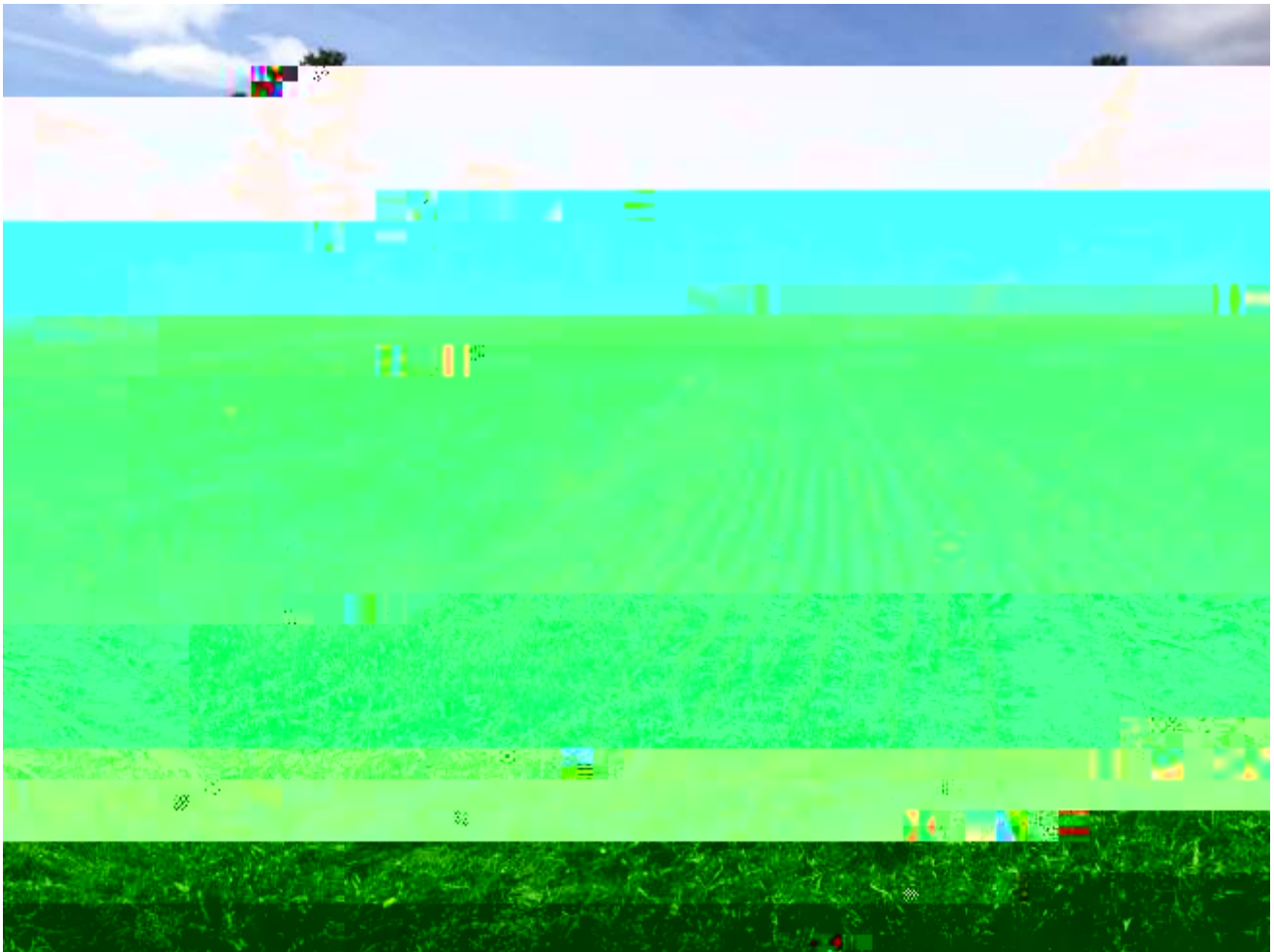


2016 Cereal Rye Variety Trial



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Deoxynivalenol (DON) analysis was done using Veratox DON 5/5 Quantitative test from the NEOGEN Corp. This test has a detection range of 0.5 to 5 ppm. Samples with DON values greater than 1 ppm are considered unsuitable for human consumption.

Table 2. Winter rye varietal information, Alburgh, VT, 2016.

Variety	Source
Abruzzi	Southeast Agriseeds
Brasetto	Seedway LLC
Huron	
Musketeer	Saved Seed
Spooner	Albert Lea
VNS (variety not specified)	Seedway LLC

Variations in project results can occur because of variations in genetics, soil, weather, and other growing conditions. Statistical analysis makes it possible to determine whether a difference among treatments is real or whether it might have occurred due to other variations in the field. At the bottom of each table, a

level of probability are shown. Where the difference between two treatments within a column is equal to or greater than the LSD value at the bottom of the column, you can be sure in 9 out of 10 chances that there is a real difference between the two values. Treatments that were not significantly lower in performance than the highest value in a particular column are indicated with an asterisk. In the following example, treatment A is significantly different from treatment C but not from treatment B. The difference between A and B is equal to 200, which is less than the LSD value of 300. This means that these treatments did not differ in yield. The difference between A and C is equal to 400, which is greater than the LSD value of 300. This means that the yields of these treatments were significantly different from one another.

RESULTS

Weather data was recorded with a Davis Instrument Vantage Pro2 weather station, equipped with a

Table 3. Temperature and precipitation summary for Alburgh, VT, 2015 and 2016.

Alburgh, VT	Sep-15	Oct-15	Apr-16	May-16	Jun-16	Jul-16
Average temperature (°F)	65.2	46.5	39.8	58.1	65.8	70.7
Departure from normal	4.60	-1.70	-4.90	1.80	0.00	0.10
Precipitation (inches)	0.340	2.51	2.60	1.50	2.80	1.80
Departure from normal	-3.30	-1.09	-0.26	-1.92	-0.88	-2.37

from Brasetto at 243 seconds. Brasetto did not have any DON present, and was not significantly different from Huron, Musketeer, and VNS.

Table 5: Grain quality for six cereal rye varieties, Alburgh, VT, 2016.

Variety	Crude protein @ 12% moisture %	Falling number seconds	DON ppm
Abruzzi	14.1*	252*	0.200
Brasetto	10.2	243*	0.000*
Huron	11.5	136	0.033*
Musketeer	10.9	183	0.133*
Spooner	12.3	157	0.183
VNS	12.0	173	0.033*
Trial mean	11.8	191	0.097
LSD (0.10)	1.16	35.5	0.150

*Treatments with an asterisk are not significantly different than the top performer in **bold**.

LSD Least significant difference.

DISCUSSION

The hot, dry conditions in 2016 emulated the weather in the west, which led to high cereal rye yields and quality. There were no statistical differences between varieties in terms of yield, and while there were some significant difference in quality, overall, the six varieties performed very well.

Many farmers question if growing VNS types of cereal rye will limit yield and quality. There were very few statistically significant differences between the cereal rye varieties. Based on this year of data collection combined with 2015, it appears that VNS rye is comparable in yield and quality to other commercially available varieties.

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