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If the jobs you have are too big for a lawn and garden tractor and too small for a farm or industrial tractor, John Deere has the tractor you need. In fact, two of them. The new John Deere 850 and 950 Tractors. Rugged. Reliable. And built to handle the jobs you'll give them.

Big-tractor features. Under each tractor's lift-up hood is a liquid-cooled, fuel-efficient diesel engine: 22 PTO hp for the 850, 27 PTO hp for the 950. Both tractors have smooth-running transmissions with 8 forward speeds, 2 reverse. Speeds are well-spaced from less than 1 mph for tilling to almost 12 mph for transporting.

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Big-tractor versatility. You can match the 850 and 950 to your jobs. Wheel

tread width adjusts front and rear. Ground clearance is nearly 14 inches under the 850—more than 15 inches under the 950. Maneuverability is superb since both tractors will turn within a 10-foot radius. So whether you're mowing, loading, plowing, digging, planting, or cultivating—these tractors can handle the job.

Service you can count on. Your John Deere Dealer is always ready to help. Service training schools for the 850 and 950 have already been completed. And a complete inventory of service and replacement parts is ready.

So stop by and see your John Deere Dealer soon for the complete story behind the new "Little-Big" Tractors. Or for free literature write to: John Deere, Box 63, Moline, Illinois 61265.

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Center-Mounted Rotary Mower	31 Posthole Digger
50 Utility Box Scraper	100 Integral Disk
31 Integral Disk	205 Rotary Chopper
Johnson-Arps Model 30 Loader	2-Row Cultivator
350 Mower	30 Integral Plow
71 Flexi-Planter	40 Rotary Tiller
11 Light-Duty Field Cultivator	45 Rear Blade
45 Integral Plow	25A Flail Mower



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GREEN INDUSTRY NEWS

GOLF

USGA reorganizes headquarters staff

The United States Golf Association has reorganized its headquarters staff. Overall direction of the association remains the responsibility of Executive Director P. J. Boatwright, Jr., but former Assistant Director John D. Laupheimer has assumed the new position of deputy executive director with direct responsibility for administrative activities. His areas of authority include the USGA Associates Program, the Green Section, public relations and communications, and membership. Frank Hannigan retains the duties and title of assistant director for special projects.

The changes were made because "the organization is growing, and we felt a need to better define the functions within the organization. These are now defined according to directors," Laupheimer said.

The new system groups administrative functions into five departments, each supervised by a director. They are:

Rules, amateur status and conduct, handicapping, competitions — Tom Meeks, formerly regional director.

Membership and services, Green Section, regional affairs — Charles W. Smith, formerly administrative assistant in rules, handicapping, Green Section, and membership.

Implements and ball — Frank Thomas, formerly technical director.

Administration — James T. Reilly, formerly controller.

Communication, public relations, Associates Program — a new director has been hired, but was not to be announced until February 1. Robert Sommers remains as man-

ager of publications and chief editor of Golf Journal, the USGA magazine.

The recent change in Golf Journal — becoming a totally nonprofit magazine, without advertising, published in-house by the USGA — was cited by Laupheimer as another factor in the staff reorganization.

CHEMICALS

Scientists identify 5,000 needed uses

A group of state agricultural experiment station scientists have identified 5,000 nursery and florist uses of agricultural chemicals which are not currently registered.

The scientists, participating in the IR-4 program, assist in the registration of agricultural insecticides, fungicides and herbicides by interceding with the Environmental Protection Agency. A survey by the American Association of Nurserymen identifying specific pesticide needs of wholesale growers was used by the scientists in compiling their list.

The scientists, who make up an advisory committee to the IR-4 program, are Richard Guest of Rutgers, USDA plant physiologist Ray Frank, Charles Powell of Ohio State University, and Richard Lindquist who is an entomologist with the Ohio Agricultural Research and Development Center.

EQUIPMENT

FMC will market Japanese tractor line

FMC Corporation, Outdoor Power Equipment Division, manu-



Signing the FMC/Iseki agreement were, (seated from left) T. Toyotama, Managing Director of the Research & Development Division, Iseki, and Robert E. Purcell, Vice President, FMC Corporation. Witnessing were, standing from left, David L. Hill, Outdoor Power Equipment Division Manager; A. L. Schmitz, Director, International Business Planning & Development, FMC Corporation; Robert E. Bergen, Assistant Manager, Outdoor Power Equipment Division, and seated, R. H. Utsunomiya, General Manager, Overseas Division, Iseki.

facturers of Bolens lawn and garden equipment, has entered into a long term engineering and marketing agreement with Iseki Agricultural Machinery Manufacturing Company, Ltd., Tokyo, Japan, for a line of medium horsepower water-cooled agricultural tractors, designed for both U.S. and Canadian markets.

According to David L. Hill, Manager of the Outdoor Power Equipment Division, Iseki is the largest exclusive agricultural machinery manufacturer in Japan, with over 8500 employees at 6 locations. Iseki, which is estimating 1977 sales to be \$470 million (U.S.) celebrated its 50th anniversary in 1975. FMC and Iseki also have technical cooperation with another one of FMC's divisions and are currently exploring other wide range cooperative agreements.

Hill noted that deliveries of the new Bolens/Iseki tractors would commence early next year.

LANDSCAPE

Most landscape firms charge for plans

Most landscape firms charge their customers for working up landscape plans, according to a recent survey conducted by the National Landscape Association. The survey, covering charges for landscape plans and specifications, brought 157 responses.

Eighty-six percent of the responding firms indicated that they do charge for such plans. Of those, just over 75% give some allowance for the plan's cost if the landscape plants are purchased from their firm.

Sixty percent of the firms charging for their plans reported using a flat fee, that might, however, vary with the size of the project, complexity or kind of job. Some firms reported charging a smaller fee if the project could be completed on the basis of a landscape "sketch" rather than a detailed drawing.

The average flat fee was \$62 per plan with prices ranging from \$15-550. Most firms reported \$25-50 fees for the simple plans and \$150-250 for the more complex.

Approximately one-fourth of the respondents indicated an hourly charge for time spent creating a landscape plan, with an average rate of \$18.50/hour. Charges varied from \$10-50. When the principal or senior

landscape architect prepared the plan, some firms indicated a higher rate, ranging from \$30-50/hour.

The remainder of the firms which reported charging for landscape plans and specifications based their fee for plans on an average of 9.4% of the estimated total project cost. This percentage charge ranged from 3-20%, with 10% being the most common.

TREE

Top 20 trees derived from study

An Ohio State University faculty member has released a list of the 20 top trees for urban use based upon a ten year evaluation of more than 140 shade and ornamental trees.

From first to tenth place are:
Bloodgood London Planetree
Red Sunset Red Maple
Dwarf Korean Callary Pear
London Planetree
Pallida Common Linden
Snowdrift Crabapple
Upright and Columnar
European Hornbeam
Chancellor Littleleaf Linden
Marshall Green Ash
Greenspire Linden

P. C. Kozel directed the project at Secrest Arboretum and five urban settings in Ohio.

RECLAMATION

Sulfuric acid improves mine spoils

Two University of North Dakota scientists are improving mine-spoil reclamation with sulfuric acid and micronutrients. Conducting research on the problems and practices involved in the revegetation of strip-mined land in coal-bearing areas of western North Dakota, Drs. N. M. Safaya and M. K. Wali of the University of North Dakota's Project Reclamation, presented a paper on the topic at the American Society of Agronomy meeting in Los Angeles.

Safaya and Wali found that they obtained better results from sulfuric acid, in comparison to gypsum, as an amendment for calcareous sodic mine-spoils. A sodic soil contains sufficient sodium to interfere with the growth of most crop plants. The sulfuric acid, in addition to improving the physical condition of the



Pete Martin, (left) recipient of the Richard Duke Memorial Scholarship, is congratulated by Dr. Robert W. Miller, Vice President of ChemLawn. The Ohio Turfgrass Foundation presented this initial scholarship in honor of the late Mr. Duke, founder and Chairman of the Board of ChemLawn Corporation.

spoil, has the added advantage of making bound phosphate available to plants. Most of the spoils have extremely low available phosphorus, according to Safaya.

Phosphorus and nitrogen fertilization was found to be essential for adequate growth of grass-legume mixtures, but their use decreased the content of some micronutrients in plants. The dry forage yields of slender wheatgrass, oats and alfalfa, grown on phosphate-fertilized spoils, were increased by 751%, 424%, and 46% respectively, with adequate nitrogen fertilization. The response of alfalfa was further increased by 99% by providing small amounts of manganese and zinc.

Leonardite, a weathered lignite that is rich in humic acids (dark organic material), was used as a spoil conditioner. Growth of legumes was improved, but thickspike wheatgrass was adversely affected. The difference in growth response by species in response to leonardite seems to be inversely related to their calcium uptake efficiency, the two scientists said.

TREE

Red oak tested for wilt resistance

Red oak seedlings are being used to discover natural resistance to oak wilt disease by a Wisconsin researcher.

Richard Durbin, Ph.D., Disease Resistance Laboratory, University of Wisconsin, has screened 17 seedlings which show signs of resisting wilt fungus in inoculation over a three-year period. Durbin is now trying to mass produce the seedlings.

GOVERNMENT

UPDATE

DuPont will fight for EBDC fungicides

E.I. duPont de Nemours and Company is attempting to rebut the EPA's notice of rebuttable presumption against registration (RPAR) of the EBDC (ethylenebisdithiocarbamate) fungicides. These fungicides include Dithane, Maneb, and Zineb, among others.

DuPont said that tests relied upon by the EPA in assessing the cancer risk of EBDC fungicides are inadequate. There is also evidence that neither EBDC or its metabolite, ethylenethiourea concentrate, will accrue or persist in man or environment in levels likely to cause chronic adverse effects, said duPont.

CAST says EPA is unrealistic

A report has been issued by the Council for Agricultural Science and Technology (CAST) accusing EPA of attempting "to blur the distinction between tumors and cancers."

EPA, according to the report, "misrepresents" the Delaney amendment to the Food, Drug and Cosmetic Act "as applying to tumors, whereas the clause refers specifically and explicitly to cancers".

CAST further states that, "because most tumors are not cancers and do not become cancers, the EPA endeavor to blur the distinction between them is scientifically questionable".

The report contends that EPA has developed a policy which holds that even small exposures to carcinogens convey a risk of cancer and if EPA is allowed to implement that policy, the U.S. will be trapped into bans on substances whose carcinogenic potential is actually very small.

The report claims that testing for potential carcinogens by using high doses can be unrealistic and remarks that the "physiological action of at least some substances is different at large doses than it is in small doses".

Several EPA staff members dismissed the report as propaganda.

Copies are available from CAST, Agronomy Building, Iowa State University, Ames, Iowa 50011.

GAO to review EPA

The General Accounting Office (GAO) has begun a review of federal agencies', including EPA's, chemical testing programs. The review was requested by Senators Kennedy (D-Mass.), Chairman, and Javits (R-N.Y.), Ranking Minority member, of the Subcommittee on Health and Scientific Research, Senate Committee on Human Resources.

The GAO is requesting information such as: type of test; cost of testing each chemical between fiscal 1976 and 78; methods used to select chemicals for testing; policy statements or regulations for assessing risks to humans of the chemicals; test coordinating procedures with other agencies; and the adequacy and expertise of personnel managing the chemical testing programs.

HORTICULTURE

Fourteen \$500 grants available for research

The Horticultural Research Institute (HRI) has announced that it will have 14 Richard P. White \$500 Research Grants available for the coming year. Awarded annually, the grants are used for purchasing supplies and equipment for important nursery research projects.

The HRI invites any organization conducting research which may be of benefit to the nursery industry, including state and federal research laboratories, land grant universities, forest research stations, botanical gardens and arboreta, to apply for one of the grants.

Recipients are selected on the basis of information provided on a simple one page application. "The only strings attached to the \$500 grants are that the money must be used to purchase supplies or equipment and that a report on the progress and/or results of the work be made available to HRI so that we can pass it along to the industry," according to HRI President Jim Walsh.

Applications for the grants are available from the Horticultural Research Institute, 230 Southern Building, Washington, DC 20005, and must be received by May 1, 1978.

NURSERY

Credit card risky as payment in advance

A retail nurseryman who accepted a credit card as payment in advance for a special order lost out when the customer rejected the order after the plants, which required special digging, were dug and set aside for him.

The nurseryman accepted a bank credit card for the order, in excess of \$200. When the order was cancelled, the customer's bank charged back to the nurseryman the full amount of the purchase. The nursery owner's efforts to resolve the problem through his own bank failed.

American Association of Nurserymen lawyers wrote to the owner's bank in an attempt to obtain information to advise businessmen concerning the possible risks of accepting credit cards in such cases.

"Based on the bank's response,"

Continues on page 72



Gordon Leishman measures the extra growth after using Jobe's Evergreen Spikes.



"My trees doubled the growth rate after I used Jobe's Spikes."

Gordon Leishman of Idle Hour Country Club, Lexington, Ky., is enthusiastic about the results he achieves after using Jobe's Spikes. Trees added four inches more growth than he expected. He used Jobe's 12-6-8 Evergreen Spikes in the fall of 1975 to help trees winter over, develop strong root systems and provide a reservoir of nutrients for spring growth. And he's been using Jobe's Spikes ever since.

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University studies have shown that Jobe's Spikes are better than surface-applied fertilizer. And there's no danger of burning turf or excessive leaching. Jobe's patented binder forms the fertilizer into easy-to-drive spikes and provides for uniform release of nutrients. A plastic cap is included to make

driving Spikes easier and to protect the Spike while you drive it. The analysis of Jobe's Tree and Shrub Spikes is 16-8-8. Evergreen Spikes are 12-6-8. Fruit Tree Spikes are 5-15-15. Rainwater or soil moisture carries the fertilizer down to the root zone.



Call your local Jobe's distributor or order direct. \$30 per case (105 Spikes) prepaid, 5 case minimum. 15 or more cases, \$25 per case. 36 or more cases, \$22.50 per case.

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you can depend on Glade to germinate quickly, establish fast. Forms a thick rhizome and root system, dense, low-growing, fine-textured turf of medium to deep green in color.

Glade Kentucky bluegrass has proven resistance to many troublesome diseases including stripe smut and leaf rust. Better than average resistance to today's Fusarium blight has made Glade a vital fortifying ingredient in many professional turf grass mixtures. A higher level of resistance to powdery mildew in moderate shade.

A Rutgers University selection (tested as P-29), Glade Kentucky bluegrass is your guarantee of physically pure and genetically true seed.

Specify the sun-n-shade elite Glade Kentucky bluegrass seed for your next lawn seed mix, available at your local wholesale seed distributor.

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Another fine, quality-controlled product of Jacklin Seed Company.

WT&T

PEOPLE

The Board of Directors of Valley Crest Landscape, Inc., Los Angeles headquartered landscape & engineering contractor, has announced the election of **Jerry W. Cox** as vice president in charge of the company's San Diego office. Cox has been with the company for six years, and was the first participant of the company's executive training program. For the past one and one-half years he has been working at the company's San Diego office, and for the last year has been the branch manager. Valley Crest Landscape, Inc. operates a network of landscape and engineering offices throughout California and in Colorado and Washington, performing large-scale projects in many Western, Southern, and Mid-Western states.



Hugh Chronister

TVA/NFSA Research and Development Task Force.

NFSA is an international organization representing more than 1,300 member companies and independent liquid fertilizer dealers.

Dr. Fred V. Grau, president of the Musser International Turfgrass Foundation, has announced the appointment of Weeds Trees & Turf Publisher **Hugh Chronister** to the Foundation's board of directors. The Musser Foundation is a nonprofit organization, "dedicated to fostering turfgrass as a learned profession, enhancing the lives of people all over the world through turfgrass, and supporting education and research in turfgrass development and management."

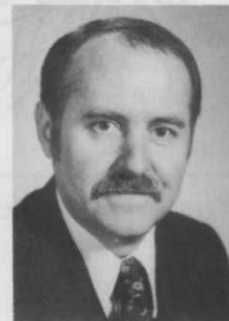
Chronister is president of Cleveland-based Harvest Publishing Co., which also publishes Lawn Care Industry, Golf Business, Pest Control, and five state farm magazines. Chronister also serves as president of the Agricultural Publishers' Association, trustee of Baldwin-Wallace College, and director of the Ohio 4-H Foundation. Chronister fills the vacancy created by the death of George E. Osburn, Dec. 3, 1977.



Jerry W. Cox

BMC Landscape, Inc., Gardena, Ca., landscape contractors, has appointed **Brian H. Flynn** as manager of operations, according to Bert M. CeDillos, chief executive officer. Flynn will be responsible for landscape and construction operations of the firm which provides diversified services to major municipal, institutional, industrial, and commercial clients in Southern California.

Flynn acquired agricultural and citrus field management experience at Newhall Land & Farming of Newhall and Santa Maria. He also managed properties for the Hansen Ranch of Camarillo. Flynn is a graduate of the University of Southern California, and has also completed two years of law studies.



James H. O'Brien

Norio Rock Watanabe has been named president of the Kioritz Corporation of America, parent company of Echo Chain Saw. Watanabe previously served as vice president and general manager of the Kioritz Corporation of America, and most recently, has been serving in the Foreign Trade Department of the Kioritz Corporation of Japan, based in Tokyo.

Watanabe replaces T. Yokomizo as president of the Kioritz Corporation of America, who has been elevated to the position of chairman of the board of the Kioritz Corporation of America and Executive Director of the Kioritz Corporation of Japan.

The National Fertilizer Solutions Assoc. (NFSA) has honored **R. Hovey Tinsman, Jr.**, as "Man-of-the-Year" and **Dr. George Rehm** as "Honorary Member", at its recent 23rd Annual Convention in Dallas, Tx.

Tinsman received the honor for his generous donation of time in furthering and promoting the interests of the fluid fertilizer industry. Tinsman has served on numerous NFSA committees, been president of the association, and represented the industry before the Senate House Agricultural Committee and the Cost of Living Council.

Rehm was recognized for his research of cool and warm season grasses and for trace element work on corn. He has worked to create good communication between fertilizer producers and the association and presently serves on the group's



Norio Rock Watanabe

James H. O'Brien has been named director of marketing and sales for the General Tree Work division of the F. A. Bartlett Tree Company, headquartered in Stamford, Conn. Prior to joining Bartlett, O'Brien had been director of marketing for International Learning Systems, manager of training for Stauffer Chemical Company, and a district sales manager for Xerox Learning Systems.

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