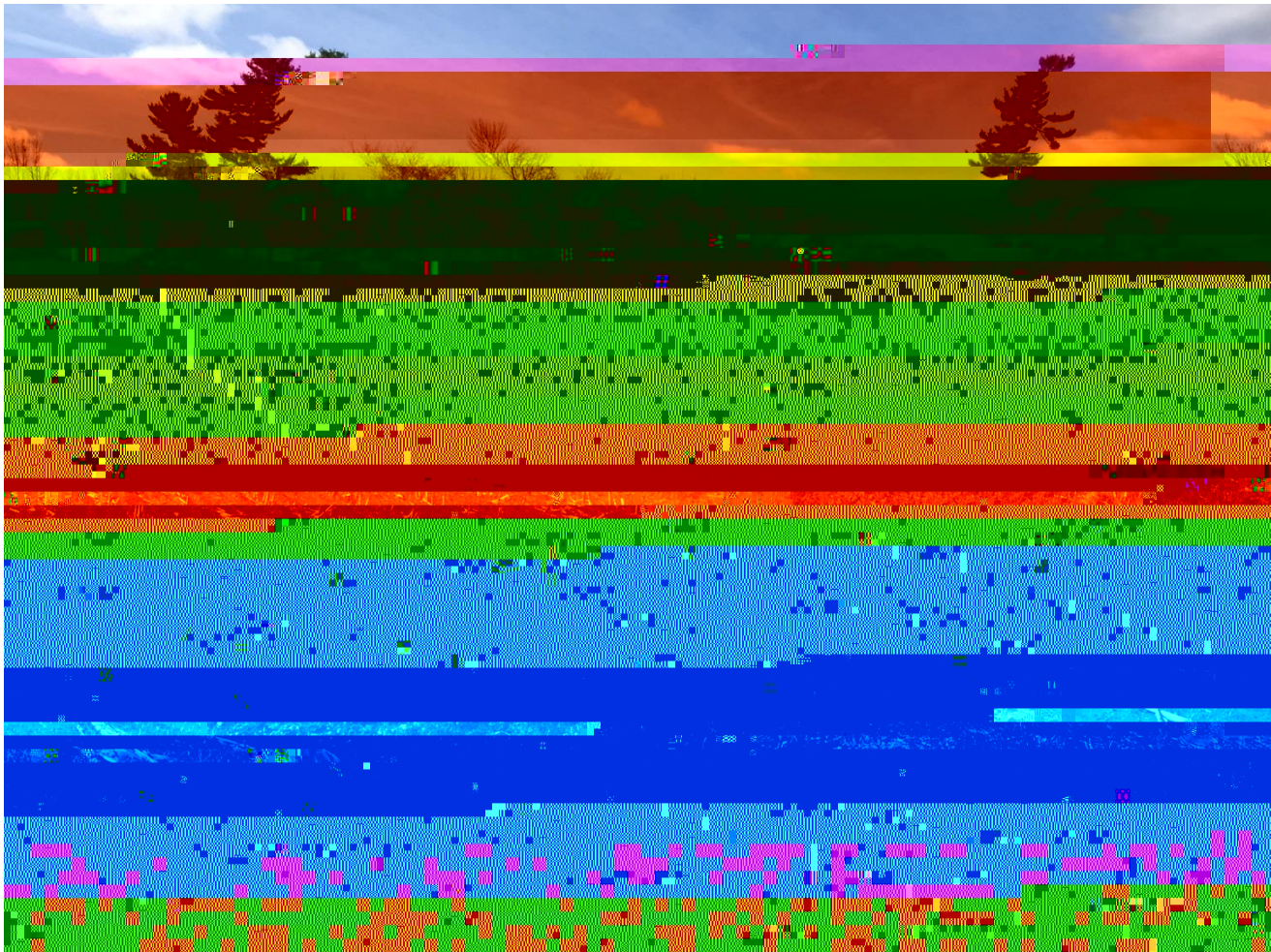


# 2019 Rye Nitrogen Fertility Trial



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**2019 RYE NITROGEN FERTILITY TRIAL**  
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The interest in growing cereal rye for grain to be sold as cover crop seed, or to other value-added markets (distillers and bakers), has increased considerably across the Northeast region. This winter hardy grain has the ability to survive cold winters and can be more tolerant of marginal land not suitable for other crops. As a result, farmers and end-users are requesting yield and quality information on cereal rye varieties. In 2018/2019, University of Vermont Extension Northwest Crops and Soils (NWCS) Program conducted a nitrogen (N) fertility trial to evaluate yield and quality of cereal rye under variable nitrogen application periods.

## **MATERIALS AND METHODS**

The experimental design of the study was a randomized complete block with treatment plots replicated four times (Table 1). Treatments were four nitrogen application timings: 90 lbs N ac<sup>-1</sup> applied in the fall, 90 lbs N ac<sup>-1</sup> applied in the spring, 45/45 lbs N ac<sup>-1</sup> split application applied in fall and spring, and a control receiving no N application (Table 2). Nitrogen was applied in the form of calcium ammonium nitrate (21-0-0). The field was plowed, disked, and prepared with a spike tooth harrow to prepare the seedbed for planting. The plots and the rye variety, Hazlet was planted with a Great Plains cone seeder on 6-Oct 2018



**Table 3. Temperature and precipitation summary for Alburgh, VT, 2018 and 2019.**

Alburgh, VT	2018			2019							
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Average temperature (°F)	45.8	32.2	25.4	15.0	18.9	28.3	42.7	53.3	64.3	73.5	68.3
Departure from normal	-2.36	-5.99	-0.55	-3.77	-2.58	-2.79	-2.11	-3.11	-1.46	2.87	-0.51

## **DISCUSSION**

Fall nitrogen applications to cereal rye may