Fusarium Head Blight in a Hexaploid Wheat Population Derived from a Line with Type I Resistance. (C01-mergoum161802-Poster)

Authors:

- R.W.Stack - *Dept. of Plant Pathology, NDSU, Fargo, ND*
- R.C.Frohberg - *Dept. of Plant Sciences, NDSU, Fargo, ND*
- M.Mergoum* - *Dept. of Plant Sciences, NDSU, Fargo, ND*

Abstract:

Fusarium head blight (FHB) of wheat, caused mainly by Fusarium graminearum Schwabe, is a serious problem in North Dakota. The adapted FHB resistant spring wheat, ND2710, has been used in many crosses in the North Dakota breeding program. Although it has proven durable across many environments, the resistance pattern of ND2710 has a flaw: acceptance of numerous individual point infections (primary infections), even though these do not spread to adjacent spikelets. To find a parent which will better resist primary infection we tested two populations from three-way crosses between adapted but susceptible wheat and two lines thought to possess resistance to primary infection (= type 1 resistance). The populations were tested for FHB in a mist-irrigated field nursery with applied grain spawn providing airborne ascospore inoculum. At 3.5 weeks postinoculation, approximatly 50-60 spikes in each of two reps were individually scored for FHB on a 0-100% scale. The two populations were similar in mean and distribution for all FHB measures. Overall, about 5% of lines had FHB disease measures similar to or better than ND2710, but 22 - 27% of lines from these populations had FHB incidence lower than this standard. The best lines from these populations had incidence values indicating that there were less than one-half as many primary infections as on ND2710.

Corresponding Author Information:

Mohamed Mergoum
North Dakota State University
Plant Sciences Dept., NDSU, P.O.Box 5051
Fargo, ND 58105-5051

phone: (701) 231-8478
fax: (701) 231-8474
e-mail: mohamed.mergoum@ndsu.nodak.edu

Presentation Information:

Presentation Date: Wednesday, November 13, 2002
Presentation Time: 4:00-6:00 pm
Poster Board Number: 730

Keywords:

Fusarium Head Blight, Wheat population, Resistance