Sterilants
Pre-Emergents
Post-Emergents
Fumigants
Aquatics
Algaecides
Nematocides
Insecticides
Miticides
Fungicides
Spreader-Stickers
Retardants
Chelates
Others

GUIDE to SUPPLIERS of WEED and TURF CHEMICALS

Page W-6
Chlordane is a money-maker for Formulators, Custom Spray Applicators and PCO's because it is both economical and effective. It protects lawns and crops two ways: 1) Controls crabgrass without harming established lawns. 2) The same application also controls turf pests such as ants, chiggers, white grubs, Japanese beetle larvae, and chinch bugs. Yet the price of Chlordane is competitive with single-purpose chemicals.

When used as a soil treatment against termites, Chlordane has shown its protective power for at least five years. This multi-purpose product also has been used successfully for many years against household insects such as roaches, mosquitoes, flies, spiders, wasps, silver fish, bedbugs, etc. Chlordane is available in both refined and agricultural grades, and in a wide range of dusts, granules, wettable powders, oil-soluble and emulsifiable concentrates.

Write Prentiss for information.
Train Yourself for Plant Pest Control

By A. B. Kennerly

“Contract applicators have a big field waiting to be developed in controlling insects and diseases in ornamentals, lawns and shade trees,” observes C. F. Garner, entomologist at Texas A & M College. “And this field is the logical opportunity for CAs and pest control operators who are willing to add this lucrative line to their present business.”

New suburban developments bring new homes with new plantings. Older plantings in the established neighborhoods need care and attention. A tree becomes a landmark. It becomes important to the family, an emotional strength, a symbol of security, and residents will spend money to preserve the tree when insects and disease threaten its existence.

“Operators who go into this business must be well qualified,” Garner insists. “The business must be built entirely on satisfactory service by operators who have the answers.”

Can the present operators with little experience in plant insect and disease control become proficient in this kind of work?

“Everyone should recognize that he must start where he is right now,” Garner explains. “There are logical steps to take to go into this business.”

First, make a survey of potential business. This survey should point up the probable demand for the service. Is the community growing or declining, or is it presently at a standstill? What is the expected life of the community in point of homeowners? Will it likely develop soon into an area of cheap boarding and apartment houses?

Assuming that the area in which the CA operates has a good opportunity for future growth and stable home ownership for another 10 to 20 years, how much time can be taken from present operations to devote to plant insect and disease control? This will determine whether it would pay to add this line to present services.

If surveys encourage the firm to go further, information should be collected on insects and diseases it will be called upon to control. “Plant insects and diseases differ in all parts of the nation,” Garner reminds. “It is not necessary to learn about all insects — only those that give trouble.”

**Microscopes a Must for CAs**

Collect specimens of the insects. These can be placed with pins in cigar boxes or any other box where the operator can refer to the insects for identification. Many CAs may not know the correct names for all the insects, but these can be identified at a land-grant college or university. Label them and include the dates they were collected and what they were feeding on. Later, the CA may wish to purchase his own microscope and use it for identifying insects as he becomes more skilled. There is nothing that will add more prestige to an operator’s professional ability than a microscope.

Next, start building a file of useful information that will be needed to know about insects, their controls, what they feed on and when, and something about the chemicals used in their control. It takes time to do these things, but they are the foundation of the pest control business dealing with plants.

“A library is essential to keep informed on plant pest controls,” Garner points out. “No one book or publication is complete. Copies can be obtained from state experiment stations, county agents, from the U.S. Department of Agricul-

It's no simple task to learn how to fight insects and diseases of lawns, shrubs, and trees as a full-time business, but many spraymen have paved the way to success with hard work and a self-education plan.
ture, and from commercial concerns who manufacture pest control chemicals.

Keep Reference Library


With this backlog of information, the next step is to learn through actual experience. "Applicants will learn that regardless of how much knowledge and experience they gain," Garner observes, "things go wrong and plants are damaged. There are several ways to reduce this damage.

First, Garner suggests establishing a small experimental plot where the operator can try out insecticides and fungicides. Or, he can arrange with some grower who is willing for him to use his plantings. This experience will help to establish confidence in the operator for handling the control measures.

Another idea is to try the controls on one shrub or a small part of the lawn, then return later to observe results. Keep records on these for future reference.

Spray Early or Late in Day

Conditions outside the control of the operator may cause damage. For example, if plants lack water, foliage is more easily burned. Midday is not as good a time to spray as the early or late hours. "Plant damage is a part of the business," Garner insists. "Be prepared to replace an occasional plant. Make cost estimates to cover this expense over an average period."

Another point to remember in control of plant insects is that it will often be necessary to make repeat applications. There are few one-shot treatments. Have an understanding with the owner regarding these additional treatments and the cost.

CAs can make arrangements with a noncompeting nurseryman for any needed replacements and at the same time learn much from him about plant disease and insect controls. He will be a good source of referral business since he is interested in satisfactory service and good livability of his shrubs and trees. Sometimes the nurseryman may be providing this service, but would rather give it up to devote his time to his nursery business.

By now the aggressive CA will be ready to take on some jobs. Keep detailed information on each contract. Include the conditions, the kind and costs of insecticides or fungicides to do the job, the time of year, the results, and charges. This information will be valuable when a similar job comes up. It could save losses in making estimates.

Disease Control Logical Adjunct

Learning how to control diseases in plants may be difficult. The homeowner, usually unable to distinguish between insect damage and disease damage, will expect contractors to treat for either. However, methods for learning plant disease control are similar to those for learning control of insects. One can learn where plant diseases can be diagnosed from state universities, although this service is limited in many states. It may be difficult to keep disease specimens.

Garner gives 5 essentials to be observed for controlling ornamental pests:

1. Use the best equipment you can buy to apply the insecticides and fungicides.
2. Select the right control measures.
3. Apply the controls in the proper manner.
4. Start control measures before serious damage occurs. This may not always be possible if homeowners delay, but the CA with contracts for regular care can avoid these situations.
5. Repeat applications must be made in 7 to 10 days for certain pests such as scales, white flies, and spider mites. In time CAs will learn some short cuts such as combination sprays that will save time and money. These combinations can control a variety of insects.

Once established, there are several ways to obtain new business. Nurserymen can be helpful by referring their customers, unless they offer a similar service. Newspaper advertising, radio spots, direct mail to new homeowners and to selected mailing lists are helpful. One operator gives demonstrations on television.

Another operator who has an established business in pest controls on ornamental shrubs, lawns, and trees has collected a file of color slides showing various activities of his work. He shows these to garden clubs, womens' clubs, and other organizations who ask him to give a program showing how to control insects in their ornamentals. While giving self-help ideas, he is also indirectly reminding them that his work is pest control. This brings him considerable business.

Future possibilities in this work are unlimited. Harlan E. Smith, plant pathologist for Texas A & M College, points to the many opportunities in controlling plant diseases and the lack of qualified people to handle the work.

"Trends now point to graduating students from colleges and universities who are fully trained to handle every kind of trouble in plants," Smith predicts. "These people would be as capable of attending to every need of plants as the veterinarian is of animals. We are arousing interest in this need and students are becoming interested. In addition to entomology and plant pathology, students who desire to qualify themselves for this work should also learn agricultural chemicals. These would include herbicides, insecticides, fungicides, and nematocides. Then, there should be additional training in plant physiology and soils."

Contract applicators who are presently training themselves in these fields will continue their search for efficient business and finance management. And this will be good. These young fellows who graduate with skilled training in the sciences of pest control won't have business experience. They will want to go to work for you.
Close Attention to Spray Tools
Is Key to Economical Operation

Weed-spraying equipment has to be shipshape to achieve an efficient job. It is obviously important for CAs to formulate carefully and diagnose thoroughly the infestation to be treated, but these precautions are of no avail if machinery isn’t properly cared for.

Sprayers usually have about nine essential parts: sprayer tank, measuring device for tank, filler hole for tank, pump, filter between tank and boom, by-pass valve, pressure gauge, boom, and nozzle.

Here are some pointers, from the Saskatchewan Department of Agriculture, which give CAs some shortcuts to economy and efficiency:

Tank. Aluminum or galvanized tanks of 150 to 200 gallons have been found quite satisfactory for certain big jobs. CAs who use a tractor-mounted tank may want to stick to 80 or 90 gallons. These recommendations are for large projects (like golf courses or highway medians) where the application is similar to agricultural work. (In the USA, many prefer tanks of larger capacity.)

Measuring devices. For a money-saver, measuring devices can be as basic as an ordinary stick calibrated in gallons. These sticks can be homemade by pouring a specified amount of chemical into the tank, and marking the measuring stick accordingly.

Filler hole. This hole should be some 8 inches across, big enough to sweep sediment from the corner of the tank. Frequently there is a screen over this hole to remove impurities from fluids poured in.

Pump. Most common types of sprayers for pumps are the gear-type and the machine with nylon rollers. Preference is for the latter, because the gear-type tends to wear faster and lose pressure. Suspended material tends to wear a gear pump.

Capacity of most pumps in widespread use is 5-10 gal/min.

It’s also convenient to have a clean-out valve in the bottom of the tank so cleaning is rapid and easy. A sump collects material for easy disposal. It is best to have the outlet slightly above the bottom of the tank so sediment doesn’t fill up the drain hole.

Filters. Chemical should be filtered between tank and boom.

By-pass valve. This device both holds pressure of chemical evenly on the boom and passes excess material back into the tank again. This returning fluid flows back into the tank and keeps chemical mixed up in the water.

Pressure gauge. This is the last mechanism solutions pass through before going to the boom, and is the gauge used to determine pressure in the boom. A handy shut-off valve should be attached so the flow of material can be turned off from the tractor or from the cab of the truck. The suck-back shut-off valve is best.

Boom. Booms should be easy to raise and lower, and should have a good range of height. It’s essential the boom is just high enough so spray patterns overlap. With 20-inch nozzle spacings, this is usually 21-23 inches above the ground to be sprayed.

A sturdy boom prevents uneven spray patterns which may result when booms whip back and forth. It is desirable to keep the boom from bobbing up and down because if the boom is too low, there is no spray overlap, and if too high, too much overlap. A stiff brace will hold the boom steady.

It’s easy to see how a swinging boom can cause an uneven spray pattern. If the vehicle is traveling 4 miles an hour and the boom is swinging forward at 4 miles an hour, the net effect is a boom traveling 8 miles an hour.

Conversely, a boom that swings back 4 miles an hour at the same vehicle speed gives a net boom speed of 0 miles an hour, and an uneven spray pattern results.

Most booms have a clean-out valve at the end. Water should be pumped through the boom before it is used to flush out sediment. Hose connections should, of course, be tight so spray cannot escape.

Nozzles. Common nozzles for weed control chemicals have 80 to 100 mesh screens to keep small bits of chemical from plugging up the nozzle tip.

Nozzles send out a fan-shaped spray. When nozzles are placed at a 5° angle on the boom, sprays run parallel without any turbulence. Each nozzle is designed to put out a specific amount of chemical per minute.

Worn nozzles can be costly because too much chemical is applied to the area. If these nozzles spray more than 10% over the recommended rate, replace tips.

Rate of spray of each nozzle can be checked by running water through the sprayers. The amount of material any type nozzle should apply at a given pressure is listed in the manufacturer’s specifications. In one minute, the cup should fill to the recommended rate. Then measure the rate of the next nozzle and so on through the entire sprayer. Badly worn nozzles should have their tips replaced.

WEEDS and TURF
Pest Control Section, October, 1962

W-5
Guide to Suppliers of Weed & Turf Chemicals

Weeds and Turf presents below the first Guide to Suppliers of vegetation control chemicals for use by Contract Applicators in urban/industrial areas. 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.

Advertisers in Weeds and Turf are listed in boldface type.

**HERBICIDES**

| ARSENIC |  |  |
|---------|  |  |
| American Fluoride Corp. | Chipman Chemical Co., Inc. | Garden Products Co. |
| General Chemical Div., ACC | M. W. Hardy & Co., Inc. | Industrial Materials Co. |
| Los Angeles Chemical Co. | Mineral Fertilizer Co. | Patterson Chemical Co., Inc. |
| Southern Mill Creek Products Co. | Utility Chemical Co. | Wilbur-Ellis Co. |
| Woodbury Chemical Co. |  |  |

**ATRAZINE**

| ATRAZINE* |  |  |
|------------|  |  |
| Continental Chemist Corp. | Doggett-Pfeil Co. | E-Z Flo Chemical Co. |
| Geigy Agricultural Chemicals | Hub States Chemical & Equipment Co. | Los Angeles Chemical Co. |
| Mercury Chemical Co., Inc. | Miller Chemical & Fertilizer Corp. | Mineral Fertilizer Co. |
| Naieco Chemical Co. | Patterson Chemical Co., Inc. | Residex Corp. |
| Riverdale Chemical Co. | Rockland Chemical Co., Inc. | Southern Mill Creek Products Co. |
| Taylor Chemical Co. | Thompson-Hayward Chemical Co. | United Chemistries |
| United Chemistries | Wilbur-Ellis Co. | Woodbury Chemical Co. |

**BOURNON**

| BORON |  |  |
|--------|  |  |
| Diamond Alkali Co. | Fort Pitt Chemical Co. | Los Angeles Chemical Co. |
| Miller Chemical & Fertilizer Corp. | Patterson Chemical Co., Inc. | United Chemistries |
| Utility Chemical Co. | Wilbur-Ellis Co. | Woodbury Chemical Co. |

**CALCIUM CHLORIDE**

| CALCIUM CHLORIDE |  |  |
|------------------|  |  |
| Brayton Chemicals, Inc. | Dow Chemical Co. | E-Z Flo Chemical Co. |
| Los Angeles Chemical Co. | Naieco Chemical Co. | Wilbur-Ellis Co. |

**DIURON**

| DIURON |  |  |
|--------|  |  |
| E-Z Flo Chemical Co. | Hayes-Sammons Chemical Co. | Los Angeles Chemical Co. |
| Miller Chemical & Fertilizer Corp. | Patterson Chemical Co., Inc. | Residex Corp. |
| Southern Mill Creek Products Co. | Taylor Chemical Co. | Thompson-Hayward Chemical Co. |

**ERBON**

| ERBON |  |  |
|--------|  |  |
| Brayton Chemicals, Inc. | Dow Chemical Co. | E-Z Flo Chemical Co. |
| Los Angeles Chemical Co. | Naieco Chemical Co. | Wilbur-Ellis Co. |

**HERBICIDES**

| SOIL STERILANTS |  |  |
|-----------------|  |  |
| ARSENIC |  |  |
| American Fluoride Corp. | Chipman Chemical Co., Inc. | Garden Products Co. |
| General Chemical Div., ACC | M. W. Hardy & Co., Inc. | Industrial Materials Co. |
| Los Angeles Chemical Co. | Mineral Fertilizer Co. | Patterson Chemical Co., Inc. |
| Southern Mill Creek Products Co. | Utility Chemical Co. | Wilbur-Ellis Co. |
| Woodbury Chemical Co. |  |  |

**CHLORINATED**

| CHLORINATED |  |  |
|-------------|  |  |
| Chipman Chemical Co., Inc. | Doggett-Pfeil Co. | E-Z Flo Chemical Co. |
| Thompson-Hayward Chemical Co. | Thompson-Hayward Chemical Co. |  |

**MONURON**

| MONURON |  |  |
|----------|  |  |
| Brayton Chemicals, Inc. | Chapman Chemical Co. | Deziutrol Corp. |
| General Chemical Div, ACC | Hayes-Sammons Chemical Co. | Hoosier Solvants & Chemical Corp. |
| Los Angeles Chemical Co. | Miller Chemical & Fertilizer Corp. | Naieco Chemical Co. |
| Patterson Chemical Co. | Residex Corp. | Southern Mill Creek Products Co. |
| Thompson Chemical Corp. | Woodbury Chemical Co. |  |

**SODIUM ARSENITE**

| SODIUM ARSENITE |  |  |
|-----------------|  |  |
| Acme Quality Paints, Inc. | American Fluoride Corp. |  |
industrial
WEED CONTROL
is profitable business

with SIMAZINE or ATRAZINE
HERBICIDES

Industrial weed eradication is a fast growing market. Custom application of herbicides is widespread, and the practice is growing. Industries and municipalities have become increasingly aware of weed problems, and are seeking ways to effectively eliminate this nuisance and potential fire hazard.

Many PCO’s depend upon Simazine and Atrazine, Geigy’s outstanding herbicides, for industrial weed control.

These herbicides can be used to eliminate almost all vegetation. One timely application, according to label directions, controls annual and perennial weeds for a full season or more. Simazine and Atrazine are safe to humans and animals, non-irritating to skin, non-flammable, non-corrosive and dependable in the results they provide.

INDUSTRIAL WEED CONTROL MARKETS
Roads, paths, industrial plants, sidings, race tracks, parking lots, around billboards, tennis courts, playgrounds, drive-in-theatres, firebreaks, fence rows, utilities, lumber yards, oil tanks, water works, and many, many other sites in your service area.

For free 12 page, full-color brochure on Industrial Weed Control, address Department PC-10.
SODIUM CHLORATE

Agricultural Chemicals, Inc.
American Potash & Chemical Co.
Baird Chemical Corp.
Barada & Page Co.
Braun-Knecht-Heimann Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
California Farm Supply Co.
Chapman Chemical Co.
Chimpan Chemical Co., Inc.
Conray Products Co.
Doggelt-Pfeil Co.
E-Z Flo Chemical Co.
Fausey-Besthoff, Inc.
Garden Products Co.
General Chemical Div., ACC
James Good, Inc.
Hogkins Agricultural Chemical Co.
Hub States Chemical & Equipment Co.
Industrial Materials Co.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Co.
Miller Products Co.
New York Scientific Supply Co.
Niagara Chemical Div., FMC
Nott Manufacturing Co.
Patterson Chemical Co., Inc.
Pearson-Ferguson Chemical Co., Inc.
Pennsalt Chemicals Corp.
B. G. Pratt Co.
Reade Manufacturing Co.
Residek Corp.
Riverdale Chemical Co.
Roeland Chemical Co., Inc.
Southern Mill Creek Products Co.
C. W. Staples, Inc.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
Triangle Chemical Co.
U. S. Sanitary Specialties Corp.
Utility Chemical Co.
Willbur-Ellis Co.
Woodbury Chemical Co.
Woolfolk Chemical Works, Ltd.

VACATE*

Diamond Alkali Co.

PRE-EMERGENT (Selective)

AMIBEN*

Amchem Products, Inc.
Brayton Chemicals, Inc.
E-Z Flo Chemical Co.
Taylor Chemical Co.
Woodbury Chemical Co.

BANDANE*

Mercury Chemical Co., Inc.
Prentiss Drug & Chemical Co., Inc.
Residek Corp.
Riverdale Chemical Co.
Velsicol Chemical Corp.
Woodbury Chemical Co.

CALCIUM PROPYL ARSONATE

W. A. Cleary Corp.
Doggelt-Pfeil Co.
E-Z Flo Chemical Co.
Monsanto Chemical Co.
Riverdale Chemical Co.
Thompson-Hayward Chemical Co.

CHLORDANE

See Insecticides

CIPC

Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
E-Z Flo Chemical Co.
Fresno Agricultural Chemical Co.
Hayes-Sammons Chemical Co.
Lobel Chemical Corp.
Miller Chemical & Fertilizer Corp.
Niagara Chemical Div., FMC
Patterson Chemical Co., Inc.
Pittsburgh Plate Glass, Chem. Div.
Riverdale Chemical Co.
Stauffer Chemical Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
Willbur-Ellis Co.
Woodbury Chemical Co.

SESONE*
This new, fast way with VACATE...Diamond's new nonselective herbicide for dry application

This is it. The herbicide you hoped would come. The weed and grass killer that lasts more than one year. A patented feature of this killer is the chemically combined water which makes it dust free. It can be applied any time (most economical results are from spring or late fall spreading). It is easy to handle—requires no mixing, hauling water, or using expensive equipment.

This is Diamond's new VACATE, and it has many physical advantages over previous formulations for battling weeds and grass. VACATE offers economy of application and efficiency in performance.

VACATE can be used anywhere a weed- and grass-free area is desirable. It controls all vegetation. Normal rainfall starts action—a total accumulated rainfall of an inch is ample. And it is safe... noncorrosive, nonflammable, and nontoxic. You ought to know the whole story. Write Diamond Alkali Company, 300 Union Commerce Building, Cleveland 14, Ohio.

VACATE is one of the Diamond Chemicals

When Writing to Advertisers Please Mention WEEDS AND TURF section
Selective Pre-Emergent Herbicides (Cont.)

TRICALCIUM ARSENATE
Chipman Chemical Co., Inc.
General Chemical Div., ACC
Los Angeles Chemical Co.
Patterson Chemical Co., Inc.
Pennsalt Chemicals Corp.
Vineland Chemical Co.

TRIFLURALIN
American Liquid Fertilizer Co.
Brayton Chemicals, Inc.
Dow Chemical Co.
E-Z Flo Chemical Co.
Miller Chemical & Fertilizer Corp.
Residex Corp.
Riverdale Chemical Co.
Thompson-Hayward Chemical Co.
Woodbury Chemical Co.

TRICYCLIC ARSENATE
Chipman Chemical Co., Inc.
General Chemical Div., ACC
Los Angeles Chemical Co.
Patterson Chemical Co., Inc.
Pennsalt Chemicals Corp.
Vineland Chemical Co.

TRIFLURALIN
American Liquid Fertilizer Co.
Brayton Chemicals, Inc.
Dow Chemical Co.
E-Z Flo Chemical Co.
Miller Chemical & Fertilizer Corp.
Residex Corp.
Riverdale Chemical Co.
Thompson-Hayward Chemical Co.
Woodbury Chemical Co.

ZYTRON®
Dow Chemical Co.

POST-EMERGENT (Selective & Non-Selective)

AMITROLE®
Amchem Products, Inc.
American Cyanamid Co.
Brayton Chemicals, Inc.
E-Z Flo Chemical Co.
Los Angeles Chemical Co.
Pennsalt Chemicals Corp.
Patterson Chemical Co., Inc.
Residex Corp.
Riverdale Chemical Co.
Southern Mill Creek Products Co.
United Chemistries
Wilbur-Ellis Co.

AMMONIUM METHYL ARSONATE
American Liquid Fertilizer Co.
Ansel Chemical Co.
Blackleaf Products Co.
Brayton Chemicals, Inc.
W. A. Cleary Corp.
Doggett-Pfeil Co.
Southern Mill Creek Products Co.
Vineland Chemical Co.

AMMONIUM SULFAMATE
Barada & Page Co.
Braun-Knecht-Heimann Co.
Brayton Chemicals, Inc.
E. I. du Pont de Nemours & Co.
E-Z Flo Chemical Co.
Eastern Seaboard Supply Corp.
Fresno Agricultural Chemical Co.
Hoosier Solvents & Chemical Corp.
Howe & French, Inc.
Kaufohl & Co.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Nalco Chemical Co.
Patterson Chemical Co., Inc.
Residex Corp.
G. S. Robins & Co.
Southern Mill Creek Products Co.
Wilbur-Ellis Co.

AMMONIUM THIOCYANATE
J. T. Baker Chemical Co.
Eastern Seaboard Supply Corp.
Mallinkrodt Chemical Works
Sinclair Mineral & Chemical Co.
Utility Chemical Co.

ARSENIC ACID
Barada & Page Co.
Braun-Knecht-Heimann Co.
California Chemical Co., Ortho Div.
Chemical Affiliates, Inc.
Chipman Chemical Co., Inc.
Commercial Chemicals Co.
Delta Chemical Works, Inc.
Fisher Scientific Co.
Garden Products Co., Inc.
General Chemical Div., ACC
Hayes-Sammons Chemical Co.
International Commodities Corp.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Niagara Chemical Div., FMC
Pennsalt Chemicals Corp.
G. S. Robins & Co.
Schnee-Morehead Development Corp.
Thompson-Hayward Chemical Co.
Woolfolk Chemical Works, Ltd.

ATRAZINE*
See Soil Sterilants

BORON
See Soil Sterilants

CACODYLIC ACID
Ansul Chemical Co.
New York Quinine & Chemical Works
Patterson Chemical Co., Inc.

CALCIUM ACID METHYL ARSONATE
American Liquid Fertilizer Co.
Ansel Chemical Co.
Brayton Chemicals, Inc.
Patterson Chemical Co., Inc.
Southern Mill Creek Products Co.
Wilbur-Ellis Co.

CALCIUM PROPYL ARSONATE
See Pre-Emergent Herbicides

DNA
Brayton Chemicals, Inc.
Doggett-Pfeil Co.
E-Z Flo Chemical Co.
Pennsalt Chemicals Corp.
Southern Mill Creek Products Co.
Wilbur-Ellis Co.

EPTC (EPTAM®)
Brayton Chemicals, Inc.
Pennsalt Chemicals Corp.
Southern Mill Creek Products Co.
Wilbur-Ellis Co.

ENZEPHALON
Brayton Chemicals, Inc.
Doggett-Pfeil Co.
E-Z Flo Chemical Co.
Pennsalt Chemicals Corp.
Southern Mill Creek Products Co.
Wilbur-Ellis Co.

EXTRON
Brayton Chemicals, Inc.
Doggett-Pfeil Co.
E-Z Flo Chemical Co.
Pennsalt Chemicals Corp.
Southern Mill Creek Products Co.
Wilbur-Ellis Co.

FAZEN
Nalco Chemical Co.
Thompson-Hayward Chemical Co.
Woodbury Chemical Co.

FENACHLOROACETONE
General Chemical Div., ACC

MONURON
See Soil Sterilants

NEBON
Brayton Chemicals, Inc.
Chapman Chemical Co.
E. I. du Pont de Nemours & Co.

2,4-D
2,4-D

SILVEX
Acme Quality Paints, Inc.
Amchem Products, Inc.
Black Leaf Products Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chipman Chemical Co., Inc.
Diamond Alkali Co.
Doggett-Pfeil Co.
Dow Chemical Co.
E-Z Flo Chemical Co.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Nalco Chemical Co.
Patterson Chemical Co., Inc.
Residex Corp.
Riverdale Chemical Co.
Southern Mill Creek Products Co.
Thompson-Hayward Chemical Co.
United Chemistries
Wilbur-Ellis Co.
Woodbury Chemical Co.

TILLAM
Stauffer Chemical Co.

W-10 WEEDS AND TURF Pest Control Section, October, 1962
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.
Fresno Agricultural Chemical Co.
General Chemical Div., ACC
Hewes Gotham Co.
Hooker Solvents & Chemical Corp.
Hoe & French, Inc.
Hub States Chemical & Equipment Co.
International Commodities Corp.
Lobel Chemical Corp.
Los Angeles Chemical Co.
Mercury Chemical Co., Inc.
Miller Chemical & Fertilizer Corp.
Mineral Fertilizer Co.
Naeco Chemical Co.
Niagara Chemical Div., FMC
Patterson Chemical Co., Inc.
Residex Corp.
Riverdale Chemical Co.
Rockland Chemical Co., Inc.
Schmizu-Schoenwald-Turner Co.
Southern Mill Creek Products Co.
Taylor Chemical Co.
Thompson Chemical Corp.
Thompson-Hayward Chemical Co.
United Chemetrics
Utility Chemical Co.
Vineland Chemical Co.
Woodbury Chemical Co.

Tell Advertisers
You Learned About Them
in
WEEDS and TURF

ACROLEIN

Shell Chemical Co.
Southern Mill Creek Products Co.
Wilbur-Ellis Co.

AMITROL-T

Amchem Products, Inc.
Brayton Chemicals, Inc.
E-Z Flo Chemical Co.
Hub States Chemical & Equipment Co.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Residex Corp.
Riverdale Chemical Co.
Southern Mill Creek Products Co.
United Chemetrics
Wilbur-Ellis Co.

AQUALIN

Shell Chemical Co.
Southern Mill Creek Products Co.
Wilbur-Ellis Co.

AQUATHOL

Pennsalt Chemicals Corp.
Thompson-Hayward Chemical Co.

DACAMINE

Diamond Alkali Co.
Southern Mill Creek Products Co.

DIQUAT

California Chemical Co., Ortho Div.
Residex Corp.

ENDOTHAL

See Post-Emergent Herbicides

HYDROTHOL

Pennsalt Chemicals Corp.

KUROSAL

Dow Chemical Co.
Residex Corp.
Southern Mill Creek Products Co.

ORTHODICHLOROBENZENE

American Fluoride Corp.
Dow Chemical Co.
Hooker Chemical Corp.
Hoosier Solvents & Chemical Corp.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Monsanto Chemical Co.
Patterson Chemical Co., Inc.
Residex Corp.
Robeco Chemicals, Inc.
Southern Mill Creek Products Co.
United Chemetrics
Utility Chemical Co.

SILVEX

Acme Quality Paints, Inc.
Amchem Products, Inc.
Black Leaf Products Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chipman Chemical Co., Inc.
Dow Chemical Co.
E-Z Flo Chemical Co.
Hayes-Sammons Chemical Co.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Patterson Chemical Co., Inc.
Here's What Chipman's 50 Years of Weed Control Offers You

1. Practical Experience

Chipman Chemical Company is the oldest and largest custom applicator of herbicides in the country. Its long, firsthand experience in the use of chemicals for all types of weed problems can be extremely beneficial to you. As a weed killer manufacturer with this unmatched background in application problems, the Company offers its “know-how” to all those engaged in weed control.

2. Extensive Line

Chipman weed killing chemicals comprise the most extensive line of herbicides available. Whether your weed problem be aquatic, industrial, turf or brush . . . Chipman has the right chemical to do the best job. Chipman Chemical Company is one of the few basic producers of 2,4-D and the largest producer of arsenicals.

3. Expert Personnel

Chipman's 50 years in the manufacture and use of weed killers has produced a highly trained and experienced group of experts. These weed control specialists are readily available to give advice and service to custom applicators and others in weed control. In recent years, for example, our technicians have trained hundreds of aquatic weed control operators.

4. Nation-wide Service

The Company's eight offices and plants, plus its representatives in other locations, make it possible to offer personal service throughout the country. Take advantage of this service! Write or phone the nearest Chipman office . . . you can obtain the assistance of the Chipman weed control representative in your area.

CHIPMAN CHEMICAL COMPANY

BOUND BROOK, N. J. P. O. Box 309 • CHICAGO, ILL. 608 S. Dearborn • ST. PAUL, MINN. 786 N. St. Albans • BESSEMER, ALA. P. O. Box 563
PASADENA, TEX. P. O. Box 272 • PALO ALTO, CALIF. P. O. Box 679 • PORTLAND, ORE. 6200 N. W. St. Helens • N. KANSAS CITY, MO. 1100 Gentry

FREE! Colorfully Illustrated Booklet on Weed Control
When Writing to Advertisers Please Mention WEEDS AND TURF section W-13
CHELATING AGENTS

IRON CHELATE
American Liquid Fertilizer Co.
Brayton Chemicals, Inc.
Faesy & Besthoff, Inc.
Hayes-Sammons Chemical Co.
Residex Corp.
Wilbur-Ellis Co.

SEQUASTRENE PRODUCTS*
Geigy Agricultural Chemicals
Los Angeles Chemical Co.
Pest Control Equipment Co.
Thompson-Hayward Chemical Co.

VERSENES®
Dow Chemical Co.

FUNGICIDES

CAPTAN®
Stauffer Chemical Co.

DICHLOREX
See Algaecides

EMMI®
Mercury Chemical Co., Inc.
Riverdale Chemical Co.
United Chemetrics
Velosol Chemical Corp.

FERBAM
Lobel Chemical Corp.
Woodbury Chemical Co.

GLYODIN
Brayton Chemicals, Inc.
Consolidated Industrial & Agricultural Chemicals, Inc.
Delta Chemical Works, Inc.
E-Z Flo Chemical Co.
Miller Chemical & Fertilizer Corp.
Niagara Chemical Div., FMC
Pittsburgh Plate Glass, Chem. Div.
G. S. Robins & Co.
Standard Oil Co. (Ohio)
Taylor Chemical Co.
United Carbide Chemicals Co.

PANOCY®
Brayton Chemicals, Inc.
Morton Chemical Co.
Patterson Chemical Co., Inc.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
United Chemetrics
Wilbur-Ellis Co.

PCNB
Aecto Chemical Co., Inc.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
California Farm Supply Co.
Cotton States Chemical Co., Inc.
E-Z Flo Chemical Co.
Edco Corp.
Florida Agricultural Supply Co.
Hayes-Sammons Chemical Co.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Miller Products Co.

ZINEB
Black Leaf Products Co.
Lobel Chemical Corp.
Pennsalt Chemicals Corp.
Shepard Div. of Samincorp
Woodbury Chemical Co.

ZIRAM
Pennsalt Chemicals Corp.

GRANULAR CARRIERS

ATTACLAY
Minerals & Chemicals Philipp Corp.

GROWTH RETARDANTS

PHOSFON
Lobel Chemical Corp.
Patterson Chemical Co., Inc.
Virginia-Carolina Chemical Corp.

MALEIC HYDRAZIDE
E-Z Flo Chemical Co.
Naugatuck Chemical
Thompson-Hayward Chemical Co.
Woodbury Chemical Co.

INSECTICIDES

CHLORDANE
Agricultural Chemicals, Inc.
American Fluoride Corp.
American Liquid Fertilizer Co.
Barada & Page Co.
Black Leaf Products Co.
Brayton Chemicals, Inc.
Browning Chemical Corp.
California Chemical Co., Ortho Div.
Chapman Chemical Co.
Chipman Chemical Co., Inc.
City Chemical Corp.
W. A. Cleary Corp.
Continental Chemists Corp.
Doggott-Pfeil Co.
E-Z Flo Chemical Co.
Eastern Seaboard Supply Corp.
Faesy & Besthoff, Inc.
Flag Sulfur & Chemical Co.
Fresno Agricultural Chemical Co.
General Chemical Div., ACC
Hayes-Sammons Chemical Co.
Heise, Inc.
Hoe & French, Inc.
Hub States Chemical & Equipment Co.
International Commodities Corp.
Lobel Chemical Corp.
Lorenz Chemical Co.
Los Angeles Chemical Co.
McLaughlin Gormley King Co.
Mercury Chemical Co., Inc.
Michlin Chemical Corp.
Miller Chemical & Fertilizer Corp.
Mineral Fertilizer Co.
Mutchler Chemical Co., Inc.
Naugatuck Chemical

Niagara Chemical Div., FMC
Olin Mathieson Chemical Corp.
Patterson Chemical Co., Inc.
Pennsalt Chemicals Corp.
Stauffer Chemical Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
United Chemetrics
Wilbur-Ellis Co.

For complete information write:
Doggett-Pfeil Co.
Springfield, New Jersey

W-14

WEEDS AND TURF Pest Control Section, October, 1962
rly on Niagara for improved Malathion formulations

Not just one . . . but four improved Niagara formulations . . . give you versatile, effective Malathion in the forms best for your use: **Malathion 5 Miscible**—in gallon jugs or 5 gallon cans; contains 5.0 lbs. Malathion per gal. **Malathion 25 Wettable**—25% Malathion; in 4-lb and 50-lb bags. **Malathion 4 Dust**—4% Malathion; 50-lb bags. **Malathion 4 Natox Dust**—4% Malathion, 5% DDT; 50-lb bags. ¶ For exceptional kill of resistant insects . . . for safety in use on a wide range of plants and crops . . . plus dependable customer service, rely on Malathion formulations by Niagara. Call your nearest Niagara dealer for complete information.

RICHMOND, FRESNO, CALIF., JACKSONVILLE, TAMPA, POMPMO, FLA., NEW ORLEANS, OPELOUSAS, LA., GREENVILLE, MISS., AYDEN, N. C., AYER, MASS., WYOMING, ILL., SOUTH HAVEN, MICH., LOS FRESNOS, TEX., GREELEY, COLO., YAKIMA, WASH., DOTHAN, ALA.

**NIAGARA CHEMICAL DIVISION**
MIDDLEPORT, N. Y.
DIAZINON*  American Fluoride Corp.  
Brayton Chemicals, Inc.  
California Chemical Co., Ortho Div.  
Chapman Chemical Co.  
Continental Chemists Corp.  

DIETHYL ETHER  Taylor Chemical Co.  

DISYSTON*  California Chemical Co., Ortho Div.  

DIBROM  California Chemical Co., Ortho Div.  

DICHLOROETHYL ETHER  Taylor Chemical Co.  

ETHION  American Liquid Fertilizer Co.  
Brayton Chemicals, Inc.  
California Chemical Co., Ortho Div.  
Chapman Chemical Co.  
E-Z Flo Chemical Co.  
General Chemical Div., ACC  
Lobel Chemical Corp.  
Los Angeles Chemical Co.  

LINDANE  Agricultural Chemicals, Inc.  
American Fluoride Corp.  
Baird Chemical Corp.  
Brayton Chemicals, Inc.  
California Chemical Co., Ortho Div.  
Chapman Chemical Co.  
Continental Chemists Corp.  
Contemporary Chemical Co.  
Craft Chemicals Co.  
Dodge & Co., Inc.  
Dow Chemical Co.  
Edison Chemical Co.  
Endosil Corp.  
Fenner Chemical Co.  
Flag Sulfur & Chemical Co.  
Grandee Chemical Co.  
Hayes-Sammans Chemical Co.  
Henley & Co., Inc.  
Hooker Chemical Corp.  
Hughes Chemical Co.  
Hub States Chemical & Equipment Co.  
India Chemical Corp.  
Inland Chemical Co.  
Intercontinental Chemicals Corp.  
J. & M. Co.  
Jefferson Chemical Co.  
Johnson & Co.  
Koppers Co.  

METACIDE  Chemagro Corp.  
E-Z Flo Chemical Co.  
United Chemists  
Wilbur-Ellis Co.  
Woodbury Chemical Co.  
Woolfolk Chemical Works, Ltd.
easy turf and weed control—

with a famous

FONTAN

THE R.5 FONTAN FOR HEAVY DUTY
WEIGHT 37 LBS.

A self-contained unit, the Fontan has jets to interchange for misting or spraying, another attachment to interchange for dusting. Designed for versatility, dependability and safety, the Fontan has metal frame and padded straps for comfortable operation.

FONTAN + MALATHION = ECONOMY

The Fontan adjusts to allow low-volume spraying with less dilute liquid and a higher concentration of Malathion or other chemical. Both Fontans offer complete portability, choice of droplet size, easy maintenance, safe fuel injection, corrosion-resistant plated parts.

THE R.6 FONTAN FOR SMALLER JOBS
WEIGHT 24 LBS.

A torch interchanged with the spray head and nozzle converts either Fontan into a flame thrower for weed killing, snow removal, burning off paint, heating tar for roofs and street repairs, and numerous similar tasks.

See You at Booth 81
Kansas City, October 21-25
NPCA Convention and Trade Show

SOUTHERN MILL CREEK PRODUCTS COMPANY, Inc.
BOX 4297, TAMPA, FLORIDA
Please send further information on:
___R.5 FONTAN ___R.6 FONTAN ___MALATHION
NAME
ADDRESS
CITY _______ ZONE _______ STATE

When Writing to Advertisers Please Mention WEEDS AND TURF section
Insecticides (Cont.)

METHOXYCHLOR
E. I. duPont de Nemours & Co.
Geigy Agricultural Chemicals

PARATHION
Agricultural Chemicals, Inc.
American Cyanamid Co.
American Fluoride Corp.
American Liquid Fertilizer Co.
American Potash & Chemical Corp.
Brazton Chemicals, Inc.
Browning Chemical Corp.
California Chemical Co., Ortho Div.
Chenmagro Corp.
Chipman Chemical Co., Inc.
Commerce Petroleum Co.
E-Z Flo Chemical Co.
Eastern Seaboard Supply Corp.
Fasey & Besthoff, Inc.
Flag Sulfur & Chemical Co.
Fresno Agricultural Chemicals Co.
General Chemical Div., ACC
Globe Chemical Co.
Hayes-Sammons Chemical Co.
Lobel Chemical Corp.
Los Angeles Chemical Co.
Mercury Chemical Co., Inc.
Michlin Chemical Corp.
Miller Chemical & Fertilizer Corp.
Mineral Fertilizer Co.
Monsanto Chemical Co.
Mutchler Chemical Co., Inc.
Niagara Chemical Div., FMC
Olin Mathieson Chemical Co.
Patterson Chemical Co., Inc.
PennsSalt Chemicals Corp.
Pittsburgh Plate Glass, Chem. Div.
Plant Products Corp.
Prentiss Drug & Chemical Co., Inc.
Schnur-Schoenholtz-Turner Co.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
Triangle Chemical Co.
United Chemetrics
Volkert Chemical Corp.
Wiltur-Ellis Co.
Woodbury Chemical Co.
Woolfolk Chemical Works, Ltd.

SEVIN*
American Fluoride Corp.
Black Leaf Products Co.
Brazton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chapman Chemical Co.
Doggett-Pfeil Co.
E-Z Flo Chemical Co.
Fasey & Besthoff, Inc.
Fairfield Chemicals, FMC
Florida Agricultural Supply Co.
Lebanon Chemical Corp.
Los Angeles Chemical Co.
Mercury Chemical Co., Inc.
Michlin Chemical Corp.
Miller Chemical & Fertilizer Corp.
Miller Products Co.
Mineral Fertilizer Co.
Niagara Chemical Div., FMC
Patterson Chemical Co., Inc.
Plant Food Corp.
Private Brands, Inc.
Residex Corp.
G. S. Robins & Co.
Rockland Chemical Co., Inc.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
Union Carbide Chemicals Co.
United Chemetrics
Wiltur-Ellis Co.
Woodbury Chemical Co.
Woolfolk Chemical Works, Ltd.
York Chemical Co.

SULFOTEPP
Plant Products Co.
Virginia Chemicals & Smelting Co.

TRITHION*
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
E-Z Flo Chemical Co.
Fasey & Besthoff, Inc.
Lobel Chemical Corp.
Los Angeles Chemical Co.
Mercury Chemical Co., Inc.
Miller Chemical & Fertilizer Corp.
Mineral Fertilizer Co.
Niagara Chemical Div., FMC
Patterson Chemical Co., Inc.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Taylor Chemical Co.
Wiltur-Ellis Co.
Woodbury Chemical Co.

See Nematocides

MITICIDES

ARAMITE*
Black Leaf Products Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chapman Chemical Co., Inc.
Doggett-Pfeil Co.
E-Z Flo Chemical Co.
General Chemical Div., ACC
Lobel Chemical Corp.
Los Angeles Chemical Co.
Naugatuck Chemical
Niagara Chemical Div., FMC
Patterson Chemical Co., Inc.
PennsSalt Chemicals Corp.
Pittsburgh Plate Glass, Chem. Div.
Pyroly Chemical Corp.
Riverdale Chemical Co.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
United Chemetrics
Wiltur-Ellis Co.

CHLOROBENZILATE
Geigy Agricultural Chemicals
Prentiss Drug & Chemical Co., Inc.

DIBROM*
See Insecticides

DIMITE*
Acme Quality Paints, Inc.
E-Z Flo Chemical Co.
Patterson Chemical Co., Inc.
PennsSalt Chemicals Corp.
Taylor Chemical Co.

DISYSTON*
See Insecticides

ETHION
See Insecticides

GENITE
Brayton Chemicals, Inc.
General Chemical Div., ACC
Miller Chemical & Fertilizer Corp.
Wiltur-Ellis Co.

KELTHANE*
Black Leaf Products Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
E-Z Flo Chemical Co.

See Insecticides

NEMATOCIDES

D-D
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Dow Chemical Co.
Hayes-Sammons Chemical Co.
Lobel Chemical Corp.
Mineral Fertilizer Co.
Patterson Chemical Co., Inc.
Plant Food Corp.
Private Brands, Inc.
Residex Corp.
G. S. Robins & Co.
Rockland Chemical Co., Inc.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
United Chemetrics
Wiltur-Ellis Co.
Woolfolk Chemical Works, Ltd.

DICHLOROPROPENES
Dow Chemical Co.
E-Z Flo Chemical Co.
Shell Chemical Co.
Thompson-Hayward Chemical Co.
Wiltur-Ellis Co.
**NEMAGON®**
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Chapman Chemical Co.
E-Z Flo Chemical Co.
Hayes-Sammons Chemical Co.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Patterson Chemical Co., Inc.
Shell Chemical Co.
Southern Mill Creek Products Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
United Chemetrics
Wilbur-Ellis Co.

**VAPAM®**
Brayton Chemicals, Inc.
Doggett-Pfeil Co.
E. I. duPont de Nemours & Co.
E-Z Flo Chemical Co.
Fessy & Besthoff, Inc.
Hayes-Sammons Chemical Co.
Los Angeles Chemical Co.
Miller Chemical & Fertilizer Corp.
Mineral Fertilizer Co.
Patterson Chemical Co., Inc.
Residex Corp.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
Wilbur-Ellis Co.

**VC-13®**
Doggett-Pfeil Co.
E-Z Flo Chemical Co.
Lobel Chemical Corp.
Miller Chemical & Fertilizer Corp.
Patterson Chemical Co., Inc.
Ponsall Chemicals Corp.
Southern Mill Creek Products Co.
Taylor Chemical Co.
Virginia-Carolina Chemical Corp.

**VORLEX**
E-Z Flo Chemical Co.
Morton Chemical Co.

**CHLOROPICRIN**
Brayton Chemicals, Inc.
Dow Chemical Co.
Neil A. Maclean Co., Inc.
Morton Chemical Co.
Patterson Chemical Co., Inc.
Residex Corp.
Southern Mill Creek Products Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
Wilbur-Ellis Co.

**D-D**
See Nematocides

**ETHYLENE DIBROMIDE**
American Potash & Chemical Corp.
Brayton Chemicals, Inc.
Dow Chemical Co.
E-Z Flo Chemical Co.
Eastern Seaboard Supply Corp.
Michigan Chemical Corp.
Niagara Chemical Div., GMC
Olin Mathieson Chemical Co.
Pest Control Equipment Co.
Residex Corp.
Southern Mill Creek Products Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
United Chemetrics
Wilbur-Ellis Co.
Woodbury Chemical Co.

**METHYL BROMIDE**
American Potash & Chemical Co.
Brayton Chemicals, Inc.
California Chemical Co., Ortho Div.
Doggett-Pfeil Co.
Dow Chemical Co.
E-Z Flo Chemical Co.
Eastern Seaboard Supply Corp.
Frontier Chemical Co.
Great Lakes Chemical Co.
Lobel Chemical Corp.
Los Angeles Chemical Co.
Neil A. Maclean Co., Inc.
Michigan Chemical Co.
Miller Chemical & Fertilizer Co.
Morton Chemical Co.
Niagara Chemical Div., GMC
Olin Mathieson Chemical Co.
Patterson Chemical Co., Inc.
Pest Control Equipment Co.
Residex Corp.
Southern Mill Creek Products Co.
Stauffer Chemical Co.
Taylor Chemical Co.
Thompson-Hayward Chemical Co.
United Chemetrics
Wilbur-Ellis Co.
Woodbury Chemical Co.

**MYLONE®**
Brayton Chemicals, Inc.
E-Z Flo Chemical Co.
Miller Chemical & Fertilizer Corp.
Niagara Chemical Div., GMC
Sales Supply Co.
Union Carbide Chemicals Co.

**VAPAM®**
See Nematocides

**SPREADER STICKERS**
Agricultural Specialties
E. I. duPont de Nemours & Co.

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

**SODIUM TCA 95% MANUFACTURED IN HOLLAND**

EXCLUSIVELY DISTRIBUTED BY:

**ROBECO Chemicals, Inc.**
25 EAST 26th STREET NEW YORK 10, N.Y.
MURRAY HILL 3-7500

When Writing to Advertisers Please Mention WEEDS AND TURF section W-19
<table>
<thead>
<tr>
<th>Company Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Leaf Products Co.</td>
<td>6147 N. Broadway, Chicago 40, Ill.</td>
</tr>
<tr>
<td>Braun-Knecht-Heimann Co.</td>
<td>P.O. Box 707, Burlington, Iowa</td>
</tr>
<tr>
<td>Browning Chemical Corp.</td>
<td>296 Madison Ave., New York 17, N.Y.</td>
</tr>
<tr>
<td>Brulin &amp; Co.</td>
<td>2385 Columbus Ave., Indianapolis 7, Ind.</td>
</tr>
<tr>
<td>California Chemical Co., Ortho Div.</td>
<td>Lucas &amp; Ortho, Richland, Calif.</td>
</tr>
<tr>
<td>California Farm Supply Co.</td>
<td>2940 Wilson St., Berkeley 4, Calif.</td>
</tr>
<tr>
<td>Central Solvents &amp; Chemicals Co.</td>
<td>2540 Floryncey St., Chicago 12, Ill.</td>
</tr>
<tr>
<td>Chapman Chemical Co.</td>
<td>Box 3158, Mallory Station, Memphis 9, Tenn.</td>
</tr>
<tr>
<td>Chemagro Corp.</td>
<td>P.O. Box 4915, Kansas City 20, Mo.</td>
</tr>
<tr>
<td>Chemical Affiliates, Inc.</td>
<td>2900 W. 54th Ave., New York 16, N.Y.</td>
</tr>
<tr>
<td>Chipman Chemical Co., Inc.</td>
<td>2909 Arch Ave., Chicago 8, Ill.</td>
</tr>
<tr>
<td>City Chemical Corp.</td>
<td>182 W. 22 St., New York 11, N.Y.</td>
</tr>
<tr>
<td>W. A. Cleary Corp., P.O. Box 749,</td>
<td>New Brunswick, N.J.</td>
</tr>
<tr>
<td>Cole &amp; DeGraf, 656 Townsend St., San Francisco 3,</td>
<td>California</td>
</tr>
<tr>
<td>Commerce Petroleum Co.</td>
<td>2980 Arch Ave., Chicago 8, Ill.</td>
</tr>
<tr>
<td>Consolidated Chemicals Co.</td>
<td>P.O. Box 86, Minneapolis 1, Tenn.</td>
</tr>
<tr>
<td>Conray Products Co., 129F Pearl St., New York 5,</td>
<td>N.Y.</td>
</tr>
<tr>
<td>Consolidated Industrial &amp; Agricultural Chemicals,</td>
<td>1517 Pine Street, Sandusky, Ohio</td>
</tr>
<tr>
<td>Continental Chemist Corp.</td>
<td>2256 Ogden Ave., Chicago 12, Ill.</td>
</tr>
<tr>
<td>Cotton States Chemical Co., Inc.</td>
<td>P.O. Drawer 157, West Monroe, La.</td>
</tr>
<tr>
<td>Delta Chemical Works, Inc.</td>
<td>23 W. 40th St., New York 23, N.Y.</td>
</tr>
<tr>
<td>DeMert &amp; Dougherty, Inc.</td>
<td>4900 W. 64th Ave., Chicago 50, Ill.</td>
</tr>
<tr>
<td>Destroxul Corp., Ltd.</td>
<td>495 Arroyo Pkwy., Pasadena, Calif.</td>
</tr>
<tr>
<td>Diamond Alkali Co.</td>
<td>Unifed Chemical Bldg., Cleveland, O.</td>
</tr>
<tr>
<td>Dixie Solvents &amp; Chemicals Co.,</td>
<td>Appleton Lane, Louisville 16, Ky.</td>
</tr>
<tr>
<td>Doub A. Pfeil, 191 Mountain Ave.,</td>
<td>Springfield, N.J.</td>
</tr>
<tr>
<td>E.l. duPont de Nemours &amp; Co., Inc.</td>
<td>Ag. Chem. Dept., Wilmington, Del.</td>
</tr>
<tr>
<td>E-Z Flo Chemical Co.</td>
<td>P.O. Box 808, Lansing 3, Mich.</td>
</tr>
<tr>
<td>Eastern Seaboard Supply Corp.</td>
<td>145 Franklin, Valley Stream, N.Y.</td>
</tr>
<tr>
<td>El ske Products Co., Garfield, N.J.</td>
<td>1395 Palisade Ave., Garfield, N.J.</td>
</tr>
<tr>
<td>Enequist Chemical Co., Inc.</td>
<td>100 Varick Ave., Brooklyn 37, N.Y.</td>
</tr>
<tr>
<td>Fasy &amp; Beethoven, Inc.</td>
<td>25 E. 26 St., New York 10, N.Y.</td>
</tr>
<tr>
<td>Fisher Scientific Co.</td>
<td>1 Reagent Lane, Fair Lawn, N.J.</td>
</tr>
<tr>
<td>Flagg Sulfur Chemical Co.</td>
<td>P.O. Box 5737, Tampa 5, Fla.</td>
</tr>
<tr>
<td>Florida Agricultural Supply Co.,</td>
<td>200 Biscayne Blvd., Miami, Fla.</td>
</tr>
<tr>
<td>Fort Pitt Chemical Co.</td>
<td>26th St., Pittsburgh 22, Pa.</td>
</tr>
<tr>
<td>Fresno Agricultural Chemical Co.,</td>
<td>P.O. Box 1286, Fresno 15, Calif.</td>
</tr>
<tr>
<td>Frontier Chemical Co.,</td>
<td>600 Doremus Ave., Newark 5, N.J.</td>
</tr>
<tr>
<td>Gallochur Chemical Corp., Ossining, N.Y.</td>
<td>Garden Products Co., 3246 Grand Blvd., St. Louis 18, Mo.</td>
</tr>
<tr>
<td>Getz Agricultural Chemical Co.,</td>
<td>P.O. Box 430, Yonkers, N.Y.</td>
</tr>
<tr>
<td>General Chemical Div., ACC, 40 Reeder St., New York 6, N.Y.</td>
<td>Globis Chemical Co., 105 N. 15th St.,</td>
</tr>
<tr>
<td>Industrial Materials Co., 1017 McCullough St., Houston 70, Texas</td>
<td>International Commodities Div., 11 Merrer St., New York 13, N.Y.</td>
</tr>
<tr>
<td>Los Angeles Chemical Co., 4545 Arden St., South Gate, Calif.</td>
<td>Michigan Chemical Corp., 9045 Vinny St., Detroit 11, Mich.</td>
</tr>
<tr>
<td>Nalcro Chemical Co., 6216 W. 16th Place, Chicago 38, Ill.</td>
<td>Miller Products Co., 7737 Killingsworth, Portland, Ore.</td>
</tr>
<tr>
<td>Naugatuck Chemical, Naugatuck, Conn.</td>
<td>Monsanto Chemical Co., 800 Lindbergh, St. Louis 66, Mo.</td>
</tr>
<tr>
<td>Ohio Quinne &amp; Chemical Works, 100 Church St., New York 8, N.Y.</td>
<td>Montrose Chemical Co., 104 Clarion Ave., New York 5, N.J.</td>
</tr>
<tr>
<td>Ohio Solvents &amp; Chemicals Co., 3470 W. 140 St., Cleveland 11, O.</td>
<td>Orin Mathieson Chemical Corp., Mathieson Bldg., Baltimore, Md.</td>
</tr>
<tr>
<td>Patterson Chemical Co., 1400 Union Ave., Kansas City, Mo.</td>
<td>Pearson-Ferguson Chemical Co., 1400 Union Ave., Kansas City, Mo.</td>
</tr>
<tr>
<td>Pennsalt Chemicals Corp., 193 Palisade Ave., Garfield, N.J.</td>
<td>P.O. Box 1297, Tacoma 1, Wash.</td>
</tr>
<tr>
<td>P.O. Box 853, Belmont, Calif.</td>
<td>Pes Control Equipment Co., 24 W. Bond St., St. Louis 13, Mo.</td>
</tr>
<tr>
<td>Plant Food Corp., 3711 Medford St., Los Angeles 63, Calif.</td>
<td>Plant Products Corp., Kennedy Ave., Blue Point, Long Island 7, N.Y.</td>
</tr>
<tr>
<td>Reade Mfg. Co., 135 Hoboken Ave., Jersey City 2, N.J.</td>
<td>Pyrrole Chemical Corp., 517 Spring Lane, Portsmouth, Ohio</td>
</tr>
<tr>
<td>Red Horner Chemical Co., 625 Broadway, White Plains, N.Y.</td>
<td>Resideco Corp., Terminal Ave., Clark, N.J.</td>
</tr>
<tr>
<td>Robinson Brothers Chemicals, Inc., 2605 Chouteau Ave., St. Louis, Mo.</td>
<td>Robinson Brothers Chemicals, Inc., 255 Randolph St., Cincinnati 7, Ohio</td>
</tr>
</tbody>
</table>

**W-20 WEEDS AND TURF Pest Control Section, October, 1962**
BUYERS' GUIDE FOR PEST CONTROL OPERATORS

PICK YOUR PUMP HERE

**MODEL N7540**, up to 350 psi, output to 23 gpm

**MODEL GN6310RJ** PUMP UNIT delivers the volume and pressure you need for effective PRE-TREAT SPRAYING to control termites

- 9 gpm at 0 psi
- 6.9 gpm at 100 psi
- 4.25 gpm at 250 psi

**N6300**, up to 300 psi; up to 14 gpm at 800 rpm

PISTON PUMPS: up to 3 gpm, 500 psi at 1800 rpm

Hollow shaft models mount directly on electric motor

Hypro offers you the widest selection of low-cost pumps for pest control

Whatever your requirements... high pressure for wide coverage, resistance to strong chemicals, rugged durability for day-after-day performance... there's a Hypro pump to do the job. Not only may you choose from a dozen types and sizes, but you may also specify materials... nylon or buna-N rollers; cast iron, Ni-Resist, or bronze housings; rubber or leather shaft seals.

You can choose your power too. Hypro pumps operate at motor, gas engine and PTO speeds. You can supply the motor or buy the complete pumping outfit.

**MC5300**
PISTON PUMP UNIT WITH DIRECT ELECTRIC MOTOR DRIVE
High pressure at low horsepower:
- 200 psi, ½ hp
- 500 psi, 1 hp

**Hypro Engineering, Inc.**
706 39th Ave. N.E., Minneapolis 21, Minn.

SEE US AT THE SHOW IN BOOTH NO. 35!

When Writing to Advertisers Please Mention WEEDS AND TURF section
Know Your Species

GOOSEGRASS
(Elusine indica)

Goosegrass, sometimes called Wiregrass and Yardgrass, is an annual grass found in urban areas, lawns, yards, roadsides, and waste places. Widespread throughout eastern United States, goosegrass was introduced from the warmer parts of Asia. It is somewhat similar in appearance to crabgrass, but differs in that the digital spikes which bear the seeds are much broader than crabgrass spikes, and goosegrass does not root from joints on the prostrate stems as crabgrass does. Though described as pale green, goosegrass is a darker green than crabgrass. Goosegrass is particularly bothersome during the months from June to September.

Stems are flattened, smooth, and cover the ground in prostrate mats in tufts from fibrous roots. The stems may be from 6 inches to 2 feet long. Leaves are smooth, pale green with loose, flattened, and overlapping sheaths. Two to 10 spikes radiate from near the top of the stem. Spikes are ½ inch wide, 1 to 3 inches long; each has a row of spikelets attached on one side extending to the tip of the rachis (long axis).

Each of the 5 mm. long spikelets holds 3 to 5 tiny flowers, which produce seeds. Seeds are about 1.5 mm. long, reddish-brown, and cross-ridged.

Pre-emergent control is effected with calcium arsenate applied before seeds germinate in April or May. Additional treatments using disodium methyl arsenate (DMA) may be necessary if a few weeds get through. This should be applied when the weed is tender and actively growing.

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

DRAWING BY REGINA HUGHES, USDA, BELTSVILLE

Florida Spraymen’s Convention
Set for Miami Beach Nov. 8-10

Almost every branch of a contract applicator’s business will be analyzed at the third annual convention of the Horticultural Spraymen’s Association of Florida, Nov. 8-10, Deauville Hotel, Miami Beach.

Nearly 300 delegates are expected at the annual affair, association publicity director Thomas Hamall told Weeds and Turf at press time.

An added feature at this year’s meeting is the invitation to out-of-state spraymen who may wish to attend the Florida meeting. Hamall said all contract applicators may attend.

No three-day convention ever featured more fact-filled sessions, or a more delightful social program.

After HSAF president Larry Nipp officially opens the convention Thursday morning, an all-day series of talks and discussions will be offered.

Highlights of Thursday’s program include an address by Dr. Stratton H. Kerr, entomologist from the University of Florida.

Basic lectures on the biology and control of insects, plant diseases, followed by a “question and answer period with the old pros,” will round out Thursday’s slate.

Thursday night, in the Deauville’s pool area, delegates and their families will gather for a Hawaiian Luau.

Friday morning spotlights safety, with a talk by William J. Wiswesser, from the Industrial Hygiene Dept., Wilson Products Co., Reading, Pa. Wilson manufactures safety equipment.

“Equations for Small Business,” a talk designed to help smaller companies operate more efficiently, will be offered by Dr. Grover A. J. Noetzel, Department of Economics, University of Florida, Gainesville.

Business meetings, visits to supplier’s exhibits, a cocktail party, and a banquet are scheduled for Saturday.

CAs who would like to attend the HSAF annual convention should write Thomas Hamall, Publicity Director, 3291 N. W. 103rd. St., Miami Beach, Fla.
Kill all weeds and grasses either way with these powerful new herbicides from Chapman

**WEED-FREE G** for dry application—Applied dry in delivered form, by hand or with mechanical equipment. Contains Diuron, trichlorobenzoic acid (TBA) and sodium trichloroacetate (TCA) • Effective on all broad and narrow leaf weeds and grasses and woody vines • Excellent for spot treatment • Use in Spring, Fall and Winter.

**NO-VINE** for controlling vines—Applied dry in delivered form, by hand or with mechanical spreader • Contains granular form of 2, 3, 6 trichlorobenzoic acid • Kills top growth and root systems • Particularly effective on bindweed and other woody vines • Low application rate, long residual effect make No-Vine particularly economical.

**WEED-FREE S** for spray application—Wettable powder for application with mechanical or hand spraying equipment • Contains Diuron, Dalapon, and 2,4-D • Knocks down all weeds and grasses quickly; use during growing season • Non-corrosive to metal spraying equipment • Powerful...dependable...economical.

**WEED FREE AEROSOL BOMB** ready-to-use pressurized spray—Sell this convenient aerosol weed-killer for extra profits • Perfect for edging, trimming, and spot treatment of weed patches • Contains 3% Pentachlorophenol • Turns vegetation brown in only a few hours • E-Z Applicator extension wand makes it easy to use.

Chapman also distributes other weed control products from leading chemical manufacturers.

Mail for more information
Chapman Chemical Company
P. O. Box 3158, Mallory Station
Memphis 9, Tenn.
Please send me more information on Chapman herbicides.
Name
Company
Address

When Writing to Advertisers Please Mention *WEEDS AND TURF* section
Weed Control As A Science

Used either as a textbook, reference, or manual, Weed Control As A Science by Dr. Glenn C. Klingman, should be a part of the library of every person engaged in weed control.

Dr. Glenn C. Klingman, professor of field crops at North Carolina State College, assisted by Lyman J. Noordhoff of the United States Department of Agriculture, has produced a very complete and scientific work on weed control.

Dealing first with basic botany and chemistry, the book is adequately illustrated with some 200 drawings and photographs for easy understanding. Types of weeds, principles of seed dispersal and dormancy, as well as fundamentals of herbicide action on plant tissues, are discussed.

The author outlines not only the standard controls which have been used for years, emphasizing chemical methods, but also explains new developments in chemical control and specific new herbicides. Descriptions of the chemicals, their structure, and composition, aid in understanding these important facets of weed control.

Several of its 24 chapters are divided into applied phases of control: agricultural, industrial, aquatic, and horticultural. There is even a section on the mechanics of spraying apparatus. Others deal with types of soil, drift, sterilants, lawns, turf, and ornamentals.

Included also is a helpful appendix on weeds and susceptibilities of these plants to certain herbicides. Conversion factors for correctly formulating chemicals in any quantity are particularly useful. Changes in application rates, spray patterns, and speeds of spraying vehicles add to the book's practical value.

This book is excellent for the modern contract applicator.

Literature you'll want...

Here are the latest government, university and industrial publications of interest to contract applicators. Some can be obtained free of charge, while others are nominally priced. When ordering, include title and catalog number, if any. Sources follow booklet titles.

2,4-D for Post-Emergence Weed Control in the Everglades. Bulletin 532. University of Florida Experiment Station, Gainesville.


Principles of Selective Weed Control. Circular 505. California Agricultural Experiment Station, Public Service Office, 131 University Hall, 2200 University Ave., Berkeley.4.
Meeting Dates

Horticultural Spraymen's Assn. of Florida Annual Convention, Hotel Deauville, Miami Beach, Nov. 8-10.

North Central Weed Control Conference, Hotel Lowry, St. Paul, Minn., Dec. 3-5.


Southern Weed Control Conference, Admiral Semmes Hotel, Mobile, Ala., Jan. 16-18.


West Point Products Offers Turfgrass Guides and Tools

West Point Products Corp., manufacturers of equipment for mechanical weed control, recommends the following program for turfgrass management, especially of golf greens:

1. Aerify with either open or thatch spoons; 
2. Mow with a vertical cutter; 
3. Top dress; 
4. Mat; 
5. Aeri-spike; and 

Tools available from West Point for the mechanical operations involved include 3 models of a vertical cutter, which the firm notes will remove the leaves from broadleaf weeds, crabgrass, clover and other weeds, allowing turfgrass to gradually “shade out” the undesirable foliage. The company emphasizes that weed leaves should be removed only as rapidly as the desirable turfgrasses can grow into the voids, noting that two vertical cuttings are usually sufficient.

Model VC-3A Verti-Cut, with 26 blades and 52 cutting tips, operates up to 4 mph, powered by a 4-HP Briggs & Stratton engine. Weighing 255 lbs., the model has an 18 inch cutting width and 27 inch over-all width. Height of cut is adjustable in 1/2" increments.

Aerification loosens the soil beneath the surface, producing a triple effect: cores of soil are scooped out so surrounding packed soil has room to expand; openings are made from surface to rootzone to admit air, water, and fertilizer; and walls for the openings are loosened so roots can penetrate into the surrounding soil. Five models or aerifiers are available from the firm.

To close openings created by aerification, and to open soil to water and fertilizer, West Point offers an aeri-spike, which pushes the top dressing down into the turf. Controlled decomposition of the thatch is more easily accomplished when the top dressing is spiked, the firm notes.

West Point Products Corp. also offers interested CAs two free booklets, “Improving Athletic Field Turfgrass,” and “Fall Renovation of Greens and Fairways.” For copies of the booklets, and more information on any West Point products, write the company at West Point, Pa.

Calif. Studies Aquatic Weeds

With the establishment of a project in Davis, Calif., USDA Central Research Fund-supported studies of aquatic weed problems have begun in four areas. Other locations include Alabama, New York, and North Carolina.

In the Davis project, a laboratory has been especially fitted for chemical and plant physiological work. A screen house and culture tanks will soon be available for growing aquatic weeds for experiments.

Problems are being approached from the viewpoint of both basic and applied aspects, and a program for the entire state is anticipated soon, a report from University of California Agricultural Extension Service states.

Diazinon for Lawn Pests Outlined

Information sheets on the use of Diazinon for lawn insect control, including recommendations for treating individual insect infestations, are available from Geigy Agricultural Chemicals, P.O. Box 430, Yonkers, N.Y., the firm announced recently.

Penn-Chem, Doggett-Pfeil Join

Penn-Chem Products recently announced its merger with Doggett-Pfeil Co., manufacturer and supplier of insecticides, fungicides, weed killers, and water soluble fertilizers.

Main office, manufacturing plant, and warehouses will be in Springfield, N.J., Penn-Chem announced. In addition to the Doggett-Pfeil office, Penn-Chem will maintain its present headquarters and warehouse facilities in Lansdale, Pa. Sale of products will be handled through Doggett-Pfeil, 191 Mountain Avenue, Springfield.

According to the company announcement, the new “jointure” will bring contract applicators a complete line of turfgrass chemicals available from one source.

Hydraulically powered aerial ladder from Utility Body Co. rotates in a complete circle, and elevates to 70° angle. Top controls enable CAs to direct ladder while working from it. Utility recommends the device for tree work, as well as allied activities such as bird control. For more information, write the firm at 1530 Wood St., Oakland, Calif.
Appeal to Pro/Neophyte CA

I have been receiving copies of Weeds and Turf and I would like to say your approach is fine, in that you have articles for the person now in the herbicide applying business, as well as information for those who want to go into the field, either with experience from allied activities, or as something new.

The needs of this business have finally arrived at the point where I feel weed control is of professional stature.

It seems that through your publication we will not only be able to learn of new herbicides and methods of application, but will also be able to pass on to others general technology we have gained through the years.

Once again let me say that you are doing us all a great service by instituting this publication.

Carl Nagle, Jr.
Vice-President, General Mgr. Texas Weed and Grass Control, Inc. Odem, Texas

Pioneer Weed Controller

I have been working for towns, counties, and public utilities on weed and brush control for many years, and am one of the pioneers in this field.

I am receiving, and reading with great interest, your publication, Weeds and Turf. I think it is very well put together, and the articles, as a whole, are well presented.

I do not have any suggestions at this time, but I believe a magazine such as yours will advance and achieve a stimulant that appeals to all your readers.

I wish you every success with your new publication.

J. Harrington Nicholson
President
J. H. Nicholson, Inc.
Mahopac, N.Y.

Watch for Pine Needle Scale

Identification of the pine needle scale, an insect common on home plantings and nearly all pines and spruces, is an important talent for CAs who spray ornamentals in conjunction with their lawn contracts.

Severe infestations of the destructive pest cause afflicted pine needles to turn yellow, then brown, and eventually to die.

Female scales on pine needles are pure white, about 1/10th inch long, and are wider at one end than the other. At the small end is a small oblong yellow spot.

Winter is spent in the egg stage. The female forms the white crust and turns to eggs under the crust. Then follows the “crawler” stage, which is the form that spreads over the plant. When the crawler finds a suitable spot on the needle, it settles down to suck sap, form a white scale, and turn to eggs.

This white covering is resistant to penetration of most insecticides except strong ones like lime-sulphur. Lime-sulphur can be applied only during the plant’s dormant season or it will burn the tender leaves.

Cure For Moss-Infected Lawns

Moss growing in lawns indicates too little fertilizer, horticulturists at Purdue University say. It is encouraged by excessive shade and excessive moisture.

They recommend waiting until fall and cleaning the moss up by adding fertilizer. If it is quite thick, rake the moss, or spade the area, sow grass seed, and fertilize.

Well on the road.

Reader Dave Fleming of Philadelphia reports he has turf maintenance routes in 14 counties, serviced by two trucks that are self-supporting. It’s taken a great deal of publicity—radio, TV, and newspaper—to get this new service on the road, but now “it looks good.”

Goose on the loose.

We reported in July that a nurseryman in Pennsylvania had resorted to geese to control weeds in his shrubbery stock. Now a report from Oklahoma says a cotton farmer has also gone the goose route. Problem there, though, seems to be coyotes, who like the wellfed quackers as much as the birds do. So he had to sit by an electrified fence all day, armed with rifle and binoculars, to keep the wild animals from eating the fowls which are eating the weeds. In fairness, we hesitate to criticize anyone searching for more efficient means of squelching weeds, but this seems, at best, somewhat impractical.

One of the busiest men in Florida these days is Ralph White, general manager of Ousley Sod Co. in Pompano Beach. Besides running his thriving business, Ralph is president of the Florida Turf-Grass Association, and works closely with CAs in the Sunshine State. Ralph is also scheduled to take part in the November convention of horticultural spraymen in Florida. Where does all the energy come from? Must be the Florida sun, and all the good, rich food we all get from attending so many convention banquets!

We just saw a letter to the editor of a local paper, in which a lady gardener protests, on behalf of her garden club, about the so-called misuse of pesticides. This worried do-it-yourselfer says she asked her club (along with the ladies) how many read labels on their garden chemicals, and only four answered “yes.” This, the lady proceeds, is the reason we need more laws about pesticides! Some hardworking CA, who’s spent years trying to convince his customers that labels must be read, would no doubt like to refute this Rachel Carson-in-the-bud, since it is frequently the professional who gets unjustly blamed for the amateur’s mistakes.

Speaking of fearful ladies, we’re sure everybody would calm down if they could see some of the elaborate laboratories our suppliers maintain to test new chemicals. We just returned from Amherst, Pa., where Amchem Products treated us to a tour of its lush weed farm. There all Amchem’s new chemicals undergo extensive tests both for effectiveness and for safety. Passers-by on the super highway which runs alongside this flourishing farm must wonder who’s growing such a strange looking crop.

Midwestern CAs, take a tip from your neighborhood lawn and garden center. We recently motored about the countryside, one Sunday, and saw nursery advertising products for those recent invaders, chinch bugs. If your customers don’t know about this newly arrived threat, be sure you set them straight. Next summer you’ll no doubt be getting lots of calls about this persistent pest.
Use TRITHION® insecticide for lawn chinch bug control. Chinch bugs are small sucking insects that feed on the juice in leaves and stems of grass, causing brown patches and eventual death of infested lawns. Chinch bug destruction is a growing problem around the country . . . but a problem you can solve for your customers with TRITHION.

Since 1960, thousands of lawns have been treated with TRITHION. Results have been spectacular!

TRITHION gives quick, positive control. It's a fast-acting compound that controls all chinch bugs, including those strains that have become resistant to other materials.

TRITHION is easy to handle safely. It is less hazardous to handle than many other organic phosphorus pesticides. TRITHION is an easy-to-apply emulsifiable liquid . . . and also is available in granular form.

TRITHION offers one-shot control . . . that lasts. Repeat sprays are rarely needed with TRITHION—"one-shot control" stops chinch bugs. Its long residual action means long-term protection . . . with resulting reduced costs.

Use TRITHION on your customers' lawns. Remember—TRITHION keeps the grass greener on their side of the fence . . . and on yours, too! For details, write Stauffer Chemical Company, Agricultural Division, 380 Madison Avenue, New York 17, N.Y.
custom applicators!

FAMOUS ROYALETTE SERIES
Economy plus all-around versatility and complete dependability. Capacities of 5 and 10 g.p.m. at up to 400 lbs. pressure. Tank sizes: 50, 100, 150, 200 and 300 gal. Complete line of 3 g.p.m. sprayers also available.

choose the exact model you need from

3 John BEAN SPRAYER SERIES

Now, John Bean offers the CA the widest selection of high pressure sprayers available with 3 complete series to choose from! Pump capacity and pressure, tank size, mounting type and sprayer accessories are a matter of choice — you select the model that fits your business requirements exactly. And, every model features long, trouble-free service with exclusive Bean Bond corrosion-resistant tanks and Sapphite pump cylinders that are so hard they resist wear from the most corrosive spray materials. See your dealer for complete details.

NEW ROYALIER SERIES
Featuring the new 4-piston Royalier pump that combines compactness plus performance that’s practically pulsation-free. Capacities: 15 g.p.m. at pressures up to 400 lbs. and 20 g.p.m. up to 300 lbs. pressure. Tanks available in 200, 300, 400 and 500 gal. sizes.

RUGGED ROYAL SERIES
For big capacity spraying. Three capacities to choose from: 25 g.p.m. at up to 700 lbs. pressure; 35 and 60 g.p.m. at pressures up to 800 lbs. Tank sizes from 200 to 1000 gal.

for special dutch elm disease
and mosquito control data,
plus free catalogs—check,
clip and mail coupon attached
to your card or letterhead