DEVELOPMENT OF DRYLAND WESTERN TURFGRASS CULTIVARS

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Breeding research has continued on four western grass species which would be extremely useful in minimum maintenance turf plantings and for areas with special soil or moisture problems. The species in this turf performance improvement program are alkaligrass (Puccinellia spp.), blue grama (Bouteloua gracilis), fairway wheatgrass (Agropyron cristatum) and inland saltgrass (Distichlis spicata).

Alkaligrass is highly tolerant of saline, sodic and waterlogged soils and can therefore provide cover in such problem areas which are usually found in low areas of a turf. Its appearance and performance is approximately equal to Kentucky bluegrass in our turf test plantings which are progeny tests of accessions from six western states and five foreign countries. An advanced generation will be produced next year from the best performance disease resistant parents we have selected.

Blue grama, the dominant native grass in many western grasslands, produces a dense stand with a minimum amount of water and is tolerant of alkaline soils. Accessions from three western states have been screened and 27 elite selections produced seed this year in an isolated polycross nursery. The seedlings will be evaluated and serve as the basis of the second cycle of selection.

Fairway wheatgrass tolerates drought by going dormant and recovers rapidly after receiving moisture. We produced seed from 78 selected parent plants this year in an isolated crossing block and will field test their seedlings in Cycle 2 next year as well as testing the turf performance of those selected parents.

Inland saltgrass forms a dense system of robust rhizomes which allow it to rapidly spread and create a serviceable turf. It is highly tolerant of salt and waterlogged soils, and deep roots and rhizomes help to withstand droughts. Many accessions being tested grow less than six inches high under irrigation so require only infrequent mowing. Selected elite parents will produce advanced generation seed next year.

Plans are being made to evaluate superior strains of these grasses at three different experiment stations having different climate conditions in 1988.