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Agricultural Chemicals

TURF NOTES

NUMBER 103-1

importance of

FALL FERTILIZATION

The basic reasons for fertilizing in the fall are as old as turfgrass itself. And, with the availability of the long-lasting ureaforms such as Nitroform, fall fertilization becomes even more important in a well-programmed turf maintenance program. This bulletin discusses the types of turf, the nutrients needed, timing of fertilization for each type of turfgrass, and the advantages of and rates to use Nitroform.

To know when to fertilize for best results, determine the growth characteristics for your particular turfgrass species, then correlate application with seasonal and climatic conditions. It's easy to determine what type of fertilizer to use, for a slow-release ureaform such as Nitroform® turf food builds turfgrass in the fall and the residual stays in the soil to get turf off to a good start in the spring.

KNOW THE GROWTH CYCLE OF YOUR TURFGRASS

Turfgrasses may be grouped into two major categories—cool-season grasses and warm-season grasses. Cool-season grasses such as the bluegrasses, fescues, and bents produce their best quality growth during the fall and early spring. Warm-season grasses such as Bermuda, zoysia, centipede, and St. Augustine have their most important growth cycle in the summer months. *Nitrogen applications should be properly timed to assure that an adequate and continuous supply is available during these important periods of growth.*

KNOW YOUR NITROGEN SOURCE

All qualified turf professionals know that turfgrasses must have a constant source of nitrogen regulated to the growth cycle. With quickly available nitrogen sources, maintenance crews are tied to a schedule of continuous fertilization. Burning is a constant worry. Heavy rains often leach much of the nitrogen. Maintenance crews are forever in the golfers' way. Spreaders require frequent replacement. Actually, there is no end to the drudgery and worry . . . and the time was when there was no other choice.

This is not the case today. Nitroform provides a long-lasting, slow-release nitrogen source that is nonburning and resists leaching. With Nitroform, two applications per year may be sufficient for most turf. Of course, putting greens and similar turf require more frequent applications of nitrogen.

KNOW THE VALUE OF OTHER NUTRIENTS

The professional also knows the value of P and K in building and in keeping healthy turf. Phosphorus stimulates root growth and helps in crown and stolon development. Potash improves plant vigor and rigidity, and aids also in root development.

ADVANTAGES OF FALL FERTILIZATION WITH NITROFORM® Turf Food

- To build cool-season grasses during their peak growing cycle, when undesirable grasses and weeds are dormant.
- To aid in the development of overseeded grasses and nurse grass for fall and winter turf.
- To take advantage of the temperature and moisture conditions best suited for efficient use of fertilizer nutrients and turfgrass development.
- To revive all types of turfgrass damaged during the summer months, making fall play more enjoyable.
- To strengthen all types of turfgrass for overwintering, benefiting spring play.
- To avoid developing "lush" turf that sometimes results from too much spring fertilization.
- To release the labor force during the active spring and summer months for other maintenance duties.
- To increase efficiency by combining fertilization with the usual fall cultivation practices.
- To build a residual nitrogen that resists leaching and that will be available for use as soon as the turf wakes up in the spring.
- To provide the most efficient slow-release, residual storehouse of nitrogen available today for healthy turf.

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Please send the Turf Notes Number 101-1 giving the Nitroform program for my area.

Also, please send the booklet that shows how to compare the costs of Nitroform and conventional organics.

(PLEASE TYPE OR PRINT)

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Company _____

Address _____

ZIP _____

Soil tests are the only sure way to determine when to use P and K, and to determine the proper amounts. But, it's a safe rule to apply some P and K at least once a year . . . and just prior to the important period of turf growth would naturally be the best.

The soil test will also give the pH of the soil, from which liming practices can be determined. In most areas, the minor nutrients are supplied by the soil, but check your turf specialist, or turf specialty supplier, if you have any questions about local soil deficiencies.

KNOW WHEN TO FERTILIZE

Fertilize heaviest just prior to the most important growth cycle for your particular turfgrass, and at least once more each year at the proper time recommended for your type of turf.

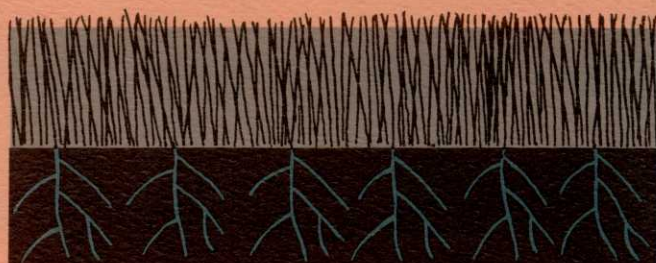
Fall fertilization is extremely important for the cool-season grasses—bluegrasses, fescues, and bents. These grasses produce maximum crown, rhizome, and stolon development during the fall. Soil moisture and temperature are ideal at this season for the most efficient use of available nutrients. Since frost eliminates most weeds early, these turfgrasses, if properly fertilized, can grow and spread into the thin areas without competition from weeds. Fall fertilization helps turf recover from summer use and prepares it for winter hardiness and early spring growth. Spring fertilization of these turfgrasses is also recommended.

The heaviest fertilization of warm-season grasses—Bermuda, zoysia, centipede, and St. Augustine—should come in the spring to coincide with their most important growth cycle. However, early fall fertilization also is desirable for these grasses. A well-fertilized turf will be damaged less by severe winter weather and will begin growth earlier in the spring.

KNOW HOW TO USE NITROFORM® TURF FOOD

In the central and northern areas of the United States, the recommended yearly application is 8 to 15 lbs. of Nitroform® turf food per 1,000 square feet, or 350 to 650 lbs. per acre. Since these areas have predominantly cool-season grasses, two-thirds should be applied in the fall and one-third in early spring.

In the southern areas where the growing season is longer, apply annually 12 to 20 lbs. of Nitroform per 1,000 square feet, or 500 to 800 lbs. per acre. Split applications are recommended. For cool-season grasses apply two-thirds in the fall and one-third in the spring. For warm-season grasses, apply two-thirds



BE SURE YOU USE A SLOW-RELEASE NITROGEN FOR FALL FERTILIZATION

Ask your Turf Specialty Supplier for Nitroform® turf food as granular Blue Chip® for mechanical spreaders, and Powder Blue* for liquid application. Or, look for the Blue Chip label on mixed fertilizers so that you will know that you have the best nitrogen source—Nitroform.

*Hercules Trademark

in the spring and one-third in the fall. **When Bermuda fairways are to be overseeded** with annual rye or creeping fescues, apply 200 to 300 lbs. of Nitroform per acre just before or at the time of overseeding.

These general recommendations do not apply to putting greens and similar close-knit turf areas. Consult Turf Notes Number 102 to determine the accurate pounds of nitrogen required annually by the most commonly used turfgrasses.

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How light and small should a chain saw be?

A professional logger would select his saw in relation to its power and performance. If the saw and engine are too small they quickly overheat and have neither the power nor durability to handle a lengthy cutting job. The new STIHL 030 AV Deluxe is a professional-type of lightweight chain saw. A real top-performance tool with more than twice the power of some saws, near its lightweight class... and with many real deluxe features. Like Stihl's exclusive AV anti-vibration system to absorb fatiguing vibrations from chain and engine... an extra-large muffler to quiet your saw and neighbors... automatic chain oiling with quantity control and many others. Try the new STIHL 030 AV Deluxe. The saw that is light enough to suit the occasional-user and powerful enough to satisfy the professional.

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WEEDS TREES and TURF®

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The Cover

A new chipper on the market—the Precision Tree Destroyer—promises to be an important addition to the tree care industry. It's a big machine—but portable and mounted on a trailer bed and pulled by a regular tractor at regular truck highway speeds. The chipper will handle tree trunks up to 22" in diameter. It is made by Precision Chipper Corp., a company with a quarter-century of chipper manufacturing experience on stationary chippers for the forest products industry. Two smaller units, scheduled for introduction late this year, are being built. Operating the Tree Destroyer is a veteran Precision employee, Clyde Hill.

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For information about Princep, and other Geigy herbicides, AAtrex[®], Pramitol[®], and Atratol[®], write to Geigy Agricultural Chemicals, Division of CIBA-GEIGY Corporation, Ardsley, New York 10502.

Princep by Geigy



Turf-Maker is specifically designed for professional turfmen, landscapers and sod growers.



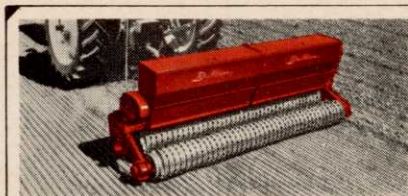
TURF-MAKER

— the most precise grass seeder made

Brillion's Turf-Maker is for you—if you want to seed the finest grass seeds and lawn mixtures with miserly accuracy over large areas. It crushes, seeds and rolls in one pass—enables one man to seed up to 50 acres per day without extra help, equipment or seedbed conditioning.

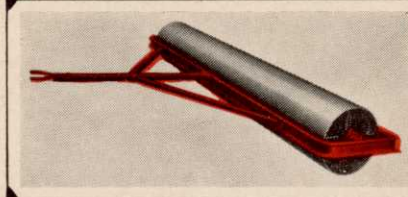
Turf-Maker gives you exclusive Micro-Meter adjustment for an infinite range of seed settings—Brillion fluted rolls, the most accurate seeding mechanism known — and the unique reversible sprockets for a dual range of rate settings. The results: Full, thick stands at up to 50% seed savings over conventional methods. It's the best for sod seeding.

You can order Turf-Maker in 8' and 10' seeding widths. Options include transport wheels for both sizes and 3-point Category II pick-up for the 8' model. Seed better—save more with Brillion. Mail coupon.



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LS-135R

Editorial

Change By Itself Will Fail

We're a little sick of the constant criticism by the so-called under 30 group. We've yet to hear a single, solid, workable proposal on any subject on which this group can agree.

Most of us who are allegedly suffering from generation gaposis agree. So, why bring it up now?

Frankly, it's just that a tour of sod research plots this past week caused some reflection. At Michigan State's muck test fields, we saw 41 varieties of sod being grown for test purposes. Most looked good. But, compare that with the 30's. Common Kentucky bluegrass by this time of year was dry and brown, unless we had a most unusual season. Bare ground was the rule in most parks and city playgrounds.

It's been this oft-accused materialistic generation which has developed new bluegrasses and blends, which has developed chemical fertilizers, which has made 150-bushel/acre corn crops common (as opposed to 15 bushels during the not-so-good years of the 30's), which has developed chemical pesticides which in themselves have helped wipe out countless health destroying viruses and other pests.

These achievements are tied to the vegetation care and agricultural industries. But look around. Reflect. Remember how we used to worry about our children contracting polio? Before the days of a researcher named Salk?

Today, the nation is green, vibrant, and beautiful—when compared with 30 years ago. Yet, it's little wonder that those under 30 do not appreciate the significance. They've never lived without the finer things of life. Few have worried about a serious and prolonged lack of money or the necessities of life. Few can appreciate that 35 years ago, when all children in a large family reached adulthood, that it was an uncommon occurrence.

Few men live today—who also lived through the decade prior to World War II—who cannot from personal experiences recount better examples as to why we need take pride in our collective record.

Change, as so often proposed by young people, without a practical approach to reality, will fail.



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Government News / Business

Citrine Okayed For Potable Water Applied Biochemists, Inc., Milwaukee, Wis., has received amended registration from the Environmental Protection Agency for use of Citrine, an algaecide, in potable water reservoirs and other aquatic areas. Previous registration was for use in lakes and trout ponds.

Herbicide Added To Mulch A new product by Masonite Corporation, Febrex Root Insulator/Weeder, has first clearance from EPA. It's a herbicide treated ground cover and mulch. Masonite will use dacthal which is registered for use on most ornamentals and around established trees, shrubs and ornamental plantings. Sales will begin in 1972, in selected metropolitan areas of southern and north central states.

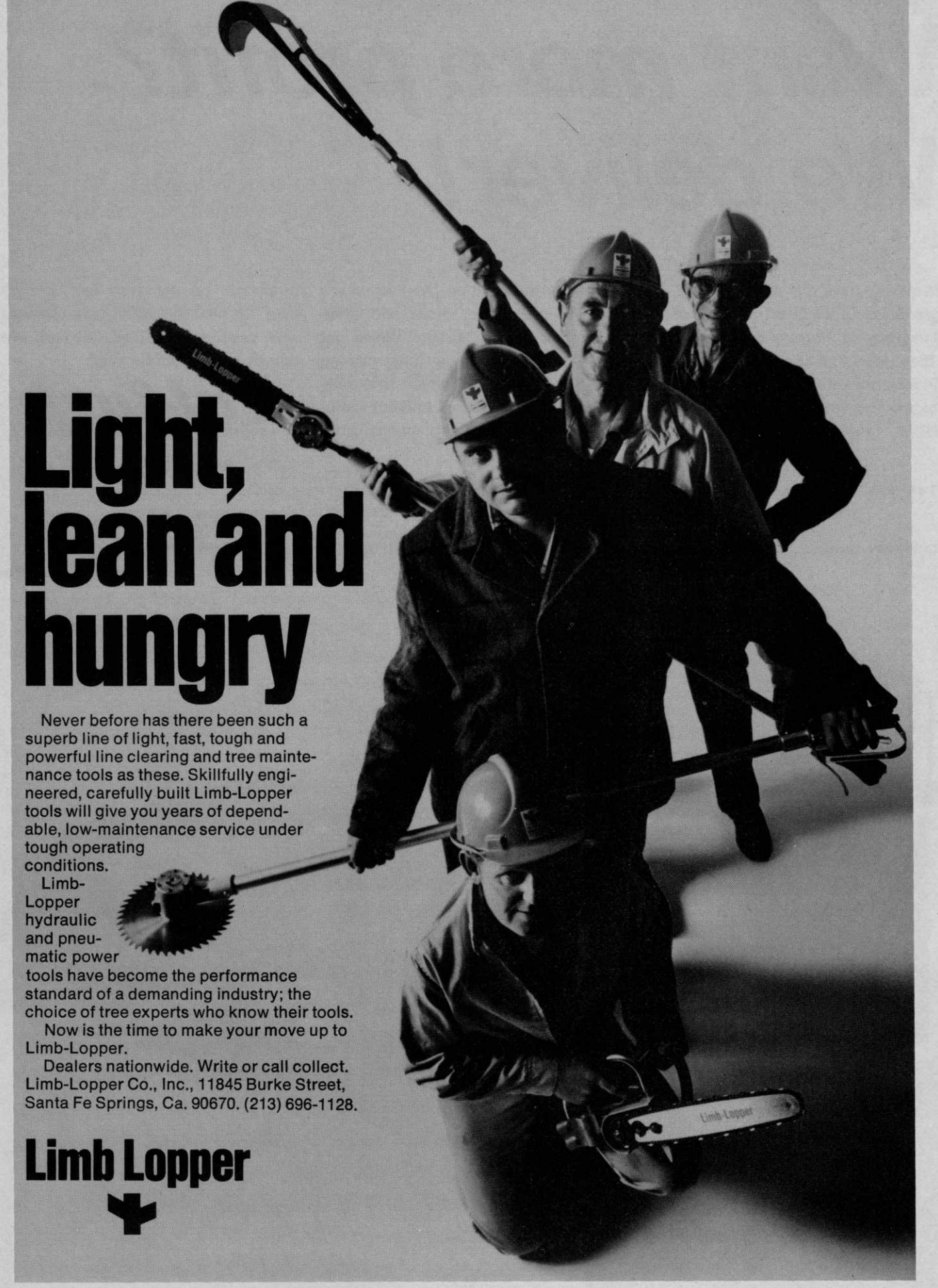
Amitrole Registration Cancelled The EPA has cancelled the registration of Amitrole, widely used on croplands. Evidence indicated that the herbicide may cause tumors in experimental animals.

Slow Moving Vehicle Emblem Mandatory Effective this month (August 27) the Occupational Safety and Health Act of 1970 becomes effective for Slow Moving Vehicle Emblems. Applies to all states.

Rohm and Haas Receives Priority For Stam Use of Stam, a postemergent herbicide (3,4-dichloropropionanilide), has been awarded to Rohm and Haas in a decision by the Board of Interference of the U.S. Patent Office. Previously (1967) the priority was awarded Monsanto.

Grants Awarded For Gypsy Moth Studies Gypsy moth damage likely will continue in the news as the public becomes more closely associated with attendant damage. Just announced by the USDA are four university grants to further study the problem: \$26,845 to Penn State to develop a sampling system for each of the life stages of the gypsy moth; \$75,000 to Ohio State for studying chemical factors in ash and tulip poplar leaves that inhibit feeding by gypsy moth; \$33,000 to the University of New Hampshire for studies of electronic measurements of tree defoliation; and \$18,988 to Syracuse University for studies of potential compounding effects of the invasion of the two-lined chestnut borer in red and white oak.

More Protection For Fish and Wildlife Fish and wildlife may get more protection if S. 1463 (McGovern, S.D.) and S. 1563 (Schweiker, Pa.) passes. It promises to impose criminal penalties on anyone shooting certain birds, fish or animals from planes.



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