

VARIETAL DEVELOPMENT PICTURE

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The pace of appearance of new Kentucky bluegrass cultivars to the market place has leveled in the past two years. This is not surprising in that more than a dozen are now available commercially which are superior to Merion in disease tolerance. In order to compete successfully, any new cultivar must be equal to existing ones in most major characters and superior in at least one important character. Kentucky bluegrass breeders have been affective, and their job becomes increasingly challenging.

Turfgrass quality in terms of the dark green color which most prefer, density, texture, and uniformity is existant in practically all of the improved cultivars. The greatest potential weakness, as it has always been, is susceptibility to one or more diseases. Two considerations complicate this picture.

In the first place, most diseases, such as Fusarium roseum, anthracnose, and the leaf smuts, often do not occur uniformly, nor is it a simple matter to inoculate populations of grass plants and expect an infection to occur each time. Thus a variety in testing may escape infection for several years.

The second factor is that some diseases do not occur or appear until the grass plot has developed for a number of years. For example Nugget did not show Fusarium roseum at East Lansing until the plots were three years old, or dollar spot until after five years. In A-34 and Nugget we found good shade tolerance, but Fusarium did not occur in A-34 until late summer, 1975.

The process of isolating improved strains, testing them widely, then building seed supplies to commercially available quantities and educating the public to their acceptance is long and expensive, and often weaknesses will become evident about the time the cultivar is becoming widely used.

The testing at many stations and under many conditions, and the free interchange of research information is invaluable here because a weakness apparent at one location is a warning, and sooner or later usually shows up at other locations.

The insect problem must be an increasing concern, and extended hot, dry periods such as Michigan experienced in the summer of 1975 permits a build up of populations of such insects as sodweb worm which are normally common only in more southerly latitudes. Bill bug and white grubs are potential hazards.

Since differences occur between cultivars in reaction to both diseases and insects, the blending concept assumes increasing importance. An apparently significant development occurred in blend studies at MSU in 1975 when plots which included a so-called common type such as Park or Delta came through summer stress periods with higher appearance ratings than plots containing only blends of improved cultivars.

New bluegrass plots containing 54 entries were established in September at MSU on both inorganic and muck soils.

In the fifth generation of selection for leaf spot resistance in red fescue, good levels of heritability for this trait were finally achieved for the first time. Winter inoculations of greenhouse material to confirm these results as well as to test progenies of crosses of individual plants will be done in early 1976.

Three vegetative strains of creeping bentgrass collected by Dr. J. B. Beard (MSU AP -18, -28, and -38) have been increased as breeder stock at MSU and have been established for stolon production by Warren Turf Nurseries. All three have good

quality and appearance and AP -28 particularly has demonstrated outstanding ability to resist invasion by Poa annua. These three clones have been sent to Oregon where Dr. Bill Meyers will be studying them for ability to produce a seed crop. Yet to be determined, of course, if successful crossing is achieved, is the question as to whether progenies of this synthetic have good turf quality, and also carry the most desirable character, annual bluegrass exclusion.

The fine leafed meadow fescue synthetic which exhibits excellent winter survival, has been produced as breeder seed, and two companies have expressed interest in taking it as a proprietary cultivar. By field day time at Traverse City in September 1976, we should know when seed will be available. Although preliminary tests indicate that this does not have the wear tolerance of tall fescue, we feel that this synthetic will have an important place in industrial, park and cemetery lawns, as a highway and roadside grass superior to those extant, and for tall roughs on golf courses and other extensive turf areas where high quality and attendant maintenance costs are not major considerations.

Crossed plants of two very low growing sheep fescues produced progenies ready for testing for this desirable growth habit. The extremely low water and nutrient demands of this species are attractive as we face energy concerns.