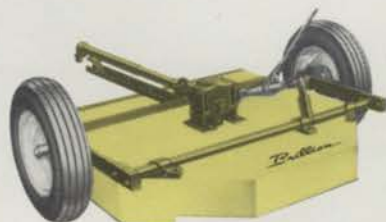


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throw objects. For 3-point Category  
I hitch.



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pickup models.

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gives thick stands on minimum  
seed. 4 bushel capacity,  
5'4" wide.



**ROLLERS.** Single or  
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up to 20' with trailing  
gangs. Hefty and rugged,  
for fast smoothing and  
long life.



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contours, lift hydraulically, fold  
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| <input type="radio"/> Rollers           | <input type="radio"/> I am a student          |
| <input type="radio"/> 60° Rotary Mowers |   |

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Water was one of the early problems with which Caranci had to cope. There was either too much on the surface or not enough to irrigate. This lake was constructed to supply water for irrigation on the course. It also serves as a hazard for golfers.

## TURF MANAGEMENT (from page 37)

area. The cutting height for summer is  $\frac{3}{8}$  inch, for spring and fall  $\frac{1}{2}$  inch.

Every 4 to 5 years chlordane is used for grub control. Fungicides are used to prevent disease. Acti-dione ferrated, Thiram 75, 3336 systemic, cadmium chloride are among those that have been combined for broad-spectrum control on fairways during the growing seasons. Cadmium chloride is alternated with these fungicides during the growing sea-

son. It is also applied in early November to catch the winter diseases in their incubation stage.

The Ledgemont fairways are aerified twice a year. "In the fall, as they are sliced, they are overseeded to repair the ravages of summer play," explains Tony.

As to the amount of irrigation, Tony knows that "one inch of water per week" is a very arbitrary rule of thumb. He recommends relating the

This greens-mower is in operation six days a week. Bentgrass greens stay  $\frac{1}{8}$  inch tall. Even during the months when greens are not actively growing, a mower is used to keep the standard height.



rate of pumping to the ability of the soil surface to absorb water, which is also altered by atmospheric conditions. "To maintain the optimum field capacity at Ledgemont, it takes ten hours of pumping at a rate of 800 gallons per minute."

Tony's solution for weed control is, "the best weed control is to grow turfgrass. We have used Dicamba and 2,4-D when needed. Now the dandelions and plantain are under control. Clover, chickweed, and knotweed seldom show up in a serious infestation."

With most tees large enough now to hold the grass under heavy traffic, the driving distances can also be varied with wind conditions and tournament needs. "Keeping Merion cut at one-half inch means that the rest of the turf care better be right," says Tony.

Monthly, except July and August, the tees receive a pound of N per 1,000 square feet during the golfing season. The 75% organic balanced fertilizer used on the fairways is also the workhorse on tees. The slow release and balance of nutrients assure a constant, steady source of the right kind of plant food.

Tees are verticut, aerified, and overseeded only in the fall. Irrigation depends on rainfall, and averages every third day. A preventative disease program is scheduled annually. The same materials are used on tees as on fairways.

Using the most efficient materials and practices on the tees and fairways programs more crew time for greens maintenance. Mowing six days a week, the bentgrass greens stay  $\frac{1}{8}$  inch high. They are aerified and topdressed twice a year, and spiked as needed.

Watering is scheduled daily, when the rainfall is not adequate. Since the water requirements vary with each green, the watering time prescribed for each green is based on the rate of absorption.

"Preventive programs are vital to keep greens free of disease and insect damage. Sod webworm, cutworm, chinch bug are the most serious culprits. Insecticides such as Sevin, Diazinon, and chlordane may be used as often as twice a month, and gives adequate control," asserts Tony.

"In season, fungicides such as Acti-dione ferrated and Thiram 75 are used every seven days to give broad-spectrum control. For winter disease control, cadmium chloride is applied twice in the fall, and mercuric chlorides are usually applied twice in mid-winter, with the sec-

(continued on page 56)



# SIReservoir tree injector puts the treatment where it works best.

Functional sapwood  
Cambium  
Phloem  
Outer bark

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That, very simply stated, is the reason why your Jacobsen distributor offers a full line of turf-care equipment.

From seeders to mowers to sweepers.

After all, you won't need absolutely everything we offer to keep your turf looking great. But whatever you do need, it's good to

know there's one guy out there at the other end of your telephone who can get it for you.

He won't get you something kind-of-like what you need, either. He'll get exactly what you need. He can do it because he's backed by the most complete line of turf-care equipment there is.



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# ways to make good turf look great.

And that "full line philosophy" is one of the big reasons your Jacobsen distributor handles Jacobsen. (Since he's an independent businessman, he can carry just about any line he darn well wants to. But having such a complete line to work with gives him more ways to help you maintain great-looking turf.)

So if you'd like to have a guy on your team who cares as much about turf as you do, get ahold of your Jacobsen distributor.

He not only knows your equipment needs inside and out, he can get you what's needed to help make good turf great. When all is said and done, would you really want it any other way?

## Your Jacobsen Distributors

Before we sell it, we buy it.

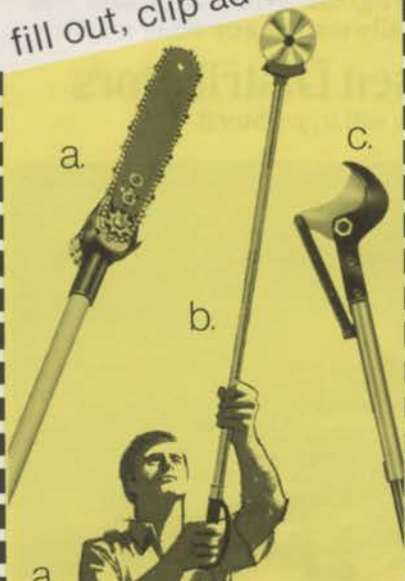


For the name of the distributor near you, write: Jacobsen Turf Distributor Directory, 1721 Packard Avenue, Racine, Wisconsin 53403.



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**ACKLEY HYDRAULIC Pole-Type Chain Saw**

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Perfectly balanced—easy to use. Lightweight (under 6 lbs.). Vibration free. Less operator fatigue. Long reach—cuts fast, clean. Full 3" cut. New insulated handle for heat protection.

c.

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**ACKLEY HYDRAULIC Pruner**

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Fairways are mowed a minimum of four times a week. Mowers are kept busy in some areas of the course every day. Cutting height varies according to season,  $\frac{3}{8}$  inch in summer and  $\frac{1}{2}$  inch in fall.

## TURF MANAGEMENT (from page 52)

ond coming after the January or early February "thaw." The rate for early fall is one ounce per 1,000 square feet and for mid winter, 3 ounces per 1,000 square feet.

Fertilization is equally important to the greens. They need a steady supply of balanced nutrients. In April and May, about three-quarters pound of N per 1,000 square feet is applied each month. This balanced fertilizer 20-5-10 is 50% organic with 25% granular "Nitroform" and 25% sludge. This banks some slow-release nitrogen in the soil. During June, July, and August,  $\frac{1}{4}$  pound of N is applied every other week with one-half of the nitrogen in soluble form and the other half sludge.

For better color prior to a tournament the above treatment may be repeated after seven days. In September and October the balanced fertilizer with 50% organics is repeated at the rate of one pound of N per 1,000 square feet. This banks nutrients for the winter and early spring green up.

The budget is fixed at the figure required "to do the job." Payroll takes about 75 percent. Twelve percent is for all chemicals, fertilizers, and seed. Fertilizer is roughly one-third of this portion. The remaining 12 percent covers utilities, equipment, and other maintenance, and miscellaneous necessities.

The capital and annual investment in Ledge-mont pays off for the area.

Like all large turf areas, the golf course acts as an oxygen factory. The grass takes up the carbon dioxide and releases nitrogen. Sheltering a wide utility right-of-way, it offers more than the normal open spaces. And as already stated, its water management provides a water resource.

Quick to realize the public relations aspects, Tony comments, "Large tracts of land without concrete and housing, properly planted with trees and grass, are becoming more and more essential to our over-all ecology for water and air resources. The water table is getting lower and lower and the air is getting more and more polluted."

Whether campaigning to be councilman of North Providence, performing the role of the visiting instructor serving as an officer in a golf course superintendent association, speaking at an educational conference, serving in the armed services, or managing the Ledge-mont course, Tony Caranci is the dedicated individual with the "considerable diversification" that he tells his students is necessary. He makes the job of golf superintendent challenging and rewarding. He is "truly one of the professional turfgrass managers and business executives" needed to handle the complex technology of today's golf courses.



## Pesticide Act To Highlight Weed Science Convention

Details of the Federal Environmental Pesticide Control Act of 1972 will highlight the annual meeting of the Weed Science Society of America in Atlanta, February 6-8.

David P. Dominick, assistant administrator of the Environmental Protection Agency will provide complete review on this important new law that affects both the private applicator and the certified applicator. He will speak during the first day of the session, Monday, Feb. 6.

Also scheduled during the first day's meeting will be an opening address on "The Role of A Professional Society" by WSSA President R. P. Upchurch of Monsanto Chemical Co.; two talks covering the role of herbicides in a modern society; and a presentation by Under secretary of Agriculture J. Phil Campbell on "American Diet: The Shift From Bread and Potatoes to High Protein."

February 7 and 8, half-day meetings are scheduled to discuss a wide variety of weed control topics. Among the topics scheduled are two discussions on turf care, another session covering aquatic weed control and a presentation by Dr. P. L. Klingman of USDA on "Non-herbicide Weed Control." Included in that discussion will be control of weeds by insects, fish, flaming and several other possible methods for weed control without chemicals.

A ladies' day program during the meeting will include tours of attractions such as Underground Atlanta and special addresses on a variety of topics.

Anyone interested in weed science and control is invited to attend the session, according to Dr. Earl Rogers of the University of Florida, program chairman. Further details are available from Dr. Rogers at the Agronomy Dept., College of Agriculture, University of Florida, Gainesville, Fla., 32601. Details for local accommodations for the meeting are available from L. S. W. Hauser, Tifton Georgia Experiment Station, USDA, Tifton, Ga., 31794.

The three-day meeting will be held at Atlanta's Regency Hyatt House.

## Crop Protection Chemicals Division Formed By Agrico

A crop protection chemicals division has been formed by Agrico Chemical Company.

It is estimated that in 1971 the

value of crop protection chemicals consumed was \$1,600,000,000 at grower price," said John F. Babbitt, president of Agrico." The value of fertilizer materials consumed totaled about \$2,550,000,000. Thus the value of crop protection chemicals consumed in the relatively young industry were approximately 63% of the value of all fertilizer materials.

"Agrico is setting up this important and specialized division to provide our dealers and customers with their requirements for crop protection chemicals and associated technical services." Babbitt said.

## Banvel X Pellets Registered By EPA

A Federal label for Banvel X-P pellets is now registered by the Environmental Protection Agency.

Manufactured by Velsicol Chemical Corporation, Banvel herbicides controls a broad spectrum of broad-leaf weeds, as well as several brush species which were resistant to previously used brush killers.

Other Banvel formulations include granules, straight liquid and a broad range of mixtures of oil- and water-soluble formulations.

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For more than 115 years Mitts & Merrill has been making specialized machinery for industry. A major part of our business is equipment to reduce scrap and waste. This experience is incorporated into design features on our brush chippers that result in higher efficiency and longer, trouble-free service for you. Only Mitts & Merrill brush chippers offer features like these:



**Staggered knife pattern** for smoother cutting action. Mounted on an all-steel cylinder that, even without an external flywheel, is heaviest in the industry. Each cylinder revolution gives more cuts, produces smaller chips of uniform size. Self-adjusting knives are reversible; give twice the service between sharpening.



**Optional torque converter** isolates engine and transmission from cutting shock to minimize maintenance. Makes operation virtually fully automatic; increases operator productive time. Available on all models.

Plus...

• **Positive safety-lock pin** for greater operator safety • **Swing-away, folding feed chute** protects cutting chamber; allows instant access and increases maneuverability • **Heavy duty construction** includes coil spring, torsion-type suspension, and box tubular steel frame.

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These hard-to-kill woody plants and brush along a RECA transmission line near Itasca, Texas are an example of the performance of Tandex granules and tablets.

## They Put The Hush On Brush

Results of tests on a Rural Electrification Cooperative Administration site near Itasca, Texas indicate that after 16 months difficult-to-control brush species have been 99 percent controlled.

Granule and tablet formulations of Tandex karbutilate herbicide were applied by hand in early June, 1970, on the surface of clay loam soil around the base of tree trunks and brush clumps. The granular material contained 10 percent active ingredient while the experimental tablet form contained 60 percent karbutilate.

Rates were one-half tablespoonful per inch of basal diameter for the Tandex granular. Tablets were applied at the rate of four per inch of basal diameter.

What were the woody species present at the site? Mosquite, elm, hackberry, persimmon, prickly ash, sumac, pecan, oaks and chittum. The tough ones that usually get away!

As early as May of 1971, researchers found complete defoliation of 95 percent of the treated species. The release properties of the compound are such that Tandex takes a moderately long time to completely kill the species treated. Thus, when the final evaluation was made last October 1972, only then could the test be labeled as 99 percent control.

Researchers indicate that the material may be unusually suited for woody species and brush control. Upon application, the compound is characterized by a high degree of vertical percolation (downward but not lateral movement in the ground) which minimizes effects on adjacent areas. This may be considered a distinct plus in areas where lateral movement would damage valuable vegetation adjacent to the area treated. Pill and pellet formulations are also of special interest because they simplify "pinpoint" application by hand and eliminate drifting or blowing of material during use.



# — 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.

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National leader in tree service, operating from Maine to Florida, offers excellent opportunity in sales and management. Ability to work with public and personnel is important. Must be experienced in tree work or horticulture. Excellent starting salary, expenses and fringe benefits. Intensive training course and outstanding growth potential. Send resume of experience or educational background to:

**WILLIAM ECKHARDT**

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2770 Summer Street, Stamford, Conn. 06305

**POSITIONS OPEN for 2 qualified men on expanding turf farm.** Experience in all phases of turf farm operation necessary for both positions and experience in sales and management required for one position. 90% of turf, muck grown, modern harvesting equipment used, considerable irrigation equipment used. Excellent future, top salary, transportation, paid hospitalization, etc. Write giving complete resume to Anthony L. Peca, Pres., Batavia Turf Farms, Inc., Box 662, Batavia, N.Y. 14020.

**EXPANDING TREE SERVICE company in northeast—looking for aggressive and experienced salesman.** Starting pay commensurate with education, experience, and ability. Commission also paid on profits earned. Company car furnished; pension plan; paid hospitalization, excellent future. Send resume (with current annual sales and earnings) to Box 133, Weeds Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

**TREE TRIMMER, Prince George's County, Maryland.** Beginning salary \$6,641 with annual increases to \$8,913. Applicants must have had experience in shade tree services, including tying various knots in rope to be used as safety saddle and aerial lifts. Good physical condition. Apply: Personnel Office, 14750 Main Street, Upper Marlboro, Maryland 20870 or call 301 627-4747.

**LANDSCAPE FOREMAN, Prince George's County, Maryland.** Beginning salary \$8,056 with annual increases to \$10,905. Applicants must have had considerable experience in landscaping with some supervisory experience. Apply: Personnel Office, 14750 Main Street, Upper Marlboro, Maryland 20870 or call 301 627-4747.

**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.,

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**SOD NURSERY MANAGER, Young,** married man for 400 acre operation serving Chicago metropolitan area. Send resume. Box 91, Weeds Trees & Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

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**CONSULTANT-TREE SERVICE and landscaping.** Specialist in: increasing sales, cost reduction, personnel management and training, also product development and promotion. Will travel. Contact H. Harvey, (Suburban Philadelphia). 215 Ki-3-7155.

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**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.

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**FULL LINE OF USED TREE equipment for sale.** We accept trade-ins and buy used tree equipment. New service available for northern Ohio. We now rent skyworkers, tree spades, brush grinders, 84' National crane, stump grinders and wood splitters. 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,

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**FOR SALE — Overstocked with 12" and 16" Brush chippers,** powered by Ford Industrial engines. Save over \$500.00 on each unit. Immediate free delivery within 300 miles of New York. Imperial 516 541-4868.

**WANTED: Stump grinder, Vermeer 15" or larger, any condition.** Smith Nursery, 1809 Washington Ave., Portland, Maine 04103.

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**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.

**GARDEN CENTER and landscape business in southern Virginia near mountains, lakes, and fast-growing suburbs.** A once-in-a-lifetime for family. Modern fiberglass greenhouses. Trucks, tractor, tools and equipment. All at a bargain. Reply to Box 94, Weeds Trees & Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

**VALLEY FORGE STONE CO., R3,** Box 115, Fleetwood, Pa. 19522. Phone 215 944-7171 or evenings 779-7698. All type landscape stone — boulders, rough flagging, pebbles, building stone, etc. White and all colors. Please contact us for estimate.

**THE GOLD ONES from D. J. Andrews, Inc.,** Stump cutter teeth, pockets, and bolts. Top quality and best price in the U.S.A. D. J. Andrews, Inc., 17 Silver St., Rochester, N.Y. 14611. Call 716 235-1230 or 716 436-1515.

**IDEAL 5-ACRE RANCH, Lake Conchas, New Mexico.** \$2,975. No down. No interest. \$25/month. Vacation paradise. Money maker. Free brochure. Ranchos: Box 2003GY, Alameda, California 94501.

**FOR SALE OR RENT. Land for sod or vegetable-production,** by the acre or shares. 414 326-5267.

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**LEARN AUTOMATIC IRRIGATION** — Complete self-taught course and textbook on fundamentals. Design, operation, maintenance, installation, pipe, equipment. Latest developments in automatic turf and landscape irrigation. New Edition now only \$49.50 postpaid. California add tax. Send check, order or request for free outline. Larson Company, P.O. Box 4453, Santa Barbara, Calif. 93103.

## BUSINESS OPPORTUNITIES

**WANT TO SELL arborists? Sell direct!** Effective — economical. Zip-coded addresses on self adhesive labels only \$75.00/thousand. Specialized categories \$10.00/hundred. Product Development International, 200 Sylvan Ave., Rutledge, Pa. 19070.



"By golly, you're right, it is turf."



## trimmings

**FACTS FROM OUR ENVIRONMENT** is a new booklet that's chocked full of informal questions and answers. "What is the biggest hazards to water quality? Do farm fertilizers load our rivers with nitrate? What is the earth's insect population?" and 121 other questions are answered in this informative booklet. Published by the Potash Institute of North America, it is available in single or multiple copies. Twenty-five cents for single copies. Write to 1649 Tullie Circle NE, Atlanta, Ga. 30329.

**FOREST PLANTING** in the U.S. during the last fiscal year totalled 1,692,939 acres, up 93,000 acres from the year before. Leading states were Florida, Alabama, and Oregon.

**JUGLONE** is a chemical produced by oak and hickory trees that is reported to act as a repellent to the European elm bark beetle. Scientists at the University of Wisconsin are studying this chemical for the possibility of adding it to elm tissue to combat the beetle which carries Dutch Elm Disease. A water soluble derivative could be injected into vascular tissue or perhaps applied as a foliar spray.

**THE COFFIN LID** is all but closed on DDT. As is typical at funeral gatherings, good comments about the chemical's beneficial uses continue to float on the breeze. Off to one side the environmentalists are madly shoveling dirt into the grave. And as the cold January air rips through the cemetery of chemical heroes, mourners stop to contemplate on a world free of malaria, free of mosquitoes, gypsy moths and other crop and forest marauders. Perhaps this discarded victim of public opinion will now find rest.

**SWITZERLAND** via Bolens Division of FMC Corporation is the incentive to dealers who meet or surpass pre-established sales goals during the year. According to Don Birdsall, Bolens manager of advertising and sales promotion, the 8-day vacation for two will be taken in late summer of 1973.

**LITTER BUGS** are more costly than most taxpayers may think. It's been estimated that American dump more than 40 million tons of trash annual-

ly on our roads, beaches, parks and other public areas. If piled one foot high, that much litter would cover a highway between New York and San Francisco, or about 3,000 miles. During 1971, litter bugs cost more than \$21.5 million to clean up the 752.2 million acres of Federal parks, forests and lands.

**FEDERAL HIGHWAY ADMINISTRATION** has begun a research effort to find ways to advise motorists of safe driving speeds during foggy weather conditions. A research study will be done by the Oregon State Highway Division under a 27-month, \$262,609 contract. Although only three percent of all accidents occur during fog, these accidents are more likely to result in multiple vehicle collisions, says the FHA. A recent study showed that two-thirds of all accidents involving nine or more vehicles in California occurred during fog.

**CARL ROSE** has a nose for detecting gas. As a consulting arborist from New Jersey, Carl noted a condition on a London planetree in the town of Kearney in late August that looked suspiciously like a gas leak in the soil under the street. He notified the utility company who had no previous knowledge of a leak. Sure enough, eight days later, after testing for gas, they ripped up part of the street and replaced three house services and part of the street main.

**THATCH** defined by the Turfgrass and Crop Terminology Committee of the American Society of Agronomy is: "a tightly intermingled layer of living and dead stems, leaves and roots of grass, which develops between the layer of green vegetation and the soil surface. According to Dr. Robert W. Miller, Ohio State University, thatch appears to hinder plant growth in many ways. These include tying up mineral elements applied on the surface, plant response to fertilization, increased incidence of disease, decreased effectiveness of fungicides and insecticides, inhibited water penetration and an overall loss of turf vitality.

**DON'T RANT—PLANT.** That's what Daniel P. O'Connor of Anaheim, California thinks people should do instead of complaining about the environment going to pot. And he practices what he preaches. With the help of Ken D. Mueller, an expert on from the University of California, Riverside, O'Connor is teaching about 20 of his neighbors to

grow better turfgrass, trees and bushes. He's now something of a "sub-agent" for Mueller when it comes to improving the environment. Kind of a "Green Industry Ambassador" to the public. Perhaps O'Connor's enthusiasm for green will start a revolution.

**WHAT DO YOU DO WITH OLD UTILITY POLES?** Give them to Bill Murphy, a foreman on the property of the Iowa-Illinois Gas and Electric Co. He not only has the professional touch of an arborist, but is gifted as a wood carver as well. In fact, he is the man who gave Green Rock, Ill. its only totem pole. He carved it from an assortment of tools, power saw and a good deal of Boy Scout imagination.

**FACTS FROM OUR ENVIRONMENT** is a new booklet that's chocked full of informal questions and answers. "What is the biggest hazards to water quality? Do farm fertilizers load our rivers with nitrate? What is the earth's insect population?" and 121 other questions are answered in this informative booklet. Published by the Potash Institute of North America, it is available in single or multiple copies. Twenty-five cents for single copies. Write to 1649 Tullie Circle NE, Atlanta, Ga. 30329.

**FOREST PLANTING** in the U.S. during the last fiscal year totalled 1,692,939 acres, up 93,000 acres from the year before. Leading states were Florida, Alabama, and Oregon.

## Orthene Systemic Insecticide Under Production At Chevron

A new systemic insecticide that breaks down into harmless materials in the environment is being produced by the Ortho Division of Chevron Chemical Company.

Called Orthene, the insecticide is applied as a foliar spray that is rapidly taken up by the plant. Rain or water from sprinklers can't wash the material off the leaves once it has been allowed to dry.

Beneficial insects such as lady bugs and bees suffer little residual harm from Orthene. It is effective on such pests as aphids, leaf hoppers, webworms, tent caterpillars and gypsy moth.

The new material will be produced in a new manufacturing complex at Richmond, Calif. It is expected that the plant has the capacity to produce more than a million pounds of the material annually.