





Field day guests hear research observations on 60 varieties of bentgrasses growing on a total sand base. Note in the lower right of the big picture how dollar spot had affected one variety while plots on either side appear to be perfectly healthy. Above, Ray Keen, K-State professor of horticulture and field day chairman, shows Merle Shogren how an inch of peat was used to top off the 'washback' sand.

#### Football Field Renovation

Compaction and traffic were considerations also, as K-State built its new football field and stadium.

Field composition was specified to be 60% sand, 20% haydite, 15% peat and the rest soil, said Tom Shackelford, who's in charge of the university grounds.

Bermudagrass was sowed for quick cover. When the season opened last fall, it became apparent, Shackelford said, that ingredients weren't mixed enough.

"You'll never find a football coach who says he doesn't want a hard field," Shackelford said, "but this field was so hard that before the first game was played, 75 pairs of soccer shoes were purchased."

Of course, Shackelford continued, every time runners broke loose, they were gone, demonstrating to fans' delight the reason coaches like a hard field. K-State beat Colorado State 21-0, for its first opening-game victory since 1964.

The bermudagrass did not come back this spring, Shackelford said, so the field was planted to Windsor and Fyking bluegrass. "I'm amazed at how quickly the grass has spread," he said. Nevertheless, the plan is to plow up the field again, right after the season ends this year,

Would you believe this football field withstands 15 to 18 games a season? The Blueville Nursery in Manhattan renovates every year.

to thoroughly mix the soil with "everything we can think of."

#### Good Turf Treated as Crop

As guests paused to allow a barbecued chicken dinner to settle, they listened to Darrell Westervelt, owner of Blueville Nursery in Manhattan, tell how he renovates the football field in Bishop Stadium, part of the city-county park and fairgrounds.

Keeping healthy turf on this field isn't the normal football field maintenance task. This is no normal field, considering its intensive use.

"Last season, 18 games (high school) with three in the rain were played," said Westervelt. Fourteen or 15 is an average season.

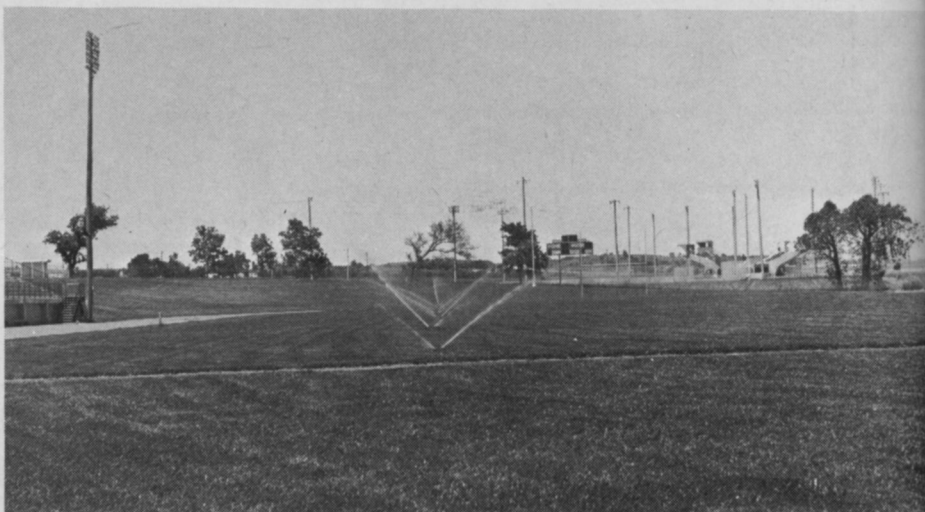
"I approach the task of building a

good playing turf as though it were a crop, to be grown for harvest during the football season," he said.

Westervelt was given the contract to care for the field after its first season in 1966. It had been seeded to bermudagrass for the quick cover.

After the season, he began the renovation by hauling in 40 tons of sludge from the city disposal plant. Forty to 50 cubic yards of top soil also were added to fill in depressions.

Seeding was done on Feb. 15, 1967; the rate, four lbs. of K31 and one pound of Kentucky bluegrass per 1,000 sq. ft. The same area got one pound of actual nitrogen and



two pounds of phosphorus. Another pound of N was added in May, and another pound in September.

After the season, the renovation is repeated; topdress with soil and sludge (applied with a manure spreader), aerate, use harrow and drag mat to break up clods, fertilize, and reseed.

"I reseed at the full rate where the turf is torn up, and at the half rate elsewhere," said Westervelt.

"We mow at three inches during the summer, then lower to 2½, or two inches during the season.

"In high school football, it's not so much of whether you win or lose the game that concerns the coaches, but how to prevent broken arms and legs.

"We cut the grass high and may even water a few days ahead to give the boys a soft place to fall."

The field incorporates a buried Weathermatic watering system with Turbo-jet pop-up sprinklers.

Before the group visited the field, they listened to biology professor Dr. Loran C. Anderson give a scholarly presentation on the anatomy of a grass plant.

It is essential to know the basic make-up of a plant, he said, before you can scientifically breed new varieties, determine how chemicals and diseases affect plant structure, or even to determine which cultural practices are best. New research methods, he added, are revealing there are more classes of grasses than first thought, and that some grasses have been improperly categorized.

#### Turf Industry Gains Recognition

Dr. Floyd Smith, vice-president for agriculture, officially welcomed the turf specialists, composed of nurserymen, golf course superin-

tendents, garden center owners, and sod producers.

There is "increasing recognition of the contributions of the turf industry in the state," Dr. Smith said. Emphasis is on improving our environment, he continued, and "we can look to the growing of plants as one way of controlling pollution."

Interest among state legislators, said Dr. Smith, has taken the form of a \$62,000 horticulture appropriation available beginning this month to deal with the unique climate and soil characteristics around the Wichita area.

Research will be initiated on horticulture problems related to the food crops and the safe use of agricultural chemicals.

"But there will be a very decided interest in research concerning turf-grasses, ornamentals and shrubs," Dr. Smith said.

#### Nitrogen Compounds as Herbicide

Earlier in the day, Richard Pence showed results of his experimental work with anhydrous ammonia used as a herbicide.

Pence's studies are supported in part by an assistantship from the Central Plains Turfgrass Foundation.

Pence enclosed three turf areas, each about one yard square and 2½ inches deep, then released anhydrous ammonia at the rates of 200 lbs. per acre, 300 lbs. and 400 lbs. An estimated 95% to 100% total vegetation kill was achieved in all three "boxes."

How the grass and broadleaf plants were killed isn't known for sure. Anhydrous ammonia, coming out of the tank as a liquid, is 28 degrees below zero. It immediately vaporizes at higher temperatures. One theory is that vegetation is killed by freezing. Another theory, based on ammonia's great affinity for water, is that, as the liquid ammonia vaporizes, it saps the plant structure of its water content, causing death by desiccation.

Whatever the cause of death, the bigger problem, Pence said, is to make the application practical. One method he intends to try is pulling the inverted box device over turf with a tractor as the anhydrous ammonia is released.

Darrell Westervelt, owner of Blueville Nursery, uses a pencil to show the three-inch height the grass is mowed during the growing season. It's mowed either 2½ or 2 inches during the high school playing season. With Westervelt is employee Leroy Hannebaum.



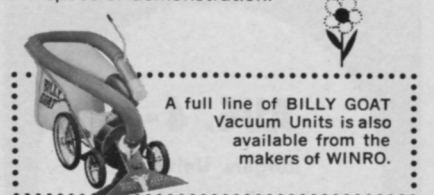
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# Here Are Program Features For Shade Tree Conference

Programming for the 45th International Shade Tree Conference is a beauty.

That opinion comes in part from the conference theme, "Beautify With Trees." The major basis, however, is the interesting, educational and entertaining agenda that's lined up for every member of the family. There are separate programs for the men, for women, and for the youth.

The date is Aug. 10-14; the place, the Portland Hilton, Portland, Ore.

Sunday is sort of the "business-before-pleasure" day. The board of directors of the National Arborist Association meets in the morning and the ISTC board of governors convenes in the afternoon.

President Keith L. Davey will officially open the conference at 9 a.m. Monday. The topic lineup looks like this:

— Inventory of vegetation resources from air and space, and implications for the arborist;

— Effect of pollution on ornamental plants;

— A banker's opinion of your business today;

— Growth factors in trunk development of young trees; and

— Growth control in trees; physiological and anatomical aspects.

Three sessions run concurrently Tuesday, on commercial, utility and municipal arboriculture.

Commercial topics are:

— What methods are open to those wishing to retire or dispose of their business;

— Encroachment of municipalities into private enterprise and what can be done about it;

— Is arboriculture a trade or profession?; and

— Managing an arboriculture business.

Municipal arboriculture deals with what's happening in this field across the country. Special reports will be given from the cities of New York, Minneapolis, Ottawa, Long Beach, Greenwich, and Lansing.

Session three on utility arboriculture considers:

— Meeting beautification and conservation needs through the off-street planting concept;

— Budgeting tree trimming;

— Helping to maintain a productive line clearance program through a tree cost analysis system;

— The street tree ordinance in support of off-street planting; and

— URD—the answer to service reliability and beauty in new residential areas.

The three groups merge for an evening session on ornamental plants of the Orient adaptable to the Northwest.

## Equipment Displays, Demonstrations

Perhaps the most practical and worthwhile feature of the conference is the wide array of equipment, materials and merchandising exhibitors.

A 45-minute "Exhibitors Period" is scheduled for Monday morning and half-hour breaks are scheduled each half-day during other days of the convention.

Field demonstrations are Wednesday morning, 9 to 12 noon. Educational sessions will be at the hotel in the afternoon. Some three dozen exhibit booths are available.

The special educational sessions

Wednesday afternoon will be presented in three categories — general arboriculture, utility arboriculture, and municipal arboriculture.

General arborists will learn about cabling and bracing techniques and tools for tree pruning safety.

Utility arborists will hear the same session on safety. In addition, topics are utility engagement in city tree planting programs and a presentation on opportunity for safety on and off the job.

Municipal arborists will spend the afternoon touring and discussing street trees and special city tree-planting and maintenance problems.

Much of Thursday will be devoted to reports and discussions of insects. There will be one session on the use of trees in unusual landscape designs.

At 11 a.m., the conference business session will convene. The agenda includes election of officers and asking recommendations for convention cities for 1974 and 1975.

## Bring the Family

If the problem in your house is whether to take a family vacation or attend the Shade Tree Conference, then your troubles are over. Have the family start reading this story from the back.

The entertainment lineup is a family vacation: Monday evening — a visit to J. Frank Schmidt & Son Company nursery and a barbecue at a scenic spot; Wednesday evening — Buses leave for Tillamook and a trip up the scenic coast to Gearhart's, with a salmon barbecue on the beach; and Friday — post convention tours are available to Alaska and the Canadian Rockies.

Special programming for women includes other entertainment. On Monday, they will travel the scenic Columbia Highway, second highest in the U.S., to Multnomah Falls for lunch. They'll visit a beautiful grotto en route.

Tuesday morning is open, except a meeting of the "Shady Ladies." After a luncheon, with a TV personality as speaker, women leave for a tour of the city. The highlight is the world famous international rose garden in Washington Park.

Wednesday and Thursday are open for shopping.

Special features on the teenage and youth program include tours Monday to the Portland zoo and the Oregon Museum of Science & Industry; tour of the Bonneville dam and fish hatchery at Multnomah Falls Tuesday; trip to Janzen Park Wednesday; and a pool party at the hotel Thursday.

**3<sup>RD</sup>  
Annual  
Field  
Days**

**AMERICAN  
SOD PRODUCERS  
ASSOCIATION**

**AUG. 4-5**

**Rutgers University  
New Brunswick, N.J.**

(See Story Pg. 28)

## Meeting Dates

Dates for this column need to reach the editor's desk by the 10th of the month preceding the date of publication.

**National Fertilizer Solutions Association, Round-Up Program**, Ridpath Hotel, Spokane, Wash., July 8-10.

**National Fertilizer Solutions Association, Round-Up Program**, Hotel Muehlebach, Kansas City, Mo., July 22-23.

**American Sod Producers Association, Third Annual Field Days**, College of Agriculture and Environmental Science, Rutgers University, New Brunswick, N.J., and Princeton Turf Farms, Cranbury, N.J., Aug. 4-5.

**Turfgrass Field Day**, U.S. Department of Agriculture, at the Agricultural Research Center, Beltsville, Md., Aug. 6.

**45th International Shade Tree Conference**, Hilton Hotel, Portland, Ore., Aug. 10-15.

**National Fertilizer Solutions Association, Round-Up Program**, Marriott Motor Inn, Atlanta, Ga., Aug. 13-14.

**Golf Course Superintendents Field Day**, University of Rhode Island, Kingston, R.I., Aug. 20.

**Lawn and Utility Turf Field Day**, University of Rhode Island, Kingston, R.I., Aug. 21.

**Turfgrass Management Conference**, Hawaii Turfgrass Association, East West Center, University of Hawaii, Honolulu, Hawaii, Aug. 27-29.

**Virginia Polytechnic Institute Turfgrass Field Days**, V.P.I. Experimental Plots, Blacksburg, Va., Sept. 3-4.

**Annual Turfgrass Field Day**, Michigan State University, East Lansing, Sept. 4.

**Lawn and Ornamental Days**, The Ohio Agricultural Research and Development Center, Wooster, Sept. 9-10.

**Michigan State University Sod Producers' first field day** at the Much Experimental Farm northeast of East Lansing, Sept. 10.

**Virginia Cultivated Turfgrass Association sod field day** at the Kidwell farm near Remington, Va., just off U.S. 29, Sept. 14.

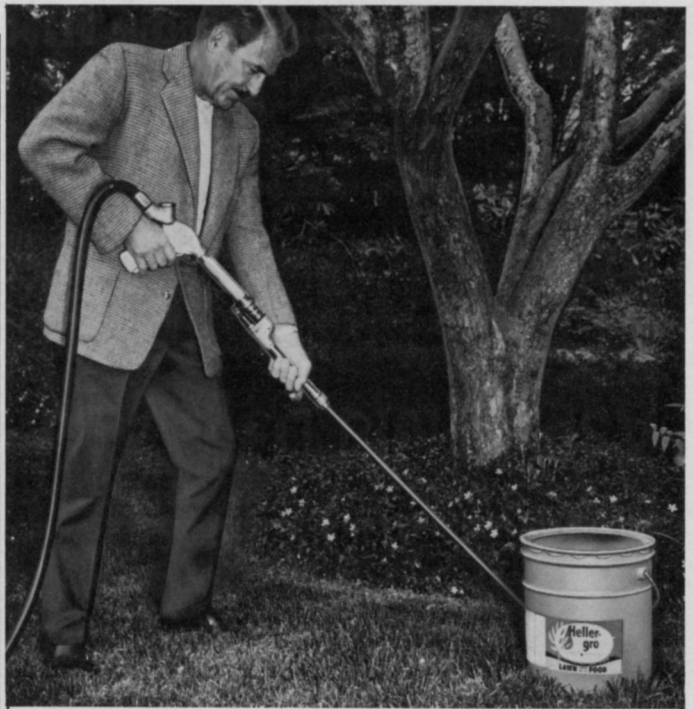
**Pacific Northwest Pesticide Applicators Association**, Annual Meeting, Renton Inn, Renton, Wash., Sept. 19-20.

**Central Plains Turf Conference**, Kansas State University, Ramada Inn, Manhattan, Kan., Oct. 15-17.

**National Fertilizer Solutions Association, National Convention and Equipment Exhibition**, Cincinnati Convention Center, Cincinnati, Ohio, Nov. 9-13.

**Ohio Turfgrass Conference and Show**, Sheraton-Cleveland Hotel, Cleveland, Ohio, Dec. 1-3.

**National Aerial Applicators Association, Third Annual Conference**, Roosevelt Hotel, New Orleans, La., Dec. 7-10.



## "Heller-gro improves health, foliage and color of trees and shrubs"

says P. N. Hanson, of Parr & Hanson, Inc., Arborists, Hicksville, New York

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# The Cissels Employ A Turf Bird

By MARJORIE S. CISSEL  
Brookeville, Md.



Photos by Walter Argenbright, Jr., Etchison, Md.

It's not a bird, it's a plane and the boss is in it. Lambert Cissel . . .

**W**E lifted off from Plymouth, Ind., airport bound for Maryland with clouds hovering gray and windswept at only 2000 feet. Rain was moving in behind.

Promises for better weather turned out to be just promises. In the mountainous terrain of western Pennsylvania, we met the swirling fingers of a squall line.

We had been toying with the idea of climbing over the weather for the past 100 miles. If it meant climbing to 14,000 feet, we would need oxygen, and probably the only thing we didn't have was the oxygen tank.

My husband, Lambert, glanced toward me for a mental reading. Suddenly he decided, pushing the throttle to full power and pulling the nose high.

I began to wonder if we could go high enough, then stopped wondering and started watching the sweeping altimeter hand . . . 5000 feet . . . 7000, 9000, nothing.

Then at 10,500, the highest we had ever been, the plane suddenly popped into the clearest, brightest sunlight we had ever seen.

We rose to 11,500 and settled back for a peaceful trip across the moun-

tains. The engine purred like a sleeping cat.

This was our recent trip home from a Turf Field Day at Shamrock Turf Nurseries at Hanna, Ind. Total hours in the air: 4.5. Total miles traveled: 504. Overnight lodging fees: none.

Such are the stories told by those who run their sod business from a cockpit. Kimberthy Turf Farms is among them.

Kimberthy's "turf bird" is a dependable flying machine called the Cessna 180. Its 230 horses lift it easily from the shortest strips (including sod fields). This particular 180, a four-seater, has a cruise speed of 130 to 160 miles per hour and a cruise range of 700 miles to 800 miles. It is equipped with ADF, a 90-channel Lear (VHF), LF, Omni and a four-hour oxygen supply for five.

Lambert Cissel, president of Kimberthy and owner of the plane, considers the 180 more than a luxury item. It's a very real part of the business.

Sod hunting is its major asset. When the turf supply gets thin, Lambert takes to the air for a quick examination of the countryside.

Spotting a good turf field isn't

difficult, and at 140 crow-flying miles per hour, a lot of land can be combed in a short time.

At the same time, he can spot-check his crews. There's nothing like having the boss "drop in" to keep them on their toes.

On occasions, he has air-delivered pay checks.

It is on the long-range trip, however, that the turf bird really proves its worth. Several years ago, Lambert found he would have to wait at least a week for a tractor parts shipment from Richmond, Va. Instead, he took to the air and, despite one stop because of darkness and morning ground fog, got back in mid-afternoon of the next day.

Attending equipment demonstrations and field days are other activities when the plane is handy. Often, he drops in on neighboring turf producers, distant yet within the state, for their field days.

According to a magazine for those with flying interests, we aren't, by a long shot, the only ones floating our way through the business world. Some 1300 large companies and 11,000 small companies own and operate their own aircraft, the article said.

At least 40,000 aircraft are operated mainly for business purposes in the U.S., said the magazine. Business flying is a \$2 billion-a-year industry. Airplane costs range from a \$2,500 single engine radio equipped plane to a \$2 million jet.

If you wonder why we bother to

**Next  
Issue**

**D. W. Morrill Tells How  
To Start a Sod Farm**



... lands his Cessna 180 to chat with employee James Austin, on the forklift.

use a plane when a great deal of its uses could be accomplished almost as well without leaving the ground, the first answer would be: To save time.

If you compare using your own plane with using a commercial plane, other good answers are: Independent scheduling, reliability, safety, reaching off-airline cities and airfields.

Our reasons for incorporating a plane into the business, initially, had nothing to do with saving time. We love to fly. With those who love to fly, as with those who hunt, boat or fish, any excuse to get out (or up) is a good one.

And when it's discovered this excuse not only saves time but gives a business-deductible pleasure as well, then why not?

We could find sod, deliver checks and travel without one, but we're sure it could not be done as effectively . . . and certainly not done with as much pleasure.

## \$1 Buys 16 Publications On Lawns and Landscaping

A 16-page publication "package" on lawns and landscaping is available as a special offer from the Cooperative Extension Service, Michigan State University.

The price is \$1.00 for the 16 publications — cash, check or money order — from the Bulletin Office,

Box 231, East Lansing, Mich. 48823. The offer will be kept open until Aug. 1.

Subjects include planning a landscape, controlling insects, selection and planting of trees and shrubs, outdoor lighting, pruning, and paving of home grounds.

## Michigan Golf Course Damage, Also

As a part of the June issue, we reported the presence of fairy ring on one Michigan sod farm.

In his spring turf report, Dr. James Beard, crop scientist at Michigan State University, has identified *Fusarium* blight as the cause of the dead rings of grass.

"In most cases, spring kill in the circular ring pattern cannot be attributed to the direct activity of *Fusarium* blight," said Beard.

"It appears there is an interaction between the *Fusarium* blight disease and low temperature kill. The turf in these circular rings has been weakened by *Fusarium* activity the previous summer and fall. Actual kill was caused by direct low temperature in-

## Grass Use, Crop Forecast Reported at Merion Meeting

Record disappearance, or use, of Merion Kentucky bluegrass — 5,246,004 lbs. — was reported at the recent 16th annual meeting in Spokane, Wash., of the Merion Bluegrass Association.

Unsold grass inventory was listed at 1,925,443 lbs. of quality seed. Crop statistics indicate an acreage decrease in this year. The 10,687-acre production estimate compares with 12,305 acres harvested in 1968. It was concluded that Merion still led the field, due to its built-in promotion program and its good dealer profit margin.

Arden Jacklin of Jacklin Seed Company, Dishman, Wash., was re-elected association president. Other officers are Arnie Bonnicksen of Western Farmers Association, Pasco, Wash., vice-president; Dick Bailey of W. R. Grace and Company, Rudy-Patrick Division, Hal-say, Ore., treasurer, and James Eveson, La Grande, Ore., secretary.

Directors are George Royes of George Royes Grass Seeds, Imbler, Ore.; Ted Freeman of Madras, Ore.; Bill Rose of Woodburn, Ore.; Elmer Schneidmiller of Liberty Lake, Wash.; A. B. Renz of Veradale, Wash., in addition to Jacklin, Bonnicksen and Bailey.

jury to the hydrated plants within the weakened region of the ring."

Dr. Beard, also in the spring report, said Michigan golf courses suffered extensive damage last winter from desiccation. He described injury to greens "more severe in 1969 than in the previous ten years."

"The absence of snow cover combined with low temperatures and high winds resulted in severe injury to elevated, exposed slopes and high spots on many golf courses and very extensive injury to greens. Severe injury was most common on greens where an extensive thatch was present or where a late fall aeration was practiced with the holes left open throughout the winter."



Wiley Miner of Princeton Turf Farms, Cranbury, N. J., shows the location of the Aug. 5 sod equipment demonstration to Dr. Henry W. Indyk (next to sign) and William Rapp. Miner and Indyk are president and executive secretary, respectively, of the American Sod Producers Association. Indyk also is Rutgers University turf management extension specialist. Rapp, of Rapp Sod Farm, is president of the New Jersey Cultivated Sod Association. The American Sod Producers Association is sponsoring its third annual sod field days Aug. 4-5.

Dr. C. R. Funk (kneeling, right) demonstrates qualities of a Kentucky bluegrass hybrid he has developed at Rutgers University to Al Neuberger (kneeling, left) and Drs. R. E. Engel (standing, left) and Henry W. Indyk. Turfgrass plots will be featured at the ASPA field days. Neuberger is supervisor of the University's turfgrass research plot maintenance, while Engel is a professor in turfgrass management.

## ASPA Field Days Aug. 4-5

Plans for the American Sod Producers third annual summer field days have been completed, according to the group's executive secretary, Dr. Henry W. Indyk.

Events, scheduled for Aug. 4-6, promise to be among the largest and most interesting conducted by the recently formed national organiza-

tion of sod producers and associated interests, Dr. Indyk said. The Cultivated Sod Association of New Jersey is host.

Activities will begin Aug. 4 at the College of Agriculture and Environmental Science campus of Rutgers University, Route #1, New Brunswick, N.J. A tour of the turf-

grass research plots will be conducted by Drs. C. R. Funk and R. E. Engel. Visitors will see results of the first Kentucky bluegrass hybridization program.

At the evening dinner meeting, Francis Raymaley, New Jersey Department of Agriculture director of resource development, will speak on "Future Platters of Land Development in New Jersey."

An all-day demonstration of sod production equipment is scheduled for Aug. 5 at the Princeton Turf Farms home office, Union Valley Rd., Cranbury, N.J. The latest line of sod production equipment and materials will be displayed and demonstrated under actual field conditions. Lunch and refreshments will be served.

These activities have been scheduled to coincide with the biennial USDA field day, Aug. 6 at the Agricultural Research Center, Beltsville, Md. A tour of the Center's facilities and turfgrass research plots is scheduled.

### AMERICAN SOD PRODUCERS ASSOCIATION invites your participation

If you are a Sod Grower you should be  
a member of ASPA.

Keep in touch with progress.  
Allied Industries are welcome.

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## Turfgrass Foundation Gives \$10,000 Grant to OSU

A \$10,000 turfgrass management study grant has been awarded for the second consecutive year to Ohio State University by the Ohio Turfgrass Foundation.

According to University Associate Professor of Agronomy Dr. Robert W. Miller, who will conduct the study, the grant makes possible additional research in the fields of better turfgrass on golf courses, industrial grounds, cemeteries, parks, and home lawns.

The Ohio Turfgrass Foundation was founded in 1961 as a nonprofit organization incorporated under Ohio laws. Its three basic purposes are to promote research in and disseminate information on turfgrass management, as well as to encourage turfgrass training of students. It offers several scholarships annually and sponsors a turfgrass conference and show each year. Dates for 1969 are Dec. 1-3 in Cleveland.

## Soil Test, Not Plant Use Basis for Fertilizer Need

Some exercises in pencil pushing can be misleading when you figure fertilizer needs, warns Curtis Overdahl, extension soils specialist at the University of Minnesota.

Overdahl says plant composition sometimes is mistakenly used as the major basis for a fertility program. This reasoning that "whatever is removed must be replaced" can cause serious miscalculations of plant nutrient needs.

Merely by replacing the plant nutrients that are removed, underestimates can occur, since factors such

as leaching and fixation losses and the lack of 100% efficient plant use are ignored.

Overestimates of plant nutrient needs are possible, also. Some soils may have sufficient quantities of an element so that additions won't be necessary in a lifetime.

Knowledge of plant composition is important, but exercise care in how you use it, Overdahl adds. A complete soil testing program is your best bet for determining fertilizer needs.

## Phosphorus Is Key To Lake Enrichment

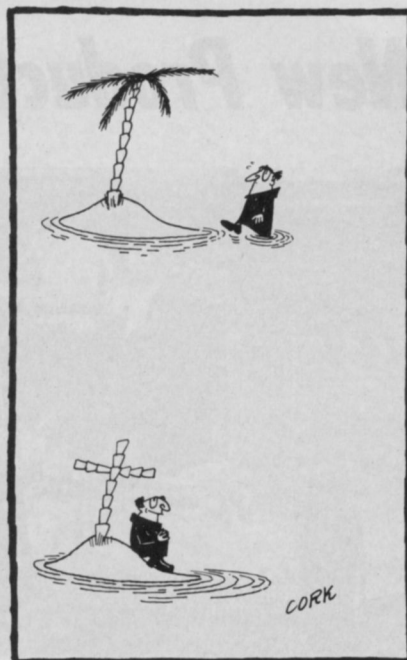
Phosphorus is a key nutrient in the regulation of water plant growth, according to University of Minnesota researchers studying the process of lake enrichment and aging.

University limnologist Robert Megard reports that the amount of phosphorus is often the limiting nutrient of water plant growth.

Even small amounts of phosphorus can cause a great deal of algae growth, he says, estimating that the 3 pounds of phosphorus in the surface layer of an acre of Lake Minnetonka, for example, produces 70 pounds of new organic matter a day.

During a 60-day summer period, more than 2000 pounds per acre of actual algae organic matter can accumulate, according to Megard.

Lowell Hanson, university soils scientist, reports that surface water and sediment are big sources of phosphorus from the land. When soil is able to stay in place and come in contact with soluble or suspended phosphorus compounds, soil particles absorb the phosphorus quite efficiently, he says.



He explains that spray irrigation of sewage or feedlot effluents is a possibility for cleaning up phosphorus-polluted waters. Another method may be the use of inland potholes used as sites for settling and absorbing nutrients before they get into the lakes.

Analysis of tile water samples from fertilized fields in southern Minnesota indicate that water percolated through the soil contains about 20 parts of phosphorus per billion parts water, the researchers report. This would mean that about 1/100 of a pound of phosphorus would be removed from an acre of land if 2 inches of water were collected by the tile lines over a year's time, they explain.

On a township basis of 23,000 acres this would total up to the phosphorus equivalent of 1200 pounds of a 0-45-0 phosphate fertilizer, they add.

## Slide Rule 'Errs' on Sod Webworm Control

An error has been found in the 1969 Cornell recommendations for sod webworm control, says Kirk Personius, Monroe County, N.Y., Cooperative Extension Agent.

Recommendations for sod webworm control call for Sevin (carbaryl) at the rate of 2 qts. of 4F; or 4 lbs. of 50W per 5000 sq. ft. This results in more than 17 lbs. per acre, or almost twice that recommended by the producers of Sevin.

The United States Department of

Agriculture recommends 4 oz. of Sevin per 1000 sq. ft., or 174.42 oz. per acre. The Cornell recommendations, calculated on a per-acre basis, resulted in 17.42 lbs. per acre. Apparently the person making the calculations, said Personius, made two mistakes — thinking in pounds rather than ounces and misplacing the decimal point.

In any event, he added, "we think 17.42 lbs. per acre is too much and suggest this be reduced."

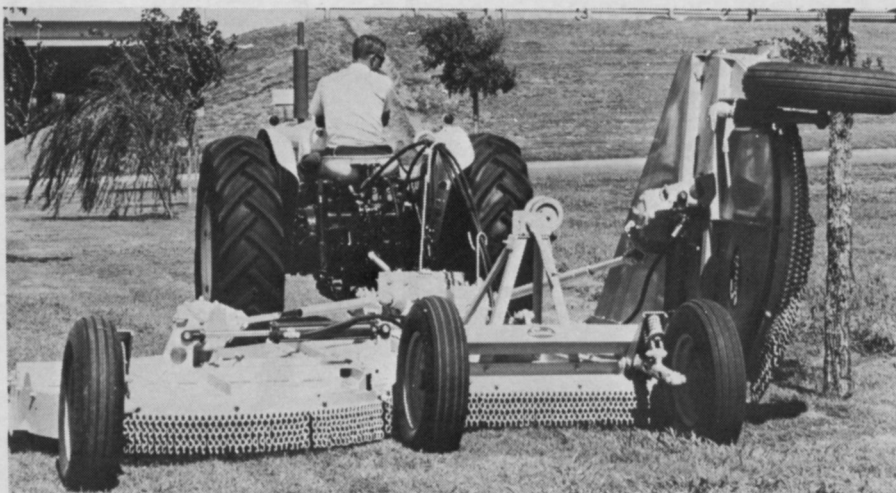
USDA recommendations, when raised to a per-acre figure, came to about 11 pounds.

Until more experimental evidence is available, the New York Extension Service advises using carbaryl at the rate of between six and 10 lbs. per acre for control of sod webworms.

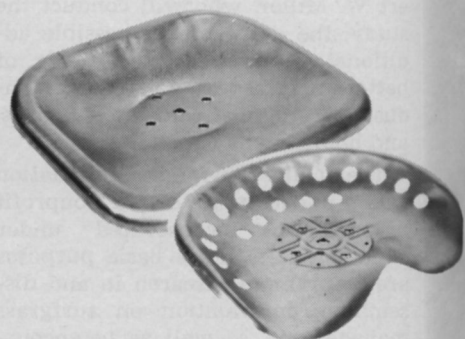
Therefore, the 1969 Cornell recommendations should be changed to 1 qt. 4F, or 2 lbs. 50W Sevin per 5000 sq. ft.

# New Products . . .

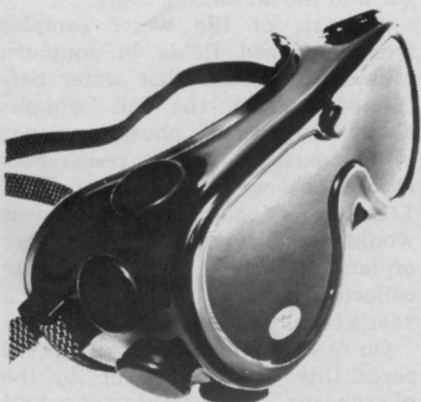
## Designed for the Vegetation Care Industry



Servis Equipment Company, Dallas, Tex., has introduced its new FLEX XV Flex-Action Rotary Cutter for contour mowing, brush cutting, and row crop shredding operations. The FLEX XV weighs more than 3,350 lbs. without optional accessories and clean cuts a full 15-ft. wide swath. Wings raise to 90° maximum and lower to 22° minimum heights while the unit is in continuous operation. It is designed to operate behind wheel-type tractors with drawbar ratings from 50 h.p. For more details, circle (701) on reply card.



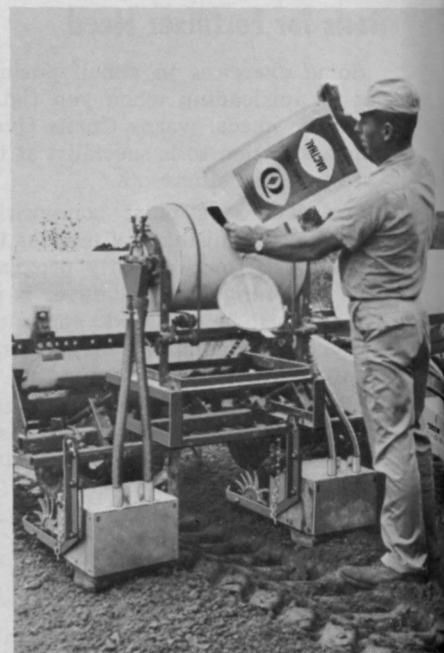
Logan Metal Stampings, Inc., Akron, Ohio, announces two new metal seats for riding mowers and garden tractors. Both models feature heavy, lock-reinforced backing plates for extra rigidity, are constructed of 13 gauge steel, and are available in rectangular and round styles. For more details, circle (702) on reply card.



Glendale Optical Company, Inc., Woodbury, N.Y., announces an all-plastic welding goggle with a soft vinyl body and lenses of IRex, an infra-red and ultra-violet absorber developed by American Cyanamid Company. Called the Glengard 715, the goggle features an 0.60 plastic wide view lens available in shades from 3 to 8. Also, lenses are available to fit standard welding goggles in these shades, in 50mm sizes. Glengard plastic filter plates fit welding helmets and come in sizes 2 x 4¼" and 4½ x 5¼", shades 3 to 14. The lenses are in compliance with U.S.A.S.Z87-1-1968. For more details, circle (705) on reply card.



Lakes Supply Company, Inc., Dundee, Ill., introduces a turf weed control unit, available in three models, to curb the "drift" of spray weedicides that kill plant life. Called "The Drip," it operates by dripping liquid weed killer onto a roller, coating it with a film. The damp roller kills the weeds it contacts. Model 101, illustrated, is equipped with a 36" wide roller and a 15½-gal. capacity tank. For more details, circle (706) on reply card.



Diamond Shamrock Chemical Co., Cleveland, Ohio, has developed a dry herbicide applicator allowing application and planting in single operation. The applicator, which eliminates water carrying, mixing and pouring, is designed for use with Diamond's Dactol W-75 preemergence weedkiller. From a 50 lb. capacity drum, dry herbicide rotates and is metered at a preset rate through flexible tubes onto the ground in 12" bands. It needs refilling only once every 15 to 20 acres. Flaps on the application tubes minimize wind drift. The applicator may be rear-mounted, tool-bar mounted, or front-mounted. For more details, circle (707) on reply card.