

New Bluegrasses and Ryegrasses



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An exciting group of new turfgrass varieties is being developed at turfgrass institutions throughout the United States and Europe. Many should be of value for improving golf course turf. Before any new variety is used extensively it should be thoroughly tested to determine its value, area of use, and particular management requirements.

New Bluegrass Varieties

Kentucky bluegrass is the most widely used lawn-type turfgrass in the northern United States. It is hardy, attractive, and widely adapted. The usefulness of Kentucky bluegrass on fairways and tees will be greatly enhanced as varieties become available that are capable of producing a denser, more dependable turf under conditions of close mowing. New varieties including Warren's A-20, Sodco, Pennstar and Fylking have much to offer. They will be followed by even better selections and hybrids being generated by expanding turfgrass breeding programs.

FYLKING Kentucky bluegrass (Plant Patent 2887) was discovered in Southern Sweden over a quarter century ago by the Swedish Seed Association. A moderate amount of seed is currently being produced in the United States by the Jacklin Seed Company.

Good resistance to both stripe smut and the *Helminthosporium* leaf spot and crown rot disease gives Fylking a considerable advantage over most other bluegrass varieties. Fylking is also moderately resistant to current races of stem rust, but it is fairly susceptible to dollar spot and powdery mildew. This variety produces an attractive, dense, moderately low-growing turf of a rather fine texture. This leafy appearance is maintained during May and June when most other bluegrasses become quite stemmy, producing seedheads and unwanted pollen. Abundant rhizome production results in a tightly knit sod. Therefore, periodic thatch control is normally advantageous in maintaining the best condition.

An attractive, rich, moderately dark green color is developed in early spring, and, is maintained into late fall even under moderately adverse growing conditions, such as low fertility and incipient drought. The rather decumbent growth habit and improved disease resistance of Fylking allows it to tolerate moderately close mowing. However, it should be pointed out that excessively close mowing places considerable stress on any bluegrass variety and weakens its ability to resist disease and prevent weed invasion. The rather fine leaves of Fylking tend to bend over, especially at higher

cutting heights. Thus a neater appearance will be achieved with moderately close mowing.

Fylking has performed very well in mixtures with other bluegrass varieties as well as with the improved varieties of fine fescue and perennial ryegrass.

PENNSTAR Kentucky bluegrass was released by Pennsylvania State University in 1967 after extensive testing as PSU K5 (47). This variety originated as a single, apomictic plant obtained from the progeny of a selection made by Professor H. B. Musser. Seed production problems are currently delaying the widespread availability of this promising variety. Pennstar has good resistance to *Helminthosporium* and stripe smut, the two diseases which normally cause the greatest amount of damage to Kentucky bluegrass. The variety is also moderately resistant to current races of stem rust. It is fairly susceptible to powdery mildew and dollar spot. Pennstar produces an attractive, fairly dense, tightly knit, moderately low-growing turf of a rather fine texture and a pleasing, moderately dark green color. It has medium tolerance of close mowing and performs very well in mixtures.

WARREN'S A-20 Kentucky bluegrass has better overall disease resistance than any other commercially available variety. It has good to excellent resistance to *Helminthosporium*, stripe smut, powdery mildew and stem rust. Turf produced by this variety is attractive, dense, upright, of medium leaf width and has a pleasing, moderately dark green color. A-20 will tolerate rather close mowing. Unfortunately, this elite variety will not reproduce true by seed and must be propagated vegetatively like Zoysia.

WARREN'S A-34 Kentucky bluegrass might well be considered for moderately shaded areas on the golf course. This is a vigorous, disease resistant variety with significantly better shade tolerance than other Kentucky bluegrass varieties currently available. When maintained at a two-inch mowing height, this variety will tolerate shade up to 65 per cent of the daylight hours. A-34 also does rather well in full sun, producing a very aggressive, dense, medium green turf with moderately good resistance to *Helminthosporium* leaf spot, stripe smut, stem rust and powdery mildew. A-34 is primarily available as sod, but seed supplies are being increased.

SODCO Kentucky bluegrass was released by Purdue University in 1967. A moderate amount of seed should be harvested in 1970. Sodco is a blend of four selections similar in growth habit and general appearance. They are Anheuser Dwarf, RI-10, AQ-6, and 16-BB-56. All have

an attractive, rich, dark green color, wide leaves, and a rather decumbent growth habit with a fairly slow rate of vertical growth. They also appear to have good resistance to the *Helminthosporium* leaf spot and crown rot disease and should be able to tolerate rather close mowing.

KENBLUE Kentucky bluegrass represents an attempt to reconstitute the type of Common Kentucky bluegrass formerly harvested from the naturally occurring bluegrass stands of the famous blue-grass region of Kentucky. Currently, much of the seed being sold as Common Kentucky bluegrass is actually seed of a single strain variety such as Newport which has been selected for its high seed production potential. Kenblue is an erect growing variety with a rapid rate of vertical growth and is highly susceptible to the *Helminthosporium* leaf spot and crown rot disease. It will not tolerate the close mowing desired on golf course fairways and tees. Nevertheless, it does have considerable genetic diversity and has a record of proven performance for use on areas receiving high cut and moderately low fertility. It appears to be especially valuable for use in the southern part of the bluegrass region.

Bluegrass Varietal Blends

We expect a great deal in performance from our turfgrass varieties. They are grown on a wider range of soil, environmental and use situations than any other plant species. We want our turfgrass plantings to be permanent and durable as well as attractive and easy to maintain. All varieties can be expected to show some weakness as plantings become widespread and stands become aged. A diversity of many good varieties should offer considerable protection against unforeseen problems. Many of the elite bluegrass varieties of the future will undoubtedly be blends of complimentary components. Current research at Rutgers strongly suggests that a variety with combined resistance to both the *Helminthosporium* and stripe smut diseases should be included in all bluegrass blends used in regions where these diseases may be a problem.

New Perennial Ryegrass Varieties

Perennial ryegrass is a cool-season grass best adapted to maritime climates. It is most useful in places such as Britain, the Netherlands, and New Zealand, where winters are mild and summers moist and cool. As ryegrass is brought into more continental type climates, increasing problems with poor winter or poor summer performance may be encountered. No ryegrass

variety will tolerate a Minnesota winter or a Washington, D.C., summer as well as a good bluegrass.

The new turf-type perennial ryegrass such as Manhattan, NK100 and Pelo are a considerable improvement over Common perennial ryegrass in their various turf characteristics. In fact, many people fail to recognize them as ryegrasses. They are finer leaved, more attractive, denser, lower-growing, more persistent, and have better turf-forming properties. They are quick and easy to establish and will grow on a wide range of soil types. The new ryegrasses are normally easier to mow than common perennial ryegrasses, but they can be very difficult at times. Frequent cutting and a sharp mower helps maintain top quality. The improved ryegrasses have generally done very well on the sandy coastal plain soils of Long Island. Further research and experience is needed to fully assess their specific usefulness in other areas. A good bluegrass variety should normally be included in any ryegrass mixture.

NK100 perennial ryegrass originated primarily from plants surviving for many years in old pastures of the British Isles. These plants were crossed with common perennial ryegrass from

Oregon. Plants with good persistence, a leafy growth habit, good turf quality and an attractive, bright, medium dark green color were selected from these crosses to develop NK100. This variety has been very successful on Long Island with many stands persisting for over 10 years.

PELO perennial ryegrass was developed in the Netherlands. This variety has an attractive, bright, moderately light green color. It is leafy and has shown comparatively good resistance to rust and Fusarium snow mold.

MANHATTAN perennial ryegrass was recently released by Rutgers University. Most of the parental plants of Manhattan were selected from old turf areas in Central Park located on Manhattan Island in New York City. Manhattan has an attractive, rich, moderately dark green color. It produces a turf of finer texture, greater density and a somewhat slower rate of vertical growth than other available ryegrass varieties.

NORLEA perennial ryegrass is a moderately short-lived variety developed in Canada. It is attractive, leafy and moderately low growing. This variety can be very useful as a nurse or companion grass if quality seed not contaminated with annual ryegrass is used.

Warm Season Grasses

We Should Know About

by **JAMES B. MONCRIEF**, Director, Southern Region, USGA Green Section

BERMUDAGRASSES (*Cynodon dactylon*)

The search for superior bermudagrasses is continuing both by selecting from old turfgrass areas, and developing new crosses. Many strains of turf-type bermudas have been collected by Dr. Wayne Huffine and Associates, with the most recent releases from Tifton, Ga. Yet with all these numbers, the perfect specimen is still being sought.

The latest is Tifdwarf. Released in April, 1965, it is being used in most new plantings even though it turns a purplish color during cold weather. Height of mowing will affect this condition. In most areas other than in south Florida it should be overseeded.

Tifdwarf will make an excellent putting surface if it is managed properly, although and some

high handicappers say it makes too fast a putting surface. It forms a tight turf, is a low-growing prostrate type of grass that has a wide range of maintenance levels. It was first sold as a low maintenance level grass, but the best putting surface is achieved when it receives 1½ to 2½ pounds of nitrogen per 1,000 square feet per month using a 4-1-2 ratio.

Because tifdwarf is sensitive to some chemicals, it is advisable to grow healthy turf to minimize weeds. Sod webworms will leave other grasses in preference to Tifdwarf. The grass has a very dark green appearance which attracts the adult stage of this insect.

In summary, Tifdwarf gives an outstanding performance during warm weather and a poor one during cold weather.

Tifgreen, released in 1956, is not a new grass, but it is still used very much on greens.