PROJECT TITLE: 2004 Evaluation of IMI tolerant winter wheat varieties and development lines for yield performance under continuous cropping.

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OBJECTIVES:
Determine the yield potential of IMI tolerant winter wheat lines in central Montana environmant.

RESULTS:
The crop did not establish and grow well. The producer had similar experience in the surrounding field. In both cases, farm field and research plots, shallow seeding depth combined with a dry fall and spring contributed to reduced crop growth. There was some IMI herbicide drift on to intolerant yield check lines, so plot areas had to be adjusted.

All of the experimental IMI tolerant lines produced yields greater than the yield of the variety Above, which was the IMI tolerant yield check. Test weights ranged from 55.7 to 61.5 lbs/bu for the experimental lines compared to 58.7 lbs/bu for both Above and Rampart checks. Protein content also ranged widely from 10.8 to 14.8 for the experimental lines compared to 12.6 and 14.4 for Above and Rampart, respectively.

SUMMARY:
The performance of the experimental IMI tolerant lines show that large strides are being made in improving the yield and protein content of IMI tolerant winter wheat.

FUTURE PLANS:
The IMI tolerant winter wheat evaluation nurseries were established at Huntley in the fall of 2004.

Table 1 2004 Clearfield variety evaluation on no-till recrop near Moccasin.
Exp Clrvar Central Agricultural Research Center. Moccasin, Montana.

ID	Cross	entry	Grain Test Wt	Grain Yield	Grain Protien
			lbs/bu	bu/a	%
Eltan		32	56.4	41.2	11.2
MTCL0486	98X96C51-1	26	59.9	37.5	11.4
NuSky		35	60.2	37.2	10.8
MTCL0468	98X306E42	8	61.0	36.9	13.0
MTCL0476	98X343E50	16	57.7	36.8	11.4
Morgan		34	59.2	36.8	11.2
Neeley		36	60.1	36.7	12.4
MTCL0473	98X339E43	13	62.0	35.6	12.7
MTCL0480	98X350E23	20	59.7	35.6	10.8
MTCL0482	98X351E62	22	57.7	35.1	12.2
MTCL0474	98X339E63	14	58.7	34.5	11.6
MTCL0470	98X322E25	10	57.1	34.4	11.8
MTCL0487	98X96C51-5	27	59.1	34.0	11.9
MTCL0471	98X329E32	11	60.0	34.0	13.3
MTCL0479	98X347E5	19	58.7	33.5	14.8
Rampart		33	58.7	33.5	14.2
MTCL0475	98X339E72	15	58.0	33.3	11.8
MTCL0477	98X346E39	17	56.8	33.1	12.8
MTCL0488	98X333E52	28	57.9	33.1	11.9
MTCL0472	98X339E16	12	60.9	33.0	12.3
MTCL0483	98X72C54-2	23	61.5	32.8	11.5
MTCL0462	98X309E29	2	58.9	31.9	13.4
MTCL0469	98X308E1	9	57.6	31.3	11.5
MTCL0478	98X347E2	18	55.7	31.2	13.1
MTCL0489	98X335E33	29	57.9	30.8	10.8
MTCL0484	98X78cC86-1	24	60.4	30.0	13.0
MTCL0490	98X338E13	30	56.0	30.0	13.3
MTCL0464	98X311E95	4	57.5	29.3	13.1
MTCL0463	98X311E7	3	58.8	29.2	13.2
MTCL0466	98X74C49-1	6	58.7	29.1	13.5
MTCL0485	98X92C55-4	25	59.3	28.8	13.1
MTCL0461	97X353C30-3	1	58.2	28.3	14.7
MTCL0467	98X74E67	7	59.9	28.3	13.0
MTCL0465	98X73C17-2	5	60.0	28.2	13.2
MTCL0481	98X350E9	21	59.9	28.0	13.2
Above		31	58.7	22.1	12.6
MEAN TRT MEANS			58.83	32.61	12.5
CV (S/MEAN) %			1.495	8.703	
LSD(0.05 by t)			1.786	5.762	

Low weed competition.
Some entries non imi tolerant checks were damaged with Beyond drift.
These blanks were removed from plot area calculations.