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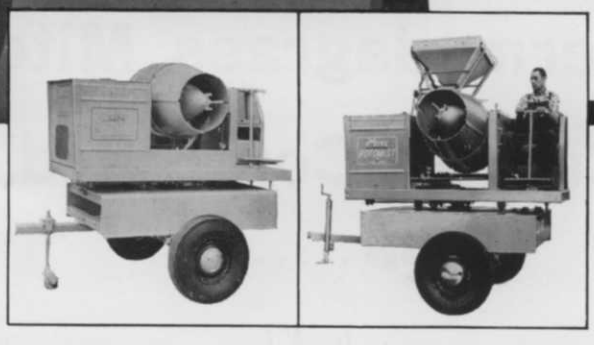

91 ROTOMIST is available on a spring-mounted trailer or said mounted with tank for use in trucks.

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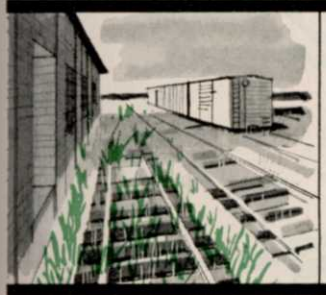

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Only a few examples of the type of situations that mean opportunity for you are shown above. Product descriptions are necessarily brief, too—each of these Du Pont herbicides effectively control many other kinds of weeds or brush. For complete information mail the coupon to Du Pont today.

On all chemicals follow label instructions and warnings carefully.

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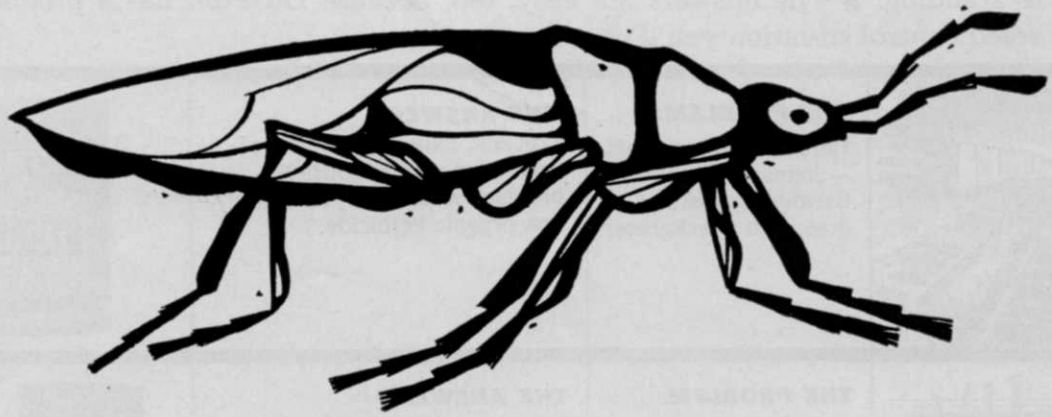

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TECHNICAL CHEMICALS DEPT., NIAGARA CHEMICALS DIVISION, MIDDLEPORT, NEW YORK

WEEDS and TURF

June 1964 **Volume 3, No. 6**

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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.

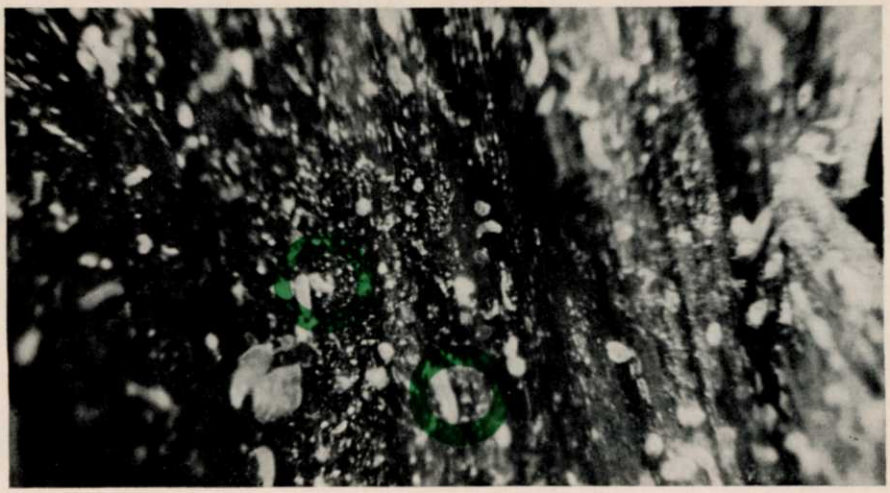
The mites remain hidden under the leaf sheaths. By using a hand lens of 14 power or larger, these pests can be seen by removing the outer sheath cover and looking near the crown of the plant. They appear as tiny white larvae, sometimes slightly curved, and may vary in number from a few to a hundred or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

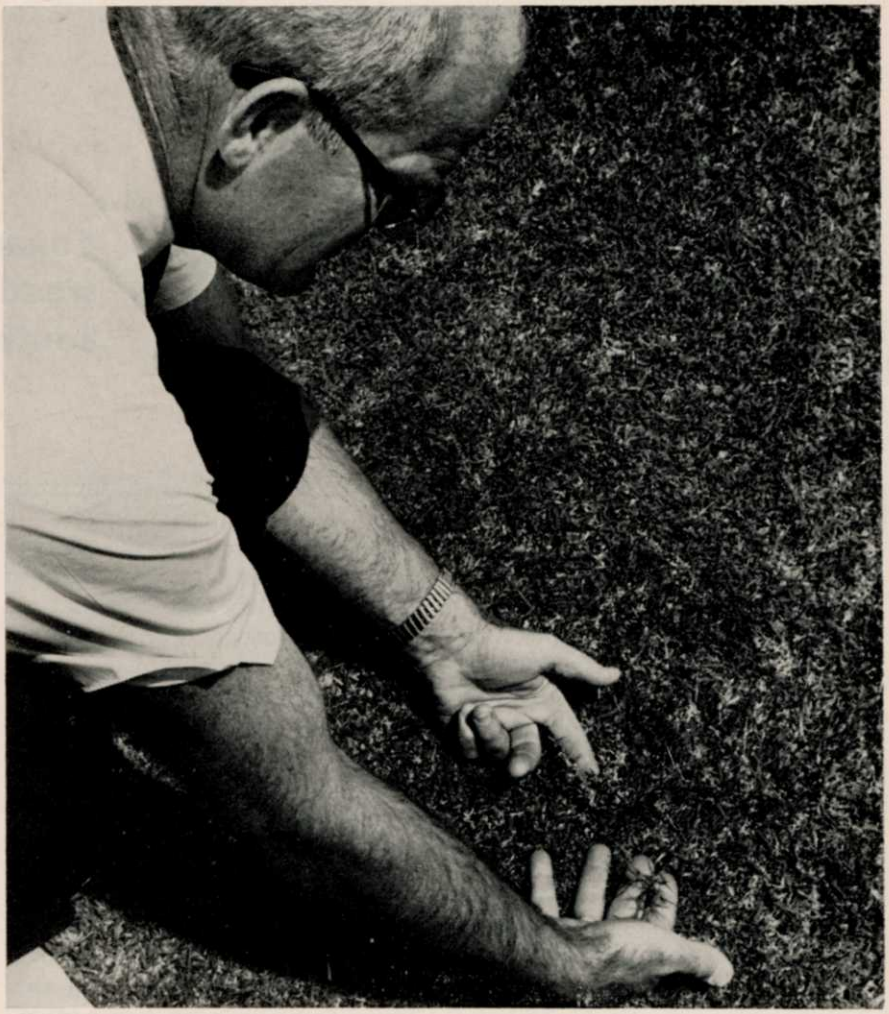
Mite



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.

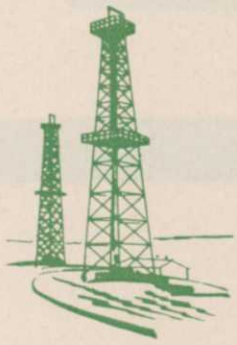
Author Wayne Morgan (right center) is a turfgrass specialist for the University of California Extension Service. Here he demonstrates how to check for damage from this pest which he has carefully studied for some time.

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.