Polysulphate®

Trial

Winter oilseed rape *(Brassica napus)* in a sandy loam 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_3 (19.2% S)
K	14% K_2O (11.6% K)
Mg	6% MgO (3.6% Mg)
Ca	17% CaO (12.2% Ca)

ICL

Fertilizerplus®
Premium plant nutrition from ICL Fertilizers

When

Sowing:
September 2016
Harvest:
May 2017

Where

Hubei, China

Crop

Winter oilseed rape
(Brassica napus)

Soil type

Sandy loam soil

Measurements

- Yield
- Yield components
- Nutrient uptake

Objective

To investigate the effect of increasing rates of Polysulphate on the yield, yield components and nutrient uptake of winter oilseed rape.

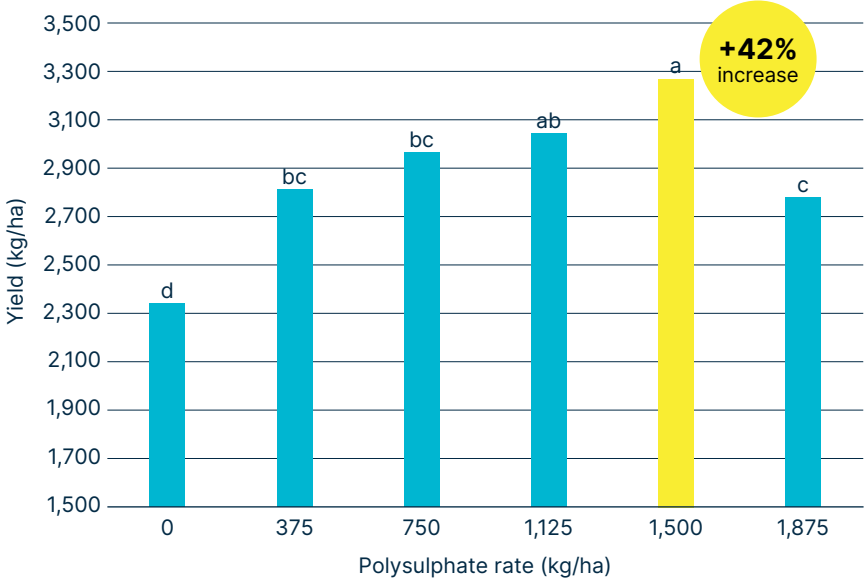
Treatments

This randomized block trial consisted of four replicates with six treatments. In all treatments, nitrogen, phosphorus and boron were applied according to farmers' traditional practice: 180 kg N/ha, 75 kg P_2O_5/ha and 1 kg B/ha. Five treatments consisted of increasing rates of Polysulphate: 375, 750, 1,125, 1,500 and 1,875 kg/ha. The control treatment received the same N, P and B application but no Polysulphate was applied.

Results

- All nutrients (N, P, K, S, Ca and Mg) uptake in shoots increased in the Polysulphate treatments when compared to the control. The highest nutrient uptake was obtained when Polysulphate was applied at a rate of 1,500 kg/ha.
- All three yield components (pods per plant, seeds per pot and 1000-seed weight) increased significantly with Polysulphate application, up to a dose of 1,500 kg/ha.
- Polysulphate application increased significantly the yield. The highest yield was obtained when Polysulphate was applied at a rate of 1,500 kg/ha.

Polysulphate (kg/ha)	N	P_2O_5	K	S	Mg	Ca
			Shoot uptake (kg/ha)			
0	83.1 d	7.5 d	100.5 e	29.3 e	12.2 e	36.9 e
375	105.1 c	11.5 c	170.5 d	51.8 d	15.9 d	54.2 d
750	115.1 ab	11.9 ab	255.2 c	66.6 bc	18.3 bc	66.8 bc
1,125	110.6 bc	12.0 bc	286.6 b	72.0 ab	19.1 b	72.3 ab
1,500	120.0 a	13.0 a	320.4 a	77.1 a	20.8 a	76.9 a
1,875	112.2 abc	12.3 abc	298.7 ab	64.6 c	17.3 c	64.1 c



** Different letters above bars indicate significant differences among treatments (p<0.05).*

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

Polysulphate

fertilizers.sales@icl-group.com
icl-growingsolutions
@iclgrowingsolutions
@ICLGrowingSolutions

www.icl-growingsolutions.com

For more information consult www.icl-growingsolutions.com/contact-office/ for your contact in your region.