"This Baby Will Steal Your Heart."

"When you put as much into something as I have with this new 30-H, it gets close to you. But I think it's the kind of machine you're going to love. It's got a Yanmar diesel that turns out 30 horses for all the power you'll ever need. The 72" deck gives you the big cut you want for wide area mowing. Talk about smooth. The hydrostatic transmission really gets the job done. And our special rear-wheel steering leaves a "0" uncut circle. Naturally, the 30-H has all the dependability we build into every Gravely. Let me tell you, this baby will steal your heart."

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arry Miller Director of Engineering Gravely International, Inc. Clemmons, North Carolina PROMASTER

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Circle No. 221 on Reader Inquiry Card

RESEARCH UPDATE

Superintendents: What they do best

According to a LANDSCAPE MANAGE-MENT survey, golf course superintendents do what's necessary to keep the course running well, are well paid (and are paid for overtime), and receive proper medical and dental benefits.

All 34 of the superintendents interviewed for the survey provide weed and insect control and aerate their courses regularly. Disease control, mowing and fertilization are performed at 97 percent of their courses. Ninety-four percent use an irrigation system, and 85 percent perform inhouse renovations. An even 50 percent practice aquatic weed control, either chemically or by using aerifiers.

The average land taken up by a U.S. course today 143.5 acres.

Unless they're all trying to feed families of eight, superintendents' pay is staying competitive. Average salary for 1989 is \$30,720. The majority (25 percent), are paid between \$20,000 and \$24,999. Twenty-two percent receive between \$25,000 and \$29,999. An elite three percent are paid at or above \$60,000.

Liability insurance is one of the factors cited by superintendents as affecting profitability. It's no wonder.

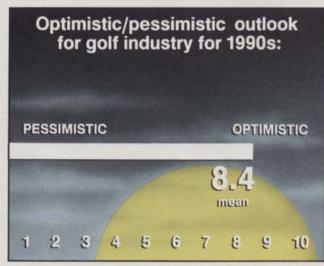
Pat Jones, director of communications for GCSAA, says liability insurance costs are rising, "especially when attached to golf cars, or things that typically might result in litigation, whether justified or not."

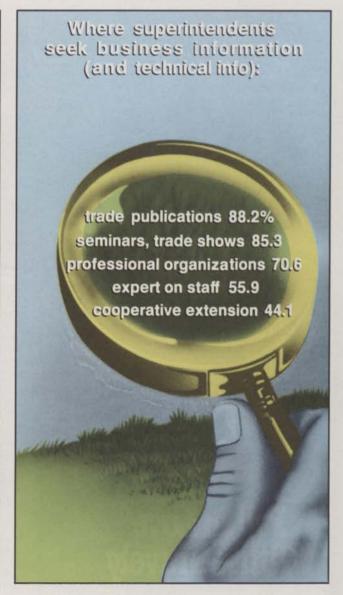
The good news on the benefit front is the coming trend toward portable pension plans, as cited by the survey.

Jones says the pension's lack of portability has been a problem in many professions. Usually, a pension must be cashed in by the employee should he change jobs. That requirement may change.

"What we and a lot of small business are working with Congress to do," Jones says, "is create a system by which employees who change jobs more frequently would be able to take their pension plans with them, like a portable IRA."

Superintendents cite affecting their prof	
liability insurance	80.0%
equipment upkeep	80.0
employee benefits.	70.0
other insurance	66.7
govt. regulations	36.7
employee turnover	36.7
inflation	26.7
accounts receivable	23.3
salary increases	23.3
customer turnover	16.7
none/no answer	13.3





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Now there's more to Cushman® Front Line® Mowers than top cutting performance. More power. More operator comfort. More endurance.

Now there's the new dieselpowered model Cushman 807.

Its totally integrated power train and new hydraulicallypowered steering gives you unmatched performance over the long run. The 807 dispatches thick, wet grass on tricky maneuvers around obstacles without losing

ground speed. No other rotary mower gives you a cleaner cut.

At the heart of the new, four-wheel 807 is a powerful 21.5 horsepower, 3-cylinder Kubota 950 diesel engine. We've also included a heavy-duty Donaldson air cleaner and a new, heavy-duty Cushman PTO clutch to keep your new Cushman Front Line running longer. A complete family of Cushman Front Lines and a wide range of accessories are available to meet all your needs all

Choose a 3 or 4 wheel design with 60- or 72-inch side or rear discharge mower deck. Or add the exclusive Cushman Grass Caddy To system, which lets you cut, catch, and hydraulically dump 16 bushels of clippings without leaving the seat.

For a convincing demonstration contact your Cushman dealer today. Or call toll-free: 1-800-228-4444.

4014 Cushman, P.O. Box 82409, Lincoln, NE 68501

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Circle No. 106 on Reader Inquiry Card

PRODUCTS

Solar-powered light is wireless, work-free

The Light Fantastic is a totally stand alone, wireless, solar-powered lighting unit. It can be adjusted to glow brightly during the evening or softly throughout the night. Light Fantastic absorbs sunlight during the day and creates a soft glow from dusk onwards.

The units can be used in groups or individually, and are easily moved

from place to place as the seasons change.

Circle No. 191 on Reader Inquiry Card

Safety wear catalog for multi-applications

Bata Shoe Co. has a new catalog available highlighting its line of industrial, waterproof protective clothing and footwear.

Bata says it has a commitment to safety excellence that begins in the research stages and continues through design and production.

Circle No. 192 on Reader Inquiry Card

Blue colorant can be used as lake dye, spray indicator

Drane Supply Co. of Louisville, Ky. has produced what it says is the first blue colorant to be labelled for use as a liquid lake dye and as a spray pattern indicator.

The product is called Aqua-Turf. Drane reports that when used in ponds, Aqua-Turf shades sunlight for the control of algae and aquatic weeds, as well as enhancing lake appearance with a natural looking blue color.

One gallon treats up to an acre of

water four to five feet deep and lasts for up to several weeks.

For spray pattern indicator use, Agua-Turf is applied at the rate of 8 to 14 ounces per acre. It leaves a temporary blue color that gives grass a deeper green appearance.

Drane says Aqua-Turf is harmless to all forms of animal and vegetable life, and does not affect the performance of any turf chemicals.

Circle No. 193 on Reader Inquiry Card

Attachment is adaptable as a scraper and loader

The D.W. Scraper is a new heavy-duty truck attachment that fits on a 3-point hitch as a scraper or end-loader.

It has two, $2^{1/2}$ x 18-inch cylinders controlling the bucket. The change from scraper to end-loader is accomplished by changing six bolts on each

Sources say the tool can be used to finish grading around buildings, building ponds and terraces, leveling driveways and more.



Circle No. 194 on Reader Inquiry Card

New line of attachments for mowers and tractors

Attachments Plus of Spring Lake, Mich., now offers rugged, lightweight attachments for front mowers and tractors with 3-point hitches.

In less than five minutes, an operator can change from an adjustable fork set for moving balled trees to a



tote platform for transporting shrubs, or to a large half-yard hopper for hauling bark or debris.

The product line features an aluminum clam shell hopper and scoop along with a steel fork set, tote platform bracket kit and tool organizer. One person can easily change attachments thanks to quick release pins.

Circle No. 195 on Reader Inquiry Card

New nursery fabrics provide great cover

Two new non-woven fabrics are available to nurserymen as part of an expanding Agryl System of protective covers for horticulture and agri-



culture from American Agrifabrics.

Both Agryl products are soft, breatheable, non-abrasive materials available in narrow and wide widths.

Agryl P-30 is a medium weight cover at 0.9 oz./sq.vd. It offers freeze protection down to 26°F, and is recommended for late spring freezes on ferns, foliage and container stock.

Agryl P-50 is heavier, at 1.5 oz./ sq.vd. Its use is recommended for harsher growing conditions, and provides freeze protection down to 24°F. American Agrifabrics says P-50 is also ideal for overwintering in single or double layers, or coupled with white poly film.

Circle No. 196 on Reader Inquiry Card

Research license available for tree tie-down system

A tie-down system for supporting newly-planted trees is available for licensing to manufacturers interested in research and development.

Safe Way Tie-Down anchors trees to promote improved growth, according to the Invention Submission Corporation (ISC). ISC says the unit allows for more attractive landscaping without unsightly stakes. Designed for optimum safety, the system eliminates the risk of stumbling over above-ground stakes and running into virtually invisible support lines.

ISC reports that the design sub-

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stantially reduces the aggravation of mowing the lawn around supported trees.

Circle No. 197 on Reader Inquiry Card

Line of power tools grows; now totals 17

New product additions have been completed by EasyRake,Inc. The line now includes 17 models of dethatchers, vacuum carts and sprayers.

"Major expansion of our product line from our traditional base of highperformance dethatchers led us to take a similar step forward with appropriate changes in our product name and the development of a newlook, corporate logotype and symbol," says Jerry Jones, president.

The addition of a 40-cubic foot Model 86 and a six-bushel Model 344 lawn vacuum brings to twelve the number of self-powered tractormounted and trailered units.

The EasyRake Model 84 trailer-mounted sprayer features 13-gallon capacity and complements the 13-gallon tractor-mounted Model 82 and the 30 gallon trailer-mounted Model 88 for residential and commercial spraying.

Circle No. 198 on Reader Inquiry Card

New catalogues describe vacuum, blower products

Atwater Strong Inc. of Akron, Ohio, offers a new 18-page booklet detailing its various vacuums and blowers.



Trade names for Atwater products are Lo-Blo, the Air-Broom, Lit-R-Blo and Mi-T-Vac. Commercial units are used by groundskeepers, lawn care professionals, landscapers, parks, schools and cities.

Circle No. 199 on Reader Inquiry Card

Watch for improved variety of Clemfine

Bob Mazur of Clemson University is currently researching to breed an improved stand of Clemfine tall fescue in five years.

Mazur says he is not trying to replace Clemfine, but rather to incorporate additional plant characteristics to fill a new market niche.

Those characteristics are greater dwarf growth, finer leaf texture and darker color, along with Clemfine's well-known disease tolerance.

Major markets for tall fescue in the Southeast include Atlanta, Charlotte, N.C. and Birmingham, Ala. "Here at Clemson," says Mazur, we're in an ideal location to screen for improved tall fescue varieties. We've got the same climate and disease problems."

Mazur's research begins with screening plant ecotypes and selecting germ plasms from disease resistant varieties.

Circle No. 200 on Reader Inquiry Card



One-Pass Mowing & Clean-Up

Mow and power vac at the same time with Goossen's new 128 cu. ft. capacity Vac 'n' Load. It can be used with virtually any front deck or midmount mower, and is also ideal for fast fall leaf pickup. And when the job's done, it tilts up for easy dumping.

If you need time-saving one-pass capability, then you need to know more about Vac 'n' Load. It gets the big jobs done faster.

Ask about the convenient terms available with Goossen's all-new **TurfTeam Leasing**.

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Pressure washer line has variable sprayer

The Jet-Pro Model JP-3015 by Jetter Corp. has a variable pattern spray tip and two-piece wand for easy accesorizing.

Jetter says the Jet-Pro operates at



1500 psi, a full 3 gpm, and retails for hundreds of dollars less than comparable models.

Circle No. 201 on Reader Inquiry Card

Tree spade maximizes transplanting capability

Vermeer has produced what it says is the world's largest mechanized tree mover.

The 9400 Tree Spade can handle trees with a 94-inch diameter. It mounts on a truck with a minimum GVW rating of 58,000 lbs. The unit weighs 22,500 lbs., and features a heavy duty hydraulic drive system with chain reduction assist. Four spoon-shaped spades reach a depth of 65-inches. Each spade applies a digging force of 42,000 lbs. at the point. Giant anchor plates press the ball securely in position during transport.

The front of the truck bed holds approximately 450 gallons of water which lubricate the tree ball and spades while digging.

Maximum ball weight capacity is 12,000 lbs.

The tree digging and lifting opera-



tion is all hydraulically controlled from a single operator station which is located next to the spades for maximum visibility.

Circle No. 202 on Reader Inquiry Card

New wall system is mortarless

A new concrete block landscape retaining wall system has been introduced by Allan Block Corpora-



tion of Minneapolis.

According to the company, the system requires no mortar or stabilizing pins, and can be used in a wide variety of soil and site conditions for residential, commercial and municipal applications.

The secret to the system is a raised lip on the front upper edge of each block which allows blocks to interlock as they are stacked. Walls are formed by placing the first row of blocks in a shallow trench, stacking additional rows on top against the lip, and backfilling behind each row.

Allan Block retaining walls may in-



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corporate inside and outside curves, multi-levels, landscaping pockets, angles, corners and stairs. Blocks are available in a variety of colors.

According to designer and company founder Robert Gravier, Allan Block has the durability of landscape boulders or stone, but without the weight and difficult installation.

Circle No. 203 on Reader Inquiry Card

Goosegrass is a goner from bermudagrass turf

Sencor 75 Turf Herbicide from the Mobay Corporation is reported to be highly effective in the control of goosegrass in actively growing Bermudagrass turf.

Applied prior to green up per label directions, Sencor 75 will also effectively control such broadleaf weeds as common chickweed, corn speedwell, henbit, parsley-piert and spur weed.

It mixes with water and may be applied with any conventional tank type sprayer. Mobay says that usually, one application, and never more than two, will provide seasonlong control.

Circle No. 204 on Reader Inquiry Card

Clipping pickup made easy thanks to new deck design

A new "top flow" deck design for the Cushman Front Line mower vastly improves the collection of clipping and debris when mowing.

The new deck features a grass propulsion impeller as an integral part of the deck design. The replaceable impeller blade operates on the same



spindle as the right-hand cutting

According to Cushman engineers, most grass collection systems rely on air drawn in from under the edges of the mower deck. The "top flow" deck is designed with air inlet passages that allow positive air flow even when the mower is operated low to the ground in wet turf.

A tunnel-shape provides an open, straight path for clippings and debris. This, says Cushman, minimizes the chance of plugging from twigs, pine cones or other types of debris.

Circle No. 205 on Reader Inquiry Card

Broad spectrum control, no residual soil activity

Roundup herbicide from Monsanto controls more than 110 kinds of emerged weeds, roots and all. If you've needed more than one herbicide in the past to control weed problems, Monsanto says Roundup can help.

Roundup works in the plant and not in the soil. That, according to Monsanto, means it has no residual soil activity, so it won't wash or leach out to harm nearby desirable vegetation.

It is ideal for trimmning and edging around shrubs and flower beds, around trees and other valuable ornamentals.

Circle No. 206 on Reader Inquiry Card

New lineup of mowers features many widths

Dixon Industries, Inc. has presented its 1990 Zero Turning Radius riding lawn mowers. They range in size from the ZTR-304 with a 30-inch cut to the surprisingly compact commercial grade ZTR-502.

Speed, steering and direction are controlled by two hand levers. The 30-inch, 36-inch and 42-inch models rely on Dixon's patented transaxle.



The ZTR-502 features a piston-type hydrostatic drive, an 18-hp Kohler engine and a special patented suspension to reduce vibration.

The narrow swaths of the ZTR-304 and the ZTR-312 permit these 30-inch cut mowers to move freely in close-planted areas.

Circle No. 207 on Reader Inquiry Card

New utilitruck is now here for the new year

Columbia ParCar Corporation introduces the 1990 Columbia Utilitruck.





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Columbia ParCar Corporation says the Utilitruck is perfect for light industry, agriculture and turf

The Utilitruck is a rugged, allpurpose vehicle, and may be customized to fit any of your special needs.



Circle No. 208 on Reader Inquiry Card

Tough on weeds, gentle on grass

Acclaim 1EC herbicide from Hoechst-Roussel Agri-Vet Company is tough on grassy weeds, yet gentle on cool season turfgrasses. Acclaim can be used when no pre-emergence product can because it controls weeds after they have germinated.

The produce controls or suppresses crabgrass, goosegrass, barnyardgrass, foxtail sp., panicum sp., Johnsongrass and sprangletop. Acclaim is cleared for use on turfgrass, Kentucky bluegrass. perennial ryegrass, fine fescue, tall fescue, annual bluegrass, zoysiagrass and bentgrass.

Circle No. 209 on Reader Inquiry Card

New line of grass cutters ready for springtime

Simplicity Manufacturing, Inc. has introduced a complete line of commercial grass cutting machines. The line includes six riding models, two mid-size walk-behinds and two trim mowers.

"The front cut models feature a zero-turning radius that gives operators great maneuverability around and under obstacles common to parks, building sites and large rural lots," says Warren Frazier, president and chief executive officer.

A patented hydro steering design features dual hydrostatic drive that allows the units to pivot in a full circle



around either drive wheel. Models are available with a lever or exclusive steering wheel design. Moving the steering wheel 40° turns the units a full-360°.

Options include dual tail wheels and grass catchers.

Circle No. 210 on Reader Inquiry Card

High performance engines power commercial mowers

The Toro Company has added two new high performance Kohler en-





Combination vacuum and mechanical sweeper will pick up grass clippings, leaves, cans and other debris in wet or dry conditions. 7 cu. yd. hopper. Call Your Nearby Olathe/Toro Dist. For Demo!

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