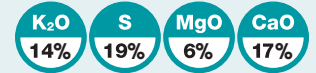


Growing SUGARBEET IN FRANCE



POLY4



KEY FINDINGS

**+ 11% yield advantage
over Korn-Kali and +6%
over MOP + kieserite**

**Additional 3 t ha⁻¹ yield advantage
with increased POLY4 rate**

**Greater sugar yield
achieved with POLY4**



A CASE FOR POLY4

- Sugarbeet is an important industrial crop in northern Europe and a major crop in France that grows 388 thousand hectares of sugarbeet, second largest area in Europe 28.
- Potassium is a critical nutrient to maximise root yields while crops also often receive magnesium and sulphur, and so kieserite or Korn-Kali are currently used as standard fertilizers for sugarbeet.
- POLY4 contains magnesium, potassium, sulphur and calcium in one product. POLY4 delivers its nutrients over an extended period, ensuring the crop has adequate nutrition throughout the growing season.

POLY4 BENEFITS



Source of macro nutrients



Balanced supply of essential nutrients



Extended nutrient delivery profile



Suitable for organic farming



Low carbon footprint

| Treatments | Nutrient rates applied (kg ha ⁻¹) | | | |
|----------------------------------|---|-----|-----|----|
| | K ₂ O | CaO | MgO | S |
| Korn-Kali | 140 | 0 | 21 | 18 |
| MOP + kieserite | 140 | 0 | 20 | 16 |
| POLY4 (84 kg ha ⁻¹) | 140 | 14 | 5 | 16 |
| POLY4 (200 kg ha ⁻¹) | 140 | 34 | 12 | 38 |

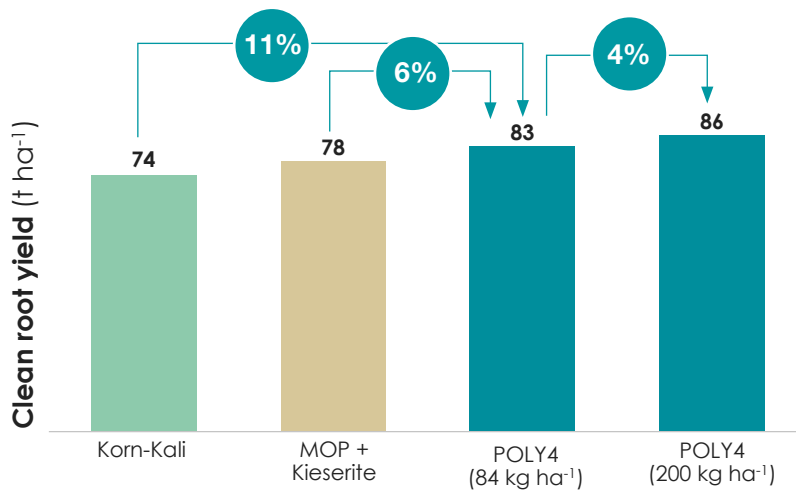
*All treatments received standard nitrogen and phosphorus application rates. POLY4 treatments were balanced for K with MOP: 84 kg POLY4 ha⁻¹ with 213 kg MOP ha⁻¹ and 200 kg POLY4 ha⁻¹ with 187 kg MOP ha⁻¹.



ROOT YIELD ADVANTAGE



Application of a 84 kg ha⁻¹ POLY4 rate gave a large yield improvement compared to alternative fertilizers with similar Mg and S applications. A standard application rate of 200 kg POLY4 ha⁻¹ (supplying 20% of the potassium) had an additional 3 t ha⁻¹ clean root yield.



TRIAL FOCUS

To compare sugarbeet yield with low and moderate POLY4 application rates to standard practices of MOP + kieserite and Korn-Kali.

PARTNER

Antedis

LOCATION

**Pleine-Selve,
Hauts-de-France**

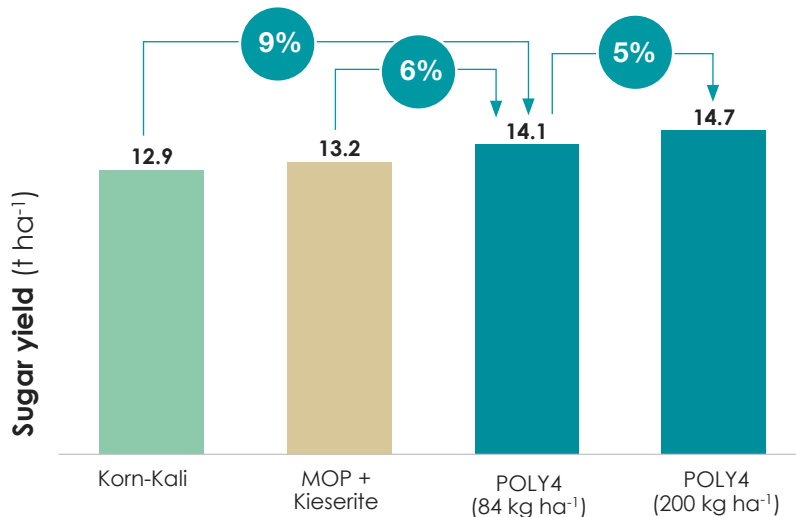
DATE

2019

INCREASED SUGAR YIELD



Sugar concentration was maintained in the roots with POLY4 treatments (average of 17.1% polarisable sugar). Improved root yields with POLY4 treatments directly translated into increased sugar yield.



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Notes: All treatments received 60 kg N ha⁻¹ and 75 kg P₂O₅ ha⁻¹ from DAP and ammonium nitrate. Pre-trial soil analysis: 1.7% SOM, pH 8.2, 84 mg P kg⁻¹, 226 mg K kg⁻¹, 82 mg Mg kg⁻¹, 7143 mg Ca kg⁻¹.

Source: Antedis (2019) 17000-ASA-17016-18 (sugarbeet).