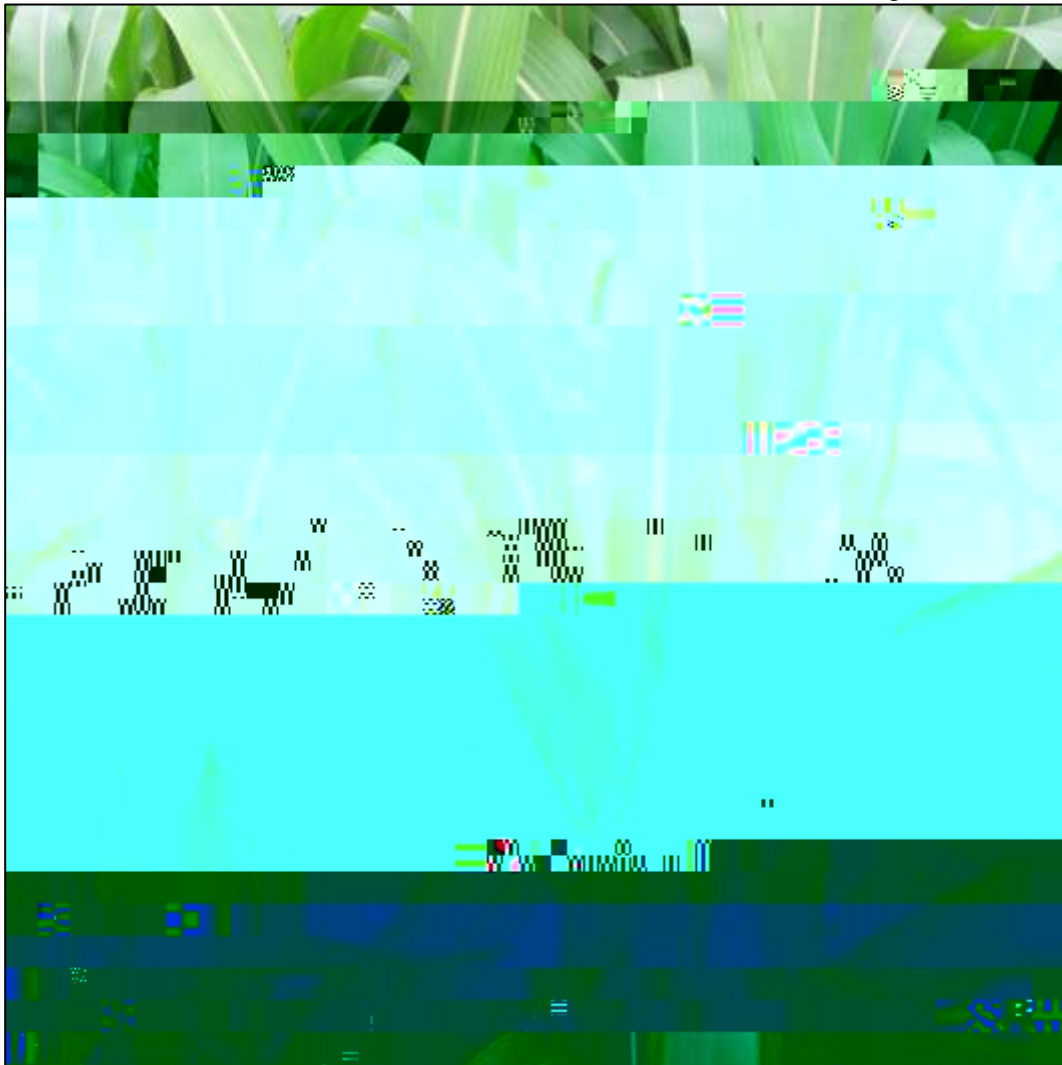


## 2014 Summer Annual Variety Trial



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**2014 SUMMER ANNUAL VARIETY TRIAL**  
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Warm season grasses, such as sorghum x sudangrass crosses, sudangrass, millets, and teff are high-yielding summer annuals that can provide quality forage in the hot summer months, when cool season grasses are not as productive. The addition of summer annuals into a rotation can provide a harvest of high-quality forage for stored feed or grazing. Generally, summer annuals germinate quickly, grow rapidly, are drought resistant, and have high productivity and flexibility in utilization. However, it is important to know the challenges of growing summer annuals, including the high cost of annual establishment, increased risk of stand failure due to variable weather, and the risk of toxic levels of nitrates and prussic acid in sorghum and sudangrass crops. The UVM Extension Northwest Crops and Soils team conducted this variety trial to evaluate the yield and quality of warm season annual grasses.

## **MATERIALS AND METHODS**

Twelve varieties of summer annuals were planted at Borderview Research Farm in Alburgh, VT on 2-Jun 2014 (Table 2). General plot management is listed in Table 1. Plots were managed with practices similar to those used by producers in the surrounding area. The previous crop was sod. The field was disked and spike tooth harrowed prior to planting. Plots were seeded with a Great Plains small plot drill at a seeding rate

**Table 1. General plot management.**

<b>Trial Information</b>	<b>Borderview Research Farm Alburgh, VT</b>
Soil Type	Benson rocky silt loam
Previous crop	sod
Planting date	2-Jun
First cut harvest date	1-Aug
Second cut harvest date	4-Sep
Seeding rate: Teff	6 lbs acre <sup>-1</sup>
Annual ryegrass	20 lbs acre <sup>-1</sup>
Millets	25 lbs acre <sup>-1</sup>
Sorghums, Sudangrass, and crosses	50 lbs acre <sup>-1</sup>
Tillage methods	Mold board plow, disk, and spike tooth harrow

**Table 2. Summer annual varieties, characteristics, and seed source.**

<b>Variety</b>	<b>Species</b>	<b>Characteristics</b>	<b>Seeding Rate (lbs. ac<sup>-1</sup>)</b>	<b>Seed Source</b>
Corvalis	Teff	non-BMR	6	
Moxie CW 0406	Teff	non-BMR	6	
Fria	Annual Ryegrass	endophyte-free	20	Seedway
Wonderleaf	Millet	non-BMR	25	
AS 5201	Sorghum x Sudangrass	non-BMR	50	
AS 6201	Sorghum x Sudangrass	BMR	50	
AS 6401	Sorghum x Sudangrass	BMR	50	

AS 640Tm0 g[(A)

**Table 3. Seasonal weather data<sup>1</sup> collected in Alburgh, VT, 2014.**

<b>Alburgh, VT</b>	<b>June</b>	<b>July</b>	<b>August</b>	<b>September</b>
Average temperature (°F)	66.9	69.7	67.6	60.6
Departure from normal	1.1	-0.9	-1.2	0.0
Precipitation (inches)	6.09	5.15	3.98	1.33
Departure from normal	2.40	1.00	0.07	-2.31
Growing Degree Days (base 32°F)	1041	1171	1108	860
Departure from normal	27	-27	-31	2

<sup>1</sup>Based on weather data from a Davis Instruments Vantage Pro2 with WeatherLink data logger. Historical averages are for 30 years of NOAA data (1981-2010) from Burlington, VT.

Hayking sudangrass was the tallest variety at 34.2 inches, significantly taller compared to some of the shorter species (Teff and ryegrass) that only reached 15 inches tall (Table 4). The summer annuals did not grow as tall as those grown in

**Table 5**

