

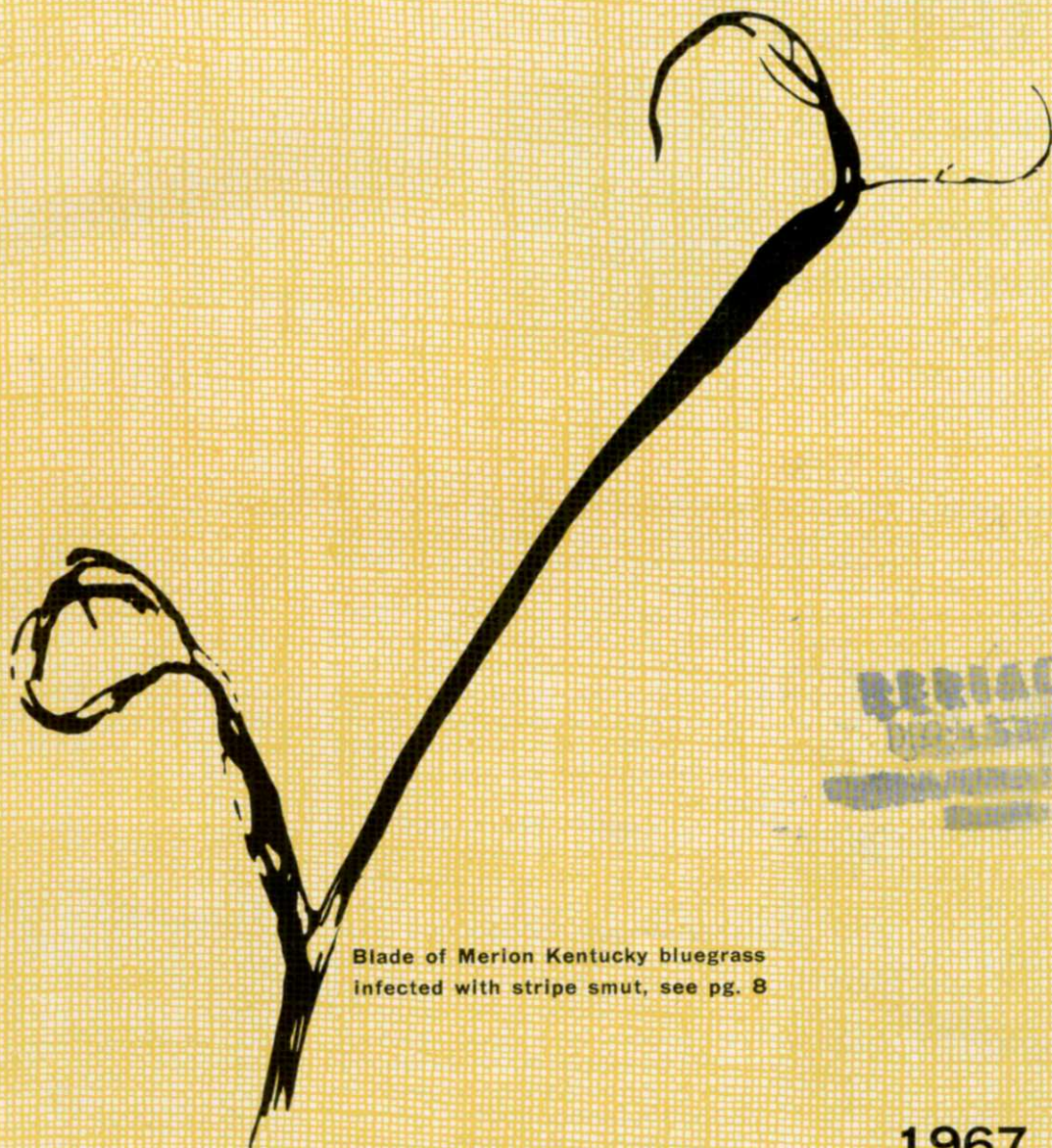
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WEEDS TREES and TURF

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All 1966 Articles

A TRADE MAGAZINES, INC. PUBLICATION

December 1966



Blade of Merion Kentucky bluegrass
infected with stripe smut, see pg. 8

ERRATA
MAY 1967

Monthly magazine of methods, chemicals and
equipment for vegetation maintenance and control

1967
SUPPLIERS
GUIDE

"COPPER SULFATE AND CONTINUAL SAMPLING KEEP ALGAE AT A MINIMUM"

states Alan H. Ketcham, Superintendent of Supply, Stamford Water Company, Stamford, Connecticut



Alan H. Ketcham, Superintendent of Supply and William Bartscht, Watershed Supervisor plan an all-out attack on algae.

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William Bartscht, Watershed Supervisor, continually samples water from the reservoirs and from outlying ponds.

reservoir and served a city of 8,714, the Stamford Water Company today operates 4 reservoirs and provides water for 90,000.

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algae is allowed to grow unchecked there is danger of it getting into the main reservoir, and it is always simpler to treat algae confined to a small pond."

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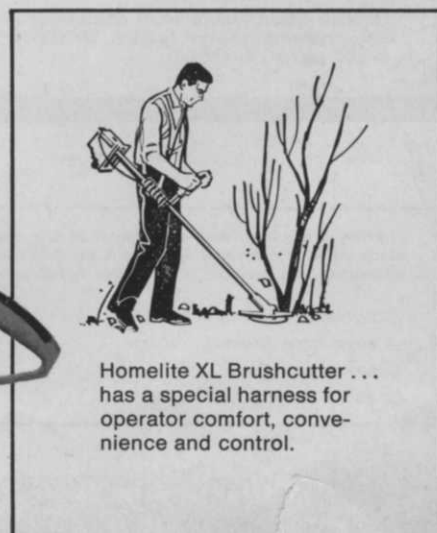
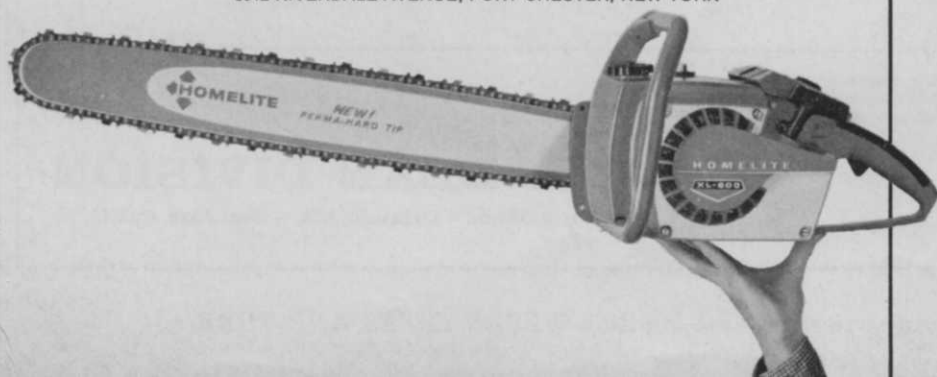
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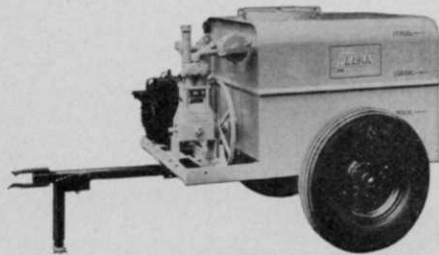
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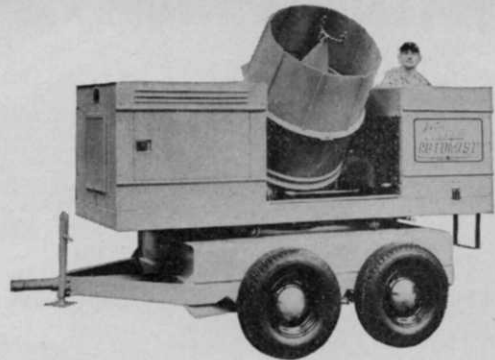


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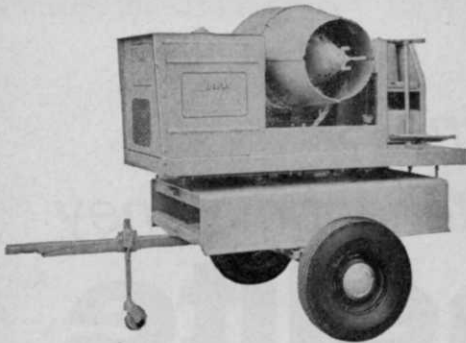
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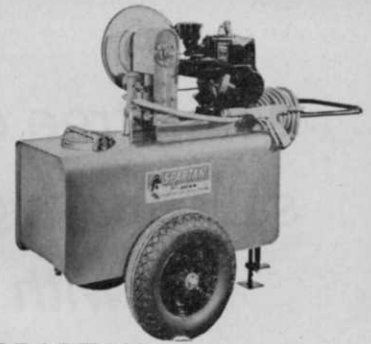


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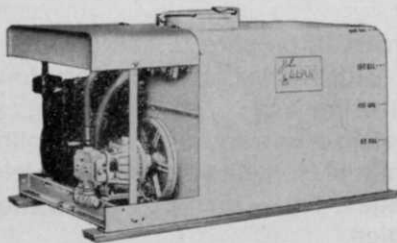


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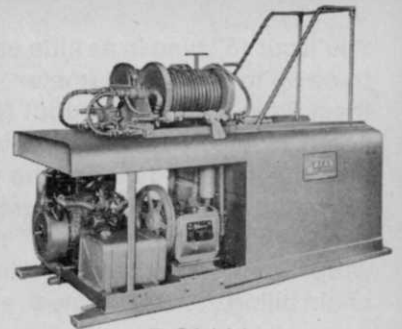
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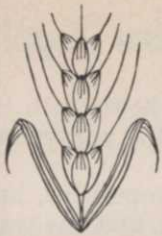
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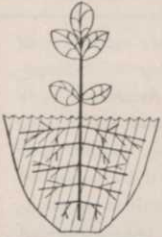
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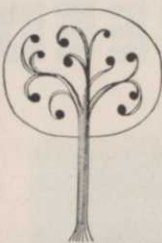
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December 1966
Volume 5, No. 12

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Competition and the Labor Supply

Wherever we have traveled in the past year, WTT has time and again run into a familiar complaint from small businessmen, whether arborists, or spraymen, or sod growers. We have talked to some operators who, far from expanding, are contracting the size and scope of their own businesses, and others who seem on the verge of giving up.

Their reasons are usually the same regardless of their field: stiff competition and a shortage of trained labor. Isn't competition the American way of business? Of course, the small operator answers, but lately it's become such a cutthroat proposition that many are losing money on a great deal of the work they perform.

And what of help? A small arborist or sprayman may have worked hard to build up a "fleet" of three trucks. But now he can't find the personnel to keep them operating. Often he just hires a man and begins to train him when his employe moves on. What is he to do about this? Hire another? Or, is there another available for the job?

The squeeze is on, and most informed prognosticators say it will get worse before it gets better. Is the small businessman going to be forced out? Perhaps not, if he will only convince himself that it's not enough to be just a good operator. He must also keep careful track of his business expenses. Turn to page 41 and you'll find a Floridian's suggestion that the operator's income may well depend

more on what he can save than on how much he can make. This comment was aimed at spraymen, but applies to many others as well.

The small operator has to be competitive, but to do so he must know where to save, and one way is to have adequate equipment. Obsolete equipment that costs too much to operate, or is inadequate for the job and requires more man-hours than a precarious labor situation warrants, is a liability in competition. The cost of mechanizing may be high, but the cost of substituting man-hours for efficient equipment is even higher.

We think this coming year will see more small businessmen turning increasingly to mechanization to stay in the competitive race. We hope that those planning to purchase equipment will match items carefully to their job needs, choosing those that are neither too large nor too small, but suited to increase the efficiency of their operations.

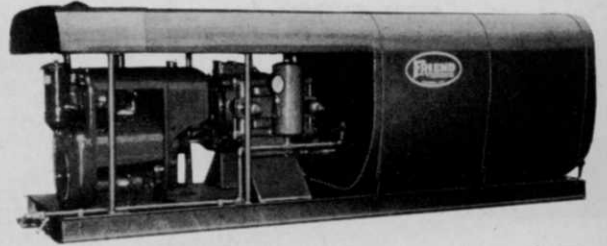
WEEDS TREES AND TURF is the national monthly magazine of urban/industrial vegetation maintenance, including turf management, weed and brush control, and tree care. Readers include "contract applicators," arborists, nurserymen, and supervisory personnel with highway departments, railways, utilities, golf courses, and similar areas where vegetation must be enhanced or controlled. While the editors welcome contributions by qualified freelance writers, unsolicited manuscripts, unaccompanied by stamped, self-addressed envelopes, cannot be returned.

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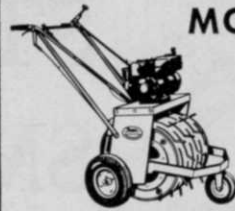
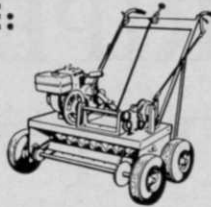


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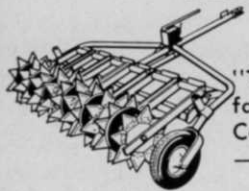
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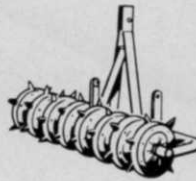


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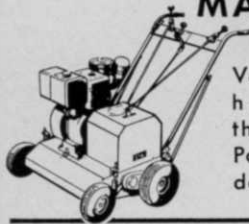
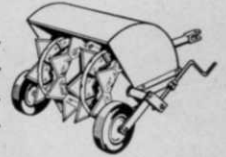
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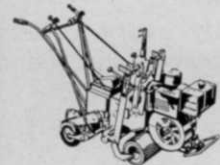
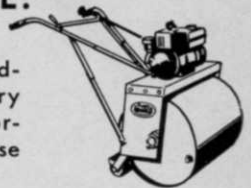
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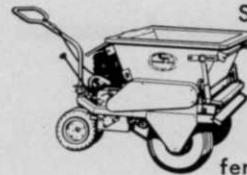
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STRIPE SMUT

Attacks Merion Bluegrass

By

P. M. HALISKY

C. R. FUNK, and

S. BACHELDER

College of Agriculture and
Environmental Science
Rutgers University
New Brunswick, New Jersey

grasses, virtually every variety or selection observed was found infected with stripe smut.

Stripes Signal Disease

Stripe smut first appears as long, narrow, grayish stripes on the leaves of grasses. These linear sori normally extend the entire length of the leaf blade. Eventually the leaf tissues rupture along these stripes releasing dark, sooty spore masses and causing the leaves to shred into ribbons. The diseased leaves then curl from the tip downward and the infected plants become ragged, withered, and unthrifty.

In plots of Merion Kentucky bluegrass, infected plants appear in early May as yellowish tufts of stunted, sick-looking grass. During the summer such weakened plants succumb readily to the adverse effects of drought, insects, nematodes, weed competition, or other bluegrass diseases.

Stripe smut is disseminated by

STRIPE SMUT is caused by a fungus (*Ustilago striiformis*) which has become a serious problem in bluegrass in the Northeast. The widespread use of the highly susceptible variety "Merion" has focused attention on the prevalence and destructiveness of this disease in home lawns, golf courses, and industrial turf areas.

In New Jersey, stripe smut is found on bluegrass (*Poa*), bentgrass (*Agrostis*), orchardgrass (*Dactylis*), quackgrass (*Agropyron*), and timothy (*Phleum*). In creeping bentgrass (*Agrostis palustris*) the disease was observed in plots of Seaside and Penncross. Among the blue-



Merion bluegrass leaves shown above have been shredded into ribbons by stripe smut.

spores which act as "seeds" of the fungus. The spores may be carried on bluegrass seed, in seed hay, or on lawn mowers, and become associated with the soil, in which they remain viable up to one year. The spores germinate and produce hyphae which penetrate the young tillers originating at the nodes of rhizomes.

Following penetration, the fungus mycelium spreads systemically throughout the grass plant including the leaves. As long as an infected plant lives the fungus generates successive crops of smut spores which find their way back into the soil and serve as inoculum for further infection of bluegrass tillers.

Merion Is Most Susceptible

Results of bluegrass evaluation trials conducted at the Rutgers Agricultural Experiment Station indicate considerable variation in the reactions of bluegrasses to stripe smut infection (Table 1). In these trials 3 varieties were found resistant, 3 were susceptible, and one (Merion) was highly susceptible. In some plots Merion produced an average of 2540 tillers per square foot of turf of which 521 (or 20.5%) were infected with smut.

In Merion lawns stripe smut usually appears two to three years after planting and thereafter the incidence of disease progressively increases each year until ultimately the turf is severely damaged. Among bluegrasses, those varieties which produce a dense sod such as Merion, Windsor, and Prato, are generally most susceptible to stripe smut infection. In contrast, varieties with a spreading growth habit such as Dwarf, Pa.K5(47), and Park appear resistant to the disease.

Nitrogen Affects Disease

Nitrogen fertilization is a key management practice in turf production since it is related to vegetative growth, leaf density, and turf color. Claims have been made that aqueous urea as a nitrogen source is effective in reducing stripe smut in Kentucky bluegrass. Results of trials conducted at Rutgers show that both aqueous and granular fertilizers

Table 1. Reaction of Kentucky bluegrass varieties to infection by Stripe smut (*Ustilago striiformis*)

Variety	No. smutted tillers per square foot	Reaction
Dwarf *	1.1	Resistant
Park	4.2	Resistant
Pa.K5(47) *	4.7	Resistant
Delta	20.0	Susceptible
Newport	37.0	Susceptible
Cougar	46.8	Susceptible
Merion	112.2	Highly Susceptible
LSD at 5%	21.8	--

* Experimental selections not available commercially.

stimulated vegetative growth in early summer, resulting in a temporary lowering of stripe smut in the treated turf. However, by October, all fertilized plots showed significantly higher stripe smut counts than the untreated plots (Table 2).

Control Needed

At the present time no effective chemical control measure is known for reducing the incidence of stripe smut in bluegrass turf. Trials conducted at Rutgers with the fungicides nabam and zineb

applied as soil drenches were not effective in reducing disease severity.

Several new systemic fungicides are currently being evaluated for their effectiveness in controlling stripe smut in Merion bluegrass. In the interim, however, the best method for smut control appears to be through breeding for disease resistance. A number of promising experimental selections of Kentucky bluegrass presently being tested at Rutgers show good resistance to stripe smut.

Table 2. Effect of nitrogen fertilization on stripe smut incidence in Merion Kentucky bluegrass turf

Nitrogen source ¹ .	Number smutted tillers per square feet	
	May-June 1965	October 1965
<u>Aqueous fertilizer</u>		
Urea (45-0-0)	26	78
Ammonium Nitrate (33-0-0)	24	80
Control	45	42
LSD at 5%	11	27
<u>Granular fertilizer</u>		
Complete (10-6-4)	10	95
Control	135	35
LSD at 5%	48	32

¹. All fertilizers were applied at the rate of one lb. of actual nitrogen per 1000 sq. ft. of turf per application. The granular fertilizer was applied six times during the summer; the aqueous fertilizer once.

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AMMONIUM METHYL ARSENATE
The Ansul Co.
Green Lawn Laboratories, Inc.
Nalco Chemical Co.

AMMONIUM SULFAMATE
E. I. duPont de Nemours & Co., Inc.
Nalco Chemical Co.

ARSENIC ACID
Allied Chemical Corp.
Chevron Chemical Co., Ortho Div.
Chipman Chemical Co.
Niagara Chemical Div., FMC Corp.
Pennsalt Chemicals Corp.
The Sherwin-Williams Co.

ATRAZINE
(See Soil Sterilants)

BANVEL-D* (DICAMBA)
Velsicol Chemical Corp.

BORATE COMPOUNDS
(See Soil Sterilants)

BROMACIL
(See Soil Sterilants)

CACODYLIC ACID
The Ansul Co.
Nalco Chemical Co.

CALCIUM ACID METHYL ARSENATE
Nalco Chemical Co.
Vineland Chemical Co.

CALCIUM PROPYL ARSENATE
(See Preemergence Herbicides)

DACAMINE*
Diamond Alkali Co.
Great Lakes Chemical Div.

DALAPON
(See Soil Sterilants)

DINITRO COMPOUNDS
Allied Chemical Corp.
Chevron Chemical Co., Ortho Div.
The Dow Chemical Co.
Niagara Chemical Div., FMC Corp.

DIURON
(See Soil Sterilants)

DMA (DSMA)
Allied Chemical Corp.
The Ansul Co.
Chevron Chemical Co., Ortho Div.
Nalco Chemical Co.
Thompson-Hayward Chemical Co.
Vineland Chemical Co.

ENDOTHAL
(See Preemergence Herbicides)

EPTAM*
(See Preemergence Herbicides)

FENAC
(See Soil Sterilants)

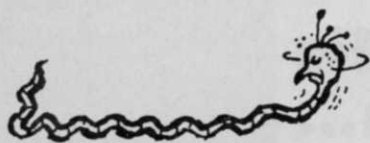
FENURON
E. I. duPont de Nemours & Co., Inc.
Nalco Chemical Co.

HCA*
(See Soil Sterilants)

LINURON
(See Preemergence Herbicides)

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Chipman Chemical Co.
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nullify a nematode?



gas a grub?

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Shepard Chemical Industries, Inc.
Vineland Chemical Co.

MONURON

(See Soil Sterilants)

MSMA

The Ansul Co.
Great Lakes Chemical Div.
Nalco Chemical Co.
Thompson-Hayward Chemical Co.
Vineland Chemical Co.

NEBURON

(See Preemergence Herbicides)

PARAQUAT*

Chevron Chemical Co., Ortho Div.

PENTACHLOROPHENOL

The Dow Chemical Co.
Nalco Chemical Co.
Reichhold Chemicals, Inc.

PHENYLMERCURIC ACETATE (PMA)

Chemley Products Co.
Green Lawn Laboratories, Inc.
Vineland Chemical Co.

PRAMITOL*

(See Soil Sterilants)

SILVEX

Chipman Chemical Co.
The Dow Chemical Co.
Green Lawn Laboratories, Inc.
Hercules, Inc.
Nalco Chemical Co.
Northrup, King & Co.
Thompson-Hayward Chemical Co.

SODIUM ARSENITE

(See Soil Sterilants)

SODIUM CACODYLATE

The Ansul Co.
Nalco Chemical Co.

TCA

(See Soil Sterilants)

TORDON*

The Dow Chemical Co.
Nalco Chemical Co.

TRYSDEN* (TBA)

E. I. duPont de Nemours & Co., Inc.
Nalco Chemical Co.

2,4-D

Allied Chemical Corp.
Amchem Products, Inc.
Chevron Chemical Co., Ortho Div.
Chipman Chemical Co.
Diamond Alkali Co.
The Dow Chemical Co.
Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.
Hercules, Inc.
Nalco Chemical Co.
Northrup, King & Co.
Stauffer Chemical Co.
Thompson-Hayward Chemical Co.

2,4,5-T

Allied Chemical Corp.
Amchem Products, Inc.
Central Solvents & Chemicals Co.
Chevron Chemical Co., Ortho Div.
Chipman Chemical Co.
Diamond Alkali Co.
The Dow Chemical Co.
Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.

Hercules, Inc.

Nalco Chemical Co.

Stauffer Chemical Co.

Thompson-Hayward Chemical Co.

UROX*

(See Soil Sterilants)

AQUATIC HERBICIDES

AMITROLE

Amchem Products, Inc.
American Cyanamid Co.
Great Lakes Chemical Div.

AMITROLE-T

(See Postemergence Herbicides)

AQUATHOL*

Pennsalt Chemicals Corp.

AQUATHOL* PLUS

Pennsalt Chemicals Corp.

CALCIUM HYPOCHLORITE

Pittsburgh Plate Glass Co.
Robeco Chemicals, Inc.

CASORON*

(See Preemergence Herbicides)

COPPER SULFATE

Chevron Chemical Co., Ortho Div.
Green Lawn Laboratories, Inc.
Phelps Dodge Refining Corp.
Robeco Chemicals, Inc.
Vineland Laboratories, Inc.

DACAMINE 4D*

Diamond Alkali Co.
Great Lakes Chemical Div.

DALAPON

(See Soil Sterilants)

DICHLONE

Naugatuck Chemical Div.

DIQUAT*

Chevron Chemical Co., Ortho Div.
Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.

HYDROTHOL*

Pennsalt Chemicals Corp.

ORTHODICHLOROBENZENE

Pittsburgh Plate Glass Co.
Robeco Chemicals, Inc.

POTASSIUM ENDOTHAL

Pennsalt Chemicals Corp.

SILVEX

(See Postemergence Herbicides)

SODIUM ARSENITE

(See Soil Sterilants)

2,4-D

(See Postemergence Herbicides)

2,4,5-T

(See Postemergence Herbicides)

COMMERCIAL FERTILIZERS

NITROGEN SOURCES

—Fast Release—

AMMONIA, ANHYDROUS

Allied Chemical Corp.
Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Columbia Nitrogen Corp.
The Dow Chemical Co.
E. I. duPont de Nemours & Co., Inc.
Hercules, Inc.
Phillips Petroleum Co.
Pittsburgh Plate Glass Co.
Smith-Douglass Div., Borden Chem.
Sohio Chemical Co.

AMMONIUM NITRATE

Allied Chemical Corp.
Agrico Chemical Co.
Chevron Chemical Co., Ortho Div.
Columbia Nitrogen Corp.
Green Lawn Laboratories, Inc.
Hercules, Inc.
International Minerals & Chem. Corp.
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.
Sohio Chemical Co.

AMMONIUM PHOSPHATE

Allied Chemical Corp.
Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Green Lawn Laboratories, Inc.
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.
Stauffer Chemical Co.

AMMONIUM SULFATE

Allied Chemical Corp.
Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Columbia Nitrogen Corp.
The Dow Chemical Co.
Green Lawn Laboratories, Inc.
Phillips Petroleum Co.
Rohm & Haas Co.
Smith-Douglass Div., Borden Chem.

AQUA AMMONIA

Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Columbia Nitrogen Corp.
The Dow Chemical Co.
Green Lawn Laboratories, Inc.
Hercules, Inc.
Sohio Chemical Co.

CALCIUM NITRATE

Best Fertilizers Co.
Green Lawn Laboratories, Inc.

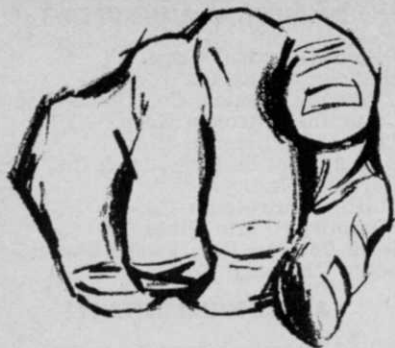
UREA

Allied Chemical Corp.
Agrico Chemical Co.
Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Columbia Nitrogen Corp.
Green Lawn Laboratories, Inc.
Hercules, Inc.
International Minerals & Chem. Corp.
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.
Sohio Chemical Co.

—Slow Release—

UREA-FORMALDEHYDE

Allied Chemical Corp.
Best Fertilizers Co.
E. I. duPont de Nemours & Co., Inc.
Green Lawn Laboratories, Inc.
Hercules, Inc.



TEST YOUR TURF FOOD

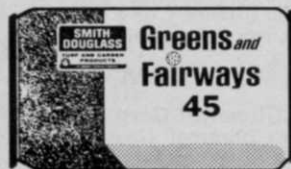
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Best Fertilizers Co.
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Smith-Douglass Div., Borden Chem.
Andrew Wilson, Inc.

COTTONSEED MILL

Smith-Douglass Div., Borden Chem.
Andrew Wilson, Inc.

MILORGANITE*

Sewerage Commission of Milwaukee

NITRO-GANO*

Wilbur-Ellis Co.

POTASH SOURCES

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Hooker Chemical Corp.

POTASSIUM CHLORIDE

Allied Chemical Corp.
American Potash & Chemical Corp.
Green Lawn Laboratories, Inc.
Kalium Chemicals, Ltd.
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.
U. S. Borax & Chemical Co.

POTASSIUM NITRATE

Green Lawn Laboratories, Inc.
Smith-Douglass Div., Borden Chem.
Southwest Potash Div.

POTASSIUM SULFATE

American Potash & Chemical Corp.
Best Fertilizers Co.
Green Lawn Laboratories, Inc.
Mallinckrodt Chemical Works
Smith-Douglass Div., Borden Chem.

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Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Columbia Nitrogen Corp.
Davison Chemical Div.,
Green Lawn Laboratories, Inc.
International Minerals & Chem. Corp.
Loamite Corp.
Northrup, King & Co.
Robert B. Peters Co., Inc.
Phillips Petroleum Co.
Plant Marvel Laboratories
Ra-Pid-Grow Corp.
Smith-Douglass Div., Borden Chem.
Summers Fertilizers, Inc.
Wilbur-Ellis Co.

LIQUID

Allied Chemical Corp.
Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Cloro-Spray Corp.
Columbia Nitrogen Corp.

Green Lawn Laboratories, Inc.
Hydroponic Chemical Co., Inc.
Phillips Petroleum Co.
Wilbur-Ellis Co.

PLASTIC COATED

Smith-Douglass Div., Borden Chem.

PHOSPHATE SOURCES

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Agrico Chemical Co.
Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Green Lawn Laboratories, Inc.
International Minerals & Chem. Corp.
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.

ROCK PHOSPHATES

Agrico Chemical Co.
Chevron Chemical Co., Ortho Div.
International Minerals & Chem. Corp.
Smith-Douglass Div., Borden Chem.

—Ammonium Phosphates—

AMMONIUM PHOSPHATE-NITRATE

Chevron Chemical Co., Ortho Div.
Green Lawn Laboratories, Inc.
Smith-Douglass Div., Borden Chem.

AMMONIUM PHOSPHATE-SULFATE

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Chevron Chemical Co., Ortho Div.
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.
Stauffer Chemical Co.

AMMONIUM PHOSPHATE-UREA

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Smith-Douglass Div., Borden Chem.

DIAMMONIUM PHOSPHATE

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Agrico Chemical Co.
Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Columbia Nitrogen Corp.
Green Lawn Laboratories, Inc.
Hooker Chemical Co.
International Minerals & Chem. Corp.
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.
Stauffer Chemical Co.

MONOAMMONIUM PHOSPHATE

Chevron Chemical Co., Ortho Div.
Green Lawn Laboratories, Inc.
Smith-Douglass Div., Borden Chem.
Stauffer Chemical Co.

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Agrico Chemical Co.
Best Fertilizers Co.
Columbia Nitrogen Corp.
Green Lawn Laboratories, Inc.
International Minerals & Chem. Corp.
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.
Stauffer Chemical Co.
U. S. Industrial Chemicals Co.

pH CONTROLLERS

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International Minerals & Chem. Corp.
Andrew Wilson, Inc.

CALCIUM CARBONATE

Diamond Alkali Co.
Green Lawn Laboratories, Inc.
Minerals & Chemicals Philipp Corp.
Pittsburgh Plate Glass Co.

DOLOMITE

Best Fertilizers Co.
Smith-Douglass Div., Borden Chem.

GYPSUM (CALCIUM SULFATE)

Best Fertilizers Co.
Smith-Douglass Div., Borden Chem.

LIME, CONCENTRATE

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Minerals & Chemicals Philipp Corp.
Smith-Douglass Div., Borden Chem.

LIMESTONE

Pittsburgh Plate Glass Co.

LIQUID FISH

Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.

SULFUR

Allied Chemical Corp.
Best Fertilizers Co.
Chevron Chemical Co., Ortho Div.
Smith-Douglass Div., Borden Chem.
Wilbur-Ellis Co.

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BARK

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Best Fertilizers Co.

CALCINED CLAY

Floridin Co.
Minerals & Chemicals Philipp Corp.
Oil-Dri Corp. of America
Waverly Petroleum Products Co.
Wyandotte Chemicals Corp.

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Eagle-Picher Industries, Inc.

CORN COBS

Green Lawn Laboratories, Inc.
Smith-Douglass Div., Borden Chem.

DIATOMITE*

Eagle-Picher Industries, Inc.

LOAMITE*

Loamite Corp.

PEAT-HUMUS

Premier Peat Moss Corp.
Western Peat Co.

PEAT MOSS

Best Fertilizers Co.
Premier Peat Moss Corp.

VERMICULITE

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Smith-Douglass Div., Borden Chem.
Zonolite Div., W. R. Grace & Co.

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Fitchburg Engineering Corp.

MULCHES

CALCINED ABSORBENT CLAY

(See Soil Conditioners)

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Weyerhaeuser Co.

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Fitchburg Engineering Corp.
Premier Peat Moss Corp.
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The Dow Chemical Co.
Green Lawn Laboratories, Inc.

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The Gregg Co.
O. E. Linck Div., Walco-Linck Corp.
Mallinckrodt Chemical Works

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Green Lawn Laboratories, Inc.
Minerals & Chemicals Philipp Corp.

GRANULES, NATURAL

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American Vermiculite Corp.
Floridin Co.
Minerals & Chemicals Philipp Corp.
Waverly Petroleum Products Co.

GRANULES, SYNTHETIC

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Humble Oil & Refining Co.
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Johns-Manville Corp.

FULLERS EARTH

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Minerals & Chemicals Philipp Corp.
Waverly Petroleum Products Co.

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Minerals & Chemicals Philipp Corp.

KAOLINS (CLAY)

Minerals & Chemicals Philipp Corp.

TALC

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Bonide Chemical Co., Inc.

TRACE ELEMENTS

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American Potash & Chemical Corp.
Green Lawn Laboratories, Inc.
Smith-Douglass Div., Borden Chem.
U. S. Borax & Chemical Co.

BORO-SPRAY

American Potash & Chemical Corp.

COPPER CHELATE

Geigy Agricultural Chemicals
Green Lawn Laboratories, Inc.
Niagara Chemical Div., FMC Corp.
Smith-Douglass Div., Borden Chem.

COPPER SULFATE

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Green Lawn Laboratories, Inc.
Phelps Dodge Refining Corp.
Robeco Chemicals, Inc.
Smith-Douglass Div., Borden Chem.
Vineland Laboratories, Inc.

IRON CHELATE

Best Fertilizers Co.
Geigy Agricultural Chemicals
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Green Lawn Laboratories, Inc.
Niagara Chemical Div., FMC Corp.
Smith-Douglass Div., Borden Chem.
Tennessee Corp.
Vineland Laboratories, Inc.

IRON, MICRONIZED

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Green Lawn Laboratories, Inc.
Mallinckrodt Chemical Works
Phillips Petroleum Co.
Smith-Douglass Div., Borden Chem.
Tennessee Corp.

MAGNESIUM CARBONITE

Smith-Douglass Div., Borden Chem.

MAGNESIUM SULFATE

Allied Chemical Corp.

MANGANESE CHELATE

Geigy Agricultural Chemicals
Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.
Smith-Douglass Div., Borden Chem.

MANGANESE SULFATE

Allied Chemical Corp.
Eagle-Picher Industries, Inc.
Eastman Chemical Products, Inc.
Green Lawn Laboratories, Inc.
Tennessee Corp.

MANGANOUS OXIDE

Green Lawn Laboratories, Inc.
Tennessee Corp.

MOLYBDENUM

Green Lawn Laboratories, Inc.
Smith-Douglass Div., Borden Chem.

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Geigy Agricultural Chemicals
Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.
Niagara Chemical Div., FMC Corp.
Smith-Douglass Div., Borden Chem.

ZINC SULFATE

Allied Chemical Corp.
Eagle-Picher Industries, Inc.
Green Lawn Laboratories, Inc.
Phillips Petroleum Co.
The Sherwin-Williams Co.
Tennessee Corp.

COMBINATION OF TRACE ELEMENTS

Green Lawn Laboratories, Inc.
Niagara Chemical Div., FMC Corp.

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Cloro-Spray Corp.
The Dow Chemical Co.
Emery Industries, Inc.
General Aniline & Film Corp.
Rohm & Haas Co.
Stepan Chemical Co.

EMULSIFIERS

Armour Industrial Chemical Co.
Atlas Chemical Industries, Inc.
Cloro-Spray Corp.
Emery Industries, Inc.
General Aniline & Film Corp.
Great Lakes Chemical Div.
Rohm & Haas Co.
Stepan Chemical Co.
Thompson-Hayward Chemical Co.

SPREADER-STICKERS

Allied Chemical Corp.
Chipman Chemical Co.
Colloidal Products Corp.
E. I. duPont de Nemours & Co., Inc.

Emery Industries, Inc.
Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.
B. G. Pratt Co.
Rohm & Haas Co.
Stepan Chemical Co.
Thompson-Hayward Chemical Co.
Thuron Industries, Inc.
Wilbur-Ellis Co.
Andrew Wilson, Inc.

STABILIZERS

Armour Industrial Chemical Co.
Emery Industries, Inc.
General Aniline & Film Corp.

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Allied Chemical Corp.
American Cyanamid Co.
Aquatrols Corp. of America
Armour Industrial Chemical Co.
Cloro-Spray Corp.
Colloidal Products Corp.
Emery Industries, Inc.
General Aniline & Film Corp.
Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.
Roberts Chemicals, Inc.
Rohm & Haas Co.
Stepan Chemical Co.
Thompson-Hayward Chemical Co.
Thuron Industries, Inc.
Vineland Chemical Co.
"Water In," Inc.

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Great Lakes Chemical Div.

NORBAK*

The Dow Chemical Co.

VISTIK*

Hercules, Inc.

GROWTH RETARDANTS

MALEIC HYDRAZIDE

Naugatuck Chemical Div.

PHOSFON*

Mobil Chemical Co.

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BROMIDE

The Dow Chemical Co.
Great Lakes Chemical Div.

CHLOROPICRIN

The Dow Chemical Co.
Great Lakes Chemical Div.
Morton Chemical Co.

D-D* (VIDDEN-D*)

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Great Lakes Chemical Div.
Shell Chemical Co.,
Ag. Chem. Div.
Stauffer Chemical Co.

DICHLOROPROPENE COMPOUNDS

The Dow Chemical Co.
Great Lakes Chemical Div.

ETHYLENE DIBROMIDE

The Dow Chemical Co.
Great Lakes Chemical Div.
Niagara Chemical Div., FMC Corp.

FUMAZONE* (NEMAGON*)

The Dow Chemical Co.
Great Lakes Chemical Div.
Shell Chemical Co.,
Ag. Chem. Div.

METHYL BROMIDE

The Dow Chemical Co.
Great Lakes Chemical Div.
Michigan Chemical Corp.
Velsicol Chemical Corp.

MYLONE*

Union Carbide Corp.

PROPARGYL

The Dow Chemical Co.

SAROLEX*

Geigy Agricultural Chemicals

TELONE*

The Dow Chemical Co.

TRIZONE*

Great Lakes Chemical Div.

VAPAM* (VPM*)

E. I. duPont de Nemours & Co., Inc.
Stauffer Chemical Co.

V-C 13*

Mobil Chemical Co.

VORLEX*

Great Lakes Chemical Div.
Morton Chemical Co.
Niagara Chemical

MITICIDES

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Stauffer Chemical Co.

BIDRIN*

Shell Chemical Co.,
Ag. Chem. Div.

CHLOROBENZILATE*

Geigy Agricultural Chemicals

DELNAV*

Great Lakes Chemical Div.
Hercules, Inc.

DIBROM*

Chevron Chemical Co., Ortho Div.
Great Lakes Chemical Div.
Stauffer Chemical Co.

DIMITE*

The Sherwin-Williams Co.

ETHION

Niagara Chemical Div., FMC Corp.

GENITE*

Allied Chemical Corp.

KARATHANE*

(See Fungicides)

KELTHANE*

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Rohm & Haas Co.

MORESTAN*

Chemagro Corp.

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PENTAC*
Great Lakes Chemical Div.
Hooker Chemical Corp.

SYSTOX*
Chemagro Corp.

TEDION*
Great Lakes Chemical Div.
Niagara Chemical
Stauffer Chemical Co.

TRITHION*
Stauffer Chemical Co.

INSECTICIDES

ABATE*
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Shell Chemical Co.,
Ag. Chem. Div.

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Niagara Chemical Div., FMC Corp.
Pennsalt Chemicals Corp.
The Sherwin-Williams Co.

ASPON*
Stauffer Chemical Co.

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BACILLUS THURINGIENSIS
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Pennsalt Chemicals Corp.
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BAYTEX*
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BETANAPHTHOL
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BHC
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BIDRIN*
(See Miticides)

CHLORDANE
(See Preemergence Herbicides)

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The Sherwin-Williams Co.

CRYOLITE
Pennsalt Chemicals Corp.

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Great Lakes Chemical Div.

DDD (TDE)
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Rohm & Haas Co.

DDT
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Chevron Chemical Co., Ortho Div.
Chipman Chemical Co., Inc.
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Faesy & Besthoff, Inc.

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(See Miticides)

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DIBROM*
(See Miticides)

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Ag. Chem. Div.
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ETHION

(See Miticides)

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Velsicol Chemical Corp.

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(See Preemergence Herbicides)

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Miller Chemical & Fertilizer Corp.

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Chipman Chemical Co.
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Hooker Chemical Corp.
S. B. Penick & Co.
Pennsalt Chemicals Corp.
Robeco Chemicals, Inc.
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Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.
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Smith-Douglass Div., Borden Chem.

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American Potash & Chemical Corp.
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Chipman Chemical Co.
Great Lakes Chemical Div.
Green Lawn Laboratories, Inc.
Pennsalt Chemicals Corp.
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SYSTOX*

(See Miticides)

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Stauffer Chemical Co.

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Hercules, Inc.

TOXAPHENE

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Hercules, Inc.

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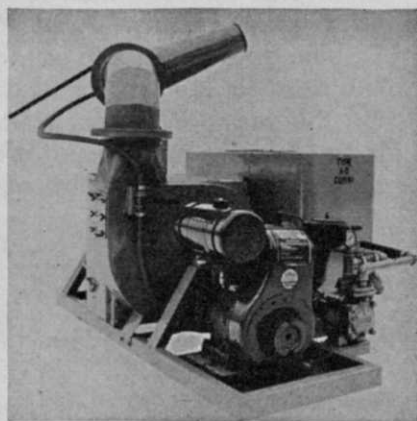
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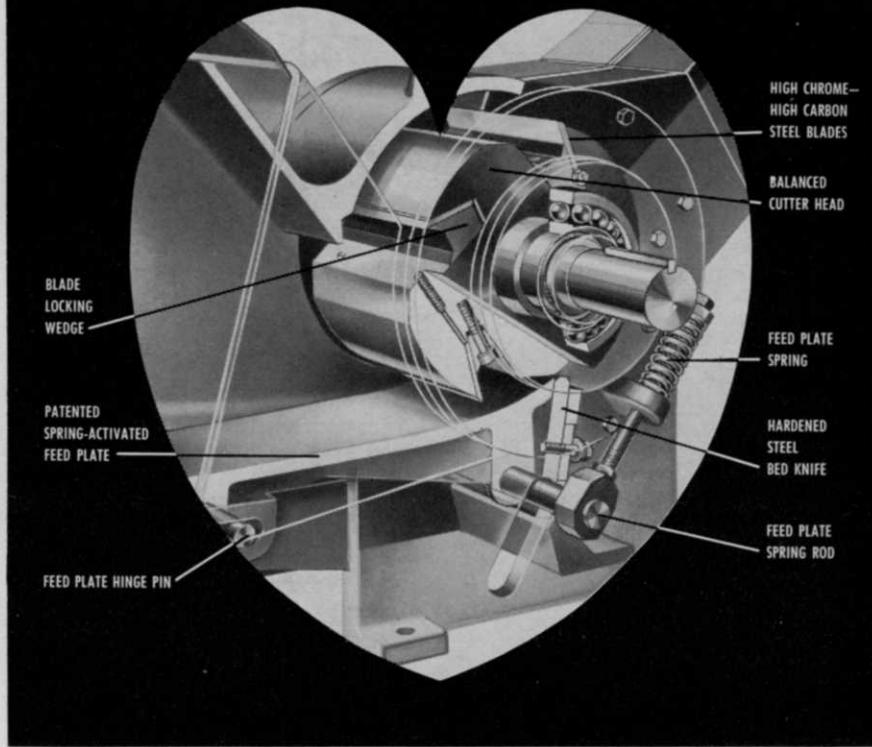
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Gravely Tractor
International Harvester Co.
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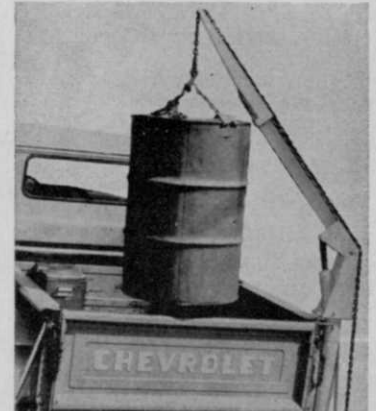
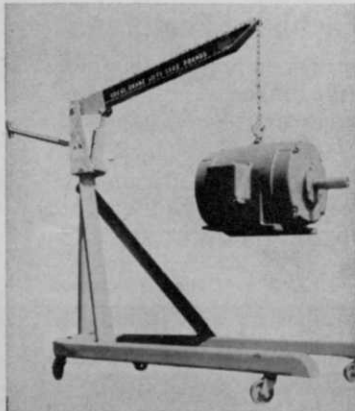
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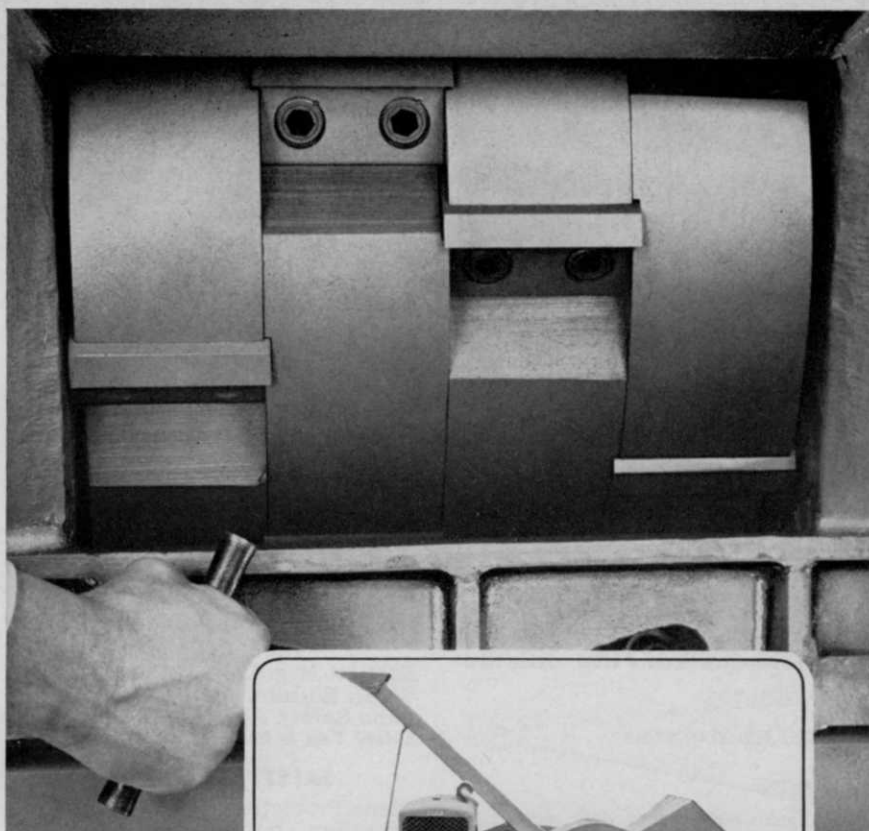
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Smoother, more economical operation that is easier on the chipper's internal mechanisms are the solid reasons for staggered knife superiority.

Look—most brush chippers use four knives that run the full length of the cutting cylinder. They are spaced around the cylinder at four equal intervals.

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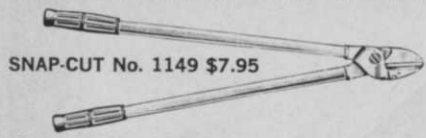
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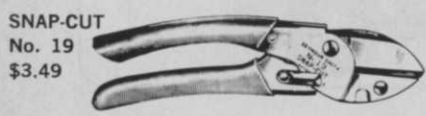
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New, light weight, heavy duty anvil type lopping shears. Alloy metal handles. 100% guaranteed. Cuts limbs up to 1 1/4" diameter.



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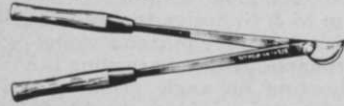
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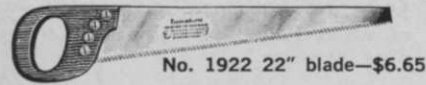
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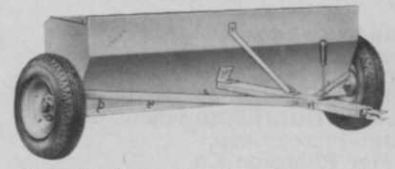
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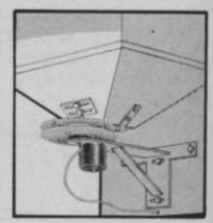
of application rate or type of material. The control handle is easy to reach from tractor or hopper and is not subject to friction or linkage variations in opening and closing. The entire unit is designed so gate and agitator can be easily removed for cleaning. 3' model holds 180 lbs. of fertilizer—5' model holds 300 lbs.

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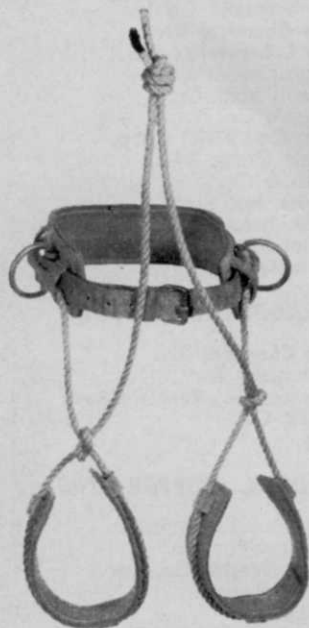
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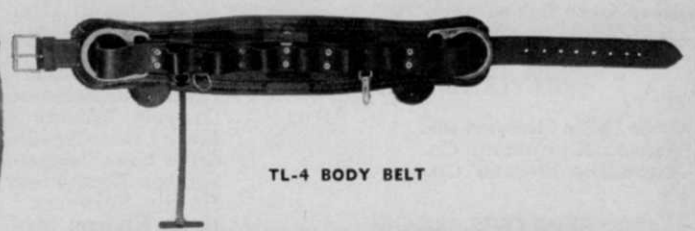
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with their
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Adamson Sprinkler Co.,
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Allis-Chalmers Mfg. Co.,
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American Cyanamid Co., Ag. Div.,
P.O. Box 400, Princeton, N.J.
American Excelsior Corp.,
850 Ave. H East, Arlington, Tex.
American-Lincoln Corp.,
518 S. St. Clair St., Toledo, Ohio

American Oil Co.,
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tions, 207 University Hall, Univer-
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trol.** Catalog No. A 1.76:289, 1965,
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20402.

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homa State University, Stillwater,
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Extension Circular 759, Agricul-
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Fact Sheet 6404, Agricultural
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**Dwarf Greenspike, A New Arborvitae for
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Agricultural Mailing Room, Okla-
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Zimmerman Pine Moth. Mimeo E-40,
August, 1965, Purdue University,
Cooperative Extension Service,
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Velsicol Chemical Corp.,
341 E. Ohio St., Chicago, Ill.
Vermeer Manufacturing Co.,
P.O. Box 190, Pella, Iowa
Viking Mfg. Co.,
P.O. Box 68, Manhattan, Kans.
Viking Pump Co., 4th & Shutte Sts.,
Cedar Falls, Iowa
Vineland Chemical Co.,
W. Wheat Rd., Vineland, N.J.
Vineland Laboratories, Inc.,
P.O. Box 70, Vineland, N.J.

W-X-Y-Z

Waco Lickity Log Splitter Div.,
Piqua Engineering, Inc.,
234 1st St., Piqua, Ohio
R. M. Wade & Co., 1919 N.W.
Thurman St., Portland, Oreg.
Walker Mfg. Co., Fowler, Kans.
Walsh Manufacturing Co.,
1200 Fisher St., Charles City, Iowa
"Water-In," Inc.,
P.O. Box 421, Altadena, Calif.
Waukesha Motor Co.,
W. St. Paul Ave., Waukesha, Wis.
Waverly Petroleum Products Co.,
3018 Market St., Phila., Pa.
Wayne Manufacturing Co., 1201 E.
Lexington St., Pomona, Calif.
H. N. Webster Mfg.,
P.O. Box 623, Sebring, Fla.
West Point Products Corp.,
West Point Pike, West Point, Pa.
Western Peat Co.,
5800 Monroe St., Sylvania, Ohio
Weyerhaeuser Co.,
Tacoma Bldg., Tacoma, Wash.
The Whitaker Manufacturing Co.,
5719 W. 65 St., Chicago, Ill.
Whitney Seed Co., Inc.,
P.O. Box 250, Buffalo, N.Y.
Wichita Equipment Co., Inc.,
P.O. Box 1329, Wichita Falls, Tex.
Wilbur-Ellis Co., 970 S. Goodrich
Blvd., Los Angeles, Calif.
Willson Products Div., Ray-O-Vac
Co., 2nd & Washington Aves.,
Reading, Pa.
Andrew Wilson, Inc.,
Baltusrol Way, Springfield, N.J.
Wright Saw Div., Thomas Industries,
207 E. Broadway, Louisville, Ky.
W-W Grinder Corp.,
2957 N. Market, Wichita, Kans.
Wyandotte Chemicals Corp., 1532
Biddle Ave., Wyandotte, Mich.
Yazoo Mfg. Co., Inc.,
P.O. Box 4207, Jackson, Miss.
York Modern Corp.,
Mill & Watson St., Unadilla, N.Y.
Zonolite Div., W. R. Grace & Co.,
135 S. LaSalle St., Chicago, Ill.

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Buy Quality Grass Seed for Sod Production

By M. H. DAY

Seed Specialist, Agronomy Department
University of Maryland, College Park

SELECTION and use of quality grass seed is basic to any sound, profitable sod production program. In fact, it is almost impossible to market a high quality sod without first starting with a good seed lot.

It doesn't seem logical or very businesslike to buy seed contaminated with weed seeds and then spend the next 18 to 24 months attempting to eradicate weeds, when the most economical control is to leave them at the market place. Don't buy trouble: avoid infested seed lots. The difference in cost between good and mediocre seed is much less than the cost of even the simplest weed control program.

What Is Quality Seed?

There is a great deal of disagreement as to what constitutes quality grass seed. I doubt seriously if any two sod producers would arrive at the same general standards or points to consider, much less explicit quality specifications.

I will not attempt to provide an ironclad, simple definition, but rather to list some specific points that in my opinion must be considered when one tries to define a quality seed lot.

Kind and variety of the seed is the first and most important point to be considered. The specific variety chosen must be able to produce the desired end product. Seed must be adapted to the area: it must be winter hardy, summer or heat hardy, resistant to common local diseases. If it is to be seeded as a mixture, it must be compatible with the other varieties used in the mixture. A poor choice here can make all other standards meaningless.

Author Day's recommendations were originally delivered to the Maryland Sod Conference, March 2, 1966, at the University of Maryland. While his comments are necessarily directed to sod producers in that state, they are relevant to other states as well.

The next several points to consider are mechanical, and concern what is actually in the bag. Almost every seed lot contains some other crop seeds, inert matter, and weed seeds. Seed is purchased mostly by weight, so that everything in the bag is paid for. But how much of this is pure seed of the grass variety desired, and how much fits into one of the other three categories?

Our Maryland seed inspection records indicate that some purchasers are buying as much as 31% inert matter, 7½% crop seed (orchardgrass, timothy, etc.), and over 2% weed seed (annual bluegrass). There is quite a wide range in purity available. The label tells the story, at least in part, and the buyer must determine from it whether the seed lot meets his standards.

Law Restricts Noxious Weeds

The labeled percentage by weight of weed seeds includes those of noxious weeds, if any are present. Taggers are required by Maryland law to list the rate of occurrence of all restricted noxious weed seeds, and are precluded from selling seed lots containing more than 16 such seeds per ounce.

A quality seed lot is free of all noxious weed seeds, and there is little excuse in this day and age for the sod grower to buy lots labeled to reflect their presence. There is plenty of good material available.

Some growers have, in the past, bought seed lots heavily infested with annual bluegrass (*Poa annua*), at rates up to and over 44,000 seeds per pound. Since July 1, 1966, however, lots containing over 16 *Poa annua*

seeds per ounce have been prohibited in Maryland. Lots containing any *Poa annua* must be labeled to reflect the rate of occurrence, and should be avoided by quality-conscious growers.

Consider Seed Germination

Once the purchaser knows what is in the container, it's important to ask how much of the *pure seed* will germinate. What percentage is capable of producing a normal, healthy seedling? In a quality lot, most will germinate. Many other lots produce very poor results. Selection depends on what germination rate the buyer will settle for: whether he expects 85%, 90%, 95% of seeds to germinate, or is satisfied with 60% or 70%.

Consider the date on the tag reflecting the germination test. Maryland law requires seed lots to be retested every nine months, but I suggest this is a long time to depend upon red fescues and some lots of bluegrasses. I would insist on a fairly recent test date.

Seed Buyer Beware

We have on the Maryland market, as in the states around us, all categories of seed offered for sale. It is a buyers-beware market. Without much effort, the buyer can obtain some of the unadapted, low-purity, low-germinating, high-weed-content seed lots that are generally available.

On the other hand, the buyer can obtain high quality grass seed by adopting a set of minimum standards and insisting upon that product. But, the standards adopted must be complete. It is unwise to base the decision on just a few of the quality factors. For example, one might insist on high purity and high germination and still obtain a seed lot full of *Poa annua*, chickweed, etc. Or, the seed lot could be free of weed

seed and still be infested with one or more of very undesirable crop seeds, such as orchardgrass, tall fescue, timothy, and bentgrass.

When buying bluegrass, one might end up with an excellent lot from the standpoint of mechanical purity, but it could be an undeclared variety, unsuited to local weather conditions. This problem is a big one today, and only emphasizes the care required to obtain quality seed.

It is interesting to note that the price is about the same for quality seed as it is for trash lots. Certainly, the price of seed cannot be used as a guideline when buying quality. Seedsmen attempting to market high-caliber seed find it very difficult to get a respectable profit margin, probably because too few of us know a quality lot when we see one.

Most of us are unwilling to pay for something we really don't understand or recognize. It is important to take the time to list the quality points sought in seed, and to purchase accordingly from a reliable dealer who handles a good line. Otherwise, one seed lot is like all others—just seed. Standards I would use if I were to buy seed for several grasses are given in Figure 1.

How To Use Specifications

Assuming the sod grower has developed a set of practical specifications he will be satisfied with, it remains to use them. They will not help in the file drawer. To be effective, they must become a part of the purchasing contract, and should appear on each purchase order, letter, or agreement for seed. I further suggest that a statement be included to the effect that "all seed lots failing to meet the above specifications will be unacceptable."

Here are several guidelines that can help to determine whether the desired quality product has been obtained: 1. Purchase from a reliable seed house and use a contract incorporating specifications. 2. Depend upon the label and hope it is accurate. 3. To be sure of seed

Figure 1. Sample Seed Specifications for Quality Bluegrass and Fescue

Type of Seed to Buy:	Control Program	
	Without Quality Control Program	With Quality Control Program
Merion Kentucky bluegrass	Buy Certified Seed	Buy seed of North Dakota, Iowa, Missouri, or Kentucky origin, or common Kentucky bluegrass seed of North-west origin*
Kentucky bluegrass	Buy Certified Seed	
Pennlawn red fescue	Buy Certified Seed	X
Kentucky 31 tall fescue	Buy Certified Seed	X

Purity and Germination Standards:

Seed	Minimum Purity	Maximum Crop Seed	Maximum Weed Seed	Noxious Weeds	Minimum Germ.
Bluegrass (N. central origin)	90.00	0.10	0.25	free	85.00
Bluegrass (N. west origin)	98.00	0.10	0.25	free	85.00
Bluegrass (Certified)	98.50	0.00	0.10	free	85.00
Red fescue	98.00	0.25	0.10	free	85.00
Red fescue (Certified)	98.50	0.10	0.05	free	85.00
Tall fescue	98.50	0.10	0.10	free	85.00
Tall fescue (Certified)	98.50	0.00	0.05	free	85.00

Additional Purity Specifications:

1. Bluegrass to be free of bentgrass and redtop, chickweed, *Poa trivialis*, *Poa annua*.
 2. Red fescue to be free of tall fescue, orchardgrass, bentgrass.
 3. Tall fescue to be free of orchardgrass, chess, cheat, dock.
- (If ryegrass or redtop is added to a mix, minimum standards should be established for it, also, since either may carry objectionable crop and weed seeds).

Purchase Agreement to Include:

Acceptance of seed will be based on actual test results by a reputable seed laboratory. Payment to be made on all acceptable lots. Seed lots that fail to meet above minimum specifications will be returned to supplier without payment. Supplier to replace promptly any lot failing to meet these standards. (Many other specifications used by some consumers, such as size of container, delivery date, treatment, etc., may be included).

In Maryland: All seed containers to be completely and accurately labeled in accordance with provisions of the Maryland Seed Law.

* Common Kentucky bluegrass of broad genetic base, not to include improved varieties, which are frequently marketed as common Kentucky bluegrass.

quality, initiate a quality control program and have samples of the product tested by a reputable seed laboratory.

A good seedsman offering a high-caliber product will welcome a quality control program. Others stand to lose when their product is analyzed.

Some may consider a seed-buying program that involves specifications a bit cumbersome, involved, and time consuming. The alternative is to call a dealer, order the amount needed, and when it arrives, plant it. Under these conditions, the grower

must be prepared to accept the resulting sod without complaint. There's not much to be done about it except try another dealer.

When using specifications and a quality control program, the buyer can be assured of getting what he wants or returning it prior to paying the bill. And he will save many of the problems related to poor stands, weed control costs, and low quality turf. Perhaps the sod producer can afford to abuse some management practices, but he can't afford to abuse seed buying practices.



Dr. Granville C. Horn, Associate Turf Technologist at the University of Florida leads conference participants in tours and discussions of turf research at the University.

Inez Fails to Dampen Interest at 14th Florida Turfgrass Conference

Paying little heed to Hurricane Inez slapping at Florida's southeastern coast, Florida turf professionals gathered, Oct. 4 to 6, in Gainesville for the 14th Annual University of Florida Turfgrass Management Conference. Though attendance was somewhat lower than anticipated due to the hurricane, 400 registrants were at the opening session which concentrated on turf fertilizers and soils.

"Application of soluble fertilizers in irrigation water is an acceptable practice *provided that the irrigation system is such that it gives uniform distribution*," Dr. G. M. Volk, of the University of Florida, told the group while he discussed the great increase in the use of liquid fertilizers. "However," he cautioned, "this is usually the exception in practical watering systems."

Volk listed widely used types of liquid fertilizers in order of their popularity, potential value to turf: ammonium nitrate, ammonium nitrate-urea, complete solutions from common materials, ammonium polyphosphates, liquid clay suspensions, anhydrous ammonia, aqua ammonia, and urea formaldehyde solutions. "The usage of fertilizers in solution is entirely practical, and will give results equivalent to dry materials if certain practices are followed," Volk summarized. He

included mowing of grass prior to application, and irrigation immediately afterwards, among the necessary steps to be taken.

Within the next five years, all professionals supervising large turf areas "will go almost entirely to bulk fertilizer deliveries," Leroy Fortner, of Superior Fertilizer Co., predicted. This will result in lower labor cost, less storage problem, and less time required for distribution, Fortner said in his talk on "Bag vs. Bulk Fertilizers."

Basic information needed by Florida turf professionals on soils and soil-fertilizer relationships was stressed at this session which also included a close look at the contents of a fertilizer bag. William Heflin, Armour Agricultural Chemical Co., outlined methods of preparing mixed and straight fertilizers, and the meaning of formulations in terms of plant growth.

Golf Workshop Evaluates Tifdwarf

Second day of the meet saw four professional management workshops conducted concurrently. One of the workshop highlights occurred in the golf course section where a panel of Florida superintendents discussed their evaluations of the recently released Tifdwarf bermudagrass. "It will become the most popular greens grass in Florida," Paul L. Frank, of the

Hole-In-The-Wall Golf Course, Naples, forecast.

Frank, who has worked with Tifdwarf for seven months and has planted nine holes with the grass, evaluated it as excellent for tees and greens, with a putting quality much superior to that of 328 bermudagrass. He pointed out that Tifdwarf shows a more rapid recovery from verticutting (20% to 30% faster than 328), but added that he would like to give more study to fairway plantings before confirming an opinion that the lack of vertical growth is a detriment from the golfer's viewpoint.

Stanley E. Clarke, of LaGorce Country Club, Miami, agreed that Tifdwarf has shown superior qualities. After a year and a half's experience with the grass, he concluded that it has less grain, requires less verticutting, and has less weed infestation due to its close growth. Clarke endorsed the new variety by noting that, if he owned a golf course, he would not hesitate to plant it on his own greens.

Held at the same time were workshops for horticultural spraymen and lawn service agencies; retail dealers and garden suppliers; and turf managers working with industrial sites, athletic fields, parks, cemeteries, and sod growers.

Rudy Tomasello, a member of the Florida Pest Control Commission, from West Palm Beach, challenged participants in the spraymen's workshop to become more familiar, not only with chemicals, insects, and plant life, but also with ways of becoming better businessmen. Pointing to the keen competition developing in the ornamental spray industry, he stressed the immediate need for an operational analysis of industry methods. Tomasello also outlined requirements and techniques for "Costing a Job" in the spray business.

1967 Officers Named

Named as officers of the Florida Turfgrass Association for second year terms were James L. Blackledge, Rainy Sprinkler Sales, Lake Worth, president; L. N. Clark, Director of Parks, Jacksonville Beach, vice presi-

dent and president-elect; and James E. Ousley, Sr., Ousley Sod Co., Pompano Beach, secretary-treasurer.

Directors, chosen in contested elections for the first time in the association's 14 years, will be: J. Leroy Fortner, Superior Fertilizer Co., Sarasota; William Colburn, Bay Hill Club, Orlando; Carl Dilsaver, Miami Shores Golf Club, Miami; Robert A. Lagasse, agronomist, Patrick Air Force Base; Charles L. Quandt, Seminole Lake Country Club, St. Petersburg; Ronald W. Collins, Collins Spray Service, Satellite Beach; Harold E. Jenkins, Jenkins Landscape Co., Hobe Sound; and Robert L. Johnson, Johnson and Faris Garden Supply, Gainesville.

Other activities of the three-day meet included tours of research projects underway at the University of Florida's horticultural unit, a suppliers' party and reception, and the 14th annual FT-GA banquet, which was attended by several hundred members and University of Florida guests. Dr. Granville C. Horn, Associate Turf Technologist at the University of Florida, was honored at the banquet for his "outstanding research contributions to the Florida turfgrass industry."

Also honored for his years of service to the industry was former FT-GA director, Wayne A.

Hibbs, Sarasota garden supply dealer. David M. Filipek, Gainesville, was named at the banquet as winner of the association's Scholarship and Research Foundation 1966 scholarship of \$500. Filipek, a senior in turf management, plans to become a golf course superintendent. Seventy-three firms, individuals, and affiliated associations were cited for their contributions to the Foundation during its first year, just ended.

The Florida Turfgrass Management Conference is co-sponsored by the Florida Turfgrass Association and the University of Florida's Institute of Food and Agricultural Sciences. Coordinators for the conference were Dr. Granville C. Horn, University of Florida, and Walter D. Anderson, executive secretary of the turfgrass association.

Ornamentals Open House Set

"Escalating Ornamentals" is theme for the '67 Ornamentals Open House sponsored by the Crops Research Division, Agricultural Research Service, USDA. There will be a program for florists on Jan. 12, and another for nurserymen on Feb. 1. Both will take place at the National Arboretum, Washington, D.C., and each will feature presentations on culture and control, as well as research greenhouse tours.



Members of the Florida TGA crowded back to revote in the first contested election the association has held, reelecting officers and naming eight directors.

Meeting Dates



- Connecticut Nurserymen's Assn., Annual Meeting**, Hotel Park-Plaza, New Haven, Dec. 28.
- North Carolina Association of Nurserymen, Short Course and Trade Fair** North Carolina State University, Raleigh, Jan. 1-3, 1967.
- Northeastern Weed Control Conference**, Commodore Hotel, New York, N.Y., Jan. 4-6.
- Indiana Arborist Assn., Annual Meeting**, Claypool Hotel, Indianapolis, Jan. 4-6.
- Pennsylvania-Delaware Chapter, International Shade Tree Conference, Annual Meeting**, Nittany Lion Inn, University Park, Pa., Jan. 10-12.
- Illinois Nurserymen's Assn., Annual Convention and Trade Show**, Hotel LaSalle, Chicago, Jan. 15-17.
- Virginia Nurserymen's Assn., Annual Convention**, Williamsburg Lodge, Williamsburg, Jan. 15-17.
- New York State Arborist's Assn., The Concord Hotel**, Kiamasha Lake, N. Y., Jan. 15-17.
- Rutgers Lawn and Utility Turf Course**, Rutgers University, New Brunswick, N.J., Jan. 16-17.
- Maryland Nurserymen's Assn., Annual Meeting**, Washington Country Club, Gaithersburg, Jan. 17-18.
- Rutgers Golf and Fine Turf Course**, Rutgers University, New Brunswick, N.J., Jan. 18-20.
- Ohio Chapter, ITC, Annual Meeting; Ohio Nurserymen's Assn., Winter Meeting; and Ohio State University Short Course for Arborists, Turf Managers, Landscape Contractors, and Nurserymen**, Sheraton Hotel, Columbus, Jan. 23-26.
- Virginia Turfgrass Council**, Hotel John Marshall, Richmond, Jan. 24-25.
- California Weed Conference**, Hilton Inn, San Diego, Jan. 24-26.
- Southern Weed Conference**, Jung Hotel, New Orleans, La., Jan. 24-26.
- Illinois Custom Spray Operator's Training School**, University of Illinois, Urbana, Jan. 25-26.
- Associated Landscape Contractors of America Annual Convention**, Sheraton Dallas Hotel, Dallas, Tex., Feb. 1-4.
- International Turfgrass Conference and Show**, Washington Hilton Hotel, Washington, D.C., Feb. 5-10.

Fla. PC Rules Preoccupy Spraymen At Last Month's HSAF Convention

"The Horticultural Spraymen's Association of Florida and the Florida Pest Control Association will have to band together to protect their interests in legislative matters in the coming year," Dempsey Sapp, State Pest Control Commissioner from Gainesville, told delegates at the opening session of the 1966 HSAF convention and trade show, in Ft. Lauderdale, Fla., November 3 and 4.

With all its activities, including speeches, panel discussions, and the annual banquet, compressed into a two-day schedule, HSAF brimmed with predictions of closer cooperation with the FPCA and of a possible legislative battle to defend the newly revised Florida Pest Control Act, and its protective provisions for both public and industry pros.

Sapp traced briefly the background of the law, which became effective July 1, 1965, and which includes lawn and ornamental spraymen as well as structural pest controllers. Basically, the law requires anyone performing pest control work as a business to obtain an operator's license from the five-man state Commission.

To qualify for a license, an individual must pass an examination made up and administered by the Commission, or he may have been included under a "grandfather clause" designed to protect capable practicing applicators at the time the law went into effect.

"The greatest task will be to educate both the public and those in the industry in the provisions of the new law," commissioner Sapp said. Too many operators, prospective operators, and others still do not fully understand its provisions. In its capacity of reviewing complaints against operators, the Commission holds both informal and formal hearings throughout the state. In many cases, Sapp pointed out, corrective action initiated at the hearing has proved sufficient. If necessary, however, the Com-



Bill Murray (left), named HSAF's new secretary-treasurer, acted as registrar for the '66 meet. Here he signs up John Carli, Chase & Co., Sanford, Fla., and Ray Meyers (right), of Orlando. Meyers was later named vice president of the spray group for the coming year.

mission has the power to suspend or revoke licenses, certificates, and identification cards. Chairman of the Commission is Sam Walkup, of Orkin Exterminating Co., Orlando, who introduced Sapp's talk. Larry Nipp, HSAF president, also sits on the Commission.

Enforcement of legal provisions is primarily the responsibility of the Florida State Board of Health. Outlining these regulations to the group was F. R. DuChanos, board member. He stressed that label registrations are "the final word" on which chemicals can be used for lawn and ornamental spraying. Use of any chemicals not registered for this purpose is prohibited, and the operator is required to maintain in his office files specimen labels of those chemicals he employs.

Short But Challenging History

From recognition of damage caused by chinch bugs to Florida lawns; from the beginnings of chemical research; from the discovery of nematodes and such diseases as dollar spot; from the proper use of chemicals and the appearance of chemical resist-

ances, the history of the lawn and ornamental spray industry in Florida is not a long one, but it has been challenging. This was the judgement of Dr. Gene Nutter, veteran turf expert from Jacksonville, as he and Ralph Jones, Wilson & Toomer Fertilizer Co., Jacksonville, discussed new trends in the industry.

Heretofore, most businesses have placed emphasis on residential spraying, particularly for chinch bugs. But, the Florida sprayman is beginning to branch out into other areas and to offer other services, including weed control, lawn renovation, fertilization, pruning, etc. Most spraymen still emphasize curative programs, but interest is growing in selling preventive maintenance.

Spraymen are also finding non-residential opportunities to supplement home lawn and ornamental work. Industrial weed control is a prime opportunity for horticultural spraymen because they already have the necessary labor and equipment, Nutter pointed out. Roadsides, airfields, and military grounds are other areas where spraymen

need to look to see what can be done, Jones added in the back-and-forth exchange of ideas on industry opportunities. Another strong possibility lies in the area of aquatic weed control, and this is particularly true of Florida, the speakers agreed.

Personnel shortages and a highly competitive business atmosphere also face the industry. These problems have been around for some time, but they are likely to become more severe. The individual sprayman will have to shoulder more of the burden of finding and training promising help. And, he will have to realize that "the honeymoon is over in business," Jones said. The sprayman will have to know where his business is making money and where it is not, and then take the necessary steps to correct the situation. Predicting that prices charged will probably come down rather than up, Jones suggested that the operator's living may well depend more on what he can save than on what he can make.

Florida Grasses Reviewed

Kicking off the morning session as the convention moved into its second day of talks, Ralph White, of Ousley Sod Co., Pompano Beach, reviewed for delegates the common Florida lawn grasses. All have their uses and their problems, White emphasized, and the lawn sprayman must know what these are. Otherwise, the customer will not be satisfied and may turn away from lawn grasses entirely, preferring such nonlawns as colored concrete.

Turning his attention to individual grasses, White noted that carpetgrass has no place in southern Florida; centipedegrass



Bringing spraymen up to date on new regulations were (left to right) Sam Walkup, Florida Pest Control Commissioner; F. R. DuChanos, of the State Board of Health; Craig Anderson, session chairman and new HSAF president-elect; and Dempsey Sapp, P.C. Commission member.

is not extremely shade and wear tolerant, can't be managed too closely, and is quite susceptible to brown patch fungus. Bahia-grass is susceptible to weed invasion and produces high, unsightly seed spikes during its reproduction period in fall; nematodes and certain diseases can become a problem in zoysiagrass; lawn caterpillars are the biggest problem in bermudagrass, and nematodes usually appear if the grass has been planted in an area for a long time; St. augustine-grass is apt to be severely damaged by chinch bugs and often accumulates very heavy thatch in well-fertilized and watered lawns.

Tackling the problem of what to do about thatch accumulation in St. augustinegrass, Lew Watson, Broward County Agricultural Agent, advised conventioners that "the key to successful renovation is to do it before too much thatch has accumulated." The secret is not to pull up too much at one time. For this reason, knives of vertical

mowers should be set no closer than about 3 in. apart.

Here is Watson's schedule for successful lawn renovation: 1. Investigate grass closely for insects, nematodes, and fungus, and if found treat this problem first, allowing time for the grass to recover sufficiently before renovating; 2. Fertilize 10 days to two weeks ahead of verticutting; 3. Aerate if possible and practical; 4. Verticut, being careful not to take out too much; 5. Rake, then vacuum, and 6. Apply herbicides—atrazine and simazine work well when applied about 10 days to two weeks after renovating.

No Homeowner Mowers

Lawn mowers for the homeowner are designed to be used about 30 hours per year, Art Griffes, of House and Garden Lawn Service, Ft. Lauderdale, pointed out in his talk on lawn maintenance equipment. For this reason, home mowers are not suitable for a lawn service, since they require too much maintenance. Griffes urged prospective buyers to test machinery under actual use conditions before making the purchase, and once the equipment is on the payroll, the lawn serviceman should keep complete records on each item so he will know just how much it is costing to operate.

When buying lawn equipment, consider first the size and maneuverability of the machine. Griffes suggested that the labor shortage and time savings pos-

(Continued on page 46)

Getting together after an informative educational session were (left to right) Ralph White, Lew Watson, Bill Murray, and Art Griffes. Murray, who chaired the session, was honored at the banquet for boosting HSAF membership in the Lake Worth area.



Monthly Insect Report

WTT's compilation of insect problems occurring in turfgrasses, trees, and ornamentals throughout the country.

Turf Insects

FALL ARMYWORM

(*Spodoptera frugiperda*)

Texas: Buildup continues in eastern portion of state; moderate to heavy in Kaufman, Henderson, and Gillespie Counties on lawns. Buildup expected to continue until frost.

GREEN JUNE BEETLE

(*Cotinis nitida*)

Oklahoma: Larvae heavy and damaging turf in small areas in Tulsa County.

BILLBUGS

Kansas: (*Sphenophorus venatus vestitus*) Larvae and adults noted in old Zoysia lawns in Johnson and Sedgwick Counties. **Utah:** (*Sphenophorus parvulus*) Spreading and damaging lawns in Salt Lake County.

FALSE CHINCH BUG

(*Nysius ericae*)

Idaho: Nymphs nuisance on lawns at Lewiston, Nez Perce County.

STRATIOMYID FLY

(*Altermetoponia rubriceps*)

California: Heavy in Westwood Terrace district of San Francisco County; lawns showing damage, large swarms of adults occurring.

WHITE GRUBS

(*Phyllophaga* spp.)

Alabama: Larvae damaged root systems of grass sod at Madison County Golf Course; controls necessary.

SNAIL

(*Vallonia pulchella*)

California: Heavy in lawn and turf at Carmel, Monterey County.

Insects of Ornamentals

BAGWORM

(*Thyridopteryx ephemeraefornis*)

Alabama: Pupating in central section on cedar, willow, hackberry, and other trees. **Virginia:** Infesting shrubs in Vinton, Roanoke County.

FALSE POWDER-POST BEETLE

(*Melalgus confertus*)

California: Larvae occurring in Conadria fig nursery stock in Grass Valley, Nevada County.

ROUNDHEADED WOOD BORERS

(*Obera tripunctata*)

Alabama: Larvae injuring twigs and smaller limbs of isolated dogwoods on lawns in Lee County. **Virginia:** Larvae infesting twigs of dogwoods and lilacs in Chesapeake.

BOXELDER BUG

(*Leptocoris trivittatus*)

Texas: Moderate to heavy on many shade trees and ornamental plants in southern portion of Hood County.

SALT-MARSH CATERPILLAR

(*Estigmene acrea*)

Florida: Moderate on 150 palms (*Phoenix roebelenii*) inspected in nursery in Davie, Broward County. Larvae cutting new growth out at tops of palms.

VARIABLE OAK LEAF CATERPILLAR

(*Heterocampa manteo*)

Oklahoma: Heavy on many ornamental oaks in Payne County.

SPIDER MITES

(*Tetranychus* sp.)

Wyoming: Large numbers present on ornamental junipers at Torrington, Goshen County.

IO MOTH

(*Automeris io*)

Florida: Infesting 50% of *Ixora coccinea* and completely defoliating some at nursery in Davie, Broward County.

LEAF ROLLER MOTH

(*Platynota stultana*)

California: Damaging holly nursery stock at Perkins, Sacramento County. Larvae and pupae populations high.

ARMORED SCALES

(*Unaspis euonymi*)

Alabama: Heavy on old euonymus plantings in Lee County. **Virginia:** Heavy on euonymus at home in Haynesville, Richmond County.

WHITE PEACH SCALE

(*Pseudaulacaspis pentagona*)

Alabama: Heavy on ornamental mulberry and cottonwood trees in Clay County.

Tree Insects

APHID

(*Myzocallis walshii*)

Virginia: Heavy on red oaks at Big Meadows Lodge on Skyline Drive, Shenandoah National Park. Leaves heavy with honeydew.

ELM LEAF BEETLE

(*Pyrrhalta luteola*)

Nevada: Light on elm in Eureka, Eureka County for second known infested area in county. Infestation and damage in Tonopah, Nye County, and Panaca, Lincoln County, heavier than in 1965. **New Mexico:** Serious on elm trees in Albuquerque area, Bernalillo County. Damage more common on Chinese Elm Trees than other elms. Some homeowners removing this species because of the

Compiled from information furnished by the U. S. Department of Agriculture, university staffs, and WTT readers. Turf and tree specialists are urged to send reports of insect problems noted in their areas to: Insect Reports, WEEDS TREES AND TURF, 1900 Euclid Ave., Cleveland, Ohio 44115.

pest. **Texas:** Light on most Chinese Elms in Upton County. **Utah:** Defoliated about 25% elm trees at Kanab, Kane County.

LEAFHOPPER

(*Opsiurus stactogalus*)

California: Adults heavy on tamarisk trees in Dos Palos, Merced County.

SAWFLY

(*Caliroa lineata*)

Texas: Larvae heavy on oak trees near Houston, Harris County.

FALL WEBWORM

(*Hyphantria cunea*)

New Mexico: Moderate to heavy, causing partial to complete defoliation of poplar, pecan, and elm trees throughout Dona Ana County. **Virginia:** Medium on sweetgum in Churchland area, Chesapeake. Larvae infesting sycamore trees and seeking overwintering sites around trees and buildings.

Ind. Treemen, Nurserymen Plan Jan. Joint Meeting

From 350 to 400 arborists and nurserymen are expected to attend the midwinter meetings of the Indiana Arborist Assn. and the Indiana Assn. of Nurserymen, being held concurrently at the Claypool Hotel, Indianapolis, Jan. 4-6.

Don Surber, National Cash Register Co., Toledo, Ohio, is scheduled to talk to both groups on "Profit Planning." Other speakers are Professor Glen Lehker, Purdue University, Lafayette, who will discuss "Pesticide Safety"; Dr. C. J. Carter, Illinois Natural History Survey, Urbana, Ill., slated to delineate some "Uncommon or Unusual Tree Diseases"; and Professor H. W. Gilbert, Purdue, who will consider "Trees for Streets."

Speakers and their topics set for arborist sessions include Paul Ramsey, N. G. Gilbert Corp., Muncie, Ind., "How Do We Measure Up As Managers"; Noel Wysong, Golconda, Ill., "Your Public Relations"; Gerald J. Mitchell, U.S. Dept. of Labor, Wage-Hour and Public Contract Div., Chicago, "The Wage-Hour Law and Its Application To The Tree Care Industry"; and Dr. Paul E. Tilford, Wooster, Ohio, "A Street Tree Program for Smaller Communities." Other topics are "Some New Ideas on Chemical Brush Control," by Richard E. Abbott, Ohio Power Co., Canton, and "Pest Problems

and Bug Blasters," by Dr. Donald L. Schuder, of Purdue.

Panel discussions on "Safe Operations of Aerial Lifts" and "Growth Retardants" are also among arborist activities at the upcoming meet.

Ralph Carmichael, president, Midwest Chapter, International Shade Tree Conference, is a featured speaker on the program for nursery interests. He'll discuss "Landscape Design and Application." Nurserymen will also hear talks on "Selling Up in Landscaping"; "Labor—Its Price, Availability, and Relation to Profit"; and "Keeping Old and New Customers Sold on Plant Material."

For further information, write Dr. Donald L. Schuder, Secretary, Indiana Assn. of Nurserymen, Agriculture Hall, Purdue University, Lafayette, Ind.; or Kenneth B. Flaig, Executive Secretary, Indiana Arborist Assn., 6509 Birchdale Drive, Fort Wayne, Ind.

January Tree Planting to Mark N.Y. Arborists' Meet

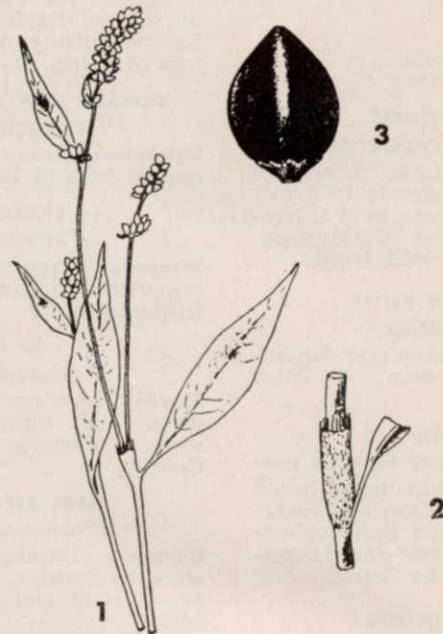
A tree planting ceremony, unusual for January, will take place when the New York State Arborists Assn. meets at the Concord Hotel, Kiamesha Lake, N.Y., Jan. 15-17. Not just a ceremony, it will show participants the proper techniques for winter plantings.

Moderated panel discussions on "Community Appreciation of Shade Trees" and "Legislation Affecting Arborists" will lead off on Sunday, Jan. 15, educational program. Monday will feature a look at "The Arborist Through Consumer Eyes," and a roundtable discussion, to be chaired by Professor Carl F. Gortzig, of Cornell University, Ithaca, on "Trees and Their Care in 1967." Also planned are sessions on work procedures and safety, which are to be developed both by commentary and audience participation.

For more information, contact William H. Schwab, Secretary, Hudson Valley Chapter, New York State Arborist Association, P.O. Box 321, Millbrook, N.Y.

Know Your Species

LADYSTHUMB (*Polygonum persicaria*)



Ladysthumb smartweed is also known as persicary, heartweed, and spotted knotweed. A seed-producing annual, ladysthumb is a common weed in the northern United States and southern Canada.

The plant is most frequently found in waste places, along roadsides and ditches, and in cultivated ground, particularly in low, wet areas.

Stems of ladysthumb are smooth and fleshy and are sometimes slightly hairy. Widely branched stems grow 6 inches to 3 feet tall.

Leaves, shown in (1), are alternate and pointed at both ends. A triangular dark spot is usually found in the middle of the leaves. Smooth-edged and 1 to 6 inches long, leaves are attached at the base to a sheath that extends around the stem (2). Sheaths are smooth and fringed with short bristles.

Flowers are pink to purple and are borne on dense, round spikes, $\frac{1}{2}$ to 2 inches long, at the ends of the stems. The plant flowers in the period, June to October.

Seeds (3) are heart shaped and may be flattened or 3-sided. Shiny, black seeds are about $\frac{3}{32}$ inch long and are produced from July to November. Seeds are frequently found in clover and small grain seeds.

Ladysthumb can usually be partially controlled by mowing when the flowers first appear. Good control may be obtained by using low-volatile esters of 2,4-D and 2,4,5-T at the rate of 1 pound per acre. For maximum results, chemicals should be applied when plants are small. Under favorable conditions, first application will kill young weeds. Otherwise, further application is necessary for control.

Prepared in cooperation with Crops Research Division, Agricultural Research Service, United States Department of Agriculture, Beltsville, Maryland

(DRAWING FROM NORTH CENTRAL REGIONAL PUBLICATION NO. 36, USDA EXTENSION SERVICE)

Classifieds

When answering ads where box number only is given, please address as follows: Box number, c/o Weeds Trees and Turf, 1900 Euclid Avenue, Cleveland, Ohio 44115.

Rates: "Position Wanted" 5c per word, minimum \$2.00. All other classifications, 10c per word, minimum \$2.00. All classified ads must be received by Publisher the 10th of the month preceding publication date and be accompanied by cash or money order covering full payment.

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Over 110 Research Papers Due for Jan. NEWCC Meet

More than 110 scientific papers will be presented when some 800 weed experts from 13 states gather Jan. 4 to 6 for the 21st Annual Northeastern Weed Control Conference, at the Hotel Commodore in New York City.

In addition to research reports, representatives from government, industry, universities, research institutions, regulatory agencies, and other areas will delve into the many phases of weed and control problems. NEWCC's program will emphasize latest developments and information pertaining to weed control in turf, ornamentals, forests, roadsides, industrial sites, railroad and power company rights-of-way, and aquatic environments, as well as in agronomic crops.

Final details for the 1967 meeting, one of four regional weed conferences held each year in the U.S., are firm and can be obtained by writing to Dr. Arthur Bing, Secretary-Treasurer, Northeastern Weed Control Con-

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ference, Cornell Ornamentals Research Laboratory, Farmingdale, Long Island, N.Y. 11735.

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HSAF Convention Report

(from page 42)

sible from using larger equipment make better buys of the bigger item. Consider its design and construction second, he advised. In particular, it should have more than "just enough" power. Third, consider the economy of maintenance. Larger items require more expensive parts, but not nearly as much replacement; small machines often eat up too many parts. Keep in mind, too, the availability of replacement parts. Finally, according to Griffes, consider the initial cost of the equipment; but do it last, not first.

Relay Panelists Answer Queries

Concluding HSAF's educational sessions, a panel of experts, so large it was divided into two sections, took questions from the floor. First team consisted of Dr. John Cabler, Turf-Grass Specialities, Inc., Ft. Lauderdale; Dr. T. E. Freeman, Associate Plant Pathologist, University of Florida, Gainesville; Dr. Stratton Kerr, Associate Entomologist, University of Florida, Gainesville; and Doug Palmer, Junior College of Broward County, Ft. Lauderdale.

What is new for brown patch control? the panel was asked. Rohm & Haas' Fore and Diamond Alkali's Daconil 2787 look promising, was Dr. Freeman's reply.

What new chemicals look good for chinch bug control? Dursban from Dow and Akton from Shell have given good control at the rate of 1 lb. active ingredient per acre, Dr. Kerr said. Akton is available only with an experimental label for testing.

What are the prospects for a fungicide that will control all fungus diseases? Dr. Freeman expressed doubts that such a fungicide will be developed. In all likelihood, various chemicals will still be required for optimum control of the different fungi. Several of the broadest spectrum fungicides on the market now are Fore, Daconil, Thiram, and the organic mercury compounds.

What about reference guides for control of insect pests in Florida? The University of Florida's "Insect Control Guide," covers all

up-to-date recommendations, Dr. Kerr replied. This book can be obtained for \$5.00, which includes supplementary information as it is made available, from James Brogdon, Extension Entomologist, Department of Entomology, University of Florida, Gainesville.

Taking the baton at midpoint in the question and answer session were Dr. Evert Burt, Associate Turf Technologist, Plantation Field Laboratory, Ft. Lauderdale; Dr. Thomas Stringfellow, also from the field lab; Al Wills, Junior College of Broward County, Ft. Lauderdale; Dr. Huey Borders, Plantation; Dr. Tom Kochis, Plantation; and Lew Watson. Questions came thick and fast during the panel session, which was moderated by Ralph White, who was later named a director of HSAF for the coming two years at the business meeting.

Others chosen for key association offices included Larry Nipp, American Power Spray Co., Ft. Lauderdale, who will serve a second term as HSAF president; Craig Anderson, The Professional Sprayer, Inc., Ft. Lauderdale, who moved into the newly created position of president-elect; Ray Meyers, American Power Spray, Orlando, who becomes vice president; and Bill Murray, Greenlawn Spray Service, Lake Worth, who was named secretary-treasurer for the coming year. Selected as new directors-at-large were Robert Perry, Sunset Nursery, Tampa; and Earl Waldman, Earl's Lawn Spray Service, Port Charlotte.

But the convention was not all business, as the large turnout of almost 150 discovered at the annual banquet, the biggest yet, held in the host hotel, Pier 66 in Fort Lauderdale. With longtime sprayman Charlie Johnson, of Charlie P. Johnson Spray Service Co., Inc., Miami, and Willard Fifield, Director of the Florida Agricultural Research Institute, Gainesville, as master of ceremonies and guest speaker, no dinner could end on a dour note. In a genial mood, HSAF members filtered from the hotel to return to the task of improving their industry in the state of Florida.

Trimmings

Topless Illustration. A frequent correspondent of ours has written in to ask what happened to the top of the photograph that appeared on page 24 of WTT's November issue. A group illustration of past presidents of the Northeastern Weed Control Conference, the photo was cropped just above the head of '65 president, Dr. Gideon Hill, of duPont Chemical Co. Now, we could claim that Dr. Hill just happened to be the tallest participant in the photo. And, we might add that we're not in the habit of running pics of walls and ceilings, preferring to leave this to interior decorators' journals. However, in truth, this would only be a half-truth. Those who have seen the ballroom of the Hotel Astor, longtime meeting place of the NEWCC, may recall the semidraped maidens adorning the wall. In defense of our cut, we quote Dr. Homer LeBaron, conference public relations chairman, of Geigy Agricultural Chemicals Corp.: "I might mention in passing that the background of this photograph was somewhat coincidental, but I hope it will not prevent your magazine from being distributed in the U.S. mail." What troubles us is that the background was only "somewhat" coincidental, and we're wondering what we'll run into when the NEWCC meets next January 4 to 6. Of course, the Hotel Astor will be no more, and we assume the maidens will be shipped off to a roadside museum. But then, there's always the possibility they are being removed to the Hotel Commodore, where Northeast weedmen will meet in '67. Shuddering thought.

* * *

Year Round Use for Yule Tree. *With the holiday season close upon us, we hear that some cities plan to provide their residents an extra use for discarded Christmas trees. City chippers will chew up trees and homeowners will receive the chips for mulching their trees and shrubs. Sounds like a good idea, but it still doesn't remove the vexing necessity of taking down the Christmas tree, most unpleasant task of the holiday season. Wonder when someone will invent ornaments suitable for mulch?*

* * *

Bit of the Auld Sod. Recently received some correspondence from County Down, Ireland, pertaining to the 18th Cen. practice of planting lawns not with grass, but with moss. Seems to have been an aristocratic preference adapted to Ireland's humid climate and highly acid soils. We're told that some moss lawns were of "many acres" and yellowish-golden in color. Just when moss ceased to be cultivated in lawns of the elite, we can't say. But we can say this: the more we travel around the country and view the tremendous strides being made in commercial sod production, the more we realize that an Irish aristocrat of centuries past would have difficulties bettering the cultivated sod readily available on today's market.

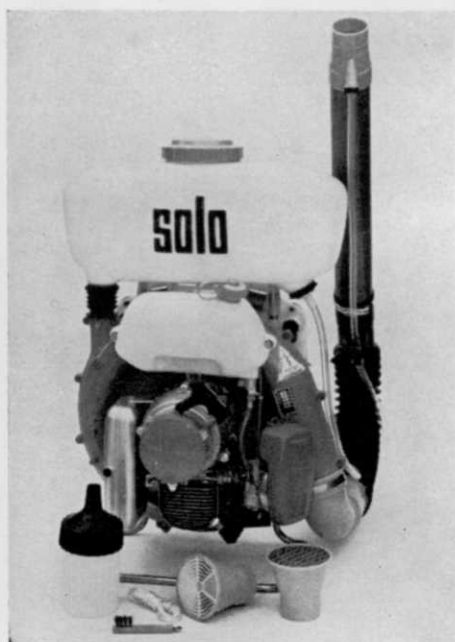


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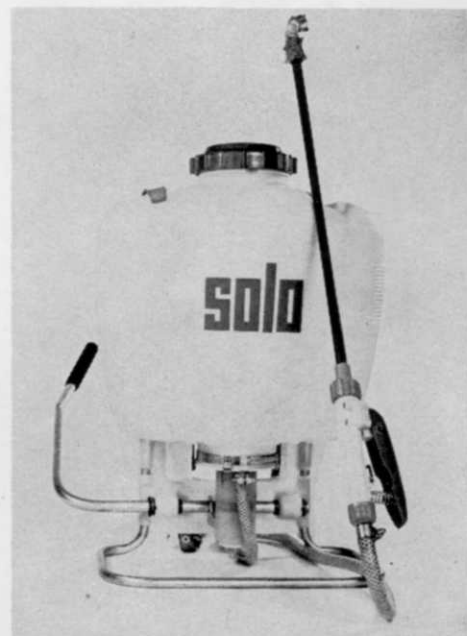


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