Growing POTATOES IN POLAND

POLY4
A SIRIUS MINERALS PRODUCT

K_2O 14% | S 19% | MgO 6% | CaO 17%

KEY FINDINGS

8% average tuber yield improvement

Improved economic return

Increased dry matter content

A CASE FOR POLY4

- With 320,000 hectares, Poland has the largest potato area in the EU.
- Farmers can use MOP and SOP as a K source.
- The Cl present in MOP can detrimentally reduce tuber dry matter content.
- As sulphur depositions in the EU has decreased, S deficiency can be problem.

POLY4 BENEFITS

- A low Cl^- balanced source of K and Mg with sulphate-S, Ca and additional micro nutrients
- Extended nutrient delivery profile
- Blends, stores and spreads well with conventional equipment
- Suitable for organic farming

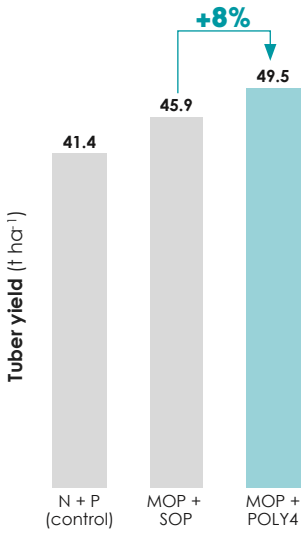
poly4.com

Treatments	Average nutrients applied (kg ha^{-1})				
	K_2O	MgO	S	CaO	Cl
N + P (control)	0	0	0	0	0
MOP + SOP	180	0	32	0	69
MOP + POLY4	180	10	32	29	125

*All treatments received standard applications of N and P fertilizer.

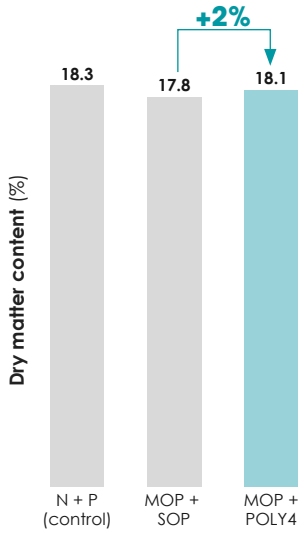
GREATER TUBER YIELD

With the POLY4 fertilizer plan, tuber yield was significantly greater at both sites (+6% and +9%). Improved yield increased revenue by US$359/ha.



INCREASED DRY MATTER CONTENT

The POLY4 fertilized potato tubers had greater dry matter content than the MOP + SOP at both sites. This difference was significant at one site. Higher dry matter content is the most important characteristic that helps to attract a price premium from the potato frying industry. For processing, high tuber dry matter content influences the oil absorption rate to achieve a good fry colour.



Notes: 1) FAOSTAT (2019); 2) Treatments applied at planting. N and P_2O_5 provided by AN at 455 kg ha^{-1} and DAP at 100 kg ha^{-1}, respectively. MOP and SOP are blended to provide K_2O in a 85:15 ratio. Pre-trial soil analysis at Kepa: 15 mg P kg^{-1}, 181 mg K kg^{-1}, 1550 mg Ca kg^{-1}, 10 mg Mg kg^{-1}, 116 mg S kg^{-1}, pH KCl 6.1, 0.87% organic carbon, EC 17 µS cm^{-1}, CEC 33 cmol 100g^{-1}; Osiny: 23 mg P kg^{-1}, 192 mg K kg^{-1}, 1150 mg Ca kg^{-1}, 37 mg Mg kg^{-1}, 126 mg S kg^{-1}, pH KCl 5.6, 0.88% organic carbon, EC 8 µS cm^{-1}, CEC 20 cmol 100g^{-1}; 3) Genstat means of trials at both locations. Cultivars used were Lord and Oberon; 4) Data presented after application of 180 kg K_2O ha^{-1} was the recommended application rate; 5) Potato price obtained from FAOSTAT.

Source: Institute for Soil Science and Plant Cultivation, Puławy (2018), 49000-PUL-49012-18 (potato).

TRIAL FOCUS

To compare POLY4 performance with commonly-used K fertilizers for potato production in Poland.

PARTNER

Institute for Soil Science and Plant Cultivation, Puławy, Poland

LOCATION

Kepa and Osiny, Poland

DATE

2018

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