

CHALKBOARD

TIPS FROM THE PROS

CONTROLLING THE UNWANTED ADMIRERS OF QUALITY TURF

Well-groomed golf courses and athletic fields attract more than golfers and athletes. Certain types of wildlife thrive on the tender roots, seed, worms and insects in the cool, moist soil beneath sports turf. Nearly everything a landscape manager does to provide resilient, uniform turf also invites pocket gophers, moles and ground squirrels that tunnel beneath the turf to live and feed.

The problem is common at turf facilities located near large natural areas or farmland. As parks, schools and golf courses are built on the edge of spreading suburbs, turf managers find their beautiful turf being riddled with mounds of dirt, soft spots and ridges above burrows dug by these vertebrate pests. A trend toward naturalizing areas around golf courses and parks by replacing mowed turf with wildflowers and tall grass may be encouraging these animals to increase their populations. Construction in areas that were formerly natural can cause escaping pests to move onto the sports turf site.

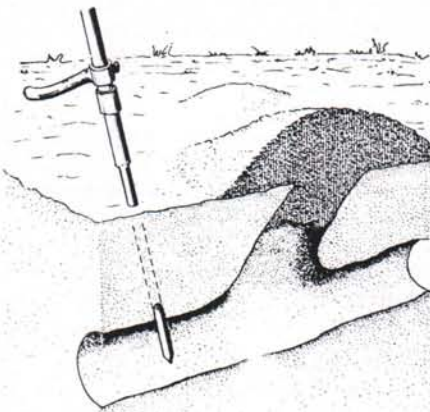
Extension wildlife specialists know how difficult controlling these pests can be and urge turf managers to contact them before taking control measures into their own hands. Poorly selected or implemented control methods can cast a very negative image on the sports turf manager since the public in general is very protective of wildlife. Trapping, fumigating and baiting must be carried out in humane ways and without hazard to nontarget wildlife or domesticated animals. Once a problem is recognized, it may be wise to hire a pest control specialist to do the work.

Pocket gophers are short-legged rodents six to 12 inches in length that live alone in burrow systems from four inches to a foot below the surface. They feed on a wide assortment of roots, tubers, grasses and seeds damaging turf, ornamental and trees in the process. Using their large front teeth they can gnaw through plastic irrigation lines. Damaged irrigation pipe can seriously hamper the distribution of water intended by the system designer.

The mounds of pocket gophers are fan-shaped instead of round like those made by moles. The hole, usually filled with a plug of dirt by the gopher, is on one edge of the mound instead of in the middle. The mounds are usually located at the end of short tunnels that branch out from a main burrow system. One gopher may cause several mounds in a single day.

Success in pocket gopher control entails

locating the main burrow. The gophers rarely leave their burrows to move about on the surface. Traps and baits inserted into main tunnels are most effective and create the least disturbance to the infested area. To find these main burrows use a pointed metal rod and probe starting at the mound. You should find the short, lateral burrow leading away from the side of the mound with the exit hole. Follow it to the main burrow. Burrows are about two inches in diameter.



Probing to locate main runway.

Carefully remove the soil above the main burrow with a spade. Bait or traps can then be inserted. Place two traps in each hole with the triggers facing away from the hole into the burrow. The hole must then be covered with dirt clods or sod to block out any light from entering the hole. Check the traps in three days. Serious infestations may involve up to 50 gophers per acre. Set traps in numerous burrows and check them frequently.

Grain baits containing strychnine or anticoagulants (chemicals which cause the animal to bleed internally) can also be placed in the main burrows and replenished every week or two. Level and tamp down old mounds in order to judge gopher activity following treatment. Special tools to insert bait into burrows from the surface are available. Pest control companies in regions with serious gopher infestations will have the specialized equipment needed.

While pocket gophers prefer open areas and meadows, moles like sites where the soil remains cool and moist. They are frequently found in turf areas shaded by trees near streams or ravines. Another difference is moles eat worms and grubs (insect larvae) in the soil in addition to tender roots.

Sports turf infested with grubs can actually attract moles. By tunneling near the surface to feed they create ridges in the turf. Their main burrows, however, are as deep as 16 to 30 inches below the surface. They also create mounds distinguished by the exit hole located in the center. These mounds are often in a line connected just below the surface by burrows.

Moles are shorter than gophers, have pointed snouts and lack external ears. Their front legs are paddle-shaped and have long claws for digging. Their tails are bare and they appear blind with very poorly developed eyes.

The primary method of mole control is trapping. These traps must be properly placed in the lower burrows to be effective. The sports turf manager may elect to have a pest control specialist trap infested areas. He can discourage future mole infestation by reducing the number of grubs in the soil with applications of soil pesticides.

Ground squirrels feed above ground, not in their burrows. They construct burrows to give birth, sleep, hibernate and store food. Colonies of up to 20 ground squirrels will set up burrow systems near buildings, tall grasses, fences, piles of debris or ditches.

In the spring they are active on warm, sunny days feeding on grasses, herbs and leaves. They switch their diet to seeds in summer and fall. For these reasons bait treatments are most effective when placed on the surface near burrows in early summer and fall. Caution is advised in spreading baits. Bait boxes can be used to guard against feeding by pets and non-target animals. Traps can also be effective when placed on the surface near burrows in the summer and fall. Serious infestations may require treating burrows in the spring with fumigants.

Ground squirrels can be discouraged from digging burrows by removing debris near buildings, in plant beds, along fences and in ditches. Removing their protection makes them more vulnerable to natural predators and harsh weather.

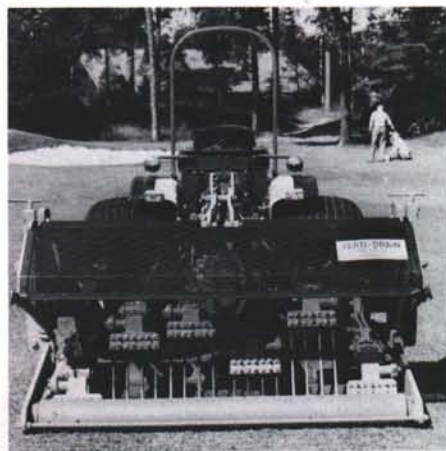
Since ground squirrels feed above ground and are active during the day, instruct members of the grounds crew to recognize and report ground squirrels in parks, on campuses and golf courses. Once they are sighted, locate the burrows and implement a control program quickly.

Editor's Note: This story is based upon information provided by Terrell P. Salmon, extension wildlife specialist, University of California, Davis, CA.

ROOKIES

PRODUCT UPDATE

DEEP AERATOR



Turf growing on deeply-compacted soils can now be brought back to health with the Verti-Drain. The tines of the rugged aerator can extend as deep as 16 inches into the soil to relieve compaction and break through soil layers that block water percolation and root growth.

A patented design drives either solid or hollow tines deep into the soil where they pivot back and forth to lift and shatter compacted soil layers. The net effect is a softer soil with a proper balance of air and moisture. Some sports turf managers backfill the core holes with sand to amend heavy clay soils over a period of time.

The Verti-Drain is powered by a tractor with category I or II hitch and power-take-off. Up to four acres a day can be aerated with the unit. The depth of penetration can be adjusted from two inches to 16 inches.

ENVIRONMENTAL MARKETING INTERNATIONAL

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FOUR-SEAT GOLF CAR



Golf courses will no longer have problems accommodating friendly foursomes now that OMC Lincoln has introduced the Cushman Eagle Golf Car, Model 556.

32 *sportsTURF*

Similar to the Cushman Eagle utility vehicle, the Model 556 features four forward-facing seats and a roto-molded polyethylene bag holder that attaches to the back of the unit and holds four 10-inch golf bags. It also comes equipped with ball, tee and scorecard holders, four mounted beverage holders, space for shoe and sweater storage, and space for a beverage cooler behind the rear seat.

The vehicle is equipped with a 12.5 hp two-cylinder air-cooled gasoline engine, heavy-duty cast iron V-type clutch, and forward and reverse gears with a synchronized transmission. Top speed is 12-15 mph, depending on governor setting. The vehicle has a rated capacity of 1,200 lbs. It has a wheelbase of 57 inches and an outside turning clearance circle of 19-feet 8-inches.

Mounted on a heavy-duty carbon steel frame are rust-proof and dent resistant panels, made of reaction injection molded polyurethane. The unit has a maintenance free battery and a V-belt drive starting motor with pedal start. Brakes are hydraulic internal expanding on the rear wheel and hydraulic disc on the front, with a toe-actuated parking brake.

CUSHMAN, OMC LINCOLN

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CORE COLLECTOR



Simplicity is the word that best describes the CoreMaster 12 Core Collector by Green-Care International. The heavy-duty metal collector glides across newly aerated turf behind the CoreMaster 12 aerator to gather all cores as they are produced. When the aerifier is raised at the end of each pass, the cores are automatically dumped for pick-up. When the aerator is lowered for the next pass, the collector is automatically reset to follow the contour of the turf, even in areas with severe undulations.

The core collector attaches to the aerator with only two bolts. The simple device

requires virtually no maintenance. It saves time and labor by combining aeration and core removal into one operation.

GREENCARE INTERNATIONAL

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POST-EMERGENCE HERBICIDE

Image, a product of American Cyanamid, has been registered by the Environmental Protection Agency for control of purple nutsedge and other tough weeds in warm season turf.

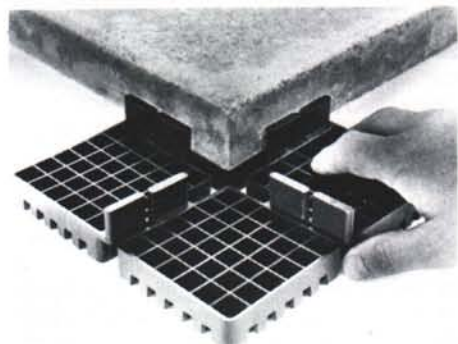
"Image is the only post-emergence product we've seen that successfully controls both foliage and roots of purple nutsedge, wild garlic and wild onion as well as suppressing yellow nutsedge," said Carl Tanner, business manager for Cyanamid Turf Product Group. "The liquid formulation is nonvolatile and can be tank-mixed with fertilizers and many other herbicides for ease of application."

This new herbicide is labeled for use on major warm season turfgrass species including bermuda, zoysia, centipede and St. Augustine. These turf species remained unharmed during seasonably warm temperatures in field tests across the South. It is environmentally sound and virtually non-toxic to humans, animals, fish, bees and birds when used according to label directions. It also shows little soil movement, laterally or vertically.

AMERICAN CYANAMID

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PEDESTAL SPACER SYSTEM



Envirospec Inc. has introduced the Pave-El pedestal system for elevation, uniform spacing, and complete drainage of pavers on waterproofed deck areas.

ROOKIES

PRODUCT UPDATE

The four-squared pedestals are made of polyethylene with eight vertical spacing ribs on their upper surface to ensure uniform spacing and height while stones are placed in position. The pedestals can be subdivided into halves or quarters for paver-stone support of perimeter edge or corners respectively.

Easy and economical to install on waterproofed areas such as podiums, decks, arenas, roofs, and around swimming pools, these high-density spacers eliminate problems of material compatibility and weatherability. They are offered in two sizes of squares with base dimensions of 5½ and 7¾ inches.

ENVIROSPEC INC.

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OUT-FRONT FLAIL MOWER



The safety of a flail mower has been combined with the maneuverability of an out-front design by Jacobsen Div. of Textron. The Turfcats four-wheel mowing tractor features rear-wheel steering and is available with either 17 hp diesel engine or 21 hp gasoline engine. Both engines have three cylinders and are liquid-cooled for quiet operation and long service life.

Both flail and rotary cutting decks can be attached to the front PTO. Up to 26 acres of turf can be mowed in a single day with the optional 72-inch rotary cutting deck. Cutting height is adjustable from one inch to four inches. High ground clearance and hydraulic lift for the attachments enable the Turfcats to clear curbs without scraping.

Other attachments are available to convert the Turfcats into a snowblower, sweeper or scraper. One tractor and a variety of attachments can provide a grounds manager with an all-season tool.

JACOBSEN DIV., TEXTRON

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HYDRAULIC VALVE-IN-HEAD



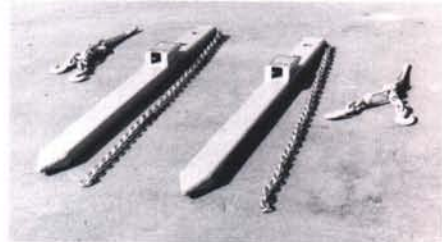
Superintendents of golf courses, parks, universities and schools can increase their control over irrigation with Rain Bird's valve-in-head hydraulic rotor sprinkler. The turf industry's first normally-open, valve-in-head, hydraulic rotor permits operation of individual sprinklers for precise watering of specialized turf areas.

Two models, the part-circle 47DH and the full-circle 51DH, have been engineered to stand up to a wide range of water quality conditions. The rotors feature a diaphragm valve with low pressure loss, an energy efficient "straight-through" impact rotor drive, a self-flushing valve seat and a high strength plastic case. The heads are designed for spacings from 51 to 80 feet, those typically found on multiple-row golf course systems.

RAIN BIRD, GOLF DIV.

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ROOKIES

PRODUCT UPDATE

MINI-TRUCK



The engineers at Kawasaki had two primary objectives when they designed the Mule mini-truck. The first was to develop a small truck that could haul more than an all-terrain vehicle around golf courses, large institutional grounds and industrial centers. The second requirement was it had to fit in the back of a standard-sized pickup truck so it could be hauled from site to site without a trailer.

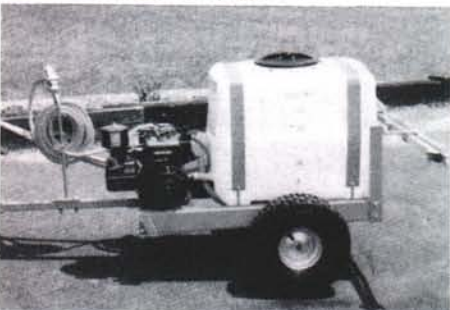
Both goals were achieved with the Mule, a small utility vehicle that can carry two passengers and a quarter ton payload. The truck is powered by a 27 hp twin-cylinder, liquid-cooled engine and features a belt converter transmission, an invention which eliminates gears and shifting developed for the snowmobile industry. Rack and pinion steering, four-wheel independent suspension and a low center of gravity give the Mule the toughness for off-road jobs.

A dual-mode differential allows one of the rear wheels to push the vehicle across easily damaged surfaces. The bed of the mini-truck is hinged to dump its payload.

KAWASAKI MOTORS CORP.

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COMPACT SPRAYER



Landscape managers can spray turf, trees and ornamentals with the compact Mini Pro-Care Sprayer by Agrotec. The 50-gallon tank

sprayer, available in trailer or skid mount versions, is designed for professional and institutional use. A twin-diaphragm piston pump powered by a three hp engine delivers up to six gallons per minute of any type of pesticide or fertilizer solution at 275 psi.

With an optional "high-reach" hose kit and handgun the unit can spray trees 30 to 40 feet in height. The trigger-activated handgun can be converted from a fine mist to a solid stream with a twist of the wrist. A three nozzle, five-foot-wide boom kit is available for large turf areas. Quick coupler hoses 25 feet in length allow the operator freedom of movement. A reel kit is also available.

The sprayer can be mounted in pickup trucks or utility vehicles or towed with the addition of a wheel kit featuring six-inch, high flotation tires with a 34-inch-wide track for stability on rough ground. The unit is equipped with an eight-inch diameter fill-well for safety and convenience while mixing chemicals. All Mini Pro-Care sprayers come standard with a calibrated pressure control, gallonage indicator, antisplash lid, line strainer, suction line cut off, agitator, and clean out plug.

AGROTEC

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ALL TERRAIN VEHICLE



The Metrac 3003K from Lely Pacific Inc. uses four wheels and a low center of gravity to operate all types of turf equipment on steep slopes and flat ground.

A 38 hp four cylinder diesel engine powers all four wheels as well as front and rear PTOs for attachments. Hydrostatic all-wheel steering combined with four-wheel drive provide tremendous maneuverability even when three-point, hitch-mounted implements are being used. The rear wheel steering can be locked for highway driving if desired. The Metrac comes standard with eight speeds both forward and reverse. Hydraulic servo brakes on all four wheels provide the stopping power needed on slopes.

The vehicle rides on 15-inch turf tires or

traction tires for slope work. A wide assortment of attachments are available for the standard three-point hitch in front and the optional three-point hitch in the rear. Front implements include a rotary mower, flail mower, cutter bar, auger, rake and snow plow. Rear implements include a spreader and vacuum.

LELY PACIFIC INC.

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DRAINAGE GRATE



Grounds managers have a new ally in their battle to eliminate drainage problems in turf adjacent to running tracks, sidewalks and outdoor courts. National Diversified Sales introduces the Mini Spee-D Channel Drain, a 2½ inch wide by three inch deep channel that intercepts surface runoff before it reaches turf areas.

Available with a full assortment of fittings, the drain can be adapted to work with larger channels. Cover grates for the channels are available in gray, green, black, sand and brick red. As its name implies, installation of the three-foot-long sections of channel is fast and simple.

NATIONAL DIVERSIFIED SALES

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FENCE POST SAFETY CAPS

Made of a rugged, weather resistant, white polyethylene, Hot Cap is the perfect alternative to flexible fence systems because it works with your existing fence posts. Designed to fit on a standard "T" post, the molded notch will provide additional stability along the top edge of a fence, reducing the risk of injury while helping to minimize lacerations and liabilities.

Inexpensive to install, it fits tightly to the top of a standard "T" post. Less expensive than ceramic insulators, Hot Cap is ideal for use around athletic fields, school yards, parks, and anywhere fencing is used.

WINDSCREENS WEST, INC.

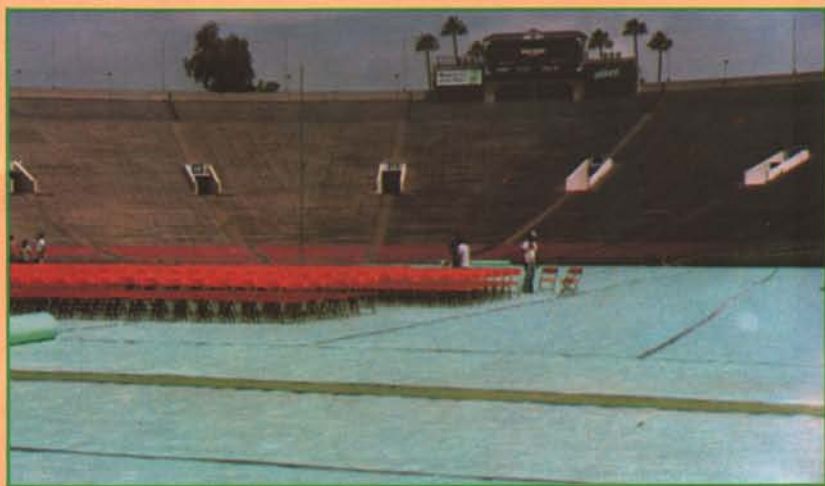
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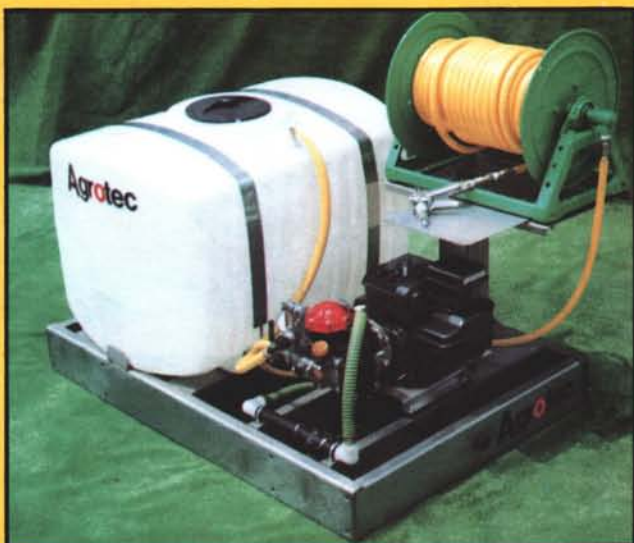
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ROOKIES

PRODUCT UPDATE

SPRAYING SYSTEM



Broyhill has built its 3030 Turf and Commercial Sprayer for tough duty. The rugged spray system features a complete assortment of pumps, spray attachments and mountings so turf and landscape managers can select a combination that's right for them.

All 3030 sprayers include a low-profile poly tank for maximum operator visibility. An eight hp Briggs & Stratton electric-start engine

powers a choice of diaphragm, piston or centrifugal pumps. The engine and pump are protected by a metal enclosure with locking access door. A one-inch, heavy duty stainless steel mechanical agitator keeps chemicals properly mixed during operation.

The spray system can be skid mounted on a pickup truck or adapted into a towable trailer. A full line of hoses, reels, nozzles, booms and walking booms provide the operator with the flexibility to do all types of turf and tree spraying using the same unit.

THE BROYHILL COMPANY

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POSTEMERGENCE WEED CONTROL

Formulated to control oxalis and prostrate spurge, Chipco Buctril is a postemergent herbicide that can be used on established, newly seeded, and overseeded areas without damaging the turf.

This contact herbicide can be tank mixed

with 2, 4-D and/or MCPP for fast, effective, safe, broad spectrum weed control.

RHONE POULENC INC.

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FUNGICIDE PACKETS

Applicator exposure to W. A. Cleary's systemic fungicide 3336 has been reduced to a minimum with premeasured water-soluble bags. There is no need for handling the fungicide during measuring and mixing. The applicator drops the appropriate number of bags into the water in the spray tank without being exposed to dust or fumes. The water quickly dissolves the bags in the spray tank.

The eight-ounce bags of fungicide eliminate the need for disposal of cans, bottles or bags after mixing. Cleary's 3336 is a systemic fungicide used to control brown patch and dollar spot diseases of turf.

W.A. CLEARY CHEMICAL CORP.

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