Delegates to the annual Florida spraymen’s convention had this impressive display of equipment to examine during their 3-day meeting. Story on page 8.

Monthly Magazine of methods, chemicals and equipment for vegetation maintenance and control
What's Behind the Big Swing to SOLO?

Versatility
Dependability
Portability

and now...
Meet the SUPER CUSTOM...

Another first by SOLO! The new "Super-Custom" has been designed as a basic unit to fill the exact needs of custom applicators and other vegetation maintenance supervisors. Use it for a concentrated spray or regular dilutions. Couple the Super-Custom to any size tank exactly as you wish and need. Mount the assembly on any carrier such as trailer, tractor, jeep or truck. No more waste of money for over or under capacity sprayers. If you do weed and brush control, turf management, or tree maintenance, join the swing to the SOLO team. It's a winner!
Here's solo in Action!

above: the Solo Mistblower
5 H.P.—Only 27 lbs.

below: New Solo Junior
2½ H.P.—Only 15 lbs.

above: Solo Chain Saw 70-A
5 H.P., 7 H.P. & 9½ H.P.

For Contract Applicators
Arborists, Foresters
Railway, Highway, Utility Rights-of-way Supervisors
Nurserymen, Golf Course Superintendents

above: the Solo Motor Scythe
3½ Foot Cutterbar

for WEED CONTROL
TREE CARE
TURF MANAGEMENT
BRUSH CONTROL

Dealer Inquiries Invited!
(Distributors throughout America)

Solo Industries, Inc.
P. O. Box 128, Dept. 76
Woodside, N.Y.

Please rush me details on SOLO’s proven power machines for
brush control [ ] turf maintenance [ ] tree care.

Name __________________________________________

Firm __________________________________________ Position __________________________

Address __________________________________________

City ______________________ State __________________ Zip Code __________________

[ ] I’m interested in a dealership.

WEEDS TREES AND TURF, December, 1964
for
GREAT
DIVERSITY
in
INSECT
CONTROL—
MALATHION

... just a few of the many insects Malathion controls:
Aphids
Bud Moths
Mealybugs
Mites
Mosquitoes
Leaf Rollers
Thrips
Looper
Fruit Flies
Leafhoppers
Nitidulid Beetles
Blueberry Maggots
Bean Beetles
Lace Bugs
Weevil Larvae
Grasshoppers
Whiteflies
Leafworms
Spittlebugs
Black Headed Fireworms

Plus many more insects, and many forms of plant scale.

POWERFUL INSECT CONTROL
PLUS ECONOMY TOO . . .

BAIRD and McGuire offers top-quality formulations of MALATHION . . . a 50% emulsifiable concentrate and a 5 pound emulsifiable concentrate . . . these formulations are specifically compounded for pest control operators who demand the finest product available!

When you buy BAIRD and McGuire you are certain of the finest product at a profitprice!

Write today for complete products price list . . .

CREATORS AND COMPOUNDERS OF THE FINEST IN CLEANERS AND DISINFECTANTS SINCE 1910
Dear “Pass-along” Reader

... by the time it reaches your desk, is your copy of Weeds, Trees and Turf:

battered
bedraggled
clipped
dog-eared
falling apart
folded
incomplete
ink-spotted
marked-up
nondescript
ripped
rolled-up
stained
stapled
torn
wadded
weathered
wrinkled???

... or, worse still, is it just plain

OLD?

If so, you ought to have your own personal subscription, which will cost you only $3 for 1 year or $5 for 2, and which will contribute immeasurably to your peace of mind.

(It will also help you do a better job of turf management, weed and brush control, and tree maintenance.)

Mail us the coupon below right away, and include your check so we can start sending WTT posthaste!

---

WEEDS TREES AND TURF
1900 Euclid Avenue
Cleveland, Ohio 44115

Gentlemen: I’m sick and tired of waiting in line for my pass-along copy of Weeds Trees and Turf. Here’s my check. Send me my own copy each month!

Name ____________________________
Address __________________________
City ____________________ State ______
Check enclosed [ ]

---

Features:

Out-of-staters Join in at HSAF Convention, Take Steps to Establish National Trade Group, Examine Spray Contracts .......... 8
Turfgass Portraits VI: Zoysia
By Dr. Robert W. Schery ................. 12
1964 Index of Articles .................. 14
1965 Suppliers Guide .......................... 16
International Turf-Grass Conference
Scheduled for Cleveland, Feb. 7-12 .......... 45
Weeds Trees and Turf Wins National Award for Editorial Excellence: Aquatic Weed Series Single Out for Citation .................. 46
Patterson to Head New Mexico Turf Group;
Conference Studies Turf Varieties, Mowing ............... 47

Departments:

Editorial: Our New Name ............... 6
Know Your Species: Nutsedge ............ 44
Meeting Dates ......................... 48
Classified Ads ......................... 48
Advertisers Index ..................... 48
Trimmings .............................. 50

---

WEEDS TREES AND TURF is published monthly by Trade Magazines, Inc. Executive, editorial, and advertising offices: 1900 Euclid Ave., Cleveland, Ohio 44115. Publication office: Corner of East North St. and Cadwallader St., Fostoria, Ohio. Send all correspondence to WEEDS TREES AND TURF, 1900 Euclid Ave., Cleveland, Ohio 44115. Single Copy Price: 50 cents for current issue; all back issues 75 cents each. Foreign $1.00.

Subscription Rates: U.S. and possessions, 1 year $3.00; 2 years $5.00. All other foreign subscriptions, 1 year $4.00; 2 years $7.00. Change of Address: Three weeks advance notice is necessary for change of address. Both old and new address must be given. Post Office will not forward copies. Third Class postage is paid at Fostoria, Ohio.

Contents of this Issue © Trade Magazines, Inc., 1964
Last summer this magazine conducted an extensive survey to determine exactly what kinds of services our readers perform. We were not surprised to learn that hardly any contract applicator offers only one kind of service (viz. only tree care, or only lawn spraying). The pattern seems to be that well-rounded businesses offer lawn maintenance in conjunction with tree work, or weed control in conjunction with tree pruning, etc. Our circulation figures show that arborists, lawn spraymen, landscape nurserymen, and similar operators, make up the bulk of our readership, with golf course superintendents, highway and railway rights-of-way supervisors, park supervisors, etc., making up the remainder.

Because of this total coverage of what has become a single, definitive market (vegetation maintenance and control, as it is now called), we have decided to call this publication *Weeds Trees and Turf*, so that the name more accurately reflects what the magazine is all about.

During the past year, our staff has prepared articles on tree pruning, on chemical brush control, on aquatic weed control, and on various kinds of turf problems; in short, on each of the fields of activity which our readers engage in. These same staff members have traveled to trade meetings and educational seminars where they talk with horticultural spraymen, weed control firms, tree specialists, etc. We have tried, over the past 12 months, to keep rounding out our editorial content so that it reflects the three major phases of the industry as it exists in America today.

We shall continue to do so. In the coming months, *Weeds Trees and Turf* intends to present each month a well-rounded group of articles. There’ll be studies of the latest chemicals for weed control in ornamentals, for example. There’ll be another in Dr. Richard Campagna’s series on non-infectious tree diseases, and more on pruning as well. There’ll be more staff-written turf features, plus those written by such experts as Dr. Robert Schery, whose “Turf Portrait” series has been so widely hailed. Many of these articles are already in the schedule, and others will be added as we go along. Each issue of WTT in 1965 will be considerably larger than the average one was this year. So we hope the new name will please all of you, and we hope you’ll let us know how we can continue to communicate effectively all the latest helpful data in the weed and brush control, turf management, and tree maintenance industry!

*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.
FACTS about HYDRO-MULCHING

...the new one-step method for establishing turf

Establishing NEW BOOKLET Explains how Hydro-Mulching provides better quick-turfing for highways and public works, parks, reforestation, golf courses, homes, landscaping, everywhere grass is needed.

HERE AT LAST IS EVERYTHING YOU NEED TO KNOW ABOUT THE ONE-STEP METHOD OF TURFING!

Authoritative source material for this booklet was obtained through the kind cooperation of leading university agronomists, forestry workers and fiber mulch experimental research.

NOW YOU CAN HAVE FAST TURF—BETTER TURF at low... low cost!

Published exclusively by BOWIE MACHINE WORKS BOWIE, TEXAS

Bowie Machine Works, Inc., Bowie, Texas PLEASE SEND ME THIS AUTHORITATIVE FREE BOOK ON HYDRO-MULCHING.

NAME______________________________

BUSINESS _______________________ TITLE _______________________

ADDRESS ______________________

CITY_____________________ STATE_________________
Out-of-staters Join in At HSAF Convention, Take Steps to Establish National Trade Group, Examine Spray Contracts

“We as spraymen have to gain our rightful place in American industry,” HSAF president Ted Kaplan told conventioning delegates at the Horticultural Spraymen’s Association of Florida annual convocation in Ft. Lauderdale last month.

Out-of-state attendance was more noticeable than ever before this year, although Floridians didn’t turn out in the customary numbers. But sometimes the small groups are the ones to get the big things accomplished. This was certainly the case this year when the Florida spraymen and their guests from across the land met at the posh Pier 66 Motel, November 5-7.

About 120 registered delegates got 4 crucial things accomplished. The assembled spraymen:

(1) met with representatives of Florida’s structural pest control industry to agree on proposed legislation favorable both to pest control people and horticultural spraymen;

(2) took steps to establish a national association of weed, tree, and turf spraymen, steps which now can only result in the formation of such a trade group in the near future;

(3) summoned to the podium outstanding spray company executives from the Sunshine State to compare different kinds of spray programs and pricing procedures; and

(4) sat in on one of the best technical question-and-answer sessions ever to be offered at a vegetation maintenance and control conference.

President Kaplan, whose spray company is in Miami, pointed out in the convention’s early hours that in the United States today, the turf industry takes in from 3 to 6 billion dollars each and every year.

He was prefacing the actual discussion about forming a national trade group set up to serve specifically the companies which contract for weed and brush control, turf management, and tree maintenance. Later in the convention’s history, the group enthusiastically endorsed the appointment of HSAF representatives to go forth to meet with other industrymen throughout the country to lay the groundwork for establishing the trade group. Out-of-stater Dick Evans, a contract applicator from Pampa, Texas, was also named to the committee and appointed chairman pro-tem.

“Up to now the movement for a national organization has been floundering,” Kaplan continued in his endorsement of the resolution to form the nationwide trade group, “Now it’s just a matter of time,” he mused.

The convention’s official resolution also requested Weeds Trees and Turf magazine to act as a clearinghouse of information about the national movement, and asked WTT editor Charles D. Webb to act as coordinator and contact man during the formative days of the trade society. After contact is made with leading industry figures throughout the nation interested in the program, a meeting is to be held in WTT’s Cleveland offices to further hash out the preliminaries before the group is born. Readers who are interested in the association-to-be are requested to write to this magazine.

“The reasons for this action are multifold,” Larry Nipp, member of the national committee, and horticultural operator (American Power Spraying) in Ft. Lauderdale, said. “It will define the industry and present a public image of the horticultural sprayman; it will offer a means to exchange information on business practices, pricing, advertising, public relations, insurance, pertinent technical matters, and other problems peculiar to the custom spray industry; and it will offer a chance for industrymen to get together in a single national convention to discuss mutual problems and perhaps have a trade show for custom
spraymen and custom spraymen alone.

“Eventually,” Nipp added, “the association will probably have a full-time staff which will be a source of technical information and assistance, and which can effectively lobby and otherwise affect legislation and public opinion favorably for the custom spray business as a whole. Truly this is a momentous idea,” Nipp concluded as he laid the resolution on the convention floor for discussion. It passed immediately, by voice vote.

Spray Monthly? Semimonthly? Or When Need Is Determined?

What type of lawn spray program is best suited to Florida conditions and to the systems of individual company philosophies was a key part of this year’s convention. Spray operator Nipp was first of a quartet to explain his business concepts. Nipp sprays his customer’s lawns for chinch bugs every 60 days. He said he finds this more profitable, and just as effective, as the monthly spraying pattern some other companies utilize.

Nipp said trucks and drivers are the major cost factors in lawn spraying, although today, with new and expensive chemicals in common use, material costs sometimes exceed even the cost of labor.

Nipp said when parathion began to fail as a chinch bug control and he had to switch to more expensive chemicals, his charges naturally had to go up. But this taught him a lesson and now his contracts include the phrase “based on the use and ability of (name of chemical) to kill chinch bugs.” He advised his audience to include this or a similar phrase in each of their lawn spraying agreements.

Nipp also reminded the assembly that in pricing a job, regardless of the size of a lawn, it’s crucial to remember the cost of getting the truck and the driver to the premises. Obviously, this is the same whether one is treating an estate or a bungalow-sized lot.

In the discussion following Nipp’s talk, Dave Fleming, a lawn spray operator from Philadelphia, said relative to prices: “When you establish a minimum price, all too often it becomes a maximum.”

“Yes,” Nipp replied, “The price you start with is usually the one you’re stuck with.”

A second type of service was explained by Jack Cuthrell who runs Mr. Spray Company in Ft. Lauderdale. Cuthrell inspects his customers’ lawns twice monthly but sprays them only if the need is determined by this inspection. He contrasted this philosophy with Nipp’s, which he described as “preventive maintenance.”

Cuthrell has a card on which he lists the results of each inspection. Whatever he finds wrong he reports to the homeowner who can then correct it. Cuthrell guarantees each lawn against chinch bug damage, and theorized he was offering his customers a kind of insurance. He conceded that sometimes his patrons become irritated because he hasn’t actually sprayed anything while his monthly bill keeps right on coming in. But, he cautions those who stray from his flock, it’s results for which he charges, and it’s results he guarantees.

In conclusion Cuthrell had a profitable bit of advice for his colleagues who operate on contracts: “Once,” he said, “I used to have all my contracts run out at the end of each year, after which I’d have to renew them one by one. What a simple thing it was to write them up so that they continue uninterrupted until a customer specifically terminates them.”

Multiple Choice

Then a more elaborate concept was explained by Sydney Kirkpatrick who runs Kirk’s lawn maintenance firm in Ft. Lauderdale. His customers may choose from a spraying schedule which is monthly, every other month, once every four months, or various combinations of these schedules. They may also elect to have Kirkpatrick add a fertilizer program to his chinch bug services. Of course, the large Florida company which he operates offers a complete line of services including renovation and other techniques.

Kirkpatrick said he used to spray liquid fertilizer from his truck, but now he uses a dry formulation applied with a spreader.

A type of business becoming increasingly rare was detailed by Ft. Lauderdale horticultural operator Ollie Benson, who has the small, custom, personalized lawn service which was so familiar in bygone times. Benson said he is a one-man operation and he in-
Veteran sprayman Charlie Johnson had technical questions for the panel of experts. He tends to stay that way. He knows each customer personally, and gives individual care and attention to every lawn, proceeding with a spray program, if needed, singularly contracted as the need arises.

He counsels his patrons to employ good cultural practices, including proper mowing and watering, vertical mowing, etc. A rousing finale to Friday’s sessions was the question-and-answer period which has become an earmark of HSAF conventions. Perennial favorite lawn expert and well-known figure in the turf world Ralph White moderated. He’s general manager of Ousley Sod Company in Pompano Beach, one of the largest companies of its type in the world.

On White’s panel were: Dr. Stratton H. Kerr, Associate Entomologist, Florida Agricultural Experiment Station, Gainesville; Dr. E. O. Burt, Assistant Turf Technologist, Plantation Field Laboratory; Lewis Watson, Associate County Agent, Broward County; Dr. John F. Cabler, Assistant Ornamental Horticulturist, Agricultural Extension Serv-

ice, Gainesville; and Dr. Thomas E. Freeman, Assistant Plant Pathologist, University of Florida, Gainesville.

This was a time for the gathering to pose its most perplexing problems and benefit from the five-starred panel of turf specialists, and the carefully phrased advice of chairman White, who’s responsible for as much fine turf as any other man in the country. Questions came thick and fast:

—“What’s best, a granular or liquid nematocide,” queried Mrs. Larry (Mae) Nipp. Dr. Burt told her there’s no appreciable difference, in his opinion; then he added that a granular product in general doesn’t last any longer than a liquid, though some may be inclined to think otherwise.

—Prexy Kaplan wanted to know what to do about millipedes. He said frequently Florida spraymen are called upon to control these slithering nuisances in customer’s lawns. Dr. Kerr said to give them a good, stiff dose of Sevin, the carbamate from Union Carbide, or perhaps Baygon, which he praised. The latter is also a carbamate, this one from the vats of Chemagro Corp. in Kansas City, Mo.

—A round of questions from inquisitive delegates touched on several aspects of fungicide usage; the following points were collectively put across by the panel: Fungicides are primarily preventive. They can be more effective if applied with a spreader-sticker. Sometimes, a fungus disease will “cure itself.” That is, if not treated, a fortunate cooling period or a dry spell will sometimes heal the fungus-induced wounds. But turf pros can’t wait for this “let-nature-do-it” routine because of its very fortuitousness.

—“Anything we can do to control scale?” a sprayman asked. “If you’re a professional with professional know-how, I’d say use parathion,” Dr. Kerr advised. “Even better,” he continued, “is parathion with a summer oil emulsion added (about 2 qts. per hundred gallons).” “Or,” he went on, “you can always use malathion. This too will act better with the oil additive.”

—What’s the broadest scale fungicide? The organic mercurials. What trade names do they go under? Memmi, Panogen Turf Fungicide, among others.

—if the pH of the soil is higher than 7 (on alkaline side), would sulfur be beneficial? “It certain-ly would help,” Dr. Cabler said. “Use one or two pounds per thousand square feet.”

—Do you think high fertilization rate causes brown patch? “I doubt it,” said Dr. Freeman. Do you get damage from brown patch other than the usual brown circle? “You can,” Dr. Freeman said, “especially in shaded areas where the grass may thin out.”

—Has anybody noticed a decrease in fungus after a lawn is sprayed with the nematocide Nemagon? Several said yes. Nipp said the use of a nematocide invariably improves the lawns he works on, and he thinks operators should do more nematode work. “We use Nemagon,” he said, adding that he tries to get 10 or 12 inches of water on it to increase effectiveness. He uses about eight dollars’ worth of the product on the average lawn, he said.

—Several questions pertained to mechanical renovation, and

(Continued on page 47)
John Bean leads the way when you “spray for pay”. You select from four basic sprayer series... plenty of choice to let you get size, type, capacity and price just right for your needs. Bean Bond lined tanks and lifetime Sapphite cylinders assure long, trouble free service. Trailer-type, skid-mounted or PTO models. Wide choice of accessories. Versatility unlimited: weed and brush control, turf spraying, applying liquid fertilizer, shrub and tree spraying, root feeding, dust abatement, row crop spraying. To be sure sprayday is payday, get the facts on John Bean high-pressure sprayers.
Zoysia, glamour name among turfgrasses second only to bluegrass, is native to eastern Asia and its outlying islands. Zoysia, named for Karl von Zois, an Austrian botanist of the 18th century, is conserved over Osaka. Species boundaries within the genus are obscure. Forbes lumped all turfgrass types as Z. matrella. Yet most literature still calls forms wider leaved than matrella Z. japonica, very fine ones Z. tenuifolia. The japonica group is commonly known as Korean or Japanese lawngrass, reflecting collections from that portion of the globe by USDA plant explorer Frank N. Meyer in 1906. The matrellas are designated manilagrass, because of Piper’s introduction of this type from the Philippines in 1911. Tenuifolias are called mascarene, Korean velvet, patio or flagstone grass.

Forbes, at the Tifton (Georgia) Experiment Station, has hybridized different forms, and the well-known “Emerald” is a selection from crossing japonica with tenuifolia. Unfortunately, Emerald sometimes grows “puffy” like tenuifolia, and then mows poorly. The Meyer variety is a dense, hardy selection from japonica seedings at Beltsville, Maryland, named for the explorer. Flawn was an early matrella selection, hardy along the East Coast nearly to New England, and also much planted in the Southwest. Recently Purdue has released Midwestern zoysias, and yet unnamed selections are today under test far and wide.

Thus zoysias, like most prominent turfgrasses, occur in tremendous variety, from very fine-leaved and low-growing tenuifolia sorts (ground covers of the deep South, so low as to scarcely need mowing), to coarser japonicas in many “sizes and shapes.” Seed, mainly imported from the Far East, but occasionally harvested on sod farms in this country, exhibits genetic reassortment typical of sexual crossing, and must be considered “japonica.” All named varieties are propagated vegetatively, to assure trueness to type. Through the years there have been many local selections across the South, chiefly matrellas, as good as any for their areas.

Adaptation and Preferences

Zoysia is not particular about soil, but seems to do somewhat better on heavier soils than on sands. Acid soils are best limed to bring them more nearly neutral.

Zoysias are warm-season grasses, even though selections such as Meyer are quite hardy even into Canada. But like bermuda and annual weeds, zoysia is discolored by cold weather, remains brown the winter through. In middle latitudes it is typically dormant from October until April, not much of a recommendation for climates where cool-season grasses such as Kentucky bluegrass, fine fescues and bentgrasses give ten months of greenness. As such, zoysia remains primarily a southern beauty, even though its growing season may be a little more prolonged than other southern grasses.

Zoysia has received heady accolades, alternating with spells of disappointment because it did not always live up to extravagant claims made for it. In the early 1950’s zoysia was to become the lawn savior in the crabgrass belt, in combination with the then new Merion Kentucky bluegrass. Apparently it didn’t worry authorities urging this upon the American homeowner that brown zoysia was just as ugly as brown crabgrass in the winter lawn! Nor that two grasses of such divergent habits are seldom compatible, do not intersperse one within the other evenly and easily. As a matter of fact, I have still to see a permanently successful interplanting of these grasses,—the combination that was to conquer American lawns!

Nor has everything been completely rosy in the South. The enthusiasm of the 1950’s for starting zoysia sod nurseries didn’t reckon with the facts of life as that the vaunted Meyer strain discolored more readily in the South than local matrellas; that zoysia in time develops thatch (and consequent problems) which can cause debilitation; that diseases and insects eventually would find zoysia attractive (billbug has recently finished off the zoysia sod business in Florida); that the very characteristics which make zoysia so wear-resistant underfoot, also make necessary an expensive heavy-duty mower to attend it.

In short, zoysia cannot be all things to all people in all locations. But among zoysias are the finest lawngrasses available for the South, aristocrats the equal of the better bermudas. Zoysia won’t establish so readily as bermuda, but it will wear better. It can stand shade. It requires only modest fertilization. Seedheads are not abundant, little bother. It is not a rampaging pest at borders as is bermuda, and it is reasonably resistant to salt spray, so useful near the coast. But it is not a turf to endure neglect ungrudgingly, as so often implied. Nor is it adapted to wet places.

Zoysia’s capabilities are better understood now, and there is a revival of interest in it for areas
where it was something of a flop earlier. For example, it may help golf fairways planted to U-3 bermuda in bluegrass country, which have suffered so much recently from winterkill (on north slopes especially) and from spring dead spot disease.

Growth

Zoysia spreads by above-ground runners (stolons), and underground stems (rhizomes). Rate varies greatly, and among the selections now under test are many potential releases that spread much more rapidly than is generally expected of zoysia. One of the drawbacks to zoysia has always been the lengthy period needed to fully establish it as a sod—a full growing year even in southern Florida, usually three years in northerly areas. During this interval weeds must be controlled, lest the zoysia be further slowed or even lost. A zoysia lawn has been expensive, and only for the patient man. But once established, slow growth becomes a virtue. Mowing need not be so frequent as with bermuda, although the turf should be “evened up” regularly, at least each ten days. No grass makes a thicker, more resilient carpet than does zoysia. But here too, there are side effects. Such durability and tightness builds thatch in time, in some lawns so tight that water runs from the surface as from a shingled roof. The turf may then dry brown even though watered. And lawn mowers sufficiently powered to mow zoysia are not the inexpensive sorts. A heavy-duty machine with an extra reel blade is almost needed. Likewise, thinning heavily accumulated zoysia thatch requires special machines or skilled burning, just too much for the average homeowner-with-a-rake. And because of slow recovery, mistakes show for quite a while.

Zoysia has no terribly serious diseases; dollar spot and brown patch are sometimes found, but respond to fungicidal prevention. Until billbugs came along, siliceous zoysia was not greatly bothered by insects. Billbug larvae work deep in the grass, and unless organic phosphates thoroughly douse the sod, control is difficult. Nematodes also attack zoysia, often seriously in Florida.

Not being the rampant grower that is bermuda, fertility needs are not so great with zoysia. “Average” fertilization for the soil and region is suggested, generally about 6 lbs. nitrogen/M/year. Resistance to drought is pretty good, though occasional irrigation is needed to keep a lawn continuously attractive. Mowing varies with use and variety, ranging from about ¾ inch to as high as 2 inches in more northerly locations. The tight growth of zoysia is quite a help in preventing weeds. Where weeds do pock the lawn, the 2,4-D family of herbicides takes out most broadleaf sorts without injury to zoysia. Nor will the usual preemergence and arsonate checks against annual grasses damage the grass.

Planting

Zoysia is best started in spring or early summer, to give the maximum period of warm weather for establishment. Seed is available only for unselected Z. japonica, usually sowed about 2 lb./M. Zoysia seed fits nicely seeding mixtures for everyday lawns, where the special characteristics of varietal selections are not important.

Named varieties, of course, must be planted from living starts, sprigs (stems about three nodes in length, one extremity to be buried, the other exposed), or by plugs (biscuits of sod). New plantings generally show little activity for 2-3 weeks. Tests indicate slightly more rapid spread from sprigs than from plugs, but the planting is more of a chore and keeping the new planting sufficiently moist more of a problem. Likewise, larger plugs have proven more enduring than smaller ones, especially if interplanted into existing turf. Spacing between starts should not be more than six inches, lest filling to a complete sod take unduly long.

Quickest fill results from planting into a cultivated and well-fertilized seedbed. If the soil cannot be sterilized, weeds may be checked somewhat with herbicides and hand pulling. In Florida Simazine and Atrazine have checked weeds without setback to zoysia, when sprayed over a new planting the same as recommended for St. Augustine.

Cross section of Zoysia matrella sod with soil washed away. (Photo courtesy Asgrow Seed Company).
### Weeds and Turf's 1964 Index of Articles

An alphabetical reference to subjects and titles of all major feature articles, feature columns, news stories, letters published in Weeds and Turf in 1964. A list of authors of this year's articles follows the Directory.

#### KEY
- (f) feature article
- (ns) news story
- (c) feature column
- (ed) editorial
- (L) letter
- (br) book review

#### Table of Contents

<table>
<thead>
<tr>
<th>Article</th>
<th>Issue Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td></td>
</tr>
<tr>
<td>Accidents, Arborists' Big Job: Cut Out the &quot;Little&quot; (f)</td>
<td>Aug 8</td>
</tr>
<tr>
<td>Aquatic Weed Control: Hyacinth Control</td>
<td>Aug 26</td>
</tr>
<tr>
<td>Aquatic Weed Control, How We Use Scuba Divers in...</td>
<td>Feb 16</td>
</tr>
<tr>
<td>Aquatic Weed Control Spec's for Ill., New                        (a)</td>
<td>Apr 34</td>
</tr>
<tr>
<td>Aquatic Weedmen Stir Up More Questions Than Answers</td>
<td></td>
</tr>
<tr>
<td>Arborists Build A Better Image, Unanimous</td>
<td>Aug 8</td>
</tr>
<tr>
<td>Arborists: Build A Better Image, Unanimous</td>
<td></td>
</tr>
<tr>
<td>Association of Spraymen? Join a National Convention (nf)</td>
<td>Oct 21</td>
</tr>
<tr>
<td>Association, National or Nothing! (ed)</td>
<td>Nov 6</td>
</tr>
<tr>
<td>Associated National HAFA Convention Report (nf)</td>
<td>Dec 8</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td></td>
</tr>
<tr>
<td>Bacillus thuringiensis, Report on</td>
<td>May 29</td>
</tr>
<tr>
<td>Bahia Grass How to Select the Right Turfgrass, by Dr. Robert W. Schery (f)</td>
<td>Apr 18</td>
</tr>
<tr>
<td>Bahia Grass, How to Select the Right Turfgrass, by Dr. Robert W. Schery (f)</td>
<td>Mar 11</td>
</tr>
<tr>
<td>Bentgrass, Turfgrass Portraits III; by Dr. Robert W. Schery (f)</td>
<td>Sep 16</td>
</tr>
<tr>
<td>Bentgrass, How to Select the Right Turfgrass, by Dr. Robert W. Schery (f)</td>
<td>Apr 19</td>
</tr>
<tr>
<td>Bentgrass, How to Select the Right Turfgrass, by Dr. Robert W. Schery (f)</td>
<td>Mar 11</td>
</tr>
<tr>
<td>Bermudagrass, How to Select the Right Turfgrass, by Dr. Robert W. Schery (f)</td>
<td>Apr 19</td>
</tr>
<tr>
<td>Bermudagrass, by Dr. Robert W. Schery (f)</td>
<td>Mar 11</td>
</tr>
<tr>
<td>Bermudagrass, Turfgrass Portraits I; Kentucky</td>
<td>Nov 8</td>
</tr>
<tr>
<td>Bestman, Making Sense About Crabgrass, by Dr. W. D. Daniel (f)</td>
<td>Mar 11</td>
</tr>
<tr>
<td>Bluegrass, Annual Know Your Species (c)</td>
<td>Apr 24</td>
</tr>
<tr>
<td>Bluegrass, Kentucky        by Dr. Robert W. Schery (f)</td>
<td>Jul 12</td>
</tr>
<tr>
<td>Bluegrass, Turfgrass Portraits I, Kentucky</td>
<td>Apr 19</td>
</tr>
<tr>
<td>Brush Up On Brush control (f)</td>
<td>May 13</td>
</tr>
<tr>
<td>Brush Control Southern Weed Conference Reports (ns) Mar 27</td>
<td></td>
</tr>
<tr>
<td><strong>C</strong></td>
<td></td>
</tr>
<tr>
<td>Calcium Arsenate Making Sense About Crabgrass, by Dr. W. H. Daniel (f)</td>
<td>Mar 11</td>
</tr>
<tr>
<td>Calcium Arsenate Making Sense About Crabgrass, by Dr. W. H. Daniel (f)</td>
<td>Mar 11</td>
</tr>
<tr>
<td>Carbaryl: Controlling Japanese Beetles at Cleveland's Airport (f)</td>
<td>Sep 26</td>
</tr>
<tr>
<td>Caterpillars Dichondra Pests and Controls Outlined in Council Bulletin (ns)</td>
<td>Oct 20</td>
</tr>
<tr>
<td>Chlorine, How to Select the Right Turfgrass, by Dr. Robert W. Schery (f)</td>
<td>Apr 18</td>
</tr>
<tr>
<td>Chlorine: Silver Controls (ns)</td>
<td>Mar 10</td>
</tr>
<tr>
<td>Chloride: Making Sense About Crabgrass, by Dr. W. H. Daniel (f)</td>
<td>Mar 10</td>
</tr>
<tr>
<td>Chlorosis: Iron Shortage May Cause Yellow Color on Pin Oak (ns)</td>
<td>Mar 10</td>
</tr>
<tr>
<td>Cool Season Grass: Grow and Finish (f)</td>
<td>Sep 26</td>
</tr>
<tr>
<td>(Contracts, Spraying) HAFA Convention Report (nf)</td>
<td>Dec 8</td>
</tr>
<tr>
<td>Crabgrass, Making Sense About Crabgrass, by Dr. W. H. Daniel (f)</td>
<td>Mar 10</td>
</tr>
<tr>
<td>(Contracts, Spraying) HAFA Convention Report (nf)</td>
<td>Dec 8</td>
</tr>
<tr>
<td>(Contracts, Spraying) HAFA Convention Report (nf)</td>
<td>Dec 8</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td></td>
</tr>
<tr>
<td>Dicamba, Colorado State Lists Results of Herbicide Tests (ns)</td>
<td>Jul 10</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td></td>
</tr>
<tr>
<td>(Ed) editorial</td>
<td></td>
</tr>
<tr>
<td>(F) feature article</td>
<td></td>
</tr>
<tr>
<td>(L) letter</td>
<td></td>
</tr>
<tr>
<td>(ns) news story</td>
<td></td>
</tr>
<tr>
<td>(c) feature column</td>
<td></td>
</tr>
<tr>
<td>(ed) editorial</td>
<td></td>
</tr>
<tr>
<td>(L) letter</td>
<td></td>
</tr>
<tr>
<td>(br) book review</td>
<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td></td>
</tr>
<tr>
<td>Fertilizer Advice on Tap at 5th U.S. Lawn and Turf Conference, Tips on Spring Dead Spot</td>
<td>Nov 11</td>
</tr>
<tr>
<td>Fertilizer Applications Improve Turf in Southern California, Winter-Timed, by Howard H. Hawkins (ns)</td>
<td>Jul 13</td>
</tr>
<tr>
<td><strong>G</strong></td>
<td></td>
</tr>
<tr>
<td>(G) Gypsy Moth Report on Aerial Application of Bacillus thuringiensis (ns)</td>
<td>May 29</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td></td>
</tr>
<tr>
<td>Hadacidin Weed Society of America Report (nf)</td>
<td>Mar 14</td>
</tr>
<tr>
<td>Hemlock Looper, Air Striking the, by Tom Burner (f)</td>
<td>Apr 12</td>
</tr>
<tr>
<td><strong>I</strong></td>
<td></td>
</tr>
<tr>
<td>(I) Irrigation: Aerify, Dethatch, Wet, Turf Areas</td>
<td>Oct 21</td>
</tr>
<tr>
<td>Invert Emulsions: The Inside-Out Sprays</td>
<td>Jan 12</td>
</tr>
<tr>
<td>Irrigation and Dehydration Study Soil Chemistry, Learn of, by R. E. Stevenson (nf)</td>
<td>Oct 18</td>
</tr>
<tr>
<td>Irrigation, How to Select the Right Turfgrass, by Dr. Robert W. Schery (f)</td>
<td>Apr 19</td>
</tr>
<tr>
<td>Irrigation, How to Use Water in Turf Management by R. E. Stevenson (nf)</td>
<td>Apr 19</td>
</tr>
<tr>
<td><strong>J-K</strong></td>
<td></td>
</tr>
<tr>
<td>Japanese Beetles at Cleveland's Airport, by Dr. W. H. Daniel (f)</td>
<td>Sep 26</td>
</tr>
<tr>
<td>Kentucky Bluegrass How to Select the Right Turfgrass, by Dr. Robert W. Schery (f)</td>
<td>Apr 19</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td></td>
</tr>
<tr>
<td>Lamiaceae, Colorado State Lists Results of Herbicide Tests (ns)</td>
<td>Jul 10</td>
</tr>
<tr>
<td>Lambquarters: Know Your Species (c)</td>
<td>Jul 29</td>
</tr>
<tr>
<td>Landscape Proper Grade Is Key to Successful Lawn (ns)</td>
<td>Jun 20</td>
</tr>
<tr>
<td>Landscape Intelligent Tree Planting Will Determine America's Future Beauty, Minn.</td>
<td>Nov 29</td>
</tr>
</tbody>
</table>

---

14 WEEDS TREES AND TURF, December, 1964
There is a mixture of common and trade-marked names (indicated by an asterisk*). This has been unavoidable since usage and recommendations of the compound, whether its common name is easier to use, or industry acceptance. There will also be some differences of opinion over the inclusion or omission of certain chemicals under particular use categories. Here again confusion exists among reference sources. We have made our choices on the basis of most frequent mention in our surveys which preceded this compilation. Readers' comments and suggestions are invited to help us improve future editions. Keep this year's Guide handy for frequent use.

Advertisers in Weeds Trees and Turf are listed in boldface type.

**HERBICIDES**

### SOIL STERILANTS

#### AMIZINE*
Amchem Products, Inc.
R. H. Bogle Co.
Brayton Chemicals, Inc.
Gabriel Chemicals, Ltd.
Hub States Chemical & Equip. Co.
Residex Corp.

#### AMMONIUM SULFAMATE
Brayton Chemicals, Inc.
Chipman Chemical Co.
E. I. du Pont de Nemours & Co.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Nalco Chemical Co.
Residex Corp.
Southern Mill Creek Products Co.
Triangle Chemical Co.

#### ATRAZINE
American Fluoride Corp.
Armour Agricultural Chemical Co.
Archem Corp.
R. H. Bogle Co.
Brayton Chemicals, Inc.
Campbell Mfg. Co.
Gabriel Chemicals, Ltd.
Geigy Agricultural Chemicals
Hub States Chemical & Equip. Co.
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Nalco Chemical Co.
Prentiss Drug & Chemical Co., Inc.
Residex Corp.
Riverdale Chemical Co.
O. M. Scott & Sons
Southern Mill Creek Products Co.
Triangle Chemical Co.
Woolfolk Chemical Works, Ltd.

#### BENZABOR*
Brayton Chemicals, Inc.
Miller Products Co.
U. S. Borax

#### BORATE COMPOUNDS, HYDRATED
American Potash & Chemical Corp.

#### BORATE-BROMACIL MIXES
Chipman Chemical Co.
Nalco Chemical Co.

#### BORATE-CHLORATE, MIXES
Hooker Chemical Corp.
Utility Chemical Co.

#### BORATE-CHLORATE-BROMACIL
Chipman Chemical Co.

#### BORATE-DIURON MIXES
Nalco Chemical Co.

#### BORATE-MONOUR MIXES
Chipman Chemical Co.
U. S. Borax

#### BORATE-UREA MIXES
Chipman Chemical Co.
Diamond Alkali Co.
Hub States Chemical & Equip. Co.
Riverdale Chemical Co.
U. S. Borax

#### BROMACIL
R. H. Bogle Co.
Brayton Chemicals, Inc.
Chapman Chemical Co.
E. I. du Pont de Nemours & Co.
General Chemical Div., ACC
Miller Products Co.
Residex Corp.
Southern Mill Creek Products Co.

#### CALCIUM CHLORIDE
R. H. Bogle Co.
Brayton Chemicals, Inc.
The Dow Chemical Co.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Miller Chemical & Fertilizer Corp.
Pittsburgh Plate Glass Co.
Utility Chemical Co.

#### CHLOREA*
Brayton Chemicals, Inc.
Chipman Chemical Co.
Hub States Chemical & Equip. Co.
Miller Products Co.
Residex Corp.

#### DIURON
Armour Agricultural Chemical Co.
R. H. Bogle Co.
Brayton Chemicals, Inc.
E. I. du Pont de Nemours & Co.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Nalco Chemical Co.
Residex Corp.
Southern Mill Creek Products Co.

#### ERBON
Brayton Chemicals, Inc.
Dow Chemical Co.
Nalco Chemical Co.
Residex Corp.

#### FENAC
Amchem Products, Inc.
R. H. Bogle Co.
Brayton Chemicals, Inc.
Nalco Chemical Co.
Residex Corp.

#### FENATROL*
Amchem Products, Inc.
R. H. Bogle Co.
Brayton Chemicals, Inc.
Residex Corp.

#### HCA*
General Chemical Div., ACC
Southern Mill Creek Products Co.

#### MONOBOR-CHLORATE*
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
Miller Products Co.
U. S. Borax

#### MONORUN
R. H. Bogle Co.
Brayton Chemicals, Inc.
Destruxol Corp.
E. I. du Pont de Nemours & Co.
E-Z-Flo Chemical Co.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Nalco Chemical Co.
Residex Corp.
Southern Mill Creek Products Co.
Wood Treating Chemicals Co.

#### PBA
Amchem Products, Inc.
Brayton Chemicals, Inc.
E. I. du Pont de Nemours & Co.
Gabriel Chemicals, Ltd.

#### PROMETONE*
Archem Corp.
Armour Agricultural Chemical Co.
R. H. Bogle Co.
Brayton Chemicals, Inc.
Geigy Agricultural Chemicals
Hub States Chemical & Equip. Co.
Miller Products Co.
Prentiss Drug & Chemical Co.
Residex Corp.

---

**Weeds Trees and Turf** presents below its annual Guide to Suppliers of vegetation control chemicals and equipment for use in urban/industrial areas. The page dimensions are 573.7x797.4 pixels, with an image containing 574x797 pixels. There is a mixture of common and trade-marked names (indicated by an asterisk*). This has been unavoidable since usage and recommendations of researchers refer to a particular chemical by one or the other, depending upon the newness of the compound, whether its common name is easier to use, or industry acceptance. There will also be some differences of opinion over the inclusion or omission of certain chemicals under particular use categories. Here again confusion exists among reference sources. We have made our choices on the basis of most frequent mention in our surveys which preceded this compilation. Readers' comments and suggestions are invited to help us improve future editions. Keep this year's Guide handy for frequent use.
VELSICOL TURF CHEMICALS
FOR COMPLETE TURF PEST CONTROL

<table>
<thead>
<tr>
<th>TURF DISEASE CONTROL</th>
<th>VELSICOL &quot;2-1&quot; MERCURIC FUNGICIDE</th>
<th>Controls brown patch, dollar spot, and snow mold. New formulation has greater wettability, more stability in suspension and less foaming action than any other comparable product.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VELSICOL MEMMI .8-EC MERCURIC FUNGICIDE</td>
<td>Controls brown patch, dollar spot, copper spot, melting out (Helminthosporium), gray leaf spot of St. Augustine Grass, and cottony blight (Pythium) or Rye grass. An emulsifiable concentrate that mixes fast, does not need constant agitation, and leaves no sediment in spray tanks.</td>
</tr>
<tr>
<td>WEED CONTROL</td>
<td>VELSICOL BANVEL® D 4S</td>
<td>Banvel D 4S gives excellent control of knotweed, common chickweed, clover, red sorrel, mouse-ear chickweed, stitchwort, dog fennel, chicory, curly dock, and many other hard-to-kill perennial broad-leaf weeds.</td>
</tr>
<tr>
<td>SOIL FUMIGATION</td>
<td>VELSICOL PESTMASTER® SOIL FUMIGANT-1</td>
<td>Soil Fumigant-1 contains methyl bromide with 2% chloropicrin. It will remove weeds, weed seeds and obnoxious grasses in an old golf green, or in the soil before new grass is planted. Economical, easy-to-apply, fast acting.</td>
</tr>
<tr>
<td>PRE-EMERGENCE</td>
<td>CHLORDANE BANDANE®</td>
<td>Chlordane provides exceptionally effective pre-emergence crabgrass control, and complete protection against damaging soil insects. Bandane is a newer pre-emergence control, notable for effective control plus safety to seedling grass and established turf. It also kills ants, grubs, and other insects.</td>
</tr>
<tr>
<td>CRABGRASS CONTROL</td>
<td>CHLORDANE HEPTACHLOR</td>
<td>Both Chlordane and Heptachlor kill most common insect pests of turf, plus many harmful or annoying insects that live on the surface of the soil. Grubs, mole crickets, wireworms, cutworms, ticks, chiggers, ants, mosquitoes, sod webworms, earwigs and many other insects can be controlled with these versatile insecticides.</td>
</tr>
</tbody>
</table>

CONTACT YOUR DISTRIBUTOR NOW FOR THE COMPLETE LINE OF VELSICOL TURF PEST CONTROL CHEMICALS! 
FOR MORE INFORMATION WRITE 
VELSICOL CHEMICAL CORPORATION / 341 E. OHIO STREET, CHICAGO, ILLINOIS 60611

When Writing to Advertisers Please Mention WEEDS TREES AND TURF
Sodium Chlorate
Agricultural Chemicals, Inc.
American Potash & Chemical Co.
Elanco Products Co.
Stauffer Chemical Co.
Armour Agricultural Chemical Co.

SODIUM ARSENITE
Acme Quality Paints, Inc.
American Fluoride Corp.

Tell Advertisers
You Learned About Them
in
WEEDS TREES AND TURF

Agricultural Chemicals, Inc.
American Fluoride Corp.
Armour Agricultural Chemical Co.
Barada & Page Co.

R. H. Bogle Co.
Bryon Chemicals, Inc.
Campbell Mfg. Co.
Gabriel Chemicals, Ltd.
Geigy Agricultural Chemicals
Hub States Chemical & Equip. Co.
Neil A. Maclean Co., Inc.
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Prentiss Drug & Chemical Co., Inc.
Riverdale Chemical Co.
Pest Control Equipment Co.
Residex Corp.
Southern Mill Creek Products Co.
Triangle Chemical Co.

SODIUM ARSENITE
Acme Quality Paints, Inc.
American Fluoride Corp.
American Liquid Fertilizer Co., Inc.
Baird & McGuire, Inc.
R. H. Bogle Co.
Bonide Chemical Co., Inc.
Bryon Chemicals, Inc.
Bruin & Co., Inc.
California Agricultural Chemical Co., Ortho Div.
California Farm Supply Co.
Chapman Chemical Co.
Chipman Chemical Co.
Destructol Corp.
E-Z Flo Chemical Co.
Faesy & Besthoff, Inc.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hopkins Agricultural Chemical Co.
Hub States Chemical & Equip. Co.
Industrial Materials Co.
Lobel Chemical Corp.
Miller Chemical & Fertilizer Corp.
Miller Products Co.
National Chemsearch Corp.
Niagara Chemical Div., FMC
Pennsalt Chemical Corp.
B. G. Pratt Co.
Sherwin-Williams Co.
Southern Mill Creek Products Co.
Thompson-Hayward Chemical Co.
Triangle Chemical Co.

PREEMERGENCE
(Selective)

ALANAP*
Bryon Chemicals, Inc.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Miller Products Co.
Naugatuck Chemical
Niagara Chemical Div., FMC
Riverdale Chemical Co.
Thompson-Hayward Chemical Co.

AMIBEN*
Amchem Products, Inc.
Armour Agricultural Chemical Co.
Bryon Chemicals, Inc.

ATRAZINE
See Soil Sterilants

AZAK*
Hereules Powder Co.
Southern Mill Creek Products Co.

BANDANE*
Archim Corp.

BENEFIN
Elanco Products Co.

BETASAN*
Stauffer Chemical Co.

CALCIUM PROPYL ARSONATE
W. A. Cleary Corp.
Lobel Chemical Corp.
Vineland Chemical Sales Corp.

CASORON*
Miller Products Co.

CHLORPAN
See Insecticides

CIPC

DACHHAL*
Armour Agricultural Chemical Co.
Bryon Chemicals, Inc.
Chipman Chemical Co.

DIPHENAMID
Armour Agricultural Chemical Co.
Elanco Products Co.

DIPHENATRILE

DIPROPALIN
Elanco Products Co.

DIURON
See Soil Sterilants

ENDOTHALL
Bryon Chemicals, Inc.
Chipman Chemical Co.

EPTAM*
Armour Agricultural Chemical Co.
Bryon Chemicals, Inc.
Miller Products Co.
Riverdale Chemical Co.
Stauffer Chemical Co.
Woolfolk Chemical Works, Ltd.

Tell Advertisers
You Learned About Them
in
WEEDS TREES AND TURF

PREEMERGENCE
(Selective)

AMIBEN*
Amchem Products, Inc.
Armour Agricultural Chemical Co.
Bryon Chemicals, Inc.

ATRAZINE
See Soil Sterilants

AZAK*
Hereules Powder Co.
Southern Mill Creek Products Co.

BANDANE*
Archim Corp.

BENEFIN
Elanco Products Co.

BETASAN*
Stauffer Chemical Co.

CALCIUM PROPYL ARSONATE
W. A. Cleary Corp.
Lobel Chemical Corp.
Vineland Chemical Sales Corp.

CASORON*
Miller Products Co.

CHLORPAN
See Insecticides

CIPC

DACHHAL*
Armour Agricultural Chemical Co.
Bryon Chemicals, Inc.
Chipman Chemical Co.

DIPHENAMID
Armour Agricultural Chemical Co.
Elanco Products Co.

DIPHENATRILE

DIPROPALIN
Elanco Products Co.

DIURON
See Soil Sterilants

ENDOTHALL
Bryon Chemicals, Inc.
Chipman Chemical Co.

EPTAM*
Armour Agricultural Chemical Co.
Bryon Chemicals, Inc.
Miller Products Co.
Riverdale Chemical Co.
Stauffer Chemical Co.
Woolfolk Chemical Works, Ltd.
If you can't find the herbicide you're looking for in the new Residex Catalogue—try this.

The new Residex catalogue provides technical information, prices and product listings for our complete line of 19 herbicides, especially formulated for industrial weed-control operations.

Since 1954, Residex has pioneered in distributing superior weed and turf products for custom applicators.

Why not use our experience to help you get started in this new and profitable field. Let us first help analyze your weed problems. Then, let us supply the specific herbicide, or mixture of herbicides, to solve the problem quickly and economically. Start cashing in on the weed and turf market now. Call or write today.

RESIDEX CORPORATION
225 Terminal Avenue, Clark, New Jersey

With this Residex Catalogue on hand, you'll never end up pulling weeds by hand.
**Propazone**
Armour Agricultural Chemical Co.
General Chemical Div., ACC
Niagara Chemical Div., FMC

**Arsenic Acid**
Alco Chemical Co.
Armour Agricultural Chemical Co.
General Chemical Div., ACC
Niagara Chemical Div., FMC

**Borax**
General Chemical Div., ACC

**Calcium Acide Methyl Arsonate**
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
Doggett Fison Co.

**Dinitro Compounds**
Woodbury Chemical Co.

**Endothall**
See Preemergence

**Fenac**
See Soil Sterilants

**Fenuron**
R. H. Bogle Co.
Brayton Chemicals, Inc.
General Chemical Div., ACC

**Fenoxaprop**
Amchem Products, Inc.
Armour Agricultural Chemical Co.
General Chemical Div., ACC

**Fenuron**
E. I. du Pont de Nemours & Co., Inc.

**Herbine**
W. A. Cleary Corp.

**Monuron**
See Soil Sterilants

**Methane Arsonic Acid**
American Cyanamid Co.

**MCPA**
Amchem Products, Inc.
Armour Agricultural Chemical Co.

**MCPB**
Brayton Chemicals, Inc.

**MCP**
Brayton Chemicals, Inc.

**Residex**
J. T. Baker Chemical Co.
Broyton Chemicals, Inc.
Southern Mill Creek Products Co.

**Methane Arsonic Acid**
American Cyanamid Co.

**Methane Arsonic Acid**
American Cyanamid Co.

**Methane Arsonic Acid**
American Cyanamid Co.

**Methane Arsonic Acid**
American Cyanamid Co.

**Methane Arsonic Acid**
American Cyanamid Co.
This year there are fewer weeds because of "Ansar"

PROGRESS REPORT: • In the brief span of two years "Ansar" herbicides have compiled a remarkable record in the eradication of weeds—especially Johnson Grass—in cotton and non-crop areas. • Cotton growers have kept our plants working at top capacity night and day to meet the demand... and as a result we'll shortly start construction of a new multi-million pound capacity "Ansar" plant!

• A new product, "Ansar 529" (170 with a surfactant added) will simplify mixing—make the product far easier to use. • Other "Ansar" products for control of weeds in irrigation ditches, orchards and a variety of non-crop areas will be available very soon. Today "Ansar" is the first name in herbicides... a product of THE ANSUL COMPANY, MARINETTE, WIS.
E-Z Flo Chemical Co.
General Chemical Div., ACC
Hub States Chemical & Equip., Co.
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Nalco Chemical Co.
Southern Mill Creek Products Co.
Stephenson Chemical Co., Inc.
Triangle Chemical Co.
Woodbury Chemical Co.
Wood Treating Chemicals Co.

PETROLEUM
Richfield Oil Corp.

PHENYLMERCUric ACETATE
American Liquid Fertilizer Co.
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
W. A. Cleary Corp.
General Chemical Div., ACC
Guard Chemical Co., Inc.
O. M. Scott & Sons
Southern Mill Creek Products Co.,
Wood Ridge Chemical Corp.
Wood Treating Chemicals Co.

PROMETONE*
See Soil Sterilants

SILVEX
Acme Quality Paints, Inc.
Amchem Products, Inc.
Bonide Chemical Co., Inc.
Brayton Chemicals, Inc.
Chipman Chemical Co.
Diamond Alkali Co.
The Dow Chemical Co.
Elanco Products Co.
E-Z Flo Chemical Co.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hercules Powder Co.
Heritage House Products, Inc.
Hub States Chemical & Equip. Co.
Lethelin Products Co., Inc.
Lobel Chemical Corp.
O. M. Scott & Sons
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Nalco Chemical Co.
National Chemsearch Corp.
Niagara Chemical Div., FMC
B. G. Pratt Co.
Residex Corp.
Riverdale Chemical Co.
Southern Mill Creek Products Co.
Thompson Chemicals Corp.
Thompson-Hayward Chemical Co.
Triangle Chemical Co.
Utility Chemical Co.
Andrew Wilson Co., Inc.
Woodbury Chemical Co.
Wood Treating Chemicals Co.

SOLAN*
Niagara Chemical Div., FMC

TCA
See Soil Sterilants

TORDON*
R. H. Bogle Co.
Brayton Chemicals, Inc.
The Dow Chemical Co.
Miller Products Co.
NaCo Chemical Co.

TRITAC-D*
Hooker Chemical Corp.
Miller Products Co.
Residex Corp.

2,4-D And 2,4,5-T
(alone or mixed)

Amchem Products, Inc.
American Liquid Fertilizer Co.
Arch Chemical Co.
Armour Agricultural Chemical Co.
Baird & McGuire, Inc.
R. H. Bogle Co.
Bonide Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Campbell Mfg. Co.
Central Solvents & Chemicals Co.
Chapman Chemical Co.
Chipman Chemical Co.
E. Z. Flo Chemical Co.
Gabriel Chemicals, Ltd.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hercules Powder Co.
Heritage House Products, Inc.
Hub States Chemical & Equip. Co.
Lethelin Products Co., Inc.
Lobel Chemical Corp.
O. M. Scott & Sons
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Nalco Chemical Co.
National Chemsearch Corp.
Niagara Chemical Div., FMC
B. G. Pratt Co.
Residex Corp.
Riverdale Chemical Co.
Southern Mill Creek Products Co.
Thompson Chemicals Corp.
Thompson-Hayward Chemical Co.
Triangle Chemical Co.
Utility Chemical Co.
Andrew Wilson Co., Inc.
Woodbury Chemical Co.
Wood Treating Chemicals Co.

UROX* WEEDKILLERS
See Soil Sterilants

• AQUATIC HERBICIDES
• AMITROL

See Postemergence

AMITROL-T*
Amchem Products, Inc.
Brayton Chemicals, Inc.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Miller Products Co.
Residex Corp.
Southern Mill Creek Products Co.

AQUALIN*
Shell Chemical Co.

AQUATHOL*
Brayton Chemicals, Inc.
Chipman Chemical Co.
Gabriel Chemicals, Ltd.
Miller Products Co.
Pennisalt Chemicals Co.
Triangle Chemical Co.

AQUATHOL PLUS*
Brayton Chemicals, Inc.
Chipman Chemical Co.
Miller Products Co.
Pennisalt Chemicals Corp.

BORASCU*
Miller Products Co.

CALCIUM HYPOCHLORITE
Robeco Chemicals, Inc.
Utility Chemical Co.

CE·TYL PICOLINUM BROMIDE
Michigan Chemical Corp.

COPPER SULFATE
W. R. E. Andrews Co.
Broxton Chemicals, Inc.
Lobel Chemical Corp.
Miller Products Co.
Phelps Dodge Refining Corp.
Robeco Chemicals, Inc.
Tennessee Corp.

TORDON*
Brayton Chemicals, Inc.
General Chemical Div., ACC
Miller Products Co.
Residex Corp.
Southern Mill Creek Products Co.

DICHLONE
Brayton Chemicals, Inc.
General Chemical Div., ACC
M. W. Hardy & Co., Inc.

DIQUAT*
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chipman Chemical Co.
General Chemical Div., ACC
Miller Products Co.

PYGON XL*
Brayton Chemicals, Inc.

POTASSIUM HYPOCHLORITE
Robeco Chemicals, Inc.

POTASSIUM IODINE
Robeco Chemicals, Inc.

POTASSIUM PERMANGANATE
Carus Chemical Co., Inc.

PRO-THION* HERBICIDES
See Soil Sterilants

RENNOX* WEEDKILLERS
See Soil Sterilants

RHYNOX* WEEDKILLERS
See Soil Sterilants

SILVEX
Penney Chemical Corp.

SILVEX
See Postemergence

SODIUM HYPOCHLORITE
Robeco Chemicals, Inc.

SODIUM PYRITHIONE
Robeco Chemicals, Inc.

SODIUM SULFATE
Robeco Chemicals, Inc.

SODIUM THIOCYANATE
Robeco Chemicals, Inc.

SODIUM TOXOGEN
Robeco Chemicals, Inc.

TERRAMITE*
Chipman Chemical Co.

TITRAC*
Hooker Chemical Corp.

TORTOIS*
Hooker Chemical Corp.

TURF SEEDS
See Soil Sterilants

URIACIN* MULCHING CHEMICAL
See Soil Sterilants

W. & A. Cleary Corp.

W. R. E. Andrews Co.

COPPER SULFATE
W. R. E. Andrews Co.
Broxton Chemicals, Inc.
Lobel Chemical Corp.
Miller Products Co.
Phelps Dodge Refining Corp.
Robeco Chemicals, Inc.
Tennessee Corp.

TORDON*
Brayton Chemicals, Inc.

DICHLONE
Brayton Chemicals, Inc.
General Chemical Div., ACC
M. W. Hardy & Co., Inc.

DIQUAT*
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chipman Chemical Co.
General Chemical Div., ACC

DIQUAT*
Brayton Chemicals, Inc.

HYDROTHOL*
Pennsalt Chemicals Corp.

MCNA*
See Postemergence

ORTHODICHLOROBENZENE
American Fluoride Corp.
Pittsburgh Plate Glass Co.
Robeco Chemicals, Inc.
Southern Mill Creek Products Co.
Utility Chemical Co.

POTASSIUM IODINE
Robeco Chemicals, Inc.

POTASSIUM PERMANGANATE
Carus Chemical Co., Inc.

PHYGON XL*
Brayton Chemicals, Inc.

SILVEX
See Postemergence

SODIUM THIOCYANATE
Robeco Chemicals, Inc.

TERRAMITE*
Chipman Chemical Co.

TITRAC*
Hooker Chemical Corp.

TORTOIS*
Hooker Chemical Corp.

TURF SEEDS
See Soil Sterilants

URIACIN* MULCHING CHEMICAL
See Soil Sterilants

W. & A. Cleary Corp.

W. R. E. Andrews Co.

COPPER SULFATE
W. R. E. Andrews Co.
Broxton Chemicals, Inc.
Lobel Chemical Corp.
Miller Products Co.
Phelps Dodge Refining Corp.
Robeco Chemicals, Inc.
Tennessee Corp.

TORDON*
Brayton Chemicals, Inc.

DICHLONE
Brayton Chemicals, Inc.
General Chemical Div., ACC
M. W. Hardy & Co., Inc.

DIQUAT*
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chipman Chemical Co.
General Chemical Div., ACC
Miller Products Co.

DIQUAT*
Brayton Chemicals, Inc.

HYDROTHOL*
Pennsalt Chemicals Corp.

MCNA*
See Postemergence

ORTHODICHLOROBENZENE
American Fluoride Corp.
Pittsburgh Plate Glass Co.
Robeco Chemicals, Inc.
Southern Mill Creek Products Co.
Utility Chemical Co.

POTASSIUM IODINE
Robeco Chemicals, Inc.

POTASSIUM PERMANGANATE
Carus Chemical Co., Inc.

PHYGON XL*
Brayton Chemicals, Inc.

SILVEX
See Postemergence

SODIUM THIOCYANATE
Robeco Chemicals, Inc.

TERRAMITE*
Chipman Chemical Co.

TITRAC*
Hooker Chemical Corp.

TORTOIS*
Hooker Chemical Corp.

TURF SEEDS
See Soil Sterilants

URIACIN* MULCHING CHEMICAL
See Soil Sterilants

W. & A. Cleary Corp.

W. R. E. Andrews Co.
SODIUM ARSENITE
See Soil Sterilants

2,4-D
See Postemergence

2,4,5-T
See Postemergence

2-(2,4-DB)
Amchem Products, Inc.
Armour Agricultural Chemical Co.
Broyton Chemicals, Inc.
Chipman Chemical Co.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Miller Products Co.
Southern Mill Creek Products Co.
Thompson-Hayward Chemical Co.
Wood Treating Chemicals Co.

TCA
See Soil Sterilants

GROWTH RETARDANTS

CYCOCEL*
American Cyanamid Co.

PHOSFON*
Virginia-Carolina Chemical Corp.

MALEIC HYDRAZIDE
Alco Chemical Corp.
Broyton Chemicals, Inc.
General Chemical Div., ACC

M. W. Hardy & Co., Inc.
Miller Products Co.
Naugatuck Chemical
Southern Mill Creek Products Co.

RO-PEL*
Upjohn Co.

B-NINE*
Naugatuck Chemical

FUNGICIDES

ACTI-DIONE*
Broyton Chemicals, Inc.
Miller Products Co.
Southern Mill Creek Products Co.
Upjohn Co.

CADMIUM CARBONATE
Southern Mill Creek Products Co.

CADMIUM CHLORIDE
W. A. Cleary Corp.
General Chemical Division, ACC
Metalsalts Corp.
Seacoast Laboratories, Inc.
Southern Mill Creek Products Co.
Vineland Chemical Sales Corp.

CADMIUM SEBACATE
(Kromad*)
Mallinckrodt Chemical Works

CADMIUM SUCCINATE
(Cadminate*)
Mallinckrodt Chemical Works

CALOMEL
Dogget Fison Co.
Mallinckrodt Chemical Works
Metalsalts Corp.
Wood Ridge Chemical Corp.

CAPTAN
Archem Corp.
Armour Agricultural Chemical Co.
Broyton Chemicals, Inc.
California Chemical Co., Ortho Div.
Hub States Chemical & Equip. Co.
Miller Products Co.
Niagara Chemical Div., FMC
Smith Douglass Co., Inc.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Stephenson Chemical Co., Inc.
Triangle Chemical Co.

CERESAN*
Broyton Chemicals, Inc.
E. I. du Pont de Nemours & Co.
Miller Products Co.
Southern Mill Creek Products Co.

CHLORANIL
Broyton Chemicals, Inc.
Naugatuck Chemical

COPPER OLEATE
Destruxol Corp.

COPPER SULFATE
Acme Quality Paints, Inc.
W. R. E. Andrews Co.
Bonide Chemical Co.
Broyton Chemicals, Inc.
Calumet & Hecla, Inc.
Destruxol Corp.

Insist on...

Miller's

IN THE NORTHWEST

PROFESSIONAL SPRAYMEN RELY ON Miller's

FOR

• INSECTICIDES

• FUNGICIDES

• HERBICIDES

PLUS THE SPRAYMAN'S KIND OF PROFESSIONAL SERVICE

MILLER PRODUCTS COMPANY
7737 N.E. Killingsworth, Portland, Oregon 97218

When Writing to Advertisers Please Mention WEEDS TREES AND TURF
DICHLOROPROPENE FUMIGANTS

See Soil Fumigants

DITHANE M-45*

Brayton Chemicals, Inc.
C. J. Martin & Sons, Inc.
Miller Products Co.

DYRENE*

Brayton Chemicals, Inc.
Chemagro Corp.
Heritage House Products, Inc.
Miller Products Co.

ELCID* 73

Elanco Products Co.

FERBAM

Archem Corp.
Berkeley Chemicals, Inc.
Brayton Chemicals, Inc.
Chemagro Corp.
Daly-Herring Co.
E. I. du Pont de Nemours & Co.

FERBAM

Archem Corp.
Berkeley Chemicals, Inc.
Brayton Chemicals, Inc.
Chemagro Corp.
Daly-Herring Co.
E. I. du Pont de Nemours & Co.

FOLPET

Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Stauffer Chemical Co.

GLYODIN

Brayton Chemicals, Inc.
Union Carbide Corp.

KARATHANE

See Miticides

MANEB

Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Daly-Herring Co.
E. I. du Pont de Nemours & Co.
Elanco Products Co.
Florida Agricultural Supply Co.
Miller Products Co.

MEMZATE D*

Brayton Chemicals, Inc.
E. I. du Pont de Nemours & Co.
Miller Products Co.

MERCURY COMPOUNDS

Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
Chipman Chemical Co.
W. A. Cleary Corp.
Doggert Fison Co.
E. I. du Pont de Nemours & Co.
Guard Chemical Co., Inc.
Mallinckrodt Chemical Works
Metalsalts Corp.
Miller Products Co.
Southern Mill Creek Products Co.
Velsicol Chemical Corp.

METHYL BROMIDE

See Soil Fumigants

MOROCIDE*

Brayton Chemicals, Inc.
Niagara Chemical Div., FMC

MORSODREN*

Morton Chemical Co.

NABAM

Archem Corp.
Brayton Chemicals, Inc.
E. I. du Pont de Nemours & Co.
Florida Agricultural Supply Co.
Mallinckrodt Chemical Works
Niagara Chemical Div., FMC
Rohm & Haas Co.
Woodbury Chemical Co.
Wood Treating Chemicals Co.

NEMAGON

See Nematocides

PANONEG*

Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
Miller Products Co.

THIRAM

Bonide Chemical Co., Inc.
Brayton Chemicals, Inc.
W. A. Cleary Corp.
Doggert Fison Co.
E. I. du Pont de Nemours & Co.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Lobel Chemical Co.
Mallinckrodt Chemical Works
Metalsalts Corp.
Niagara Chemical Div., FMC
Pennsalt Chemicals Corp.
Residex Corp.
Riverdale Chemical Co.
O. M. Scott & Sons
Seacoast Laboratories, Inc.

THIRAMAD-PLUS*

Mallinckrodt Chemical Works
Miller Products Co.

Advertising in This Month's Weeds Trees & Turf Are Listed in Boldface

PENTACHLORONITROBENZENE

Aceto Chemical Co., Inc.
California Farm Supply Co.
Cotton States Chemical Co.
Miller Products Co.
Olin Mathieson Chemical Corp.
Pennsalt Chemicals Corp.
Stauffer Chemical Co.
Wood Treating Chemicals Co.

PHENYLZINC ACETATE

Aquafols Corp. of America
Brayton Chemicals, Inc.
W. A. Cleary Corp.
Doggert Fison Company
General Chemical Div., ACC
Guard Chemical Co., Inc.
Mallinckrodt Chemical Works
Metalsalts Corp.
Niagara Chemical Div., FMC
Southern Mill Creek Products Co.
Wood Ridge Chemical Corp.
Vineland Chemical Sales Corp.
Wood Treating Chemicals Co.

PIPRON*

Elanco Products Co.

PURATIZED* AGRICULTURAL SPRAY

Brayton Chemicals, Inc.
General Chemical Div., ACC
Metalsalts Corp.
Miller Products Co.
Niagara Chemical Div., FMC

SEMESAN*

Brayton Chemicals, Inc.
Gabriel Chemicals, Ltd.
E. I. du Pont de Nemours & Co.
Miller Products Co.

SULFUR

Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
Chipman Chemical Co.
California Chemical Co., Ortho Div.
Chemwest, Inc.
Destruxol Corp.
General Chemical Div., ACC
C. J. Martin & Son, Inc.
Miller Products Co.
Niagara Chemical Div., FMC
Stauffer Chemical Co.
Stephenson Chemical Co., Inc.
Triangle Chemical Co.
Wood Treating Chemicals Co.

W. A. Cleary Corp.
THIR AM/MERCURY
W. A. Cleary Corp.
Doggett Fison Co.
E. I. du Pont de Nemours & Co.
Metalsalts Corp.
Vineland Chemical Sales Corp.

VELSICOL "2-1"*
Velsicol Chemical Corp.

ZINEB
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
Chipman Chemical Co.
E. I. du Pont de Nemours & Co.
General Chemical Div., ACC
Hopkins Agricultural Chemical Co.
Lobel Chemical Corp.
Neil A. Maclean Co., Inc.
Miller Products Co.
Niagara Chemical Div., FMC
Pennsalt Chemicals Corp.
Residex Corp.
Sherwin-Williams Co.
Triangle Chemical Co.
Woodbury Chemical Co.
Wood Treating Chemicals Co.

ZIRAM
Woolfolk Chemical Works, Ltd.
E. I. du Pont de Nemours & Co.
Sherwin-Williams Co.

INSECTICIDES

ANTIRESISTANT* DDT
General Chemical Div., ACC
Prentiss Drug & Chemical Co.

ALDRIN
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
Campbell Mfg. Co.
Chemwest, Inc.
Chapman Chemical Co.
Chipman Chemical Co.
Daly-Herring Co.
Florida Agricultural Supply Co.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hopkins Agricultural Chemical Co.
Hub States Chemical & Equip. Co.
Miller Products Co.
Niagara Chemical Div., FMC
Pennsalt Chemicals Corp.
Prentiss Drug & Chemical Co., Inc.
Residex Corp.
Riverdale Chemical Co.
Shell Chemical Co.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Thompson-Hayward Chemical Co.
Triangle Chemical Co.
Woodbury Chemical Co.
Wood Treating Chemicals Co.

ASPON*
Brayton Chemicals, Inc.
Southern Mill Creek Products Co.
Stauffer Chemical Co.

BACILLUS POPILLAE
Fairfax Biological Laboratory

BACILLUS THURINGIENSIS
Nutrilite Products, Inc.
Pennsalt Chemicals Co.
Stauffer Chemical Co.
Triangle Chemical Co.

BAYGON*
Chemagro Corp.

BAYTEX*
Archem Corp.
Brayton Chemicals, Inc.
Chemagro Corp.
Hub States Chemical & Equip. Co.
Miller Products Co.
Residex Corp.
Southern Mill Creek Products Co.
Thompson-Hayward Chemical Co.

BOMYL*
General Chemical Div., ACC

CHLORDANE
Agricultural Chemicals, Inc.
Aleo Chemical Co.
American Fluoride Corp.
American Liquid Fertilizer Co.
Archem Corp.
Armour Agricultural Chemical Co.
Barada & Page Co.
Bonide Chemical Co., Inc.
Brayton Chemicals, Inc.
Campbell Mfg. Co.
Central Chemiste Corp.
Chemwest, Inc.
Chipman Chemical Co.
W. A. Cleary Corp.
Continental Chemiste Corp.
Cornell Chemical & Equip. Co., Inc.
Cotton States Chemical Co.
Daly-Herring Co.
Destruxoil Corp.
Doggett Fison Co.
E-Z Flo Chemical Co.
Faesy & Besthoff, Inc.

NITROFORM® TURF FOOD
The most efficient slow-release storehouse of nitrogen available today

INSECTICIDE GRANULES
For soil insects

INSECTICIDE & FUNGICIDE SPRAYS
For turf insects and diseases

SOIL FUMIGANTS
For soil sterilization

WEED & BRUSH KILLERS
For clean turf

Write for price list

TRIANGLE CHEMICAL COMPANY
P. O. BOX 1501
206 LOWER ELM ST.
MACON, GEORGIA
Gabriel Chemicals, Ltd.
Heritage House Products, Inc.
Hopkins Agricultural Chemical Co.
Hub States Chemical & Equip. Co.
Lethelin Products Co., Inc.
Lobel Chemical Corp.
Neil A. Maclean Co., Inc.
Miller Products Co.
Niagara Chemical Div., FMC
National Chemsearch Corp.
Pennsalt Chemicals Corp.
Prentiss Drug & Chemical Co.
B. G. Pratt Co.
Prentiss Drug & Chemical Co., Inc.
Residex Corp.
Riverdale Chemical Co.
Smith Douglass Co., Inc.
O. M. Scott & Sons
Sea Coast Laboratories, Inc.
Sherwin-Williams Co.
Smith Douglass Co., Inc.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Stephenson Chemical Co., Inc.
Thompson Chemicals Corp.
Wood Treating Chemicals Co.

**COPPER ARSENATE, BASIC**
Chipman Chemical Co.
Destruxol Corp.
Hub States Chemical & Equip. Co.
Southern Mill Creek Products Co.

**CYGON**
American Cyanamid Co.
Brayton Chemicals, Inc.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
**Miller Products Co.**
B. G. Pratt Co.
Prentiss Drug & Chemical Co., Inc.
Southern Mill Creek Products Co.

**DDT**
Agricultural Chemicals, Inc.
Alco Chemical Co.
American Fluoride Corp.
American Liquid Fertilizer Co., Inc.
American Oil Co.
Archem Corp.
Archer Chemical Co., Inc.
**Brayton Chemicals, Inc.**
Brown Sugar Chemical Corp.
California Chemical Co., Ortho Div.
Campbell Mfg. Co.
Chapman Chemical Co.
Chemwest, Inc.
Chipman Chemical Co.
W. A. Cleary Corp.
Continental Chemist Corp.
Cornell Chemical & Equip. Co.
Cotton States Chemical Co.
Daly-Herring Co.
Destruxol Corp.
Diamond Alkali Co.
Doggett Fison Co.
E. I. du Pont de Nemours & Co.
E-Z Flo Chemical Co.
Faesy & Bostoff, Inc.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hopkins Agricultural Chemical Co.
Hub States Chemical & Equip. Co.
Lebanon Chemical Corp.
Lethelin Products Co., Inc.
Lobel Chemical Corp.
C. J. Martin & Sons, Inc.
Michlin Chemical Corp.
**Miller Products Co.**
Montrose Chemical Co.
Niagara Chemical Div., FMC
Pennsalt Chemicals Corp.
Prentiss Drug & Chemical Co., Inc.
Riverdale Chemical Co.
Sherwin-Williams Co.
Stauffer Chemical Co.
Southern Mill Creek Products Co.
Thompson Chemicals Corp.
Thompson-Hayward Chemical Co.

**DDVP**
Alco Chemical Co.
Archem Corp.
Archer Chemical Co.
**Brayton Chemicals, Inc.**
Chapman Chemicals, Inc.
Continental Chemist Corp.
Gabriel Chemicals, Ltd.
Hub States Chemical & Equip. Co.
C. J. Martin & Sons, Inc.
**Miller Products Co.**
Niagara Chemical Div., FMC
Norda Essential Oil & Chemical Co.
**B. G. Pratt Co.**
Prentiss Drug & Chemical Co., Inc.
Residex Corp.
Riverdale Chemical Co.
Shell Chemical Co.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Thompson-Hayward Chemical Co.

**DIATOMACEOUS INSECTICIDE**
Phoenix Gems

**DIAZINON**
Alco Chemical Co.
American Fluoride Corp.
Archem Corp.
Bonide Chemical Co., Inc.
**Brayton Chemicals, Inc.**
Campbell Mfg. Co.
Continental Chemist Corp.
Cornell Chemical & Equip. Co., Inc.
Destruxol Corp.
Doggett Fison Co.
Gabriel Chemicals, Ltd.
Geigy Agricultural Chemicals
Hub States Chemical & Equip. Co.
**Miller Products Co.**
B. G. Pratt Co.
Prentiss Drug & Chemical Co., Inc.
Residex Corp.
Riverdale Chemical Co.
Sea Cost Laboratories, Inc.
Southern Mill Creek Products Co.
Thompson-Hayward Chemical Co.
**Triangle Chemical Co.**
Woolfolk Chemical Works, Ltd.

**DIBROM**
(Naled)
Archem Corp.
**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
Chipman Chemical Co.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
**Miller Products Co.**
Niagara Chemical Div., FMC
Prentiss Drug & Chemical Co., Inc.

**DIELDRIN**
Alco Chemical Co.
Archem Corp.
Armour Agricultural Chemical Co.
Bonide Chemical Co., Inc.
**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
Campbell Mfg. Co.
Chapman Chemical Co.
Chemwest, Inc.
Chipman Chemical Co.
Continental Chemist Corp.
Cotton States Chemical Co.
Destruxol Corp.
Elanco Products Co.
Florida Agricultural Supply Co.
Gabriel Chemicals, Ltd.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Lobel Chemical Corp.
Neil A. Maclean Co., Inc.
**Miller Products Co.**
National Chemsearch Corp.
Niagara Chemical Div., FMC
Pennsalt Chemicals Corp.
Pest Control Equip. Co.
B. G. Pratt Co.
Prentiss Drug & Chemical Co., Inc.

**DISYTON**
Brayton Chemicals, Inc.
Chapman Chemical Co.
Chemagro Corp.
General Chemical Div., ACC
McLaughlin Gormley King Co.
Hub States Chemical & Equip. Co.
**Miller Products Co.**
Residex Corp.
Southern Mill Creek Products Co.

**DIPTEREX**
Brayton Chemicals, Inc.
Chemagro Corp.
General Chemical Div., ACC
McLaughlin Gormley King Co.
Hub States Chemical & Equip. Co.
**Miller Products Co.**
Woodbury Chemical Co.

**DINITRO COMPOUNDS**
Armour Agricultural Chemical Co.
**Brayton Chemicals, Inc.**
The Dow Chemical Co.
General Chemical Div., ACC
Niagara Chemical Div., FMC
**Miller Products Co.**
Woodbury Chemical Co.

**DILOCARPUS**
American Cyanamid Co.
**Brayton Chemicals, Inc.**
Chemagro Corp.
General Chemical Div., ACC
McLaughlin Gormley King Co.
Hub States Chemical & Equip. Co.
**Miller Products Co.**
Residex Corp.
Southern Mill Creek Products Co.

**DRINOC**
**Miller Products Co.**
Morton Chemical Co.

**ENDRIN**
Archem Corp.
Armour Agricultural Chemical Co.
**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
Campbell Mfg. Co.
Chapman Chemical Co.
Chipman Chemical Co.
Daly-Herring Co.
Gabriel Chemicals, Ltd.
Myers DU-ALL Sprayers are specially designed for the professional applicator. Versatile enough to handle a wide range of spraying jobs. Tough enough to take the rugged, day-to-day treatment required by professionals. Economical enough to provide effective, low cost coverage for greater per-job profits.

New, Du-All sprayers are available in wheel or skid-mounted models, capacities from 2-10 GPM, tanks in 150 or 200 gallon sizes. Boom attachments optional.

Myers also makes a full line of sprayers with pump capacities from 2-50 GPM, pressures to 800 PSI, tank sizes from 12½ to 1,000 gallons. See your local Myers Sprayer Dealer for details.

designed for the PROFESSIONAL!
<table>
<thead>
<tr>
<th>Company Name</th>
<th>Address</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Cyanamid Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Fluoride Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. J. Martin &amp; Sons, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diamond and Allis Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Florida Agricultural Supply Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gabriel Chemicals, Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Chemical Div., ACC Hooker Chemical Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopkin's Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prentiss Drug &amp; Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residex Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residex Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riverdale Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seacoast Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staufer Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trialgon Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vineland Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodbury Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Treating Chemicals Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LINDANE/BHC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agricultural Chemicals, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prentiss Drug &amp; Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residex Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riverdale Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seacoast Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staufer Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Chemical Div., ACC Hooker Chemical Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopkin's Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prentiss Drug &amp; Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residex Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riverdale Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seacoast Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staufer Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trialgon Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vineland Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodbury Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Treating Chemicals Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEFHOTOCYCLOR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archem Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonide Chemical Co., Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prentiss Drug &amp; Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residex Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riverdale Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seacoast Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staufer Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trialgon Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vineland Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodbury Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Treating Chemicals Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>METHYL PARATHION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Cyanamid Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Potash &amp; Chemical Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California Chemical Co., Ortho Div.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campbell Mfg. Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chapman Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chipman Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continental Chemist Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cornwall Chemical &amp; Equip. Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton States Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deuxruxol Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doggett Fison Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elanco Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elanco Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Chemical Div., ACC Hooker Chemical Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopkin's Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prentiss Drug &amp; Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residex Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riverdale Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seacoast Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staufer Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trialgon Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vineland Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodbury Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Treating Chemicals Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>METHYL TRITHION*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California Chemical Co., Ortho Div.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chapman Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chipman Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton States Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gabriel Chemicals, Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Chemical Div., ACC Hooker Chemical Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopkin's Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prentiss Drug &amp; Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residex Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riverdale Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seacoast Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staufer Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trialgon Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vineland Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodbury Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Treating Chemicals Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHOSPHAMIDON*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>California Chemical Co., Ortho Div.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chipman Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gabriel Chemicals, Ltd.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Chemical Div., ACC Hooker Chemical Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hopkin's Agricultural Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daly-Herring Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prentiss Drug &amp; Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residex Corp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riverdale Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seacoast Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staufer Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trialgon Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vineland Laboratories, Inc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodbury Chemical Co.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Treating Chemicals Co.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The table entries are truncated for readability. The full list includes many more entries.
Control Insects
this better, safer way!

USE SEVIN
INSECTICIDE

Effective and long-lasting SEVIN provides powerful control of major insect pests of trees and shrubs. SEVIN is safer to handle and safer to birds and wildlife than most other insecticides.

You knock out chinch bug, sod webworm and many other turf pests easily with SEVIN. It is deadly to insects, and its lower toxicity to humans, pets, birds and fish makes SEVIN ideal to use in any turf area.

SEVIN controls Japanese beetle, rose slug, codling moth, leafhopper and other insects on garden trees, flowers and vegetables—with few applications. Versatile SEVIN controls more than 150 different insects.

SEVIN insecticide gives you a wide margin of safety in insect control programs that provide effective, long-lasting, economical results. Powerful against insects, but safer to handle and use than most other insecticides, SEVIN is ideal for use by your spray crews in urban and suburban areas as well as in country recreation developments. For detailed information, contact: Union Carbide Chemicals, 270 Park Ave., New York, N. Y. 10017.

Sevin is the registered trade mark of Union Carbide Corporation for carbaryl insecticide.
**PYRETHRUM**

Alco Chemical Co.
Archem Corp.
Bonide Chemical Co., Inc.
**Brayton Chemicals, Inc.**
Champion Chemical Co.
Continental Chemiste Corp.
Cornell Chemical & Equip. Co.
Destruxol Corp.
Gabriel Chemicals, Ltd.
**Hub States Chemical & Equip. Co.**
Lethelin Products Co., Inc.
McLaughlin Gormley King Co.
**Niagara Chemical Div., FMC**
B. G. Pratt Co.
Prentiss Drug & Chemical Co., Inc.
Residex Corp.
Southern Mill Creek Products Co.
Thompson-Hayward Chemical Co.
**Triangle Chemical Co.**
Utility Chemical Co.
Wood Treating Chemicals Co.

**PYRETHRUM/ROTENONE**

Archem Corp.
Bonide Chemical Co., Inc.
**Brayton Chemicals, Inc.**
Champion Chemical Co.
Daly-Herring Co.
Fairfield Chemicals, FMC
gabel Chemicals, Ltd.
Hopkins Agricultural Chemical Co.
Hub States Chemical & Equip. Co.
**Niagara Chemical Div., FMC**
C. J. Martin & Sons, Inc.
**Miller Products Co.**
B. G. Pratt Co.
Prentiss Drug & Chemical Co.
Seacoast Laboratories, Inc.

**ROTENONE**

Bonide Chemical Co., Inc.
**Brayton Chemicals, Inc.**
Champion Chemical Co.
**Brayton Chemicals, Inc.**
Gabriel Chemicals, Ltd.
**Hub States Chemical & Equip. Co.**
Niagara Chemical Div., FMC
C. J. Martin & Sons, Inc.
**Miller Products Co.**
B. G. Pratt Co.
Prentiss Drug & Chemical Co.
Seacoast Laboratories, Inc.
Southern Mill Creek Products Co.
Stephenson Chemical Co., Inc.
Thompson-Hayward Chemical Co.
**Triangle Chemical Co.**

**SEVIN**

(Carbaryl)
American Fluoride Corp.
Archem Corp.
Armour Agricultural Chemical Co.
Bonide Chemical Co., Inc.
**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
Champion Chemical Co.
Cotton States Chemical Co.
Daly-Herring Co.
Destruxol Corp.
Doggett Fison Co.
Faesy & Besthoff, Inc.
Gabriel Chemicals, Ltd.
**General Chemical Div., ACC**
Hub States Chemical & Equip. Co.
C. J. Martin & Sons, Inc.
**Miller Products Co.**
**Niagara Chemical Div., FMC**
B. G. Pratt Co.
Residex Corp.
Riverdale Chemical Co.
O. M. Scott & Sons
Seacoast Laboratories, Inc.
Smith Douglass Co., Inc.
**Stauffer Chemical Co.**
Stephenson Chemical Co., Inc.
**Union Carbide Corp.**
**SYSTOX (Demeton)**
**Brayton Chemicals, Inc.**
Chemagro Corp.
Chipman Chemical Co.
**General Chemical Div., ACC**
**Hub States Chemical & Equip. Co.**
**Miller Products Co.**
Woodbury Chemical Co.

**TDE (DDD)**

Armour Agricultural Chemical Co.
Bonide Chemical Co., Inc.
**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
Daly-Herring Co.
Gabriel Chemicals, Ltd.
**General Chemical Div., ACC**
**Miller Products Co.**
**Niagara Chemical Div., FMC**
Riverdale Chemical Co.
Rohm & Haas Co.
Seacoast Laboratories, Inc.
Sherwin-Williams Co.
Stauffer Chemical Co.
**Triangle Chemical Co.**
Woodbury Chemical Co.
Wood Treating Chemicals Co.

**TEPP**

American Potash and Chemical Corp.
**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
Champion Chemical Co.
Gabriel Chemicals, Ltd.
**General Chemical Div., ACC**
**Miller Products Co.**
**Niagara Chemical Div., FMC**
Sherwin-Williams Co.
Stauffer Chemical Co.
**Triangle Chemical Co.**

**THALLIUM SULFATE**

Lethelin Products Co., Inc.

**THANITE**

Hercules Powder Co.

**THIMET**

See Miticides

**THIODAN**

**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
General Chemical Div., ACC
**Miller Products Co.**
Niagara Chemical Div., FMC

**TOXAPHENE**

Alco Chemical Co.
Armour Agricultural Chemical Co.
**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
Champion Chemical Co.
Chemwest, Inc.
Champion Chemical Co.
Daly-Herring Co.
Destruxol Corp.
Gabriel Chemicals, Ltd.
**General Chemical Div., ACC**
**Hercules Powder Co.**
Hub States Chemical & Equip. Co.
Neil A. Maclean Co., Inc.
C. J. Martin & Sons, Inc.
**Miller Products Co.**
**Niagara Chemical Div., FMC**
Penncil Chemicals Corp.
Riverdale Chemical Co.
Southern Mill Creek Products Co.
**Stauffer Chemical Co.**
Thompson-Hayward Chemical Co.
**Triangle Chemical Co.**
Woodbury Chemical Co.
Wood Treating Chemicals Co.

**TRITHION**

Armour Agricultural Chemical Co.
**Brayton Chemicals, Inc.**
California Chemical Co., Ortho Div.
**Miller Products Co.**
**Niagara Chemical Div., FMC**
Penncil Chemicals Corp.
Seacoast Laboratories, Inc.
Southern Mill Creek Products Co.
**Stauffer Chemical Co.**
Thompson-Hayward Chemical Co.
**Triangle Chemical Co.**
Woolfolk Chemical Works, Ltd.

**V-C 13**

Armour Agricultural Chemical Co.
**Miller Products Co.**
Penncil Chemicals Corp.
Southern Mill Creek Products Co.
Virginia-Carolina Chemical Co.

---

**TWIN TANK**

**POWER KNAPSACK MISTBLOWER DUSTER**

Spray, dust, wet-dust, and apply granules with the same machine; no extra attachments needed.

NO DISMANTLING OR REBUILDING — Two separate back tanks and the exclusive KWH 'non-clog' nozzle permit single or simultaneous application of wet and dry chemicals. Cover up to 40 ft. swaths. Simple finger-tip controls give precise regulation of output and allow instant switching from liquid to dust or granules and vice-versa. Sturdy all-metal construction yet only 27 lbs.

---

Contact your dealer or write to:
VANDERMOLEN EXPORT CO.
378 Mountain Ave.
North Caldwell, N. J.
DACAMINE,
kills brush and weeds
as if you pulled them out by hand

For difficult-to-control weeds and brush species, Diamond Dacamine provides the safety of amines with the killing power of the esters. Dacamine herbicide is an emulsifiable amine. The advantages: positive brush and weed control, materials needed reduced, hazards of crop damage reduced. Used along the sides of roads, along railroad tracks, around lakes and ponds, Dacamine will prove one of the most useful and effective means of controlling unsightly and destructive weed and brush growths. For details on specific Dacamine formulation techniques, write Diamond Alkali Company, 300 Union Commerce Bldg., Cleveland, Ohio 44114.

Diamond Chemicals

When Writing to Advertisers Please Mention WEEDS TREES AND TURF
MITICIDES

ARAMITE*
Archem Corp.
Bonide Chemical Co., Inc.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chemagro Chemical Co., Inc.
General Chemical Div., ACC
Miller Products Co.
Naugatuck Chemical
Niagara Chemical Div., FMC
Southern Mill Creek Products Co.
Andrew Wilson Co., Inc.

BIDRIN*
Daly-Herring Co.
Miller Products Co.
Niagara Chemical Div., FMC
Shell Chemical Co.
Stauffer Chemical Co.
The Dow Chemical Co.
Thompson-Hayward Chemical Co.
Triangle Chemical Co.

CHLOROBENZILATE*
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
General Chemical Div., ACC
Miller Products Co.
Prentiss Drug & Chemical Co.
Residex Corp.
Triangle Chemical Co.

CHLOROPICRIN
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
General Chemical Div., ACC
Miller Products Co.
Prentiss Drug & Chemical Co.
Residex Corp.
Triangle Chemical Co.

DELNAV*
American Liquid Fertilizer Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Genégy Agricultural Chemical
Hub States Chemical & Equip. Co.
Miller Products Co.
Prentiss Drug & Chemical Co.
Residex Corp.

DIMITE*
American Cyanamid Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Miller Products Co.
Triangle Chemical Co.

ETHION
See Insecticides

GENITE*
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
General Chemical Div., ACC
Miller Products Co.
Niagara Chemical Div., FMC
B. G. Pratt Co.
Southern Mill Creek Products Co.

KARATHANE
Bonide Chemical Co., Inc.
Brayton Chemicals, Inc.
Gabriel Chemicals, Ltd.
Neil A. Maclean Co., Inc.
Miller Products Co.
Niagara Chemical Div., FMC
B. G. Pratt Co.
Rohm & Haas
Seacoast Laboratories, Inc.
Smith Douglass Co., Inc.

KELTHANE*
Bonide Chemical Co.

METHYL TRITHION*
See Insecticides

MITOX*
California Chemical Co., Ortho Div.

MORESTAN*
Brayton Chemicals, Inc.
Chemagro Corp.
Miller Products Co.

MOROCIDE*
See Fungicides

OVEX
Bonide Chemical Co.
Brayton Chemicals, Inc.
The Dow Chemical Co.
Gabriel Chemicals, Ltd.
General Chemical Division, ACC

PENTAC*
Brayton Chemicals, Inc.
Hooker Chemical Corp.

SCHRADAN
(OMPA)
Miller Products Co.
Pennsalt Chemicals Corp.

SYSTOX*
(Demeton)
See Insecticides

TEDION*
American Liquid Fertilizer Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
General Chemical Div., ACC
Hub States Chemical & Equip. Co.
Morton Products Co.
Triangle Chemical Co.

TOXAPHENE
See Insecticides

TRITHION*
See Insecticides

D-D*
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
The Dow Chemical Co.
Miller Products Co.
Million Products Co.
Southern Mill Creek Products Co.

FUMAZONE*
Brayton Chemicals, Inc.
Dow Chemical Co.
Miller Products Co.
Residex Corp.

NEMAGON
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Daly-Herring Co.
Miller Products Co.
Niagara Chemical Div., FMC
B. G. Pratt Co.
Shell Chemical Co.
Southern Mill Creek Products Co.
Stephenson Chemical Co., Inc.

PENPHENE*
Pennsalt Chemicals Corp.

VAPAM*
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
Destruxol Corp.
E. I. du Pont de Nemours & Co., Inc.
Miller Products Co.
Residex Corp.
Southern Mill Creek Products Co.
Stauffer Chemical Co.

VC-13*
See Insecticides

VORLEX*
Armour Agricultural Chemical Co.
Miller Products Co.
Morton Chemical Co.

SOIL FUMIGANTS
Also See Nematocides

BEDRENCH
Niagara Chemical Div., FMC

DICHLOROPROPENE FUMIGANTS
Armour Agricultural Chemical Co.
Vineland Laboratories, Inc.

DOFUME*
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
The Dow Chemical Co.
Miller Products Co.
Residex Corp.
Southern Mill Creek Products Co.

ETHYLENE DIBROMIDE
American Potash & Chemical Corp.
Armour Agricultural Chemical Co.
The Dow Chemical Co.
Vineland Laboratories, Inc.

METHYL BROMIDE
American Potash & Chemical Corp.
Archem Corp.

MITICIDES

ARAMITE*
Archem Corp.
Bonide Chemical Co., Inc.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chemagro Chemical Co., Inc.
General Chemical Div., ACC
Miller Products Co.
Naugatuck Chemical
Niagara Chemical Div., FMC
Southern Mill Creek Products Co.
Andrew Wilson Co., Inc.

BIDRIN*
Daly-Herring Co.
Miller Products Co.
Niagara Chemical Div., FMC
Shell Chemical Co.
Stauffer Chemical Co.
The Dow Chemical Co.
Thompson-Hayward Chemical Co.
Triangle Chemical Co.

CHLOROBENZILATE*
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
General Chemical Div., ACC
Miller Products Co.
Prentiss Drug & Chemical Co.
Residex Corp.
Triangle Chemical Co.

CHLOROPICRIN
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
General Chemical Div., ACC
Miller Products Co.
Prentiss Drug & Chemical Co.
Residex Corp.
Triangle Chemical Co.

DELNAV*
See Insecticides

DIBROM*  
See Insecticides

DIMITE*  
Miller Products Co.
Pennsalt Chemicals Corp.
Sherwin-Williams Co.

ETHION
See Insecticides

GENITE*  
Brayton Chemicals, Inc.
General Chemical Div., ACC
Miller Products Co.
Niagara Chemical Div., FMC
B. G. Pratt Co.
Southern Mill Creek Products Co.

KARATHANE
Bonide Chemical Co., Inc.
Brayton Chemicals, Inc.
Gabriel Chemicals, Ltd.
Neil A. Maclean Co., Inc.
Miller Products Co.
Niagara Chemical Div., FMC
B. G. Pratt Co.
Rohm & Haas
Seacoast Laboratories, Inc.
Smith Douglass Co., Inc.

KELTHANE*
Bonide Chemical Co.
<table>
<thead>
<tr>
<th>Company Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armour Agricultural Chemical Co.</td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
</tr>
<tr>
<td>The Dow Chemical Co.</td>
</tr>
<tr>
<td>E-Z Flo Chemical Co.</td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
</tr>
<tr>
<td>Lobel Chemical Corp.</td>
</tr>
<tr>
<td>Neil A. Maclean Co., Inc.</td>
</tr>
<tr>
<td>Michigan Chemical Corp.</td>
</tr>
<tr>
<td>Miller Products Co.</td>
</tr>
<tr>
<td>Residex Corp.</td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
</tr>
<tr>
<td>Triangle Chemical Co.</td>
</tr>
<tr>
<td>Velsicol Chemical Co.</td>
</tr>
<tr>
<td>Wood Treating Chemicals Co.</td>
</tr>
<tr>
<td>The Dow Chemical Co.</td>
</tr>
<tr>
<td>Emery Industries, Inc.</td>
</tr>
<tr>
<td>General Aniline and Film Corp.</td>
</tr>
<tr>
<td>Miller Products Co.</td>
</tr>
<tr>
<td>Residex Corp.</td>
</tr>
<tr>
<td>Wood Ridge Chemical Corp.</td>
</tr>
<tr>
<td>Telone*</td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
</tr>
<tr>
<td>The Dow Chemical Co.</td>
</tr>
<tr>
<td>Miller Products Co.</td>
</tr>
<tr>
<td>Residex Corp.</td>
</tr>
<tr>
<td>Trizone*</td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
</tr>
<tr>
<td>The Dow Chemical Co.</td>
</tr>
<tr>
<td>Vidden D*</td>
</tr>
<tr>
<td>The Dow Chemical Co.</td>
</tr>
<tr>
<td>SURFACTANTS</td>
</tr>
<tr>
<td>EMULSIFIERS</td>
</tr>
<tr>
<td>Archem Corp.</td>
</tr>
<tr>
<td>Armour Industrial Chemicals Co.</td>
</tr>
<tr>
<td>Atlas Chemical Industries, Inc.</td>
</tr>
<tr>
<td>Chapman Chemical Co.</td>
</tr>
<tr>
<td>Cloro-Spray Corp.</td>
</tr>
<tr>
<td>Destruxol Corp.</td>
</tr>
<tr>
<td>Emery Industries, Inc.</td>
</tr>
<tr>
<td>General Aniline and Film Corp.</td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
</tr>
<tr>
<td>Industrial Materials Co.</td>
</tr>
<tr>
<td>Jefferson Chemical Co.</td>
</tr>
<tr>
<td>Marathon</td>
</tr>
<tr>
<td>C. J. Martin &amp; Sons, Inc.</td>
</tr>
<tr>
<td>Miller Products Co.</td>
</tr>
<tr>
<td>Petrochemicals Co.</td>
</tr>
<tr>
<td>Retzloff Chemical Co.</td>
</tr>
<tr>
<td>Rohm &amp; Haas Co.</td>
</tr>
<tr>
<td>Sole Chemical Corp.</td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
</tr>
<tr>
<td>A. E. Staley Manufacturing Co.</td>
</tr>
<tr>
<td>Stepan Chemical Co.</td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
</tr>
<tr>
<td>Triangle Chemical Co.</td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
</tr>
<tr>
<td>Woodbury Chemical Co.</td>
</tr>
<tr>
<td>WETTING AGENTS</td>
</tr>
<tr>
<td>Alco Chemical Co.</td>
</tr>
<tr>
<td>American Cyanamid Co.</td>
</tr>
<tr>
<td>Aquatrols Corp. of America</td>
</tr>
<tr>
<td>Archem Corp.</td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
</tr>
<tr>
<td>Armour Industrial Chemicals Co.</td>
</tr>
<tr>
<td>Chapman Chemical Co.</td>
</tr>
<tr>
<td>Chinnnap Chemical Co.</td>
</tr>
<tr>
<td>W. A. Cleary Corp.</td>
</tr>
<tr>
<td>Cloro-Spray Corp.</td>
</tr>
<tr>
<td>Colloidial Products Corp.</td>
</tr>
<tr>
<td>Destruxol Corp.</td>
</tr>
<tr>
<td>The Dow Chemical Co.</td>
</tr>
<tr>
<td>Emery Industries, Inc.</td>
</tr>
<tr>
<td>General Aniline and Film Corp.</td>
</tr>
<tr>
<td>Jefferson Chemical Co.</td>
</tr>
<tr>
<td>Miller Products Co.</td>
</tr>
<tr>
<td>Petrochemicals Co.</td>
</tr>
<tr>
<td>Retzloff Chemical Co.</td>
</tr>
<tr>
<td>Rohm &amp; Haas Co.</td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
</tr>
<tr>
<td>Tennessee Corp.</td>
</tr>
<tr>
<td>Triangle Chemical Co.</td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
</tr>
<tr>
<td>&quot;Water-In&quot; Inc.</td>
</tr>
<tr>
<td>Woodbury Chemical Co.</td>
</tr>
<tr>
<td>SPREADER STICKERS</td>
</tr>
<tr>
<td>Agricultural Specialties, Inc.</td>
</tr>
<tr>
<td>Alco Chemical Co.</td>
</tr>
<tr>
<td>Archem Corp.</td>
</tr>
<tr>
<td>Armstrong &amp; Co.</td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
</tr>
<tr>
<td>California Chemical Co., Ortho Div.</td>
</tr>
<tr>
<td>Chipman Chemical Co.</td>
</tr>
<tr>
<td>Colloidal Products Corp.</td>
</tr>
<tr>
<td>Destruxol Corp.</td>
</tr>
<tr>
<td>E. I. du Pont de Nemours &amp; Co.</td>
</tr>
<tr>
<td>Emery Industries, Inc.</td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
</tr>
<tr>
<td>Miller Products Co.</td>
</tr>
<tr>
<td>Nursery Specialty Products</td>
</tr>
<tr>
<td>Pennsalt Chemicals Corp.</td>
</tr>
<tr>
<td>Retzloff Chemical Co.</td>
</tr>
<tr>
<td>Rohm &amp; Haas Co.</td>
</tr>
<tr>
<td>Sole Chemical Corp.</td>
</tr>
<tr>
<td>Southern Mill Creek Products Co.</td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
</tr>
<tr>
<td>TRIZONE*</td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
</tr>
<tr>
<td>The Dow Chemical Co.</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
</tr>
<tr>
<td>Aquatril Corp.</td>
</tr>
<tr>
<td>Eagle-Picher Co.</td>
</tr>
<tr>
<td>Great Lakes Carbon Corp.</td>
</tr>
<tr>
<td>TIEC*</td>
</tr>
<tr>
<td>American Talc Co.</td>
</tr>
<tr>
<td>Blue Ridge Talc Co., Inc.</td>
</tr>
<tr>
<td>Commercial Minerals Co.</td>
</tr>
<tr>
<td>Miller Products Co.</td>
</tr>
<tr>
<td>KAOLINS (Clay)</td>
</tr>
<tr>
<td>Narvon Mines, Ltd.</td>
</tr>
<tr>
<td>United Clay Mines</td>
</tr>
<tr>
<td>MISCELLANEOUS COMPOUNDS</td>
</tr>
<tr>
<td>ANTIDESICCANT SPRAYS</td>
</tr>
<tr>
<td>Aquatrols Corp. of America</td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
</tr>
<tr>
<td>Bonide Chemical Co.</td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
</tr>
<tr>
<td>Cornell Chemical &amp; Equipment Co.</td>
</tr>
<tr>
<td>Nursery Specialty Products</td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
</tr>
<tr>
<td>Andrew Wilson Co., Inc.</td>
</tr>
<tr>
<td>TREE WOUND PAINT</td>
</tr>
<tr>
<td>Bartlett Mfg. Co.</td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
</tr>
<tr>
<td>Samuel Cabot, Inc.</td>
</tr>
<tr>
<td>Walter E. Clark &amp; Son</td>
</tr>
<tr>
<td>A. M. Leonard &amp; Son, Inc.</td>
</tr>
<tr>
<td>Andrew Wilson Co., Inc.</td>
</tr>
<tr>
<td>TREE KILLERS</td>
</tr>
<tr>
<td>American Talc Co.</td>
</tr>
<tr>
<td>Bonide Chemical Co.</td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
</tr>
<tr>
<td>Chapman Chemical Co.</td>
</tr>
<tr>
<td>Chipman Chemical Co.</td>
</tr>
<tr>
<td>E. I. du Pont de Nemours &amp; Co.</td>
</tr>
<tr>
<td>Hub States Chemical &amp; Equip. Co.</td>
</tr>
<tr>
<td>Industrial Materials Co.</td>
</tr>
<tr>
<td>Thompson-Hayward Chemical Co.</td>
</tr>
<tr>
<td>Tree Chemical Co.</td>
</tr>
<tr>
<td>STUMP REMOVING COMPOUNDS</td>
</tr>
<tr>
<td>Brayton Chemicals, Inc.</td>
</tr>
<tr>
<td>E. I. du Pont de Nemours &amp; Co.</td>
</tr>
<tr>
<td>Utility Chemical Co.</td>
</tr>
<tr>
<td>ANTICAKING CONDITIONERS</td>
</tr>
<tr>
<td>Petrochemicals Co.</td>
</tr>
<tr>
<td>United Clay Mines</td>
</tr>
<tr>
<td>ANIMAL REPELLENTS</td>
</tr>
<tr>
<td>Morton Chemical Co.</td>
</tr>
<tr>
<td>Sudbury Laboratories</td>
</tr>
</tbody>
</table>

**DILUENTS**

**GRANULAR, MISCELLANEOUS**

American Vermiculite Corp.

**DIATOMACEOUS EARTH**

American Talc Co.

**MISCELLANEOUS COMPOUNDS**

American Talc Co.

**TREES, TREES AND TURF, December, 1964**

33
TURF COLOR SPRAYS
W. A. Cleary Corp.
Cornell Chemical & Equipment Co.
Doggett-Fison Co.
The Gregg Co.
Mailinekrodt Chemical Works

GRASS SEED
Asgrow Seed Company
Chandler Div.
O. M. Scott & Sons

MULCHES
TURFIBER*
International Paper Co.

SEEDING MULCH
Armour Agricultural Chemical Co.
Boise Cascade Corp.
Bryanton Chemicals, Inc.
Troy Blanket Mills

EROSION CONTROL MULCHES
Cloro-Spray Corp.

SOIL CONDITIONERS
PEAT-HUMUS
Agri-Humus Co., Inc.
Bryanton Chemicals, Inc.
Conrad Fafard, Inc.
Floridin Co.
Michigan Peat, Inc.
Waverly Petroleum Products Co.
Western Peat

TURFACE*
Wyandotte Chemicals Corp.

BARK
Boise Cascade Corp.

VERMICULITE
American Vermiculite Corp.
Michigan Peat, Inc.
Zonolite Division

PEAT MOSS
Conrad Fafard, Inc.
Premier Peat Moss Corp.

CALCINED CLAY
Floridin Co.
Minerals & Chemicals Philipp Corp.
Oil-Dri Corp. of America

DIALOAM*
Eagle-Picher Co.

pH CONTROLLERS
(Base Formers—Raise pH)

LIME
Dolcito Quarry Co.
Ohio Lime Co.

LIMESTONE
Columbia Quarry Co.
Commercial Minerals Co.
Dolcito Quarry Co.
Limestone Products Div.
Ohio Lime Co.

LIMESTONE, BURNED CALCITE
Columbia Quarry Co.
Limestone Products Division

Minerals & Chemicals Philipp Corp.
Mississippi Lime Co.

LIMESTONE, HYDRATED CALCITE
Columbia Quarry Co.
Limestone Products Div.
Minerals & Chemicals Philipp Corp.
Mississippi Lime Co.

DOLomite
Dolcito Quarry Co.
Heritage House Products, Inc.
Ohio Lime Co.

DOLOMITIC LIME, HYDRATED
Ohio Lime Co.

CALCIUM CARBONATE
Columbia Quarry Co.
Commercial Minerals Co.

(Acid Formers—Lower pH)

SULFUR
Destruexol Corp.
General Chemical Div., ACC
C. J. Martin & Sons, Inc.
Miller Products Co.
Stauffer Chemical Co.

ALUMINUM SULFATE
Bryanton Chemicals, Inc.
Faeby & Besthoff, Inc.
General Chemical Div., ACC
M. W. Hardy & Co., Inc.
International Minerals & Chemical Utility Chemical Co.
Andrew Wilson Co., Inc.

AMMONIUM THIOSULFATE
General Chemical Div., ACC

AMMONIUM POLYSULFIDE (APS*)
General Chemical Div., ACC

LIQUID FISH
K. C. Mattson Co.

FERTILIZER, COMMERCIAL

NITROGEN SOURCES

AMMONIUM NITRATE—UREA
American Cyanamid Co.
Armour Agricultural Chemical Co.
Best Fertilizer Co.
California Chemical Co., Ortho Div.
Donner-Hanna Coke Corp.
Faeby & Besthoff, Inc.
Hercules Powder Co.
Ohio Lime Co.
Miller Products Co.
Ohio Lime Co.
Utility Chemical Co.

AMMONIUM PHOSPHATE
American Cyanamid Co.
Armour Agricultural Chemical Co.
Best Fertilizer Co.
California Chemical Co., Ortho Div.
Donner-Hanna Coke Corp.
Faeby & Besthoff, Inc.
Warren Wilson Co., Inc.

AMMONIUM SULFATE
American Cyanamid Co.

ORGANIC NITROGEN

HU ACTINITE*
Armour Agricultural Chemical Co.

MILORGANITE*
Milwaukee Sewerage Commission
Armour Agricultural Chemical Co.

TRU ORGANIC
Southern Mill Creek Products Co.

SOYBEAN MEAL
Archem Corp.

COTTONSEED MEAL
Armour Agricultural Chemical Co.
Destruexol Corp.
Faeby & Besthoff, Inc.
Andrew Wilson Co., Inc.

AGRINITE
American Cyanamid Co.

WEEDS, TREES AND TURF. December, 1964
SMIROW TANKAGE
Smith-Douglass Co., Inc.

NUTRONITE
Smith-Douglass Co., Inc.

PHOSPHOROUS SOURCES

PHOSPHATE ROCK
American Agricultural Chemical Co.
American Cyanamid Co.
Armour Agricultural Chemical Co.
Columbia Quarry Co.
Destruxol Corp.
International Minerals & Chemical

BONE MEAL, RAW
Andrew Wilson Co., Inc.

BONE MEAL, STEAMED
Armour Agricultural Chemical Co.
Faesy & Besthoff, Inc.
Smith-Douglass Co., Inc.
Andrew Wilson Co., Inc.

FISH SCRAP
Armour Agricultural Chemical Co.
Destruxol Corp.
K. C. Mattson Co.
Miller Products Co.

NITRATE OF SODA
Faesy & Besthoff, Inc.

SEWAGE SLUDGE
Armour Agricultural Chemical Co.

SUPERPHOSPHATE, CONCENTRATED
American Agricultural Chemical Co.
American Cyanamid Co.
Armour Agricultural Chemical Co.
California Chemical Co., Ortho Div.
International Minerals & Chemical
Miller Products Co.
Tennessee Corp.

SUPERPHOSPHATE, ENRICHED
American Cyanamid Co.

SUPERPHOSPHATE, NORMAL
American Agricultural Chemical Co.
American Cyanamid Co.
Armour Agricultural Chemical Co.
Best Fertilizer Co.
California Chemical Co., Ortho Div.
Faesy & Besthoff, Inc.
Andrew Wilson Co., Inc.

MONOAMMONIUM PHOSPHATE
California Chemical Co., Ortho Div.

DIAMMONIUM PHOSPHATE
American Agricultural Chemical Co.
American Cyanamid Co.
Armour Agricultural Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
John Deere Chemical Co.
Hooker Chemical Corp.
International Minerals & Chemical
Tennessee Corp.
Utility Chemical Co.

AMMONIUM PHOSPHATE NITRATE
Armour Agricultural Chemical Co.

California Chemical Co., Ortho Div.

AMMONIUM PHOSPHATE SULFATE
Best Fertilizer Co.

AMMONIUM PHOSPHATE—UREA
John Deere Chemical Co.

PHOSPHORIC ACID
Armour Agricultural Chemical Co.

POTASH SOURCES

NITRATE OF POTASH
Armour Agricultural Chemical Co.
Miller Products Co.
Utility Chemical Co.

POTASSIUM CARBONATE
Hooker Chemical Corp.
Utility Chemical Co.

POTASSIUM SULFATE
American Agricultural Chemical Co.
American Potash & Chemical Co.
Armour Agricultural Chemical Co.

POTASSIUM CHLORIDE
(MURIATE OF POTASH)
American Potash & Chemical Corp.
International Minerals & Chemical
U.S. Borax

Check off our name on Reader Reply Card!

USE
The Right Chemical
On the Right Crop
In the Right Manner
At the Right Time
In the Right Amount

WE DISTRIBUTE
The Nation's Leading Brands of
Agricultural Chemicals and
Allied Equipment.

BACKED UP BY
30 Years' Field Experience in
Economic Entomology on Control
Problems and Chemical Use.

FOR A COMPLETE LINE:

✓ Herbicides
✓ Chelating Agents
✓ Fungicides
✓ Growth Retardants
✓ Insecticides
✓ Miticides
✓ Nematicides
✓ Soil Fumigants
✓ Equipment
✓ Safety Materials

BRAYTON CHEMICALS, INC.
P.O. Box 56 • Burlington, Iowa • Tel.: 319-752-2779
## FERTILIZER, MIXED ANALYSIS

### SOLID

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul E. Allen Co.</td>
<td>Mississippi</td>
</tr>
<tr>
<td>American Cyanamid Co.</td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Best Fertilizer Co.</td>
<td></td>
</tr>
<tr>
<td><strong>Bryton Chemicals, Inc.</strong></td>
<td></td>
</tr>
<tr>
<td>California Chemical Co., Ortho Div.</td>
<td>Tennessee</td>
</tr>
<tr>
<td>Columbia Nitrogen</td>
<td></td>
</tr>
<tr>
<td>Dairyman's Fertilizer Cooperative</td>
<td></td>
</tr>
<tr>
<td>Doggett Fison Co.</td>
<td></td>
</tr>
<tr>
<td>Faesy &amp; Besthoff, Inc.</td>
<td></td>
</tr>
<tr>
<td>W. R. Grace &amp; Co.</td>
<td></td>
</tr>
<tr>
<td>Hercules Powder Co.</td>
<td></td>
</tr>
<tr>
<td>International Minerals &amp; Chemical</td>
<td></td>
</tr>
<tr>
<td>Miller Chemical &amp; Fertilizer Corp.</td>
<td></td>
</tr>
<tr>
<td><strong>Miller Products Co.</strong></td>
<td></td>
</tr>
<tr>
<td>Nitrogen Division, ACC</td>
<td></td>
</tr>
<tr>
<td>Robert B. Peters Co., Inc.</td>
<td></td>
</tr>
<tr>
<td>Ra-Pid-Gro Corp.</td>
<td></td>
</tr>
<tr>
<td>O. M. Scott &amp; Sons</td>
<td></td>
</tr>
<tr>
<td>Southwest Potash Corp.</td>
<td></td>
</tr>
</tbody>
</table>

### PLASTIC COATED—SLOW RELEASE N-P-K

- Archer Daniels Midland Co.

### LIQUID

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Liquid Fertilizer Co., Inc.</td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Best Fertilizer Co.</td>
<td></td>
</tr>
<tr>
<td><strong>Bryton Chemicals, Inc.</strong></td>
<td></td>
</tr>
<tr>
<td>Certified Laboratories</td>
<td></td>
</tr>
<tr>
<td>Cloro-Spray Corp.</td>
<td></td>
</tr>
<tr>
<td>Hercules Powder Co.</td>
<td></td>
</tr>
<tr>
<td>National Chemsearch Corp.</td>
<td></td>
</tr>
<tr>
<td>Plant Marvel Laboratories</td>
<td></td>
</tr>
<tr>
<td>Smith-Douglas Co., Inc.</td>
<td></td>
</tr>
</tbody>
</table>

### TRACE ELEMENTS

#### MAGNESIUM

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Berkshires Chemicals, Inc.</td>
<td></td>
</tr>
<tr>
<td>Destruxol Corp.</td>
<td></td>
</tr>
<tr>
<td>The Dow Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>C. J. Martin &amp; Sons, Inc.</td>
<td></td>
</tr>
<tr>
<td><strong>Tennessee Corp.</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### MAGNESIUM SULFATE

- Armour Agricultural Chemical Co.
- Berkeley Chemicals, Inc.
- Destruxol Corp.
- The Dow Chemical Co.
- C. J. Martin & Sons, Inc.
- **Tennessee Corp.**

#### MAGNESIUM CARBONATE

- See Dolomite

#### MANGANESE

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>W. R. E. Andrews Co.</td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Carus Chemical Co., Inc.</td>
<td></td>
</tr>
<tr>
<td>C. J. Martin &amp; Sons, Inc.</td>
<td></td>
</tr>
<tr>
<td><strong>Tennessee Corp.</strong></td>
<td></td>
</tr>
</tbody>
</table>

#### MANGANESE SULFATE

- Armour Agricultural Chemical Co.
- Chapman Chemical Co.
- Destruxol Corp.
- Eagle-Picher Co.
- Geigy Agricultural Chemicals
- **Miller Products Co.**
- Robert B. Peters Co., Inc.

#### MANGANESE CHELATE

- Armour Agricultural Chemical Co.
- Chapman Chemical Co.
- Destruxol Corp.
- Eagle-Picher Co.
- Geigy Agricultural Chemicals
- **Miller Products Co.**
- Robert B. Peters Co., Inc.

#### MANGANOUS OXIDE

- **Tennessee Corp.**

#### COPPER

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acme Quality Paints, Inc.</td>
<td></td>
</tr>
<tr>
<td>W. R. E. Andrews Co.</td>
<td></td>
</tr>
</tbody>
</table>

#### COPPER SULFATE

- Armour Agricultural Chemical Co.
- Destruxol Corp.
- C. J. Martin & Sons, Inc.
- Miller Products Co.
- Phelps Dodge Refining Corp.
- Tennessee Corp.
- Triangle Chemical Co.

#### COPPER CHELATE

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Chapman Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>Destruxol Corp.</td>
<td></td>
</tr>
<tr>
<td>Eagle-Picher Co.</td>
<td></td>
</tr>
<tr>
<td>Geigy Agricultural Chemicals</td>
<td></td>
</tr>
</tbody>
</table>
- **Miller Products Co.**
- Robert B. Peters Co., Inc.

#### ZINC

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Smelting &amp; Refining Co.</td>
<td></td>
</tr>
<tr>
<td>W. R. E. Andrews Co.</td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
</tr>
<tr>
<td>California Chemical Co., Ortho Div.</td>
<td></td>
</tr>
<tr>
<td>Destruxol Corp.</td>
<td></td>
</tr>
<tr>
<td>Eagle-Picher Co.</td>
<td></td>
</tr>
<tr>
<td>M. W. Hardy &amp; Co., Inc.</td>
<td></td>
</tr>
</tbody>
</table>
- **Miller Products Co.**
- **Tennessee Corp.**
- **Triangle Chemical Co.**

#### ZINC SULFATE

- Armour Agricultural Chemical Co.
- Chapman Chemical Co.
- Destruxol Corp.
- Eagle-Picher Co.
- Geigy Agricultural Chemicals
- **Miller Products Co.**
- Robert B. Peters Co., Inc.

#### ZINC CHELATE

- Armour Agricultural Chemical Co.
- Chapman Chemical Co.
- Destruxol Corp.
- Eagle-Picher Co.
- Geigy Agricultural Chemicals
- **Miller Products Co.**
- Robert B. Peters Co., Inc.

#### IRON

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Liquid Fertilizer Co., Inc.</td>
<td></td>
</tr>
<tr>
<td>Armour Agricultural Chemical Co.</td>
<td></td>
</tr>
<tr>
<td><strong>Bryton Chemicals, Inc.</strong></td>
<td></td>
</tr>
<tr>
<td>Chapman Chemical Co.</td>
<td></td>
</tr>
</tbody>
</table>
- Residex Corp.
- Riverdale Chemical Co.
- Southern Mill Creek Products Co.
- **Tennessee Corp.**
- **Triangle Chemical Co.**

#### IRON SULFATE

- Armour Agricultural Chemical Co.
- Crown Zellerbach Corp.
- Destruxol Corp.
- Eagle-Picher Co.
- Faesy & Besthoff, Inc.
- C. J. Martin & Sons, Inc.
- **Miller Products Co.**
- **Tennessee Corp.**
- **Triangle Chemical Co.**

#### IRON CHELATE

- Armour Agricultural Chemical Co.
- **Crown Zellerbach Corp.**
- Eagle-Picher Co.
- Faesy & Besthoff, Inc.
- C. J. Martin & Sons, Inc.
- '**Miller Products Co.'**
- **Tennessee Corp.**
- **Triangle Chemical Co.**

#### BORON

- **American Potash & Chemical Corp.**

- **Armour Agricultural Chemical Co.**
- **Chapman Chemical Co.**
- **Miller Products Co.**
- **U.S. Borax**
- **Utility Chemical Co.**

**BORO-SPRAY**
- American Potash & Chemical Corp.

**MOLYBDENUM**
- Armour Agricultural Chemical Co.
- Climax Molybdenum Co.

### EQUIPMENT

#### TURF MANAGEMENT

##### AERATORS

- Aero-Thatch, Inc.
- Eagle-Picher Co.
- John H. Graham & Co., Inc.
- Ryan Equip. Co.
- Toro Mfg. Co.
- West Point Products Corp.

##### BINS, PORTABLE

- Transtan Co.

##### BOTTLES, GLASS

- Destruxol Corp.
- Hedwin Corp.

##### BOTTLES, PLASTIC

- Destruxol Corp.
- Hedwin Corp.

##### DETHATCHERS

- See Vertical Mowers

##### FUMIGANT APPLICATORS

- Brayton Chemicals, Inc.
- Cornwell Chemical & Equip. Co.
- Hub States Chemical & Equip. Co.
- Morton Chemical Co.
- Southern Mill Creek Products Co.
- **Triangle Chemical Co.**

##### FUMIGANT COVERS (PLASTIC SHEETING)

- Brayton Chemicals, Inc.
- Cornwell Chemical & Equip. Co.
- Southern Mill Creek Products Co.
- **Triangle Chemical Co.**
- Wood Treating Chemicals Co.

##### HOSE

- Broadway Rubber Co.
- Electric Hose & Rubber Co.
- Evans Orchard Supply Co.

##### HYDRAULIC MULCHING MACHINES

- Bowie Machine Works
- Finn Equip. Co.

##### IRRIGATION SYSTEMS

- Adamson Sprinkler Co.
- John Bean Div., FMC Corp.
- Buckner Industries
- Doggett Fison Co.
- International Protected Metals, Inc.
- Rain Bird
- Rain-O-Mat
- Telco Industries

---

*WEEDS TREES AND TURF, December, 1964*
MEASURING WHEEL
Gandy Co.
B. G. Reilly Co.
Rolatap, Inc.

MOWERS, REEL AND GANG
Bolens Div.
Dille and McQuire Mfg. Co.
Gilson Brothers Co.
International Harvester Co.
Jacobsen Mfg. Co.
Roseman Mower Corp.
Toro Mfg. Co.

MOWERS, ROTARY
Allis-Chalmers Mfg. Co.
Ariens Co.
Bolens Div.
John Deere
Dille and McQuire Mfg. Co.
Falls Products, Inc.
Gilson Brothers Co.
Goodall Mfg. Corp.
Homelite
International Harvester Co.
Jacobsen Mfg. Co.
Rental Equip. Mfg. Co.
Simplicity Mfg. Co.
Toro Mfg. Co.
Vandermolen Export Co.

MOWERS, FLAIL
John Deere
Mott Corp.

NOZZLES, SPRAY DISCS & WHIRLS FOR
Cooley Spray Equip. Works

PUMPS
Ace Pump Corp.
John Bean Div., FMC Corp.
Brayton Chemicals, Inc.
California Heater Co.
Century Engineering Corp.
Clark Mfg. Co.
Delavan Mfg. Co.
Evans Orchard Supply Co.
Friend Mfg. Corp.
Hanson Equip. Co.
Hub Sprayers
Hub States Chemical & Equip. Co.
Hypro Engineering Co.
L. L. Larson Machine, Inc.
Markow Pumps
F. E. Myers & Brothers Co.
Precision Chemical Pump Corp.
Simplex Mfg. Co.
Solo Industries, Inc.
Southern Mill Creek Products Co.
Thuron Sprayer Mfg. Co.
Toro Mfg. Co., Inc.
Ulrich Mfg. Co.
Viking Pump Co.

PROPORTIONING SYSTEMS
John Bean Div., FMC Corp.
Brayton Chemicals, Inc.
Dragon Engineering Co.
Hayes Spray Gun Co.
Hub States Chemical & Equip. Co.

RAKES
John Deere
Destruxol Corp.
International Harvester Co.
Rental Equip. Mfg. Co.
York Modern Corp.

ROLLERS
International Harvester Co.
Rowco Mfg. Co., Inc.

ROLLER-SPRAYERS
Hanson Equip. Co.
Hub States Chemical & Equip. Co.
Sun Industries, Inc.

SCRAPERS
Allis-Chalmers Mfg. Co.
John Deere
York Modern Corp.

SEEDERS, DISC-TYPE
Cyclone Seeder Co., Inc.
International Harvester Co.
L. L. Larson Machine, Inc.

SEEDERS, HOPPER-TYPE
Bettrager Mfg.
Brillion Iron Works, Inc.
Cyclone Seeder Co., Inc.
John Deere
Ezee Flow Div., AVCO Corp.
Gandy Co.
International Harvester Co.
L. L. Larson Machine, Inc.
Lely, Ltd.
Schneider Metal Mfg. Co.
Sunnyhill Research & Mfg. Co.

SHREDDERS, SOIL
Gilson Brothers Corp.
W-W Grinder Corp.
Kemp Mfg. Co.
Lindig Mfg. Co., Inc.
Royer Foundry & Machine Co.

SLICERS
West Point Products Corp.

SOD CUTTERS
Ryan Equip. Co.
Sod-Master
West Point Products Corp.

SOD PLUGGER
Simplex Mfg. Co.

SPIKERS
See Aerators

SPRAY BOOMS
John Bean Div., FMC Corp.
John Blue Co.
Brayton Chemicals, Inc.
Brovihill Co.
California Heater Co.
Century Engineering Corp.
Chapman Chemical Co.
Clark Mfg. Co.
Custom Spray Equip. Corp.
Friend Mfg. Corp.
Hanson Equip. Co.
Hardie Sprayers
Hub States Chemical & Equip. Co.
L. L. Larson Machine, Inc.
Little Giant Products, Inc.
F. E. Myers & Brothers Co.

SPRAY NOZZLES
Archem Co.

SPRAY RIG LINE MARKERS
Contree Sales

SPRAYERS, BOOM
John Bean Div., FMC Corp.
Brayton Chemicals, Inc.
Brovihill Co.
California Heater Co.
Century Engineering Corp.
Chapman Chemical Co.
Clark Mfg. Co.
Cornell Chemical & Equip. Co.
Cushman Motors
John Deere
Friend Mfg. Corp.
Hanson Equip. Co.
Hardie Sprayers
Hub States Chemical & Equip. Co.
L. L. Larson Machine, Inc.
Little Giant Products, Inc.
F. E. Myers & Brothers Co.

SPRAYERS, CART-TYPE
John Bean Div., FMC Corp.
Buffalo Turbine
California Heater Co.
E. E. Chapin Mfg. Works, Inc.
Cooley Spray Equip. Works
Cushman Motors
Hub States Chemical & Equip. Co.
L. L. Larson Machine, Inc.
F. E. Myers & Brothers Co.
Silver Creek Precision Corp.

DELAVAN Mfg. Co.
Friend Mfg. Corp.
Hanson Equip. Co.
Hardie Sprayers
Heritage House Products, Inc.
Hub States Chemical & Equip. Co.
L. L. Larson Machine, Inc.
F. E. Myers & Brothers Co.
Silver Creek Precision Corp.

SEEDERS, DISC-TYPE
Cyclone Seeder Co., Inc.
International Harvester Co.
L. L. Larson Machine, Inc.

SEEDERS, HOPPER-TYPE
Bettrager Mfg.
Brillion Iron Works, Inc.
Cyclone Seeder Co., Inc.
John Deere
Ezee Flow Div., AVCO Corp.
Gandy Co.
International Harvester Co.
L. L. Larson Machine, Inc.
Lely, Ltd.
Schneider Metal Mfg. Co.
Sunnyhill Research & Mfg. Co.

SHREDDERS, SOIL
Gilson Brothers Corp.
W-W Grinder Corp.
Kemp Mfg. Co.
Lindig Mfg. Co., Inc.
Royer Foundry & Machine Co.

SLICERS
West Point Products Corp.

SOD CUTTERS
Ryan Equip. Co.
Sod-Master
West Point Products Corp.

SOD PLUGGER
Simplex Mfg. Co.

SPIKERS
See Aerators

SPRAY BOOMS
John Bean Div., FMC Corp.
John Blue Co.
Brayton Chemicals, Inc.
Brovihill Co.
California Heater Co.
Century Engineering Corp.
Chapman Chemical Co.
Clark Mfg. Co.
Custom Spray Equip. Corp.
Friend Mfg. Corp.
Hanson Equip. Co.
Hardie Sprayers
Hub States Chemical & Equip. Co.
L. L. Larson Machine, Inc.
Little Giant Products, Inc.
F. E. Myers & Brothers Co.

SPRAY NOZZLES
Archem Co.

SPRAY RIG LINE MARKERS
Contree Sales

SPRAYERS, BOOM
John Bean Div., FMC Corp.
Brayton Chemicals, Inc.
Brovihill Co.
California Heater Co.
Century Engineering Corp.
Chapman Chemical Co.
Clark Mfg. Co.
Cornell Chemical & Equip. Co.
Cushman Motors
John Deere
Friend Mfg. Corp.
Hanson Equip. Co.
Hardie Sprayers
Hub States Chemical & Equip. Co.
L. L. Larson Machine, Inc.
Little Giant Products, Inc.
F. E. Myers & Brothers Co.

SPRAYERS, CART-TYPE
John Bean Div., FMC Corp.
Buffalo Turbine
California Heater Co.
E. E. Chapin Mfg. Works, Inc.
Cooley Spray Equip. Works
Cushman Motors
Hub States Chemical & Equip. Co.
L. L. Larson Machine, Inc.
F. E. Myers & Brothers Co.
Silver Creek Precision Corp.
D. B. Smith & Co.
Southern Mill Creek Products Co.
Sun Industries, Inc.
Tarrant Mfg. Co.
Universal Metal Products Div.

**SPRAYERS, COMPRESSED AIR**

**John Bean Div., FMC Corp.**
Brayton Chemicals, Inc.
R. E. Chapin Mfg. Works, Inc.
Chowning Regulator Corp.
Hub States Chemical & Equip. Co.
Residex Corp.
D. B. Smith & Co.
Southern Mill Creek Products Co.
Tryco Mfg. Co., Inc.
Universal Metal Products Div.
Wood Treating Chemicals Co.

**SPRAYERS, HAND**

Archem Corp.
John Bean Div., FMC Corp.
Brayton Chemicals, Inc.
Century Engineering Corp.
R. E. Chapin Mfg. Works, Inc.
Champion Chemical Co.
John Deere
Destruox Corp.
Friend Mfg. Corp.
Gabriel Chemicals, Ltd.
Hub States Chemical & Equip. Co.
F. E. Myers & Brothers Co.
Residex Corp.
Root-Lowell Corp.
Silver Creek Precision Corp.
D. B. Smith & Co.
Solo Industries, Inc.
Southern Mill Creek Products Co.
Spraying Systems Co.
Tradewinds, Inc.
Tryco Mfg. Co., Inc.
Universal Metal Products Div.
Vandermolen Export Co.
Wood Treating Chemicals Co.

**SPRAYERS, KNPASSACK**

Archem Corp.
John Bean Div., FMC Corp.
Brayton Chemicals, Inc.
Buffalo Turbine
Gabriel Chemicals, Limited
Hanson Equip. Co.
Hub States Chemical & Equip. Co.
Ben Meadows Co.
Root-Lowell Corp.
D. B. Smith & Co.
Solo Industries, Inc.
Southern Mill Creek Products Co.
Tradewinds, Inc.
Universal Metal Products Div.
Vandermolen Export Co.
Wood Treating Chemicals Co.

**SPRAYERS, COMPLETE POWER UNIT**

Archem Corp.
John Bean Div., FMC Corp.
Besler Corp.
John Bean Div.
Brayton Chemicals, Inc.
Broyhill Co.
Buffalo Turbine
Califon Turfgrass Co.
Century Engineering Corp.
Champion Sprayer Co.
R. E. Chapin Mfg. Works, Inc.
Chapman Chemical Co.
Clark Mfg. Co.
Cooley Spray Equip. Works
Cushman Motors
John Deere
Dutton-Lainson Co.
Evans Orchard Supply Co.
Friend Mfg. Corp.

Gabriel Chemicals, Ltd.
Gro-Spray Mfg. Co.
Hanson Equip. Co.
Hardie Sprayers
Hub States Chemical & Equip. Co.
L. L. Larson Machine, Inc.
Marlow Pumps
F. E. Myers & Brothers Co.
Oakes Mfg. Co.
Root-Lowell Corp.
Silver Creek Precision Corp.
Solo Industries, Inc.
Southern Mill Creek Products Co.
Sun Industries, Inc.
Tarrant Mfg. Co.
Thuron Sprayer Mfg. Co.
Tryco Mfg. Co., Inc.
Universal Metal Products Div.
Vandermolen Export Co.
Wood Treating Chemicals Co.

**SPREADERS, DISC-TYPE**

Belt Corp.
Heritage House Products, Inc.
L. L. Larson Machine, Inc.
Southern Mill Creek Products Co.
Tyler Mfg. Co.

**SPREADERS, HOPPER-TYPE**

Belt Corp.
Brettentrager Mfg.
Brillion Iron Works, Inc.
Cyclone Sprayer Corp.
Ezee Flow Div., AVCO Corp.
Gandy Co.
Heritage House Products, Inc.
Highway Equip. Co.
Hub States Chemical & Equip. Co.
International Harvester Co.
L. L. Larson Machine, Inc.
Lely, Ltd.
Schneider Metal Mfg. Co.
O. M. Scott & Sons
Smith-Douglass Co., Inc.
Southern Mill Creek Products Co.
Sunnyhill Research & Mfg. Co.

**SPRIGGERS**

Thompson Mfg. Co.
Western Turfgrass, Inc.
Wichita Equip. Co.

**SPRIG HARVESTER**

Wichita Equip. Co.

**STONEPICKER**

Bridgeport Implement Works, Inc.

**SWEEPERS**

International Harvester Co.
Little Giant Products, Inc.

**TANKS, SPRAY**

John Bean Div., FMC Corp.
Broyhill Co.
California Heater Co.
Century Engineering Corp.
Clark Mfg. Co.
Hanson Equip. Co.
L. L. Larson Machine, Inc.
F. E. Myers & Brothers Co.
Southern Mill Creek Products Co.
Tryco Mfg. Co., Inc.

**TILLERS**

Bolens Div.
Gilson Brothers Co.
International Harvester Co.
Jacobsen Mfg. Co.
Merry Mfg. Co.
Solo Industries, Inc.

**TOP DRESSERS**

Eagle-Picher Co.
Ezee Flow Div., AVCO Corp.
Ryan Equip. Co.
Sod-Master

**TRACTORS**

Allis-Chalmers Mfg. Co.
Balmar Tractor Corp.
Bolens Div.
J. D. Case Co.
Caterpillar Tractor Co.
Cushman Motors
John Deere
Ford Motor Co.
Gilson Brothers Co.
International Harvester Co.
Jacobsen Mfg. Co.
Massey-Ferguson
Merry Mfg. Co.
Oliver Corp.
Tradewinds, Inc.

**TRAILERS**

Century Engineering Corp.
Champion Co.
John Deere
International Harvester Co.
Tyler Mfg. Co.
West Point Products Corp.

**TRIMMING (EDGING) TOOLS**

Allegretti & Co.
Jacobsen Mfg. Co.
A. M. Leonard & Son
Rowco Mfg. Co., Inc.
Seymour Smith & Son, Inc.
Sod-Master

**UTILITY VEHICLES**

Allis-Chalmers Mfg. Co.
Cushman Motors
Gilson Brothers Co.
Harley-Davidson Motor Co.
Trail broadcaster Div.
Walker Mfg. Co.

**VACUUMS**

Gilson Brothers Co.
Parker Sweeper Co.
Tarrant Mfg. Co.

**VALVES, PRESSURE RELIEF**

Delavan Mfg. Co.

**VERTICAL MOWERS**

Aero-Thatch, Inc.
Parker Sweeper Co.
Rental Equip. Mfg. Co.
Ryan Equip. Co.
West Point Products Corp.

**WEED AND BRUSH CONTROL**

**AIRCRAFT, FIXED WING**

Cessna Aircraft Co.
Grumman Aircraft Corp.
Piper Aircraft Corp.
Snow Aeronautical Corp.

**AIRCRAFT, HELICOPTER**

Bell Helicopter Co.
Bell Aircraft Corp.
Republic Aviation Corp.
Sikorsky Aviation Div.

---

**WEEDS, TREES AND TURF, December, 1964**

38
AERIAL SPRAY ACCESSORIES  
Simplex Mfg. Co.

AQUATIC WEED MOWER  
Aquatic Controls Corp.  
Jari Products, Inc.

BARRELS, PLASTIC-LINED  
Broyhill Co.  
Clark Mfg. Co.  
Hanson Equip. Co.  
Hedwin Corp.  
L. L. Larson Machine, Inc.

BARREL LINERS—PLASTIC  
B. H. Jordan & Co.

BARRELS—STEEL  
Broyhill Co.  
Destruxol Corp.  
Hedwin Corp.  
L. L. Larson Machine, Inc.  
Southern Mill Creek Products Co.

BOATS, AIR-  
Airboat Sales & Service  
Airboats, Inc.  
Hurricane Fiberglass Products Co.

BRUSHCUTTERS, POWER  
Fairmont Hydraulics  
Hoffco, Inc.  
Homelette  
McCulloch Corp.  
Rowco Mfg. Co., Inc.  
Vandermolen Export Co.

BRUSH AXE  
Sandvik Steel, Inc.

CANS, METAL  
Destruxol Corp.  
Hedwin Corp.

CHIPPER BLADES  
Brooks Products  
H & G Tool Co.  
Mitts & Merrill

DRUMS, METAL  
Destruxol Corp.

FLAMETHROWERS  
Aeroil Products Co., Inc.  
Crano Co.  
Gabriel Chemicals, Ltd.  
Hanson Equip. Co.  
Root-Lowell Corp.  
Solo Industries, Inc.  
Universal Metal Products Div.  
Vandermolen Export Co.

KNIVES, BRUSH  
International Harvester Co.

MISTBLOWERS, BACKPACK  
Gabriel Chemicals, Ltd.  
Hanson Equip. Co.  
Hub States Chemical & Equip. Co.  
Silver Creek Precision Corp.  
Solo Industries, Inc.  
Southern Mill Creek Products Co.  
Vandermolen Export Co.

MISTBLOWERS, TRUCK-MOUNTED  
John Bean Div., FMC Corp.

NOZZLES, SPRAY DISCS & WHIRLS FOR  
Cooley Spray Equip. Works  
See Turf Management

PUMPS  
See Turf Management

VALVES, PRESSURE RELIEF  
Delavan Mfg. Co.

AERIAL BUCKET SAFETY BELT  
W. M. Bashlin Co.

ARBORIST SUPPLIES, GENERAL LINE  
Bartlett Mfg. Co.  
Samuel Cabot, Inc.  
Collins Co.  
Fruit Growers of Chester County  
Harder Arborist Supply Co.

AUGERS, EARTH  
Fairmont Hydraulics  
Hoffco, Inc.

AXES  
Sandvik Steel, Inc.

CABLING SUPPLIES  
A. M. Leonard & Son

CHIPPERS  
See Weed and Brush Control

CHIPPER BLADES  
See Weed and Brush Control

CLIMBERS (SPURS)  
W. M. Bashlin Co.

DRILLS  

LADDERS  
Sandvik Steel, Inc.

LEAF BLOWER  
Vandermolen Export Co.

LOG SPLITTER  
Waco Aircraft Div.

MISTBLOWERS, BACKPACK  
See Weed and Brush Control

MISTBLOWERS, TRUCK-MOUNTED  
See Weed and Brush Control

NOZZLES, SPRAY DISCS & WHIRLS FOR  
Cooley Spray Equip. Works

PRUNERS, POLE  
W. M. Bashlin Co.  
Destruxol Corp.  
Hunt-Pierce Corp.  
A. M. Leonard & Son  
H. K. Porter, Inc.  
Seymour Smith & Son, Inc.

PRUNERS, POWER  
Vandermolen Export Co.

PRUNERS, HAND  
Destruxol Corp.  
H. K. Porter, Inc.  
Seymour Smith & Son, Inc.

PUMPS  
See Turf Management

ROOT FEEDER RODS  
Velsicol Chemical Corp.

SAWS, MANUAL  
W. M. Bashlin Co.  
Fanno Saw Works  
Sandvik Steel, Inc.  
Seymour Smith & Sons, Inc.

SAWS, POWER  
SAFETY EQUIPMENT

FIRST AID KITS
General Scientific Equip. Co.
Mine Safety Appliances Co.

GLOVES, CHEMICAL RESISTANT
Brayton Chemicals, Inc.

BRAKES, CHEMICAL RESISTANT
B. H. Jordan & Co.

MINE SAFETY EQUIPMENT
Pioneer Rubber Co.

GENERAL SAFETY EQUIPMENT
Pulmosan Safety Equip. Co.
Southern Mill Creek Products Co.
Wilson Rubber Co.

HELMETS
General Scientific Equip. Co.
Wilson Products Div.

Masks, Dust
American Optical Co.

Brayton Chemicals, Inc.

General Scientific Equip. Co.
Glendale Optical Co.
Martindale Electric Co.
Mine Safety Appliances Co.
Pulmosan Safety Equip. Co.
Southern Mill Creek Products Co.
Vondermolen Export Co.

WILLSON PRODUCTS DIV.
Wood Treating Chemicals Co.

Respirators
Acme Protection Equip. Co.
American Optical Co.

Brayton Chemicals, Inc.

General Scientific Equip. Co.
Glendale Optical Co.
Martindale Electric Co.
Mine Safety Appliances Co.
Pulmosan Safety Equip. Co.
Southern Mill Creek Products Co.
Vondermolen Export Co.

WILLSON PRODUCTS DIV.
Wood Treating Chemicals Co.

Respiration
Acme Protection Equip. Co.
American Optical Co.

Brayton Chemicals, Inc.

General Scientific Equip. Co.
Glendale Optical Co.
Martindale Electric Co.
Mine Safety Appliances Co.
Pulmosan Safety Equip. Co.
Southern Mill Creek Products Co.
Vondermolen Export Co.

WILLSON PRODUCTS DIV.
Wood Treating Chemicals Co.

RESCUE BELTS, AUTOMOTIVE
Mine Safety Appliances Co.

SAFETY BELTS, AUTOMOTIVE

M. Bashlin Co.

General Scientific Equip. Co.
A. M. Leonard & Son

Mine Safety Appliances Co.

STEEL TOE SHOES
General Scientific Equip. Co.

UNIFORMS, PROTECTIVE COVERS & JACKETS
Disposables, Inc.

General Scientific Equip. Co.
Mine Safety Appliance Co.
Riverside Mfg. Co.
Worklon, Inc.

Technological Aids

METERS, pH
Analytical Measurements, Inc.
Kel Instruments Co., Inc.

METER, SOIL MOISTURE
Industrial Instruments, Inc.

SOIL TEST KITS
Edwards Laboratory
Hub States Chemical & Equip. Co.
Industrials Instruments, Inc.
LaMotte Chemical Products Co.
Sudbury Laboratories
West Point Products Corp.

SOIL PROBES
West Point Products Corp.

Alphabetical Listing of Suppliers in this Buyer's Guide with their Complete Addresses

A
Ace Pump Corp., 1635 Channel Ave., Memphis, Tenn.
Aceto Chemical Co., Inc., 40-46 Lawrence St., Flushing, N.Y.
Adamson Sprinkler Co., 229 Barry Ave., Los Angeles, Calif.
Aeroil Products Co., 60 Wesley St., South Hackensack, N.J.
Aero-Thatch, Inc., 673 New Brunswick Ave., Rahway, N.J.
Agricultural Chemicals Co., Inc., P.O. Box 398, Llano, Tex.
Agri-Humus Co., Inc., P.O. Box 4105, 317 W. Voorman Ave., Fresno, Calif.
Airboat Sales & Service, 3123 N.W. 29th St., Miami, Fla.
Airboats, Inc., P.O. Box 5306, Denver, Colo.
Alco Chemical Co., 19220 Pioneer Blvd., Artesia, Calif.
Paul E. Allen Co., Route 586, Palm Harbor, Fla.
Amchem Products, Inc., Box 301, Ambler, Pa.
American Agricultural Chemical Co., 100 Church St., New York, N.Y.
American Cyanamid Co., Ag. Chem. Div., P.O. Box 400, Princeton, N.J.
American Fluoride Corp., 855 Ave. of Americas, New York, N.Y.
American Liquid Fertilizer Co., Inc., Box 267, Marietta, Ohio
American Mineral Spirits Co., Murray Hill, N.J.
American Oil Co., 910 S. Michigan Ave., Chicago, Ill.
American Potash & Chemical Corp., 300 W. 6th St., Los Angeles, Calif.
American Smelting & Refining Co., 120 Broadway, New York, N.Y.
American Talc Co., 130 E. Randolph Dr., Chicago, Ill.
American Vermiculite Corp., 527 Madison Ave., New York, N.Y.
Amoco Chemicals Corp., 130 E. Randolph Dr., Chicago, Ill.
Andersen Scientific, Inc., 349 First St., Los Altos, Calif.
Andreasen Fish & Game, Liberty Bank, Oklahoma City, Okla.
The Ansul Co., One Stanton St., Marlinton, Wis.
Aquafil Co., P.O. Box 349 First St., Los Altos, Calif.
Aquatique Controls Corp., Harland, Wis.
Aquatique Corp. of America, 217 Atlantic Ave., Camden, N.J.
ArCen Corp., 1514 11th St., Portsmouth, Ohio
Know Your Species

**NUTSEDGE**
*Cyperus spp.*

Nutsedge (1) is a perennial which reproduces by spreading rootstocks, underground tubers, and partially by seeds. Although nutsedge bears a superficial resemblance to some grasses and is sometimes called nutgrass and coco grass, it is not a true grass, but instead is a sedge. Nutsedge grows best under moist lowland conditions and is found in fields, waste areas, gardens, and lawns.

Nutsedges may grow to a height of 6 to 36 inches and are characterized by a solid (not hollow) stem which is triangular in cross section. Stiff, coarse, yellowish-green leaves are borne in rows of three about the base of the stem (grass leaves are two ranked).

Flowers and seeds are borne atop a relatively long leafless stem. Yellowish-brown flowers are inconspicuous and produce coarse spikelets of seeds. Seeds (2) attached to radiating branchlets (spikes) appear umbrellalike.

Scaly rootstocks bear small nutlike tubers at the ends.

There are two species of nutsedge in this important group of lawn pests: yellow nutsedge, *Cyperus esculentus*, and purple or common nutsedge, *C. rotundus*. These differ in geographic distribution, size, and coloration. Yellow nutsedge is a native North American plant and is most commonly found in northern areas of the United States, although it does extend its range at times into the South. Purple nutsedge is believed to have been introduced from tropical areas into the South. It is now common from Florida to California. Nutsedges are serious pests wherever they grow.

Upright stems of purple nutsedge grow longer than the basal leaves, whereas leaves are longer than the main stem in yellow nutsedge. Spikelets of purple nutsedge are colored a brownish purple, but yellow nutsedge has yellowish-green spikelets. Underground tubers of purple nutsedge measure 1 inch long and ¾ inch in diameter, but yellow nutsedge tubers seldom exceed ¼ inch in diameter.

2,4-D can be applied repeatedly until nutsedge is eliminated. EPTC has also proven useful as a control. Controls should be applied within two weeks of shoot emergence.

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)

---

**U. S. Borax Builds New Regional Office, Warehouse**

Construction of a new regional office and warehouse is already under way in Des Plaines, Ill., announces Hugo Riemer, president, U. S. Borax, Los Angeles, Calif. The proposed structure will occupy 27,750 square feet of a two-acre site.

W. W. Wilson, regional marketing manager, says the new building will serve as regional and district headquarters for midwestern distribution of the company's products, including industrial and agricultural borates, potash, herbicides, and 20 Mule Team line of household and industrial maintenance products.

The new facility will also serve as national headquarters for the firm's railroad sales organization which supplies weedkillers and application equipment for railroad rights-of-way.

Completion of the new building late in 1965 will consolidate U. S. Borax' Chicago warehouse on Lumber St., and the Peterson Ave. offices.

In another announcement, J. F. Corkill, U. S. Borax marketing department vice president, says the company's Atlanta regional sales office has been moved from 1627 Peachtree St. N.E. to 1720 Peachtree Rd. N.W., in Atlanta, Ga.

**WACA Reelects Stewart**

Frank B. Stewart was reelected president of the Western Agricultural Chemical Association at the annual convention held recently at Pebble Beach, Calif.

This association, comprised of agricultural chemical companies from 13 western states, cooperates with the U.S. Dept. of Agriculture and state departments of agriculture in enactment of laws and regulations for safe use of insecticides, fungicides, and weedkillers.

Stewart is executive vice president and general manager of Miller Products Co., Portland, Ore.
International Turf-Grass Conference

Scheduled for Cleveland, Feb. 7-12

More than 40 speakers, an exhibition of equipment, supplies and services occupying a 33,000-square-foot exhibition hall, will be major attractions when the 36th International Turf-Grass Conference and Show is held in Sheraton-Cleveland Hotel, Cleveland, Ohio, Feb. 7-12.

Advance registrations exceed those of previous years and indicate that a record-breaking attendance will be realized at the forthcoming event.

“We really look forward to being in Cleveland,” said Dr. Gene C. Nutter, executive director of the sponsoring Golf Course Superintendents Association of America. “It is fitting that GCSAA again takes its conference and show to Cleveland for it was there in 1923 that GCSAA really had its beginning with the birth of the Cleveland Greenskeepers Association. Appropriately, too, the Northern Ohio Chapter is host. Every member of this chapter is also a GCSAA member making it the largest 100% chapter in North America.”

John J. Spodnik, superintendent of the Westfield Country Club courses, LeRoy, Ohio, is co-chairman with Dr. Nutter. Serving with Spodnik as co-chairman of the host committee is Malcolm E. McLaren, superintendent of the Oakwood Club in Cleveland.

Officials are enthusiastic over the outstanding array of speakers chosen to address the superintendents during the 5-day educational program. They include superintendents, educators, researchers, golf course architects and other turf experts. There will be six educational assemblies.

While the conference and show is primarily for superintendents and others involved in the care and maintenance of turf, those who are interested may attend upon payment of registration fees. Information may be obtained from the Golf Course Superintendents Association of America, Box 1385, Jacksonville Beach, Fla. 32050.

Further details on this important meeting will be given in the January issue of this magazine.

“Water-In” Tests Successful

Recent tests conducted with “Water-In,” a product that is said to eliminate waterlogging due to a tendency of water to remain in soil capillaries, have been reported as successful by “Water-In,” Inc., Altadena, Calif. The most recent test was conducted by Soil & Plant Lab, Inc., Orange, Calif.

In one test, roses growing in hard compacted or adobe soils tend to have waterlogged roots. With a treatment of “Water-In” the soil was aerated and the plants fed and watered at regular intervals with no ill effect.

Other tests in various areas of the Los Angeles City Recreation and Parks Department have proven likewise satisfactory. At the Sepulveda golf course, half of a green treated with “Water-In” remained open and aerated, while the untreated half remained compacted with water runoff.

Further details are available from “Water-In,” Inc., by writing to P.O. Box 421, Altadena, Calif.

IMC Opens West Coast Office

A fertilizer sales office was recently opened by International Minerals & Chemical Corp. as part of its West Coast expansion program.

A company spokesman reports that successful completion of IMC’s potash mine at Esterhazy, Canada, enables the company to expand its activities. The new office is located at 16 E. Third Ave., San Mateo, Calif.

ALWAYS MEAN

SAFE SPRAYS

 Arborists and Custom Sprayers have depended upon PRATT’S for quality spray formulations for over half a century.

Start your schedule with SCALECIDE—the “dean” of the Oil Sprays. So safe that it can also be used as a foliar spray.

Pratt’s formulates a complete line of emulsifiable concentrates for hydraulic and mist blowers and oil base concentrates for thermal fog equipment.

Send for our free circular, “Pratt’s Spray Bulletin for Shade Tree Spraying.”

Distributorships available for the complete line of PRATT’S Sprays—write for information.

B. G. PRATT COMPANY
215 21st Avenue, Paterson, N. J.
Weeds Trees and Turf Wins National Award for Editorial Excellence; Aquatic Weed Series Singled Out for Citation

In a ceremony at the Waldorf-Astoria Hotel in New York City, November 12, Weeds Trees and Turf received a 1964 Award of Merit for Editorial Excellence from Industrial Marketing magazine. The awards were initiated 25 years ago as a means of recognizing superior editorial quality in America's business press.

Basis of the award to WTT was the three-part series, "Applicator's Manual of Aquatic Weed Control," which appeared in the October, November, and December 1963 issues.

Other winners in the WTT category were Steel and Chemical Engineering magazines.

In presenting the awards, Industrial Marketing spokesmen said the panel of judges, drawn from the communications industry, looked for importance of subject matter, quality of writing, ease of communication, and effectiveness of illustrations.

When WTT began the series in fall of 1963, the full effects of Rachel Carson's Silent Spring, a violent attack on pesticides, were just beginning to be felt. Scientists, applicators, and public health officials were particularly concerned about application of chemicals to control aquatic weeds. It was feared such applications, if not properly handled, might adversely affect potable water supplies.

But rampant weeds pose a major threat to the utility of lakes and ponds, irrigation ditches, and other waterways. Because of the lack of use-oriented information on this subject, Weeds Trees and Turf decided to present readers with a series of articles which would serve as an "on-job" manual.

WTT's Staff Biologist, David E. Schneider, began to prepare a three-part series on the subject, using as a guideline the concept that the series should tell readers: (1) how to identify aquatic weeds; (2) what chemicals to use for control; and (3) how to select application equipment.

Because of the project's complexity, copies of the first draft were mailed to leading researchers with federal and state agencies, universities, and chemical manufacturers, for review and comment. When these annotated copies were returned, they were reviewed and pertinent comments were incorporated into the final version.

Besides using previously unpublished photographs from the Plantation Field Laboratory, USDA, in Ft. Lauderdale, Fla., WTT staffers made field trips into problem aquatic weed areas and shot additional species.

The project was six months in preparation; the series was one of three award winners in its category (Industrial Publications) in the annual competition sponsored by Industrial Marketing.

Luncheon speaker during the presentation of the awards, Philip Gisser, told the assembled editors that the function of the business press today is vital to all productivity in industry and science. Moreover, he said, it is not enough to communicate data; editors must avoid overcommunication in a time when so much technical material is being produced. Gisser, Director of Advertising and Publicity for U.S. Industrial Chemicals Co., advised the editors to be selective in presentation of their materials. WTT's citation is a recognition that its editors are achieving this selectivity for its readers.
A. S. Patterson of Albuquerque was named president of the New Mexico Turfgrass Association at the 10th annual Turfgrass Conference on the New Mexico State University campus at University Park, October 9.

Other officers named were Bernard Corley, El Paso, vice-president, and C. E. Watson, NMSU agronomist, secretary-treasurer. Bill Leftwich of Holloman Air Force Base, Julian Serna of Albuquerque, and Harvour Jones of Los Lunas, were named to the board of directors.

In a report on new developments in grasses, John A. Long of O. M. Scott Company of Marysville, Ohio, said Texturf 10, also known as T-47, and Tifway, two varieties of bermudagrass, are the best all-around warm-season grasses for lawns and play areas. Tifgreen is recommended for putting greens but not for general planting because of the extra care it requires.

Windsor, Park, and Newport varieties of bluegrass have shown more disease resistance than Merion or common Kentucky bluegrass of the cool-season grasses.

J. R. Watson of Toro Manufacturing Company, Minneapolis, Minn., in a report on mowing, said “growing grasses for lawns and turf defied the natural processes of the plants. The extreme mowing required for the neat-looking lawn requires that everything else be ideal. Mowing removes the parts of the grass that manufacture food for the plants weakening them and if other conditions of moisture and fertility are not ideal the plants don’t make it,” he said.

Bunch-type grasses—ryegrass, tall fescue, and bluegrass—need higher mowing than the creeping grasses, Watson said, because the bunch grasses grow upright and more of each plant is removed in mowing.

Zoysia and bermuda can be clipped closer because they naturally grow close to the soil and only occasionally send up shoots which are clipped by a mower.

A sharp mower is important to lawn appearance. A dull mower bruises the ends of the leaves as it cuts, leaving a burned appearance. A sharp mower cuts cleanly.

Marvin Ferguson, U.S. Golf Association, Green Section, College Station, Texas, said golf courses in recent years have too often been designed without regard to drainage, foot, and car traffic, and efficiency of watering systems. He reported an excessive number of golf courses are in trouble because these factors were not considered when the courses were laid out.

The two-day conference was attended by about 50 persons.

HSAF Convention Takes Steps To Form National Trade Group
(from page 10)

prompted skilled turfman White to say he uses the Mott hammer knife back on the sod farm. He added that many commercial lawn companies, such as the ones gathered at the Pier 66, are now using the Ryan and the West Point machines. These were developed initially to prove themselves on the fairways, but now they’re keeping the nation’s lawns green as well.

Smaller in number than usual, bigger than ever in ambition, and as cordial and warmhearted as always, the Florida 1964 convention was universally praised when it came time to wind up the note taking and step out to a banquet and dance on the last day. Officers promised to continue in the same fruitful spirit throughout the coming months as the national trade association takes its last wavering steps before striding full-fledged into the future of vegetation maintenance and control, a billion dollar business in America today.
Northeastern Weed Conference Plans Full "Industrial" Day

For the first time the annual Northeastern Weed Control Conference will devote a full day to industrial weed and brush control topics, according to John A. Meade, secretary-treasurer. The industrial sessions will be part of the three-day meeting set for January 6-8 at the Hotel Astor in New York City.

In addition to the industrial weed discussions, the yearly affair will include talks on agronomy, horticulture, and related subjects. As usual, there will be examinations of latest techniques and chemicals for weed control in turf, for highway weed control, and aquatic weed control. Farm crop subjects will round out the program.

During first-day sessions, five key addresses will be offered. Included are: (1) "From Test Tube to Label," by L. L. Coulter of The Dow Chemical Co., Midland, Mich.; (2) "The Mechanics of Herbicide Application," by Art Williams of Agway, Inc.; (3) "Other Dimensions of the Weed Problem," by L. Holm of the University of Wisconsin, Madison; (4) "Progress of the CRF-1 Project on Aquatics and Woody Plants," by Dr. Stanford Fertig of Cornell University in Ithaca; and (5) "Standardization of Terminology in Weed Science," by Dr. Dayton Klingman, Agricultural Research Service, U.S. Department of Agriculture, Beltsville, Md.

Also in the offering is the traditional "New Herbicides from Industry" presentation on Wednesday evening.

Highlights of the industrial sessions include a talk entitled "Eighteen Years of Chemical Brush Control Experiences," by Fred Ashbaugh of West Penn Power Co., Greensburg, Pa.; and talks on such products as Tordon, new brush killer from Dow, and MH-30T, growth retardant from Naugatuck Chemical Co.

INDEX TO ADS

WANTED

LAWN SPRAYING OPERATOR, must know insects, fungus, etc. and know various mixtures. Must be able to sell new contracts. Give details, experience, education, reference, salary expected. Write to 3010 Oaklawn Ave., Largo, Fla.

BRANCH MANAGERS, Connecticut through Virginia area. To head local operations for progressive national corporation specializing in professional management of turf, shrubs, ornamentals. Education, experience, and/or interest in turf, horticulture, or related fields desirable. Expert sales and technical training; close guidance by Regional Directors. Good salary plus substantial commissions. Willing to relocate if necessary. Send resume to Charles W. Ridinger, Turf Kings, Inc., 46 John St., Yonkers, N.Y. 10720.
Plan to attend the

19th Annual Northeastern Weed Control Conference

JAN. 6-8 HOTEL ASTOR
NEW YORK, N. Y.

Sessions on turf, aquatic weed control, brush control, new chemicals, horticultural and agronomic crops, and general industrial and agricultural weed control technology.

For details write:
Dr. John A. Meade, Secretary-Treasurer, Northeastern Weed Control Conference, Department of Agronomy, University of Maryland, College Park, Md.

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 magazine
Circulation Department
Room 802
1900 Euclid Avenue
Cleveland, Ohio 44115

BRAND NEW!

BRUSHKING

NEW $169.00
LOW PRICE

MODEL 330

... the name that made brush cutting history the world over—from Alaska to Zanzibar.

Introducing Model 330, the 2½ HP unit that saws trees up to 5” diameter; slashes through brush 2” thick and more. Standard with 10-inch, 100-tooth shatterproof steel blade. Performs like the heavy-duty Model 880.

MODEL 880

Model 880, world standard of heavy-duty brushcutter quality, 4 HP deluxe unit, cuts trees up to 9” diameter. $249.00, F.O.B. Keene, N.H.

Rowco line of blades and accessories can be used with either model.

ROWCO MANUFACTURING CO., INC.
DEPT. WT-3, 48 EMERALD STREET, KEENE, N.H.
New Jersey Certified Sod Program Started;  
Will Establish High-Quality Producer

The first square foot of certified sod in New Jersey was harvested recently during a program arranged to celebrate the occasion. The top-quality sod received the admiring scrutiny of state officials, agricultural leaders and sod producers at the LaBarre and Schuch Sod Farm in Springfield, New Jersey, where it was produced.

The sod certification program was initiated in the spring of 1963. It is being conducted as a cooperative program between the College of Agriculture, Rutgers—The State University, and the Bureau of Seed Certification of the New Jersey Department of Agriculture. The program is under the guidance of Dr. Henry W. Indyk, extension specialist in turf management, at the College of Agriculture, Rutgers—The State University.

Officials witnessing the harvesting of the first certified sod in New Jersey are presented with certified sod. On the left is William Cranstoun, chief of Bureau of Seed Certification presenting Frank Soraci, Director of Bureau of Plant Industry, both representing the New Jersey Department of Agriculture, with certified sod. On the far right is Dr. Henry W. Indyk, extension specialist in turf management, College of Agriculture, doing the honors for Dr. Leland G. Merrill, Jr., Dean of the College of Agriculture, Rutgers—The State University.

The procedure in certifying sod begins with preplanting field inspections to assure their acceptability in the program. Inspecting officials must approve the seed before it is planted. Throughout the growing period of the grass, fields are periodically inspected. A final inspection is conducted at the time of marketing before issuance of certification tags if the sod meets all standards of certified sod.

Producer interest in the program is rapidly increasing. A substantial acreage is enrolled in the program at the present time and the availability of certified sod to the public should increase substantially within the next year, Dr. Indyk told Weeds Trees and Turf.

The producer as well as the customer stands to benefit from the program. It will provide the high quality producer the recognition he deserves for his efforts. Competitively, also, he will be in a better position, it is reported.

There are many factors which have stimulated the initiation of a program of this nature. The use of sod in establishing lawns is rapidly increasing. A high degree of variation in quality of sod available to the public exists. Certified sod will protect the customer investing in sod by guaranteeing genetic identity and a high quality product, Dr. Indyk says.

Up in the Air. Speaking of varied services, there's an aerial operator in Gettysburg, Pa., whose direct mail pieces are indicative of what's happening today. He represents a group of small operators who have taken to the air and who now offer an unusual panorama of custom spraying. Company is Agrotors, Inc., which offers rights-of-way spraying and similar service by helicopter. Agrotors' president is Dr. Carl M. Voss, and Charles M. Mark is vice president and chief pilot. Services offered include spraying of shade trees for canker worm and gypsy moth, weed control in field crops, utility brush control, etc. Now the company has branched out south, where "Ski" Bykowski heads the Lake Wales, Fla., operation. A modern and aggressive outfit, Agrotors, Inc. is jet-age example of industry advancement.

All's Fair. In New York last week a member of our staff rode by the World's Fair site on his way into the city from the airport on Long Island. While the Fair has been closed for several weeks, it was refreshing to see the tip-top shape surrounding turf areas are being kept in, presumably to continue right up to smowtime! A good plug for the maintenance company which is keeping the fairgrounds ready for the crowds to come next spring.

Stose Away! In our editorial on page 6 we talk about the "rounding out" of industry firms into more than one kind of vegetation maintenance and control, and we have a good case in point, a Pacific Northwest operator who's away and running with his thriving business of weed control, insecticide application, and tree pruning. He's Glenn L. Stose of Portland, Oregon. Glenn's calling card outlines the variety of his services, and adds that his company is licensed and bonded. Here's another of that active group of forward-thinking applicators who've done so much to upgrade the profession in the Northwest!

To the Notebooks. Conference time is upon us. Checking our calendar of coming events, we see that hardly a week will go by from now until March without an important weed control, turf management, or tree maintenance seminar everywhere from New York City, where the Northeastern Weed Control Conference meets next month, to California, where the state weedmen are also congregating in January (details in Meeting Dates, p. 48). We again urge all our readers to take time out to attend one or more of these helpful technical sessions. The small cost of registration and transportation is nil compared to the worth of the great scientific brains one traditionally finds gathered at the conferences!
Adaptability . . . that’s the word for equipment from Buffalo Turbine, the established name in spraying and dusting equipment. From the Mity Mite above, our ever-popular back pack sprayer/duster, to the heavy-duty, versatile TURBULENT AIR Duster Model “D” below, you always get your money’s worth when you buy from Buffalo Turbine. Whether you are engaged in weed and brush control, turf spraying, ornamental pest control, tree spraying, or custom agricultural pest control, look into our TURBULENT AIR line of custom-designed machines.

CHECK OFF OUR NAME ON READER REPLY CARD FOR MORE DETAILS!

One piece of equipment can be used for

- FERTILIZING
- SEEDING
- BROADCASTING
- SHADE TREES
- MOSQUITO CONTROL
- PARKS
- ORNAMENTAL TREES

So...
Get Your Money’s Worth!

BUFFALO TURBINE Agricultural Equipment Co., Inc.
Industrial Street, Gowanda, New York
From The R. H. BOGLE Company comes the versatile DRY weed and grass killer with lasting power—BO-RID® a new name for an old & respected name in chemical herbicides

**WEED CONTROL?**
- Ends the hazard of weed-spread fire.
- Exposes weed-hidden dangers.
- Improves work safety.
- Eliminates costly weed-cutting.
- Drives vermin away.
- Improves appearance, sanitation, and drainage.
- Reduces metal corrosion and wood decay.

**DRY WEED CONTROL?**
- No mix, no mess, no spray, no expensive equipment.
- No fire hazard; no corrosion, no vermin.
- High residual action.
- Non-selective; kills all.
- Easy to apply and store.
- No metal corrosion and wood decay.

**BO-RID® DRY WEED CONTROL?**
- Controlled quality, dust free, low cost.
- White pellets cling to ground, assure uniform distribution.
- Regional formulation, corrected for soil, vegetation, rainfall and season.
- Standard of application rate 200 lbs. per acre (1 lb. covers 218 square feet).
- Proven effective—non-specific—controls all vegetation.

*One of fifteen formulations

THE R. H. BOGLE COMPANY
ALEXANDRIA, VIRGINIA 22313 (703) 549-2344
MEMPHIS TENN.
JACKSONVILLE, FLA.

PRINTED IN U.S.A.