

WINTER GRAIN IMPROVEMENT
(Winter Wheat)

One winter wheat nursery containing sixteen varieties was seeded October 11, 1952. Using Wasatch as a check several varieties were found to be significantly higher in yield. The variety significantly higher in yield which has bunt resistance was Yogo x Wasatch-8. Table LX.

Table LXI gives a summary of work done in Northwestern Montana 1950-1952. Only four varieties have been tested all three years, of these four Yogo was the highest yielding with 38.40 bushels per acre.

(Winter Barley)

One winter barley nursery was seeded October 11, 1952. This nursery contained sixteen varieties. The mean yield was 35.22 bushels per acre. Purdue 1101 Sel. and Rex. CC10-242 were significantly less in yield when compared with Winter Club. Table LXII. Table LXIII shows the two year average of work done on varieties at the Creston Station. Based on a two year average Purdue 1101 Sel. is the highest yielding of the eleven varieties test for the two year period.

Table IX. Agronomic data from interstate winter wheat nursery, grown under dryland conditions in three row plots three replications at, Creston, Montana in 1951-1952.

Variety or Cross	Date planted, October 11, 1951		Date harvested, August 7, 1952				Size of plot <u>16 feet</u>				Average Bushels Per acre
	C. I. or N No.	Head- ing date	Heading Height Inches	Stand %	Lod- ging %	Test wt.	Yield per plot bu/a				
							I	II	III	Total	
Yogo x Wasatch-6		6-14	42	85	-	-	18.4	22.7	26.2	67.3	22.43
Newturk	4-15	6-15	40	92	-	-	30.5	34.0	32.6	97.1	32.37*
Turkey x Oro-221		6-15	44	88	2	-	20.6	23.4	32.6	76.6	25.53
Yogo x Wasatch-9		6-19	47	78	8	-	17.7	32.6	31.2	81.5	27.17
Winter		6-15	44	93	10	-	24.8	25.5	41.1	91.4	30.47*
Comanche		6-10	36	97	-	-	24.1	29.1	32.6	85.8	28.60
Cheyenne		6-16	41	82	-	-	34.0	29.8	33.3	97.1	32.37*
Yogo x Wasatch-3		6-15	47	93	7	64	26.2	36.9	40.4	103.5	34.50**
Nehred		6-14	39	90	-	-	29.1	25.5	36.1	90.7	32.56*
Kharkof	1442	6-17	44	83	52	63	26.9	31.9	41.8	100.6	33.53**
Yogo x Wasatch-3		6-14	42	92	-	-	20.6	27.6	30.5	78.7	26.23
Wasatch		6-14	44	95	-	-	17.7	24.8	28.3	70.8	23.60
Rio/Rex x Cheyenne	472361	6-12	39	95	-	-	19.1	25.5	26.2	70.8	23.60
Karmont		6-19	43	80	53	-	22.7	31.9	40.4	95.0	31.67*
Tenmark		6-13	42	83	-	-	26.9	28.3	20.6	75.8	25.27
Yogo	6424	6-16	44	92	-	-	23.4	29.1	28.3	80.8	26.93

Note: Wasatch is considered the check in this nursery.

No evidence of dwarf blight in this nursery.

* Varieties yielding significantly more than Wasatch (5%).

** Varieties yielding significantly more than Wasatch (1%).

Mean Yield 28.41

S. E. \bar{x} 2.33

L.S.D. ($P_{.05}$) 6.73

L.S.D. ($P_{.01}$) 9.08

C. V. 8.22%

Table LXI. Summary of winter wheat work done in Northwestern Montana, 1950-1952, Dryland conditions.

Variety or Cross	1950	1951	1952	Creston 1950-52 3 yr. av.	Stillwater 1951 1 year	Average	Number Trials
Yogo	60.93	38.50	31.67	43.70	33.10	38.40	4
Yogo x Wasatch-6	-----	-----	22.43	22.43 ¹	-----	22.43	1
Karmont	59.53	39.90	31.67	49.71 ²	26.70	38.20	3
Yogo x Wasatch-8	-----	-----	34.50	34.50 ¹	-----	34.50	1
Yogo x Wasatch-3	-----	-----	26.23	26.23 ¹	-----	26.23	1
Cache	59.03	-----	-----	59.03 ¹	27.00	43.02	2
Rio/Hex x Cheyenne (472361)	-----	-----	23.60	23.60 ¹	-----	23.60	1
Wasatch	63.80	29.00	23.60	38.80	25.50	32.15	4
Hewturk	60.73	34.50	32.37	42.53 ¹	28.30	35.43	4
Turkey x Oro 205	-----	32.40	-----	32.40 ¹	-----	34.40	1
Turkey x Oro 216	-----	40.10	-----	40.10 ¹	-----	40.10	1
Turkey x Oro 221	58.83	34.00	25.53	39.12 ²	22.40	35.76	4
Karakof	-----	44.20	33.53	38.87 ²	-----	38.87	2
Hebred	-----	48.70	32.56	40.63 ²	-----	40.63	2
Comanche	-----	40.40	28.60	34.50 ²	-----	34.50	2
Cheyenne	-----	35.00	32.37	33.68 ²	-----	33.68	2
Tenmark	-----	29.50	25.27	27.38 ²	-----	27.38	2
Minter	-----	24.50	30.47	27.48 ²	-----	27.48	2
Huntley 44	-----	44.40	-----	44.40 ¹	-----	44.40	1
Yogo x Wasatch-9	-----	35.20	27.17	31.19 ²	-----	31.19	2
Yogo x Wasatch-11	-----	32.30	-----	32.30 ¹	-----	32.30	1
Forty Fold	-----	39.00	-----	39.00 ¹	23.10	36.05	2

¹One year average.

²Two year average.