

Fertilizerplus[®]



Fertilising

Wheat and barley

with Fertilizerplus products

 ICL

Guidelines for balancing your nutrient strategy with Fertilizerplus

Fertilizerplus is a range of high quality granular fertilisers produced by ICL. All products are Polysulphate® based.

ICL has done extensive research on the establishment of grain crops. In our trials, we have found that with an application of sulphur at planting we can improve the uptake of nitrogen and with added magnesium and calcium we have seen an increase in root development.

For a good uptake of nitrogen from the soil you need adequate potassium and sulphur. Most soils within the UK and the rest of Europe are now deficient in sulphur because of the Clean Air Act and subsequent reduction in depositions from atmospheric pollution.

Crops treated with sulphur have shown yield and quality improvements at harvest. In addition, by improving the N:S ratio in the plant you can reduce the formation of asparagine. We recommend 500 g - 1 kg of SO₃ for every 2 kg of nitrogen applied.

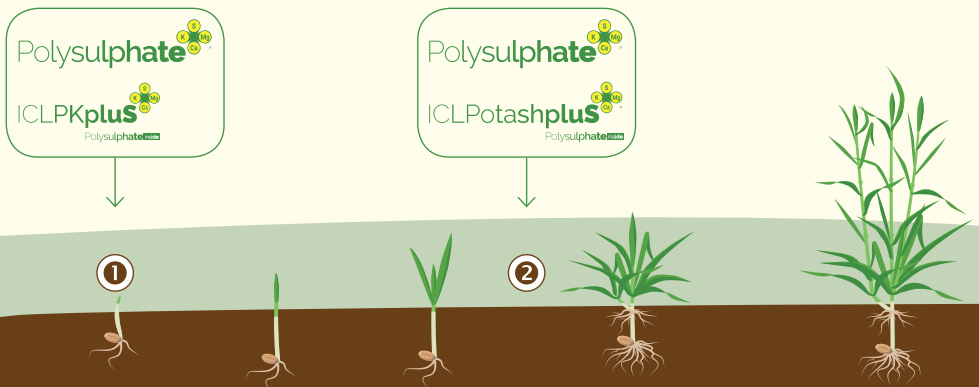
Fertilizerplus recommendations

Winter cereals (3 options)

- Polysulphate ① applied at 100 kg/ha at drilling followed by ② 100 kg/ha in January/February.*
- PKplus ① applied at drilling to meet phosphate needs and ② Polysulphate 100 kg/ha in January/February.*
- PKplus ① applied at drilling to meet phosphate needs and ② Potashplus in the spring (in place of MOP).

Spring cereals

- Polysulphate, Potashplus and PKplus can be blended into your fertiliser products or applied as needed.



* Remember to consider the extra potassium from Polysulphate in your fertiliser calculations



Without Polysulphate



With 100 kg/ha of Polysulphate

Wheat trial near Whitby, North Yorkshire (UK)

Nutrient offtake (removal) by winter and spring wheat and barley

Nutrient	Crops	Offtakes kg/t			Offtakes kg/ha					
		Wheat and barley			Winter cereals			Spring cereals		
		Grain	Straw		Grain 8 t/ha	Straw 4 t/ha	Total	Grain 6 t/ha	Straw 3 t/ha	Total
			Winter	Spring						
P ₂ O ₅	Winter wheat	6.5	1	1	52	4	56	48	3	51
	Spring wheat and barley	8	1	1	64	4	68			
K ₂ O	Wheat and barley	5.5	10	13	44	40	84	33	39	72
MgO	Wheat and barley	2	1	1	16	4	20	12	3	15
CaO	Wheat and barley	0.5	2	2	4	8	12	3	6	9

Sources: UK Fertilizer Manual, PDA and UNIFA

Fertilizerplus product analysis

- Polysulphate (14% K₂O, 6% MgO, 17% CaO, 48% SO₃)
- Potashplus (37% K₂O, 23% SO₃, 2.8% MgO, 8% CaO)
- PKplus (various grades, tailor-made)

Expected benefits of balanced crop nutrition with Fertilizerplus products

- Improved yields
- Better quality of grain proteins
- Improved baking, malting and feed quality
- Increased nitrogen use efficiency (NUE)



P

Phosphate - needed to stimulate root development and for improved flower formation, seed production and to build proteins and other compounds essential for plant structure, seed yield and genetic transfer.



K

Potassium - secures yield and quality, transport of sugars and stomatal control. It reduces susceptibility to diseases and impact of drought and is essential for good nitrogen use efficiency.



Mg

Magnesium - fundamental for photosynthesis as it is integral to chlorophyll. It is also important in development of a healthy root system and is key to grain filling.



S

Sulphur - an essential constituent of proteins. Sufficient level will reduce the formation of acrylamide and is essential for nitrogen use efficiency.




Ca


Calcium - for strong and healthy crops. It is a major building block in cell walls and reduces susceptibility to diseases. Along with phosphate, calcium is very important in the development of the root system.

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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 fertilizers.sales@icl-group.com

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