

Evaluation of durum wheat at EARC under dryland recrop conditions.

Project director:

Chengci Chen

Cooperators/personnel:

Jamie Sherman

Liz Elmore

Mike Giroux

Andrew Hogg

Luther Talbert

Hua Young Heo

Abdelaziz Nilahyane

Rebecca Garza

Calla Kowatch

Thomas Gross

Ronald Brown

Benton Carr

OBJECTIVES: To evaluate the performance of experimental lines and varieties of barley, durum, and spring wheat for recrop condition in eastern Montana.

MATERIALS AND METHODS:

Location: EARC dryland farm

Soil type: Williams Clay Loam

Previous crop: pea in 2016 - small grain in 2015

Residual soil N (lb/a): 31

Soil test P₂O₅ (lb/a): 23.2

Applied fertilizer: 200lbs 46-0-0 + 50lbs 11-52-0

Planted: April 21, 2017

Harvested: August 10, 2017

Precipitation April – August 2016: 3.92 in

RESULTS:

Agronomic data are shown below. Yield and test weight were adjusted to 12% moisture content.

Table 7. 2017 Durum yield and protein content following **chemical fallow (since this is the statewide durum trial, we planted under chemical fallowed field instead of recrop condition)**, EARC Sidney, MT.

Variety	Plant height (cm)	Days to heading (julian)	Lodging (0 to 9 [^])	TW † (lb/bu)	Protein (%)	Grain Yield † (bu/a)
Alkabo	58	168	0	63.4	13.1	35.8
Alzada	55	165	0	62.4	13.3	37.4
Carpio	59	170	0	62.6	14.6	34.2
Divide	62	171	0	62.7	15.1	35.9
Dynamic	62	172	0	63.4	12.7	35.7
Fortitude	60	170	0	62.8	13.3	39.4
Grenora	57	169	0	62.7	14.3	37.2
Joppa	64	170	0	61.8	14.1	40.4
Mountrail	57	169	0	62.8	13.5	36.0
MT112219	50	165	0	62.5	14.4	36.6
MTD16001	64	169	0	61.5	14.9	35.5
MTD16002	63	172	0	62.7	13.9	37.2
MTD16003	60	170	0	63.1	13.2	34.4
MTD16004	55	171	0	62.3	13.6	35.6
MTD16005	59	171	0	63.5	13.0	32.9
MTD16006	62	170	0	63.3	14.0	34.5
MTD16007	61	171	0	63.0	14.0	33.4
MTD16008	61	170	0	63.2	14.0	34.5
MTD16009	64	171	0	63.0	14.1	32.7
MTD16010	63	170	0	62.1	14.3	32.3
MTD16011	66	171	0	62.9	14.0	33.6
Precision	59	170	0	61.7	13.2	33.9
Tioga	65	170	0	62.2	14.2	32.8
Vivid	65	171	0	61.6	15.7	30.9
Mean	60.5	169.9	0.0	62.6	13.9	35.1
CV (%)	5.4	0.5	-	2.1	4.3	6.0
LSD	5.4	1.3	0.0	2.1	1.0	3.5

Location: EARC Dryland Farm, MT

Previous crop: Fallow

Planted: 4/19/2017

Harvested: 8/7/2017

Soil Test N Avail (lb/a): 57.5

Soil Type: Williams Clay Loam

Soil Test P2O5 (lb/a): 34

Precip 2017: 3.92"

N added (lb/a): 55

Plot Width (ft): 5'

Irrigation (sprinkler): n/a n/a

†Test Weight and Grain Yield adjusted to 12.0% moisture basis

^0: no lodging - 9: plants lying flat on ground