

Project Title: Evaluation of yield of late fall seeded winter wheat and spring wheat.

Project Leader: D.M. Wichman –CARC Research Agronomist, Moccasin, Montana.

Project Personnel:

Objectives:

Evaluate relative performance of late seeded winter wheat for use in determining insurable risk.

Results:

Fall 2013 had good September moisture which contributed good germination of downy brome and winter annuals and good soil conditions for seeding. Soil freeze up was late but came abruptly around 5th of December. Soil seeding conditions were excellent on October 26 and November 26. Soil surface was frozen on December 5th so the disk openers made just an indentation in the soil surface, leaving the seed exposed to the elements. There was good snow cover into January. Late January had Chinook winds which resulted in much water standing drill furrows and runoff in some cases. February was colder than it has been in recent years, so ice persisted in furrows where water stood in January. The spring was drier than average.

It appears the October 26 seeding was in a vulnerable stage at winter freeze up . The spring wheat, Choteau and Vida, had very poor survival. Winter surviving plants may have come from dormant seed that sprouted in early spring. The November 26 seeding had excellent survival. It is assumed this was due to the seed not fully sprouting till spring warm up. The spring wheat had similar yields for November 26 and April 28 seeding dates.

Summary:

Late fall seeding is sometimes utilized by producers to provide greater opportunity to control downy brome and other winter annuals and/or to avoid seeding into seed beds to dry to germinate winter wheat seed. Dormant seeding is often seen as less risky than a mid-October seeding. Yet, federal crop insurance guidelines discourage seeding after November 1. While decent yield were obtained with the November 26 seeding, weather and soil conditions can change abruptly making it difficult or impossible to place the seed in the soil. At the same time, warm conditions may occur post mid-late fall seeding enabling the wheat seed to germinate and the seedling to reach a winter vulnerable stage of growth (1-2 leaf).

Funding Summary:

Expenditure information to be provided by OSP. This project received no other grant support.

MWBC FY2011 Grant Submission Plans:

It is planned to submit this project for funding consideration in the next fiscal year.

Table 1 2014 Yield of late seeded winter and spring wheat on tilled fallow.
 1338DS Central Agricultural Research Center. Moccasin, Montana

Cultivar	/Seed Date:	26-Oct-13	26-Nov-13	5-Dec-13	15-Apr-14	28-Apr-14
Bearpaw		bu/a 35.7	bu/a 44.2	bu/a 9.5	bu/a no heads	bu/a not seeded
Yellowstone		38.9	47.7	16.7	no heads	not seeded
Choteau		4.9	29.8	4	39.5	28.4
Vida		5.1	37.2	3.7	45.7	37.1
Date Means		21.2	39.7	8.5	42.6	32.8
Stage 5-Dec-13		2-3 lf	Seed swelled	na	na	na

Data points are the means of three reps