

meeting dates

S	M	T	W	T	F	S
	1	2	3	4	5	
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Dates for this column need to reach the editor's desk by the first of the month preceding the date of publication.

California Park and Recreation Society announces three regional workshops. Apr. 7 at Palo Alto Community Center on Middlefield Road; Apr. 8 at Carriage House Restaurant, 1210 N. Blackstone Ave., Fresno; and Apr. 9 Parnell Park Activity Building, Whittier.

National Golf Foundation annual meeting at Stouffer's Riverfront Inn, St. Louis, Mo. Apr. 16.

22nd Annual Nurserymen's Refresher Course, sponsored by the California Association of Nurserymen at Cal Poly, San Luis Obispo, June 9-11.

Ohio Chapter, International Shade Tree Conference, at the USDA Shade Tree and Ornamental Plants Laboratory at Delaware, Ohio, July 8.

American Sod Producers Association 4th annual conference and field day, Ramada Dorchester Inn, Dolton, Ill., and the H & E Sod Farm, Momence, Ill., July 28-30.

46th International Shade Tree Conference, Hotel Flagship-Rochester, N.Y., Aug. 9-14.

Sprayorama '70 Pacific Northwest Pesticide Applicators, Inc., annual meeting, Thunderbird Motel, 1401 N. Hayden Island Dr., Portland, Ore., Sept. 10-12.

section can stand alone or be incorporated into an overall set of specifications for an entire sodding project. Contractors who specialize in a certain type of activity have the opportunity of bidding on only a portion of a project if the specifications are so designed — for example, supply and install topsoil, install sod, or maintain turf after sodding.

An appendix to the Maryland-Virginia guide explains about the two-state classification of sod:

"Certified Sod" is superior sod

grown from "certified" seed. It is inspected and certified by the State Certifying Agency to insure genetic purity, overall high quality, and freedom from noxious weeds, as well as excessive amounts of other crop and weed plants at the time of harvest. The sod must meet published state standards and bear an official Maryland, Virginia, or other state "Certified Sod" label on the bill of lading.

"Approved Sod" is inspected and approved by the State Certifying

Agency to insure overall high quality and freedom from noxious weeds and excessive amounts of other crop and weed plants at the time of harvest. It may be composed of a mixture of two or more varieties or species. The sod must meet published state standards and bear an official Maryland, Virginia "Approved Sod" label on the bill of lading.

Appendix B describes the composition of sod that is suitable for the particular region.

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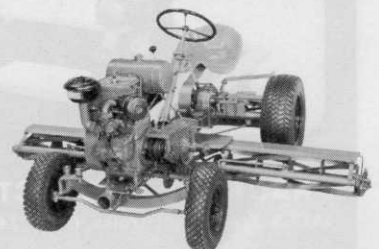
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ISU Formulation Allows Zero-Degree Spraying

The number of hours a day and days per season acceptable for dormant-season spraying with pesticides may be extended greatly, thanks to research done at Iowa State University, Ames.

How? By using methyl alcohol with water instead of water alone for preparing spray formulations, it is possible to have sprays that can be used at temperatures down to zero degrees Fahrenheit.

Dr. A. H. Epstein, extension plant pathologist at ISU, who is concerned with Dutch elm disease control, examined the exacting conditions required for spraying for the elm bark beetle which spreads the disease. Normally to spray, bark has to be dry, the wind can't exceed 5 mph and the temperature must be above freezing, simply because if it's colder, spraying equipment may be damaged or ruined by ice.

Some seasons this combination of conditions just doesn't occur in some localities. Being able to spray at temperatures below freezing would almost eliminate one of the limitations, Epstein noted.

Working with methoxychlor, Epstein observed that spray mixtures generally used in helicopter sprayers and mist blowers consist of either 12.5% or 16% insecticide in an emulsifier (xylene) mixed with water.

"A 12.5% spray emulsion could be prepared by mixing water and 25% spray concentrate on a 1-to-1 basis. This emulsion would freeze at or very slightly below freezing," he says.

However, by using methyl alcohol, the freezing point of the mixture can be lowered. Using 10, 20, 30, 40 and 50% alcohol concentrations, Epstein found he could lower the

freezing point to 28, 24, 16, 10 and 0 degrees Fahrenheit, respectively.

Examination of results of spraying glass slides and elm bark with the low-temperature sprays showed resulting residues were quite similar in evenness and concentration to those left by more conventional applications made in "normal" warmer temperatures.

"The spray droplets dried into spots that looked like dried varnish," the plant scientist says. Additionally, study of residues of the same sprays applied in March to trees outdoors showed that substantial amounts of methoxychlor remained on them 123 days later. Use of the low-temperature formulation did not appear to affect the residual qualities of the pesticide.

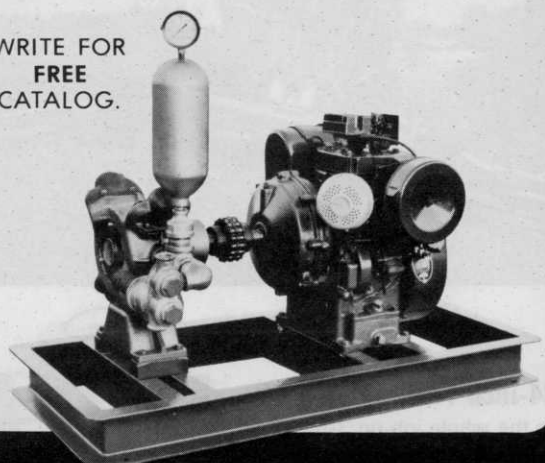
Presently, treating for control of elm bark beetles, and, in turn Dutch elm disease, is the main application of dormant-season sprays. However, Epstein says, additional work is being done and winter spraying of other plants could become practical for some pest control problems.

So, the possibility of adding an "anti-freeze" to pesticides may become important in the near future.

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Officers and directors of the re-organized Virginia Turfgrass Council are, from the left: Harvey Carpenter, Jr., Carpenter's Seed Cleaning Plant, Mitchells; B. K. Powers, Weblite Corporation, Roanoke; William P. Mooney, superintendent, Langley Air Force Base Golf Course; John F. Cook, superintendent, Country Club of Virginia, Richmond; W. R. Clements, Virginia Department of Highways, Richmond; Earl

H. Odell, Todd Company, Chesapeake; Ralph W. Firebaugh, Martinsville; J. L. Kidwell, Kidwell Turf Farms, Culpeper; Sheldon R. Betterly, Centreville Sod Growers, Inc., Nokesville; Lee C. Dieter, superintendent, Washington Golf and Country Club, Arlington; also pictured is John F. Shoulders, Extension specialist, turf, V.P.I., Blacksburg.



Robert F. Shields, past president of the Golf Course Superintendents Association of America, presents a GCSAA scholarship to Timothy P. Hutchison of Chantilly.



Dr. Fred V. Grau, left, world turf authority, and Dr. R. E. Blaser, president of the American Society of Agronomy were conference speakers.

Turf Council In Virginia Re-Organizes

Virginia Turfgrass Council reorganized and received its charter of incorporation during the recent 10th Virginia Turfgrass Conference at Fredericksburg.

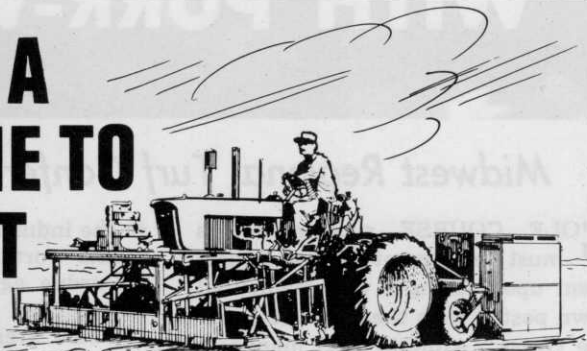
More than 280 superintendents, representatives of industry and others attended, reports J. F. Shoulders, Extension specialist in turf at V.P.I.

The program featured three general topics: soils, nutrients, and turf response; developments for improved turf quality; and developing and maintaining large turf areas.

Appearing on the program were Dr. Fred V. Grau, world renowned turf authority; R. E. Blaser of V.P.I. and president of the American Society of Agronomy; Holman Griffin of U.S.G.A. Greens Section; Dr. C. Reed Funk, Rutgers University; and Dr. D. V. Waddington of Penn State.

At the organization meeting of the board, Lee C. Dieter, superintendent of the Washington Golf and Country Club, Arlington, was elected president; J. L. Kidwell of Kidwell Turf Farms, Culpeper, vice-president; and Earl H. Odell, Todd Company of Chesapeake, secretary-treasurer.

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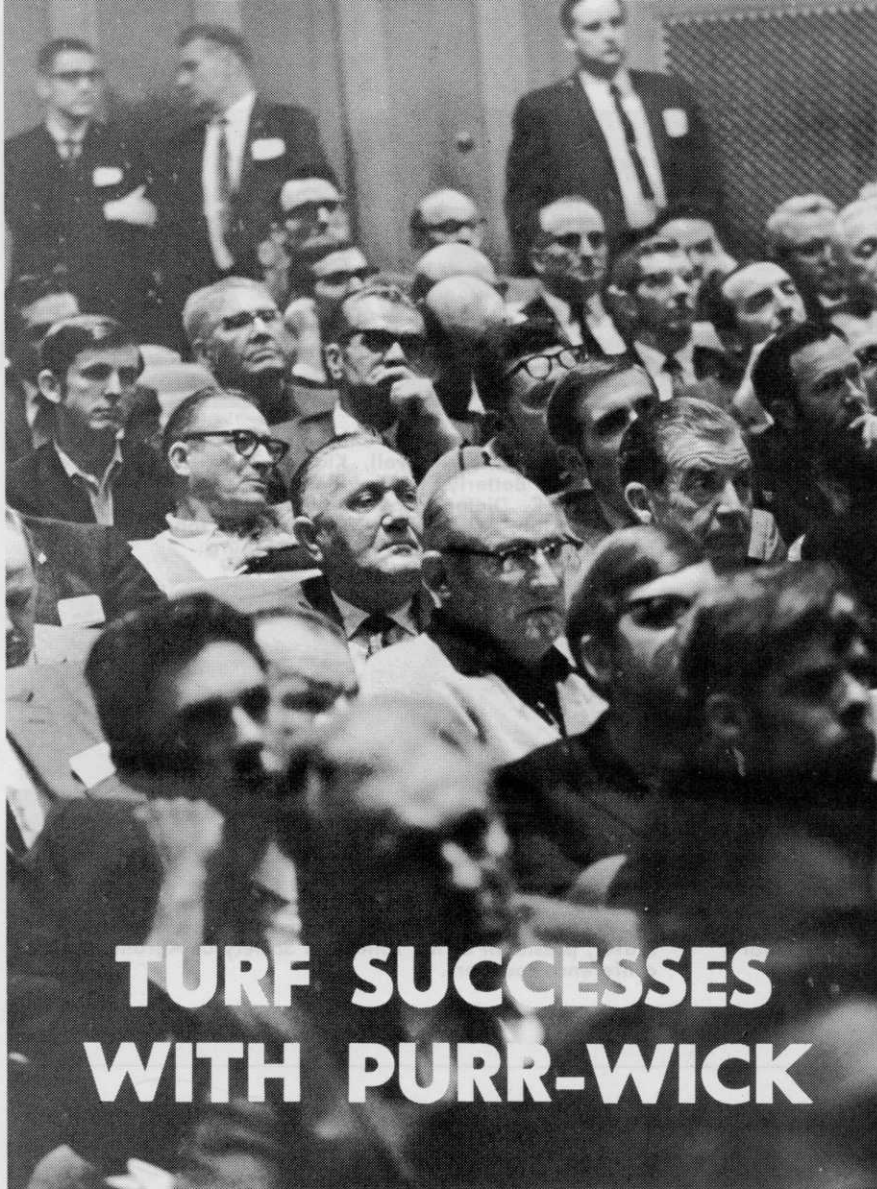
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TURF SUCCESSES WITH PURR-WICK

Midwest Regional Turf Conference Report

GOLF COURSE superintendents must get a great deal of amusement upon seeing a well-manicured lawn posted with the sign: Keep Off the Grass." Athletic field managers and sod growers must snicker a bit, also, about the owner's concern over damage from a few people walking or a few youngsters romping on the grass.

For the commercial turf industry's greatest challenge and biggest headache, of course, is to build and maintain the best turf exactly where the heaviest traffic and worst punishment will occur. The problems aren't entirely solved, and that's why about 700 turf specialists came to Purdue University, Lafayette, Ind., March 2-4, for the Midwest Regional Turf Conference.

10 Ways to Build

A positive theme of "Success With Turf" carried the implication that at least some researchers and turf men

in the industry had realized achievements worth talking about.

Purdue agronomist W. H. Daniel summarized 10 ways to build high use turf areas:

1. *Use any subsoil*, mud in and shape to grade (and leave the troubles as soon as paid, he quipped).
2. *Topsoil onto topsoil*. Avoid any subsoil, avoid working when wet. Conserving what's good can save funds. Most likely success comes with sandier soils.
3. *Subsoil under topsoil*. When a major fill is necessary, conserve and replace four to 10 inches of topsoil.
4. *Subsoil under topsoil plus drainage*. Add pea gravel backfill within six inches of surface. Tile 20 to 30 feet apart and 18 to 30 inches deep.
5. *Same as Number 4 plus sand (60%) and peat (20%) mixture*, or a variation of the ratio, mixed into the top two to four, even 10, inches of top soil in hopes of getting better water movement and less compaction.



Purdue students Carl Landgrebe, left, of Valparaiso, Ind., and Steven G. Lambert of Eaton are smiling about the \$400 scholarships they've received to further their turf studies. Landgrebe received the Mueller Sod Farm grant; Lambert got his from the Golf Course Superintendents Association of America.

6. *Intimate topmix*, prepared off-site, based on USGA green section research. Ten to 14 inches of settle topmix over two inches of washed sand over four inches of pea gravel over field tile drainage.

7. *Thin rootzone* on contoured subgrade, place small plastic drains (1.5- to 2-inch pipe with frequent narrow slits) into shallow, narrow trenches (10 feet apart). Backfill with coarse sand to overflow trench, then place 4-6-inch washed fine sand over loosened subgrade. Cover with one inch of peat and one-half inch of calcined aggregates and fertilizer. Mix well into upper one-half of sand. Compact and plant. Can be five to eight inches in total depth.

8. *Impermeable layer*, giving zero tension as it isolates subgrade. Plastic sheet is spread over contoured subsoil. Slitted plastic drain pipe is laid onto plastic sheet 10 to 20 feet apart. Coarse sand is spread over drains, then selected available sand spread 10 to 20 inches deep, based on fineness. Add peat, fertilizer, calcined aggregates. Mix into surface one to three inches. Compact and plant, mulch and keep moist.

9. *PURR-WICK* (Plastic under sand reservoir rootzone) (Figs. 1 & 2) is essentially No. 8 plus reservoir pools that store water and feed root systems through wick action. Tiers of flat pools are formed as needed beneath the even or contoured surface. Three- to six-inch ledges are built around each pool and around the edge of the total area. Interior pool edges can be stabilized by using



Officers for the 1970-71 year of the Midwest Regional Turf Foundation are, from the left, James Kirchdorfer of Irrigation, Inc., Louisville, Ky., vice-president; Theodore Woehrle, superintendent of Oakland Hills Country Club, Birmingham, Mich., president; and W. H. Daniel, Purdue turf specialist, executive secretary. Daniel received a huge "birthday cake" at the conference banquet from outgoing officers. The cake, aglow with candles signified several things, said president Robert Meier, Jr., the 33rd year of the conference, 25th anniversary of the Foundation, and the 20th year of Daniel's service as executive secretary of the Foundation.

four-inch pipe, stake anchored. Eight- or 10-mil polyethylene sheeting is used to cover the entire pool area, overlapping one to three feet and taped for extra seal. A double thickness of six-mil sheeting is adequate. Add plastic drain pipe as indicated in No. 8 and drain plugs as shown in Fig. 2. Coarse sand or gravel can be used to cover drains. Laboratory analysis of sand particle size and uniformity determines depth. These factors determine how far moisture will rise by wick action to be utilized by turf roots.

It's important that the sand be uniform in size with most particles in the range of 0.25 to 0.50 mm (60-35 mesh).

Extend the drain pipes through the plastic by cutting an X somewhat smaller than the pipe. Ease pipe through, tape it generously then concrete. Another way is to use bolted, flanged, waterproof collars of plastic. Spread sand, compact and plant as in No. 8.

10. The PURR-WICK system can be refined one more step by incorporating sub-irrigation with a chamber and adjustable float valve for each tier, thus achieving desired wetness automatically. Soil sensing probes could be used to regulate the system.

The major advantages of the PURR-WICK system, developed at Purdue University, is that it gives the manager absolute water control, can be built on any subgrade material, allows long periods between irrigation, conserves water to the maximum, stores some nutrients as dilute solution (but may

need more frequent fertilizer), and plays uniformly moist.

An ingredient table is shown in Fig. 3. Detailed specifications are available by writing the Midwest Regional Turf Foundation, Department of Agronomy, Purdue University, Lafayette, Ind. 49707.

Ask for MRTF leaflet No. 40, dated January, 1970. The leaflet describes the system and research done since 1960 by W. H. Daniel, David Ralston, David Bingaman, Mel Jansen, Robert Montgomery, H. Kohnke, Ed Monk, and others.

PURR-WICK in the Field

A panel of five men who have

built or maintained PURR-WICK systems in golf courses discussed their experiences.

Costs can vary considerably, depending on the local price for suitable sand. William Story, superintendent of Carmi, Ill., Country Club, reported a 4,000 sq. ft. green for \$2,280, with sand costing \$2.60 per ton. Charles Tadge, superintendent of the Mayfield Country Club, South Euclid, Ohio, built a ladies' tee, 20x30 feet, for \$642 with sand costing \$4.20 per ton.

Morgan Boggs, golf course architect, Louisville, Ky., currently is building 19 PURR-WICK greens (12 are done) using sand on the site.

Particular care must be taken, the panel said, in dumping and spreading the sand to avoid tearing or moving the plastic sheeting. George Lumpkins, superintendent of the Owensboro, Ky., Country Club reported using plywood sheets at the edge of the green to permit truck dumping of sand nearer the center. Ready-mix concrete trucks were suggested also as a means of distributing the sand. Flotation tires at reduced pressure were also suggested by Lumpkins for tractor-dozer units.

Recommended seeding rates for PURR-WICK installations are one pound of Penncross or the equivalent, two pounds of bluegrass or equivalent, or three pounds of grass mixture per 1,000 sq. ft. Spread stolons at the rate of eight to 10 bushels per 1,000 sq. ft. Sod should be cut as thin as practical and be greens-aired once or more after laying, plus topdressed.

Story of Carmi Country Club re-

Figure 1. Idealized cross section of PURR-WICK construction.

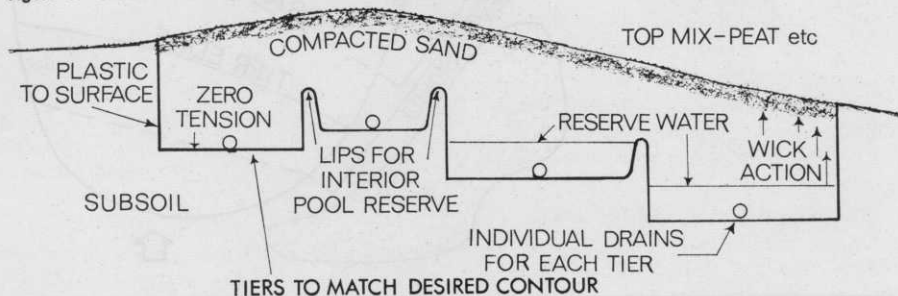
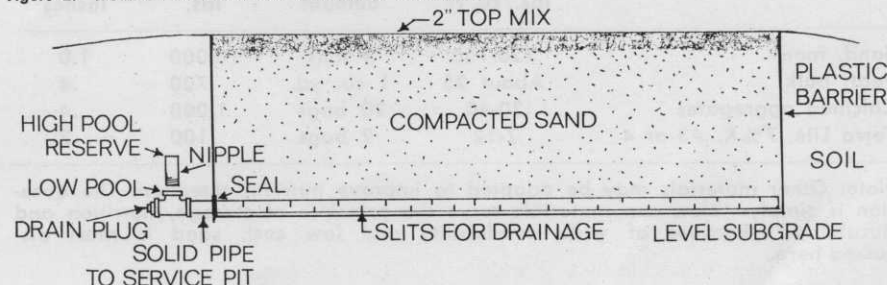


Figure 2. Idealized cross section of one tier of PURR-WICK.





Members of this panel discussed their experiences with PURR-WICK constructed greens or tees. From the left, they are William Story, superintendent of the Carmi, Ill., Country Club; Birdie Shelton, Superintendent of the L & N Golf

Course at Brooks, Ky.; Charles Tadge, superintendent of the Mayfield Country Club, South Euclid, Ohio; George Lumpkins, superintendent of Owensboro Ky., Country Club; and Morgan Boggs, golf course architect of Louisville, Ky.

ported that "We seeded Penncross on Sept. 4, mowed it eight days later, and opened for play on Oct. 10."

Birdie Shelton, superintendent of the L & N Golf Course at Brooks, Ky., seeded half of a green and stolonized the other half as a check. "The seeded established first, but in four months the stolonized had caught up and was a darker green,"

he said. Charles Tadge sodded the ladies' tee with Warren's A20 blue-grass sod.

Landscaping Eases Stresses

The conference program was rounded out with reviews on turfgrass disease, athletic field maintenance, weed control methods, sod handling, fertilization, irrigation,

and reports from the European tours of turfgrass areas taken as a part of last summer's International Turfgrass Society conference in England.

If properly planned and managed, landscaping can significantly alleviate human stresses caused by pollution, contended Dr. F. O. Lanphear, Purdue horticulturist. He said vegetation can reduce thermal pollution in urban areas by more than 10 degrees Fahrenheit.

"Air pollution can be reduced to some extent by large masses of vegetation, such as green belts and highway plantings," he continued. "Landscape plantings also reduce noise significantly, particularly high frequency noise," Lanphear added.

Speaking of Purdue's landscaping program, he emphasized it had grown from 10-15 students — its first year, 1964 — to more than 70 students today. More than 20 graduate students are now involved in the program and three full-time landscape architects are on the staff.

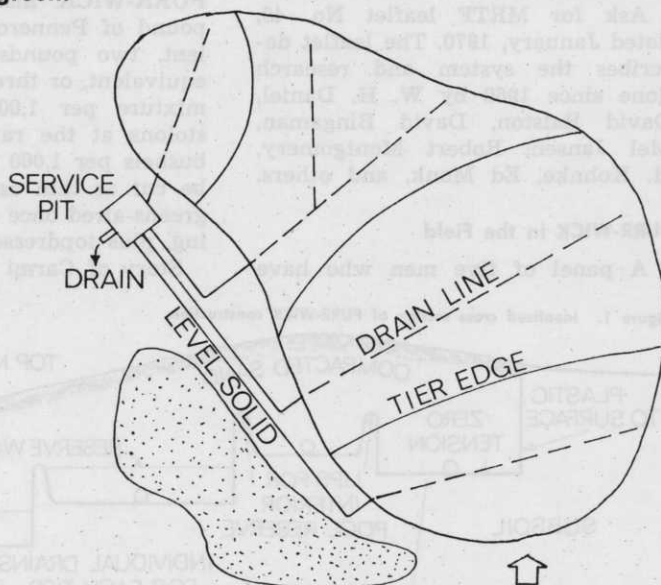
Scope of the landscape architectural program at Purdue includes regional land planning, institutional sites, parks, highways, industrial and commercial sites, and residences, he said.

New Officers

Officers of the Foundation, elected for 1970-71, are Theodore Woehrle, superintendent, Oakland Hills Country Club, Birmingham, Mich., president; James Kirchdorfer, Kirchdorfer Irrigation, Inc., Louisville, Ky., vice-president, and W. H. Daniel, Purdue turf specialist, executive secretary (re-elected).

New directors are John Fitzpatrick, Cincinnati, O.; Paul Morgan, Middletown, O., and John Dunlap, Cleveland, O.

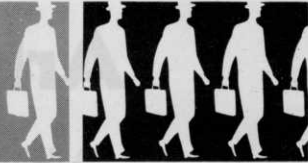
Figure 3. Schematic of four tiers and drains in a golf green.



Some Materials	Estimated	Per 1,000 sq. ft.		
	lbs./cu. ft.	amount	lbs.	inches
Sand, moist	120-150	5 tons	10,000	1.0
Peat, bulk	About 25	1 cu. yd.	700	.4
Calcined aggregates	30-40	20 bags	1,000	.4
Terra Lite, 7%K, #3 or 4	7-12	2 bags	100	.2

Note: Other materials may be adapted to improve nutrient retention. The question is simply: "How can materials serve the principle of storage, nutrition and durability?" Because of wide availability and low cost, sand is most discussed here.

industry people on the move



New Jersey Society of Certified Tree Experts has elected these officers for 1970: President — Richard F. Walter of Maplewood; vice-president — Carl Rose of Kearney; secretary — Jacob E. Bruinooge of Park Ridge; and treasurer — Harry P. Banker of Hanover.

* * *

Michigan Association of Landscape Architects has selected these officers for 1970: President — Don Reetz; vice-president — Versile Fraleigh; secretary-treasurer — Pete Klan; and executive secretary — Jane Smith.

* * *

TUCO Division of the Upjohn Company has added Marvin Eugene Parr to its agricultural chemicals sales unit. Parr will be responsible for sales in Virginia and North Carolina.

* * *

Fred Shuler has been appointed project leader for Velsicol Chemical Corporation's industrial markets. Shuler will be responsible specifically for developing markets for Velsicol's Banvel herbicide along highways, railroads, utility lines, and similar non-cropland areas.

* * *

Roger Gold and Ken Bigman have joined the staff of sales representatives for Valley Crest Landscape, Inc., a division of Environmental Industries, Inc., with offices in Van Nuys, Santa Ana, San Diego, and Concord, Calif. Gold is servicing the Los Angeles area; Bigman, the northern California area.

* * *

Ryan Equipment Company, St. Paul, Minn., has announced the appointment of Frank Buschini and Harry Murray, Jr., as regional sales representatives. Buschini was named eastern sales representative to succeed Charles K. Curry, who recently became Ryan sales manager. Murray is the midwest representative, a newly created post.

* * *

Servis Equipment Company, Dallas, Tex., has announced six management advancements:

John C. Collins was named executive vice-president and will serve as chief operating officer. Leighton R. Glass is the new vice-president of sales. Al Scifres, the first Servis salesman to sell \$1 million in one year, is the new assistant sales manager. Raymond Crawford has become controller. James W. Compton is the company's first assistant controller. Howard Humphrey is now director of marketing.

* * *

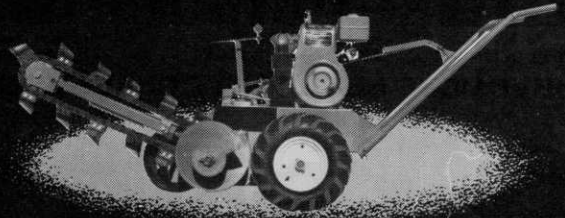
Dr. Lambert Erickson, University of Idaho plant scientist, recipient of one of two Fulbright Travel Scholarships for Scandinavian countries, is presently in Norway on sabbatical leave doing research in weed taxonomy, ecology and control.

* * *

The Pennsylvania-Delaware Chapter of the International Shade Tree Conference elected the following officers at its Feb. 20-21 fifth annual symposium: President — Robert C. McConnell, arborist, Fairmount Park Commission, Philadelphia; vice-president-elect — Earl A. Blankenship, director of forestry, Pittsburgh; vice-president — Joseph L. Hayden, arborist, Lower Merion Township, Montgomery County, Pa.; secretary-treasurer — John C. Anspach, city forester, Bethlehem, Pa.

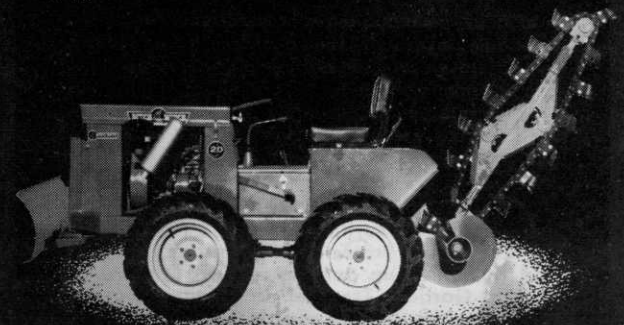
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J20 is an 18-HP, four-wheel-drive unit which can dig up to 900 FPH in ranges up to 5' deep, 12" wide. It offers three mechanically-selected digging chain speeds, plus reverse, and has hydraulically-controlled boom, backfill blade, steering and travel speed control. While trenching, travel speed is controlled hydraulically, allowing full mechanical power to be used independently for selective digging chain speeds. Designed to operate at full engine RPM providing full power efficiency for trenching. Can be equipped with boring attachment.

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Arborists Soak

ARBORISTS do hold some answers to the country's great problems, Jack MacDonald of Arizona Public Service Company told the national gathering at its February annual meeting in Phoenix.

You can see that it's the arborist who really cares for the spindly tree surrounded by concrete and asphalt, he said. The arborist is charged with the responsibility—and the pleasure—of making the country a more beautiful and a better place to live.

MacDonald, director of special services for Arizona Public Service Company and a member of the executive committee of the Governor's Commission for Arizona Beauty, provided the inspirational ingredient for the National Arborists Association program. He described the community beautification effort that is taking place across the state, from the gestures of new mothers giving memorial trees, to city-wide tree-planting endeavors, to state-wide long-range planning.

Those attending responded to MacDonald's enthusiasm by donating enough money to buy 100 citrus trees for the Phoenix tree planting program. The gesture also was in keeping with the National Arborist Association tradition of presenting a tree to the city where it meets.

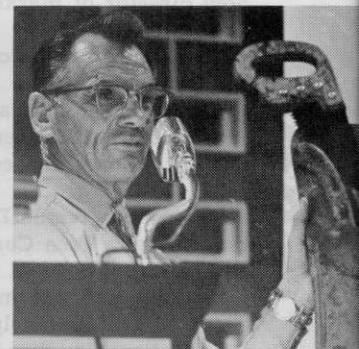
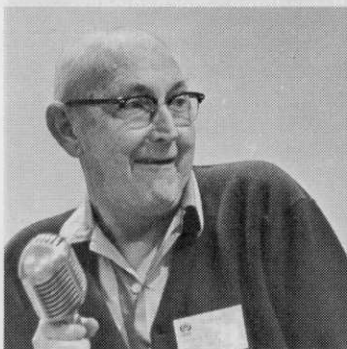
Finding, Keeping Good Help

Subject matter for the remainder of the four half-day business sessions was directed toward solving arborists' own every day problems. Speakers, panelists and floor discussions ranged over recruiting, training and holding employees, safety, DDT substitutes, and line-clearing practices.

Difficulties of recruiting and hold-



National Arborist officers for 1970 (front to rear): President — William A. Rae, Jr., Frost and Higgins Co., Burlington, Mass.; first vice-president—William P. Lanphear III, Forest City Tree Protection, Cleveland, Ohio; second vice-president — Glen Burns, Karl Kuemmerling and Associates, Canton, Ohio; secretary — John Shullenbarger, Gustin Gardens Tree Service, Gaithersburg, Md.; treasurer — Robert Felix, Harder Services, Inc., Hempstead, N.Y.; director — Thomas Morrison, arborist, Wilmette, Ill.; director — W. Roland Shannon, Shannon Tree Co., Milford, Pa.; and Past president — Paul Walgren, Walgren Tree Expert Co., West Hartford, Conn. Another director, Paul Ramsey, N. G. Gilbert Corp., Muncie, Ind., was not present.



Among program participants, from the left, were longtime arborist Gordon H. Knowles, who presented the attendance prize (Heller-Gro liquid fertilizer, of course); Kenneth Kirk, president of Shield Shade Tree Specialists, St. Louis, who

talked about employee incentives; Carl C. Brigham, management consultant, who discussed employee motivation; and William Johnson ("Badger Bill"), the Phoenix area host and who talked about desert tree care.

Up Ideas and Sunshine

ing employees can be reduced markedly if the right people are hired in the first place contended Carl C. Brigham, management consultant.

"Try to find out what motivates the man you're considering, he said. As you interview, "watch for his basic, or psychic, energy level, his level of aspiration, his ability to stand frustration."

Brigham said there are up to eight basic needs that most people have. These are the need for: security, status, power, investigation, excellence, perfection and service.

Tree work, he averred, satisfies the need for excelling, perfection, serving and investigating. So, he concluded, you look for a man who rates these needs highest.

And William Johnson, owner of Badger Tree Service, Phoenix, noted: "A good tree man is a good artist."

Company image can exert drawing power upon the more capable men in the labor market, suggested William A. Rae, Jr., Frost and Higgins Co., Burlington, Mass.

"You're more likely to get the good employee if the company has good looking equipment and uniforms," he said. "We feel ours is the company to work for in our community."

Panelists pretty much agreed with Ray Gustin, Jr., Gustin Gardens Tree Service, Gaithersburg, Md., that benefit programs are important for attracting and keeping good men, but that for the younger employee "loyalty is tied pretty closely to wages per hour."

Employee Incentives

Several incentives were discussed, with all tied to ability and varying amounts of employee attitude and discipline.

"We offer a 5¢/hr. accumulative bonus payable at the end of the year," reported Kenneth Kirk, president of Shield Shade Tree Specialists, St. Louis. "After two years' tenure, we have a profit-sharing program based on hours worked, years of service, attitude, appearance and ability.

"We pay up to four weeks' vacation. After the first year, three days; second year, a week; and so on. We give seven paid holidays, but the employee must work the day before and the day after to qualify.

"We have a life insurance pro-

gram, and the company pays about a third of the costs.

"A uniform change is provided every day or every other day."

In return, the 22-man force is required to show up two hours every day, regardless of weather, for such activities as clean-up, wash-up and repair work. They must be clean

shaven, there are no "long hairs."

Shield men normally work a nine-hour day, six-day week, getting time and a half for overtime. They take no coffee breaks, and never park equipment in front of a tavern. And no "moonlight" tree work is allowed.

Johnson of Badger Tree Service listed the ingredients of a successful tree company as good men, education, and public relations.

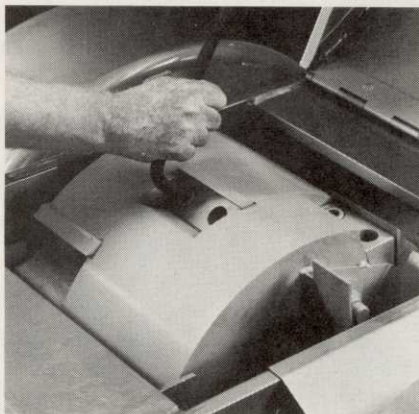
Build a sense of belonging in your employees, he advised. Uniforms are one way to do it. They don't have

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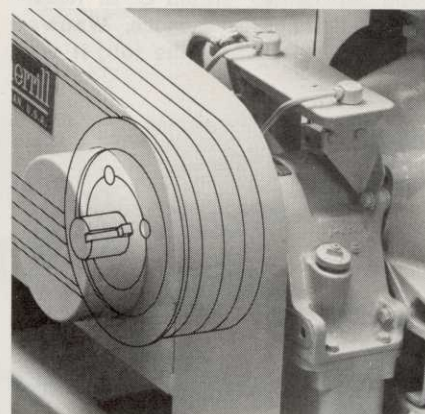


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to be elaborate; they have to be practical. "Our men all wear levis, yellow T-shirts and yellow helmets."

Training Prospective Employees

Of utmost importance is to determine if a man really likes tree work. Rae said Frost and Higgins accomplishes this objective as it trains. The company goes into schools to recruit college and high school men. A six-weeks' training course is offered to them, with pay and "no strings attached." At the end of the training, the prospective employee knows whether he likes the work and he's trained and ready to work permanently.

Training is conducted on weekends. Rae says 60% have joined the company afterward.

"Another good source of employees is from your present staff. If an employee brings in a man that stays five weeks, we pay the employee a bonus."

An obvious but often overlooked way to keep employees, Rae added, is to tell them when they've done a good job. "A little praise does go a long way."

C. G. Wilhelm of Denver follows the practice of leaving a card with the customers for them to rate work done. "They do send in the cards, and our employees do read them."

DDT Substitutes

"Talking about DDT substitutes... that could be very short; there is no good substitute," stated C. L. Wachtel, Wachtel Tree Service, Wauwatosa, Wis. "DDT did the job; it was



Entertainment included a tour of the Desert Botanical Garden of Arizona . . .

there when the beetle emerged."

"We intend to intensify our sanitation program of removing all diseased trees. We'll continue to use bidrin injections, a pretty good substitute but one that depends on the skill of the applicator. Vapam is used to isolate diseased trees by preventing root graph.

"Methoxychlor doesn't have the killing power or residual of DDT, but we'll just have to try harder getting good timing."

Edwin Irish of Charles F. Irish Co., Warren, Mich., reported acceptable results with methoxychlor. "We started two years ago, and use it 80% of the time.

Del Kennedy of Ukiah, Calif., sees

the possibility that "in three to five years the state will darn near take your sprayer away from you and say this is it."

"Systemics will be the answer," he said. "Can we make any money at it? About three times more than spraying."

Kennedy reported working with bidrin, methylcystox and Monitor. He sees "injecticides" coming on in the form of fertilizers, fungicides and pesticides.

Line-Clearing Changes

Tree companies can no longer afford to have "hatchet men" on line-clearing jobs, said Riley Stevens, Stevens Tree Surgery Co., Portland. "People have come to recognize the tree as a thing of beauty, as something to be preserved."

Stevens said he was at a loss to predict how much line-clearing there would be for his son. There's a trend to put lines underground, especially in new areas. He predicted that the next decade might bring the end of overhead wires except for principal power lines.

Trenching equipment and growth inhibitors are going to play important roles in right-of-way maintenance practices, said Glenn Burns of Kuemmerling and Associates, Canton, Ohio.

He told of tree experiments in which treated trees grew to 5½ feet in two years while untreated trees reached 17½ feet high. Mechanical tree trimming will diminish; chemical trimming will increase, he said.

Utilities make the mistake of asking for the kind of job they've determined the public approves of, then accepting the lowest bid from



Dan Lynch, executive secretary, discusses some last-minute program changes with Don Quintero, center, and Freeman Parr, program chairman. Lynch and Quintero are staff members of Executive Consultants, Inc., Washington, D.C., the new management firm for the National Arborists.