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Panel members who discussed weed control and turf management as practiced by utility and pipeline companies are, left to right: A. E. Sebastian, Southwestern Bell Telephone Co., Tyler, Tex.; N. A. Tate, Sun Pipe Line Co., Beaumont, Tex.; Dan W. Crofts, Texas Power and Light Co., Dallas, Tex.; and E. D. Robison, panel moderator, Texas A & M Research Station, Spur, Tex.

Industrial Weed Conference

(from page 10)

Wootan said that as an economist he would consider what he called "opportunity cost." In brief, Wootan said, this is one way of asking, "What could I have done with the resources devoted to this operation (those of in-house weed control operations) if they had been available for use in another part of the business?"

Dr. Wootan also stressed that the dollar cost for weed control is not the only criteria for deciding how the job will be handled or how well weed control needs to be done. He pointed out that a company weed control program is generally instituted, at least in part, as a public relations or image building activity of the firm. In short, beautification of company property and specifically weed control becomes part of an overall effort by the company to present a view of the company to those it seeks to influence whether they be the gen-

eral citizenry, customers, clients, or others.

Rights-of-way Programs

Vegetation control programs on pipeline and utility line rights-of-way were examined by representatives of each in panel discussions. E. D. Robison, brush control range scientist at the

Ground spray rig with Stull bifluid system and John Bean equipment was used for weed and brush control demonstration.



Spur, Tex., University research station and moderator said that public acceptance is important in the total program carried out by industry. This factor was also mentioned by each company speaker.

Speaking for electric utility programs was Dan W. Crofts of the Texas Power and Light Company, Dallas, Tex.

In serving almost one-half million customers, Crofts said Texas Power and Light maintains 26,000 miles of lines. These interconnect seven major generating stations with four other utility companies and involve more than 500 substations. In all, the company has to maintain some 60,000 acres of rights-of-way.

Budget for this operation ranges to more than \$750,000 yearly. About 20 percent of this total goes for clearing new rights-of-way. The balance of \$600,000 is spent as follows: 8% for reclearing and mowing rights-of-way by contract and 7% for the same type work by company crews; more than half, 57%, for tree trimming operations by contract and by company crews; chemical right-of-way control by contract applicators account for 3% of this expense and another 1% is expended by using company crews; 2% is spent for soil sterilization

by contract applicators and an equal amount for the same practice by company personnel.

Being a cost-conscious industry, Crofts said that the company will generally choose the most economical method consistent with good operating practices. But above all, he said, is assurance of good relations with the company's customers.

His company, like others in the field, has a keen interest in further development of growth retardant chemicals. These can increase the time between trimming operations or possibly retard growth to the extent that trimming may not be needed.

For controlling undergrowth Texas Power and Light uses a number of practices and combinations of these. Listed by Crofts were hand clearing, bulldozing of timber and brush, root plowing chemical spraying with tordon, 2,4-D, 2,4,5-T and ammate mixtures, pellets of tordon, dybar, and hyvar, selective weeding and brush control with DSMA and residual Karmex, and mowing or shredding.

Cost of using the company's own shredder and mowers with company labor runs \$13 to \$17 per acre. With 3- to 4-year mowing intervals, annual costs range from \$3.25 to \$5.50 per acre. Contract mowing, Crofts said, is somewhat higher. Fence rows and areas inaccessible by mowers are treated by personnel during regular patrols or mowing operations by scattering pelletized dybar, tordon, or hyvar.

Some contact spray and basal treatments have been used, Crofts reported. Initial cost has varied from \$20 to \$220 per acre depending on density. Retreatment intervals are not defined and annual costs are not as yet available. Stump treatment when used to supplement clearing operations accounts for 10% to 30% of the clearing cost.

Selective Herbicide Use

Proper use of selective chemi-

cal weed control promises to eliminate mowing in some residential areas. The company, Crofts stated, has been investigating the use of selective weed control to kill Johnson grass and other tall weeds and to allow the bermuda grass to remain.

Substation areas account for 450 acres of land which requires varying degrees of vegetation control. How these areas are treated depends on cost and the degree of esthetics desired. Some

company recommended rates of chemicals.

Nahum A. Tate, Sun Pipe Line Co., Beaumont, Tex., discussed a number of unique uses of chemicals in his industry. Asphalt berms or aprons are used around the bases of oil storage tanks. These aprons handle rain runoff and help maintain low soil moisture areas beneath tanks. Prior to spraying these with herbicides, aprons were recoated with asphalt every three to four



Multi-use ground spray rig using F. E. Myers & Bros. Co., equipment led off Industrial Weed Conference field event.

150 acres is sterilized each year. About half is handled by contract on an annual, guaranteed basis using Karmex and Telvar as the sterilant. The contractor determines the dosage rates and applies the sterilant based on his past experience. Regrowth is retarded at no cost to the company. The contractor assumes liability for runoff. Crofts said that this system has proved to be satisfactory to the company and contract costs are less than use of company labor and chemical

years because the sealing capacity had been destroyed by grass and weeds growing up through the asphalt. Herbicides are now applied heavily two to four weeks prior to recoating of berms. Though this practice has been used only six years, Tate said that results indicate that the cost will prove to be an excellent investment.

A very similar practice by Sun Pipe Company, Tate said, is to use herbicides along asphalt roadsides. A yearly application

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For More Details Circle (118) on Reply Card

of preemergence herbicide in a one-foot strip along the road edge prevents breakup of the road by grass and weed growth. The company uses this practice along roads which do not have enough traffic to keep weed growth beat down.

Tate reported that his company has used soil sterilant type herbicides for many years under above-ground tank lines, along fence lines, in railroad ballast, and under manifolds and pipe racks. High cost of labor coupled with competitive prices for chemicals has made hand cutting of any weed areas obsolete, he said.

Cross-country pipelines are visually checked by aerial inspections twice each week. This is a safety practice to detect leaks before they can become a major problem. Thus, visibility is necessary and vegetation insofar as practical must be controlled. All pipeline rights-of-way are mowed once yearly and those

with high capacities twice yearly. Mowing is done on a contract basis. Tree trimming is also a major practice and the company has been experimenting with chemical methods. Both hormone and contact herbicides are being tested and though much remains to be done in this area, Tate feels that spraying offers possibilities.

A third panel member, A. E. Sebastian, Southwestern Bell Telephone Company, said he could second the experiences of both Crofts and Tate. Most important, Sebastian said, is the quality of application from a cost standpoint. Many of the poor experiences in chemical weed control, he said, have stemmed from a lack of know-how and neglect in application. Public relations both with the general public and with customers is important he stated. Thus, he believes it most important that contractors understand this area of public relations when treating company

property. Southwestern Bell, Sebastian said, uses contractors almost exclusively in its vegetation control program.

About 150 equipment and chemical suppliers and pesticide applicators attended this Texas A & M sponsored Conference, Oct. 20-22. This was the third annual event of this type staged on the University campus.

Membership Directory Additions:

WTT inadvertently failed to include two members in its October listing of members of the American Society of Consulting Arborists. Consultants to be added and who will be included in future directories are:

Wilfrid Wheeler, Jr.

24 Rutledge Rd.

Belmont, Massachusetts 02178

(617) 484-4057

Rex Wilkinson

P. O. Box 2008

Muncie, Indiana 47305

(317) 288-4493



Timothy J. Miles, left, senior horticultural major at the University of Missouri, Columbia, Mo., accepts the Golf Course Superintendents Association of America certificate of scholarship award at the recent 9th annual lawn and turf conference at the University. In the center is MU horticultural professor John H. Dunn, and making the presentation is Robert V. Mitchell, superintendent of Sunset Country Club, St. Louis, Mo.

color lasts through only a few mowings.

The new product is available through more than 100 distributors, coast to coast, according to Frederiksen.

Niagara Chemical Issues Growers Guide to Ethion

Complete information on the use of ethion insecticide-miticide to control mites, scales and insects is given in a guide recently published by the Fairfield Chemical unit of Niagara Chemical Division, FMC Corporation.

The pocket-size guide, which folds out into a chart, covers recommended amounts and application data for protecting ornamentals and other plants.

For your copy write Department A, Niagara Chemical Div., FMC Corp., Middleport, N. Y. 14105.

New Colorant For Turf Marketed By Mallinckrodt

Mallinckrodt Chemical Works, St. Louis, Mo., is now selling a new colorant for turf and ornamentals. Known as Vitalon™, the product is a method of keeping turf green throughout the winter.

Vitalon is a vinyl-acrylic foliar colorant which is dispersible in water. Stan Frederiksen, man-

ager of turf products for Mallinckrodt, reports that one gallon will disperse well in up to 70 gallons of water. The resulting spray will then cover up to 12,000 square feet of turf.

Potential uses are for golf courses, institutional turfs, home lawns, athletic fields, and generally on shrubs and ornamentals. The spray is non-toxic and non-flammable. Once the growing season begins, the Vitalon

Winter Turf School Accepting Applicants

A turfgrass technician program is being introduced this winter at the Eastern Montgomery County Area Vocational-Technical School, 175 Terwood Road, Willow Grove, Pa.

Kenneth B. Rhodes, turfgrass coordinator, reports that dates for the program this year is as follows: First semester (10

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weeks), Jan. 6-Mar. 14; Intern Training Period, Mar. 17-Oct. 3; and the second semester, Oct. 6-Dec. 12. Graduation will be Dec. 13, 1969. Details are available directly from Rhodes.

Suppliers Staff Changes

American Cyanamid has also announced the appointment of A. C. Gilleland as Training Su-

pervisor in its Agricultural Division.

Nalco Chemical Co., Chicago, has announced the recent appointment of James A. Rush as Executive Account Manager. Mr. Rush will coordinate Nalco sales and service programs for mid-western and western accounts.

Drs. Arne E. Carlson and Dale E. Wolf have been appointed as-

sistant sales directors of the Du Pont Agrichemicals Sales Division of E. I. du Pont de Nemours and Company. Dr. Carlson will handle foreign sales and new products development activities; Dr. Wolf will be responsible for domestic sales.

Thomas G. Baroth has recently been named Manager, Industrial Design for the Aero Commander Division of North American Rockwell Corp., Pittsburgh, Pa.

A. Dale Chapman, a pioneer in the field of chemical wood preservation, has resumed the presidency of Chapman Chemical Co. of Memphis. He succeeds Frederic W. Lyndon, who has resigned to return to the management consulting field. Robert E. Branch, executive vice president since 1966, has been named general manager of the company.

Allis-Chalmers, Milwaukee, Wis., has announced that Robert H. Brethen has joined the company as general manager of its outdoor products department. In this newly created position, Mr. Brethen will be responsible for the financial, engineering, manufacturing and marketing functions of the company's line of lawn and garden tractors, mowers and similar equipment. designated manager of the Allis-Chalmers Industrial Tractor and Equipment department's Minneapolis zone, headquartered in Bloomington, Minn.

The Agricultural Chemicals Division of Geigy Chemical Corp., Ardsley, N. Y., has recently announced several personnel changes. Ralph W. Tolbert, formerly Sales Manager of the division's Middle Atlantic district, has been named Manager, Sales Training. Dr. John P. Hartnett has joined the division as a Research Specialist; James D. Russell has been designated a Sales Service Coordinator, Northeast Region.

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The Ohio Turfgrass Foundation

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Columbus, Ohio 43210 Tel. 614-293-2592

Spray Rigs:

Being familiar with the following storage techniques will help assure that your spray equipment will be in good shape next spring:

- Select a ground site where harmful residues will not affect land use, either at cleaning location or by run-off.
- Flush and drain pump, then fill with permanent anti-freeze and plug to keep filled. (Follow storage directions recommended by pump manufacturer.)
- Flush and drain all parts (tank, lines, nozzles) with solution recommended by your county agent, depending upon the last-used pesticide substance.
- Rinse thoroughly with water to remove cleaning solution.
- Hang hoses until drained dry. Coil neatly and place on flat surface (no NOT hang) in dark, cool area.
- Drain tanks and leave vented until dry; close.
- Inspect nozzles, then store according to size. Store metal nozzles in clean, light oil. Discard worn nozzles.
- Support boom so it won't be damaged by other machinery. Don't leave aluminum boom material in contact with soil or manure accumulations.

Pesticide Storage:

Bedding down your pesticide supply for that "long winter's nap" requires adhering to a number of safety guidelines. To do the job safely and wisely, follow these pointers from experts:

- Store all pesticides in original containers, following storage directions on labels. If labels are hard to read, request new ones from your dealer; if they are missing, dispose of the chemical.
- Don't allow pesticides to freeze, as they may "salt out" and become useless. Also, don't store liquid chemicals in glass containers in unheated rooms, as the container may break if the liquid freezes.
- Store all dry material on shelves off the floor so they won't become moist and "cake."
- Store pesticides away from areas where fires may be present.
- Keep pesticides stored under lock and key, out of reach of children, irresponsible adults or

pets. Storage area should be marked as such to warn firemen in case of fires.

- Store herbicides and insecticides separately so they can be easily distinguished from each other.

- Check containers for cracks and make certain containers are sealed tightly before storing.

- Analyze your pesticide supply and think about what you'll need for next year's planting.

Following are tips on safe disposal of waste pesticides:

- Drain remaining pesticides into an 18-inch hole dug in sandy soil, preferably. Be sure the area is away from wells, buildings, streams, crops and livestock. Follow label instructions for reducing poisonous effect of the pesticide.

- Rinse glass or smaller metal containers several times, then store in a locked area until they can be disposed of safely.

- Large metal drums can be properly disposed of by returning them to the supplier or selling them to a cooperage firm equipped to handle toxic materials. Empty containers can also be safely disposed of locally at public dumps. However, first notify the person in charge so that he can take any necessary precautions.

- If suitable public disposal facilities are not available, select an area away from homes, crops and streams that will be used specifically for pesticide and container disposal.

- Burn combustible containers, but be sure the smoke won't drift over nearby homes, people or livestock.

- Metal and glass containers may be decontaminated by burning. Remove lids and punch holes in metal containers before burning.

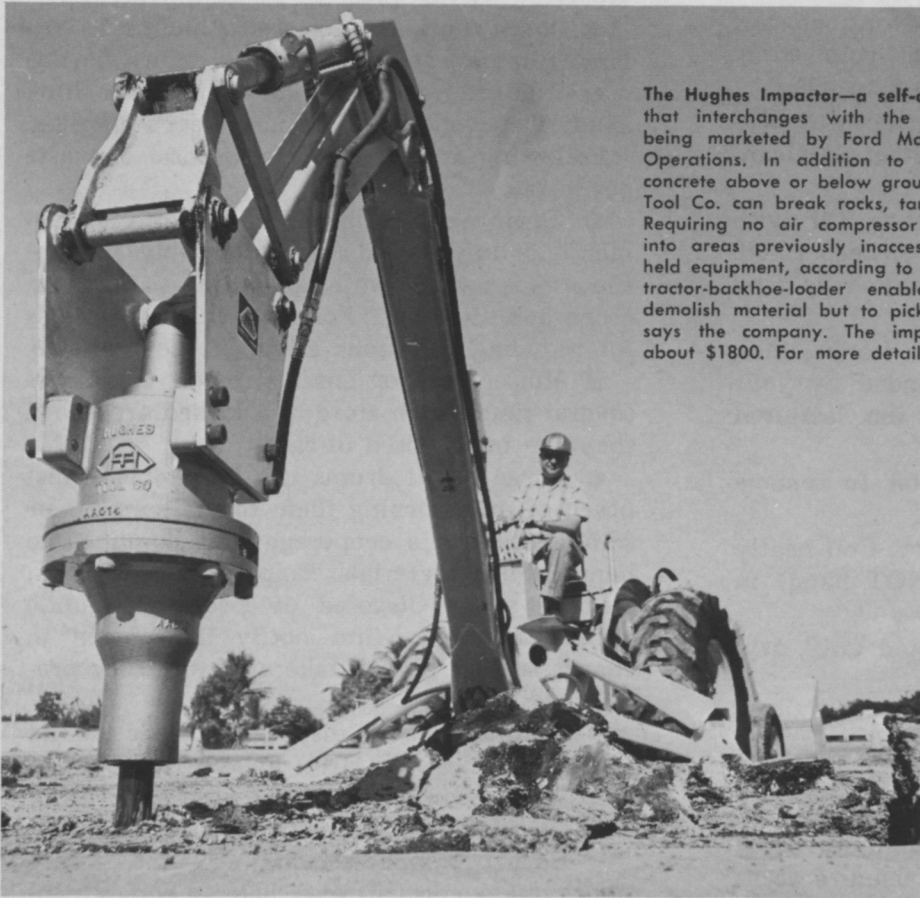
- Do NOT burn weed containers. They will volatilize and produce dangerous vapors that may explode. Instead, bury them, using the same precautions as with liquids.



GOING TO KILL SOME WEEDS, EH?
JUST BLOW YOUR BREATH ON THEM.
THAT ALONE WILL KILL 'EM."

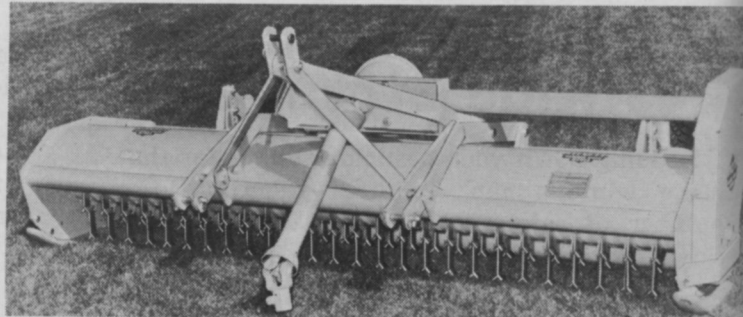
New Products . . .

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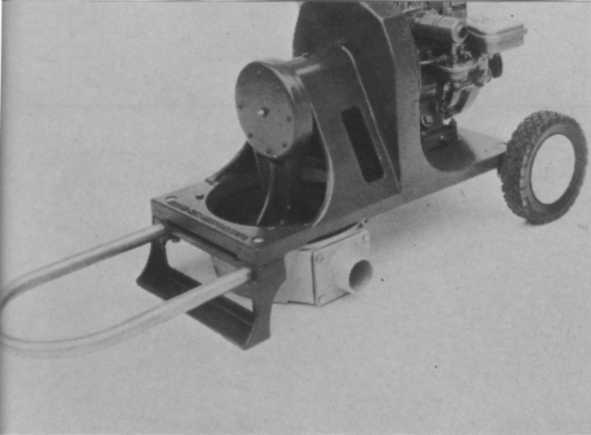


The Hughes Impactor—a self-contained, hydraulically powered device that interchanges with the industrial tractor backhoe bucket—is being marketed by Ford Motor Co's U.S. Tractor and Implement Operations. In addition to demolishing pavement and reinforced concrete above or below ground, the new unit developed by Hughes Tool Co. can break rocks, tamp backfill and drive posts or pilings. Requiring no air compressor or jackhammer device, it can reach into areas previously inaccessible for such operations with hand-held equipment, according to Hughes. The combination impactor and tractor-backhoe-loader enables a single operator to not only demolish material but to pick up and carry it to a loading point, says the company. The impactor's suggested retail list price is about \$1800. For more details circle (701) on reply card.

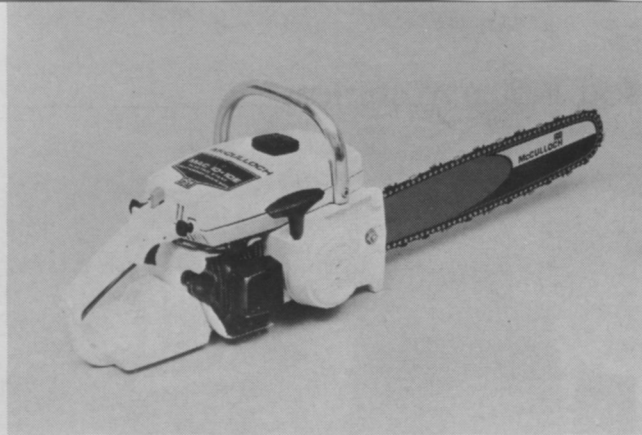
Mott Corp., La Grange, Ill., offers 2 new flail type "Hammer-Knife" mowers—Models 60 and 72—designed with heavy-duty sealed bearings and unitized frame for continuous mowing even under adverse conditions, says Mott. Completely guarded, the units feature paired edge-cutting knives for easy field servicing, according to Mott. For more details circle (702) on reply card.



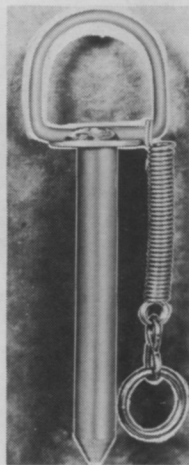
Maryland's Cambridge Wire Cloth Co. now offers a unit for controlling aquatic weeds. An amphibious paddle wheel-propelled barge with special conveyor and cutting rig can clear an acre of underwater weeds per hour, says the company. Adjustable cutting head snips off growth; submersible sicklebar cuts off plants at roots. Via series of belt systems, weeds are dumped onto second barge, which transports them to shore. Conveyors are designed to combat abuse from sand, stones and debris. For more details circle (703) on reply card.



Edson Corp., New Bedford, Mass., says that anything able to pass through a 2" suction hose can be pumped safely by its new "BONE DRY" model. The self-priming unit pumps up to 2600 G.P.H.; ideal for dewatering of low spots on lawns and fairways, cleaning leaves and silt from pools, lagoons. For more details circle (704) on reply card.



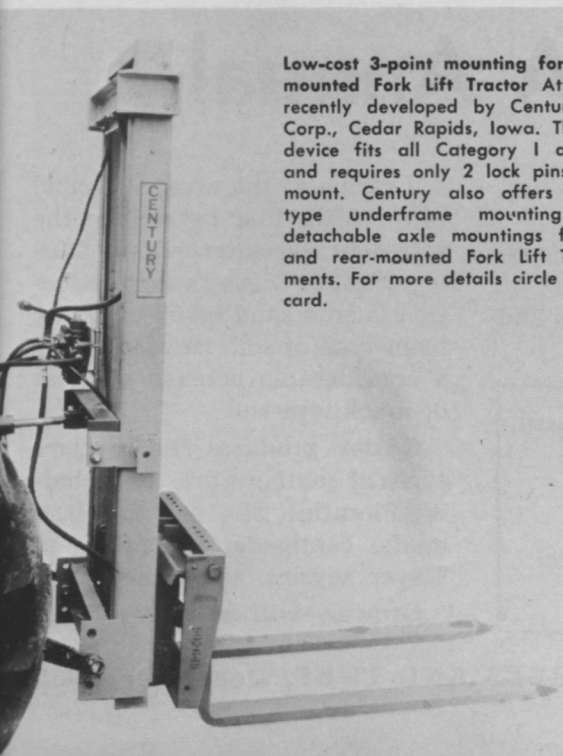
Los Angeles' McCulloch Corp. now offers MAC 10-10E, a self-contained electric starting chain saw. Batteries in handle supply starting power and are recharged automatically by alternator/generator while saw is on. 15-lb. unit offers fingertip chain oiling, noise muffler. For more details circle (705) on reply card.



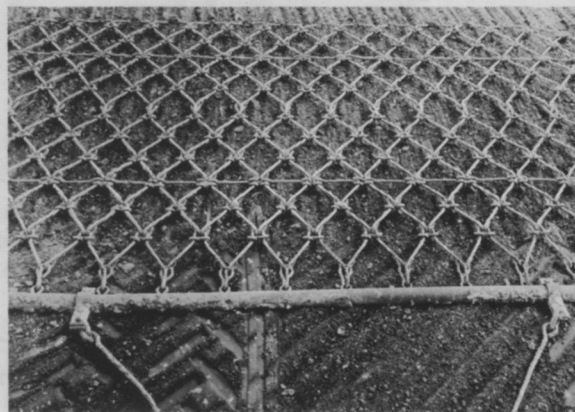
New safety-lock Hitch Pin recently introduced by Ag-Tronic, Inc., Hastings, Neb., features "Slip-Ring" lock. Even under rough conditions the device holds extra-heavy equipment locked to drawbar, says Ag-Tronic. Of high-grade steel, the pin is treated to resist abrasion and wear. For more details circle (707) on reply card.



Mitts & Merrill, Inc., Saginaw, Mich., has made available 10 new Brush Chipper models that feature folding feed chutes for maneuvering ease and protection of cutting chamber. Staggered knife pattern on rotating cylinder provides smooth cutting action, shaves material into chips suitable for mulch. For more details circle (706) on reply card.



Low-cost 3-point mounting for Century rear-mounted Fork Lift Tractor Attachments was recently developed by Century Engineering Corp., Cedar Rapids, Iowa. The heavy steel device fits all Category I and II tractors and requires only 2 lock pins and bolts to mount. Century also offers an industrial-type underframe mounting and quick-detachable axle mountings for their front and rear-mounted Fork Lift Tractor Attachments. For more details circle (708) on reply card.



Of interest to landscape contractors, golf course superes, highway and park departments and nurserymen is maintenance-free Fuerst Flexible Tine Harrow from Fuerst Bros., Rhinebeck, N. Y. It harrows, smooths, floats, drags and works in fertilizer, says Fuerst. Available in 6 or 24-ft. widths. For more details circle (709) on reply card.



James Ousley, Sr., president of Ousley Sod Co., Pompano Beach, Fla., and Doyle Watkins, farm superintendent for Ousley, discuss delivery schedule. Ousley is serving as host for the coming 2nd national meeting of the ASPA on Jan. 22.



Attractive office operation of Ousley Sod Company will be on tour schedule.

All Sod Growers Invited To Attend ASPA Annual

James E. Ousley, Sr., veteran Florida sod producer, will serve as host at the second annual meeting of the American Sod Producers Association next month.

Growers will meet Jan. 22 in an all-day educational and business session at the Fountainebleau Hotel, Miami Beach, Fla. The ASPA annual is being held in conjunction with the 40th International Turfgrass Conference and Show of the Golf Course

Superintendents Association, Jan. 19-24.

Besides the Jan. 22 educational formal session, growers will be invited to tour turf research and

*American Sod Producers Assn.
2nd Annual Meeting
Date: January 22, 1969
Time: 9:00 a.m.
Place: Fountainebleau Hotel
Miami Beach, Fla.*

sod farms in the area. Principal farm on the tour list will be the 2100-acre sod enterprise of Ousley. Most of Ousley's sod production is on a sand based or sandy loam type of soil. He also grows a considerable acreage on peat or muck type soil.

Ousley produces the major types of southern grasses including Floratine, St. Augustine, bermuda, centipede, Emerald and Mayer zoysias, and some bahia.

Growers will be interested in