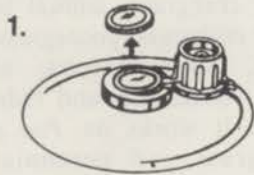


BRANDT CAP CUTTER

THE-ALL-IN-ONE Chemical Can Opener

The Brandt Cap Cutter easily opens a five gallon drum of chemical as it cuts a circular opening in the plastic spout.

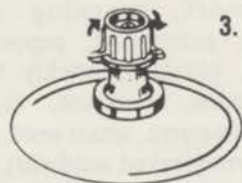
WE CAN Cut It . . .



1. Use the uniquely designed hand bar built into the bottom of the cap to pry off the chemical seal.



2. Pull up the plastic spout and remove the drum cap.



3. As you twist on your Brandt Cap cutter, you are cutting an opening into the plastic spout, eliminating the need for knives, screwdrivers and other sharp instruments.



4. RESULT—A circular opening with no jagged edges - ready to pour - in 1/3 of the time.

and so can YOU

Distributorships Available

Call Crown Today & **SUCCEED**

Toll Free

1-800-325-3316

PAT. PEND.

only
\$5.95

COMPLETE & MAIL WITH CHECK OR M.O.

YES I'd like to order _____ Brandt Cap Cutters at \$5.95 each.
Check or Money Order is enclosed. (Allow one week for delivery.)

COMPANY NAME _____

ADDRESS _____

CITY & STATE _____ ZIP _____

Mail to - CROWN CHEMICALS - 4235 Duncan Ave. - St. Louis, Missouri 63110

WTT Turf Herbicide Report

moniated phosphate, potassium from potassium sulfate. Its active herbicide is dicamba and 2,4-D.

ProTurf fertilizer plus dicot weed control II is recommended for use against aster, bittercress, black medic, buckhorn, buttonweed, chickweed, chicory, cinquefoil, white clover, cudweed, curly dock, daisy fleabane, dandelion, English daisy, evening primrose, filaree, galinsoga, ground ivy, heal-all, henbit, knotweed (seedling), lambsquarters, lippia (matchweed), moneywort, morning glory, mustard, pennywort, pepperweed, pigweed, plantain, prickly lettuce, puncturevine, purslane, ragweed, shepherd's purse, smartweed, stitchwort, thyme-leaved sandwort, vetch, whitlowgrass and yellow rocket.

Only creeping bentgrasses, putting greens, St. Augustine, carpetgrass and dichondra are not recommended.

Its chemical fertilizer composition is 30-5-3 with nitrogen sources of 1.2 percent from ammoniated phosphate, 18.8 percent soluble from urea and methylene ureas, 10 percent water insoluble from methylene ureas. Phosphorus from an ammoniated phosphate, potassium from potassium phosphate. Its herbicide is 2,4-D and MCP. P.

ProTurf starter fertilizer with pre-emergence weed control can control sprouting of crabgrass, foxtail and barnyardgrass and is used for seeding of all grasses except pennycross, seaside, astoria, C-1, C-7, C-19, and nemesilla. It is not recommended for use on Bermuda-grass or zoysia and will not control established grassy weeds.

Its fertilizer analysis is 16-21-5 and nitrogen sources of 4.9 percent ammonical from ammoniated phosphate, 7.4 percent water soluble from urea and methylene ureas, 3.7 percent water insoluble from methylene ureas. It also contains phosphorus from ammoniated phosphate, and potassium from muriate of potash. Its herbicide is siduron.

ProTurf *Poa annua* control plus fertilizer can control *Poa annua*, bluegrass and bentgrass and is designed for use on Bermudagrass.

It may discolor golf greens, however, if applied before severe cold or freezing.

It uses the herbicide pronamide (kerb) and has a fertilizer analysis of 27-0-13 with nitrogen sources 18 percent water soluble from urea and methylene ureas, 9 percent water insoluble from methylene ureas.

ProTurf weedgrass preventer controls sprouting grass weeds such as *Poa annua*, barnyardgrass, crabgrass, goosegrass and foxtail. It is not designed for use on turf areas having 50 percent *Poa annua* or more and contain the active ingredient bensulide.

ProTurf Weedicide II can control the weeds black medic, buckhorn, bur clover, chickweed, clover, cudweed, daisy fleabane, dandelion, dollarweed, English daisy, filaree, ground ivy, heal-all, knotweed (seedling), lambsquarters, pepperweed, pigweed, plantain, purslane, ragweed, shepherd's purse, yellow rocket.

It is mixed to use on all cool season grasses and Bermuda and bahia but should not be used on creeping bentgrasses, St. Augustine-grasses, carpetgrass, dichondra, lippia or similar ground covers.

Its active ingredients are 2,4-D and MCP. P.

ProTurf K-O-G- weed control is effective on weeds black medic, common chickweed, mouse-ear chickweed, clover, cudweed, curly dock, ground ivy, horseweed, knotweed, sheep sorrel, Canada thistle, wild garlic, wild onion and yarrow. Application is approved for all turf-grasses except St. Augustine and dichondra.

Dicamba is its active ingredient.

ProTurf monocot weed control can control barnyardgrass, crabgrass, foxtail, witchgrass, goosegrass (in its immature stage up to the size of a silver dollar) and paspalum (such as dallgrass, except in California). Use on St. Augustine, centipede, bahia or carpetgrass for methods other than non-selective spot treatment are not suggested.

The product uses DSMA (disodium methanearsonate) as its active ingredient.

Mallinckrodt, Inc., St. Louis,

has four turf herbicides. Po-San can control *Poa annua* while retarding growth of chickweed, dandelion, clover and Veronica, and is used in non-crop areas.

Its active ingredients are 8.5 percent methyl 2-chloro-9-hydroxyfluorene-9-carboxylate; 2.3 percent methyl 9-hydroxyfluorene-9-carboxylate, and 1.7 percent methyl 2, 7-dichloro-9-hydroxyfluorene-9-carboxylate, in one solution and 22 percent diethanolamine salt of 6-hydroxy-3-(2H)-pyridazine.

Pre-San can control smooth and hairy crabgrass, annual bluegrass, silver crabgrass (goosegrass), watergrass, lambsquarters, shepherd's purse, deadnettle and redroot pigweed. It works on *Poa annua* in bentgrass and perennial grass, clover and dichondra turf.

Active ingredients are 45 percent s-(0,0-disopropyl phosphorodithioate) ester of N-(2-mercaptoethyl) benzene-sulfonamide.

Trex-San can control bedstraw, black medic, buckhorn, burdock, chicory, checkweed, clover, dandelion, dock, ground ivy, heal-all, henbit, knotweed, lambsquarters, lespedeza, mallow, morning glory, peppergrass, pigweed, plantains, poison ivy, poison oak, purslane, ragweed; sheep sorrel, shepherd's purse, speedwell, spurge, thistle, wild carrot, wild garlic, wild lettuce, wild onion, and yarrow.

The herbicide may injure centipede, dichondra, and St. Augustine grass and will harm clover.

Active ingredients are 32.07 percent dimethylamine salt of 2,4-dichlorophenoxyacetic acid, 16.12 percent dimethylamine salt of 2-(2-methyl-r-chlorophenoxy) propionic acid, 4.04 percent dimethylamine salt of dicamba (3,6-dichloro-o-anistic acid) and .05 percent dimethylamine salts of related compounds.

Trex-San Bent can control bedstraw, black medic, buckhorn, chicory, chickweed, clover, dandelion, dock, ground ivy, heal-all, henbit, knotweed, lambsquarter, lespedeza, mallow, morning glory, peppergrass, pigweed,



There was no sleeping on
the job in the creation of
a MAN MADE bluegrass!

**SOMEBODY STAYED UP
NIGHTS TO PRODUCE**

Adelphi
KENTUCKY BLUEGRASS

**RATED OUTSTANDING for overall
performance in 10 years of
testing at Rutgers University**

Adelphi Kentucky Bluegrass is, truly, the product of many sleepless nights. The nature of bluegrass is such that hybridization can be achieved ONLY AT NIGHT and, there's no telling what time of night will be the right time.

So, aside from expertise and dedication, many patient night hours went into mating the parents of Adelphi. The result... ADELPHI KENTUCKY BLUEGRASS (U.S. Plant Patent No. 3150)... was well worth it.

ADELPHI, the first marketed, "Man-Made" Kentucky bluegrass has proven itself... with outstanding overall performance ratings in tests against as many as 60 new varieties... in New Jersey, Ohio, Michigan, Tennessee, Colorado, Rhode Island, Illinois and Washington.

ADELPHI is becoming a favorite of professional turfmen and home gardeners as well. For good looking and natural, richer, darker green color throughout the growing season... excellent density... good disease resistance and tolerance to moderately close mowing, it's "Man-Made" ADELPHI... A FIRST IN TURF.

**ADELPHI has been chosen by the Plant Variety
Protection Office, U.S.D.A., as A STANDARD
FOR DARK GREEN COLOR to which all bluegrasses
applying for plant protection will be compared
for color classification.**

(Use of this statement does not indicate any
approval or recommendation of Adelphi by the U.S.D.A.)

**Try it. This grass shouldn't
give YOU sleepless nights!**

For Information, contact:

J & L ADIKES, Inc.

Jamaica, N.Y. 11423

JONATHAN GREEN & SONS

Farmingdale, N.J. 07727

NORTHRUP, KING & CO., Inc.

Minneapolis, Minn. 55413

VAUGHAN-JACKLIN CORP.

Bound Brook, N.J. 08805 • Downers Grove, Ill. 60515

Canadian Inquiries: **National-NK Seeds Ltd.**, Box 485, Kitchener, Ont. • **Rothwell Seeds Ltd.**, Box 511, Lindsay, Ont.

Other International Inquiries: **Northrup, King & Co., Inc.**, Minneapolis, Minn. 55413

WTT Turf Herbicide Report

plantains, poison ivy, poison oak, purslane, ragweed, sheep sorrel, shepherd's purse, speedwell, spurge, wild carrot, wild garlic, wild onion, and yarrow.

Damage may result if applied to centipede, St. Augustine, or clover.

Active ingredients are 6.590 percent dimethylamine salt of 2,4-dichlorophenoxyacetic acid, 19.870 percent dimethylamine salt of 2-(2-methyl-4-chlorophenoxy) propionic acid, 2.636 percent dimethylamine salt of dicamba (3,6-dichloro-o-anisic acid).

Dow Chemical U.S.A., Midland, Mich., manufactures five turf herbicides. Esteron 6E can control such weeds as beggarticks, bitterweeds, Texas blueweed, broomweed, wild buckwheat, burdock, carpetweed, catnip, chamise, chicory, cocklebur, cornflower, coyotebrush, croton, dandelion, docks, dogsfennel, elderberry, fanweed, galinsoga, wild garlic, goatsbeard, halogeton, wild hemp, jewelweed, jimsonweed, kochia, lambsquarters, bigbend loco, Venice mallow, manzanita, marshelder, milkvetch, annual morning glory, mustards, nettles, wild onion, pennycress, field pepperweed, pigweed, plantains, poorhoe, rabbitbrush, wild radish, ragweed, wild rape, redstem, coastal sage, big sagebrush, sand sagebrush, salsify, sand shinnery oak, shepherd's purse, sicklepod, smartweed, bitter sneeze-weed, annual sowthistle, spanishneedles, sumac, sunflower, sweet clover, tansymustard, tansyragwort, bull thistle, musk thistle, Russian thistle, tumbleweed, velvetleaf, vervains, vetch, water plantain, willow, witchweed, wormwood, yellow rocket and yellow starthistle.

It is not designed for use on golf greens dichondra or other broadleaf herbaceous ground covers nor creeping grasses as bent and St. Augustine grass unless used for spot treating.

Its active ingredient is 94.4 percent 2,4-dichlorophenoxyacetic acid, isoactyl esters.

Esteron 99 is recommended for control of beggarticks, bitterweed, Texas blueweed, broomweed, buck-

brush, wild buckwheat, burdock, carpetweed, catnip, chamise, chicory, cocklebur, coffeeweed, cornflower, croton, dandelion, docks, dogsfennel, elderberry, fanweed, galinsoga, wild garlic, goatsbeard, halogeton, wild hemp, jewelweed, jimsonweed, kochia, lambsquarter, bigbend loco, Venice mallow, manzanita, marshelder, milkvetch, annual morning glory, mustards, nettles, wild onions, pennycress, field pepperweed, pigweed, plantains, poorjoe, rabbitbrush, wild radish, ragweed, wild rape, redstem, coastal sage, big sagebrush, sand sagebrush, salsify, sand shinnery oak, shepherd's purse, sicklepod, smartweed, bitter sneeze-weed, annual sowthistle, spanishneedles, sumac, sunflower, sweetclover, tansymustard, tansyragwort, bull thistle, musk thistle, Russian thistle, tumbleweed, velvetleaf, vetch, water plantain, willow, witchweed, wormwood, yellow rocket and yellow starthistle.

This product is not for use on golf greens, dichondra or other broadleaf herbaceous ground covers or creeping grasses or St. Augustine grass unless it is used for spot treating.

Chemically, its active ingredient, 41 percent, is 2,4-dichlorophenoxyacetic acid, propylene glycol butyl ether esters.

Formula 40 is designed to control bitterweed, broomweed, burdock, carpetweed, wild carrot, chicory, cocklebur, coffeeweed, croton, dandelion, dock, flixweed, galinsoga, wild hemp, jimsonweed, kochia, lambsquarters, bigbend loco, lupines, Venice mallow, marshelder, annual morning glory, mustards, pennycress, pennywort, pennwort, pepperweed, pigweed, plantains, poorjoe, Florida pusley, wild radish, common ragweed, wild rape, yellow rocket, shepherd's purse, sicklepod, smartweed, bitter sneeze-weed, annual sowthistle, spanishneedles, sunflower, sweetclover, tansymustard, bull thistle, musk thistle, Russian thistle, tumbleweed, velvetleaf, vetch, water plantain, witchweed and wormwood.

The herbicide should not be applied to dichondra or other her-

baceous ground covers or creeping grasses like bent except for spot treatments.

Its active ingredient is 59.7 percent alkanolamine salts of the ethanol and isopropanol series of 2,4-dichlorophenoxyacetic acid. Its 2,4-dichlorophenoxyacetic acid equivalent is 38.6 percent.

Kuron is a herbicide which can control bitterweed, black medic, broomweed, burdock, buttercup, croton, chickweed, dalmation toadflax, dandelion, dogsfennel, groundcherry, kochia, lupine, marshelder, plantain, ragweed and spurge.

It should not be applied to stoloniferous grasses such as bent, Bermuda, St. Augustine, carpet and centipede or dichondra.

Its active ingredient is 69.2 percent silvex, 2-(2,4,5-trichlorophenoxy) propionic acid, propylene glycol, and butyl ether esters.

Dowfume MC-2 can control quackgrass, nutgrass, johnsongrass, garlic and wild onion.

Its active ingredients are 98 percent methyl bromide, and 2 percent chloropicrin.

Ansul, Marinette, Wisc., has two turf herbicides on the market. Ansar 529 H.C. can selectively control such weeds as dallisgrass, sandbur, bahiagrass, nutsedge, crabgrass, chickweed and woodworel.

It is a high concentrate MSMA liquid plus surfactant.

Phytar 560 is non-selective and is used as a 'liquid edger' and for lawn renovation.

It is made of sodium cacodylate and cacodylic acid liquid plus surfactant.

Ortho of Chevron Chemical Company, San Francisco, Calif., markets Ortho Paraquat CL which can control annual broadleaved weeds and grasses like burclover, chickweed, filaree, groundsel, nettle, pigweed, plantain, puncturevine, purslane, red clover, shepherd's purse thistle, wild mustard, wild radish, wild oats, bluegrass, cheat grass, crabgrass and top kill and suppression of perennial weeds such as Bermudagrass, johnsongrass and morning glory.

Continues on page 36

**The crown jewel of
the bents that won't cost you
a king's ransom.**

**FOR OVERSEEDING
BERMUDAGRASS GREENS.**



Emerald
SMARAGO
variety creeping bentgrass.

Greens overseeded with Emerald look rich, play true and cost less to establish and maintain.

Emerald's rapid germination, deep rooting and lush winter color make it a natural for overseeding into bermudagrass greens. And there's more.

Overseeded in the fall, Emerald delivers good playability and a true putting surface throughout the winter. Then in the spring, Emerald really proves its worth with good transition and a less aggressive growth habit that allows bermudagrass to develop easier during the hot spring and summer months.

Easy on your budget.

But here's the payoff: because Emerald is easier to produce, Emerald will cost you less per pound than the most popular bentgrass.

And because Emerald develops less thatch, doesn't demand as much top dressing and even requires less mowing and brushing, Emerald costs less to maintain, too.

Exceptional uniformity.

Emerald is the first seeded creeping bentgrass to combine the vigor, good disease resistance, extremely fine texture and ease of establishment with the uniformity of type previously found among stolon-propagated varieties. And that adds up to less patchiness, less grain, a better playing surface for your club membership.



Bermudagrass green overseeded with Emerald 3 months after seeding, Oconee County Country Club, Seneca, South Carolina.

Order today.

This year, oversee Emerald. The crown jewel of the bents that won't cost you a king's ransom to seed or maintain.

Emerald overseeding checklist Greens

- Seeding rate: 5-8 lb. per 1000 sq. ft.
- Vertically mow in two directions.
- Work seed into bermuda sod.
- Top dress with ¼ inch sand, soil and peat in 6-2-1 ratio.
- Keep moist until germination.
- Upon emergence, fertilize with 1.5 lbs. of actual N per 1000 sq. ft.
- Fertilize monthly with 1 lb. N per 1000 sq. ft.
- Apply fungicides at 10-14 day intervals or when needed.

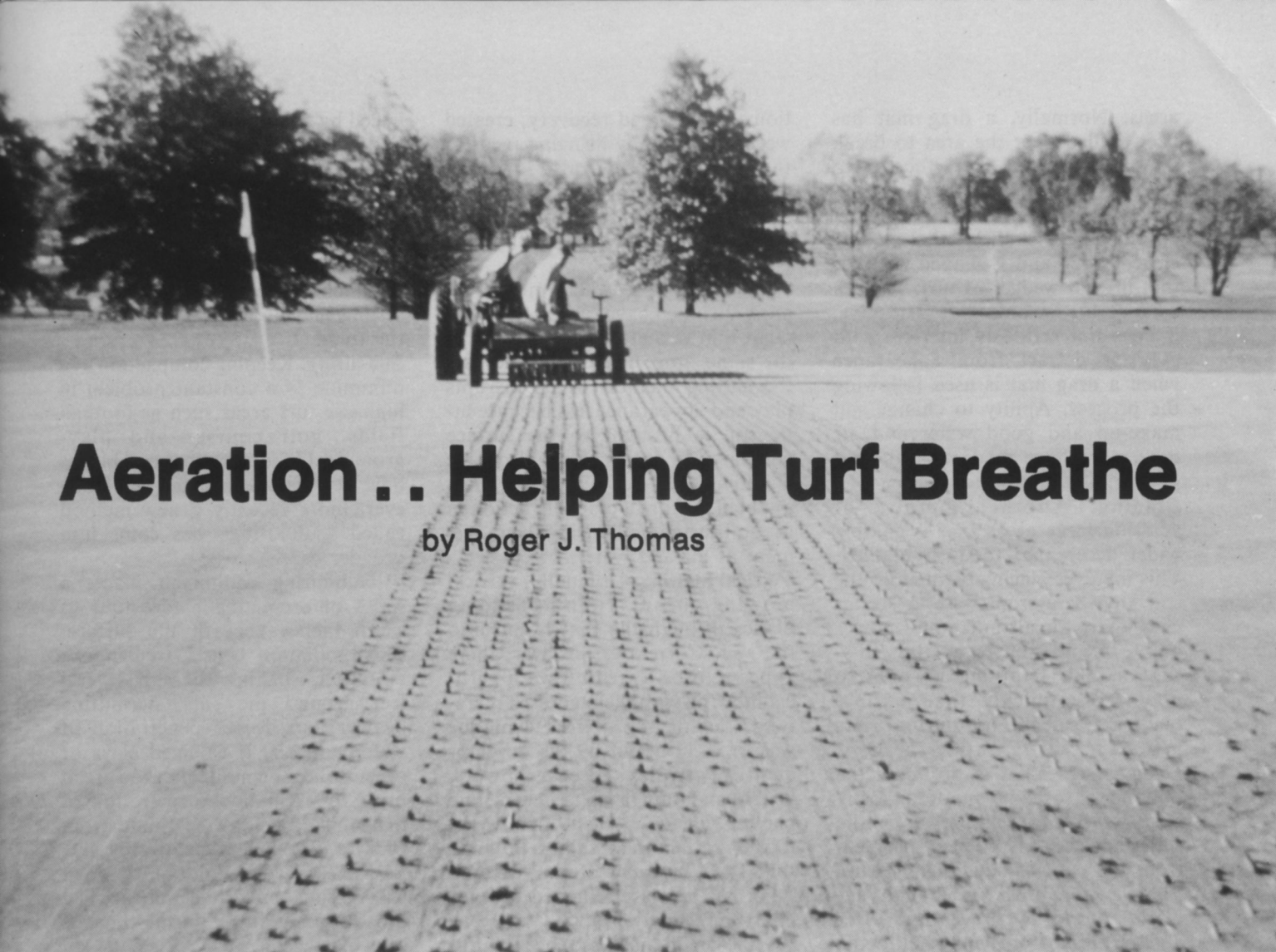
"Putting green quality"

Emerald is now available in larger supplies than ever from your Emerald distributor or jobber or write:

**The Rudy-Patrick Division,
North American Plant Breeders,**
P.O. Box 2955,
Mission, Kansas 66205.



EMERALD
SMARAGD VARIETY
CREEPING BENTGRASS



Aeration . . . Helping Turf Breathe

by Roger J. Thomas

Proper aeration is vital for the development of healthy turf. In the respiration process, plant roots take in oxygen and give off carbon dioxide. The degree of this exchange is governed by soil porosity, with small pores holding water for slow percolation and large pores allowing for good air and water movement.

Turf aeration by mechanical means is not new, of course. From the beginning there has been a sometimes confusing array of methods for moving air through the soil.

In the earliest days, pitch forks and home-made devices simply were rammed into the dry, compacted soil to improve penetration and relieved compaction. Since then we have drilled holes, sliced in deep cuts, cultivated, spiked, intermittently slotted, brushed, dethatched, dragged with deep pronged objects and even cultivated at sub-surface levels.

There even was a theory that

called for extremely close mowing to get air to fine cracks in the soil, a practice that proved disastrous during seasonal stress periods. Another short-lived technique was to drag a deep-pronged device through the ground, drawing up both good and poor turf, resulting in a long recovery period. Eventually, experience combined with advances in turf care science and equipment to arrive at acceptable methods for improving air and water movement in the soil.

The primary goal in aeration is healthy turf, achieved with minimal physical damage and disruption of play and appearance. Important, too, is reducing the time and costs involved in the process, which means relying on modern riding equipment that is wide enough to do an effective job as fast as possible.

Spiking. Spikers perhaps were the first real aeration machines, used then just as now for breaking up surface compaction to enhance the movement of air and water. Even

early tractors had spikes on their wheels for this purpose (as well as for traction). And many simple devices to crumble crust were made to attach to mowers. Later on, specialized spikers evolved for the singular purpose of penetrating the soil anywhere from ½ to 1½ inch. Spiking remains the easiest and least expensive aeration method. It can be accomplished quickly with little recovery time required, and so lends itself to simple periodic maintenance.

Coring. Efforts to aerate deeper came with pulling out cores. The size of these cores, or plugs, generally ranged from ¼ inch to as large as one inch in diameter. Tube-like devices called tines or spoons merely extracted three- to four-inch deep plugs of soil. Over the years the number of plugs pulled increased for the purpose of adding sand or other amendments to change soil structure, or to get water well below the surface in compacted, high-traffic

areas. Normally, a drag mat has been pulled over the area to break up the plugs and allow the soil to settle loosely in the holes.

Many different tines have been developed, including the hollow closed, open and L-shaped varieties that lift out wedges of turf. Though corn coring is somewhat disruptive, it does not seriously interfere with play or detract from appearance when a drag mat is used following the process. Ability to change soil make-up and good water and air movement have made this method popular among maintenance people.

Blading. Another method of aerating large areas that is gaining wider acceptance today is blading. This involves placing blades into the soil anywhere from four to six inches apart for air and water movement. Besides causing less disruption and returning an area to play more quickly than coring, blading is safer to use during stress periods for turf growth.

Dethatching. What to do about the buildup or organic matter, mostly dead grass and clippings, at the soil's surface has been a problem from the earliest days of turf care. Thatch, sometimes called mat, inhibits growth by preventing water and fertilizer from getting into the soil and to plant roots, and also contributes to the causes of grass diseases. When it builds up to a spongy rough putting surface, play is spoiled.

Dethatching machines were developed to cut the strands of stems and leaf sheaves which failed to decay over a period of years. Another function of this machine was to slice the runners of vascular strands and accumulate them with other extraneous matter on the surface so they could be collected and removed.

A logical evolution was a dethatcher that combined sweeping to efficiently handle the collection problem during the process. I should add that coring machines also help control thatch, as the soil they bring to the surface accelerates decay.

Slitting and dethatching. As the results of the dethatching were more fully appreciated, many maintenance people felt it no longer was desirable to core turf, which in addi-

tion to prolonged recovery, created weed problems by bringing seeds to the surface. They also realized severe cultivation and thatch removal at certain times of the year could seriously deter healthy turf growth.

For these reasons, more and more turf men have turned to equipment that dethatches and aerates at the same time. These machines use the slitting method which disrupts play and appearance less because little soil is brought to the surface compared to coring. They also have a cultivating affect in that the whirling blades cause a cracking action in the soil further enhancing the movement of air and water.

Vertical mowing. Originally, vertical mowing meant running slicing blades through the thatch and into the soil. Currently, however, there appears to be a trend toward vertical mowing with the blades set merely to "tick the tops." This technique was brought about by the development of triplex greens mowers, which maintain a consistently fine playing surface. By just "ticking the tops" rather than slicing into the soil, over a period of time thatch, grain and nap are removed without interrupting play.

The trend has also been influ-

enced by the greens mower's 60-inch cutting swath and ability to collect clippings while mowing. I should stress vertical mowing "ticks the tops" with very little slicing of runners. The speed and simplicity of this method let maintenance people dethatch more often without upsetting play — all good reasons for the trend.

Sub-airing. Keeping compaction at a minimum is a constant problem in high-use turf areas such as football fields, golf courses and playgrounds. Up to now tines and blades have been favored for the job. However, more recently a new method called "sub-airing" has come into broader use.

Sub-airing equipment places a series of oscillating blades four to seven inches beneath the surface. The oscillation causes tremendous vibration, shaking the soil several feet around the slits, permitting heavier and deeper penetration of water and air. If calcined clays or other solid amendments are spread prior to oscillation, penetration of these materials can be found from four to five inches below the surface. Recovery is quite quick when topdressing and fertilizer are applied following sub-airing during the best growing season. □



ABOUT THE AUTHOR — Roger J. Thomas is vice president of the Turf Equipment Division of Jacobsen Manufacturing Company. During his 29 years with Jacobsen, Thomas has worked closely with grounds maintenance people, golf superintendents, etc., throughout the U. S. and abroad, in developing turf care procedures and equipment. He graduated from St. Norbert College, DePere, Wis., and received his masters degree from Marquette University, Milwaukee, Wis.

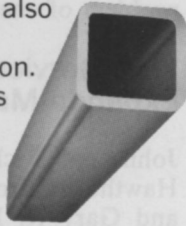
Servis machines are built with one simple idea in mind.

If you're familiar with the name, Servis, you know that we've been manufacturing rotary mowers, cutters and shredders, box scrapers, landscape rakes and rear-mounted blades for a long time. Since 1946 to be exact.

Interestingly enough, some of the first equipment we put in the field is still being used today. That's dependability.

And that kind of dependability is no accident. Servis equipment is designed to do specific jobs. And to do them better than anything else. It's also designed to last.

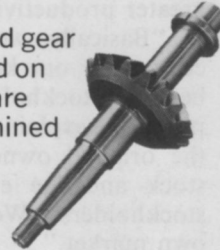
Take construction. Servis frameworks are unibody constructed to provide extra frame strength. And the high-stress areas are reinforced with heavy gauge tubing.



To be the best.

In addition, all of our rotary cutters feature safety devices to protect the tractor and cutter drive trains.

The gears and gear box shafts used on our machines are precision machined to increase strength and durability, and reduce noise.



And Servis is one of the few lines of equipment that offers you an option of blade carriers on rotary cutters. The Cyclone (dish-pan type) for cutting up to 3" brush. And the Gyro ("A" frame type) for cutting heavy 4" brush.

Of course, this is only part of our story. The point is that Servis builds a complete line of equipment with one simple idea in mind. To be the best.

So whether you've got 4" brush to cut, stalks to shred, ditches to dig, soil to move or land to level, see your Servis dealer. He's got the equipment you need.

For more information about the Servis line, contact your nearest authorized Servis dealer, or write: Austin Products, Inc., Dept. 2-75 S, P.O. Box 1590, Dallas, Texas 75221.

SERVIS

We build equipment the way we do because you wouldn't settle for less.



AUSTIN PRODUCTS, INC. An Austin Industries Company

Employee Owned Stock Plan Yields New Morale, Profits

A Rochester, N.Y. tree and landscape firm has found a unique way to stimulate higher productivity among employees by letting them purchase company stock.

The Monroe Tree Experts, Inc. and its subsidiaries Monroe Tree & Landscape, Inc. and Lewis Tree Service, Inc. have designed the plan for non-union employees over 21 who have worked for the company a year or longer. Through the arrangement, employees can receive stock at retirement.

Monroe Tree Experts initiated the program to function like this: the company makes an annual contribution to a trust fund held by Central Trust Company. The bank then purchases Monroe Tree Experts stock which can be sold only by the company or present shareholders. It cannot be traded.

Each year an independent appraisal firm will determine the value of the shares and send employees a statement of the number of shares and its value which they have invested at the bank in their name. The employees are 100 percent vested after six years or at normal retirement age of 60. Upon retirement, they may sell the stock back to the company or to others in the plan.

Thomas Terry, Jr., Monroe Tree Experts president, told WEEDS TREES & TURF the program cost \$40,000 to launch with the help of auditors and lawyer Thomas A. Stander of the law firm of Woods, Oviatt, Gilman, Sturman and Clarke. Stander patterned the plan specially for the company. Approval of the Internal Revenue Service was also necessary.

With the company paying for the stock plan, it is probably the first tree and landscape firm to use employee stock ownership. The plan does not interfere with the company's retirement plan, however. About 100 of 250 employees have joined.

The plan also enables the company to receive a tax break. Since it

can allocate no more than 15 percent of its payroll to the plan, it is taxed only on income excluding money allotted for employee stock ownership.

Beyond its credits as a distinctive plan and tax break, Terry notes how the plan has made employees feel personally successful and, in turn, helped the company enjoy greater productivity and profit.

"Basically, we did it for an incentive for our key employees who become stockholders in our company," he explained. "By doing this, the original owners could sell the stock and the employees become stockholders. We're making our own market."

Regarding company morale, he points out, "The production has picked up. They're very much more interested. It's a great attitude people in the field and in the state have. They feel they own the company, too."

Energy Prices Grip Future Of Irrigation Crop Yields

Although high costs of energy hit everyone, farmers are especially affected by the increases.

Natural gas prices, in particular, are crucial in agriculture since it supplies over three quarters of all energy used for irrigating crops. Natural gas also pumps the water for crops as well as providing energy for drying crops.

Just as irrigation can supplement the need caused by low rainfall, much of the crop yield directly relates to crops grown from irrigated land.

In the example of Texas, 60 percent of all crop production comes from irrigation, although irrigation is done over only 35 percent of the land, according to Robert L. Haney, writing in *The Texas Agricultural Experiment Station report of Texas A&M University*.

Haney said if natural gas prices exceed the present \$1.30 per thousand feet, farmers will be left with some dire alternatives. They may be forced to get more land at a lower price, scale down their standard of

living or default on their land payments.

But all is not lost, however. Research is looking into other alternatives such as increased water pumping and efficiency, although this represents great expense. A definite advantage is development of short season crops, such as a new cotton, which uses 33 percent less energy while increasing lint yield per acre 30 percent. This also requires less fertilizer, pesticides and water and fewer field operations. It may hold one answer to this serious problem of energy costs.

Tree Service Merger Expands Market Area

John and Richard Hawthorne of Hawthorne Bros. Tree Service, Inc. and Gary R. Mullane of Mullane Tree Service have announced a merger. The tree care and landscaping company will be known as Hawthorne Bros. Tree Service, Inc. with Mullane Tree Service as a division.

Although the Hawthorne Brothers are located in Bedford Hills, N.Y. and Mullane's service is in North Salem, their market is expanding to cover Connecticut, lower Westchester and Rockland County and northern Westchester County.

Chevron Announces Expansion Of Fertilizer Production

Chevron Chemical Co., San Francisco, has awarded a contract to the D. M. Weatherly Corp., Atlanta, for a third nitric acid plant at its Kennewick, Wash., fertilizer production complex. Completion of the new nitric unit is scheduled for early 1978.

The additional nitric plant is part of a \$43 million expansion of the Kennewick facility. When complete the new nitric acid unit will have a production capacity of more than 550 tons a day and will increase Chevron's output of this important fertilizer raw material to more than 900 tons a day.