

Evaluation of spring wheat varieties under dryland fallow and dryland recrop conditions at four off-station sites (Nashua, Poplar, Wibaux, and Plentywood).

Project director:

Chengci Chen

Cooperators/personnel:

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 spring wheat across eastern Montana.

MATERIALS AND METHODS:

Location:

- Roosevelt county (Poplar)
- Sheridan county (Plentywood)
- Valley county (Nashua)
- Wibaux county (Wibaux)

RESULTS:

Due to the severe drought, trials at Plentywood and Nashua did not get good germination and failed. Results from other locations are presented in Table 1-2.

Table 1: Dryland Spring Wheat Evaluation - MSU

Roosevelt County,
MT

| Variety | Plant height (cm) | TW † (lb/bu) | Protein (%) | Grain Yield † (bu/a) |
|-------------|----------------------|-----------------|----------------|-------------------------|
| Brennan | 57 | 61.0 | 14.8 | 24.1 |
| Choteau | 58 | 60.7 | 14.9 | 27.2 |
| Duclair | 62 | 58.8 | 14.7 | 24.8 |
| Egan | 62 | 58.2 | 15.6 | 24.8 |
| Foruna | 70 | 59.5 | 13.4 | 24.9 |
| Lanning | 62 | 59.9 | 15.2 | 33.9 |
| MT1543 | 57 | 58.6 | 14.4 | 25.0 |
| MT1570 | 63 | 60.6 | 14.4 | 27.2 |
| Reeder | 64 | 59.9 | 15.3 | 29.7 |
| SY Soren | 57 | 60.7 | 15.5 | 25.5 |
| Vida | 65 | 60.1 | 14.7 | 30.8 |
| WB 9879 CLP | 60 | 59.8 | 15.5 | 22.3 |
| Mean | 61.3 | 59.8 | 14.9 | 26.7 |
| CV (%) | 8.8 | 1.3 | 3.4 | 13.3 |
| LSD | 9.1 | 1.3 | 0.9 | 6.0 |

Previous crop: Fallow

Planted: 4/25/2017

Harvested: 8/4/2017

Fertilizer: Supplied by cooperator 65-70 lbs

MESZ (Microessential sulfur & zinc)

Cooperator also applied 300 lbs wheat blend in the fall.

Table 2: Dryland Spring Wheat Evaluation - MSU

Wibaux County, MT

| Variety | Plant height | TW † | Protein | Grain Yield † |
|----------------|---------------------|-------------|----------------|----------------------|
| | (cm) | (lb/bu) | (%) | (bu/a) |
| Brennan | 51.3 | 64.9 | 16.3 | 21.8 |
| Choteau | 52.7 | 63.2 | 15.0 | 24.3 |
| Duclair | 53.0 | 61.7 | 14.5 | 23.1 |
| Egan | 56.7 | 62.0 | 16.1 | 20.6 |
| Foruna | 61.7 | 62.6 | 13.9 | 23.5 |
| Lanning | 53.7 | 62.7 | 15.6 | 25.0 |
| MT1543 | 56.7 | 62.2 | 14.7 | 27.1 |
| MT1570 | 55.0 | 64.1 | 15.2 | 25.3 |
| Reeder | 54.3 | 64.1 | 14.8 | 21.6 |
| SY Soren | 54.3 | 64.4 | 15.2 | 24.4 |
| Vida | 54.0 | 63.6 | 13.0 | 28.4 |
| WB 9879 CLP | 53.0 | 63.6 | 15.4 | 25.3 |
| Mean | 54.7 | 63.3 | 15.0 | 24.2 |
| CV (%) | 8.8 | 0.8 | 3.9 | 16.5 |
| LSD | 8.2 | 0.9 | 1.0 | 6.7 |

Previous Crop: Peas

Planted: 4/27/2017

Harvested: 8/16/2017

Fertilizer: 200 lbs Urea, 50 lbs 11-52-0