

2011 VERMONT OAT VARIETY TRIAL

INTRODUCTION

Oats (*Avena sativa* L.) have a long history of being grown in the Northeast. Although most of the oats are planted for a cover crop or hay, growing oats for grain is another potential revenue source for farmers. According to the 2007 census, about 200 acres of land in Vermont is cultivated for oat grain production, with an average yield of 1747 lbs acre⁻¹. Unless, a hullless variety is grown, oats need to be hulled before being used for human consumption, and further processing is required to make oatmeal, steel cut oats or oat flour. The goal of this project was to evaluate yields and protein of twelve oat varieties.

METHODS

Twelve hulled oat varieties were planted at Borderview Research Farm in Alburgh, VT on May 13, 2011. The experimental plot design was a randomized complete block with four replications. Oat varieties evaluated are listed in Table 1.

Table 1: Oat varieties planted in Alburgh, VT, 2011.

| Oat Varieties | Seed Source |
|---------------|-----------------------|
| Badger | Albert Lea Seed House |
| Jim | Albert Lea Seed House |
| Morton | Albert Lea Seed House |
| Nice | La Coop Fédérée |
| Reeves | Albert Lea Seed House |
| Rockford | Albert Lea Seed House |
| Shadow | Semican |
| Spurs | Albert Lea Seed House |
| Tack | Albert Lea Seed House |

The seedbed in Alburgh was prepared by conventional tillage methods. All plots were managed with practices similar to those used by producers in the surrounding areas (Table 2). The plots were seeded with a Kincaid cone seeder on May 13, 2011 and harvested with an Almaco SP50 small plot combine on August 5, 2011.

This trial evaluated oats based on standard testing parameters used by commercial mills. Yield, moisture, and test weight (a measure of grain density) were recorded at the time of harvest. Following harvest, samples were cleaned with a Clipper M2B seed cleaner. A one-pound subsample was dried at 40° C and ground with a Perten LM3100 Laboratory Mill. Flour protein was determined with a Perten Inframatic 8600 Flour Analyzer. All data was analyzed using a mixed model analysis where replicates were considered random effects. The LSD procedure was used to separate cultivar means when the F-test was significant ($P < 0.10$).

Table 2: General plot management for trials.

| | Borderview Farm Alburgh, VT |
|-------------------|--|
| Soil type | Benson rocky silt loam |
| Previous crop | organic corn |
| Row spacing (in.) | 6 |
| Seeding rate | 125 lbs acre ⁻¹ |

Table 3: Temperature and precipitation summary for Alburgh, VT, 2011.

| South Hero (Alburgh) | April | May | June | July | August |
|-------------------------|-------|------|------|------|--------|
| Average Temperature (F) | 46.6 | 58.7 | 67.1 | 74.4 | 70.4 |
| Departure from Normal | 3.1 | 2.1 | 1.3 | 3.3 | 1.6 |
| | | | | | |

