Brush In Central Texas Controlled With Tandex

Tandex karbutilate herbicide, applied as a 10% granular or 60% tablet formulation, has been found to be effective in controlling troublesome brush species such as mesquite, persimmon, prickly ash, chittum, sumac and pecan on non-crop land in central Texas.

Leo Miles, product manager for FMC Corporation's Niagara Chemical Division in Middleport, New York, says that basal (spot) applications of Tandex offer an economical, conveninent and effective means of controlling undesirable woody plants without the use of water, oil or spraying equipment.

Granular formations are of particular interest in areas that are inaccesible to vehicles and application equipment since they lend themselves to hand application, with less material to carry to the site.

A urea-carbamate soil sterilant herbicide, Tandex is characterized by a broad spectrum of herbicidal activity. New registrations extending its use as a brush control agent were granted by the Environmental Protection Agency earlier this year.

It is also registered for control of annual and perennial weeds and grasses and other hard-to-kill species on non-crop land, such as utility and railroad right-of-ways, industrial sites, pipe lines and drainage ditches.

Herbicidal activity is attained through absorption by the plant root system.

SAFO Markets Spreader Sticker

A surfactant under the trade name of Magi-matic is now being produced and marketed by Safco Manufacturing, Inc. of Waco, Texas.

The product has been used in the Southwest and Southeast for several years. Safco plans to market it nationwide because of its adaptability to other areas where agricultural chemicals are used.

Safco Magi-matic surfactant is a water soluble spray additive which increases absorption, aids translocation and sticking of agricultural chemicals to plant surfaces. The manufacturer says that it provides uniform distribution of spray droplets, penetrates waxy coverings of hard to wet plants and increases weathering.

For more details, circle (720) on the reader reply card.



For More Details Circle (104) on Reply Card



"No Flywheel" design improves performance and productivity

M-B FITCHBURG CHIPPERS give you more wood chipping capacity and output without a flywheel! Our exclusive spring-activated feed plate instantly adjusts to wood size up to the unit's rated capacity. You get faster, smoother, quieter chipping.

Best of all, there is *no flywheel* to cause trouble. Veteran chipper operators know

that flywheels can tear apart, are hard to stop, and retard re-acceleration. You won't have these problems with M-B FITCHBURG exclusive design.

There's much more to the outstanding M-B FITCHBURG CHIPPER story. Return the Reader Service card now for free literature and specifications on chippers up to 7" round wood capacity.



M·B COMPANY

New Holstein, Wisconsin 53061 Dept. WTT-4 (414) 898-4261

FERTILITY (from page 26)

will continue to grow, taking up nutrients and moisture from the soil. These are translocated through the plant and the following spring, properly fertilized plants make better growth than other plants fertilized the conventional way.

Of all the elements involved in Year-Round Fertility, nitrogen seems to be the key. Many plants absorb most of their nitrogen in the form of nitrates. Even when ammonium fertilizers are applied to agricultural soils, much of the absorption of nitrogen by plant occurs in the form of nitrates. Generally, the fertilizer carrier is not important, as long as the proper amount of nitrates is present when the plant needs nitrogen.

So. Dr. Schramm undertook research to compare ammonium nitrate and Uramite ureaform fertilizers for differences in nitrogen availability. He found (Figure 1) that foliage color, density of foliage, number of flowers, and time of flower opening on azalea test plants were significantly improved from the use of Uramite, as compared with plants treated with ammonium nitrate. The slower release of nitrogen

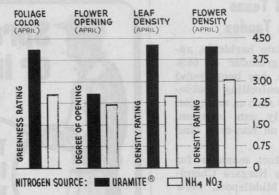


Figure 1. A comparison of the growth and development of Azalea var. Hinodegiri plants treated with Uramite ureaform and ammonium nitrate sources of nitrogen.

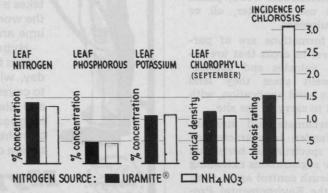


Figure 2. A comparison of the tissue analysis of Azalea var. Hinodegiri plants treated with Uramite ureaform and ammonium nitrate sources of nitrogen.

OVING: Changing Your Address? If so, notify our circulation department right away to be certain the magazine reaches you at your new location. The Post Office won't forward your copies. So when you write us, make it at least three weeks in advance of your moving date, and include your old address, as well as the new one. We'll see you don't miss a single issue. Send old and new address information to: WEEDS TREES and TURF **Circulation Department** 9800 Detroit Ave., Cleveland, Ohio 44102



by Uramite allows nitrogen to be taken up over an extended period of time by the plant.

Other measures of plant performance also demonstrated that Uramite improved the general appearance of various plants. For this ureaform nitrogen source produces a significantly higher level of leaf nitrogen and leaf calcium, without any observable chlorosis (Figure 2). No differences were observed in leaf potassium and magnesium; but with continued use of ureaform nitrogen there is a striking increase in late season greenness as shown by leaf chlorophyl content.

Another aspect of a Year-Round Fertility program involves frequency of application. The use of Uramite reduces the number of nitrogen applications necessary in the nursery and this helps to reduce labor requirements. Ammonium nitrate, for example, to produce comparable growth must be applied at frequent intervals to supply the necessary nitrogen. On the other hand, Uramite need be applied only once or twice a year.

Organic materials containing nitrogen were also compared with

Lateral branching on Canadian Hemlock is measured by nurseryman Kenneth Johnson in Fairfield, Conn. nursery. Graceful pendulous branch is characteristic of this tree which has benefited from two annual treatments with Uramite under Year-Round Fertility tests.

these two sources of commercial nitrogen. In all cases, the organic materials released the nitrogen too slowly to maintain maximum plant growth.

Scheduling for Year-Round Fertility is indicated by a program started in 1970 at Johnson's Nursery in Fairfield, Conn. Here Kenneth Johnson first adjusted nutrient levels based on an initial soil test. He then planned applications of Uramite ureaform fertilizer on a semi-annual schedule. His program for the first full year was as follows:

Feb. Apply combination of

(a) Dolomitic 2000#A limestone 395#/A (b) Uramite (c) Superphosphate 1000#/A (d) Potassium 400#/A Sulphate (e) Complete minor elements 120#/A Mar. Apply 10-10-10 480#/A 480#/A June Apply 10-10-10 Sept. Apply 10-10-10 480#/A Oct. Apply Uramite 395#/A Dec. Apply 10-10-10 480#/A (continued on next page)



But quite a tractor!

Full-muscled as a small agricultural tractor . . . safe and maneuverable as a lawn and garden tractor. The all-new 16½ hp 616 tractor from Allis-Chalmers offers the best of both for just about any in-between job you can name. Features galore with hydrostatic drive, electric PTO and optional three point hitch. It's a small wonder for small acreage farming . . . sod farms . . . seed bed preparation and cultivation . . . large area mowing . . . contract lawn care . . . landscaping . . . snow removal. There's a complete lineup of accessories available from mower to plow . . . fork lift to front end loader . . .

and more. See the 616 . . . try the 616 at your Allis-Chalmers dealer. It's quite a tractor.



Feb. Take soil test and adjust nutrient levels if necessary.

The Johnson program was repeated in 1971, and it is now being carried into its third year. Enthusiasm for the program was noted in a September, 1971 field day at the Johnson nursery in Fairfield when Connecticut nurserymen viewed plants which had been under the program for two years. Nurservmen were impressed with the uniformity and quality of nearly all species being grown. This included rhododendrons, azaleas, maple, birch, dogwood, mountain andromeda, juniper, hemlock, pines and numerous other shrubs and trees.

A year earlier the Johnsons had reported "we have been careful to make all applications on schedule. We find foliage looks better, the stock looks better and we had outstanding growth in a number of species."

Now at the 1971 field day the Johnsons said improved plant growth increased the market value of the plants and more than justified the added cost of the Year-Round Fertility program.

A poll of the nurserymen confirmed the Johnson analysis and by this spring a total of six nurseries will be on the program in Connecticut.

Much of the early Connecticut field test work for this Year-Round Fertility program was carried on at the Pachaug State Forest Nursery in Voluntown in cooperation with nurseryman, Clarence "Pete" Merrill. Here, Dr. Schramm confirmed winter hardiness of plants. Comparisons were made between the conventional application of fertilizers and the Year-Round Fertility program.

The tests included such species as

INDUSTRIES.INC.

Dept. WT4, Box 229, Grandview, Missouri 64030

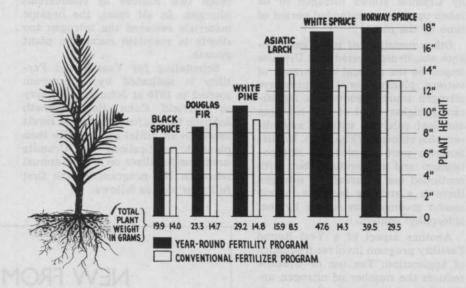


Figure 3. Growth of 3-O year forest tree seedlings under Year-Round and conventional fertilizer programs. Averages of 60 plants per species.

white pine, white spruce, Norway spruce, Black Hills spruce, Canadian Hemlock, Douglas Fir and European Larch. Fig. 3 shows results of Year-Round fertilization after only one season's testing on three year old (3-0) forest tree seedlings.

One small problem that has been observed is the increase in the number of weeds in the nursery. (See "Chemical Weed Control Cuts Labor Costs In Half," WTT, March 1972) Dr. Schramm's fertility concept really makes everything grow. Growers must plan to take care of this problem when they decide to adopt the Year-Round Fertility concept.

The question of economics is often raised about a program such as this. The Johnsons report that with close plantings and narrow rows and multiple applications the cost of fertilizer applications, extra labor for weed control, and other related expenses can average up to \$500 per acre. Other nurseries expect lower

costs. Despite the added cost, however, the increased value of the stock is realized through a reduction in winter damage, increased growth, and the improvement in quality.

What's the next step in Year-Round Fertility? Dr. Schramm believes more northeastern nurserymen will be switching to this new concept. He also sees builders, developers, and others following the lead of the first Connecticut nurseries. Top quality ornamentals are therefore in prospect and down the road is the hope that added study will establish the point that healthy plants offer greater resistance to disease and to insects, as well as to air pollution. There is much to be done to take advantage of Dr. Schramm's pioneering work. Progressive nurserymen can be expected to be beating a path to his door as they step up their efforts to improve profitability without increasing nursery acreage or the number of plants being maintained.

BILLY GOAT Indoor/Outdoor Vacuums One man with a Billy Goat becomes a big cleanup crew. Original machine BG60 is available in self-propelled (P) and push (A) models, with gasoline or propane engine, battery or electric with cord. For all models—optional intake hose for hard to reach areas. | Model HP | Snout Blower with housing BG60 | 8 | 30" | Steel Industrial Grounds, parks (KD50 | S170 | 8 | 30" | Steel Grounds, parks (Lawns, drives Lawns, drives (KD35 | S126 | Steel Lawns, drives (KD35 | S126 |

Model BT70

Model

BG 60



Fertility contrast is seen in two-year-old white pine seedlings at Pachaug State Forest Nursery, Voluntown, Conn. Larger seedlings in foreground (dark area) have been under Year-Round Fertility; lighter colored, smaller seedlings in rear have received conventional fertilizer treatments.



Two-year-old white pine seedlings are examined by Dr. Robert J Schramm, Jr. and Clarence "Pete" Merrill at Pachaug State Forest Nursery, Voluntown, Conn. They are looking for second growth lateral bud break in these seedlings, studied under Year-Round Fertility tests.





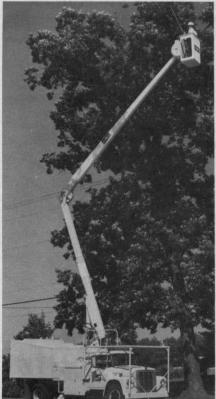
ROOF "400" Pushes Easier,

Lasts Longer Sturdy Roof "400" can cut dense 18" growth; can mow lawns smooth. Fine balance, easy rolling rubber-tired steel spoke wheels, adjustable handles, easy cutting height adjustment. The ideal mower for all heavy-duty commercial-type mowing and trimming. Blade clutch for easier starting the 5 h.p. engine, choice of stationary or swivel caster front end, choice of 21" or 24" cut. Belt driven blade protects engine, simplifies maintenance.

hills, peaks, slopes, valleys.



For More Details Circle (147) on Reply Card



NEW FEATURES make HI-RANGER® even better!

Already No. 1, now HI-RANGER moves out far ahead with design features that give owners and operators the safest, most productive personnel towers for any overhead work. Get the facts. Send for your new "5F" Catalog today... you will appreciate what we can do for you.

UP TO 57 FT. WORK HEIGHT

UNITS COMPLY WITH A N S I A92.2 - 1969

Send for 5F Catalog





MOBILE AERIAL TOWERS, INC. • Dept. N • 2314 BOWSER AVE. • FORT WAYNE, IND. 46803

For More Details Circle (111) on Reply Card

industry people on the move



Ralph R. Sjoberg, named manager of standards engineering for Koehring, Milwaukee, Wisc. Responsibilities include corporatewide dimensional specifications and standards for products, Valve Analysis as well as with programs in manufacturing and purchasing cost reduction where engineering design standards are affected.

Russell H. Stark, appointed supervisor, dealer sales for Normarc, Inc., Tangent, Oregon. Will head up all dealer sales for Oregon and Idaho operations of Normarc which includes Union Seed Company, Nampa, Idaho.

Jean P. Cartier to Northeastern regional manager for Union Carbide Agricultural Products & Services. Formerly Western regional manager, his duties now include coordinating the company's efforts with state, Federal and local governmental agencies in control programs for gypsy moth.

Jim Dowell appointed general sales manager of FMC Corporation Side-Winder machinery line. He has served as divisional and regional sales manager for Side-Winder.

Dr. Thomas R. Hopkins, elected president of Gulf Research & Development Company, a subsidiary of Gulf Oil Corporation. He succeeds **R. J. Metcalf** who is retiring.

George S. Appleton, from general manager to vicepresident and general manager of Abbott Laboratories' Agricultural and Veterinary Products Division, North Chicago, Ill.

Phil Baker becomes field representative of the JB Sod & Seed Company of Salem, Oregon. He will work in the Puget Sound area of Washington.

Thomas R. Loy, appointed manager, marketing research, agricultural for Velsicol Chemical Corporation. He will continue in his present position as manager, market development, agricultural.

Hugh M. Lynn, named product manager of Thompson-Hayward Chemical Company's pest control chemicals for the agricultural chemical division. He will direct and coordinate pest control product sales throughout the U.S.

John F. Sexton to national sales manager of Agrico turf and garden products, Agrico Chemical Company. He was president of John Sexton & Associates, marketing consultants, Columbus, Ohio.

Roderick C. Gaskell selected for a one year internship program with the Indiana Department of Parks and Recreation. He is a graduate of the University of Conn. with a degree in forest recreation. Program is jointly sponsored by the National Recreation and Parks Assoc. and the Indianapolis Department of Parks and Recreation. He will be working in the areas of regional park management, urban park maintenance, forestry, golf course management, finance and others.





MULTI-PURPOSE TRACTOR: Allis-Chalmers Corporation, Milwaukee, Wisc.

The work capacity gap between the lawn and garden and the agricultural tractor is now filled with this 616 model. It has a 161/2 hp engine to power it for a variety of uses including large area mowing, contract lawn care, roadside mowing, seedbed preparation and other tasks. Overall dimensions are 83 inches long, 56 inches wide and 48 inches tall. Independent PTO drive is controlled by an electric clutch operated by a toggle switch on the instrument panel. Many features found on larger tractors are standard. For more details, circle (701) on the reply card.



TRAP TENDER: Skaggs Turf Equipment Co., Canfield, Ohio

Relax while you work in this easy-to-maintain unit. It features a short wheel base, low center of gravity, short turning radius and one piece fiberglass body. Rakes are 72 inches wide and adjustable in three independent sections. Thirty-three teeth scarify the trap. Drag plates give smooth finish. Unit is 65 inches long, 48 inches wide and 28 inches tall. The speed range is variable up to six mph. For more details, circle (702) on the reply card.



TRIMEC BENTGRASS BROADLEAF HERBICIDE: PBI-Gordon Corporation, Kansas City, Kans.

Control nearly all broadleaf weeds in Bentgrass and other 2,4-D sensitive grasses with this new herbicide. It contains Trimec concentrate, a mixture of 2,4-D, MCP and Dicamba. The three compounds perform more effectively than when applied separately, and with less material. It has no objectionable odor. Cool season control of hard-to-kill weeds is excellent and it keeps working through the warm season or in warm climates. For more details, circle (703) on the reply card.



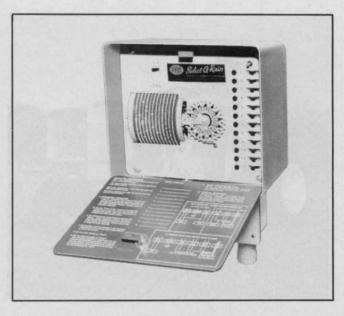
FLEXIBLE ROTARY MOWER: BMB Company, Inc., Holton, Kans.

A 15 foot flexible rotary mower that cuts a full 180-inch swath is now introduced. Hinged wings float over rough terrain and follow contours easily. Each wing cuts a 60-inch swath while the center unit has a 72-inch cutting width. Wings can be operated at approximately 45 degrees up and 24 degrees down, and fold up, locking in place for travel. Unit uses manual or full hydraulic power. Wing gear boxes are 85 hp, the center gear box is 120 hp, and all three gear boxes have sheer pins. Directional baffles are standard. Many options can be included. For more details, circle (704) on the reply card.



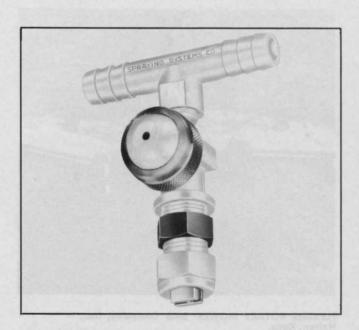
HEAVY DUTY MOWER, Roof Manufacturing Company, Pontiac, III.

Here's a push-type mower for the commercial market. Commercial "21" is built of 7-gauge welded steel frame and 12-gauge rolled steel cutting housing to extend the useful life. The model is available with 3½ hp or 5 hp engine and a 5 quart fuel tank for longer, stronger runs. For more details, circle (705) on the reply card.



SELECT-O-RAIN: Hays Mfg. Div., Zurn Industries, Inc.

This 12 zone automatic controller for watering and irrigation features a patented drum programmer. The electromechanical timing and programming device incorporates sliding actuators to select the operation of any zone for any length of time, independent of any other zone. Can be programmed for 24 hour, 14 day operation with independent control of the AM and PM hours. Other items to be programmed into the controller are timing intervals, total watering cycle duration, time relays. Has a rain switch, circuit breaker, individual zone light and UL listed components. Wall or pedestal mounted. For more details, circle (706) on the reply card.



HOSE SHANK TEEJET NOZZLE: Spraying Systems Co., Wheaton, III.

This nozzle is designed with interchangeable spray tips for spraying herbicides and insecticides. Each nozzle includes a built-in diaphragm shut-off valve to provide quick and positive shut-off. Hose shanks, nozzle body and cap are made of nylon, as well as the diaphragm shut-off valve assembly. Hose shanks are supplied in two connection sizes for use with $\frac{1}{2}$ inch ID hose. For more details, circle (707) on the reply card.



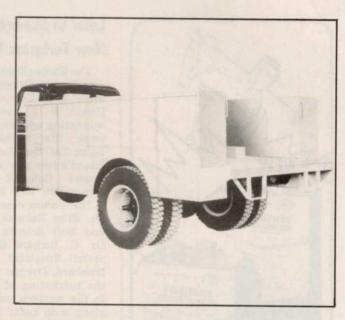
VPC STUMP CUTTER: Valley Products Corporation, Valley, Neb.

Stump removal is now economical with this new stump cutter designed to meet the special needs of municipalities, parks, cemeteries, utilities, landscapers, tree surgeons and service firms. Model 5 weighs 145 pounds and is only 29 inches wide. It can be easily loaded into the back of a station wagon or truck for fast transport. Powered by an 8 hp engine, it can remove an 8 inch hardwood stump to 8 inches below ground in 3 minutes. For more details, circle (708) on the reply card.



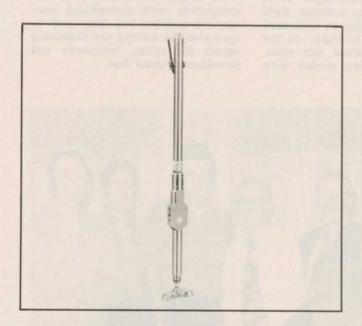
CURB-SIDE HOSE REEL: John Bean Division, FMC Corporation, San Jose, Calif.

Mount this curb-side hose heel to any pickup truck bed side. It holds up to 200 feet of % inch hose. Equipped with an automatic drag to prevent hose overspin during use. The unit contains an easily-operated positive lock for traveling. Bearings on the reel are made of heavy-duty bronze. The inner drum is designed to accommodate hose expansion under pressure. For more details, circle (709) on reply card.



LINE BODIES, Knapheide Manufacturing Company, Quincy, III.

The H Series line of utility bodies for line construction and maintenance use range in length from 108 inches to 169 inches. They are built to fit standard truck chassis with cab to axle lengths varying from 60 inches to 124 inches. Two basic styles. The H model have a vertical compartment behind the wheelhousing. The BH model is designed without the rear compartment to shorten the overhang behind the rear axle and balance load conditions. Construction features include 14 gauge side compartment shells, 3/16 inch treadplate floors, weatherproof doors. For more details, circle (710) on the reply card.



VALVE-IN-HANDLE TAMPER: Ackley Manufacturing Co., Clackamas, Ore.

Weighing only 25 pounds, this tamper features valve-inhandle on-off control. Provides the operator with complete control of the unit at the point of use. Unit delivers up to 1,600 full 3 inch strokes per minute operating at 2,000 psi and 10 gpm. Available with 2, 3 and 5 foot handle lengths. Three standard tamper shoes are available: kidney-shaped, round and rectangular. A ground rod driver accessory delivers enough drive for the longest ground rods in the toughest soils. For more details, circle (711) on reply card.



HIGH-LOW PRESSURE WASHER: Century Engineering Corp., Cedar Rapids, Iowa

The HPW-3D is a new three gallon per minute, high-low pressure washer that has the extra volume needed for flushing areas with heavy accumulations of material. Features handgun control from as far as 30 feet. The four-nozzle turret head on the handgun makes proper nozzle selection simple for every job. Nozzle selection includes 0 degree for blasting, 15 degrees for general purpose use, 40 degrees for large areas, or low pressure for applying cleaning materials. For more details, circle (712) on the reply card.



We haven't found a broadleaf weed in any kind of grass that we can't control. We're still trying, but we feel we've found their match. It's called "Trimec" Turf Herbicide and it has a clean, solid swing.

Save time and effort in the control of Broadleaf weeds. "Trimec" can give positive control of those hard to kill broadleaf weeds in the cool season as well as in mid-summer. "Trimec" is a new patented herbicide. It enables turf specialists to get the weed control job done with greater safety to grass, with less product and fewer applications than with other herbicides now being used.

Whatever the lie, fairway or green, choose GORDON'S FAIRWAY BROADLEAF HERBICIDE and BENTGRASS BROADLEAF HERBICIDE. They both contain "Trimec" Turf Herbicide and you will be the winner of the broadleaf doubles match,



GORDON CORPORATION

300 South Third St. Kansas City, Kansas 66118 A.C. 913/342-8780

"TRIMEC"

TURF HERBICIDE MAKES THE DIFFERENCE!

Lofts to Market New Turfgrass Varieties

The Exeter Bentgrass Growers Association of Oregon and Lofts Pedigreed Seed Company Inc. of Bound Brook, N. J. have reached a new marketing agreement. Lofts will become the world-wide marketing agent for the University of Rhode Island's two new turfgrass varieties, Exeter Colonial Bentgrass 'and Jamestown Red Fescue.

The announcement was made by Dr. Eliot Roberts, Chairman, Plant and Soil Science Department and Dr. C. Richard Skogley, Turf Research Specialist. Turf Seeds Inc., Hubbard, Oregon will participate in the marketing of the two varieties in the western part of the country, along with Lofts' Stover Seed Company Division, which will handle the Southern California (Los Angeles) area. Pick Seed of Richmond Hill, Canada, will market both varieties in Canada.

Exeter Colonial Bentgrass is an improved variety of Colonial Bentgrass and is used primarily on tees, fairways and aprons, as well as high quality lawns.

Jamestown Red Fescue is an improved chewings type fescue which has been under test for the last 10 years at many universities. It is characterized by its extreme dark green color, its ability to withstand close mowing and its vigor. At the Univ. of Rhode Island test plots, Jamestown has been seeded with

Colonial Bentgrass and has thrived at one-quarter inch mowing.

Exeter and Jamestown will be available only as certified seed.

Nopco Markets Wetting Agent in Slurry Form

Sellogen HR-90 wetting agent, formerly only in powder form, is now available as a slurry for use in liquid systems, according to Nopco Chemical Division of Diamond Shamrock Chemical Company.

Also introduced is a new concentrated alkyl naphthalene sulfonate, Sellogen W wetting agent.

Nopco says these compounds are highly tolerant of conditions which decompose other anionics or decrease wetting agent solubility if non-ionics are used. They remain stable in solutions containing high concentrations of electrolytes. Highly ionized or caustic solutions do not adversely affect, and in some cases greatly improve, the performance of the Sellogen wetting agents.

Sellogen HR and Sellogen W can be used with wettable powder based agricultural chemicals such as chlorinated hydrocarbon, phosphate and carbamate insecticides. When used with Lomar dispersants, they are compatible with agricultural toxicants in common use. They may be used alone as wetting and dispersing agents for sulfur, toxaphene and potassium cyanate dust.



Two new turfgrass varieties developed by the University of Rhode Island are now available. Meeting to discuss market and sales plans are: (I-r) Dr. C. R. Skogley, professor of agronomy, plant and soil science, U. of R. I.; John Morrissey, vice president and general manager, Chanderlin Seed Company; Dr. Eliot Roberts, professor and chairman, plant and soil science, U. of R. I.; Selmer Loft, chairman of the board, Lofts Seed Company; Bill Rose, president, Exeter Bentgrass Growers Assn., Hubbard, Ore.; Jon D. Loft, exec. vice president, Lofts Seed Company; and Peter S. Loft, president, Lofts Seed Company.