

ciation but is affiliated with the National Aerial Applicators Association proved to be a firm advocate of an association. In the NAAA, he said, the applicators who do not participate as members in association activities are usually the ones who are troubled with drift, materials, requirements, and similar problems.

Technical Information

Technical representatives of suppliers were featured on the educational section of the program. William H. Pierson, Diamond Shamrock Corporation, Portland, Ore., discussed turf weed and disease control. He explained that dacthal W-50 for turf is no longer available but is now supplied as W-75. In response as to why dacthal cannot be supplied as a liquid, Pierson explained that it is possible, but is an expensive and technical process and not economically feasible for the user.

Pierson also cautioned against using dacthal on golf greens because of the high chemical residue common to most greens. This precaution is especially appropos on Toronto or bentgrass greens. Residues build up in greens soils, he said, and addition of dacthal may cause an imbalance.

Systemics are not a panacea for all problems according to Clark Amen, American Cyanamid Co., but they are helpful. Amen proved a popular addition to the program as he listed all major systemics on the market today, and discussed the characteristics of each. Amen emphasized to each sprayman to carefully "read the label," whether using the product for soil or foliar application.

Among advantages of systemics which Amen pointed out are that a systemic can be sprayed on foliage and be expected to stay and it can be used at lower rate because a systemic is highly



Don Miller, A-1 Spray Service, Tacoma, Wash., left, visits with Jerry Mills, Miller Products Co., center, and Roger Hastings, Elanco Products Co., Tacoma, Wash.

active. By placement with the granular form the sprayman can avoid upsetting the balance of nature and killing off helpful predator insects. Also, Amen said, the systemic offers a method of achieving early season control. One application, he said, can give protection for six to seven weeks.

Precautions

Limitations of systemics, Amen said, include the fact that they are very toxic and require extreme care in handling. Also, the systemic does not translocate back toward the trunk of a tree and requires careful application to assure coverage. Systemics can also delay germination of seed unless the chemical is placed at the side of the seed.

By way of summary, Amen said that systemics are a valuable tool, but that this does not mean they are a substitute for other things. He urged spraymen to take the approach of the doctor and carefully consider each problem before determining whether to use a systemic.

An unusual and helpful session on the program was a 4-hour session with a psychiatrist, Dr.

John L. Shirley, of Group Dynamics, Inc., Dallas, Tex. Dr. Shirley tied a discussion of the physiological make-up of the individual with an approach to selling. He urged spraymen to take note of the personality type being dealt with in determining sales approach. This type of program was unique in an annual meeting such as the Spray-O-Rama, but proved to be extremely popular with the group and apparently most helpful. President Jim Overton said that it was planned in response to the policy of the association, the intent of which is to feature educational segments in each annual meeting.

New officers elected for the coming year are: Stan Raplee, Washington Tree Service, Seattle, Wash., president; Lew Seflon, Lew Seflon Spray Co., Portland, Ore., and Kenneth Crane, Turf-spray, Edmonds, Wash., secretary-treasurer.

Outgoing officers who planned the '68 Spray-O-Rama and generally served as hosts were: Jim Overton, Miller Products Co., Portland, Ore., president; Seflon, vice-president; and Charles Seibold, Major Spray Service, Portland, Ore., secretary-treasurer.



Thomson Machinery's newly acquired Overland scraper line offers 1, 1½ and 2-cubic yard capacities. Scrapers with larger capacities will be offered in the near future, according to Thomson.

Thomson Machinery Adds Overland Scrapers to Line

Thomson Machinery Co., Inc., Thibodaux, La., manufacturer of sugar cane field equipment, recently acquired the name, design and manufacturing rights to the Overland scraper from Overland Equipment Co., Inc., Buena Park, Calif.

A subsidiary of Seilon, Inc. of Toledo, Ohio, Thomson announced no major changes are planned immediately on the scraper line. Presently, two models are available in manually operated M-100, M-150 and M-200; and hydraulically operated H-100, H-150, and H-200. Scrapers with 3, 4½ and 6-cubic yard capacities will be available in the near future, Thomson revealed.

Purdue Engineers Evaluate Electric Turf Heating

Electric heating of turf in sports stadiums is now beyond the experimental stage and may be the forerunner of a technique to help feed people, according to Purdue University's J. R. Barrett, Jr. and F. W. Harwood of the agricultural engineering department and W. H. Daniel, turf specialist in the agronomy department.

In describing heating systems

now in use, the Purdue men discussed the objective of the Lambeau Field (home of the Green Bay Packers) installation, which was to prevent the field from freezing, at least until the National Football League play-off game last December. Other hoped-for results included: seeding and sodding cost reduction, faster rejuvenation of damaged turf, reduced injuries, faster drying and some snow melting.

Green Bay's system cost an estimated \$80-\$100 thousand; the heating bill \$10-\$20 thousand, according to the engineers.

In commercial turf heating, a system of cables is buried six or seven inches in the earth, the exact design varying with climatic location, availability and cost of power, extent of and use for each turf area and the grass variety used, they said.

However, shallowly buried cables can cause headaches, they revealed. Groundskeepers must be careful not to puncture the cables, as breaks are difficult and time consuming to locate.

They quoted Green Bay coach Vince Lombardi, who said, "The 'electric blanket' was a very successful operation—we just have to use a different tarp. Moisture forms between the tarp and the turf and freezes—that is what caused the field problems we had for the championship game."

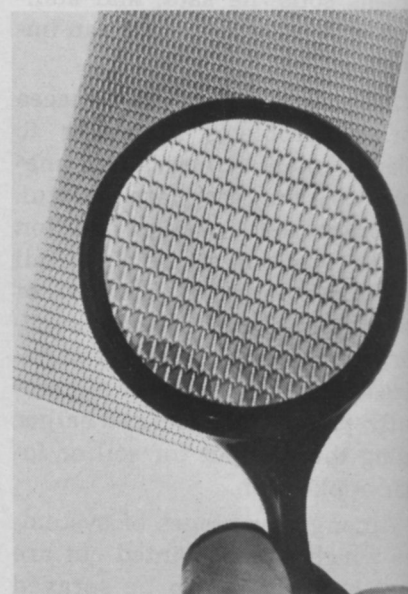
Looking ahead, the Purdue engineers said that electrically heated golf greens are under consideration. Perhaps the modification of temperatures of plant-supporting mediums will some day help grow food, they added.

National-Standard Offers New Pierced-Metal Screen

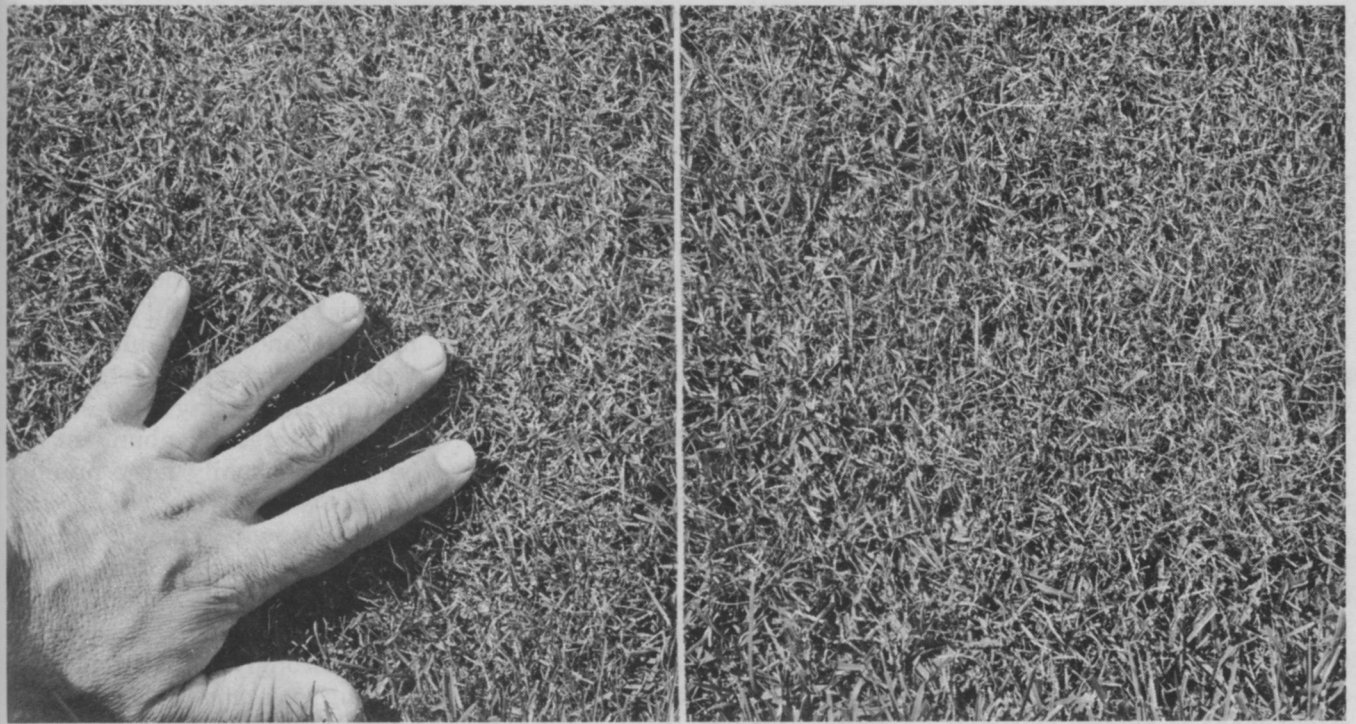
A new design in pierced-metal screens has been introduced by National-Standard Co., Perforated Metals Plant, Carbondale, Pa. Stainless steel Slotted Conidure™ offers long life, improved throughput, increased screening efficiency and reduced clogging for screens in centrifuges, dewatering presses and other dewatering equipment used in chemical and food processing, according to the company.

A unique piercing process insures that slots are highly tapered in the screening direction. By permitting sheet thickness to exceed hole diameter, this technique combines long-screen life with high throughput.

Contact the Carbondale plant for complete details.



New Slotted Conidure™ metal screen provides unique tapering of slots to prevent clogging or binding, according to National-Standard.



Fylking and Highland bentgrass planted side by side and both mowed at one-half inch heights. At this close clipping the 0217 Brand Fylking looks almost as good as the Highland.

Promising for Close-Mowed Luxury Lawns

Fylking and Tifdwarf Bermuda

By Dr. Robert Schery, The Lawn Institute

IN THE UNITED States there are no more esteemed lawn-grasses than the Kentucky bluegrasses and bermudagrasses. Both species seem to have "nearly everything" — attractive texture, beautiful color, ability to spread abundantly and recover quickly. But no species is entirely perfect. The Kentucky bluegrasses have not adapted too well to close-mowing; though the grass persists, weeds invade at a low clipping height. Many varieties are also susceptible seasonally to such prevalent diseases as leafspot and stripe smut. Bermudagrasses require a lot of attention to look their best, and are not tolerant of shade. Most selections grow so rapidly that frequent mowing and thatch removal are required;

it becomes expensive to keep ahead of the grass in an era of costly labor.

But breakthroughs seem to have been made on both fronts recently, — development of Fylking Kentucky bluegrass for much of the North and upper South, Tifdwarf bermudagrass for the deeper South. Both are too new to be thoroughly tested in all climates, under various modes of care; but they promise to correct the deficiencies just cited. Fylking thrives mowed an inch or less, and reports indicate it to be quite resistant to disease, especially to stripe smut, a terror for Merion and Windsor. Tifdwarf bermudagrass was discovered around 1963 at several locations, as a mutant or "sport" out of Tifgreen (the most wide-

ly used golf green variety in the South). Quickly accepted for golf greens, it is now being investigated as a lawn possibility which can endure light shade and which may need mowing as little as monthly.

Fylking from Sweden

Perhaps more is known about Fylking for lawns than about Tifdwarf. Fylking was discovered in Sweden a number of years ago, and widely proved there before being licensed for production in America as the 0217 strain. Hogg and Lytle in Canada, and Jacklin Seed Company in the United States, are the North American licensees. Their North American escotype has been widely distributed to research centers for observation

during the last three years, while seed supplies were being built up. Substantial information has been accumulated on Tifdwarf for golf greens, too, by the Coastal Plain Experiment Station (where Tifgreen originated) and Southern Turfgrass Nurseries at Tifton, Georgia, and elsewhere in the Southeast. Only recently has Tifdwarf been suggested for lawn and fairway rather than solely as a greens grass, uses that are still largely experimental. A fine review of Tifdwarf was given by J. B. Moncrief of the USGA Green Section at the 8th Annual Turfgrass Short Course at Auburn University. Moncrief's presentation appears in the Proceedings of that conference, issued in the spring of 1968. Those interested in Tifdwarf possibilities might want to review this summary.

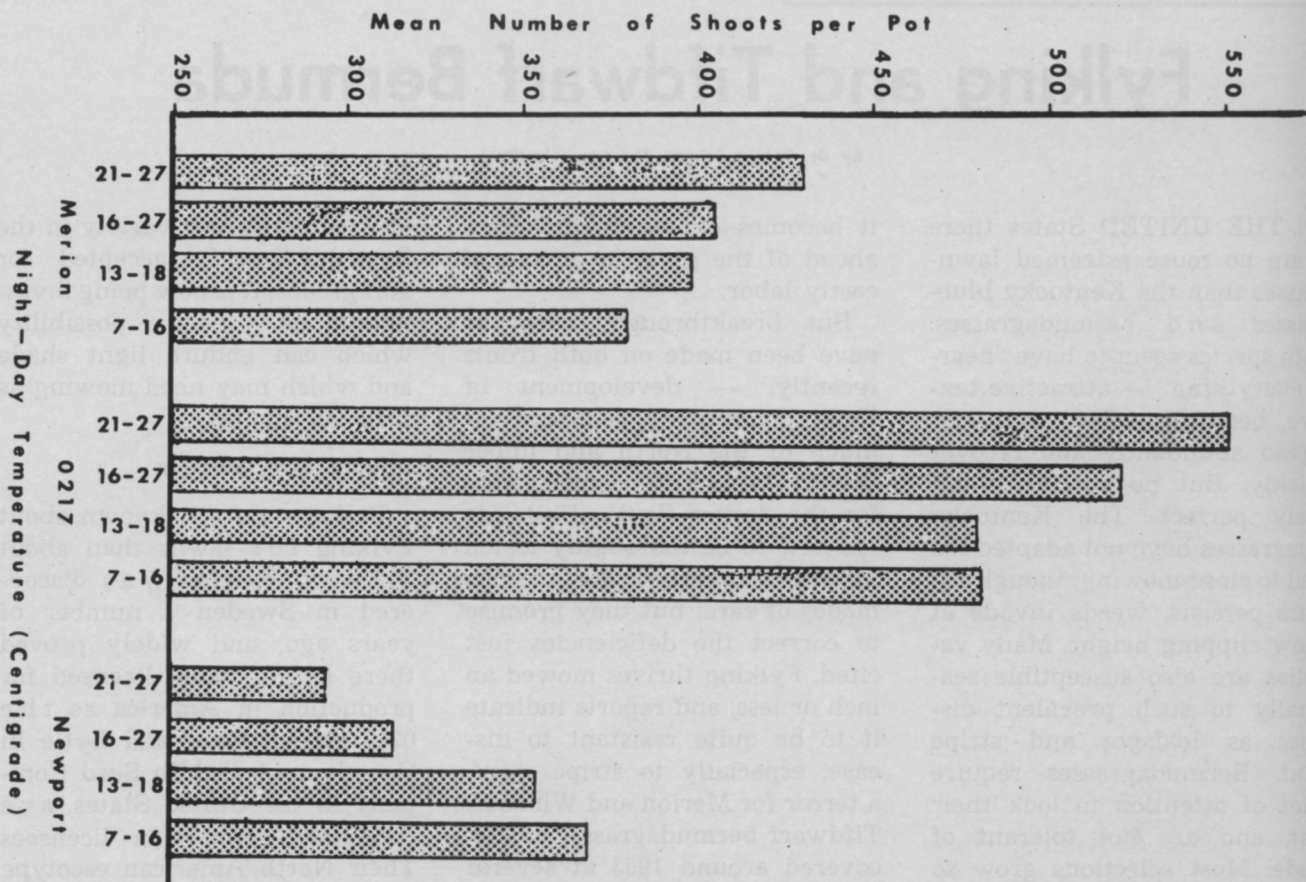
Only this year is Fylking seed being offered to the public, al-

though many sod growers received supplies from which to start sod in 1967. Fylking has been grown at the Lawn Institute for about two years. Some universities have had it under test for several years, and performance reports are beginning to be released. One of the most comprehensive is from Rutgers University in New Jersey, part of the annual "Report on Turfgrass Research" for 1967 (Bulletin 818). With perhaps the most advanced bluegrass breeding program in the United States and with bluegrass selections from all over the world to compare, Rutgers rates Fylking neck and neck with the best of Dr. Funk's own bluegrass hybrids. In one test Fylking rated second, in another fourth, comparing about 60 of the best bluegrass finds Rutgers has assembled. Fylking led all present commercial varieties in summer survival.

Compared to most bluegrasses Fylking seed is a "heavyweight." Perhaps because of this husky seed Fylking sprouts and establishes quickly. In our experience Fylking reaches a growth plateau after several weeks, and for good future performance should be well fertilized. Its leaf blades are narrower than with most varieties (viz. Merion), curve or twist in a graceful arch. Thus more than most bluegrasses Fylking produces a felted surface of interlacing blades. This is accentuated by abundant tillers, an unusually large number of shoots from the crown. Under low mowing many of the tillers lie nearly prostrate. Even under higher mowing the leaf base is reasonably short and the blade strongly bent back, thus tending to escape the mower.

No Serious Disease

So far we have experienced no serious diseases during the grow-



Test data in graph is from Dr. Victor Youngner at the University of California, Riverside. This research compares three different bluegrasses. Note that the average number of shoots per pot is greatest with Fylking, and that compared with Newport it is much more active in the higher temperature ranges.

ing-season on Fylking, in keeping with reported observations around the country. Fylking has not been so competitive in winter as the native bluegrass, although with extra fertilization winter growth may have been more evident. Some snowmold or similar winter discoloration has been noted, perhaps accounting for the fact that Fylking raves mostly focus upon performance during the growing-season under reasonably temperate conditions. How far southward Fylking can be used effectively as a permanent turf is still not known, although its low growth suggests excellent possibilities for winter-seeding Tifdwarf golf greens in the South. The grass has been planted to lawns so far south as Alabama, and is under test in bluegrass-bermudagrass borderland near Raleigh, North Carolina. It has performed well in southern California. Its low growth would seem to make it a "natural" for fairways in combination with other dwarf varieties such as Highland bentgrass.

The Jacklin Seed Company, patentor for the 0217 strain, recommends that it be provided at least 4 lbs. of nitrogen per 1000 sq. ft. annually, divided more or less evenly through the growing season. New seedings should be watered frequently until established, after which watering may await signs of wilting. A seeding rate of 2 lbs. to the 1,000 sq. ft. is recommended for Fylking sowed alone. August and September are the best time to start new lawns. Because tillers and spreading rhizomes are produced so abundantly, in time Fylking seeded alone. August and September are the best times mechanically in early spring or autumn, marring lawn appearance for a few days only. The low growth of Fylking may permit somewhat less frequent mowings than with taller bluegrasses, but, as with any grass, it is well to mow often enough so that only

about one-third of the green leaf is removed at a clipping. Although Fylking endures very low mowing, it probably will be more attractive and with fewer weeds if kept an inch high or nearly so.

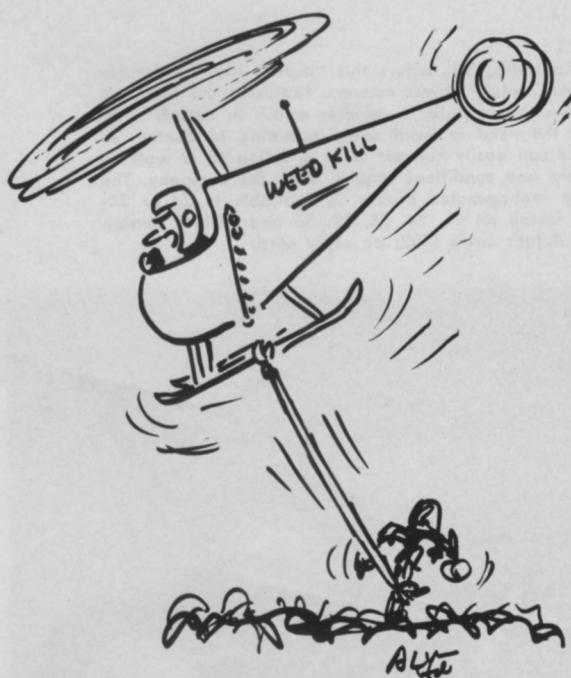
The lawnseed industry is bulging with many fine new varieties for numerous uses. In Fylking and Tifdwarf, turf managers already have at their call two promising possibilities for low-mowed luxury lawns in bluegrass and bermudagrass country. Fylking is available as seed, but Tifdwarf must be started vegetatively.

Fertilize Shade Trees Now, NAA Recommends

Fall is an excellent time of year to fertilize shade trees, according to a report by the National Arborist Association. Although results may not be obvious at this time, next spring

will see your trees leaf out earlier in greater abundance, wearing a glossy, green look of health, says NAA.

Distinct advantages of fall fertilization of shade trees, according to the group, are as follows: (1) Work can be done around trees without damage to turf from trampling, as soil is moist but not saturated; (2) Soil moisture hastens fertilizer breakdown for root absorption; (3) As root growth continues well into winter, an abundance of nutrients in the soil during this period assures development of an extensive root system with increased capability of furnishing moisture and food to trees; (4) Nutritional elements not absorbed in autumn are immediately available to trees when new growth starts in spring; (5) Orders placed with tree service companies are given prompt attention, as autumn brings a decrease of demands for insect control or other work of emergency nature.



"WE'VE GOT A STUBBORN WEED THAT WON'T DIE."

New Products . . .

Designed for the Vegetation Care Industry

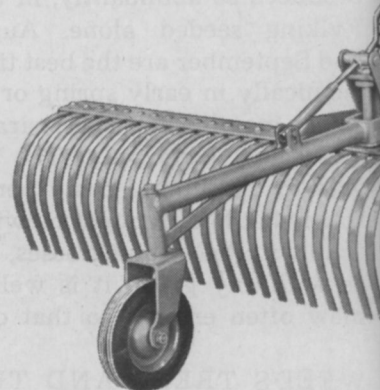


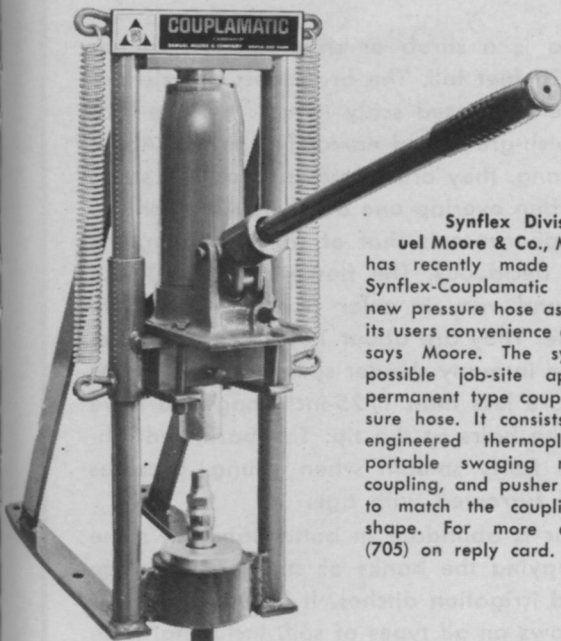
Piper Aircraft Corp., Lock Haven, Pa., has made available what may be the first ag plane on skis—the Piper Pawnee 235. The aircraft was used in Finland for forest fertilization, one of the first instances in which aerial application of agricultural chemicals has been carried out during the winter by ski-equipped planes, says Piper. Frozen lake surfaces near forests being treated were used for landings. Several thousand Pawnees are in use in the United States and 60 other countries for a variety of purposes, according to Piper. For more details circle (701) on reply card.

Bunton Co., Inc., Louisville, Ky., offers this "instant hitch" rider for its line of heavy-duty, rotary power mowers. Featuring the toe-touch hitch, the unit allows the operator to quickly attach or detach without using tools or the need to bend over, according to Bunton. In that way operators can easily convert from a riding to a walking mower where safety and conditions require, says the company. The unit, also featuring foot-operated brakes, is available in 24 or 30-inch wide sizes to install on 21, 24, 28, 32, 36 and 52-inch Bunton mowers. For more details circle (702) on reply card.

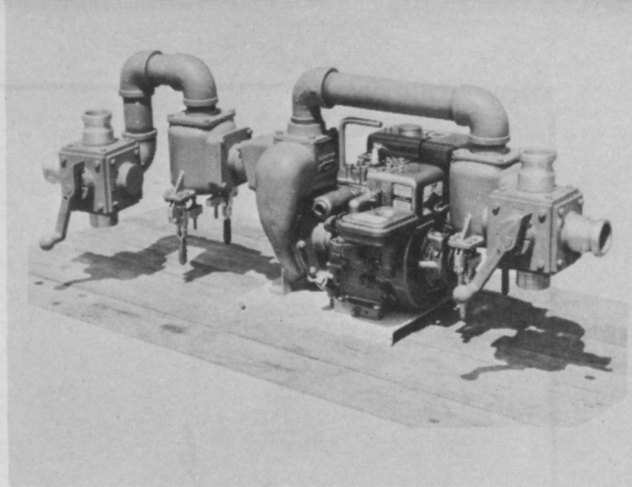


Stihl American, Inc., Midland Park, N. J., offers its 040 water pump with kit for replacing wearable parts. The 1½-inch pump moves up to 4300 gallons per hour, with a total head of up to 160 feet. It offers self priming/cleaning action and is designed for long-life service, says Stihl. For more details circle (703) on reply card.





Synflex Division of Samuel Moore & Co., Mantua, Ohio, has recently made available its Synflex-Couplamatic System. This new pressure hose assembly offers its users convenience and economy, says Moore. The system makes possible job-site application of permanent type couplings to pressure hose. It consists of Synflex-engineered thermoplastic hose, portable swaging machine, the coupling, and pusher and die sets to match the coupling size and shape. For more details circle (705) on reply card.



Load-King—a complete ground liquid loading system for agricultural aircraft—is now available from Transland Aircraft, Inc., Harbor City, Calif. Shown is Load-King Model 8, a Flomax 8 140 gallon/minute pump driven by 3½ HP engine, 2 line strainers and 2 valves. Fast, simple, dependable operation, says Transland. For more details circle (706) on reply card.

Rotary Power, Inc., Houston, Texas, has recently made available its Shur-Foot production mower, able to work on slopes as steep as 35 degrees. Operator and seat, steering wheel and all controls remain level, a feature that highway departments and mowing contractors can appreciate. Mower head follows the ground up to grades of 35°. Turning is easily done within 96-inch radius, says Rotary. The unit consists of all wheel hydrostatic drive, front-mounted 72-inch rotary or flail mower, hydraulically driven power steering. One lever controls tilt to coincide with side of hill being worked, another lifts or lowers equipment such as mower or seeder. Cutting heights range from 2 to 10 inches. For more details circle (707) on reply card.

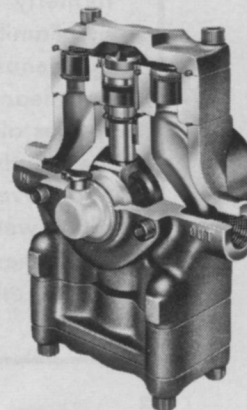


Arps Corp., New Holstein, Wis., has made available a new "mini" rake for compact tractors. Spring steel "fingers" really work soil during lawn building, landscaping. Ideal for clearing brush, stones, debris and spreading topsoil, crushed stones. Rake can be set at 5 different angles plus right angles. Optional gauge wheel keeps rake at right height for the job. Available in 4 or 6 foot length. For more details circle (704) on reply card.



Champion Brass Manufacturing Co., Los Angeles, has incorporated into its pop-up sprinkler a "sure drop" assembly that eliminates the chance of mower damage from an unretracted stem. Other features include a self-cleaning, all-brass stem assembly; flow control adjustment; and capability to vary spray patterns. For more details circle (708) on reply card.

Unique "building block" design of new Hypro Series 5700 piston pumps prevents leakage into crankcase and permits servicing of separate pump assemblies without disturbing other parts, says its developer, Hypro, Inc. of St. Paul, Minn. Twin-cylinder pumps provide pressure to 500 psi in capacities of 2 to 3 gpm. For more details circle (709) on reply card.



SALT CEDAR

(Tamarix ramosissima)

Drawing from: Arizona Ranch, Farm, and Garden Weeds, by Kittie F. Parker. Arizona Agricultural Extension Circular 265, 1958.

Prepared by: O. A. Leonard, Botanist, assisted by B. J. McCaskill, Senior Herbarium Botanist, Botany Department, University of California, Davis, California.

Salt cedar or tamarisk (*Tamarix ramosissima* — formerly *T. pentandra*) is a member of the Tamarisk Family (Tamaracaceae). The 54 species within this genus are native to western Europe, the Mediterranean region, India and Northern China. This species along with four others was introduced into the southwestern United States as ornamentals and have since escaped from plantings and become well established. For this reason they are sometimes mistaken for native plants.

Like other members of the genus *Tamarix*, *T.*

ramosissima is a shrub or small tree. It ranges from 5 to 20 feet tall. The branchlets are slender with minute appressed scaly leaves that are glabrous, grayish-green and narrowly pointed. About 1/16-inch long, they are so crowded on the stems that they often overlap one another. Although the general appearance is that of an evergreen, the leaves are deciduous. The flowers are small but numerous and vary in color from deep pink to nearly white. They are about 1/16 inch in diameter, crowded in many slender spikes up to 2 inches long, and are less than 1/25-inch long and have a tuft of fine hairs at the tip. The bark, reddish-brown and fairly smooth when young, becomes ridged and furrowed with age.

Salt cedar is abundant in bottomlands in some areas, occupying the banks of streams, drainage washes and irrigation ditches. It is drought resistant and grows on all types of soil, including those that are alkaline or salty. Originally this plant was not looked upon as a weed problem but was considered a desirable ornamental. It was also used as a check on erosion or as a windbreak. However, this plant has spread over large areas since its introduction, due to the fact that its seed is air and water born. The seedlings are apparently able to survive best on sites made bare by flooding or other means; they cannot tolerate competition on soils not underlain with a shallow water table.

Once established, salt cedar is difficult to kill by cutting or burning. It resprouts from both roots and stems and becomes bushier after each resprouting. This plant must be controlled in places where it clogs drainage courses and rivers with its dense growth, making regulation of such streams difficult. In addition, salt cedar consumes large quantities of water each year. This is an important economic factor in the Southwest, where the availability of water determines areas that can be irrigated or used domestically. Much effort has been made to control this plant in several states.

Old plants are difficult to kill with foliage spray. The best practice is to remove the old growth by mechanical means (or by fire) and then to spray the new growth in three to six months. Silvex (2,4,5-TP) is the most effective herbicide that is being used currently. The areas must be retreated as often as is necessary to keep surviving plants under control and to kill new seedlings.

Old plants can be killed by basally spraying them with esters of 2,4-D or 2,4,5-T applied in diesel oil. Applicability of basal sprays, however, is confined to situations where the plants are limited or the areas are small.

Classifieds

When answering ads where box number only is given, please address as follows: Box number, c/o Weeds Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

Rates: "Position Wanted" 10c per word, minimum \$3.00. All other classifications 20c per word, minimum \$4.00. All classified ads must be received by Publisher the 10th of the month preceding publication date and be accompanied by cash or money order covering full payment. Boldface rule box: \$25.00 per column inch, two inch minimum.

FOR SALE

ESTABLISHED Lawn Maintenance business in Boca Raton, Fla. Gross income \$24,000 per year. Selling price of \$12,000 includes established customers, truck, trailer, and equipment. Write to: Box 35, Weeds, Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

FARM FOR SALE—120 acre sod farm, all muck and peat. 1/2 mile north of East Lansing on blacktop road. Well and pond for irrigation. All seeded to Merion. John Bower, R. 2, Grand Ledge, Michigan 48837. Phone 517 627-6107.

POOR HEALTH forces sale of interest in a large weed and brush highway operation in northeast. All inquiries confidential. Box 36, Weeds, Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

HELP WANTED

GROUNDS SUPERINTENDENT for one of largest (6000 Apts.) garden apartment developers soon ready to expand into golf course. Operating sites are located throughout eastern U. S. Experience in turf, shrubs, ornamentals, trees and flowers will lead to responsibility for multi-site landscaping or golf course maintenance. Take this opportunity to join Multicon, the leader in the industry. Good salary, benefits and luxury apartment. Send resume to: L. F. Cronk, 4645 Executive Drive, Columbus, Ohio 43221.

Fusarium Blight Resembles Dollar Spot Disease

Dr. George A. Bean, turf pathologist in the University of Maryland's Department of Botany, revealed that symptoms of Fusarium blight—a disease infecting Windsor, Kentucky bluegrass and Merion are somewhat similar to those of dollar spot disease.

Fusarium blight, like dollar spot, causes lesions—one to many per leaf—with white centers surrounded by light brown margins. Lesions usually extend across the width of the leaf, causing a general appearance of cir-

cular light tan areas in infected sod.

The two diseases differ, however, in that blight-infected areas can increase in size until they run together, while dollar spot areas rarely get larger than 4 to 5 inches in diameter and seldom coalesce. Also, with Fusarium blight a few healthy bluegrass plants occasionally remain in the center of an infection circle, giving it a "frog eye" look.

Appearing in early June and remaining sometimes through September, Fusarium blight infects the warmest sections of lawns (such as those near sidewalks or driveways); according to Bean. Slopes with southerly exposure are more severely damaged than others. Of the grasses it infests, Merion is hardest hit.)

Tersan-OM fungicide treatments can prevent or reduce the disease severity, says Bean. Management programs that maintain healthy turf should help in reducing if not preventing its occurrence.

Insect Report

WTT's compilation of insect problems occurring in turfgrasses, trees, and ornamentals throughout the country.

Turf Insects

CHINCH BUGS

(*Blissus* spp.)

Maryland: Damage heavy to lawn at Hancock, Washington County.

A FLEAHOPPER

(*Spanogonicus albofasciatus*)

Arizona: Heavy in 2 dichondra lawns in southwest Phoenix area, Maricopa County.

A GROUND PEARL

(*Margarodes meridionalis*)

Arizona: Heavy in 12 Tifgreen Bermudagrass lawns at Tempe, Maricopa County.

RHODES-GRASS SCALE

(*Antonina graminis*)

Arizona: Infested Tifgreen Bermudagrass lawns in many areas of Salt River Valley, Maricopa County. **California:** Adults medium on Kikuyu grass at Encinitas, San Diego County.

SOD WEBWORMS

Utah: Larvae damaging lawns at Logan, Cache County. Most serious

outbreak in past several years. **Maryland:** *Crambus* spp. moths extremely abundant at night in Greenbelt and New Carrollton, Prince Georges County.

Tree Insects

COOLEY SPRUCE GALL APHID

(*Adelges cooleyi*)

Ohio: Galls in moderately damaging numbers on several spruce in ornamental planting in Portage County. Infested spruce in Cuyahoga County.

PAINTED MAPLE APHID

(*Drepanaphis acerifoliae*)

California: Adults medium on silver maple trees at Ventura, Ventura County.

BLACK TURPENTINE BEETLE

(*Dendroctonus terebrans*)

Alabama: Larvae and adults damaged shade pine trees in Lee County; several large lawn trees dying.

ELM LEAF BEETLE

(*Pyrrhalta luteola*)

Nevada: Adults entering hibernation in infested areas of Lincoln County; damage unusually heavy at Caliente and Panaca areas and generally light at Pioche. Light on elms in Esmeralda County northwest of Tonopah, Nye County. Esmeralda County is a new county record. **Texas:** Activity heavy in Dallas, Denton, Collin, Hunt, Hopkins, Franklin, and Titus Counties. **Oklahoma:** Late instars, probably third generation, light on Siberian elms in northwestern area; defoliation moderate to heavy.

BRONZE BIRCH BORER

(*Agilus anxius*)

Oregon: Last instars extensively damaged ornamental birch at Pendleton, Umatilla County. This infestation in residential area for several years. Controls effective on some trees; other trees removed.

BOXELDER BUG

(*Leptocoris trivittatus*)

Oklahoma: Numerous on various trees in northwest Oklahoma City, Oklahoma County.

A LACE BUG

(*Corythucha bellula*)

Pennsylvania: Discolored hawthorn leaves on about fifty 8 to 10-foot-tall leaves. Collected about 5 miles west of Butler, Butler County. This is a new State record.

SYCAMORE LACE BUG

(*Corythucha ciliata*)

Virginia: Damage severe on some sycamore trees in Montgomery County.

YELLOW-NECKED CATERPILLAR

(*Datana ministra*)

Alabama: Larvae feeding on red and blackjack oak foliage in Lee, Randolph, Macon, and Chambers Counties; more numerous than in several years.

FALL WEBWORM

(*Hyphantria cunea*)

New Mexico: Very heavy on shade trees in Dona Ana County. Defoliation heavy on many poplars; much webbing. **Texas:** Activity light to medium on oak trees in Hunt, Hopkins, Franklin, Titus, Morris, and Bowie Counties. Active on mulberry and poplar trees in El Paso County.

MIMOSA WEBWORM

(*Homadaula anisocentra*)

Tennessee: Still active on mimosa in central and western areas.

Lush Winter Turf. Swedish soccer teams playing winter games at Solna, Sweden, this year will enjoy lush, green turf despite the snow. The field has been engineered to beat freezing by combining underground heating cables and a plastic covering. Sod has been installed over a six inch mixture of sand and gravel to absorb excess moisture. Electric cables prevent freezing and can maintain a 54° F temperature. Protection against night frost and drying out of the leaf zone is provided by a giant transparent plastic sheet, more than 260' x 360'. The plastic cover is handled by a motor-driven steel drum. Thus, even in the severe climate near Stockholm, turf growth is induced in early March and maintained until well after killing frosts in the fall.

* * *

New Test for DED Antidote. A new antidote for Dutch elm disease has received clearance for field tests. Registration by the USDA is for a period of one year for a product developed by Charles R. Freers, Muscatine, Ia. Testing will be done in Missouri, Iowa, Illinois, and Indiana. Freers reports that the antidote inhibits continued growth of the DED fungus organisms.

* * *

AAN Legislative Conference. Legislation has had an enormous impact on the nursery industry. So says Bob Lederer who is executive vice-president of the American Association of Nurserymen. Much of the success of the AAN, he says, is in helping members in an intelligent approach to legislation. A third national legislative conference by the AAN is being staged at Chicago this month. Lederer who is backed in his views by the state nursery association secretaries believes this coordination is the only way the nursery industry can avoid errors in judgement and duplication of effort regarding common legislative problems. Listed for discussion at the Chicago session are subjects ranging from wage-hour problems to tax suits.

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Community Programs. New trend in the suburbs is community spray programs. Robert Bartlett, company president for Bartlett, says more property owners are organizing and contracting for tree and shrub pesticide applications on area basis. In some cases, home owners are billed

individually, in others a representative of the suburban group negotiates a contract for the community, collects from each and pays the custom pesticide applicator. In either case, Bartlett states, the cost for each property owner is less. Normal service is a 3-step program: an early spring initial spraying to ward off leaf-eating insects; a late spring spraying aimed at aphids, lace wing flies, white flies, and leaf eating insects; and a third spraying in early summer for mosquitoes and other insect pests.

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Davey Keeps Busy. Davey Tree Expert Company has opened their new 28,000 square foot shop at their Kent, O., headquarters. It is one of five repair and service operations for handling Davey's fleet of 800 vehicles used by crews in 42 states and Ontario, Canada. In addition to cranes, aerial baskets, and crawler tractor sprayers, the company uses 300 brush chippers, 250 shade tree sprayers, and more than 50 tractors. Add to this array 500 power saws, 5000 hand saws and pole trimmers, and 275 electric drills for tree feeding. Davey crews, each year, also use more than 100 miles of manila rope, 75,000 feet of high pressure hose, enough ladders to reach several miles high, and about 1½ million pounds of tree plant food.

UM Suggests How and When to Make Soil Tests

Late summer through fall soil testing has definite advantages over spring testing, says William Fenster, University of Minnesota extension soil specialist.

By taking soil samples in the fall, one can avoid the inevitable "spring rush" and get test results back in plenty of time for spring planting. Fall testing also gives you ample time to decide which fertilizers will best provide proper nutrients for maximum yields, says Fenster.

Furthermore, fall testing allows fertilizers to be applied when soil is in relatively good condition. Waiting for spring to apply fertilizers often causes difficulties if the ground is wet.

As far as soil tests themselves are concerned, results are only as good as the samples on which

the tests are made, according to John Grava, supervisor of the university's Soil Testing Laboratory.

To collect a soil sample that reflects the fertility of an entire field, Grava recommends the following steps.

Divide each field into uniform areas of not more than 20 acres on level land or more than 5 on hilly grounds. Soil in each area should have the same color and texture, cropping history and fertilizer and lime treatments.

Avoid taking soil from low spots, dead furrows, fertilizer bands, urine spots, old fence rows or areas near crushed rock roads.

Before sampling each area, scrape away surface litter. Then sample to plow-layer depth for row crops; for pastures, sod crops or lawns, sample to a 3-in. depth. If using a spade or trowel, dig a V-shaped hole and remove a ½-in. slice from the side of the hole. Place the core in a clean pail; if testing for zinc, use a plastic container.

Repeat this procedure in about 15 places in each of the uniform areas. Mix the subsamples thoroughly, then pour the composite mixture into a pint soil container. (Both containers and information sheets can be obtained from your county extension agent.)

If the soil is wet, let it air dry or send it immediately to the laboratory, Grava said. He also stressed that information sheets be filled out completely so that researchers know which tests are to be run. Also, warns Grava, keep records of where you took the various samples.

Mail to the Soil Testing Laboratory, University of Minnesota, Institute of Agriculture, St. Paul, Minn. 55101. Checks should be payable to the university.

As of mid-September, Grava said, soil tests and recommendations will be computerized to give faster, more efficient service.