

Pennfine Perennial Ryegrass.

If it's got a weakness, nobody's found it. But we have heard about some new strengths.

The Pennfine story gets better as it goes along.

Four years ago, the agronomists at Pennsylvania State University finished their work on Pennfine. And the professional turf community put this remarkable fine-leaved perennial ryegrass to work on golf courses, athletic fields, sod farms, parks, cemeteries and public grounds across the country.



Clean-cutting Pennfine

Other fine-leaved ryegrasses

The ultimate test.

Now, after thousands of grounds maintenance pros have used Pennfine, nobody's reported a real weakness. All the characteristics the Penn State agronomists

selected for—unsurpassed mowability, excellent disease resistance, exceptional decumbency, persistence under diverse management conditions, fine texture and compatibility with Kentucky Bluegrass—have proven out in the real world. That's the ultimate test.



Dr. Joe Duich of Penn State inspecting a new application for Pennfine: Independence National Historical Park, Philadelphia.

In fact, Pennfine has performed even better in some areas than anticipated. It's proven to be more tolerant to both shade and heat. It's shown excellent rust resistance on the West Coast. And, although Pennfine showed good to excellent disease tolerance in university trials, its disease tolerance appears to be even stronger in actual use.



Pennfine production fields in the Pacific Northwest where a major effort is underway to meet growing demand for seed.

Increased production.

From the very beginning, there's been only one problem with Pennfine: not enough seed to meet demand. And that problem is just about solved with substantially increased production. We can't make you a flat promise. But, if you order fairly soon, you should be able to get Pennfine seed in the quantity you want.

On the other hand, maybe you're still not convinced. In that case, we'll send you a test kit with enough Pennfine seed for you to develop a 100 sq. ft. test plot. And you can try to find a weakness on your own turf.

Either way, whether you seed Pennfine this year or just test it, we think you'll be impressed by the results.

- WTT-4
- Let me know how I can order Pennfine Perennial Ryegrass.
 - I'm still not convinced. Send me a Pennfine Test Kit.

Name _____

Title _____

Club or Company _____

Address _____

City _____ State _____ Zip _____

Please Note: The test kit offer is restricted to turf professionals, people whose livelihood depends on the establishment and maintenance of quality turf.

Mail to: Pennfine Perennial Ryegrass, P.O. Box 923, Minneapolis, Mn 55440.



WEEDS TREES & TURF®

April 1976, Vol. 15, No. 4

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THE COVER—Broadmoor Golf Club, Colorado Springs, Colo. utilizes a Toro irrigation system.

Editorial

There will be an overwhelming and paralyzing increase in government regulations of all aspects of weed control, not only in the use of herbicides but in alternate methods as well, according to Dr. Boysie E. Day, professor of plant physiology, University of California at Berkeley. He spoke at the Southern Weed Science Society Meeting earlier this year in Dallas, and we share some of his thoughts here.

An increasing burden of regulatory busy work is today necessary to get a new product registered and this is a deterrent to the development of research workers . . . The national policy on pesticides is to progressively accumulate all significant decisions about pesticides into government hands . . . Greater government control over herbicides will not better the human safety factor because the hazard in weed control has always been associated almost entirely with machines, and regulatory activities are not aimed at alleviating these hazards . . . For greater effectiveness, procedures of weed control must be adapted to local and regional conditions, and this will never be done on a national scale . . . The effect of restricting herbicide use leads to switching from one chemical to another less efficient one which in the end leads to larger doses, not reduction in use of herbicides . . . \$71.5 million will be spent to support the Environmental Protection Agency pesticide program through next March, and this money would be more judiciously spent on research.

Dr. Day's summary is that in the future the regulators will join with the regulated to defend procedures they have established and gained vested interest in. By that time, the staggering costs of regulation will have pruned the industry down to a comfortable half-dozen international companies, and the academic community and other agencies will have been successfully isolated from the decision-making processes. Pesticides will then have become in effect public utilities moving with glacial slowness without a harsh word spoken. All decisions will be made with a minimum of publicity by quiet negotiations between government and corporate bureaucracies on the basis of unpublished industry research.



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For more information on Roundup, write Roundup, Monsanto Agricultural Products Company, 800 North Lindbergh Boulevard, C3NJ, St. Louis, Missouri 63166.



Monsanto

Government News Business

The Environmental Protection Agency has postponed to June 30 the effective date of the recent ban on further production of most pesticides containing mercury. Administrator Russell Train delayed the effective date of the ban at the request of several producers of mercurial pesticides. The ban originally was effective February 17. The producers reportedly asked for the delay to allow federal courts time to rule on several lawsuits challenging the ban.

More light-duty trucks are to be subject to tighter emission standards under new proposals by the Environmental Protection Agency. The number of pick-up trucks, vans, utility vehicles and off-road vehicles that must meet federal exhaust emission limits will increase by over 50 percent in 1978 under the proposal. In addition, the emission standards for these trucks would be reduced to levels comparable in stringency to those scheduled for 1977 cars.

Building awards rose in January to \$6.39 billion -- a 25 percent leap from a year earlier, which is good news for sod growers and others related to the turf and green industry. Residential building contracts rose 40 percent in January to \$2.16 billion. Also, it appears home mortgage rates may be a bit better this spring. The reason is that thrift institutions are loaded with money to lend. As a result, many real estate experts expect to see mortgage rates dropping at least a quarter percentage point and perhaps a half-point by the time spring house buying gets into full swing. However, any rate downturn may be temporary. Many mortgage lenders see rates inching back up later this year.

Another increase in the minimum wage is coming fast. This time Congress will tie the wage standard to a formula assuring automatic increases from now on. The most likely outcome of informal committee sessions is the wage floor, which rose from \$2 to \$2.30 an hour in January, will be hiked possible to \$2.75. Also, the floor will be indexed to provide automatic boosts. Despite Ford Administration opposition, the bill will move fast. The Senate Labor Committee is already primed to act quickly once the House legislation is passed.

The U. S. Department of Agriculture has issued a full registration to Charles R. Freers of Muscatine, Iowa for his chemical treatment for the prevention and arrest of Dutch elm disease to the states of Missouri, Iowa, Illinois and Indiana. Freers said he expects other states will be registered for his product soon.

According to latest figures published by the Bureau of Mines, sales of horticultural perlite grew 19 percent in 1974. Usage increased from about 21,180 short tons in 1973 to 25,370 short tons in 1974. The two-year growth for sales is about 100 percent.

Labeling for Aquazine algicide, a selective chemical that controls nuisance algae and submerged weeds in ponds without affecting all groups of algae or higher plants in the aquatic environment, has been registered by the Environmental Protection Agency according to manufacturer, Ciba-Geigy Corp., Greensboro, N. C. The algicide is a photosynthesis inhibitor thus making it safe to non-photosynthetic organisms including zooplankters, fish and other aquatic animal life.

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Designed to save you money, when you buy it and when you use it.

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76-CUT-8



HOW TO HANDLE A WATER SHORTAGE

You would think the exclusive, internationally known Valley Club of Montecito, Calif. would not have a problem in the world. At least not a serious one. It has what must be one of California's most beautiful golf courses, which lies along the gently rolling foothills of the Coast Range very near the Pacific Ocean. Clusters of magnificent oaks and sycamores line the undulating fairways of the 100-acre course, which is modeled after St. Andrews of Scotland. The Valley Club course is never crowded, its 350 members being well-to-do, influential people who insist on privacy and the freedom to play golf far from crowds.

The rich rural community of Montecito which adjoins Santa Barbara enjoys one of the most favorable climates in the country. Coastal moisture, plus cooling summer fogs and an average of 17 inches of rainfall annually. When the temperature reaches 80 to 85 degrees, Montecito's residents imagine they are having a hot spell.

This idyllic countryside does have a problem, one shared by the Valley Club and the community of Montecito. Both are suffering from a sudden shortage of water, a moisture famine that is likely to become more severe. Water is rationed. Violators face fines and even jail terms. At present homes cannot be built in the area, which is served by the Cashuma Dam reservoir to the

west. The region has been developing rapidly and there is heavy use of water for agriculture.

Golf superintendent Don Lokey of Valley Club is facing the problem head-on. He saw the possibility of a water shortage more than two years ago while planning a new irrigation system for the course.

"We asked that the design of our new system include the ability to cut back to meet such a shortage," he recalls. "But we didn't think it would come this quickly."

Now Lokey has been handed the not entirely welcome opportunity to test his theory that "golf courses in general get too much water." He will try to find out how little water he can get by with without having bad looking turf. The research project should be of considerable interest to golf superintendents everywhere.

Lokey's first step is calibrating all parts of his new irrigation system so that he will be able to control accurately its water output and can link the output accurately to the meter reading. He must know this, he emphasizes, in order to learn how little water he can use to maintain his green golfing pastures. Among the devices he is using to get his answers are calibrated cups, like rain gauges.

Lokey, who originally was an ornamental horticulturalist and became a golf superintendent by acci-

dent, has an engineering turn of mind. He came to Valley Club more than three years ago to help plan the new irrigation system. The decision to replace a golf course irrigation system is a major one. But it wasn't too difficult to make in this case. The old, patched-up system was wearing out and getting too unwieldy.

It had been installed in 1929 and was designed on the old principle, Lokey recalled, "that you watered only tees, landing areas just before the greens, and the greens. There was very little sprinkler coverage and you relied a lot on the coastal dampness."

As it became necessary to water more and more of the course, including the fairways, extensions were added to the old cast iron pipe system. All kinds of sprinkler heads were used. Gardeners worked night and day to maintain watering schedules. Labor and water costs mounted. Then came early warnings of a possible water shortage. A new, much more efficient irrigation system became mandatory.

"To get the accuracy in the system that we considered necessary," Lokey said, "we asked all manufac-

A battery of rotor pop-ups operating on the sixth fairway at Valley Club in Montecito, Calif. Each fairway has its own separate automatic controller.