2021 Fall Forage Oat Seeding Rate Trial

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In 2021, the University of Vermont Extension's Northwest Crop and Soils Program evaluated the performance of forage oats planted at various seeding rates. In the Northeast, cool season perennial grasses dominate pastures and hay meadows that farmers rely on. Often times during the fall months, the perennial pasture will decline in yield and quality. The addition of cool season annual forages, such as oats, into the grazing system during this time may help improve the quality and quantity of forage. To maximize fall forage yields, farmers want to know if they should increase oat seeding rates. To determine if higher seeding rates of oats will boost fall forage production, a trial was initiated in the fall of 2021 to evaluate oat seeding rates from 75 to 200 lbs per acre.

MATERIALS AND METHODS

The trial was established at Borderview Research Farm in Alburgh, VT, and the plot design was a randomized complete block with four replications (Table 1). The soil type was Benson rocky silt loam and the previous crop was milkweed. Six seeding rates of the forage oat variety Everleaf 126 were the treatments.

Table 1. Forage oat seeding rate trial management, Alburgh, VT, 2021.

Location	Borderview Research Farm – Alburgh, VT
Soil type	Benson rocky silt loam
Previous crop	Milkweed
Tillage operations	Pottinger TerraDisc
Planting equipment	Great Plains Cone seeder
Treatments (seeding rates in lbs ac^{-1})	75 100 150 175 200
Replications	4
Plot size (ft)	5 x 20
Planting date	23-Aug
Harvest date	3-Nov

The seedbed was prepared with a Pottinger TerraDisc. The trial was planted with a cone seeder on 23-Aug into 5' x 20' plots. On 3-Nov, the plots were harvested using a Carter flail forage harvester equipped with a scale in a 3' x 20' area and the plot weight recorded. An approximate 1 lb subsample of the harvested material was collected and dried to determine dry matter content and calculate dry matter yield.

Variations in yield and quality can occur because of variations in genetics, soil, weather and other growing conditions. Statistical analysis makes it

Table 3. Yield of six forage oat seeding rates, 2021.

Seeding rate	Dry matter yield	
lbs ac^{-1}	lbs ac^{-1}	tons ac^{-1}
75	2261	