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LANDSCAPE LOG

By Douglas Chapman, horticulturist, Dow Gardens, Midland, MI

AUGUST JOB FOCUS
1. **Turf**
   a. **planting new lawns**
   b. **fertilization**
2. **Deciduous Tree Pruning**
3. **Pine Planting**
   a. **transplanting**
   b. **late season insects and diseases**
4. **Continued Heavy Maintenance**
   a. **mowing and weeding**

August in the Northeast and North Central states is the beginning of fall. The soil is still warm, but we see the return of rain after a normally dry June and July. Further, the day length, or photoperiod, is still long enough to sustain growth. Landscape development is certainly centered on three broad categories: 1) turf; 2) deciduous tree pruning; and 3) pine planting.

TURF

August in Central Michigan and through the Northeast is the *one* single best time to plant new lawns (while spring is a *second* prime time for new lawn installation). The soil temperature is high and the air temperature is beginning to cool. By the second week of August fall rains commence and almost every morning we have dew on the grass. The abovementioned conditions are perfect for new lawn installation. The weed season is essentially over, and one can install a new lawn, while expecting almost complete success with minimal weed seed germination.

Each part of the country will have different recommended grass types, but it should be recognized that a grass seed mixture is probably better than any one individual cultivar. It is better due to the fact that there is more environmental tolerance and insect and disease resistance with a broad variety of grass types than with a single cultivar—the same consideration as with trees, the greater the variety of species, in general, the more disease tolerance one can expect. In the Great Lakes area, a mixture of 60% fescue [cv. of creeping red or chewings], 20% Kentucky Bluegrass, and 20% fine leaf perennial ryegrass, e.g. Manhattan Perennial Rye, establishes quickly, while being medium to low maintenance. The individual cultivars of bluegrass, fescue and fine leaf perennial ryegrass will change as new ones are developed, but the concept of a mixture of grasses, emphasizing disease resistance and low in nutrient requirements, will probably result in the type of lawn that fits best a large area landscape, park, or even home grounds.

Fertilizer, depending on the program one uses, is also important during mid-to-late August. One should apply the equivalent of approximately one pound of actual nitrogen per 1,000 square feet, while emphasizing potassium as well (five pounds of a 20-5-10). Most fertilizer recommendations are based on the amount of nitrogen applied per 1,000 square feet. Contemporary research has shown that relatively high quantities of potassium are also important to stimulate carbohydrate metabolism, while increasing disease tolerance, drought, and winter hardiness. Generally speaking, phosphorus deficiency is difficult to induce in the average lawn. Most cool season grass species are effective extractions of this macronutrient and, therefore, small quantities are all that are needed. Note—with all fertilizers, the lawn should be dry and the fertilizer watered in soon after application.

DECIDUOUS TREE PRUNING

The month of August is a good time to prune deciduous trees. Most of the terminal and diameter increase, that is plant growth has occurred and, physiologically, it has been shown that there is a good wound response at this time. For years nurserymen removed suckers and unwanted branches during this month. They took advantage of the foliage being on the plant as long as practical, thus adding dimension to the tree trunk but removing the unwanted growth at a time when the plants callused over most rapidly. The only cautions to August pruning would include: pruning of crab apples during wet periods, thus encouraging fire blight, and pruning of elms. Hart at Michigan State University suggested that wounds on elms during August may attract elm bark beetle, thus it could be a factor in late season Dutch Elm Disease infection. Other than these two considerations, most trees, including bleeders, such as Sugar Maple and birch, respond well to late summer pruning.

PINE PLANTING

August represents the single best time to transplant pines in the landscape. Although spring transplanting results in 80-90% success, transplanting of pines during August usually results in 95% of greater success. The conditions of warm soil encourages root growth. Frequent showers, high humidity, and relatively long photo-period combine for this one plant genera's transplanting success. For most success, transplant the pines balled and burlapped. During the '60's some of the early photoperiodic researchers showed that pine roots continued to grow during August and September under that particular day length even though vegetative growth had stopped. This single factor probably best explains the success of pine transplanting in August. The pine roots have opportunity to become established before the onslaught of winter. Many landscapers have noted that staking and heavy mulching also contribute to late season transplanting success. Does this mean that hemlock and juniper also exhibit the same increased planting success? In the case of these plants, the literature and practical experience have not been as clear. Junipers, hemlocks, and spruce transplant relatively well throughout the month of September and early October if mulched heavily.

Late season insects and diseases can have some impact; therefore, one should be looking for extremely heavy infestations of mites (two-spotted or red), aphids, scale, and walnut caterpillar. Diseases to be on the lookout for are few but important. If an extremely wet August, fire blight on crab apple, hawthorn, and mountain ash and needlecast on pine can be problems. **WTT**

REPORT · FROM IRON COUNTRY

The inside story on the turf equipment market today.

By Bruce F. Shank, executive editor

One year ago there was speculation some turf equipment manufacturers were on shaky ground. Today, that thought seems ludicrous, with manufacturers saying there may be too many companies and a shake-out is likely.

Furthermore, two more U.S. companies are preparing to enter the commercial turf equipment market and there is concern Japanese manufacturers are studying the market. U.S. manufacturers are concerned about "copy-cats".

Weeds Trees & Turf editors visited Iron Country in March and April to get the full story. We spoke to representatives of more than a dozen companies to get their opinions and to learn of their plans.

Most of the activity by far is in commercial mowing equipment, especially in the walk-behind intermediate (30- to 60-inch) rotaries. George Schaefer, Jr., of F.D. Kees Mfg. Co., said, "In 1975, a survey we did showed a void in the 32- to 50-inch walk-behind rotaries and we focused our attention on that void. Three years ago, Toro did a similar questionnaire using a Kees mower as an example. They are aware of the potential."

Price, maneuverability and speed are reasons contractors cite for buying walk-behind intermediates. They are replacing some of their trim mowers and large riding mowers with the intermediates (see Mower Efficiency, April issue).

The concept of walk-behind rotaries was developed in the 1930's by two men, each separately. Howard Phelps, the founder of Sensation, in Nebraska and Leonard Goodall in Missouri. "My first rotary had bicycle tires and an electric motor from a Hoover vacuum cleaner," says Phelps. "I've still got it here in my living room in Raleston, Nebraska, a suburb of Omaha. I also hold the patent for the first grass catchers for rotary mowers." Phelps began commercial production in 1940 and sold the company in 1966. Last year Gilson Brothers purchased Sensation and is stepping up its marketing efforts.

Leonard Goodall of Warrensburg, Missouri in the 1930's, built a company and distribution network which included the then Bunton Seed Co., in Louisville, Kentucky. "Bunton had the Eastern Seaboard for Goodall until we started making our own mowers and Foley bought Goodall in the mid-50's," said Gilbert Brown, Bunton vice president. In 1969, Bunton bought all rights to the Goodall line. "Between 1949 and the mid-70's the market for walk-behind intermediates was served by only a few companies. Today, there are 9 companies with similar products and more coming," Brown says.

Ransomes Bobcat claims to be the largest current manufacturer of walk-behind intermediates. Bobcat intermediates were first produced in the mid-70s. Ransomes, a British company, purchased Bobcat in 1977, adding a reel line to Bobcat's rotaries. Many landscape contractors speak highly of the Bobcat intermediates. Dick Lehman of Ransomes attributes the company's success to simplified operation and maintenance as well as a good distribution network.

F.D. Kees also entered the walk-behind intermediate market in the mid-70's after market research showed potential. Sensation and Yazoo were old-line companies with products in that category.

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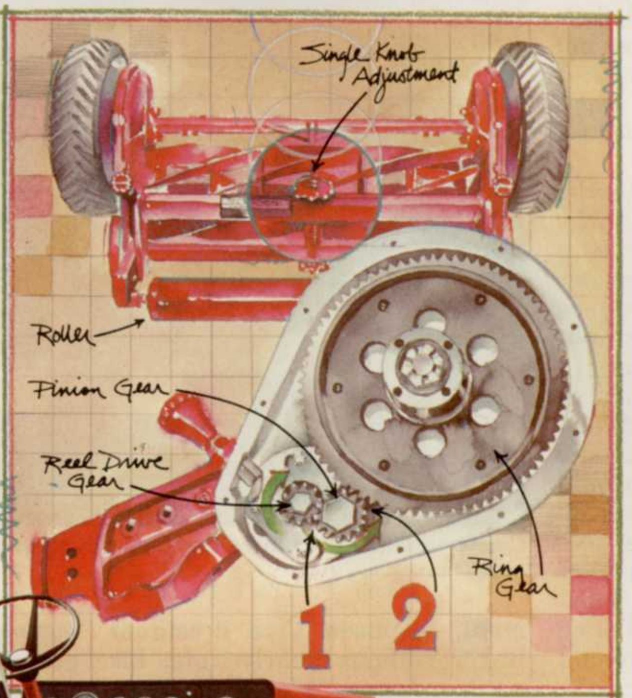

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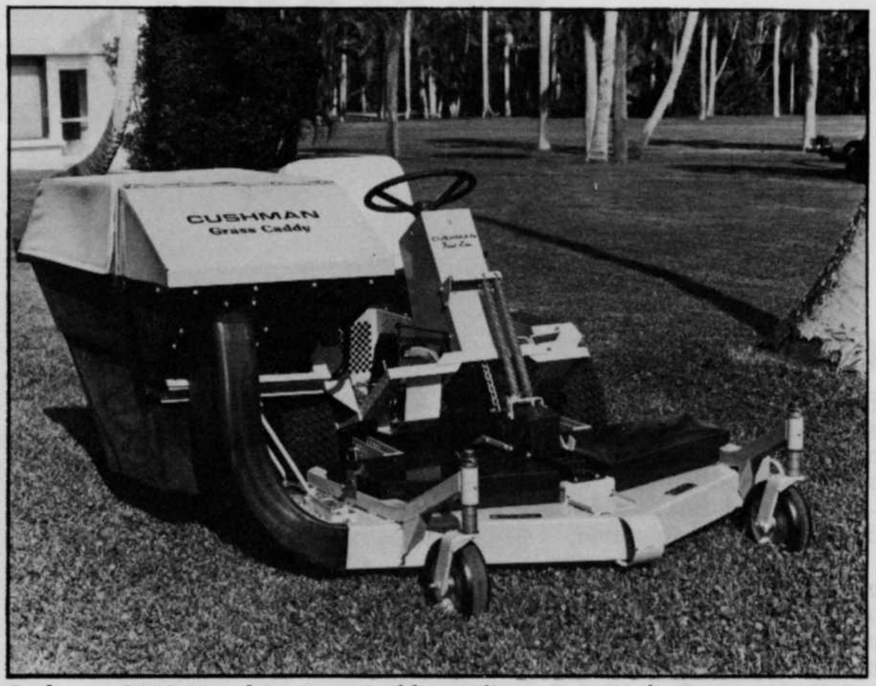
Since then Gravely, Deines, and Exmark have joined the group. Still, Toro and Jacobsen wait to enter the intermediate market. Representatives from Toro and Jacobsen did not want to reveal their plans for this type of mower but distributors have told *Weeds Trees & Turf* both companies have prototypes in testing with introductions not far off.

One potential problem may be what happens to distributors who carry Toro or Jacobsen lines with another company's intermediates when Toro and Jacobsen introduce competitive models. One distributor felt it will take two years or more for Toro and Jacobsen to build up inventories of walk-behind intermediates if they choose to enter that market. This would give distributors time to evaluate the competitiveness of the new products and whether both lines can be together on the same showroom floor. He also expected price and new engineering by Toro and Jacobsen to make a difference.

All the excitement is not walk-behind intermediates. Toro has been pleased with the reception of its 11-bladed reels it introduced last fall. "We have more products in development at Toro for the commercial market than we have ever had before," says Steve Williams, manager of the commercial products group. "We will introduce more new products this year and next year than any previous time. This reflects our continuing commitment to product research and development." Toro will announce its 1983 introductions in August at its annual dealer convention.

Denny Brown of Toro is spearheading an experimental program using a computer to balance a customer's needs with an appropriate mower. "Construction of a mower can mean the difference between two years and eight years of reliable service," Brown says. "Down time is critical in the commercial market. Some mowers may cost less at first, but cost more later when they don't hold up or last as long."

Both Toro and Jacobsen have installed computer-aided design systems to speed up product development. Jacobsen Vice President Roger Thomas clearly states his company's goal, "We are making a unique product for the industrial marketplace. We are not in the throw-away business." "More and more mowers will be hydraulic," Tom Carter, Jacobsen vice president of engineering said. "At first we had to get parts from aircraft parts suppliers, but now we are custom designing our own parts to increase the efficiency and reliability of hydraulics. Solid state components may tell the mower operator of the future that the hydraulic fluid is too hot or the pressure has dropped; preventing damage and prolonging equipment life."



Cushman-OMC Lincoln's *Grass Caddy typifies a new emphasis on grass collection.*

Hydraulics are credited for reducing the weight of mowing equipment, improving the cut by increasing the rotation speed, simplifying changeover of attachments, and eliminating a number of moving parts subject to wear. Hydraulics were first applied to rotary equipment by Excel.

National Mower, the oldest manufacturer of powered reel mowers in business, has built customer loyalty on keeping their mowers as simple and as rugged as possible. "Rotaries are not as safe around people," says John Kinkead, National's president. "Reel mowers operate with less horsepower and at lower rpm, saving fuel consumption and engine wear. Traditionally they are more popular in the Northeast and West. Reels have difficulty cutting grass higher than the radius of the reel, usually 3- to 4-inches. Beneath that, they tend to cut cleaner than rotaries. Regular blade sharpening is needed and is admittedly more difficult than with rotaries. Distributors are going to have to change their reel service to satisfy markets like lawn care," Kinkead said.

The reel market is growing as well. In addition to the older companies such as Toro, Jacobsen, National, Locke, and Roseman, are recent entries to the U.S. market, Brouwer Turf Equipment Ltd. of Ontario, Canada, and Ransomes of the United Kingdom. The reel gang, especially hydraulic reels, is holding its own in the golf and parks markets as a good cut for large areas. Triplex mowers, as well, are being used more in fairways to reduce *Poa annua* and disease by clipping removal.

Clipping removal for both reel and rotaries is growing in priority for product designers. A major part of the new commercial line about to be announced by a new entry this fall is a grass catching system. Cushman's new Grass Caddy for

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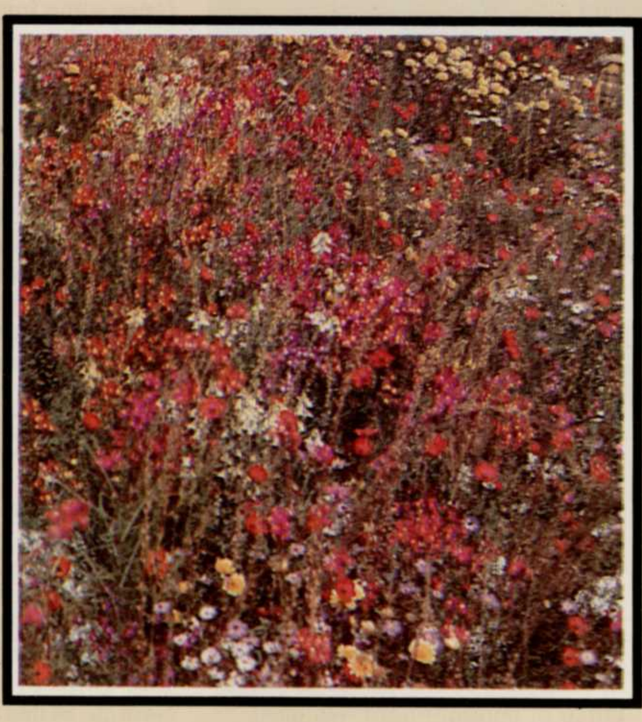

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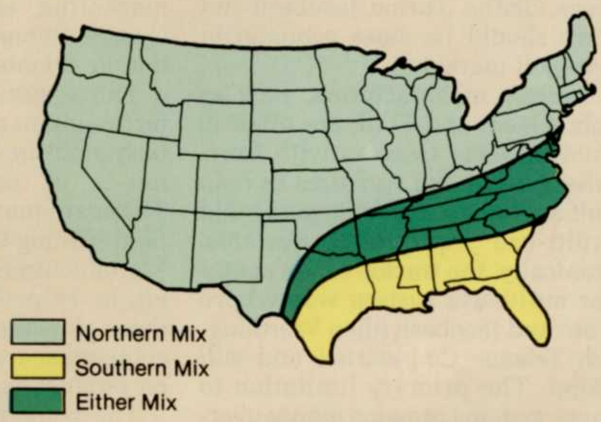

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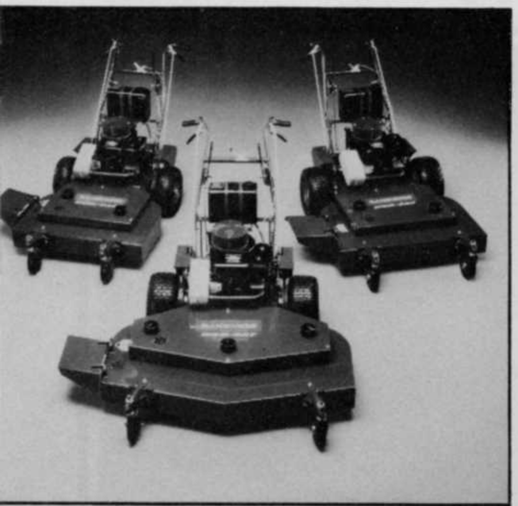


Walk-behind intermediate *rotaries from Ransomes-Bobcat.*

its Front Line riding rotary mower is a good example of the attention to grass collection. Much of this is in response to the growing importance of commercial lawn care.

Another important item in product development is a zero turning radius heavily promoted by Excel with its twin joy stick steering. Excel has also responded quickly to the grass collection and multi-use concepts.

Mechanical thatch management is another feature being considered by commercial equipment manufacturers as a partial result of lawn care. The simple device offered by Snapper in its consumer mowers may work its way into the commercial market as an option to powered rakes and vertical mowing.

The benefits of coring are being realized by non-golf markets at the same time. Aerifying attachments as offered by Ryan, Dedoes, Hahn, Kees, Olathe, Turfco, Jacobsen and Toro should be more common in non-golf markets.

Tractor manufacturers, such as John Deere and Ford, are offering medium-size tractors with four-wheel drive and turf tires to help golf and landscape managers build multi-use equipment systems. Ironically, the tractor as the center for multi-use system was where Toro and Jacobsen (then Worthington Tractor Co.) started and still excel. The primary limitation to these systems remains maneauverability.

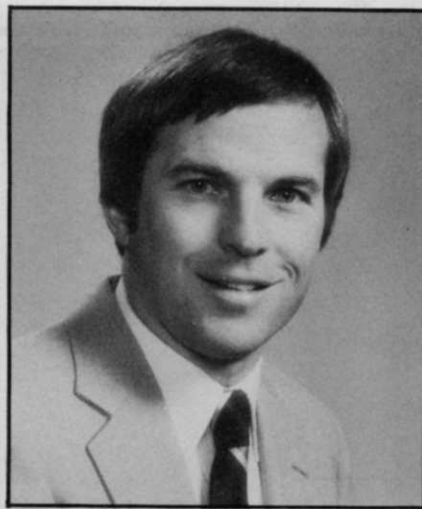
The trim rotary mower market faces some increased pressure as a result of new safety regulations. Commercial mowers are exempt from blade brake systems now required on consumer mowers. Commercial equipment producers are concerned some consumer mower manufacturers might try to use the commercial market to avoid the safety regulations. Commercial buyers should demand the higher standards set by commercial mower manufacturers, such as ball bearing wheels, heavy-duty housing, and commercial grade engines.

U.S. engine manufacturers are fighting back against companies like Honda who gained market share recently. Briggs and Stratton introduced a much-improved I.C. series of engines last year recapturing some of the Honda market. The chief problem, according to George Schaefer of F.D. Kees, is Honda developed a 4-cycle engine with better oil circulation than U.S. engines and claimed longer life. This concern also increased the popularity of 2-cycle engines, such as on Lawn Boy. Briggs responded with the I.C. engine that has greater life and easier rebuilding. "Our buyers have now started asking for Briggs engines over Honda," says Schaefer. "Briggs was down to 40 percent of our production and now its back to 60 percent."

Teledyne Wisconsin is repositioning to increase its engine market share under the name Teledyne Total Power. Teledyne also cooperates with a Japanese company on the Robin engine line. Kohler and Onan increased their marketing efforts at the Golf Course Superintendents Convention in Atlanta in February.

The engineers of commercial turf equipment manufacturers are busy right now trying to meet the needs of commercial buyers. There are many test models in the field waiting to go into production. Manufacturers now have computers to help their engineers meet those demands. Like Toro, other companies are working vigorously on product development.

The potential hurdle to the entire process is the distribution system. "Next to product quality, is a



Steve Williams, *head of Toro's commercial turf equipment group.*

company's distribution," says Dick Lehman of Ransomes-Bobcat. "As we expand our product lines, distributors who carry more than one company's line are faced with pressure from both the manufacturers and the customers. There is great potential in certain markets for new equipment distributorships."

Manufacturers may try farm equipment distributors as an option to turf equipment distributors. Farm equipment manufacturers have an inside track in that case. Farm equipment distributors could also use the extra business.

Garden centers with commercial lines are also an option, but consumer equipment manufacturers would have an edge there. The overall situation does seem to support the need for new commercial turf equipment distributors.

Conrad Langenberger, vice president of marketing for Simplicity, told attendents of the Reinders Turf Equipment Show in Milwaukee, "Manufacturers are pinched, and many are shoring up their distributors. By 1984, housing starts will reach the magical two-million mark. Riding mower sales will increase through 1986, go down, then resurge again in 1988. I expect gas engines of the future to have longer life expectancies."

The volatility of the consumer equipment market is dangerous. Equipment manufacturers may want to stick more closely to the stable commercial market.

WTT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