

2014 ORGANIC WINTER WHEAT PLANTING DATE TRIAL

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In 2014, the University of Vermont Extension Northwest Crops and Soils Program conducted a winter wheat planting date trial. As the demand for local organic wheat has risen over the last few years, UVM Extension has been trying to determine the best agronomic practices for wheat production in the Northeastern climate. Traditionally, producers have planted winter wheat after the Hessian fly free date, 15-

severe lodging and a complete crop loss. In addition, grain moisture, test weight, and yield were calculated.

Table 3. Winter wheat planting date trial specifics in Alburgh, VT, 2014.

Trial information	Borderview Research Farm Alburgh, VT
Soil type	Benson rocky silt loam
Previous crop	Summer annuals
Row spacing (in)	6
Seeding rate (lbs ac ⁻¹)	125
Replicates	3
Harvest area (ft)	5 x 20
Harvest date	1-Aug 2014
Tillage operations	Fall plow, disk, and spike tooth harrow

Following harvest, seed was cleaned with a small Clipper cleaner (A.T. Ferrell, Bluffton, IN). An approximate one pound subsample was collected to determine quality. Quality measurements included standard testing parameters used by commercial mills. Test weight was measured by the

different from variety C, but not from variety B. The difference between A and B is equal to 725, which is less than the LSD value of 889. This means that these varieties did not differ in yield. The difference between A and C is equal to 1454, which is greater than the LSD value of 889. This means that the yields of these varieties were significantly different from one another. The asterisk indicates that variety B was not significantly lower than the top yielding variety.

RESULTS

Seasonal precipitation and temperature recorded at weather stations in close proximity to the trial site is shown in Table 4. The growing season this year was marked by lower than normal temperatures in September, April, and July, and higher than normal rainfall throughout the growing season (Apr-Jul). In Alburgh, there was an accumulation of 4756 Growing Degree Days (GDDs), which is 284 GDDs below the 30 year average.

highest harvest moisture was the fourth planting date (10-Oct) at 19.4%. All of the planting dates had moisture levels above 14% and therefore had to be dried down to below 14% moisture, necessary for optimal grain storability.

Table 5. Winter wheat harvest and quality results by planting date, 2014.

Planting date	Plant height	Yield @ 13.5% moisture	Harvest moisture	Test weight	Crude protein @ 12% moisture	Falling number	DON
	inches	lbs ac ⁻¹	%	lbs bu ⁻¹	%		

Figure 1. Yield and protein comparison between planting dates across hard red winter wheat varieties in Alburgh, VT, 2014.

Treatments that share a letter did not differ significantly by planting date.

Impact of Variety

Table 6. Winter wheat harvest and quality results by variety, 2014.

Variety	Plant height	Yield @13.5% moisture	Harvest moisture	Test weight	Crude protein @ 12% moisture	Falling number	DON
	inches	lbs ac ⁻¹					

DISCUSSION

It is important to remember that the results only represent one year of data. The 2014 growing season brought many challenges to the grain growing industry. Overall, winter wheat yields were lower than average and likely due to weather cond

