Ammonium Nitrate proven as best option for British grassland farmers

Choosing urea may save money up front, but could reduce forage stocks as well as productivity and profitability for grassland farmers.

Three years of replicated trials at Reaseheath College in Cheshire show that using Ammonium Nitrate (AN) over urea increases yield of silage and grazing grass in spring and early summer. At current values (2018), to purchase AN in the form of Nitram® for a 80ha (200 acre) grass system costs £3,000 more than urea. However, it would cost £13,500 to replace the lost grass energy with concentrate feed. And that energy loss would be enough to make 150,000 litres of milk.

### Three year average trial results for both silage and grazing yields

<table>
<thead>
<tr>
<th>Silage Yields</th>
<th>Grazing Yields</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grazing rotations 1 + 2 + 3 (140kg N/ha applied)</strong></td>
<td><strong>15% more</strong></td>
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<td><strong>Grazing rotations 1 + 2 + 3 (140kg N/ha applied)</strong></td>
<td><strong>8% more</strong></td>
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<td>Grass DM Yield (t DM/ha)</td>
<td>+ 0.5t DM/ha</td>
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<td><strong>1st + 2nd Cut (210kg N/ha applied)</strong></td>
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<td>Grass DM Yield (t DM/ha)</td>
<td>+ 1.3t DM/ha</td>
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**Key learning from the trials**

- **15% more silage**
- **8% more grazed grass**

### On a 200 cow system, Nitram yields enough extra grass energy for:

- **73 tonnes of concentrate**
- **150,000 litres of milk**

**Blue bags grow better crops**
Science into practice

- On-farm practical trial looking at performance of AN and urea
- Lancashire dairy farm, 2016 autumn re-seed
- 75kg N/ha per 1 cut (60 units N/acre) plus slurry
- 2017 Nitram vs urea
- 2018 SingleTop® (27+12SO₃) vs urea sulphur blend (38+19SO₃)

On-farm trial results

Nitrogen Trial Results 2017

- 21% more grass (2.7t DM/ha, 3.6t FW/acre)

Nitrogen Sulphur Trials Results 2018

- 18% more grass (1.5 DM/ha, 3.1FW/acre)

A small investment gives a huge return

2017*

Nitram cost +£3,383

Nitram benefit, you could:  ROI
A. Sell the silage +£18,900  5:1
B. Turn extra energy into milk +£72,765  21:1
C. Replace concentrate feed +£27,471  8:1

2018*

SingleTop cost +£2,511

SingleTop benefit, you could:  ROI
A. Sell the silage +£14,000  5:1
B. Turn extra energy into milk +£43,419  17:1
C. Replace concentrate feed +£15,262  6:1

*Based on typical fertiliser, slage, milk and concentrate prices for the year. ROI – Return On Investment

Find out more online at: www.cffertilisers.co.uk/results

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