JUNE
1964

WEEDS and TURF

The grass-roots magazine of vegetation maintenance©

Damage of Bermudagrass Mite Can be Controlled!

page 8

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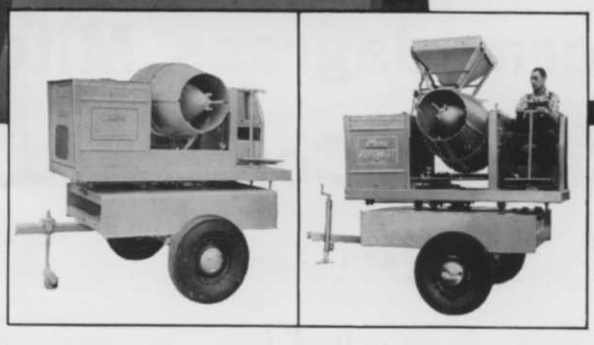

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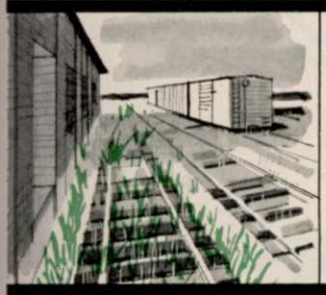

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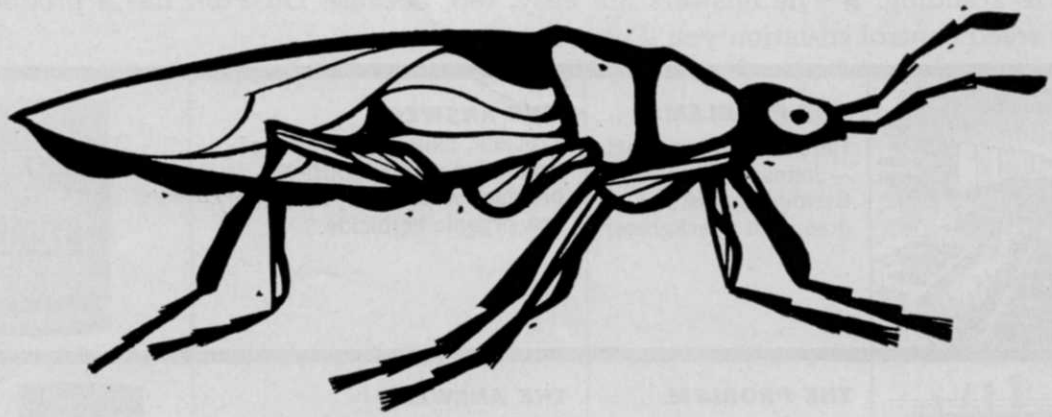

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WEEDS and TURF

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Features:

Departments:

JAMES A. NELSON
Publisher

CHARLES D. WEBB
Editor

DAVID E. SCHNEIDER
Staff Biologist

R. J. HOFFER
Circulation Manager

Advertising Representatives
National Headquarters
1900 Euclid Avenue
Cleveland, Ohio 44115
Phone: Area Code: 216+771-4169

New York City
Billingslea & Ficke
420 Lexington Avenue
Phone: Area Code: 212+
LExington 2-3667

Los Angeles
The Maurice A. Kimball Co., Inc.
2550 Beverly Boulevard
Phone: 213+DUnkirk 8-6178

San Francisco
The Maurice A. Kimball Co., Inc.
580 Market Street
Phone: 415+EXbrook 2-3365

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A popular pastime

Connecticut's Senator Abraham Ribicoff, head of the congressional committee investigating pesticides, recently charged that the Federal Aviation Agency has failed to move effectively and speedily in clamping regulations on aerial applicators of pesticides.

In reply, an FAA spokesman commented that while his agency has studied the problem of aerial application since November 1962, no decisions have yet been made public. FAA action is expected soon, the official said, but it is still felt that aerial application of pesticides is a field in which the FAA has little competence.

Meanwhile, the executive director of the National Aviation Trades Association, David Teetor, reportedly attacked the chemical industry for its alleged failure to label materials properly for aerial use. He also urged stronger federal control over aerial spraying operations, news reports stated.

On the other hand, the FAA authority said in defense of *his* agency that control should be left largely up to the states, with the federal government acting only in a supporting role.

There is much to be said in defense of both points of view; but the weighing of one viewpoint against the other in the same context is not valid. The question of adequate labeling is rightfully in the domain of the U.S. Department of Agriculture. Rules affecting the safe operation of aircraft in interstate commerce is justifiably a concern of the Federal Aviation Agency, whether the aircraft apply pesticides or not. But to confuse the responsibility of the two government agencies is unwise.

It does no good to attack government agencies which have no jurisdiction over the problem at hand, although this is a popular pastime these days.

We believe that regulations which affect those factors peculiar to aerial application of pesticides are best left up to the Department of Agriculture. USDA people have years of experience supervising labels for chemical pesticides, and methods of application. No doubt FAA knows what it is up against in attempting to insure the safe use of aircraft, but USDA scrutiny is probably the best answer when we're concerned about the combination of aircraft *and* pesticides.

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

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Controlling the Bermudagrass

By WAYNE C. MORGAN
University of California Agricultural Extension Service, Davis

BERMUDAGRASS, long known for its resistance to most pests, has found a challenge to its survival in a new plant-feeding mite, *Aceria neocynodonis*. It was first observed and recorded from Phoenix, Arizona, in 1959, and later at several locations in southern California in 1960. Observations have shown it to be widespread throughout southern California from the inland boundaries near the Colorado River to the coast. Local infestations have also been reported to the east in New Mexico and Texas. The mite has been reported present in Florida and Georgia. Experts feel that it will spread into all areas where Bermudagrass is cultivated in turf.

Turf injury may vary from light or almost negligible to severe damage; complete kill of the Bermudagrass has been reported in some cases.

Although common Bermudagrass, *Cynodon dactylon*, has been shown to be the most susceptible to damage, the newer hybrid Bermudagrasses have been infested, resulting in severe injury.

Damage is first noticeable in the spring. Lawns fail to begin their normal growth even when irrigated and well fertilized. The grass that does appear is damaged by the mites and has a typical rosetting and tufting of the growth, known as "witches'-broom." This is due to the shortening of the internodes. With heavy infestations the grass turns brown and dies in irregular patterns.

Weakened turf is susceptible to damage by summer blight fungi which also take a toll.

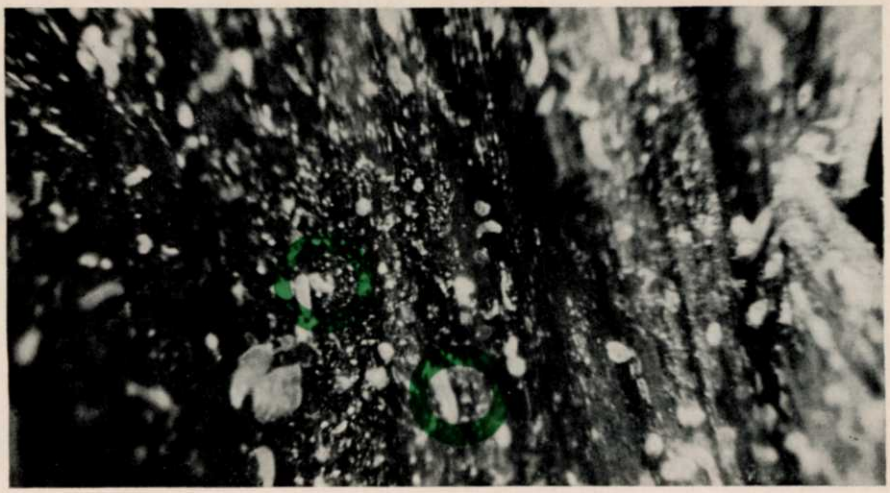
The mites remain hidden under the leaf sheaths. By using a hand lens of 14 power or larger, these pests can be seen by removing the outer sheath cover and looking near the crown of the plant. They appear as tiny white larvae, sometimes slightly curved, and may vary in number from a few to a hundred or more under a single sheath.

Suggestions for chemical control of the mites come as the result of testing various insecticides in 1961. These tests were conducted in cooperation with J. S. Morishita, Department of Entomology, University of California, Riverside. Most effective of the materials tested was diazinon at the rate of 6 ounces of the liquid or 7.4 ounces of the 25% wettable powder per 1,000 square feet. For each 1,000 square feet add one ounce of a wetting agent and apply in 25 gallons of water. Although applying the spray at 300 to 400 pounds pressure so that it can reach down into the crown of the plant has been shown to be very effective, satisfactory results have been reported from applying the material in a garden hose sprayer or a 3-gallon tank-type sprayer. A repeat spray may be applied if needed in 10 to 14 days.

The results of another experiment demonstrated the importance of proper cultural practices in controlling these mites. Good management practices which include thatch removal

Five years ago in Arizona a new threat to the hardy Bermudagrass began to crop up. Now the pest, a mite known as *Aceria neocynodonis*, is spreading rapidly into other states. In this article, Author Morgan tells how to recognize damage wrought by the pest, how to recognize the organism itself, and how to control it effectively with today's chemical pesticides.

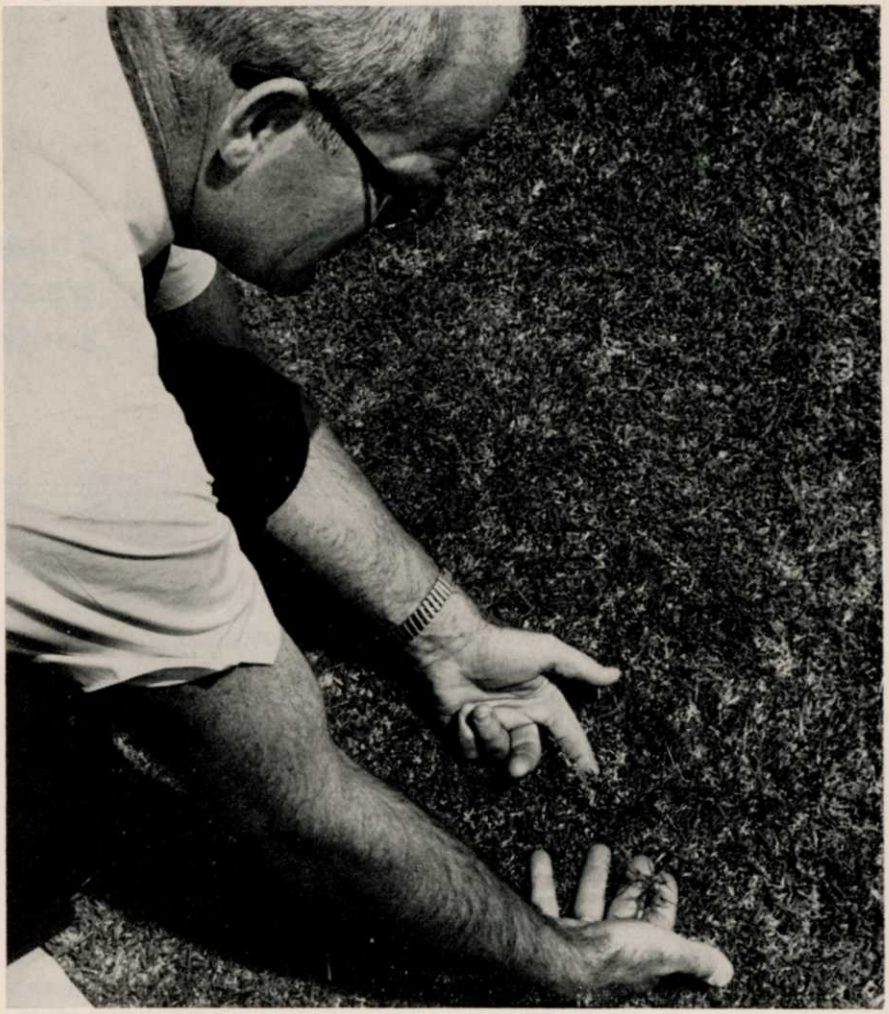
Mite



and control, aeration, sufficient irrigation and fertilization will reduce the damage done by the mites and the number of insecticide treatments necessary for their control.

Low fertility lawns treated in spring will require a urea-sulfur, ammonium nitrate, or ammonium sulfate fertilizer along with the insecticidal spray to restore greenness to turf.

Cultural practices alone will not necessarily entirely eliminate the need for insecticides to be applied.



Damage described in this article is a result of the Bermudagrass mite, *Aceria neocynodonia*, (top right). Green circles point out some of the long, slender organisms. Photo is by Dr. George D. Butler, Jr., Associate Professor of Entomology, University of Arizona, Tucson. Dr. Butler says the mite is rapidly spreading through Texas, Florida, Georgia, and other states.

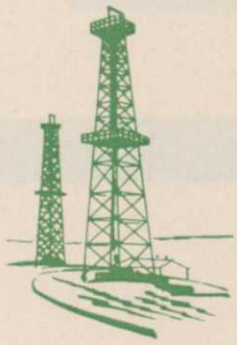
Author Wayne Morgan (right center) is a turfgrass specialist for the University of California Extension Service. Here he demonstrates how to check for damage from this pest which he has carefully studied for some time.

A closeup of turf afflicted with the Bermudagrass mite. Growth at top is normal plant. Grass damaged by mites (bottom) shows tufting of turf which is typical result when *Aceria neocynodonis* attacks.

Home office of dick evans inc. is this modern building in Pampa, Texas (above). Evans had it built to his own specs for about $45,000. Pictured below are one of the firm's branch offices and some of the vehicles used for industrial weed control.

dick evans, inc.

Contract Applicator



Texas company supplies weed control for vast southwestern oil fields

A capital company, in lower case type, is one way to describe the Texas-based operations of dick evans inc. (which doesn't use capital letters), an industrial weed control firm that now has branched out into three states, and is considered to be a pioneer in the contract application of industrial herbicides.

Dick Evans himself first started out in the pest control business. Soon, however, he realized the Southwest's heavy oil industry needed a responsible vegetation maintenance service. He was convinced that here was a real opportunity to perform a service, make a profit, and grow with one of America's rapidly growing industries: petroleum.

Shortly after entering industrial weed control, he disposed of his pest control operations, and set up a closely held corporation.

"At one point during the peak of our promotional activities," Dick recalls, "We employed more than 50 people. Obviously, sales costs became prohibitive, and we found ourselves running out of operating capital; cash demands were exceeding cash flow."

The company tried all the usual incentive programs, both to boost sales and production. Nothing succeeded to the satisfaction of management.

"Furthermore," Evans says, "some key employees were leaving to form their own organizations in competition with us, which we had not had the foresight to prevent."

After various methods of reorganization were tried unsuccessfully, the Texas operator decided to sell or give away a "working interest" in each territory to his proven key personnel. The operation was broken up into independent segments, with men stationed in heaviest areas of work. Today each segment operates as an independent business under the blanket of the corporation.

"Our home office in Pampa, Texas, is a service headquarters for the people in charge of the branches," Evans points out. "We handle overall large contractual negotiations on behalf of each, or all, of them. All invoicing and banking is handled in our central office, as is insurance. Of course, this is not new, but to pinpoint responsibility for performance and create initiative for proper field decisions, and still receive a return on our investment, we had no other reasonable alternative."

Today Evans says he sees an ideal business as a one- or a two-man operation with an annual volume of between $40,000 and $50,000 a year. Beyond this, he believes, requirements for additional equipment and personnel enter the picture and destroy the profit. Of course, other operators have set themselves up on a different basis with different goals, but Dick Evans has found what he believes is the best procedure for his type of business.

To further simplify overhead and operating complexities, all services such as bookkeeping, advertising, public relations, printing, and similar needs, are farmed out on contract wherever this is possible.

"At one time we employed 10 people in our central office—today, outside of myself and Mrs. Evans, we have one girl who serves as a secretary and does all invoicing and filing for the entire operation. I handle matters of corporate policy, financing, sales, and field production; Mrs. Evans handles accounts payable and receivable, banking, and acts as liaison with our accounting firm.

"Outside stenographic help is employed when necessary at seasonal peaks," Evans reveals.

The firm's Board of Directors is composed of Dick Evans, Mrs. Evans, the company attorney, the president of the firm's bank, and two outsiders.

"We draw on every conceivable type of advisory service," Dick comments.

Evans is qualified both to perform industrial weed control and to manage a complex corporation. He holds membership in the American Society of Chemical Engineers, American Management Association, Weed Society of America, and various pest control associations, many of which he has served as an officer. He is also a Rotarian, a director of his local chamber of commerce, and a member of many civic and social groups.

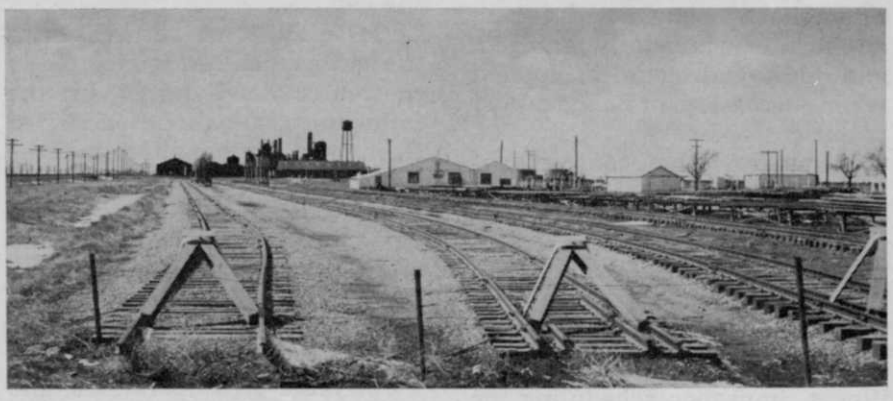
Company offices are now located in Great Bend and Wichita, Kansas; Oklahoma City and Enid, Oklahoma; and Perryton, Big Springs, Borger, and Pampa, Texas. In the next five years, the company expects to open some five or six additional operational offices.

Chose Oil Fields as His Specialty

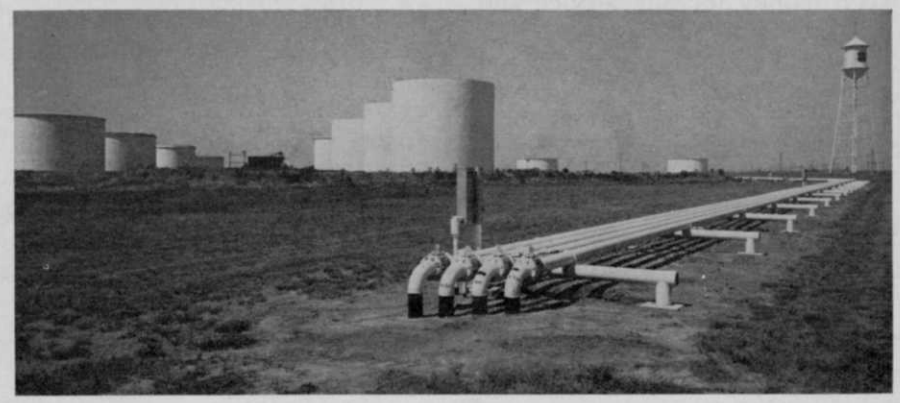
Dick Evans decided from the start that he would specialize in service to the petroleum industry, so he began to think like an oil man. "We surveyed the requirements of the petroleum industry, including refining, petrochemical plants, oil- and gas-producing properties, and plants processing or manufacturing by-products of petroleum."

While there are unlimited opportunities in other fields of industrial weed control, it was decided that the techniques learned for the oil fields, and the equip-

When contract applicator Evans (extreme right) decided to build his own building, he carefully studied what his particular needs would be. Here he reviews blueprints with Mrs. M. J. Evans and builders E. E. Shelhammer (extreme left) and Ed Myatt (next to Mrs. Evans). The Texas operator had to make sure his structure would accommodate spray rigs like the one shown below, which is completely outfitted for oil-field weed control jobs. Note the large-capacity, high-pressure sprayer.



Typical installations dick evans, inc. is responsible for include the trackage and butane-loading racks shown above. This facility belongs to Cities Service. Below is one of the many oil tank farms the Evans company keeps weed free. The area below was originally infested with bindweed and wiregrass, but is now virtually free of undesirable growths, thanks to Evans' efforts. These pipelines need to be easily accessible to maintenance crews.



ment specially designed to service these areas, would not be economically adaptable to other pursuits.

"So our employees and our field people are trained to think in oil industry terms," Evans says.

While Evans considers himself one of the first to specialize in service for a single industry, he admits that today there are no less than 200 contract applicators who service the petroleum industry alone.

His Business Philosophy

"It is difficult to put into a few brief words the service we perform," the pioneer applicator muses, "but fundamentally we solicit business from a client on a 'turn-key' basis. This means we will assume complete responsibility for a stated period of time, three to five years preferably, for keeping certain areas *completely weed free.* Embodied in our guarantee is a 'money-back' clause, with two reinspections of the areas to be made during each growing season, at which time any growth that might have been missed during application is manually removed, and additional chemical applied where necessary, at no extra cost to our customer."

Evans feels that contract applicators must remember that they are selling a service, and that whatever they must do to satisfy the customer with this service, must be done.

"We cannot tell our customer that lack of rain, too much rain, illness, improper scheduling, or chemical failures are the reasons for lack of results," he says spiritedly. "The customer just isn't interested in this. He pays good money for our service and he expects results."

Since he must guarantee beyond question all of his contracts, Dick Evans has no universal pricing system. Every job is examined on the spot; careful testing of soil conditions, an analysis of weed species, and a study of general climatic conditions are carried out before the job can be priced.

Furthermore, he's found no universal chemical that works in all cases. Various compounds, in many combinations, and in differing dosages, are used, depending on the circumstances. Applicators must continue to learn all they can about weeds and the way they grow, about chemicals and how they act, and about the way weather affects herbicides, Evans insists.

All Equipment Same Color

All of the company's equipment is of standardized colors. Truck cabs are white, beds black, and spray tanks and equipment red. A minimum of advertising copy is used, just the company insignia (including the name in lower case letters, the firm's identifying logotype) and information required by law.

Each truck is equipped with snake bite kits, first aid kits, and road flares.

The larger units have remote control ignition switches and starter buttons for the pump engines located in the cabs, so they can be started or stopped at the operator's option while moving from one job site to another. A pressure gauge is also located in the cab.

"In small, confined areas with the serviceman headquartered in the center of activity, we use the following: 300-gallon Bonderized Bean tank, 20-gpm pump, and the usual attachments such as pressure regulator, pressure relief valve to prevent pulsation, and two Bean reels powered with an attachment of our own design (patent applied for)," Evans says.

For large-area operations, and where water dosages are high, the firm uses a 1000-gallon Bean Bonderized tank with built-in baffle plates to prevent sway. "We use a series of 10 to 12 agitator blades on the shaft for heavy agitation," Evans reveals. "Our minimum requirement in pumping equipment for these large areas is a 25-gpm Bean pump with an air-cooled Wisconsin engine."

Supplementary Tools

In soil sterilization work, Evans feels he needs a droplet solution, not a fine mist or spray. This allows herbicides to be evenly distributed over the soil surface. "We have found wands to be our best bet," Dick remarks. "We have designed and applied for a patent on a wand made of aluminum, with a 'Y'-tip, on which is mounted 2 special nozzles which spray in overlapping circular patterns. These are of stainless steel and are manufactured specifically for our type of work by Spraying Systems, Inc."

Summing up his equipment requirements, Evans says the operator needs a tank large enough for the type of operation planned, with pump and pump engine overpowered for efficiency; more than enough mechanical agitation in the tank to obtain and maintain proper mix of materials; positive shutoffs; and truck with reserve capacity to pull load under abnormal conditions.

These are formidable requirements, but necessary to do a difficult job well.

Advice to Other Operators

Dick Evans believes there are great potential markets yet to be explored in custom application of herbicides. When asked to enumerate the steps newcomers should take to become active in this market, he lists the following.

1. Survey the market and determine the potential need for the type of service you intend to offer.

2. Secure adequate capital. No less than $25,000 will do it.

3. Determine what assistance, if any, can be expected from suppliers in sales promotion.

4. Work out an arrangement with someone already in the business, in another area, to work with until he is satisfied you have acquired the necessary techniques of application.

5. Start negotiations with a bona fide insurance carrier. It takes time to get this insurance, and you just can't operate without it.

In short, industrial weed control on a contract basis is not a simple business; it takes a long time to get ready, it takes a lot of money to procure equipment

and quarters, and it takes a lot of knowledge about weeds and chemicals.

But what it takes first of all is just plain hard work, and the flourishing firm of dick evans, inc., is living evidence that when these factors are successfully combined, a lucrative and important business can be established.

Method to Locate Weedicides In Atmosphere Reported

A method of detecting and measuring weedkilling chemicals in the atmosphere was reported recently at the American Chemical Society's 147th national meeting in Philadelphia.

The method could be used by government regulatory agencies to identify herbicides in the air and to determine the amounts prevalent during and after spraying, according to Donald F. Adams, head of the air pollution research laboratory at Washington State University.

An improved collecting technique and an automatic system for identifying and measuring the weedkillers have been combined in the new method, Adams said. Samples collected over 24-hour periods show daily fluctuations in the amount of weedkiller in the air.

The 2,4-D family of herbicides has been used extensively in wheat-growing areas and has contributed to increased wheat production, the chemist explained. This widespread use, however, has led to some unfortunate incidents in which nearby susceptible crops were damaged, he added.

The new method should help determine the range of weedkiller in the area of spraying, the distance it drifts with the wind, and whether it occurs in the air as vapor or as liquid droplets, Adams indicated. This information is essential to the safe application of 2,4-D.

The technique involves collecting samples by drawing air through a solvent, n-decane, contained in tiny tubes called "midget impingers," which are kept at just above freezing temperature. The material trapped in the solvent is then analyzed for 2,4-D compounds by a sensitive technique known as gas chromatography, Adams explained.

Methods for measuring nonvolatile 2,4-D substances and for separating gaseous from liquid samples are being developed by Adams and his co-workers, Craig M. Jackson and W. Lee Bamesberger.

Adams also expects the method to be used to detect insecticides in the atmosphere, although this has not yet been tried.

Root-Absorbed Insecticide Protects Plant as It Grows

A breakthrough in the battle against sucking insects on ornamental plants has just been accomplished, according to Bill Hantsberger, Colorado State University Extension Entomologist.

Called Disyston, the new systemic insecticide is taken up by the plant roots and translocated through other parts of the plant while growth continues, it is said. As sucking insects such as aphids, leafhoppers, and mites feed on plant juices, they will be automatically poisoned.

Disyston will be marketed under the trade name of "Scope" systemic insecticide, by Chemagro Corp., Kansas City, Mo. It will be available in dry or granular form. The new product will give at least six weeks' protection against pests, it is reported.

USDA Approves Malathion Label

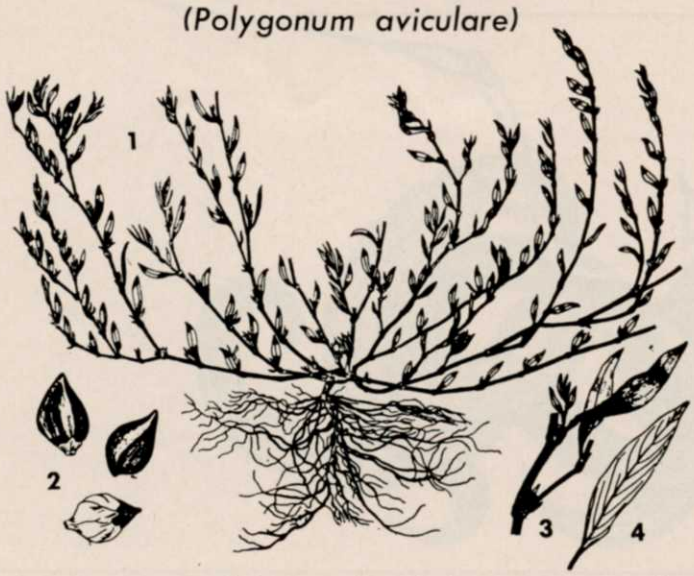
American Cyanamid Co. reports the Pesticide Regulation Division, U. S. Department of Agriculture, has accepted use of malathion for controlling wax scale on ornamentals. The label claim reads in part as follows:

"Malathion 57% Emulsifiable Liquid. Wax Scale — Ornamentals: For the control of wax scale on ornamentals, apply malathion 57% Emulsifiable Liquid at the rate of 2 quarts (40 ounces of actual malathion) per 100 gallons of water in the spring when crawlers are active.

"One or two repeat, full-coverage applications should be made at 10-day intervals."

Know Your Species

Prostrate Knotweed
(Polygonum aviculare)



Prostrate knotweed[1] is a seed-producing summer annual which grows in yards, along sidewalks, waste places, roadways, paths, and any place that soil may be so compacted that other plants will not grow or grow poorly. It has a variety of other common names such as: dooryard weed, pinkweed, and dishwater weed (taken from the old habit of throwing soapy water into the backyard, which killed grass). Although prostrate knotweed will grow in moist flowerbeds, it can withstand trampling and drought and is usually found on portions of yards which receive abuse.

As the common name indicates, prostrate knotweed grows nearly flat on the ground forming a dense mat. From the crown, stems branch out in all directions to a distance of about 2 feet. Where there is competition for light, ends of the stems may ascend up to 9 inches.

Slender stems are tough and wiry. Each joint or node (knot) is covered with a papery scale or sheath. This is a characteristic of the buckwheat family, Polygonaceae.

Small leaves are alternate on the stems[3]. Oblong to lance-shaped, these pale-green leaves[4] are narrow at the base and come to a point at the tip. Basal portions of leaves often look as if they are covered with a white "mildew." Leaves commonly measure ¼ to 1½ inches long by 1/3 to ¾ inch wide.

Flowers are small, yellowish-white to greenish, found clustered in the axils of leaves (where leaf meets stem). Flower parts may have a pinkish tinge.

Reddish-brown seeds[2] have a dull surface, and are 3-angled or triangular.

The root is a small, thin, taproot.

Prostrate knotweed can be effectively controlled, when plants are small and actively growing, with repeated applications of silvex and 2,4-D. Mature plants are resistant to both chemicals.

Endothall has been particularly effective for selective knotweed control, but may temporarily discolor perennial turfgrass. Also effective is dicamba (Banvel-D), which does not harm turf, but should be used with caution around ornamentals and trees.

Effective in tests, but as yet unapproved for turf use is the brush-killer 4-amino-3,5,6-trichloropicolinic acid, trademarked Tordon.

Prostrate knotweed will succumb to spot treatment of most general-contact herbicides. Due to its shallow and persistent habit of annual growth, knotweed will be one of the first weeds to re-invade a previously sterilized area and will indicate the need for re-treatment.

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)

Stuart H. Bear Elected Vice Chairman of NACA Board

Stuart H. Bear, division manager of Niagara Chemical Div., and vice president of FMC Corp., is the new vice chairman of the board of directors of the National Agricultural Chemicals Assn. He replaces T. K. Smith, Jr., vice president of Monsanto Co.

A graduate of Pennsylvania State University and the executive program in business administration of Columbia University, Bear joined the Niagara sales organization in 1931. He was promoted to division manager of Niagara in 1958.

Smith leaves the NACA board due to reassignment of his company responsibilities. He is now president of Chemstrand which takes him out of the agricultural field.

Shrub Bloom Determines Pruning Schedule

When to prune shrubs depends largely on the time they bloom, Charles E. Parks, extension landscape architect at Kansas State University, reminds applicators.

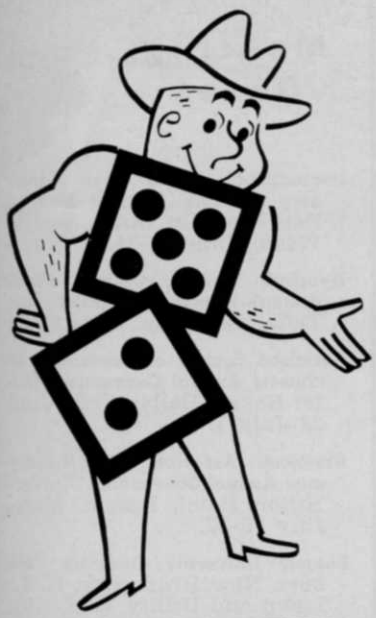
Shrubs that bloom in the summer and early fall may be pruned early in the spring before new growth produces flowers. Included in this group are hibiscus, hydrangea, crepe myrtle, privet, and floribunda roses.

Lilacs, forsythia and other spring-blooming shrubs are pruned after they have bloomed, rather than in early spring, Parks said.

Some shrubs are pruned slightly in the spring and again after they have flowered. These include cotoneaster, viburniums, and honeysuckle, except the fragrant honeysuckle which is pruned after it has flowered.

If evergreens need pruning, the red cedar varieties are pruned immediately after new growth is apparent. This is especially true where pruning is done to control size. It does not injure evergreens to prune them almost any time, Parks said.

Parks added that shaping of individual shrubs is best accomplished with single cane or twig cuts.



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SEVIN is the registered trade mark of Union Carbide Corporation for carbaryl insecticide.

Urox Herbicide Developed To Mix With Asphalt or Tar

A liquid herbicide that can be applied with asphalt or road tar to provide long-term weed control along highway shoulders has been developed, according to Allied Chemical's General Chemical Division.

The herbicide, called Urox, is also said to extend the usefulness of this bituminous shoulder treatment.

Each year, state and county highway departments spend countless sums to prevent erosion along highways by stabilizing the soil and gravel with asphalt or road tar treatments. These treated surfaces are eventually destroyed as weeds push through, making reapplication necessary.

Urox weedkiller is not affected by the hot mixes and remains active in the asphalt or tar for a long period, instead of leaching into the soil, the company says.

A five-year test in Virginia showed that an initial treatment of Urox weedkiller in asphalt gave complete control along a major highway. The company reports that similar tests along the eastern seaboard showed comparable results. For more details, write the company at 40 Rector Street, New York, N.Y.

USDA Warns Industry: Observe Parathion Labels

Parathion insecticide has no approval for use by homeowners in their gardens, nor approval for private contractors to apply it in or around houses.

This reminder to the industry comes in an open letter from John S. Leary, Jr., Chief Staff Officer in the Pharmacology section of the U. S. Department of Agriculture Pesticides Regulation Division. This is the Division which approves labels.

Domestic use of parathion is denied because "the margin of safety for the compound is too small," Leary says.

"Labelling for products containing parathion will require a statement indicating that it is not for home garden use," Leary added in his letter. "This policy applies in general to other highly toxic pesticides which have an equivalent margin of safety."

Morton Has Mecopex

A selective weedkiller said to provide permanent control over broadleaf weeds without harming fine grass has been introduced by Morton Chemical Co.

Named "Mecopex," the new compound is reportedly harmless to fine grasses such as Washington, Toronto and Seaside Bent, and Kentucky and Merion Blue. Applied as a post-emergence herbicide when weeds are growing vigorously, Mecopex breaks their growth cycle and prevents them from crowding out turf and lawn grasses.

The new weedkiller is particularly effective on clover, common and mouse-eared chickweed, lambsquarter, plantain, knotweed, pigweed and ragweed, the company says.

A technical bulletin may be obtained from Morton at 110 North Wacker Drive, Chicago, Ill. 60606.

Meeting Dates

International Shade Tree Conference Western Chapter Meeting, Ben Franklin Hotel, Seattle, Wash., June 21-24.

Hyacinth Control Society Fourth Annual Meeting, Holiday Inn, Tallahassee, Fla., June 28-30.

American Society of Landscape Architects Annual Convention, Hotel Baker, Dallas, Tex., June 28-July 1.

American Association of Nurserymen Annual Convention, Statler-Hilton Hotel, Boston, Mass., July 19-22.

Rutgers University Turfgrass Field Days, New Brunswick, N. J.: Lawn and Utility Turf, Aug. 12; Golf and Fine Turf, Aug. 13.

International Shade Tree Conference, Shamrock Hilton Hotel, Houston, Tex., August 15-21.

12th Annual Turf Conference, Florida Turfgrass Assn., Gainesville, Florida, Aug. 25-27

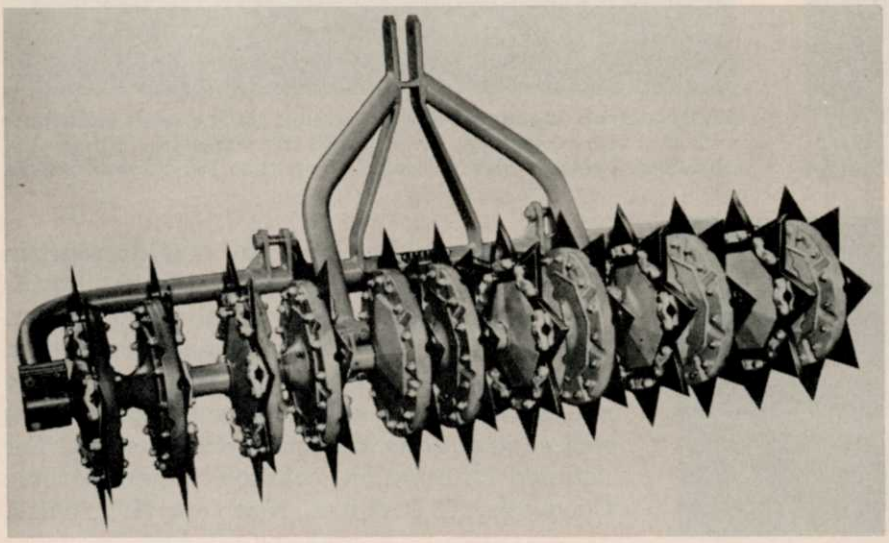
National Agricultural Chemicals Assn. Annual Convention, The Greenbrier, White Sulphur Springs, W.Va., Sept. 8-11.

Midwest Regional Turf Field Days, Purdue Univ., Lafayette, Ind., Sept. 14-15.

Ohio Agricultural Experiment Station, Lawn and Ornamentals Day, Columbus, Ohio, Sept. 15.

Illinois Turfgrass Foundation, Illinois Turfgrass Field Day, University of Illinois, Urbana, Sept. 18.

Society of American Foresters Annual Meeting, Hilton Hotel Denver, Colo., Sept. 27-30.



Turf managers have a choice of either a 9- or 12-wheel aerating unit in Ryan's Tracaire. Both models aerate a six-foot swath and are designed for use with tractors having a 3-point hitch. With a complete set of tines (coring, slicing, and renovating), the Tracaire can be used throughout the growing season for a complete building and improvement program of large turf areas, the company says. Details can be obtained from the Ryan Equipment Co., 2055 White Bear Ave., St. Paul, Minn. 55109.

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HELP WANTED

OUR COMPANY is now operating in termite and pest control. We wish to expand into weed control, turf maintenance, tree care, etc. If you qualify to form and manage this new department, kindly give education details, experience, reference and personal data. Write Box 512, Havertown, Pa.

POSITION WANTED

MATURE AND AMBITIOUS young man, degree in entomology and ornamental horticulture, experience in various phases of agricultural chemical industry, seeking position with future either technical or administrative. Age 28, married, one child. Prefer metropolitan N. Y. area, but will consider other locations. Write Box 1, Weeds and Turf magazine.

Proper Grade Is Key To Successful Lawn

Proper grading, to a large extent, determines the success or failure in establishing a successful lawn, L. R. Quinlan, landscape architect at Kansas State University, advises.

First consideration is to have lawns drain away from buildings, walks, and drives. It is also important to eliminate hollows where water might stand. Small pools of water will kill grass if they remain any length of time.

The front lawn of the average home should be slightly convex and slope away from the house. The slope should be no greater than necessary for drainage during heavy rains. A steep slope makes it difficult to keep soil moist and maintain grass, Quinlan says.

Side lawns and rear gardens should be graded in the same way if possible. Where the lot slopes deeply to the rear or front, it is best to build retaining walls rather than steep-terraced slopes on which turf is difficult to establish and maintain.

"Where surface drainage from adjacent property is a problem, construct a small waterway along the upper property line, Quinlan added.

Suppliers Personnel Changes

Amchem Products, Inc., has appointed Warren C. Teel, agricultural chemical sales representative in the state of Kansas, according to an announcement by M. B. Turner, Vice President, Director of Marketing, Agricultural Chemicals Div. Teel was formerly director of the noxious weeds division, Kansas State Board of Agriculture, Topeka.

Hercules Powder Company's Synthetics Dept., has named Kenneth T. Givens as manager of the Greenville, Miss., agricultural chemicals district sales office. Givens is a member of the Entomology Society of America and succeeds Leonard V. Edwards, who is now sales manager, pesticides, in the company's home office, Wilmington, Del.

Metalsalts Corp. advises that Peter C. Griffin has been appointed to the newly created position of Product Manager for agricultural products. Griffin was formerly associated with California Chemical Corporation as technical sales representative, working with fertilizer companies, hybrid corn companies, and local pesticide distributors.

Niagara Chemical Division of FMC Corporation has appointed George C. Duckworth as manager of its Agricultural Department, it was announced recently. Duckworth replaces E. K. Hertel who was recently named manager of a new department combining the division's Fairfield and technical chemicals operations. Three other changes were made by Niagara with the appointment of J. R. Graham to its newly organized post of Supervisor of Formulation and Process Development. Graham has served in the company's research and development department for the last nine years. Appointed to its Fairfield Chemicals staff is David H. Ferguson as sales representative covering northern California, and Peter M. Grehlinger is made sales service representative for the department.

Stauffer Chemical Co.'s former Eastern Sales Manager, Harold L. Straube, has been advanced to Director of Marketing, Agricultural Chemical Division. In his new position Straube will be responsible for all divisional marketing in the U. S. and Canada. Stauffer also named Willis E. Ball as sales manager for California, Arizona, Nevada, and Hawaii, in their west coast agricultural sales division. Ball will also serve as liaison between all service departments and other divisions of the company in the San Francisco office.

Union Carbide International has acquired the services of Dr. Maarten de Vries as technical director to the agricultural chemical sales manager. Dr. de Vries was formerly associated with international chemical companies in Europe and this country.

United States Borax & Chemical Corp. recently assigned Edwin R. Weatherall to Houston, Tex., headquarters for the South and Southwest. According to J. F. Corkill, marketing department vice president, Weatherall will be agricultural sales representative there.

— Advertisers —

INDEX TO ADVERTISEMENTS

Circular Outlines Method For Control of Nutsedge (Nutgrass)

Agronomists at North Carolina State have concluded that it may be impossible to get rid of nutsedge (nutgrass), but it is possible to control it. Their findings appear in a new circular which outlines control procedures.

The agronomists, A. D. Worsham, G. C. Klingman and R. P. Upchurch, say that nutsedge can be controlled "with properly timed applications of chemical weedkillers." They also proceed to outline the proper chemical weedkillers to use, when and how to use them.

Also listed are steps to be taken to control nutsedge in specific crops, as well as in lawns and flowerbeds. The agronomists point out that dense shade and repeated tillage, as well as chemicals, can be used to control the pest.

Free copies of Circular 452 on controlling nutsedge are available from the Department of Agricultural Information at North Carolina State, Raleigh, N. C.

Rutgers Turfgrass Field Days

Rutgers University's annual Turfgrass Field Days will be held at the University, New Brunswick, N. J., on the following dates:

Aug. 12—Lawn and Utility Turf.

Aug. 13—Golf and Fine Turf.

Tours start at 10:30 a. m. and 1:30 p. m. each day. Individual inspections of the plots are invited before or after the tours. All interested turfmen may attend.

Omega Fertilizer Is Leased

Kerr-McGee Oil Industries, Inc., Oklahoma City, has leased the facilities of the Omega Fertilizer Works. John D. McLeod, who has operated Omega, will manage the business for Kerr-McGee and will initiate an expanded fertilizer production and marketing program.

The fertilizer firm has plants in Omega and Tifton, Ga.

Trimmings

Back to School. It was back to the classroom for landscape architect Kenneth W. Larsen, of Albuquerque, N.M., recently. But this time the well-known landscaper went as teacher, not as student. Ken was one of the lecturers at the New Mexico Landscape Design Course held last month on the campus at New Mexico State University, College Park. Now a consultant in land planning, Larsen's chief interest in recent years has been in city planning (he was associate planner for the city of Albuquerque from 1957 to 1959). We're sure delegates all profited from this veteran landscaper's comments!

* * *

Time on Their Hands. *Spraymen and custom lawn maintenance supervisors will be interested in the apparent paradox that while the American public's leisure time is growing, it doesn't necessarily mean every citizen is going to start looking after his own lawn. As a matter of fact, trends are to greater utilization of nonworking hours for such pleasant pursuits as bowling and boating, we gathered from a recent news release. Since 1850, the average worker's leisure time per week has grown from 42 to 74 hours. At the same time, the report says, expenditures for recreation have skyrocketed, as have the average number of hours spent weekly in pleasure driving. Moral of all this, we suppose, is that while the masses hie themselves to parks and lakes for fun-filled outings, our hard-working readers will be back at home, carefully looking after the lawns!*

* * *

Gentle Prompter. St. Louis is getting set to celebrate its bicentennial, and City Commissioner of Forestry Edward J. Schrader is determined his metropolis on the Mississippi will look its best for the event. He recently urged residents to "lay out the green carpet" for visitors by sowing grass in vacant lots to help eliminate weed growths. And Mr. Schrader backed up this suggestion with the gentle reminder that any citizen who fails to keep weeds "cut down to size" will be issued summonses by the police. St. Louis city officials are empowered by law to cut weeds at the property owner's expense if weeds are allowed to get out of hand, and we heartily endorse Commissioner Schrader's determination to keep St. Louis green yet free of weedy eyesores!

* * *

Hot Tip. *Another encouraging note for weed control applicators: an official in Nebraska has officially warned the public that burning is an antiquated and dangerous way to remove weeds. Not only that, but it's almost pointless, the Nebraskan says, since the weeds merely grow back. While we and our readers take this for granted, it's good to know that potential customers are getting the message, too, that weed control is a matter for professionals!*

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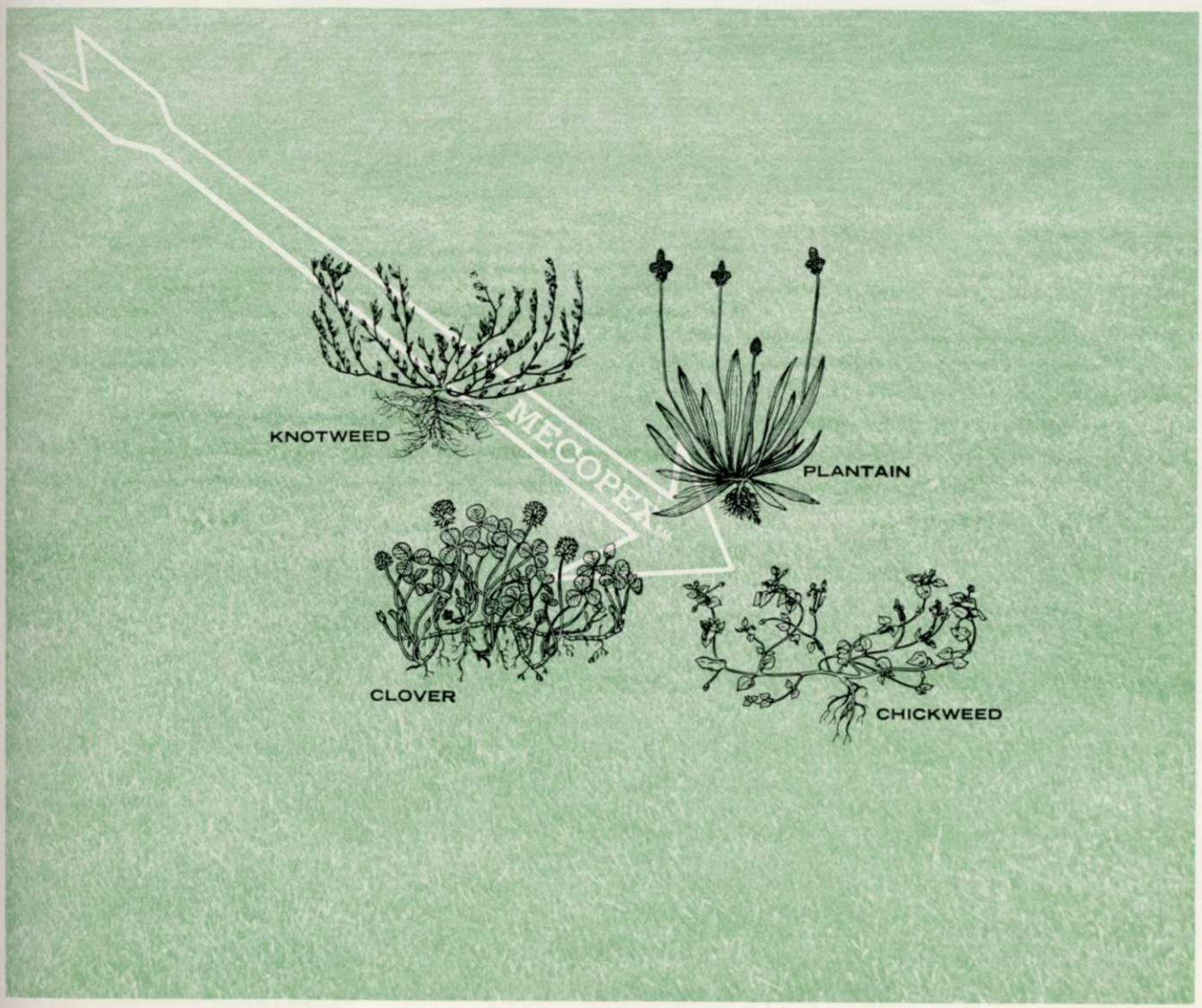

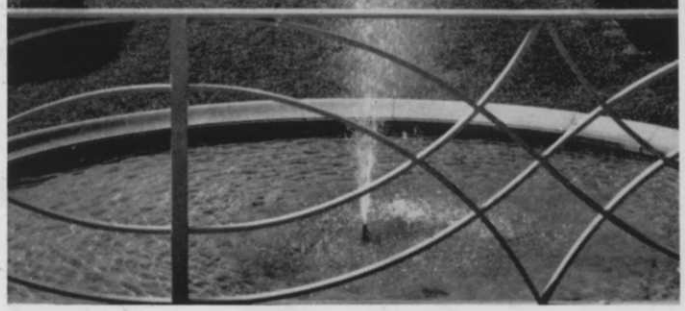

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If you'd like to know more about how Diazinon can help you turn every call into an opportunity for extra profits, just write to:

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