PROJECT TITLE: Selection and evaluation of winter triticale lines for grain production in Montana.

PROJECT LEADER: D. M. Wichman, Agronomist, Moccasin, MT

PROJECT PERSONNEL: Matt Kolding, retired OSU wheat breeder, Pendleton Oregon.
J. Vavrovsky, Research Specialist, Moccasin, MT

TECHNICAL ASSISTANCE: Pat Hensleigh, Barley Breeding Research Associate
Phil Bruckner, Winter Wheat Breeder

OBJECTIVES:
To evaluate winter triticale lines for adaptation to Montana conditions and to develop varieties to be release by the Montana Agricultural Experiment Station for Montana grain producers.

RESULTS and SUMMARY:
The 2003 grain yields were similar to Tiber winter wheat(Tables 1-5). Mild winters have prevented the critical evaluation of winter triticale lines for winter hardiness. As a result, we have been reluctant to make conclusive decisions on the fitness of winter triticale lines. Through cooperation and support of numerous MAES agronomist and plant breeders we have been able to get some winter hardiness evaluations conducted at the Williston research center in western North Dakota. Out crossing and contamination still plague the winter triticale selection process. However, we are making progress with some lines that seem to self fertile and less susceptible to out crossing. Grain yields are much improved over the years. The grain plumpness and seedling vigor of winter triticale seems much improved over lines evaluated 20 years ago.

FUTURE PLANS:
The winter triticale project sole funding source is MAES. In reality it means numerous MAES researchers are going beyond the expectation of their jobs to assist in conducting the development of winter triticale.
Table 1  2003 Winter triticale grain agronomic performance at Moccasin.
Exp WTG: Central Agricultural Research Center. Moccasin, Montana.

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LSD(0.05 by t)= 1.009  5.26  323.7  2.261

DATA SOURCE = FBWTG03.WWD(DBF)

Fertilizer: 10-10-10-5 w/seed  60 lbs N Top dress
Harvest: 5-Aug-03
### Table 2 2003 Winter triticale grain nursery multi-location mean yield.

Exp WTC Montana & Wyoming Agricultural Experiment Station.

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