

Turfgrass Extension and Breeding Report

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Extension Handbook

Several commodity areas, in cooperation with respective Michigan State University departments and extension specialists, have promoted and supported the handbook concept of information delivery and organization.

The officers of the Michigan Turfgrass Foundation have provided encouragement for the production of such a handbook in the turfgrass area.

Jesse Saylor, of the Department of Horticulture, and Tom Smith, of Crop and Soil Sciences, had developed a compendium of turfgrass extension information for county agents and this has formed the basis of the development of such a program for wider distribution.

Research and extension specialists in the Departments of Crop and Soil Sciences, Botany and Plant Pathology and Entomology are preparing approximately two dozen new Extension leaflets on specialized subjects to be placed in the Handbook.

Originally 300 copies of the Handbook are being compiled, and will be available to the public at a cost of about \$15, with a reduced cost for members of the Michigan Turfgrass Foundation. This price includes leaflets and bulletins that will be published for at least the coming three years. Upon purchase, an address should be provided for mailing future leaflets. Turf Club students have helped with the collating of the Handbook as a Club project.

Fescue Breeding

Dr. Vargas, Ron Detweiler and I have been working since 1967 toward developing leafspot resistant red fescue cultivars. This has proven to be a difficult process because of the complexity of inheritance of resistance in this genus.

About 400 resistant parent plants have been isolated. The best of these are selected on the basis of adequate to heavy tillering, rhizome versus bunch growth habit, leaf width, vigor and dark green color. These are sent to Dr. Bill Meyer in Hubbard, Oregon, who establishes them in space-planted nurseries there.

In May each year, he and I select compatible plants (i.e., those of similar plant type with simultaneous dehiscence or pollen shed) and transplant them - prior to pollen shedding - to isolation plots. Plant numbers in these plots may vary from 2 to 5. Seed from these crosses provide experimental synthetic varieties or cultivars, and six have been produced thus far.

Seed of each parent is harvested individually, and tested the following winter for leafspot at M.S.U. Some do not germinate well, and others may break down in disease resistance. These are discarded from future synthetic cultivar increases.

Dr. Meyer has increased seed (about 20 lbs. each) of the first three synthetics, and these have been sent to seven selected turfgrass breeders for evaluation as turf.

Those which merit cultivar status will be patented under Plant Variety Protection of the U.S.D.A. and proprietary rights will be assigned to private companies for increase and distribution. Approximately 5% of sale from first point value is returned to M.S.U. for further turfgrass breeding. Wintergreen chewings fescue income from Northrup-King and Company has been important in this regard.

The first six synthetic experimental crosses were of the more coarse, creeping, 56-chromosome types. Thirty-five selected parent plants of the narrow-leaf-creeping chewings and hard fescue-types have been sent to Oregon for 1981 combinations.

Beaumont meadow fescue seed increase failed this year. One hundred acres were established in Oregon, but annual ryegrass volunteer plants could not be controlled selectively and the fields were lost.

Dr. Vargas plans to submit leafspot resistant parents to anthracnose and dollarspot inoculation as well to broaden the disease resistance range.

A small increase of a low growing, creeping-type sheep fescue is being attempted in Oregon as well.