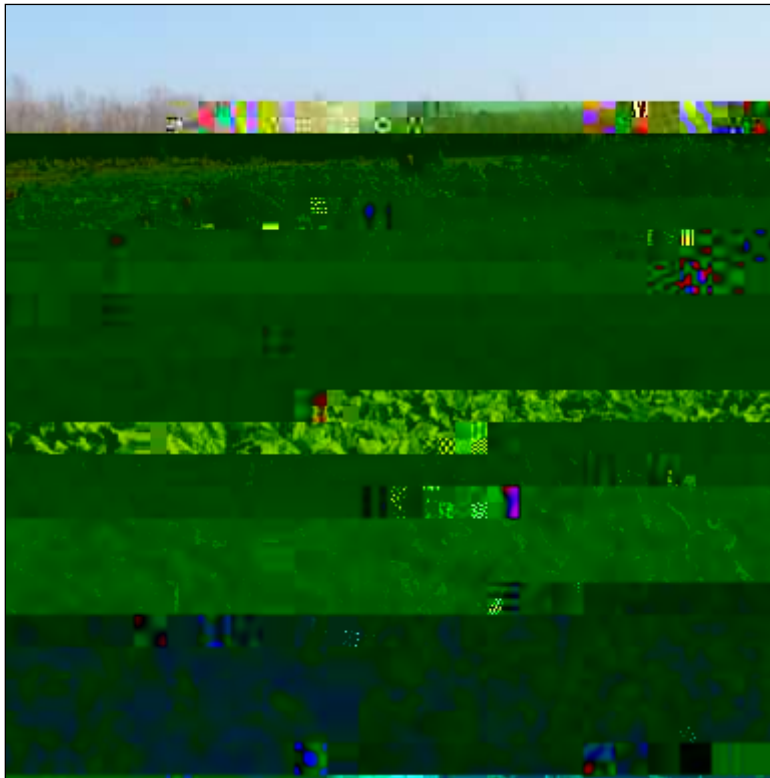




2016 Forage Brassica Variety Trial



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2016 FORAGE BRASSICA VARIETY TRIAL
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Forage brassicas are very cold hardy and can extend the grazing season late into the fall. They grow extremely fast and provide very nutrient dense feed at times when growth is limited for many other species. Brassicas fit well into some annual crop rotations such as small grains or summer annual forages. Adding brassicas to a grazing plan can not only extend the grazing season but and can also reduce the reliance on expensive feed inputs. There are different species of forage type brassicas on the market today

Soils Program conducted a forage brassica variety trial to evaluate yield and quality of commercially available forage varieties.

In 2016, a variety trial was conducted at Borderview Research Farm in Alburgh, VT, to evaluate seven forage brassica varieties (Table 1, Image 1).

Table 1. Seven forage brassica varieties, 2016.

Variety	Species
Appin	Turnip
Barkant	Turnip
Barsica	Rape
Eco-Till	Radish
Dwarf Essex	Rape
Purple Top	Turnip
T-Raptor	Brassica hybrid

The seedbed was prepared using standard local practices, including incorporating previous crop residue with a moldboard plow and finishing with disk and drag harrows (Table 2). The soil was a Benson silt loam. The experimental design was a randomized complete block with four 20 and were planted with a Great Plains grain drill at a rate of 6 lbs ac⁻¹ on 15-Aug.

Table 2. Agronomic and trial information, 2016.

Location	Borderview Research Farm-Alburgh, VT
Soil type	Benson silt loam
Previous crop	Spring barley
Tillage operations	Moldboard plow, disking, drag harrow
Plot size (ft.)	5 x 20
Replicates	4
Planting date	21 0 0 1 135.38 144TJET23

Table 3. Summarized weather data for 2016 Alburgh, VT.

Alburgh, VT	August	September	October
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Figure 1. Brassica dry matter yields by type, 2016.

Treatments that share a letter performed statistically similarly to one another.

Brassica varieties also differed significantly in quality (Table 5). Protein content ranged from 16.9 to

Figure 2. Protein and NDF digestibility of seven forage brassica varieties, 2016.

Treatments that share a letter performed statistically similarly to one another.

DISCUSSION

Overall, the brassicas performed exceptionally compared to previous years despite dry conditions. These data demonstrate that brassicas have the potential to produce large quantities of biomass in a short period of time in the northeast. Brassicas averaged 2705 lbs ac⁻¹ dry matter with 20.1% protein and 77.4% NDF digestibility. These crops can be grazed or harvested in late October, and into November depending on weather, when there are not many other forage options for this kind of biomass production or quality. However, care should be taken if grazing animals on forage of this high quality as bloating and other health issues could occur. In addition, brassicas should be limited in lactating cow diets to limit off-flavors in milk. Due to their low fiber content, brassicas can be mixed with an annual grass, such as oats or annual ryegrass, or even with a winter grain such as rye or triticale. This can provide a more balanced forage than the brassicas alone.

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