

**Objective:** Comparing grass quality from Sweetgrass plus Se against straight nitrogen

**Crop:** Grass

**Location:** Ballantrae, Ayrshire, Scotland

**Date:** Grazing season 2018 up to end May

**Reason:** NSA Scotsheep 2018

**Trial code:** Scotsheep



A Broad Spectrum Soil Analysis highlighted soil deficiencies of sulphur, sodium and selenium, all essential for livestock performance. A split field trial is currently underway comparing a commodity fertiliser with Sweetgrass, a grassland fertiliser enriched with sodium.

## Results after half the field was treated with Sweetgrass and half straight nitrogen

Nutrient	Origin Sweetgrass 23.0.0 + 5% S + 5% Na + Se @ 187.5kg/ha	Straight N (27% N) @ 187.5kg/ha
Potash	Reduced by 25% from excessively high to optimum = reduced risk of staggers	Excessively high
Sodium	Increased from deficient to optimum = higher palatability and increased DM intakes	Deficient
Selenium	Increased by 160% from severely deficient into target range = reduced risk of ill thrift, infertility, low LWG, retained placenta, etc	Severely deficient
Sulphur	9% improvement in the N:S ratio which encourages formation of true protein	Higher N:S ratio could reduce true protein formation

## Nutrient ratios

### First leaf sample early May

### Second leaf sample late May

Sweetgrass	Straight nitrogen	Sweetgrass	Straight nitrogen
N:S ratio		N:S ratio	
<b>14:1</b>	<b>15:1</b>	<b>25:1</b>	<b>27:1</b>
K:Na ratio		K:Na ratio	
<b>11:1</b>	<b>24:1</b>	<b>8:1</b>	<b>17:1</b>
K:Mg ratio		K:Mg ratio	
<b>10:1</b>	<b>14:1</b>	<b>12:1</b>	<b>16:1</b>