

AGRO·CHEM
SOIL REBUILDER
"The Productivity Improver"

A Totally New, Organic Product

(Releases the pressure of compacted, tight soils so as to allow roots to grow down deeper. Soil Rebuilder encourages grass to grow in thick and natural into bare and thin areas.) HELPS TO DEVELOP DEEP STRONG ROOTS.

In this age of ecology, Agro.Chem's organic Soil Rebuilder has been created to let nature itself breathe life into the earth.

Soil Rebuilder is a natural organic combination of plant by-products, decomposition by-products, organic extracts, bacterial by-products, and many organic complexes found in highly productive organic soils.

Incubated for 7½ weeks under stringent conditions, Soil Rebuilder is guaranteed to be a pure, productive product. When applied by sprayer, Soil Rebuilder loosens tight, compacted soils, coats soil particles with organic matter and helps develop productive soil aggregates.

At work, Soil Rebuilder increases organic matter, bacteria, bacterial decomposition and the availability of plant food and micro nutrients. Recharging the soil with life by increasing the penetration of air, water and nutrients deep within the soil, Soil Rebuilder helps Mother Nature rebuild her soil naturally.

All of these reactions help develop a Deep Root System by making fertilizer work better. Soil Rebuilder lessens the need for extensive watering, fertilizing and weed control, thereby reducing maintenance costs.

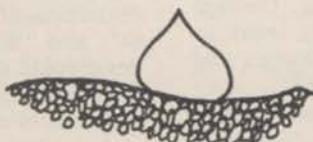
Soil Rebuilder is non-toxic and completely safe to use on all soils. It is harmless to humans, pets and wildlife, too.

For improved productivity, try Agro.Chem's Soil Rebuilder. No other product can produce such dramatic, natural results because no other product is produced in such a natural manner.

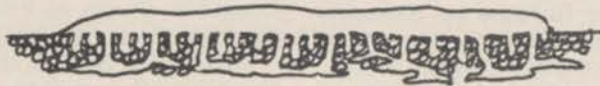
Try this on your ground this year. Notice the improved results within a few weeks—water and nutrients penetrate and help fertilizer work better.

Since plant roots only absorb liquid materials, Soil Rebuilder was created to make water react in a special way. Agro.Chem calls this special water **FLAT WATER**. **FLAT WATER** is an active, live water that penetrates and recharges the soil with life-producing Fertilizer nutrients, Liquid nutrients, Air, Trace elements.

Soil Rebuilder draws these vital elements deep into the soil and root system. Bacterial action is sustained and plant nutrients are made available to build soil aggregates and improve soil texture. Result: Water, air and fertilizer penetrate faster and make soil more productive, roots are deeper and stronger. Disease and insect infestation are reduced drastically because moisture retention in the Matt and Thatch layers is reduced. Plants grow thicker, are more healthy and beautiful.



Ordinary water cannot seep into small soil openings. It just stays on the surface and evaporates.



Flat water creeps and seeps into tight soils—coats soil and makes it more productive. Brings air, water and fertilizer deeper into soil to develop strong roots, healthier plants and lasting beautiful results.

For everything that grows in the soil, try Soil Rebuilder and all Agro.Chem products. Agro.Chem products are "productivity improvers."

Order your performance package today. Contact Agro.Chem for nearest distributor. Phone 312/673-7500 or by letter to: P.O. Box 59225, Chicago, Ill. 60659.



Be certain to ask for Agro.Chem's Ground Care catalogue or circle number on reply card.

Dealerships & Distributorships Available

For More Details Circle (159) on Reply Card

WIPE OUT SOD WEB- WORMS



*DYLOX insecticide provides excellent control of ravenous insects that destroy fine turf.

Easy-to-use formulation mixes with water; doesn't corrode sprayers.

Three applications, one month apart are recommended for best control. Start in May or June.



RESPONSEability
to you and nature

Division of Baychem Corporation
Box 4913, Kansas City, Missouri 64120

73107-4

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Phosphate Rock Crisis Is Real Says Agrico

The U.S. is facing a phosphate rock crisis that may be similar to the current "energy crisis." But the U. S. has alternate supplies of energy in its vast coal and shale reserves and its nuclear potential while the phosphate rock supply is irreplaceable.

Those statements were made to The Fertilizer Institute by Kenneth F. Lundberg, chairman of Agrico Chemical Company. Agrico owns some of the nation's largest phosphate rock reserves in Florida and North Carolina.

Phosphate rock is essentially the only source of the phosphate component of chemical fertilizers.

"Present phosphate supply capability in the world market faces a critical point in the mid-1980's. Some will predict that our U. S. phosphate industry will be on a downhill slide from that time on. However, I would remind the pessimists that the resourcefulness of our people and our system to rally to a need is well known.

"It is my judgement that the U. S. phosphate industry will continue to

be an important world supplier with increasing emphasis on upgraded products.

"That is exporting our phosphate rock in the form of upgraded phosphate products or wheat, soybeans and meat.

"We have that opportunity because the outlook for U. S. agriculture and agriculture throughout the world has never been brighter," Lundberg said.

Lundberg predicted that if U. S. producers are to hold their percentage position of world requirements, by 1985 mining capacity dedicated exclusively to export must be increased 12,000,000 tons in addition to 13,500,000 tons of additional rock capacity required for increased domestic demand.

\$7850 In Awards And Grants Won By Students And Colleges

Scholarships to students, and three financial grants for research, were awarded during the annual Turfgrass Conference held recently at The Pennsylvania State University.

The U. S. Golf Association turfgrass breeding research grant of \$2000 was received on behalf of the department of agronomy by Dr. James L. Starling, department head. This grant has been awarded annually since 1947.

The Golf Course Superintendents Association of America turfgrass research grant of \$1200 was received for the college of Agriculture by Dr. Herbert Cole, Jr.

Dr. Thomas L. Watschke accepted the Winter Course Alumni turfgrass research grant of \$1200 for the department of agronomy.

Pennsylvania Turfgrass Council scholarships of \$500 each went to Donald S. Danyo of Pittsburgh and David P. Porter of Altoona.

Michael T. Hess of Hawley won the Albert Cooper Pocono Turfgrass Association scholarship of \$400. Twelve of the 13 winners are enrolled in the two year winter course in turfgrass management at Penn State.

The Finger Lakes Golf Course Superintendents Association of American scholarship of \$300 went to David L. Allen of Clifton Spa, N. Y.

Scholarships of \$250 each were awarded to nine students by the Penncross Bentgrass Growers Association of Oregon. The winners were Winfrey P. Bunton of Louisville, Ky.; Dennis R. Cox of Cuyahoga Falls, Ohio; Jeffery S. Edwards

of Altoona; John D. Foster of Crooksville, Ohio; Richard W. McConnell of New Castle; Lewis S. Morgan of Alliance, Ohio; David W. Ruley of Marion, Ind.; Dennis J. Salettel of Lyndhurst, Ohio; and Kim M. Sheffer of Dover.

Landscape Contractor Prexy Outlines Problem Areas

"Pre-qualification should apply to all landscape contractors whether they are working as prime or subcontractors," said Jerry J. Lankenau, president of the Associated Landscape Contractors of America as he addressed the Roadside Development Meeting of the Highway Research Board Committee.

"The landscape contractor should be listed with the general contractor when the bid is submitted. Past performance should always be considered, and not only the financial position of the company."

Lankenau, summoned by the Highway Research Board Committee to provide a landscape contractor's perspective on governmental contracts involving highway work, was also critical of maintenance of work after the contractor has left the job.

"Too often we'll find that a project began with good specifications, had good supervision during the period of guarantee, but afterwards little attention was given the project. This greatly diminishes the results of our efforts and disallows much pride in our work," he said.

Other points of criticism which Lankenau had heard voiced recently by the ALCA membership were: "Lack of communication between the designing group and the inspecting engineer"; "Lack of contractual definition of substitution of material"; and "Selection of materials in geographic areas where the material does not exist, or in times when the material is not available."

According to the association president, a problem as yet unresolved in much of the country is unit pricing. It fails to take into account the economy of size. An unresolvable problem almost everywhere is public disclosure of unit prices.

"A contractor hungry for a job will, as a matter of course, review the published unit prices and shave off a percentage," he said. "He may lose money on the project, after which his unit prices are published, and the next guy pulls the same trick because he's hungry and he'll eventually lose more money than the first guy. In the long run, everyone loses."

— classifieds —

When answering ads where box number only is given, please address as follows: Box number, c/o Weeds Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

Rates: "Position Wanted" 10¢ per word, minimum \$3.00. All other classifications 20¢ per word, minimum \$4.00. All classified ads must be received by Publisher the 10th of the month preceding publication date and be accompanied by cash or money order covering full payment. Bold-face rule box: \$25.00 per column inch.

POSITIONS WANTED

SALES REPRESENTATION: Washington, D.C. (Government), Virginia, Maryland, and Delaware. Seasoned sales organization can handle equipment, turf related chemicals, or specialties. We can tailor our marketing capabilities to meet your needs. W. H. Chadbourne, Agronic's, Inc., 10818 Fairchester Drive, Fairfax, Virginia 22030. Phone 703 471-9660.

HELP WANTED

WASHINGTON TREE SERVICE, Inc. in Seattle has openings for 2 experienced climbers-trimmers. If you have background and experience to do quality work and are a sober, responsible person, this could be the opportunity you have been seeking. Year 'round job, excellent benefits including profit sharing plan. Relocation allowance to qualified persons. Write or phone: Lou Vaughn, Washington Tree Service, Inc., 20057 Ballinger Road, N.E., Seattle, Washington 98155. Phone 206 362-9100.

DISTRIBUTORS for D. J. Andrews, Inc. stump cutter teeth, pockets and bolts. Best wholesale and retail price in U.S.A. Add to this exclusive area, local advertising at our expense, etc., and you have our story. D. J. Andrews, Inc., 17 Silver St., Rochester, N.Y. 14611. Call 716 235-1230, or 716 436-1515.

SEEDS

SOD QUALITY MERION SEED for discriminating growers. Also Fyking, Delta, Park, Newport, Nugget and Pennstar bluegrasses as well as fine fescues. We will custom mix to your specifications. Michigan State Seed Company, Grand Ledge, Michigan 48837. Phone 517 627-2164.

CROWN VETCH SEED: Penngift and Chemung varieties. Direct all inquiries to: Walter C. Mehlenbacher, Castile, New York 14427. Phone 716 493-2553.

ALL VARIETIES, straight or mixed to specifications, bluegrasses, fescues, bents, others. Markell Seeds, P.O. Box 3397, Green Bay, Wisconsin 54303. Phone 414 437-0851.

FOR SALE

DOUBLE EDGE sod cutter blades. Will fit any Ryan sod cutter. Works like double edge razor blade. Cuts much more sod per blade. Made to bolt on both ways. \$24.00 plus postage. New automatic sod loaders for direct loading to pallets, trucks or trailers. No workers needed on ground. Both products developed and designed by Hadfield. Write or call Glen Hadfield, 4643 Sherwood, Oxford, Michigan 48051. Phone 313 628-2000.

IDEAL 5-ACRE RANCH. Lake Conchas, New Mexico. \$3,475. No Down. No Interest. \$29/mo. Vacation Paradise. Good Investment. Free Brochure, Ranchos, Box 2003TT, Alameda, California 94501.

ARPS stump cutter teeth, top quality and best price in U.S.A., D. J. Andrews, Inc., 17 Silver St., Rochester, New York 14611. Call 716 235-1230.

USED EQUIPMENT

VERMEER 604 log chipper with Detroit diesel model PTA41052 power unit; 1969 White Trend cab-over truck with behind cab mount model 100A Husky logger-loader (10,000 lb. capacity at 8 ft.—4450 lb. at 19 ft.) Maximum horizontal reach 21'-4". All in good operating condition. Package price \$17,000.00. Chipper and loader purchased new February 1971. Used 18 months. Telepower Services, Inc., P.O. Box 2207, Muncie, Indiana 47302.

1968 VERMEER T & S—44 Tree Spade, mounted on 4 wheel drive, Dodge, asking \$6000.00. 1970 Ford Skyworker, 50 ft., with chip box hydraulic outlets at basket, mint condition, asking \$12,800.00. 1970 Asplundh Chipper, 12 inch—4 cylinder, mint condition, asking \$2,900.00. Edwards Tree Service, 3190 Cooper Foster Park Road, Vermilion, Ohio 44089. Phone 216 967-6750 or 933-6750.

RECONDITIONED brush chippers, sprayers, log splitters, stump routers, bucket trucks. Let us know your needs. Equipment Sales Company, 5620 Old Sunrise Highway, Massapequa, New York 11758. Phone 516 799-7619.

FOR SALE: 1 John Bean 35 GPM Sprayer with 400 Gallon tank, 300 ft. High Pressure Spray Hose, and Hose Reel. For more information write or call B. M. Fry Co., 8636 Mulberry Rd., Chesterland, Ohio 44026. Phone 216 729-7480.

FITCHBURG TWC 6 CHIPPER— Takes 5 to 6" log. Reconditioned, painted, \$875.00. William Wehner & Assoc., P.O. Box 3271, Davenport, Iowa 52808.

MISCELLANEOUS

LANDSCAPE DESIGN KIT—37 rubber symbol stamps and ink pad. Postpaid \$25.00, C.O.D. \$26.00 plus postage. Order direct or brochure sent. California add tax. T-Gordon's, Box 741T, Reseda, California 91335.

TREE APPRAISALS, SURVEYS, loss evaluations and expert consultation services. For names of members of the American Society of Consulting Arborists, Inc., throughout the country, contact: Executive Director ASCA, 12 Lakeview Ave., Milltown, New Jersey 08850.

COMING IN SEPTEMBER
WEEDS TREES and TURF
SHARPENING PRUNING SAWS

EQUIPMENT WANTED

LOOKING FOR 55' Hi-Ranger. Make me an offer. Temple Tree Service, 17371 Willowbrook Dr., South Bend, Indiana 46635.

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trimmings

AQUATIC VEGETATION is reducing the sport fishing potential of ponds and lakes in many parts of the midwest. In Jackson county, South Dakota, largemouth bass, green sunfish and black bullheads generally exceed 500 fish per surface acre. But when heavy growths of aquatic vegetation occur in the summer, the fishing potential is reduced. Solution: fish from a tube float. This doesn't solve the aquatic weed problem, but it keeps weeds out of the active fishing area.

WHO ELSE USES PESTICIDES? According to the National Agricultural Chemicals Association, Industry is the largest non-agricultural user of pesticides. It accounts for nearly one-fifth of domestic sales. An estimated \$300 million was spent in 1970 by industry. Uses include: mildew control in paint, wood preservatives, carpet treatments for insect pests, contamination in food preventative; preservation of plaster board, and others.

YOU DIDN'T HEAR THIS from us. The Associated Press reports that Kidwell Turf Farms of Culpepper, Va. has hired a new sales representative. He's been in the turf business for 12 years. The kicker is his name. He's C. S. (Pete) Moss!

WHAT IS AN ARBORIST? What is a forester? According to the American Society of Consulting Arborists an arborist deals with trees as individuals whether naturally seed or planted. The value of such trees, whether on private or public property, to be considered from the standpoint of shade, landscape beautification or recreational enhancement. A forester deals with trees en masse whether naturally seeded or planted. The value of such trees to be considered from the standpoint of lumber, pulpwood, wildlife habitat or erosion control.

SLUGS—everybody hates them, nobody likes them. But how do you get rid of them? Richard L. Miller, extension entomologist at Ohio State University, says use slug bait. With the introduction of Mesurool, we probably have one of the most effective slug killer ever known, he says. Don't feed good beer to those lousy slugs. They don't deserve that kind of treatment, he comments.

ARE YOU AN INTERSTATE commerce businessman? If you are, take a tip from those in the nursery business. Many of these fellows experienced problems in shipping plants to other states this spring. Seems like some states place rigid quarantines on the movement of certain plants into their states. If you have experienced this problem, better contact the state department of agriculture in your state. Or, ask your association to provide a list of quarantined states. The American Association of Nurserymen has periodically published a Quarantine Wall Chart for its members.

REMEMBER THAT PURPLE INK meat processors use to mark hanging carcasses? The ink is Violet No. 1 and the Food and Drug Administration has banned its use. Why? Two Japanese studies indicate that the food coloring may cause cancer.

The dye has been in common use for 22 years. Not just on meat, however, but in drugs, cosmetics, beverages, ice cream and bakery goods.

NOISY MILE might be the best way to describe the size of the insect population. Researchers calculate that over 80 percent of all animal life consists of insects. More than a million species of insects have been identified to date and the list is growing. While there are about three billion people in the world, scientists estimate that there are that many insects for every square mile of the earth.

TUSSOCK MOTH damage is causing much clamor in western states. According to the Associated Press, the Oregon department of forestry has sprayed Zectran insecticide on 1000 acres of forests with a reported kill of 78 percent after 12 days.

Turfgrass Insects

By **HERBERT T. STREU**

Department of
Entomology and Economic Zoology
Rutgers — The State University



Many insects feed on turfgrass and some can cause severe damage. Several common and important pests are illustrated in the accompanying figure.

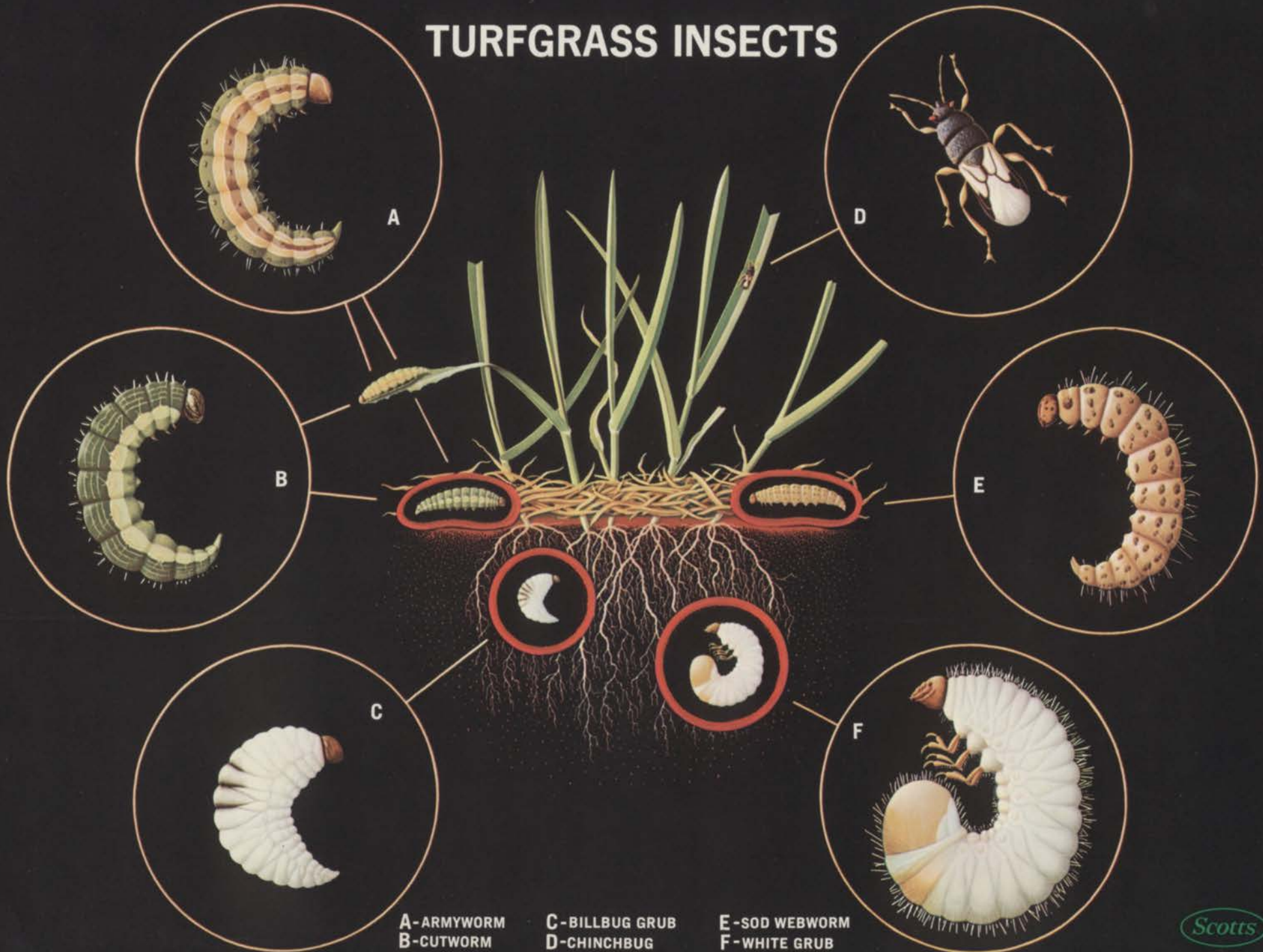
Chinch bugs feed on the above ground plant parts with sucking-type mouthparts. The bugs tend to congregate and early damage is often spotty. Greatest damage occurs during hot, dry seasons when populations may reach many hundreds or more, per square foot.

Billbug and white grubs are beetle larvae which feed below ground chewing off grass roots. As a result, heavily infested sod may be easily rolled, or pulled up, and uncontrolled populations may kill extensive areas of turfgrass.

Sod webworms, armyworms and cutworms are the larvae of a number of species of moths. These caterpillars or "worms" feed above ground chewing off grass leaves and stems, leaving patchy dead areas in the turf.

Any of the above insects may occur at the same time in turfgrass and the combined attack on the various plant parts result in multiple damage.

TURFGRASS INSECTS



A-ARMYWORM
B-CUTWORM

C-BILLBUG GRUB
D-CHINCHBUG

E-SOD WEBWORM
F-WHITE GRUB