them, they'll be ready. You'll soon be seeing a new front-end loader as a part of the Modularmatic package, giving you capabilities never before offered. Shortly after, we unveil a new, bigger Ditch Witch with greater power, the same modular versatility. We developed the R200 vibratory plow because our customers told us there was a need for such a machine. When you're ready for a new underground tool, Ditch Witch wants to have it ready for you.

EXPERIENCE AND PROFESSIONALISM YOU CAN TRUST . . .

It was 25 years ago that Ditch Witch built the world's first service-line trencher and pioneered a new industry. So we've been in the business, literally, since it began. We've learned a lot, made a lot of changes and improvements and set the pace for changing equipment requirements. We consistently build and sell more than half the world's trenchers, and that's a record we're mighty proud of.

TRENCHING'S NOT A SIDELINE WITH OUR DEALERS . . .

When you need to get the most out of an older machine, you can count on your

Ditch Witch man to back you up. He's a specialist in Ditch Witch equipment; trenching's not a sideline. He talks your language and he solves your problems.

TROUBLE-SHOOTING — ON-THE-SPOT OR IN-THE-SHOP . . .

For a Ditch Witch Man, service begins with the sale. Sure, lots of people make the claim — but ask the operator who has needed help and *he'll* tell you! Ditch Witch factory-trained maintenance men solve the problem on the job site or in the shop, night or day.

NEED A PART? IT'S ALREADY THERE!

A complete inventory of factory-authorized parts line the walls of your Ditch Witch dealer. And he keeps them up-to-date. You'll seldom have to wait longer than the time for a local delivery.

We're tight-fisted with our dollars, and we expect *you* to be, too. And Ditch Witch is ready to serve you whether you need new equipment now or later . . . or need expert service in keeping your present equipment in top running condition. Just give your Ditch Witch man a call!



C Series



R200

Ditch Witch . . . equipment from 7 - to 195-HP.

Expect more out of what you get... with Ditch Witch



CHARLES MACHINE WORKS, INC.

P.O. Box 66
Perry, Oklahoma 73077

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TOTAL TURF CARE IS HERE!

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 Turf herbicide to sustain your Total Turf Care. Postemergence Dacamine kills dandelion, plantain, poison ivy, knotweed and other broadleaf weeds.

Dacamine is an oil soluble diamine form of 2,4-D which is formulated to

Get a full course of protection against weeds and disease.

be used *only* with water. It combines the weed-killing power of an ester with the safety of an amine.

Dacamine stays put—kills the weeds you spray it on but won't vaporize and damage valuable plants nearby. Its unique formulation penetrates waxy weed foliage—then moves all the way to the roots, killing the whole plant not just the top.

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, Red Thread 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 arsenate 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.

Ask your turf chemicals supplier for more information or write: Agricultural Chemicals Division, Diamond Shamrock Chemical Company, 1100 Superior Avenue, Cleveland, Ohio 44114.

Be Diamond Sure!



**Diamond Shamrock
Chemical Company**

A UNIT OF DIAMOND SHAMROCK CORPORATION

editorial

Men and women, if there is any doubt, are the green industry's most important resource. They serve the industry's customers, make the decisions, plot the future, operate the equipment, collect the money.

The industry is really people. They are its direction, its fuel, its achievement and image. People brought us to this point. Now, they can carry us dramatically into another era of progress and growth . . . or they can smash the whole picture into a million pieces.

Our primary worry is that many firms are not treating people with the tender loving care so needed by this valuable resource. People need understanding, support, training, direction and encouragement.

With care, people can build business and industry beyond our hopes. Without care, men and women will shortcut their jobs, deceive management and tell the customers to jump in the lake.

Most of the important factors in the gentle art of people care, in our view, fall into two general categories: training and fairness.

Training is the act of teaching an employee how to do a job right. It does

not mean reading a manual, putting a worker on the job for a few days or weeks to pick up skills on his own or requiring him to attend a half-day meeting every Monday.

Training is simple teaching. If the employee knows how to do the job after being taught, then training has occurred. There is no other way training can take place.

Often of course, training is far more extensive and expensive than management ever dreamed. But, we suggest, it is far more useful than many managers have ever imagined.

The doctrine of fairness actually covers a multitude of management-employee relations. It is the act of being honest with people. It is sharing information about the business, paying a dollar for a dollar in service, supporting the growth and development of employees, rewarding successes but standing firm on failures. Fairness is giving an employee a break.

These factors are critical to our survival — in this society . . . in this industry. There is no substitute for people as a critical resource in the green industry. Let's take care of them.

When you talk SEED, you're really talking about a combination of several important characteristics.

Plumpness. Germination rate. Seedling vigor. Establishment rate.

At E. F. Burlingham & Sons, we know.

Because we've spent the last 70 years experimenting and developing higher quality grass seeds for your use.*

The results speak for themselves.

Recently, Burlingham introduced a superior chewing fescue variety into the United States. Originally developed by plant breeders in Holland, this bright green grass produced a large, plump seed with an excellent establishment rate. Its name: Koket.

We experimented with the seed even further and found it adaptable to different climates and soil conditions.



Koket's strong germination rate and seedling vigor produced a fescue that mixed well with other grasses, and proved itself exceptionally hardy—even under adverse soil conditions.

A strong seed performance.

An excellent grass. Koket from E. F. Burlingham & Sons.

Just one of the many reasons why . . . when you talk about SEED, you talk about Burlingham.

E. F. Burlingham & Sons, P.O. Box 217, Forest Grove, OR 97116. Phone: (503) 357-2141; Telex 36-0274; Cable: Burlingham.

E. F. BURLINGHAM & SONS

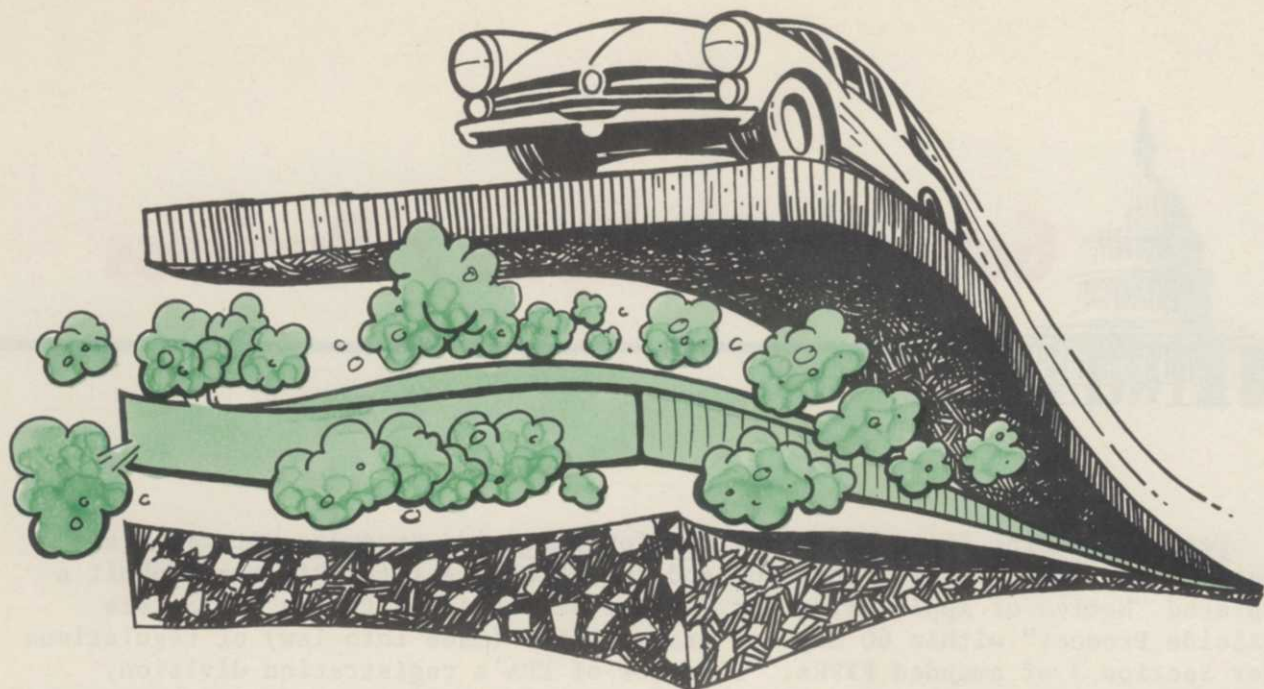


*Bonnieblue, Majestic, Sydsport and Birka Kentucky Bluegrasses and Koket Chewing Fescue.

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WEEDS TREES and TURF



Put a "gas blanket" between you and weed breakthrough.

CASORON® — for years leader in orchard, nursery, landscaping and industrial weed control — is *now approved for use under asphalt*. Use it where weeds and roots do the most damage: recreational courts, bicycle and golf cart paths, paved sidings, airport runways, parking lots, etc.

Works like nothing you've ever used before. Applied as a granular or wettable powder over the subgrade, CASORON soon begins to emit a weed-killing gas. Once the asphalt is applied, it traps the gas creating a long time blanket and protection against weed growth and weed breakthrough.

Why CASORON instead of sterilants:

Simply because you can effectively kill weeds and stop root growth without risking damage to adjacent ornamentals. CASORON is a root inhibitor, ornamental roots will stop growing as they contact the gas blanket. They won't systematically translocate the herbicide. And they won't erupt through the blanket into the asphalt. Also, CASORON's blanket of protection stops weeds from germinating — but won't sterilize areas for future planting. *Other uses:* CASORON is highly effective around right-of-ways, curbs, landscaped areas and fences. Over 60 perennial and annual weeds and grasses can be controlled.

If asphalt is in your plans for the future, specify CASORON. It's a gas.

4-4891



THOMPSON-HAYWARD CHEMICAL COMPANY
P. O. Box 2383
Kansas City, Kansas 66110

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Government News / Business

Persons holding State Registrations for pesticide products not registered under Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) must submit a completed "Notice of Application for Federal Registration for an Intrastate Pesticide Product" within 60 days of promulgation (made into law) of regulations under Section 3 of amended FIFRA. Director of EPA's registration division, John B. Ritch, Jr., also said, that failure to file notice would otherwise result in such pesticide products no longer being lawfully shipped after that period. Promulgation of Section 3 regulations is expected on or before December 1, 1974. First formal notice concerning intrastate pesticides appeared in the Federal Register on September 17, 1974.

New OSHA rules setting procedures for the submission and consideration of certain required changes in state plans for their job safety and health programs must contain assurances that as changes are made in federal programs, corresponding changes will be made by the states. OSHA will require state program change supplements be submitted for approval whenever alterations in the federal program could have adverse impact on the "at least as effective as" status of a state program. Examples of such changes in the federal program covered by the new rules include: promulgation or modification of standards, including emergency temporary standards; revision in enforcement policies or procedures; legislative or regulatory changes including recordkeeping and reporting requirements. The new rules became effective September 12, 1974, date of publication in the Federal Register.

Surfactant prices continue rising. ICI United States announced average price increases of seven cents per pound for more than 200 of its surfactants. Increases range from 1/2¢ per pound to 38¢ per pound, depending on the individual item.

Monsanto Company plans to build a facility to commercially produce Roundup herbicide at its Luling, La., plant site. Company officials said, completion of the multi-million-dollar unit is expected by mid-1976.

In other industry expansions; Agrico Chemical Company and Farmland Industries announced that their new 1,250-ton fertilizer plant would be located in Enid, Oklahoma. Construction is expected to begin immediately with completion in late 1976. Farmland will operate the facility under a management agreement with Agrico.

A new plant for the production of Fumazone nematicide in Magnolia, Ark., was announced by Dow Chemical U.S.A. John Weseloh, product marketing manager, said the plant will have an annual production capacity of 40 million pounds and should be in operation by January, 1976. Manufacture of Fumazone requires large amounts of bromine, which Dow already produces at Magnolia.