



Busiest, savingest tractor around...

**International Cub Lo-Boy mows, dozes,
seeds, levels, loads – not a one job unit!**

Why is the Cub Lo-Boy so popular for large and small jobs alike? On grass-cutting alone, Cub more than earns its keep. Just 8 feet long, a Cub with its center-mounted rotary mower snakes around and between bushes and trees, mows up close to buildings and fences. An additional Cub bonus is its all-season versatility. You can select from several easy-on, easy-off attachments to doze, level, load, rake, seed, tow and carry.

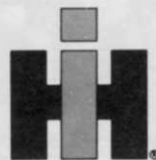
Another big reason for Cub's wide acceptance is its water-cooled engine. The Cub power plant outlasts ordinary air-cooled engines. And the entire Cub is built rugged—from transmission, clutch and hydraulics to the tough final drive.

Low initial cost and upkeep are still other Cub Lo-Boy advantages. Cub will work all day long on just 7½ gallons of gas. Maintenance, parts and tires are compact-priced.

Ask about all the worth-more features. Then test-drive a Cub Lo-Boy at your dealer's parking lot. His financing is flexible—terms are no problem.

INDUSTRIAL EQUIPMENT

**Wheel and crawler tractors • loaders • backhoes
dozers • forklifts • mowers • special duty tools**



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New Products . . .

Designed for the Turf Care Industry

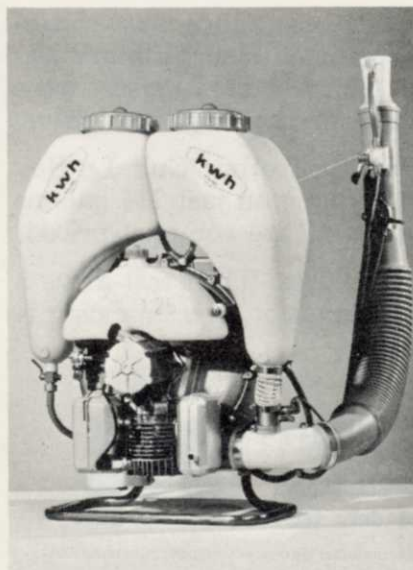
A grounds sweeping machine designed to work on both turf and paved surfaces is now offered by the Turf-Vac Co., 3342 Olive, Long Beach, Calif. 90807. Operating without brushes or rakes, this Turf-Vac Model GPU provides a 4-ft. sweep at speeds up to 10 mph. As the sweeping action is produced by a vacuum system, the unit can be used on wet or dry, paved or grassy surfaces. Its mulching system reduces dry grass and leaves to fine particles, tin cans to quarter-sized pieces. The debris is caught in a 27-cu. ft. capacity nylon bag for easy handling. Powered by a 24-HP Kohler engine, the rust-proof fiberglass van has a short 30-in. turning radius. Ground speed is controlled through a separate hydraulic system that allows the blower to run at a constant speed for maximum efficiency.



New, safety Wire Screen MonoGoggle (model 208) has been offered by American Allsafe Co., Inc., 273 Niagara St., Buffalo, N. Y. 14213. With an anodized aluminum screen lens designed to reduce glare, the goggles provide eye protection from impact and flying particles and resist pitting, scratching and fogging. Flexible and lightweight, they conform easily to facial contours.



Vandermolten Export Co. introduces lightweight Knapsack Mistblower-duster, designed for greater power plus ease of handling. Only 20 lbs., the unit is powerful enough to spray 40 ft. high. It provides deeper penetration and better coverage in addition to saving time, says Vandermolten. Write the co.: P.O. Box 967, West Caldwell, N.J. 07006.



Rental Equipment Mfg. Co. has recently made available to the consumer public its "Blue Bird" Lawn Comber. With a rotor of free-swinging, case-hardened steel blades (that adjust easily according to need), the unit literally "combs" out the thatch in lawns. A crank control permits combing depth to be adjusted so that the Lawn Comber can be as gentle or as severe as the job demands. The unit can also be used for such tasks as breaking up heavy dirt clods, turning in rye grass and cutting out crabgrass. Available with a 4- or 6-HP engine (or with no engine), the Comber is guaranteed for 1 year by Rental Equipment Mfg. Co., 2778 South Tejon, Edgewood, Colorado 80110.



Robert Niedermann (left) and Lee Kelnhofer chart customers on their schedule board.

Tractor "Mounties" Provide Custom Lawn Care Service

Red trailers toting a fleet of garden tractors indicate that special "mounties" are at work in the Milwaukee area this season. Their rescue mission: to relieve homeowners from the burdens of lawn care and maintenance.

Non-gardening homeowners can now go golfing or vacationing while a Lee Services, Inc. "mountie" mows, edges, trims, leaf-sweeps, thatches, fertilizes and treats their lawns for weeds and diseases, according to Lee Services. Customers—including doctors, cardiac patients, widows and salesmen who travel a great deal—are systematically charted on a schedule board. Lee's says it is equipped to handle all landscape maintenance operations for the home, school, hospital or industrial plant.

From a 1-man operation catering to 23 customers in 1965, Lee's enterprise now enlists the services of 11 mounties who serve over 250 customers. According to Lee Services' Lee Kelnhofer, they are enlarging their new building to double its present

shop size and will expand their tractor fleet from 14 units to 35.

Kelnhofer is particularly pleased with one aspect of his operation: the discovery of a healthy and useful new "career" for retired men. Gray-haired grandfathers become excellent tractor operators who can be proud of their landscaping skills, says Kelnhofer.

Lee Services feels it is a "growing" business in more than one way as it reports that franchises are planned for extending the operation to other cities.

A Lee's "mountie" diligently at work.



UNIVERSAL Wheel Pump SPRAYER

It pumps
as it's
pushed!



For Turf Care!

One of the handiest sprayers a professional can own. Ideal for jobs too small or too irregular for power equipment. Sprays either a 48" wide or 24" wide swath. Unique rubber wheel-pump "milks" out solution as you push the sprayer. Lays down a heavy residual spray. For killing weeds. Fungus control. Insect control. Turf grubs. Fertilizes, too. Safe. Sure.

Write for new catalog.

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LEIGH PRODUCTS, INC., SARANAC, MICHIGAN



George R. Ferguson, president of Geigy Agricultural Chemicals is heading the 1968 Agricultural Chemicals Campaign on behalf of the nation's 3 million 4-H members. The campaign, geared to help turn out young people who have a fuller understanding of the impact of modern technology on the problems of world food supply and environmental health, also promotes international good will by providing special training for rural youth of developing nations. Ferguson, holding a Ph.D. from Ohio State University, has been with the Geigy Chemical Corp. since 1945.

Construction Site Trees Need Special Treatment

A little care before construction starts can save many trees which would normally die later. Once the construction plan is laid out, the decision on which trees are to become a permanent part of the new landscape plan can be made.

Trees which are to be saved should then be fenced for protection. Dr. Fred B. Widmoyer, horticulturist at New Mexico State University, Las Cruces, N. M. suggests a barrier around each tree which encloses all exposed roots and low hanging branches.

Where trenches must pass near such trees, construction crews need to be alerted to cut as few roots as possible, and where roots must be cut to cut them cleanly. Widmoyer also suggests painting cut root ends with a wound dressing and backfilling

the trench as soon as possible to prevent roots drying up.

NLNA To Publish New Landscape Directory

The "National Directory of Landscape Firms" will be published shortly by the National Landscape Nurserymen's Assn. to assist customers in locating qualified landscaping firms.

The directory will list members of the NLNA, the Associated Landscape Contractors of America and the American Association of Nurserymen according to the size job they will undertake, type of contract they handle, and whether or not they offer maintenance service.

"With this easy reference directory," says Roger Ingels, NLNA president, "any potential customer can quickly find the firm that can do his type of job."

The directory will be available free to those interested in letting contracts and will be distributed to landscape architects, government agencies, building owners and highway departments.

Root Girdling Can Cause Severe Shade Tree Damage

Just by cutting a root, you may improve the health or save the life of a shade tree, reports the National Arborist Association.

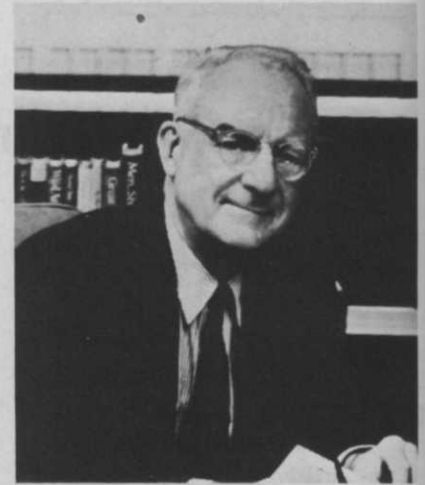
When a secondary root develops and grows into the parent root stem, it exerts pressure against the stem and impedes the passage of moisture and nutrients to the upper parts of the tree. This destructive secondary root is known as a girdling root.

Signs of girdling root injury include yellowish leaves, branch die-back, and smaller tree size and yield than normal. Affected trees seldom die suddenly but decline in health over a period of several years.

In treating an affected shade

tree, sever the girdling root at the point of development and remove it completely. To hasten the tree's recovery, the NAA recommends an application of fertilizer, removal of dead wood, pruning of weakened branches, and watering during drought periods.

Dr. Grosvenor Heads 1968 Landscape Awards Program



Dr. Melville B. Grosvenor, chairman of this year's Landscape Awards Program, has served as president and editor of National Geographic. Among his many and varied activities, he is Chairman of the U. S. Interior Secretary's Board on National Parks, Historic Sites, Buildings and Monuments and serves on the board of trustees of several colleges.

Dr. Melville B. Grosvenor, Chairman of the Board of Trustees and Editor-in-Chief of the National Geographic Society, has accepted the chairmanship of the American Assn. of Nurserymen's 16th Annual Landscape Awards Program.

Designed to pay tribute to businesses and organizations that excel in landscape beautification, the program has recently been expanded, in part, to take fuller advantage of the new impetus brought to the beautification drive by Mrs. Lyndon B. Johnson. Award categories now include institutional, commercial,

municipal, and industrial organizations.

Among his duties as chairman of the program, Dr. Grosvenor will preside at the awards luncheon to be held in Washington, D. C., on October 22.

Tiny Wasp May Stem Dutch Elm Disease

A tiny wasp collected by a USDA entomologist in France may help curtail Dutch elm disease by destroying the elm bark beetles which cause it.

The wasps affect only the beetle larvae, which they parasitize, and are harmless to humans. Female wasps can thrust their egg-laying organs through the bark to deposit an egg beside the beetle larvae. The egg hatches into a wasp larva that kills the immature beetle by drawing its body juices.

Although the wasps will not endanger their food supply by eradicating the elm beetles, they can provide sufficient control to prevent an epidemic of Dutch elm disease.

Turfgrass Industry Hears Congressman MacMathias

Maryland's rapidly-growing turfgrass industry has been urged by Congressman Charles MacMathias to "use your special knowledge, talents, and services to help insure the beauty and attractiveness of our land in this period of suburban growth and development."

The Congressman talked to more than 100 participants at the recent third annual sod conference at the University of Maryland.

Pointing out that Maryland is the fifth fastest growing state in the nation, Congressman Mathias said sod growers, installers, contractors, and land-

Clean up roadsides, ditches, or any noncrop land with MBC. MBC is a nonselective herbicide—spread or spray it on and it kills top growth almost on contact, leaches into the soil to attack roots, sterilizes soil for at least a season.

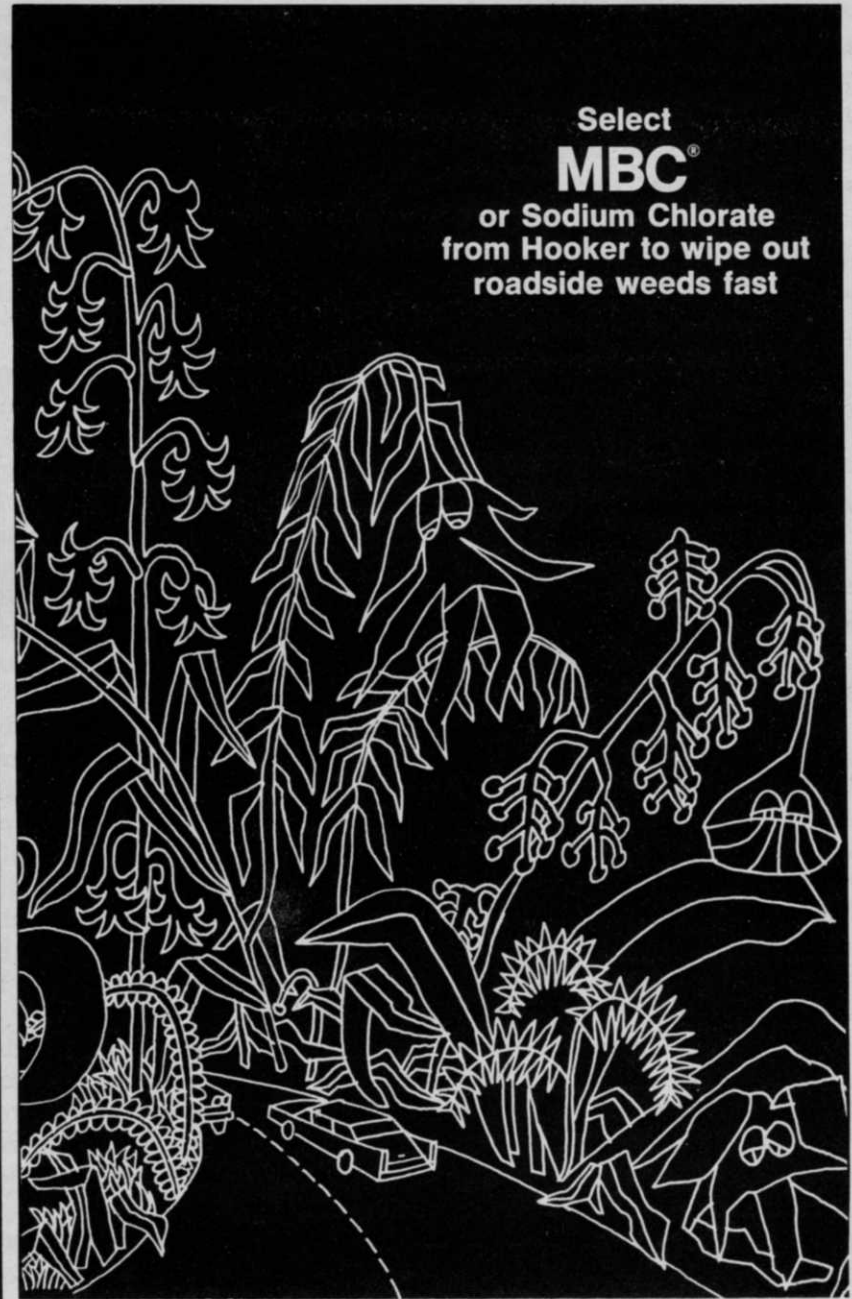
MBC completely eliminates Johnson grass, bur ragweed, hoary cress, and other troublemakers.

Also for low-cost control along roadsides or on smaller areas such as fence lines and around power-line towers, try Hooker Sodium Chlorate. It gives you control over all weeds and protects against their return for up to two years.

For more information on these powerful killers, write Agricultural Chemicals, Hooker Chemical Corporation, 406 Buffalo Avenue, Niagara Falls, N. Y. 14302.



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Select
MBC[®]
or Sodium Chlorate
from Hooker to wipe out
roadside weeds fast

scape architects are facing an important challenge to help keep Maryland green. Growth feeds upon itself, he said, and pressures on land use will be even more intense in the counties around our cities. To avoid "slurbs," a slum-like blight of suburban areas, all the knowledge and skills you can muster will be needed," he said.

Industry-wide standards, uniform specifications for growing and installing sod, and a Maryland sod law to help protect the public and assure orderly marketing and development of the industry drew attention at the day-long meeting. "The home builder, architects and other buyers should be able to purchase sod by specifications and be sure of what they are getting," Dr. Elwyn Deal, turfgrass specialist, University of Maryland, told the group.

Leafspot and Foot Rot In Bluegrass Lawns

Leafspot and foot rot—also known as "melting out"—occurs when bluegrass decreases in vigor and eventually fails to respond to fertilizer and water.

According to Ohio State University studies, symptoms of the disease include the appearance of dark or reddish-brown spots on leaves and the shriveling and browning of leaves and stems. Patches of the lawn appear to "melt out," and crabgrass invades the areas of dead grass.

R. E. Partyka, OSU plant pathologist, reports that the disease most severely attacks common Kentucky bluegrass.

To reduce disease damage, says Partyka, avoid over-fertilization. Mow the lawn at a height of 1½ to 2 inches, as a lower cut depletes the grass' food supply. Remove the clippings after cutting

because the fungus may be in or on them.

Chemical control consists of spraying lawns with a fungicide at 10-day intervals in the spring. Or, apply a fungicide as soon as the turf greens up, to be followed by a second application in 3 weeks and a third in 4 weeks. If the disease persists, several fall applications are advisable.

Fungicides recommended by OSU studies include: Dyrene, Tersan OM, Captan, Fore, Zineb, Daconil 2787 and Kromad. Follow directions and use five gallons of water for every 1,000 sq. ft. of lawn area, says OSU. For better results, OSU recommends adding a small amount of household detergent plus enough pressure to drive the spray to the base of the plant.

Diagnosing and Treating Nematode Troubles

Nematodes — slender, microscopic roundworms or eelworms—feed on plant roots and are a real threat to turfgrass. Diagnosing nematode injury is difficult, reveals R. E. Partyka, plant pathologist at Ohio State University, and is often confused with fertilizer burn, nutrient deficiency, poor soil aeration, drought and insect damage.

Partyka describes nematode-injured turf as bunchy, stunted and often yellow in color. Grass blades die back from the tips. Later the turf may thin out, wilt and die in irregular areas with no specific symptoms on the plants. Damaged roots may be swollen, stubby and dark in color.

Since nematodes cannot be detected with the unaided eye, soil samples from a suspected area should be diagnosed in a laboratory. (Contact your State Land-Grant University).

If nematodes are present, keep grass growing vigorously by watering, fertilizing and following

good cultural practices. If severe, Partyka recommends applying Nemagon EC-2 or Fumazone 70E at the rate of 1½ to 2 pints mixed with 10 to 15 gallons of water drenched on 1,000 sq. ft. of turf.

Water the turf immediately after application to insure penetration and to prevent toxic effects. Treat in the spring or fall when soil temperature is above 55°. Aerifying the turf before application improves results. Do not apply chemical to newly seeded areas.

Heavy Water, Fertilizer May Cause Grass Wilt

To help prevent wilt, water grass less frequently and don't apply fertilizer during the wilting season, reports Harry Meusel, Yale University.

Meusel explains that wilt occurs when grass loses more moisture than it absorbs. Heavily watered grass has twice as many surface pores as lightly watered grass and will lose moisture faster and wilt sooner at temperatures above 70° F. After fertilization, heavily watered grass wilts even more quickly because more water evaporates from the plant.

Light intensity, which affects the size of surface pores, also influences wilting. Grasses in shaded areas wilt more slowly than those in sunny areas.

Meusel recommends that a phenol mercuric acetate solution applied to grasses can help control wilt. This closes the pores of the leaf. But the best safeguard against wilting is a strong root system.

Heavily watered grass usually has short, stubby roots because moisture is readily available near the soil, whereas lightly watered grass has long, thin roots that reach deep into the soil and are less susceptible to wilting.

MSU's First Turf Class Is Graduated, Placed

The first graduates of Michigan State University's Turfgrass Management Technical Training Program are now "on the job," receiving starting salaries ranging from \$6,000 to \$10,000 per year.

MSU's new 18-month program combines 4 terms of classroom training with 2 terms of on-the-job experience. Classroom instruction includes, aside from English and business courses, such areas as: principles of turfgrass management, soils and soil fertility, botany, chemistry, plant pathology, entomology, irrigation and drainage, turf equipment, and maintenance of trees and shrubs.

Applications for the program, which begins in September, are now being accepted by Robert LaPrad, Institute of Agricultural Technology, Room 120, Agriculture Hall, MSU, East Lansing, Mich. 48823.

Treatment for Webworms On Honey Locust Trees

Brown, webbed-together foliage in the tops of a thornless honey locust or mimosa tree indicates probable mimosa webworm infestation.

Richard L. Miller, Extension entomologist at The Ohio State University, says that first-generation webworms appear in late June, with a second generation appearing in August. Generally a number of larvae cooperate in building nests about $\frac{3}{8}$ in. in diameter, although a single larva may web 2 or more leaflets together and feed inside the enclosure. These nests may occupy most of a tree's foliage. Silken threads hanging from a tree is the result of larvae lowering themselves to the ground.

According to Miller, the webworm can be controlled with



MSU's first Turf grads and their instructors are: seated, left to right, Scott Sincerbeau, John Kosmalski, John King, Turfgrass Management Program Coordinator. Standing, left to right, Dr. James B. Beard, MSU Turf Specialist, Fred McMullen, Larry Jackson, Bruce Wolfrom.

either DDT or Sevin 50% wettable powder at 2 tbsps. per gal. of water. Thorough coverage of tree tops provides the best results.

Systemic insecticides are also effective, says Miller, but he recommends that a professional make the applications.

Safeguard System Protects Buyers or Pesticides

Fear not, pesticide buyers! According to Frank Boys, agricultural chemicals specialist at the University of Delaware, you can count on 3 safeguards for getting your money's worth in chemical quality and quantity.

Firstly, Boys points out that pesticide manufacturers keep daily records and samples of each batch of chemicals processed in their plants. This helps ensure that all pesticides maintain the same quality standards.

By referring to the batch number on the bottom of pesticide containers, buyers can obtain information on whatever pesticide they desire.

Inspectors of the U. S. Dept. of Agriculture Pesticide Regulation Division carry out another safeguard. They collect and analyze pesticide samples to ensure that the products contain all ingredients in the amounts listed on the labels of the containers. USDA inspectors also regularly check the effectiveness and safety of registered pesticides. If a product is found to be misrepresented in any way, steps are taken to correct the violation immediately.

The third safeguard is carried out by "backup teams" of state chemists and inspectors, says Boys. These people collect samples from manufacturers, distributors and users in all areas of the state and analyze them to further assure the validity of label specifications.



Penn - Delaware ISTC Chapter received a special award for this exhibit at the recent Philadelphia Flower Show.

Penn-Delaware ISTC Exhibits At Philadelphia

The Pennsylvania - Delaware Chapter of ISTC won a special award for their exhibit at the recent Philadelphia Flower Show, one of the oldest and largest Spring exhibitions in the nation. Joseph L. Hayden, flower show chairman for the Chapter, designed the exhibit which demonstrated various methods of beautifying city streets with trees. He used pits, boxes, and tubs. Also stressed was the fact that trees sometimes have to be removed. In this case, it proved to be a good example of a DED victim which was felled and bucked on the sidewalk.

Hayden reports that 100,000 persons visited the show during its 8-day run in Philadelphia's new Civic Center. E. George Maurer, Chapter president, Greenville, Del., adds that the effort put forth by Hayden and his committee in these last 3 annual exhibitions is industry public relations at its best.

The Pennsylvania Horticultural Society promotes the Philadelphia Flower Show and sponsors financially a number of educational exhibits such as the one constructed by ISTC.

MSU Making Progress In Red Fescue Research

Scientists at MSU's Agricultural Experiment Station have released a new red fescue but feel they can improve it even more. Drs. Fred Elliott and James Beard, MSU crop scientists who developed the fescue, say the seed will be ready for commercial use by 1970.

The variety, Wintergreen, is an improved red fescue that adapts well to shaded conditions and produces good turf with minimum fertilizer and water.

Researchers feel that improved breeding techniques now being developed will help them achieve their goal of developing a fescue that will adapt well to commercial sod production and require less water for growth.

New Fescue Developed By Northrup, King & Co.

Ruby Creeping Red Fescue, an improved turf grass for seed mixtures, will provide a more durable turf, according to How-

ard Kaerwer, Northrup - King turf specialist.

Retaining desirable fescue features (the ability to withstand heavy traffic and grow in shade and poor soil), Ruby also offers major improvements over less desirable features, says Kaerwer.

Describing Ruby as the "friendly fescue" that blends well with other lawn grasses, Kaerwer reports that Ruby provides improved mowing characteristics, resistance to disease and bunching, and a tolerance to high levels of fertility. Its spreading ability and color contrast with bluegrasses make Ruby ideal for use in turf seed mixtures, says Kaerwer.

Good Year Predicted for Wisconsin Sod Producers

Wisconsin's sod farms can look forward to another good year, according to R. C. Newman, extension horticulturist at the University of Wisconsin.

The state's sod industry has grown from 300 acres in 1958 to 8000 acres today. If home building is increased, demand for sod should improve with prices remaining at current levels, predicts Newman.

Under Wisconsin conditions, sod is a 2-year crop that is seeded in late summer, ready to be cut 12 to 18 months later. Currently valued at \$800 to \$1000 per acre, sod is a \$3,500,000 crop in the state. As transportation costs are high, sod must be grown near markets in large metropolitan areas such as Chicago.

According to Newman, potential growers should get expert advice regarding the feasibility of growing sod on their farms. Production problems include customer care, weed control, and the development of a description of sod quality.

Numerous Agencies Battle Florida's Aquatic Weeds

The State of Florida is losing out in a fight that's been going on for more than a decade against aquatic weeds in its fresh water lakes.

Various groups have been trying various methods of control and the result has been more water weeds than ever.

It is a two-part problem.

First, no one is quite sure just what is the most effective way to control or eliminate any one weed, much less all or most of them.

Second, no one has had a real opportunity to be effective since there is such duplication of effort and fragmentation of authority in existing programs.

Florida Governor Claude Kirk set up an Aquatic Research and Development Commission a year ago which has itemized the problems and come up with what it considers could be some solutions to the problem.

The Committee wants to invest heavily in research and establish a vehicle through which control programs can be coordi-

nated. The details are to be worked out with state, federal and local officials.

According to a preliminary study, during the fiscal year which ended last June 30, no fewer than 39 different agencies (14 state and federal, 25 district and county) spent more than \$1.3 million in an unsuccessful effort to clear Florida's lakes, streams and waterways.

In an effort to eliminate this vast multiplicity of effort and authority, the committee recommends creation of a coordinating agency under the Florida Game and Freshwater Fish Commission to handle all control, planning and research.

Another recommendation is that present county, district and area funding by millage or other tax be rescinded and operation monies come from earmarked sources and the general fund.

Legislation Is Sought

This would save some counties as much as \$35,000 per year, but the taxpayers probably wouldn't notice it because the committee estimates "not less than \$2.5 million yearly can ac-

complish this function effectively."

The preliminary report asks Florida's congressional delegation to introduce legislation which would make the state a center of nationwide research on aquatic plants.

"Florida, unfortunately," reads the report, "contains natural test areas for such research and development activities." On the other hand, "we have more trained talent and facilities to find the answers than any other area."

One of the weeds the committee is anxious to control is the water hyacinth. But the cause for most concern are two new menaces in Florida's fresh water, elodea hydrilla and Eurasian water milfoil.

These plants have spread "with unbelievable speed," according to the committee and "show graphic evidence of rapidly becoming 100 times more damaging than the floating hyacinth."

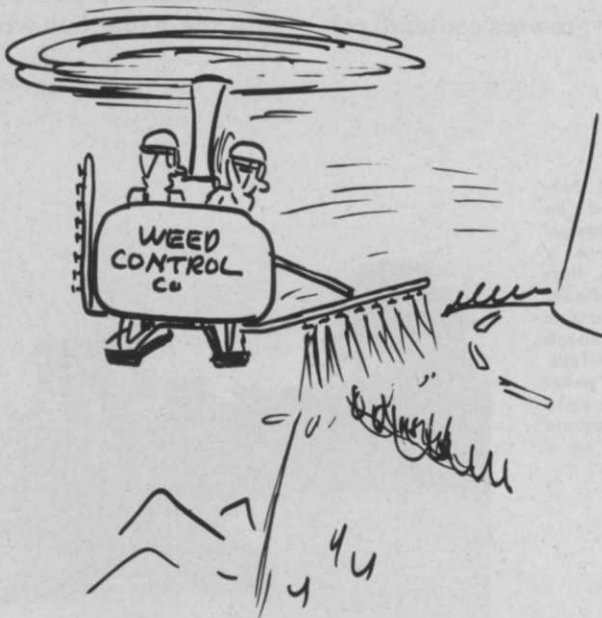
Elodea has almost choked the Crystal River in Florida and milfoil, which grows in both fresh and brackish water, has a 3000-acre foothold in the Gulf of Mexico at the mouth of the Homosassa River in Florida.

One of the major control problems, the committee points out, lies in the fact that elodea and milfoil cannot be clipped or cut in any way as a means of control.

The report contains engineering estimates that say unless a way is found to eradicate elodea and milfoil, drainage canals will have to be increased in size by 160 percent to provide necessary water flow.

There is a possibility water hyacinths could form the basis for a new industry which, in turn, would help control this floating weed, Florida officials say.

A machine which harvests, crushes and grinds hyacinths into a supplement for animal feed has been tested with success on the Peace River.



"YOU COULDN'T GET ME TO USE A TRUCK TO SPREAD THOSE WEEDS UP HERE. TOO DANGEROUS."



Bob Rapp, owner, left, and James (Jim) Walling, office manager, discuss current Rapp instant lawn orders.

Sales Savvy Is Business Management Key For Sod Producers Across the Country

Selling sod is becoming the key factor in the success of growers across the country. Growing a quality product requires the best in cultural practices. But growers have this facet of the business pretty well worked out. Harvesting practices are still undergoing changes and methods vary. But the crux of success seems more and more to be the ability to sell, and to collect the cash for the delivered product.

A good example of maintaining and holding a firm market is the Rapp operation at Farmingdale, N. J. Owner-manager Bob Rapp believes their secret in marketing has been control of sod from the field to the site where it will be installed. After 5 years in the business, he is convinced that the producer who is able to control the sale of his

sod can better maintain his market.

As many growers contend, col-

lection from many borderline landscapers, primarily those who use the name but who are more

Princeton sod harvester is used on Rapp farms. Operating unit here is William Sachse. Harvester can handle up to 10,000 square feet per hour though Rapp finds men folding sod for pallet can handle only about 7000 square feet hourly on a day-long basis.

