classed in the ratings. They may have hidden virtues! I believe we can safely say that any of the cultivars in the tables will make an acceptable fine turf if "all goes well", if the grass is planted to favorable habitat and is well tended. But the search goes on for ways to minimize risk, to supply still better looking, more functional cultivars even if adopted only to certain uses (such as the golf course fairway or roadside berm) or to accommodate what has traditionally been marginal habitat.

Tables 1-3 reflect ratings by many individual observers, any of whom might see things differently than would another person. Certainly the ratings vary with fluctuations of the season, and from year to year (for the weather is not alike any two years). Keep in mind, too, that cultivars often go "down hill" with time, perhaps because new races of disease arise, or because abundant use of the cultivar permits epidemic spread. Some cultivars have special uses or adaptations, the reason why the Lawn Institute Variety Review Board's list included such self-reliant cultivars as Arboretum (appearance of which is little different from old-fashioned common bluegrass!). Some cultivars may be especially useful in blends or mixtures, extending the seed of more expensive selections while not downgrading performance of the combination. Quite often, as has recently been noted in Ohio scorings, cultivars not high-ranking of themselves may end up in near the top when combined in blends!

Artistic concoctions

Concocting blends (cultivars of the same species) or mixtures (combinations of different species) is more an art than a science. At the Lawn Institute identical mixtures planted on different occasions, and in different locations, may sometimes have bluegrass dominate, another time fescue. An ecological principle, "competitive exclusion", states that similar organisms in a stable environment will not exist indefinitely in balance, but that one component will outcompete the other (which will then be gradually eliminated). Competitive exclusion often holds for lawns of blends and mixtures, but equally often a minority component hangs on sufficiently to experience a renewal should tribulation afflit the initial dominant. Merion, for example, is a strong competitor, tending to dominate less aggressive cultivars such as Fylking, until stripe smut (against which Fylking is resistant) sets back the Merion.

More studies needed

It is not possible to test blends and mixtures under all environmental conditions, and much is still to be learned about competitiveness of cultivars. Experience with crop plants has proven that some cultivars outcompete the weeds much better than do others, whether due to inherent vigor or to allelopathy (repressive secretions). The interactions are so involved, and beyond our ability to do much about them, perhaps lawnseed blending will always remain an art, in which experienced seedsmen do their best, realizing that sometimes one, sometimes another component will "carry the ball". It's really immaterial just so something does persist to make a fine turf!

Many avenues still merit exploration in the breeding and selection of new lawngrasses. So far resistance to insect attack has received little attention. Breeding for harmony with pesticides is in its infancy (in Illinois, recently, bluegrass cultivars were rated for Ronstar phytotoxicity, for example). Attention is now being given performance under ultra-low maintenance (e.g. Ohio). In time breeders may incorporate special features, such as Merion's ability to photosynthesize through the leafsheath (thus enabling the grass to endure defoliation more adequately) as proved by Dr. Youngner's growth chamber work in California. Certainly there is no theoretical reason why the hardiness of grasses from harsh environments cannot be bred into less hardy cultivars.

For table 3 see page 22
TABLE 3 Performance of lawngrass cultivars on the East Coast. A = in top third (A* = top 10%), B = in middle third, C = in bottom third of ratings compiled by local authorities. For specific responses, 1 = good, 2 = medium, 3 = poor.

<table>
<thead>
<tr>
<th>KENTUCKY BLUEGRASSES</th>
<th>MASSACHUSETTS</th>
<th>CONNECTICUT</th>
<th>RHODE ISLAND</th>
<th>NEW JERSEY</th>
<th>MARYLAND</th>
<th>VA.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>overall</td>
<td>spring</td>
<td>overall</td>
<td>overall</td>
<td>overall</td>
<td></td>
</tr>
<tr>
<td></td>
<td>average</td>
<td>Helminth</td>
<td>Helminth</td>
<td>Helminth</td>
<td>Fusarium</td>
<td>Leaf</td>
</tr>
<tr>
<td></td>
<td>color</td>
<td>spot</td>
<td>spot</td>
<td>spot</td>
<td>spot</td>
<td>spot</td>
</tr>
<tr>
<td></td>
<td>1½&quot;&quot;</td>
<td>¾&quot;&quot;</td>
<td>overall</td>
<td>average</td>
<td>strip</td>
<td>1½&quot;&quot;</td>
</tr>
<tr>
<td></td>
<td>3-yr. av.</td>
<td></td>
<td></td>
<td></td>
<td>smut</td>
<td>2½&quot;&quot;</td>
</tr>
<tr>
<td>Adelphi</td>
<td>B</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>C</td>
<td>A*</td>
</tr>
<tr>
<td>Arborretum</td>
<td>C</td>
<td>1</td>
<td>B</td>
<td>1-2</td>
<td>1-2</td>
<td>1</td>
</tr>
<tr>
<td>Arista</td>
<td>C</td>
<td>1</td>
<td>B</td>
<td>1-2</td>
<td>1-2</td>
<td>C</td>
</tr>
<tr>
<td>Baron</td>
<td>A</td>
<td>2</td>
<td>1</td>
<td>A</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Birko</td>
<td>B</td>
<td>1</td>
<td>A*</td>
<td>1-2</td>
<td>1-2</td>
<td>A</td>
</tr>
<tr>
<td>Bonnieblue</td>
<td>C</td>
<td>1</td>
<td>A*</td>
<td>A</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Brunswick</td>
<td>A</td>
<td>1</td>
<td>A</td>
<td>A*</td>
<td>A</td>
<td>3</td>
</tr>
<tr>
<td>Enmundi</td>
<td>B</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fylking</td>
<td>B</td>
<td>2</td>
<td>1</td>
<td>B</td>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>Galaxy</td>
<td>A</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgetown</td>
<td></td>
<td>B</td>
<td>1</td>
<td>1-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glade</td>
<td></td>
<td>A</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Majestic</td>
<td>C</td>
<td>1</td>
<td>A*</td>
<td>B</td>
<td>A*</td>
<td>3</td>
</tr>
<tr>
<td>Merion</td>
<td>A*</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Nugget</td>
<td>A*</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Pennstar</td>
<td>B</td>
<td>2</td>
<td>1</td>
<td>A-2</td>
<td>1-2</td>
<td>B</td>
</tr>
<tr>
<td>Plush</td>
<td></td>
<td>A</td>
<td>3</td>
<td>1</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Prato</td>
<td></td>
<td>A</td>
<td>3</td>
<td>1</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Ram I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A*</td>
<td>2</td>
</tr>
<tr>
<td>Sodco</td>
<td></td>
<td>B</td>
<td>1</td>
<td>1-2</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Sydsport</td>
<td>C</td>
<td>2</td>
<td>C</td>
<td>1</td>
<td>3</td>
<td>A</td>
</tr>
<tr>
<td>Touchdown</td>
<td>B</td>
<td>1</td>
<td>A*</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Common</td>
<td></td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>Park</td>
<td>B</td>
<td>1</td>
<td>1</td>
<td>C</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Windsor</td>
<td>B</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>FINE FESCUES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1½&quot;&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>¾&quot;&quot;</td>
<td></td>
<td></td>
<td></td>
<td>overall</td>
<td>average</td>
</tr>
<tr>
<td>Atlanta</td>
<td>A</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Banner</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fortress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Highlight</td>
<td>A</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Jamestown</td>
<td>A</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Koket</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Pennlawn</td>
<td>B</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Ruby</td>
<td>C</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>PERENNIAL RYEGRASSES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citation</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>Derby</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diplomat</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Game</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>Manhattan</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NK-100</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NK-200</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pelo</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Pennfine</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yorktown</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Common</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22 WEEDS TREES & TURF/OCTOBER 1976
Davey is ready to give you a "fifth season" head start on 1977 tree service.

The fifth season is "Davey Season." It's going on now, and it runs into the first budding of spring. Right now is the low-cost season for you to get needed tree work done promptly, efficiently, and a jump ahead of busy spring and summer months.

Our carefully trained crews are ready to put their knowledge, experience, and specialized equipment to work for you now. To prune deadwood, open up vistas, remove dangerous trees, and schedule new plantings. To grind stumps and clear away unwanted brush.

We'll survey your tree needs, provide cost estimates, and set up a tree maintenance program for you with no obligation. And if you wish, we'll do what work is needed immediately to preserve the beauty and value of your trees, to ensure public safety, and to help you avoid emergencies and costly overtime later.

For estimates without obligation on fifth-season work, check the Yellow Pages for the Davey representative nearest you. He's fully equipped and ready to consult with you—or go to work for you right now.

DAVEY TREE
KENT, OHIO 44240
Coast to Coast and Canada
“Bunton lawn-turf equipment is built to take a beatin’... it’s tough! Like this self-propelled riding mower. Equipped with a cushiony seat and power steering, it can turn on a dime! It can even go over a pile of rocks and still come out cuttin’!” So listen to Rocky Graziano... send for more information today... with Bunton, you can’t lose! Available from 8-inch to 52-inch cut.

**FREE catalog of grounds care equipment**

Full-color catalog shows the full line of Gravely lawn and garden tractors with accessories for mowing, grounds maintenance, gardening, snow removal, and more. Unique tractors feature all-gear transmission that Popular Science called “probably the world’s most rugged small gear-type tractor drive.”

**CULTIVAR GLOSSARY**

**KENTUCKY BLUEGRASSES**

**ADELPHI**—Rutgers hybrid from an unreduced egg of Bellevue pollinated by Belturf, 80 chromosomes; chief proprietor is Adikes, Jamaica, N.Y.

Dark, low, with a lengthy season and good spring color; responds to fertilization; good disease tolerance (some leafspot Midwest, resists snowmold, rust, Fusarium and stripe smut); medium texture with foliage rather upright; about 15 percent sexual; wide adaptability; relatively few seedheads.

**ARBRETUM**—mass selection from hot dry hillside at Gray Summit, Mo.; chief proprietor is Mangelsdorf, St. Louis, Mo.

Indistinguishable from “old-fashioned” Kentucky bluegrass, but unusually persistent and surviving under low maintenance. Best used for unpanpered, tall-mowed swards; in spite of leafspot and intermittent setback, hangs on year after year.

**ARISTA**—selection from Van Engelen, Holland; chief proprietor is International Seeds, Halsey, Or.

A “better-than-average” fast-starting strain useful for sportsfields and for extending mixtures; superior to other “common” types, but generally below top cultivars; disease vulnerability, but good recovery.

**BARON**—clonal, pure-line from Barenbrug, Holland; chief proprietor is Loft, Bound Brook, N.J.

An all-around “workhorse” cultivar lacking striking features; high ratings for vigor, reasonable disease resistant (some Fusarium susceptibility); decumbent, stocky growth (withstands low and less frequent mowing); with average spring color and many seedheads; economical and a good cultivar for sod; consistently above average in almost all locations; similarities with Cheri and Victa.

**BIRKA**—European selection; chief proprietor is E. F. Burlingham, Forest Grove, Or.

Good disease resistance, especially leafspot; slow to green in spring, and winter color not the best; little information yet released, but has rated well, including with minimum care in Connecticut.

**BONNIEBLUE**—Rutgers hybrid from an unreduced egg of Bellevue pollinated by Pennstar, 94 chromosomes; chief proprietor is E. F. Burlingham, Forest Grove, Or.

Dark, lengthy-season, decumbent; highly apomictic; excellent disease resistance, especially for leafspot, stripe smut and rust (though suffers some from Fusarium); withstands low-mowing; may show some hot weather stress, but outstanding in cooler weather.

**BRUNSWICK**—one of Rutgers selections; chief proprietor Turfseed, Hubbard, Or.

Little test information yet available.

**ENMUNDI**—Van Engelen, Holland, selection; chief proprietor is E. F. Van Engelen, Holland, selection; chief

Continued on page 27

For ad on following page circle 103 on free information card
The crown jewel of the bents that won't cost you a king's ransom.

Emerald SMARAGD 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-propogated varieties. And that adds up to less patchiness, less grain, a better playing surface for your club membership.

Order today.

This year, overseed 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.

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

U.S. proprietor is International Seeds, Halsey, Or.

Excellent general properties, dense and carpet-like but not winter quality of many domestic selections; limited “test” reports.

FYLKING—from Svalof, Sweden, about 80 chromosomes; U.S.A. chief proprietor Jacklin Seed, Spokane, Wa. (0217 strain).

Very attractive, luxuriant beauty; semi-decumbent and adapted to low mowing; highly apomictic; initially quite tolerant to disease, but mildly susceptible to leafspot, etc. recent years; gene linkages similar to Pennstar, with low seedhead formation and response to moderate fertilization; not aggressive; widely available as seed of excellent quality.

GALAXY—hybrid from Rutgers, Bellevue the seed parent, Pennstar the pollen plant, approximately 91 chromosomes; chief proprietor is Whitney-Dickinson, Buffalo, N.Y.

Excellent cool-weather performance and extended season; dark, low, highly apomictic, and well regarded for turf quality; medium texture; some susceptibility to stripe smut, but generally resistant to leafspot, Fusarium, mildew and rust; suggested in blends where smut is a problem.

GEORGETOWN—Rutgers selection; chief proprietor is Loft, Bound Brook, N.J.

Little reported information available yet, but initial trials are encouraging.

GLADE—selection, from a New York lawn; chief proprietor is Jacklin, Spokane, Wa.

Low, dark, resistant to mildew (a chief cause of loss in shade); recommended as a slow-growing, low-profile cultivar for shade or sun; highly true-to-type and very attractive; stands low mowing (tees); some characteristics of high-rating Birka, but better color; mild leafspot and Fusarium susceptibility, but quite resistant to rust and stripe smut.

MAJESTIC—another Rutgers hybrid of Bellevue pollinated by Belturf; chief proprietor is Loft, Bound Brook, N.J.

Beautifully low and dense, one of the most decumbent cultivars; makes a strong sod, with lengthy season; reasonably tolerant of all diseases; “tops” in Long Island tests; stands out in cool weather, particularly for dark color and low profile (excellent winter appearance); somewhat slowgrowing, and takes time to mature.

MERION—highly apomictic selection discovered near Philadelphia; sponsor is Merion Bluegrass Association, Hubbard, Or.

Long the “standard of excellence” for bluegrass cultivars — low, dense, of medium texture, and very attractive; excellent leafspot resistance, but suffering today from “new” diseases such as stripe smut and Fusarium as well as rust and mildew; still “tops” where diseases are not a serious problem; needs generous fertilization; better in more northerly regions than southerly ones; fairly slow to establish but strongly competitive and with good wear-resistance; tolerates low mowing.

Continued
CULTIVAR GLOSSARY

Continued

NUGGET — selection, discovered near Cook Inlet, Alaska; chief proprietor is Pickseed West, Tangent, Or.

A “breakthrough” for dark color, low, dense growth, and general attractiveness; some buildup of diseases (dollarspot, red thread and Fusarium principally), but good leafspot resistance and at least fair tolerance of mildew, rust and smut; “rave” ratings where free from disease; better northward than southward; does well in shade; slow vertical growth; excellent sod strength, rhizome and leaf production, but somewhat slow to establish.

PENNSTAR—Pure line highly refined at Penn State Univ. from European seed stock; chief proprietor is Seed Production Improvement Corp., Minneapolis, Minn.

Exceptional grace and beauty; resistant to serious disease attack, though suffering some from Fusarium; thatches little, strongly apomictic; requires only moderate fertilization; linkage of characteristics similar to Fylking; withstands low-mowing; produces few seedheads.

PLUSH—clonal selection from under a pinoak in New Jersey; chief proprietor is FFR Cooperative, West Lafayette, Ind.

Competitive and widely adapted; medium green color, reasonable disease resistance (some susceptibility to Fusarium), and low habit; exceptionally broad leaf blade provides a bold texture; early spring green-up; seems to perform well in southern parts of bluegrass belt, and rates with elite varieties under continental conditions.

PRATO — selection, from Holland; chief proprietor is Northrup-King, & Co., Minneapolis, Minn.

An above-average choice especially used for extending blends and mixtures; of good color, reasonably low, dense and drought-resistant; fine texture, few seedheads; seems resistant to dollar-spot, mildew, rust and stripe smut.

RAM I—Rutgers selection; U.S.A. proprietor is Loft, Bound Brook, N.J.

Little information, but generally good performance in reported tests.

SODCO — composite of four “pure lines” selected at Purdue Univ.; chief proprietor is Purdue Agri. Alumni Seed Improv. Ass’n., W. Lafayette, Ind.

A tailored variety noted for low, slow growth, dark color, shade tolerance, good resistance to all diseases; of medium texture; few seedheads, and not prone to thatch; should be well fertilized for top performance; adapted to shade; slow establishing (thus needing less mow-

Horticultural Perlite...
The multi-purpose soil conditioner for turf, containers and propagation.

Professional landscapers and grounds maintenance men have long made Horticultural Perlite one of their main ‘tricks of the trade’. It’s an ideal soil conditioner that helps promote “a sea of green velvet”. You see, by preventing compaction, it keeps the soil loose enabling more oxygen to reach and help nourish the root system. And because Horticultural Perlite also retains three to four times its weight in moisture, it keeps the root network moist long after watering. The result is a beautiful blanket of green growing on a thick healthy, robust root system that not only keeps grass beautiful, but prevents golf courses, institutional and campus lawns and residential lawns from getting soggy, mushy or soft underfoot.

Nurserymen find Horticultural Perlite practically indispensable for container grown plants and shrubs because of its ability to retain moisture, and to keep the mixture around the root environment loose. It is also a great “starting mixture” for transplanted stock as it helps reduce the incidences of transplant shock. And because Horticultural Perlite is sterile and non-toxic, it won’t rot, decompose, disintegrate or break down. Nor will it help promote insect life. Being light in weight, Horticultural Perlite makes container moving light work and shipping costs a lighter expense. It’s not only ideal for your plants—Horticultural Perlite is ideal for your business.

For plant propagation, Horticultural Perlite soil mix is almost as important as sunlight. Because of its water-retention characteristics, this mixture maintains an even distribution of moisture to stimulate fast root development in cuttings and to speed seed germination. Most important, by keeping the starting mixture loose, Horticultural Perlite permits a freer flow of oxygen to help nurture the new growth. This also makes transplanting easy; without root damage; and without undue shock. Horticultural Perlite is inert matter that can last indefinitely in your seed beds. It is sterile, odor-free and can’t promote insects or bugs. It is a great asset for the new beginnings of plant life.

Horticultural Perlite...
The multi-purpose soil conditioner for turf, containers and propagation.

Professional landscapers and grounds maintenance men have long made Horticultural Perlite one of their main ‘tricks of the trade’. It’s an ideal soil conditioner that helps promote “a sea of green velvet”. You see, by preventing compaction, it keeps the soil loose enabling more oxygen to reach and help nourish the root system. And because Horticultural Perlite also retains three to four times its weight in moisture, it keeps the root network moist long after watering. The result is a beautiful blanket of green growing on a thick healthy, robust root system that not only keeps grass beautiful, but prevents golf courses, institutional and campus lawns and residential lawns from getting soggy, mushy or soft underfoot.

Nurserymen find Horticultural Perlite practically indispensable for container grown plants and shrubs because of its ability to retain moisture, and to keep the mixture around the root environment loose. It is also a great “starting mixture” for transplanted stock as it helps reduce the incidences of transplant shock. And because Horticultural Perlite is sterile and non-toxic, it won’t rot, decompose, disintegrate or break down. Nor will it help promote insect life. Being light in weight, Horticultural Perlite makes container moving light work and shipping costs a lighter expense. It’s not only ideal for your plants—Horticultural Perlite is ideal for your business.

For plant propagation, Horticultural Perlite soil mix is almost as important as sunlight. Because of its water-retention characteristics, this mixture maintains an even distribution of moisture to stimulate fast root development in cuttings and to speed seed germination. Most important, by keeping the starting mixture loose, Horticultural Perlite permits a freer flow of oxygen to help nurture the new growth. This also makes transplanting easy; without root damage; and without undo shock. Horticultural Perlite is inert matter that can last indefinitely in your seed beds. It is sterile, odor-free and can’t promote insects or bugs. It is a great asset for the new beginnings of plant life.

Perlite Institute, Inc.
45 West 45th Street • New York, N. Y. 10036 • (212) 265-2145
Circle 110 on free information card
HING), but takes half again as long to make mature sod as faster cultivars; widely adapted.

SYDSPORT — selection, from Sweden; chief proprietor is E. F. Burlingham, Forest Grove, Or.

Bold (broad-bladed), vigorous and aggressive, suggested for “hard use” areas; resists leafspot, but suffers some from rust and dollar spot, and may develop thatch; well thought-of where an “ebullient” selection is appropriate.

TOUCHDOWN — Rutgers and USGA release, clone discovered by Supt. Rewinski on Long Island fairway; chief proprietor is Pickseed West, Tangent, Or.

Bright-green, medium low, fine-textured cultivar with rather upright foliage; stands low mowing (tees); long growing season; disease-resistant (except mildly affected by Fusarium); highly apomictic; requires only moderate fertilization, yet establishes rapidly.

FINE FESCUES**

ATLANTA — selection; chief proprietor Northrup King & Co., Minneapolis, Minn.

Little information; promising having rated highly in limited testing.

BANNER — Rutgers 45-clone synthetic from East Coast Sources; proprietor is E. F. Burlingham, Forest Grove, Or.

Chewings type; fine texture, dark color, moderately low-growing; strong sod; widely adapted, perhaps into the Southeast; tolerates low pH and low fertility.

FORTRESS — Rutgers 6-clone synthetic assembled from old turf areas East Coast; proprietor is Turfseed, Hubbard, Or.

A spreading fescue, bred especially with roadside use in mind; spreads aggressively but thatches little; mid-summer leafspot, but recovers well; usual fescue tolerance of low fertility, low pH and shade; utilitarian rather than consistently beautiful.

HIGHLIGHT — selection? from Holland; chief proprietor, International Seeds, Halsey, Or.

A “show-off” (especially bright and beautiful) of the Chewings type; establishes rapidly, and has excellent color; can be mowed low for overseeding golf greens.

JAMESTOWN — selection from abandoned seaside planting in Rhode Island; chief proprietor, Loft, Bound Brook, N.J.

A Chewings-type fescue with exceptionally low growth and dark color; durable and recuperative; enjoys high ratings generally; some-

"Sound Conditioned"

M & M Brush Chippers

for...

less noise...

more efficiency

Applying engineering designs which “Sound Conditioned” our industrial scrap reduction machinery, Mitts & Merrill can modify our brush chippers for low noise levels. At the same time, those engineering features which have made Mitts & Merrill the leader for years have been retained.

*Copyright Mitts & Merrill, Inc., 1973, 1974, 1975. All rights reserved.

Optional torque converters and the heaviest steel cylinder — even without an external flywheel — combine to give positive cutting action under the most rugged conditions. Isolates the engine from shock. Minimizes maintenance.

Staggered knife pattern, for years a Mitts & Merrill feature, has always resulted in a lower noise level. First, by segmenting the noise source. Second, through smoother cutting action. Third, by producing smaller chips.

Plus • Positive safety-lock pin for greater operator safety • Swing-away, folding feed chute protects cutting chamber; allows instant access and increases maneuverability • Heavy duty construction includes coil spring, torsion-type suspension, and box tubular steel frame.
what susceptible to leafspot, but good recovery and strong summer performance; excellent for golf green overseeding.

KOKET — synthetic from 5-clonal lines selected in Holland; chief proprietor, E. F. Burlingham, Forest Grove, Or.

A strong Chewings cultivar with excellent tillering capacity; consistently among the top-rating cultivars; good density and weed resistance; not quite so brilliant as Highlight, but perhaps steadier, with good disease resistance.

PENNLAWN — tripartite, synthetic from Pennsylvania State Univ.; public variety.

Familiar "improved variety" standard for comparison, exhibiting general "average" performance.

RUBY — selection, from Holland; proprietor, Northrup, King & Co., Minneapolis, Minn.

An open-growing fescue of the spreading type, especially useful in mixtures, and for low maintenance areas; tends to remain vegetative, with limited seedhead formation; good spreader and establishes rapidly; intermediate in turf qualities.

PERENNIAL ryegrasses***

CITATION — Rutgers 3-clone synthetic; proprietor is TurfSeed Inc., Hubbard, Or.

Fine-texture, dark color and semi-decumbent growth habit characteristic of the new "turf-type" perennial ryegrasses; mows neatly; good summer performance.

COMPAS — mass selection, from Holland; chief proprietor, International Seeds, Inc., Halsey, Or.

More "turf-type" qualities (reasonably low growth and density) than common ryegrass, fairly fine-textured; wear resistant; establishes rapidly; one of the earlier introductions of intermediate nature.

DERBY — 12-clone synthetic assembled in Indiana; chief proprietor, International Seeds, Halsey, Or.

All-purpose cultivar ranking with Manhattan and Pennfine in quality; dense, mows cleanly, tolerates low mowing; good disease tolerance; wear-resistant and reasonably tolerant of cold; not so fine-textured as is Pennfine.

DIPLOMAT — A Rutgers synthetic; proprietor is Loft, Bound Brook, N.J.

An excellent turf-type cultivar a peer of Citation, Derby, Manhattan, etc., but not yet widely reported upon.

GAME — clones screened in Holland; U.S.A. proprietor is Willamette Seed, Shedd, Or.

A widely promoted, utilitarian...