PROJECT TITLE: Intrastate Winter Wheat Evaluations - Screening of early generation winter wheat lines for TCK smut and stripe rust.

PROJECT LEADERS: Bob Stougaard and Todd Keener, NWARC, Kalispell, MT.
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OBJECTIVE: Evaluation of early generation winter wheat lines for yield, quality and disease resistance to dwarf bunt and stripe rust.

RESULTS:

Yields varied from 66 to 129 bu/A and were equal to yields taken from this nursery last year. Stephens yielded the highest while the low yielding entry was Roughrider. Test weights averaged 60.2 lb/bu for the nursery. This nursery was planted on the same date last year but was harvested 18 days earlier in 1992 due to the dry August weather. Height notes were normal for the location. Lodging was moderate in greater than 50% of the entries and presumably caused some yield loss. No cereal diseases were observed in the trial. The absence of snow cover could indicate why TCK smut was not prevalent in the trial.

SUMMARY:

The recommended varieties of Winridge and Lewjain were included in the top four yielding varieties of the Intrastate Winter Wheat Nursery with yields of 119 and 116 bu/A, respectively. The test weight for Winridge was 61.7 lb/bu while Lewjain was 58.3 lb/bu. One third of the entries yielded above 100 bu/A.

FUTURE PLANS:

Disease resistant varieties will continued to be evaluated at Kalispell through cooperative variety testing.

Table 1. Agronomic data from the Intrastate Winter Wheat Nursery grown on the Northwestern Agricultural Research Center. Planted: September 18, 1991 Harvested: August 4, 1992

CI Number	Variety	YIELD BU/A	TEST WT LB/BU	HEAD DATE	HEIGHT INCHES	LODGING INDEX 1/
CI 17860	NEELEY	111.7	61.1	155.3	45.3	40.9
CI 17879	ROCKY	96.5	61.1	151.3	47.2	21.4
CI 17844	REDWIN	100.9	61.9	154.0	48.6	11.1
PI517194	TIBER	116.1	61.5	154.0	48.6	16.9
CI 17735	NORSTAR	86.0	59.9	156.0	51.8	43.0
CI 13670	WINALTA	66.9	59.4	153.7	53.2	52.7
CI 17439	ROUGHRIDER	65.7	59.3	154.0	50.5	51.3
CI 15075	CENTURK	84.3	59.4	150.7	49.2	48.3
PI491532	CREE	74.2	58.4	154.0	51.8	82.3
NA 0001	THUNDERBIRD	92.3	61.6	149.3	40.7	.7
CI 17727	WESTON	90.2	61.7	151.0	50.5	27.9
CI 8885	CHEYENNE	75.5	58.2	154.3	52.5	65.6
PI491533	NORWIN	95.1	60.2	155.0	29.5	0
CI 17277	SAGE	71.5	56.9	153.3	51.8	60.0
CI 13190	WARRIOR	80.7	56.8	151.3	51.2	62.3
PI478771	AGASSIZ	74.8	58.4	154.3	55.1	58.7
CI 17952	HAWK	105.1	62.5	150.7	34.1	0
MT 8039	JUDITH	104.8	60.4	151.3	44.6	1.5
QT 542	HYBRITECH 542	103.5	60.4	150.7	46.6	7.8
QT542-F2	HYBRITECH 542 F2	97.7	60.1	151.0	45.3	3.7
XNH 1486	HYBRITECH	115.2	60.3	151.0	40.0	5.6
CI 17902	WINRIDGE	115.7	61.7	155.7	46.6	3.3
ND 8002	SEWARD	93.6	60.4	156.7	48.6	32.2
ID 279	BLIZZARD	97.1	60.8	156.0	48.6	8.5
RH78W296	BIGHORN	110.4	60.5	154.3	34.1	0
PI477287	RAM	108.0	59.3	151.7	40.0	0
CI 17846	MANNING	111.5	59.8	152.3	39.0	0
CI 17940	ARCHER	99.1	59.3	152.0	35.4	0
PI518591	ARAPAHO	96.8	59.4	151.0	38.7	0
MT 8713	MSC/CTK A+//IUL	88.2	61.6	153.7	34.1	0
MT 8719	RRI/MT 6928	104.8	61.7	153.7	38.7	0
MT 88013	PMN5/WN//HP 344/FRD	73.2	59.8	149.7	47.2	24.6
MT 88017	PMN5/WN//HP 344/FRD	80.5	59.9	151.3	41.3	27.4
MT 88018	PMN5/WN//HP 344/FRD	75.2	60.1	151.3	48.6	27.8
MT 88021	PMN5/WN//HP 344/FRD	74.5	60.8	150.3	48.5	16.7
MT 88024	PMN5/WN//HP 344/FRD	84.4	60.4	151.0	44.6	0
MT 88026	PMN5/WN//HP 344/FRD	87.2	61.0	150.7	46.6	10.0
MT 88027	PMN5/WN//HP 344/FRD	81.0	60.2	151.0	44.6	26.0
MT 88028	HP340/NRS//MT7216(18	84.1	58.0	152.3	45.9	50.1
MT 88030	HP340/NRS//MT7216(18	83.4	60.6	151.7	41.3	10.4
MT 88046	PMN5/MT 77003//HP344	83.6	61.2	151.0	42.0	8.9
MT 90003	ORS-W 30-166/WRG//ID	93.7	61.4	154.3	47.2	5.6
MT 90025	MT8001/MT7673//MT781	90.0	59.6	152.7	48.6	41.4
MT 90026	ID103/WRG//MT7840/MT	93.7	61.0	152.7	48.6	1.1
MT 90027	ID103/WRG//MT7840/MT	102.1	60.9	152.3	48.6	0

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Table 1 (Cont'd). Intrastate Winter Wheat Nursery - Kalispell

CI Number	Variety	YIELD BU/A	TEST WT LB/BU	HEAD DATE	HEIGHT INCHES	LODGING INDEX 1/
S86-15	KESTREL	95.6	60.2	155.3	44.0	32.2
S86-736	S86-736	100.6	60.1	155.3	44.6	26.7
MTSF1258	LEW/TBR//RDW	97.0	61.3	152.7	47.9	11.1
MTSF1260	LEW/TBR//RDW	85.1	60.6	152.3	46.6	8.3
MTSF1569	LEW/TBR//RDW	88.5	60.3	155.0	41.3	18.3
MTSF1570	LEW/TBR//RDW	95.0	60.3	155.0	47.9	56.7
CI17909	LEWJAIN	118.7	58.3	158.0	33.5	0
MTSF2238	LEW/TBR//RDW	96.6	60.7	153.7	44.0	3.7
ID 355	MC*2/NP824/3/LMH66/5	96.9	60.0	155.3	47.9	27.5
IDHW0355	2*MC/NP824/3/LMH66/5	90.7	60.2	155.0	49.9	26.7
ID 360	ID 360	109.8	59.3	156.7	36.1	25.7
RDW(SEL)	AC READYMADE	97.3	61.1	154.3	47.9	0
PI499375	KS73164/PI94424	99.0	60.2	151.7	47.2	17.6
PI499376	LENORE/KS73164	89.2	58.3	153.0	38.7	0
PI499377	MANNING/MT7579	111.4	59.6	152.3	41.3	2.2
HILL-81	HILL-81	106.0	59.8	154.3	38.7	0
CI 17596	STEPHENS	128.8	60.2	156.7	38.1	0
CI 17419	DAWES	93.5	61.4	147.3	36.1	0
LAMAR	LAMAR	90.7	61.3	150.7	47.9	26.3
PI495594	TAM 107	101.5	60.1	146.0	37.4	0
	MEAN	94.03	60.2	152.9	44.5	19.1
	L.S.D.	18.87	1.23	1.760	2.60	33.7

1/ Lodging Index = Lodging severity X Lodging prevalence / 9.