



Oak Knoll Aeration and Over-Seeding Trial 2019

Table 1. Mean \pm standard deviations (SD) for aeration treatments

Observation	No aeration	With aeration	p^1
Forage quality			
Dry weight (lbs./acre)	4874 \pm 672	4532 \pm 420	0.258
Crude protein, %	-	-	-
Without over-seeding	7.0 \pm 0.7	7.6 \pm 0.5	0.209
With over-seeding	6.9 \pm 0.5	6.3 \pm 0.3	0.098
Relative feed value	109 \pm 4	111 \pm 8	0.472
Pasture composition			
Bare ground, %	0	1 \pm 2	NA
Litter cover, %	7 \pm 1	7 \pm 5	NA
Grass cover, %	94 \pm 4	94 \pm 6	0.888
Legume cover, %	16 \pm 9	11 \pm 6	0.256
Soil characteristics			
Infiltration T2, seconds	74 \pm 39	64 \pm 32	0.622
Penetration, depth (cm)	29 \pm 3	27 \pm 3	0.216
Soil organic matter, %	5.5 \pm 1.2	6.1 \pm 1.2	0.338

Table 2. Mean \pm standard deviations (SD) for over-seeding treatments

Observation	No over-seeding	With over-seeding	p^1
Forage quality			
Dry weight (lbs./acre)	4742 \pm 596	4664 \pm 580	0.801
Crude protein, %	-	-	-
Without aeration	6.9 \pm 0.7	6.9 \pm 0.5	0.919
With aeration	7.6 \pm 0.5	6.3 \pm 0.3	0.007
Relative feed value	111 \pm 5	108 \pm 7	0.334
Pasture composition			
Bare ground, %	1 \pm 1	1 \pm 1	NA
Litter cover, %	6 \pm 2	8 \pm 5	NA
Grass cover, %	93 \pm 3	95 \pm 6	0.421
Legume cover, %	12 \pm 10	14 \pm 6	0.669
Soil characteristics			
Infiltration T2, seconds	93 \pm 28	45 \pm 22	0.003
Penetration, depth (cm)	27 \pm 4	29 \pm 2	0.114
Soil organic matter, %	5.5 \pm 1.0	6.2 \pm 1.3	0.317

¹The probability value associated with the treatment in the analysis of variance. For observations where a significant treatment effect ($p \leq 0.05$) was indicated, values are highlighted in bold. Values that are not available are indicated as NA.



San Juan County

WASHINGTON STATE UNIVERSITY
EXTENSION

Trial Methods

Fall 2017 - Aerated

5/7/18 – Over-seeded with Birds Foot Trefoil at 15 lbs per acre

7/13/18 - Sampled forage biomass and quality

9/11/18 - Sampled soil quality

Fall 2018 - Aerated

6/14/19 - Sampled forage biomass and quality

9/18/19 - Sampled soil quality

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