



Polysulphate  
Trial

**Organic grass and  
clover mixed pasture  
on a sandy soil**

Polysulphate fertilizer is a soluble, easily-absorbed, cost effective answer to crop nutrition, containing four key plant nutrients: sulphur, potassium, magnesium and calcium.

**S** 48% SO<sub>3</sub>  
(19.2% S)

**K** 14% K<sub>2</sub>O  
(11.6% K)

**Mg** 6% MgO  
(3.6% Mg)

**Ca** 17% CaO  
(12.2% Ca)



## When

Application:  
26 February 2021  
1<sup>st</sup> cut: 28 May 2021  
2<sup>nd</sup> cut: 24 June 2021



## Where

Winterswijk,  
the Netherlands



## Crop

Mixed pasture (red and white clover and ryegrass) (*Trifolium repens*, *Trifolium pratense* and *Lolium perenne*)



## Soil type

Sandy



## Measurements

- Dry matter yield
- Feed unit milk (VEM)
- Net Energy Lactation (NEL)
- Crude protein

Mined in the UK, ICL is the first – and only – producer in the world to mine polyhalite, marketed as Polysulphate.

**Polysulphate**

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## Objective

To evaluate the effect of Polysulphate on the yield and quality of a mixed organic pasture (grass and clover) grown on sandy soil in the Netherlands.

## Treatments

The trial consisted of eight strips of grass pasture. Each 6 × 50 meter strip received 20 t/ha of cattle slurry on the 5<sup>th</sup> of March, before the first cut, and 17.5 t/ha of cattle slurry on the 9<sup>th</sup> of June, before the second cut. Strips 2, 4, 6 and 8 were also treated before the first cut with 227 kg/ha of granular Polysulphate, on 26<sup>th</sup> of February.

The grass and clover from each strip was weighed and analyzed.

## Results

- Polysulphate application increased the crude protein production by 21.4%. This is the result of a 10.8% increase in dry matter and a 9.6% increase in crude protein content.
- The net energy lactation (NEL) of the forage was increased by 11.1% with Polysulphate application

## Yield and quality of the forage, 1<sup>st</sup> + 2<sup>nd</sup> cuts

	Dry matter (kg/ha)	Crude protein (g/kg dry matter)	Crude protein (kg/ha)	Feed unit milk (KVEM/ha)*	Net Energy Lactation (MJ/ha)
Control	6,723	146	982	6,042	41,690
Control + Polysulphate	7,452	160	1,192	6,713	46,320
<b>Increase</b>	<b>+10.8%</b>	<b>+9.6%</b>	<b>+21.4%</b>	<b>+ 11.1%</b>	<b>+11.1%</b>

\* 1 KVEM = 6.9 MJ NEL