RESULTS

Seasonal precipitation and temperature recorded at a weather station at Borderview Research Farm are displayed below in Table 4. The growing season was warmer than normal overall, although the month of July was cooler than average. There were a surplus of growing degree days early in the season and a deficit in July, resulting in a season just 36 growing degree days above normal. There were 4.99 inches less precipitation than normal. Low precipitation through heading and flowering stages resulted in low fusarium infection rates and DON concentrations in the other grains trials at Borderview Research Farm in the 2021 growing season.

Table 4. Temperature and precipitation summary for Alburgh, VT, 2021.

Alburgh, VT	April	May	June	July
Average temperature (°F)	48.1	58.4	70.3	68.1
Departure from normal	2.52	-0.03	2.81	-4.31
Precipitation (inches)	3.52	0.66	3.06	2.92
Departure from normal	0.45	-3.10	-1.20	-1.14
Growing Degree Days (32-95°F)	497	818	1149	1119
Departure from normal	85	-1.0	86	-134

Based on weather data from a Davis Instruments Vantage Pro2 with WeatherLink data logger.
Historical averages are for 30 years of data provided by the NOAA (1981-2010) for Burlington, VT.

Barley Variety x Fungicide+Timing Interactions:

There were no statistical interactions between treatments and varieties, i.e., both varieties trialed responded similarly to treatments.

Impact of Fungicide and Timing

There were significant differences between treatments for harvest moisture, test weight, yield and DON concentrations (Table 6). Harvest metrics are shown in Table 5 and DON concentrations and FHB incidence and severity are shown in Table 6.

Harvest moisture was statistically different between treatments, but all treatments were over 14% and required drying down for storage. Test

Table 5. Harvest quality by fungicide treatment and timing, Alburgh, VT, 2021.

Treatment	Timing	Harvest moisture	Test weight	Yield at 13.5% moisture
		%		

Table 6. DON concentrations and FHB severity by fungicide treatment and timing, Alburgh, VT, 2021.

Treatment	Timing	DON	Average FHB severity	Incidence of FHB infected heads

Figure 1. The impact of variety on barley yield and DON concentration.
Varieties with different letters varied significantly by DON concentration. No yields differed significantly by treatment.

DISCUSSION

Higher levels of

ACKNOWLEDGEMENTS

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