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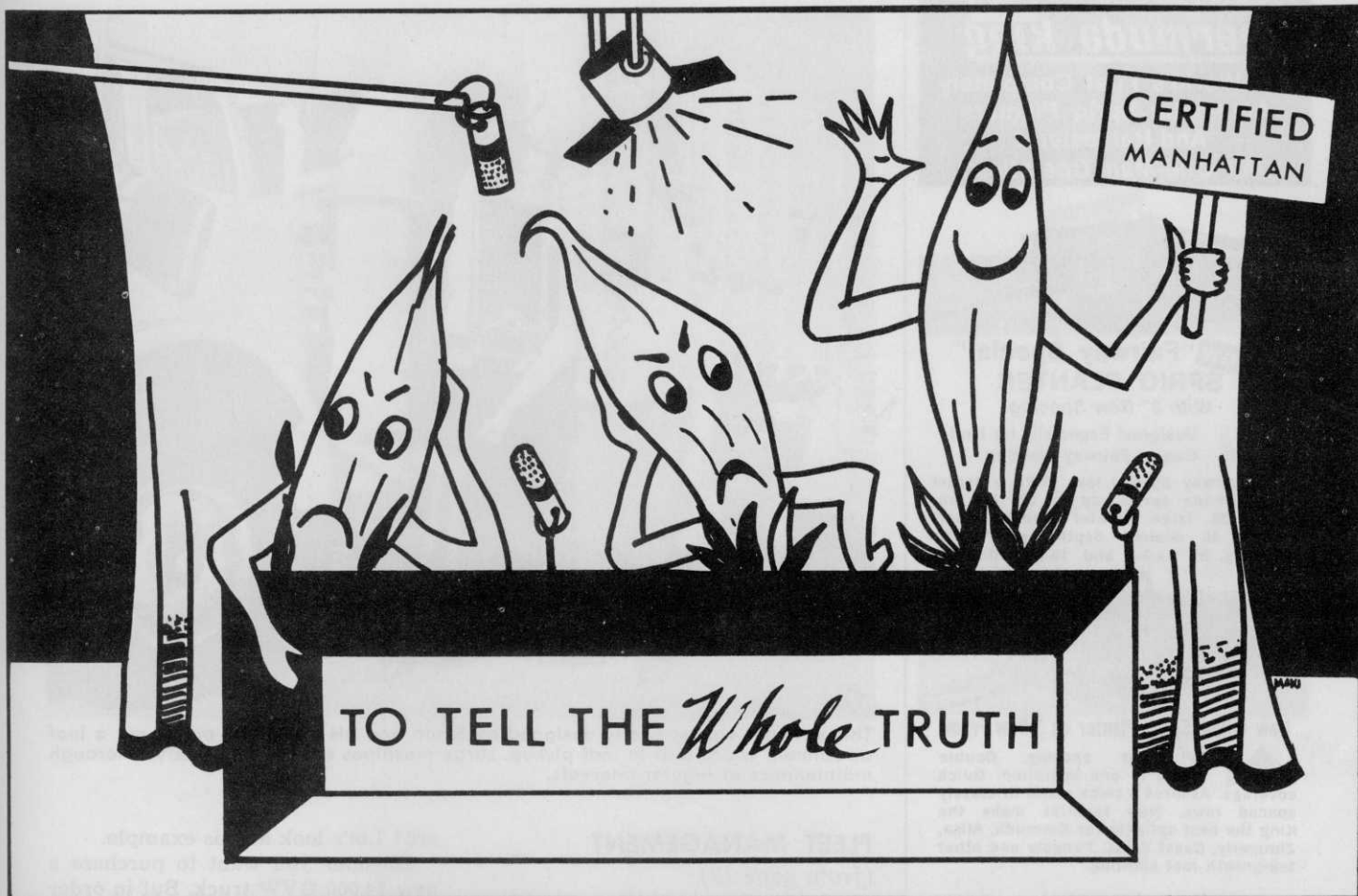
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FLEET MANAGEMENT

(from page 13)

leasing programs, open end leasing, and closed end leasing.

Open end leasing can be had with or without full maintenance. A contract is written on a mileage or hourly basis, for instance. The cycle period is 36 months, mileage limitation 45,000 miles, 3¢ thereafter, the lease makes up the balance of the purchase price when the vehicle is disposed of.

Closed end leasing can also be had with full maintenance programs. The cycle period is still 36 months, mileage limitation 45,000 miles, 3¢ thereafter. The lessee turns in vehicle at end of cycle period and completes all obligation.

Most lease agreements have a penalty clause for mileage; i.e. 60,000 to 80,000 miles pays penalty equivalent to blue book loss.

The lessee can write off 100% of lease payment as operating expense. The only tax write off is license.

In some cases it is better to purchase or own the equipment, as owned vehicles can be written off for such items as: sales tax, annual license and annual depreciation.

How should a manager decide whether to purchase one vehicle with needed options (larger axles, etc.) or the next model up which has the desired equipment as stand-

ard? Let's look at this example.

Consider you want to purchase a new 24,000 GVW truck. But in order to purchase a truck this size with components you want, it is necessary to purchase a 20,000 GVW truck and purchase optional components. I am referring to a F-700, for instance, where standard FA. 7000 pounds and an optional FA 9000 pounds compares to a standard RA. 13,000 pounds and an optional RA. 15,000 pounds. By going to a standard model F-750, it is possible to purchase the F-750 at the same price or sometimes even less. The main factor to consider would be cost.

Aerial Equipment

New regulations on vehicle-mounted elevating and rotating work platforms have brought new meaning into the purchase of aerial equipment. Due to a personnel accident some years back, we have established a preventive maintenance program on aerial ladders, cranes and personnel platforms for the City of Los Angeles. This program meets the State of California and manufacturer's recommendations. The program now in effect meets or exceeds OSHA requirements.

First, we are required to install a safety bar inside the bucket to fasten a safety belt to. This bar must be insulated on the outside of bucket, so no projected bolts can make contact

with electrical wires.

We also have established detailed series of inspections for aerial devices. They consist of: 1. Daily operators inspection in which records are turned in weekly; 2. A 90-day visual inspection of performance, controls and warning devices; 3. A one-year inspection as to lifting capacity, stability tests, electrical insulation tests and complete visual inspection of cable, hoses, and all other components; and 4. A three-year tear-down inspection. This consists of dismantling of machine, magna-flux all pins, shafts, sprockets, and shives. Replace all hydraulic lines overhaul controls, x-ray booms and replace cables.

In some ways the OSHA program follows the manufacturers recommendations. The Bureau of Transportation provides and is responsible for maintenance of same. It is our responsibility to supply and maintain the best and safest equipment possible to the using agencies. □

Spray Irrigation Effluent Yields Phosphorus To Soil

Most soils, irrigated with sewage effluent, are capable of removing unwanted phosphorus from the effluent for countless years without becoming over-saturated.

Such irrigation with sewage effluent is considered widely as feasible to meet the proposed goals of Federal legislation which would forbid disposal of critical pollutants into surface waters by 1983, stated Dr. Louis T. Kardos, professor of soil physics at Penn State University.

The phosphorus is either "fixed" or held onto by the soil, or is removed by crops through the root systems in a process termed "the living filter," Dr. Kardos explained. In medium-textured Hublersburg clay loam, for example, phosphorus has not increased below 12 inches of soil after irrigating the land with a total of 472 inches of sewage effluent over a 10 year period.

In coarse-textured Morrison sandy loam, on the other hand, 591 inches of sewage effluent applied over a 7 year period has increased the phosphorus content as far down as 3 feet. This soil is largely covered with forest. Virtually all of the phosphorus taken up by the trees is recycled through leaf litter each fall.

Water samples taken from the soil pores indicate that phosphorus leakage at 4 feet has been less than 1 percent of the total applied phosphorus on the clay loam soil. Leak-

age at the same depth was about 7 percent on sandy loam soil.

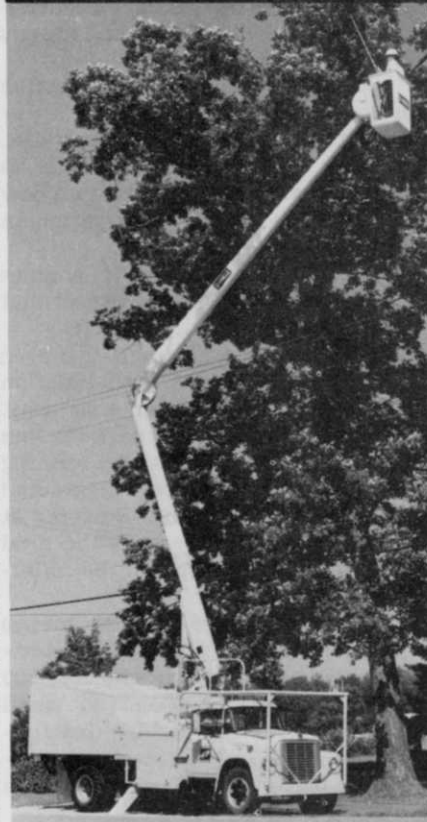
Regardless of the amount of effluent applied, no change was detected in phosphorus concentration in groundwater at either site.

Harvest of crops from the clay loam soil removed from 10 to 140 per cent of the applied phosphorus in the various years, Dr. Kardos stated. Such harvesting of crops contributes substantially to extending the time over which the soil can behave as an effective phosphorus filter.

Approximately 500,000 gallons of effluent are currently being sprayed daily on about 75 acres of farm and forest land at Penn State. Chlorinated secondary effluent is diverted from a sewage treatment plant into a pipeline which runs about 4½ miles to the irrigation site. Any one piece of land is irrigated only once a week. The system has been in operation since 1963.

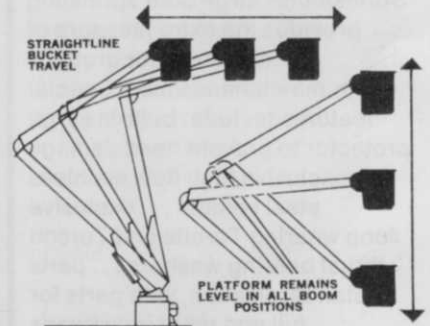
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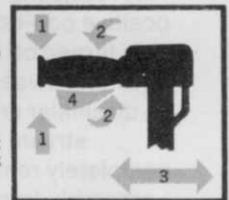
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THE METRIC SYSTEM

(from page 30)

dustry, yet the advantages of getting in step with the rest of the world are so great that business and industry are converting rapidly — already!

About 30 percent of Ford Motor Co.'s production worldwide is metric. Ford has opened a new plant at Lima, Ohio, and now is building a completely metric engine there for the Mustang II. The engines being used in the Ford Pinto, Plymouth Cricket, Dodge Colt, and Chevy LUV are already metric.

At General Motors, all new development now will be metric from the start.

John Deere is producing metrically dimensioned tractor engines here and in Europe.

IBM initiated a 10-year conversion program in 1971.

At its Hough plant at Libertyville, Illinois, International Harvester is designing and manufacturing all new products in metric measurement units.

Manufacturers of small engines will follow suit. You can expect that new designs soon will be metric.

These actions are being taken even though there has been no legislation yet. Perhaps it's better that way. With the present active participation of the United States in refining metric standards, and a gradual changeover by manufacturers at their convenience, perhaps the total cost and disruption can be minimized.

Total conversion to the metric system in the United States, according to one estimate, would cost 100 billion dollars. The cost to small engine central and service distributors and dealers will be an infinitesimal part of that. The real burden falls on manufacturers.

An estimated 10 percent of the total 100 billion dollar cost will be in what is called "soft" conversion — simply expressing measurements of our present products in metric equivalents — on drawings, on literature, on labels, on packaging, in books, in records. We would also change road signs, gasoline pump meters, and innumerable other familiar items now bearing nonmetric language.

The remaining 90 percent of the cost of going metric is in what is called "hard" conversion. "Hard" conversion means complete redesigning of products to metric measurements. That means redesigning every component in a Kohler engine. Every component in conveyor systems and lift trucks. Every gauge.



E. L. Fisher is director of service, electric plant and engine division, Kohler Co. He is a graduate engineer and has served as director of service since 1970.

Every measuring device.

When the heating system in a Kohler factory is replaced, when the wiring is replaced, when the building itself is replaced, all components will be metric, from bricks and 2 by 4's to boiler pipes and light fixtures.

Convert all industry and all products to the metric system, and you can understand why the total cost has been estimated at 100 billion dollars. Keep in mind, however, that the conversion will be gradual and that the cost will be spread over 10, 20, or more years. Keep in mind, too, that if we don't convert to the metric system, we could lose many times 100 billion dollars in international trade in the next century; and that would affect the standard of living for all of us.

What does adopting the metric system mean to small engine central and service distributors and dealers?

I don't think that it will be a big problem. I don't think that it will be costly. Again, the transition will be gradual; and before you know it, you will be thinking in metric terms of inches, pounds, and gallons.

School systems are already starting to teach the metric system so that young people will be well prepared for the transition period.

The conversion to metric will increase the inventory of hardware items somewhat for small engine distributors and dealers, because they will have to carry replacement nuts and screws for today's nonmetric engines at the same time that they are "phasing in" metric parts. Other parts are unique to a particular engine anyway, unless you are dealing with a family of engines with some interchangeability of

parts. So I would conclude that the effect on inventory cost would be minimal.

Small engine distributors and dealers will have to double up on some tools during the transition period. They will need the non-metric tools they have now, but they will need metric tools also.

Many of our present tools will need no conversion. Others such as socket wrenches, open end wrenches, torque wrenches, pressure gauges, and micrometers must be sized or calibrated to the metric scale. The cost of equipping a dealership with metric tools is moderate.

Will we have to train dealers in the metric system? Probably not. For one thing, many of them already work with metric engines — snowmobile engines, motorcycle engines, diesel engines — and I suspect they worked into it without any special training in the metric system.

Also, dealers order replacement parts by part number, whether the parts are metric or non-metric.

Thirdly, at the risk of repetition, the transition will be gradual and dealers will learn to think metric and talk metric almost without realizing it.

Actually, this discussion can be summarized in a few words:

The United States is going metric. Legislation is imminent. Companies are already changing.

Small engine manufacturers are going metric. New designs are apt to be metric, while production continues for a while on non-metric models. Or we could say it this way — as older models are dropped from the product line, new products will be metric.

Small engine distributors and dealers are going metric. And they will do so at minimum cost, with minimum effort, and so gradually that they will be part of the metric world before they know it.

Along the way, we will forget a few things — like the "perfect 36." Or that time-honored saying, "An ounce of prevention is worth a pound of cure." And Texans will have to give up, or resize, the 10-gallon hat.

Required OSHA Poster Revised By Dept. of Labor

The U.S. Department of Labor has announced publication of a revised "Safety and Health Protection on the Job" poster.

The new poster, required by the Occupational Safety and Health Act of 1970 to be posted in most of the nation's workplaces, is a more de-

tailed copy of the original notice.

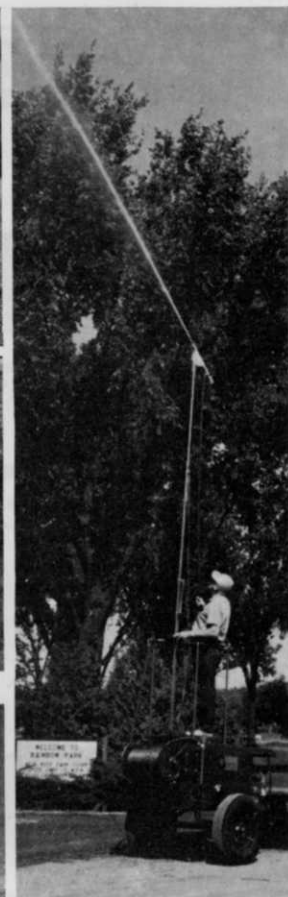
Assistant Secretary of Labor John H. Stender, head of the Occupational Safety and Health Administration (OSHA), said the new poster "summarizes the provisions of the Act in easily understandable language so that both employer and employee will understand their rights and responsibilities under the law."

The revised, two-color notice includes a summary of the general responsibilities of employers and employees for creating safe and healthful workplaces. It explains the rights of an employee during an OSHA in-

spection, and summarizes the employee complaint procedures under the Act.

The poster also describes the citation provisions of the Act and details the various penalties that can be imposed. It also describes OSHA's commitment to voluntary compliance as an integral part of its efforts.

The poster is available, without charge, at any OSHA Regional Office. These offices are located in Atlanta, Boston, Chicago, Dallas, Denver, Kansas City, New York City, Philadelphia, San Francisco, and Seattle.



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industry people
on the move



DR. JOHN E. KAUFMANN, appointed assistant professor of turfgrass management for Cornell University. He fills the position vacated by Professor Emeritus **JOHN F. CORNMAN**.

* * *

DR. MICHAEL TYSOWSKY, named entomologist for the agricultural chemicals division of ICI America, Inc. **DR. DAVID H. BROOKS**, appointed research supervisor. He is on a two-year leave from the London based parent company.

* * *

EDGAR E. FEHNEL to vice president of agricultural marketing planning for Elanco Products Company. He will be responsible for product planning and coordination of agricultural products on a worldwide basis.

* * *

PAUL R. BLUM, appointed area manager for the southeastern states for Kohler Co. He will headquarter in Atlanta and work with original equipment manufacturers and Kohler engine distributors in a nine state area from Arkansas to the Carolinas.

* * *

CHARLES S. PUTNAM, elected vice president/sales for Telsco Industries. He has served as Weather-matic division sales manager for four years.

* * *

WAYNE G. RICHTER, appointed sales planning manager for consumer products manufactured by Massey-Ferguson, Inc.

* * *

FLOYD L. SIMPSON and **JAMES C. BRYAN** become district sales managers for Elanco Products Company. Simpson will manage sales in the Indianapolis district and Bryan will head the Cleveland district.

* * *

Addition of nine technical representatives brings to 63 the number of ProTurf representatives for O. M. Scott & Sons. New additions include: **DICK GRAY**, **MIKE RAINEY**, **FRED TOOT**, **STEVE SCOTT**, **BOB TUMEY**, **CHARLES LOMBARD**, **BEN MALIKOWSKI**, **CHUCK CURTIS**, **GERALD SWEDA**. All have backgrounds in turfgrass management, seed, irrigation, turf equipment or other specialized areas of the Green Industry. In other company moves, **JACK CANTU** has been named vice president and director of the company. **GEORGE HORN** assumes the organization-wide responsibilities of director of marketing. New director of sales is **FRANK KOLLEY**. **JIM CONVERSE** becomes director of technical services. **GARY NEYMAN** has been named manager of technical information. **TOSH FUCHIGAMI** joins ProTurf as manager of technical field services. **BILL HOOPES** becomes senior PTI instructor of the company's retail division. **J. C. HIGGINS** moved to assistant general manager. **RAY FLEMING** becomes ProTurf's manager of field administrative services. **GEORGE GUMM** named manager of the midwestern region and **BRIAN FINGER** appointed manager of the eastern region. **ED DOTSON** promoted to manager of sod growers sales.

* * *

DONALD J. VALSVIK elected vice president of Conwed Corporation. He will continue to serve as manager of the developing business group.

Int. Pesticide Applicators Form Michigan Chapter

A Michigan chapter of the International Pesticide Applicators Association has just been formed according to an announcement by Lew Sefton, corporate secretary.

Charter members of the new chapter are: Al Ray, Wolverine Tree Care Co., Detroit; Frank Jasso, Jasso Tree Service, Clarkston; Paul King, West Side Forestry Service, Inc.; and Bob Olsen, Robert Olsen Landscape, Inc., Lapeer.

For more information about starting a state chapter of IPAA write: Lew Sefton, Corporate Secretary, International Pesticide Applicators Association, Inc., 5600 S. W. Rosewood, Lake Oswego, Oregon 97034.

Applicator Workshops To Be Held By B&G Company

Workshops designed to teach the applicator more about his business have been announced by the B & G Company, Dallas, Tex.

According to L. P. Quattrochi, general manager, each of the workshops is one and one-half days in length. The program is presented by

means of a workbook which contains outlines of each talk. Delegates to the workshops will fill in the workbook which will act as a source of material later.

Dates and locations of the workshops are: Dallas Workshop, Ramada Inn, Carpenter Freeway, Irving, Tex., Jan. 11-12; Houston Workshop, Royal Coach Inn, South Boulevard, Houston, Tex., Jan. 18-19; Lubbock Workshop, KoKo Inn and KoKo Palace Convention Center, Lubbock, Tex., Feb. 8-9; and Oklahoma Workshop, 89er Motel, Oklahoma City, Oklahoma, Mar. 1-2.

Texas Turfgrass Conference Held on A&M Campus

About four hundred people attended the 28th annual Texas Turfgrass Conference in early December in the J. Earl Rudder Conference Center at Texas A&M University.

Dr. Richard H. Duble, associate professor in the Soil and Crop Sciences Department, said the conference was aimed at turf management on golf courses, parks, lawns and business areas.

Keynote address this year was presented by Dr. James R. Watson, vice-president of the Toro Company, Minneapolis, Minn.

Afternoon talks covered grass establishment, weed control in overseeding greens, golf course construction budgeting and bentgrass for Texas golf greens.

Other topics were athletic field maintenance, roadside turf establishment, recent advances in weed control, turf growth retardants and cultural problems of ornamental plants.

The second day's sessions focused on bermuda turf thatch control, Floratam, irrigation system installation and making golf courses competitive. Also included were personnel motivation, woody ornamentals, annual plant propagation and lake management.

Conference sponsors were the Texas A&M soil and crop sciences department, Texas Turfgrass Association and U.S. Golf Association, Green Section.

Zip-Penn Offers Catalogue

A new catalog of replacement chain saw chains, guide bars, sprockets, engine parts and other equipment for chain saws has been issued by Zip-Penn Inc. Write: Zip-Penn Catalog Office, Box 43073, Middletown, Ky. 40243.

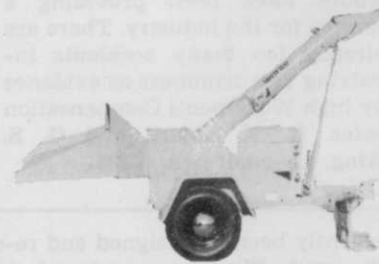
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LETTERS TO THE EDITOR

HATS "ON" TO US

Hard Hats & Tree Men In my own company, I'm only the boss, and when I get up in the morning I put my plant on, then put my hard hat on my head. I feel it is the best insurance coverage possible for a treeman's head, and the company pays the \$5 premium, but the policy only covers you when it covers you. Hard hats are good insurance.

Like your article in July issue on synthetic ropes says, most tree men resist change, but these hard headed souls would still be wise to get accustomed to wearing hard hats. Some of us here in Westchester have made it a condition of employment spelled out in the job application along with other safety rules. If a man is fired for violation of safety rules which are so part of the conditions of employment, in New York he cannot collect unemployment until he works another 14 weeks. Besides OSHA says THOU SHALL WEAR an approved hard hat whenever in the vicinity of any overhead hazard.

Maybe you can help editorially. I'd like to see hard hats worn a lot more often. Safety's Cheap! **John A. Crockett, vice president, Westchester County Tree Protective Association, Inc.**

JUST THE FACTS

You may construe this letter as fan mail. I am an ardent environmentalist, Sierra Club member, etc, etc, who, as a plant scientist receives selected publications I think you do an excellent job of presenting the new FDA and EPA ruling, pronouncements, etc. without using the usual wild, bitter comments Most of us realize that all chemical or all natural will not work, but emotion will not solve the problem either. We must continue to work together for the common good; not just the good of one side.

So, even if you have an almost uncontrollable urge to "blast out" when a new chemical is removed

or restricted from use, just remember that you might lose a group of readers that really just want to help solve the problems, not obstruct for the sake of obstruction. **Fred R. Rickson, associate professor of botany, Oregon State University.**

OBJECTION SUSTAINED

Mr. Hank Harvey, Jr.'s article, "Arborist Shop Talk" in the October issue advocates a "limb-over-a-wire-technique." This very definitely is an unsafe practice. Use of this technique could result in the wires burning down injuring a person on the ground. Under certain conditions, conductor contact could cause a voltage increase thereby damaging televisions, refrigerators, appliances, etc.

The American National Standards Institute appointed a committee designated as Z133 to develop "Safety Requirements For Tree Pruning, Trimming, Removal and Repair." This standard was developed by representatives of industry, government, trade and educational groups, including U.S. Department of Labor and OSHA. Because of the hazards associated with the practices advocated by Mr. Harvey, we feel compelled to respond to his article.

This standard specifically identifies electrical hazards associated with tree work in Section 4, Section 8.2.1 and 8.2.5. The practice of throwing a rope over the wires or using a pole saw as discussed in the article is contrary to the standard.

The only part of Mr. Harvey's statement that we can agree with is his last sentence, "Call the Utility Company." I think if he had said this in the beginning, he would have been providing a service for the industry. There are already too many accidents involving tree trimmers as evidence by high Workmen's Compensation rates. **R. E. Abbott and G. S. King, Co-chairmen, Z133.**

Lockwood-Hardie Sprayers Featured in New Brochure

A new brochure on the full line of Lockwood-Hardie sprayers is now available from the Lockwood Corporation, Gering, Nebraska.

The complete line of sprayers has

recently been re-designed and re-engineered. They are equipped with stainless steel tanks to prevent corrosion and lower maintenance cost.

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