

PROSPER ST



Seed
Treatment

Phosphite-based seed treatment to maximise establishment.

Prosper ST contains potassium phosphite combined with a range of nutrients in a readily compatible seed treatment formulation. Suitable for use on a range of crops including wheat, barley, maize and oilseeds.

When applied to seed Prosper ST increases the level of the cytokinin *cis*-Zeatin that boosts both primary and lateral root growth. New research has also demonstrated an increase in nitrate reductase activity resulting in increased nitrogen assimilation and shoot growth.

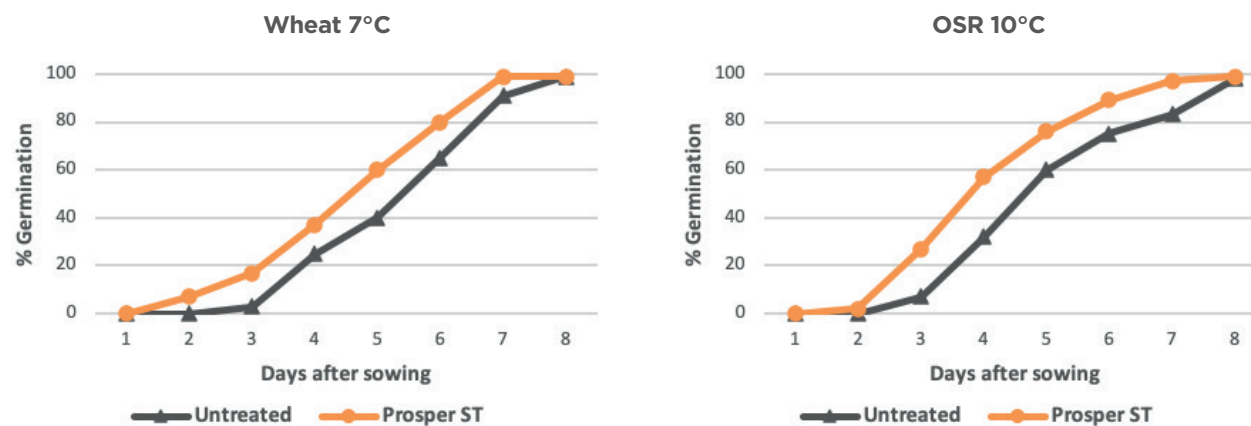
Prosper ST increases:

- Speed of germination
- Root growth – typically +30%
- Nitrogen assimilation and shoot growth
- Stimulates root exudate beneficial to soil mycorrhiza.

Improved speed of germination

Independent university trials investigated the effect of Prosper ST on the germination of both winter wheat and oilseed rape at a range of different temperatures (7°C, 10°C and 15°C).

Not surprisingly increasing temperature increased the rate of germination, however, even under ideal laboratory conditions Prosper ST increased the speed of germination of OSR at three temperatures tested and for wheat at 7°C and 10°C.



Source: Dr S. Rossall, University of Nottingham, 2019

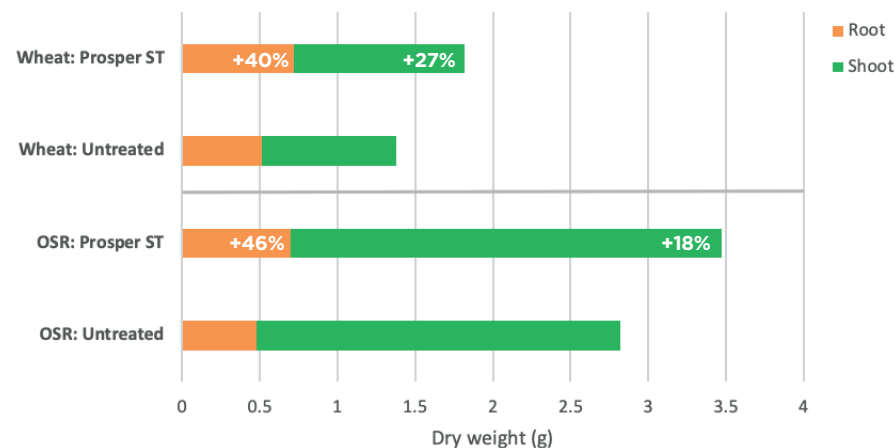
Increased root growth drives improved shoot growth

The potassium phosphite contained in the Prosper ST formulation increases the level of the cytokinin *cis*-Zeatin (cZ) which leads to:

- Longer primary root growth
- More lateral root development

Root biomass is typically increased by 30% and the larger root system allows improved access to soil nutrients and moisture which in combination with stimulation of the enzyme nitrate reductase supports faster nitrogen assimilation and subsequent increase in shoot growth.

Prosper ST: Effect on root and shoot biomass 39 days after application



Oilseed rape 19 days after sowing

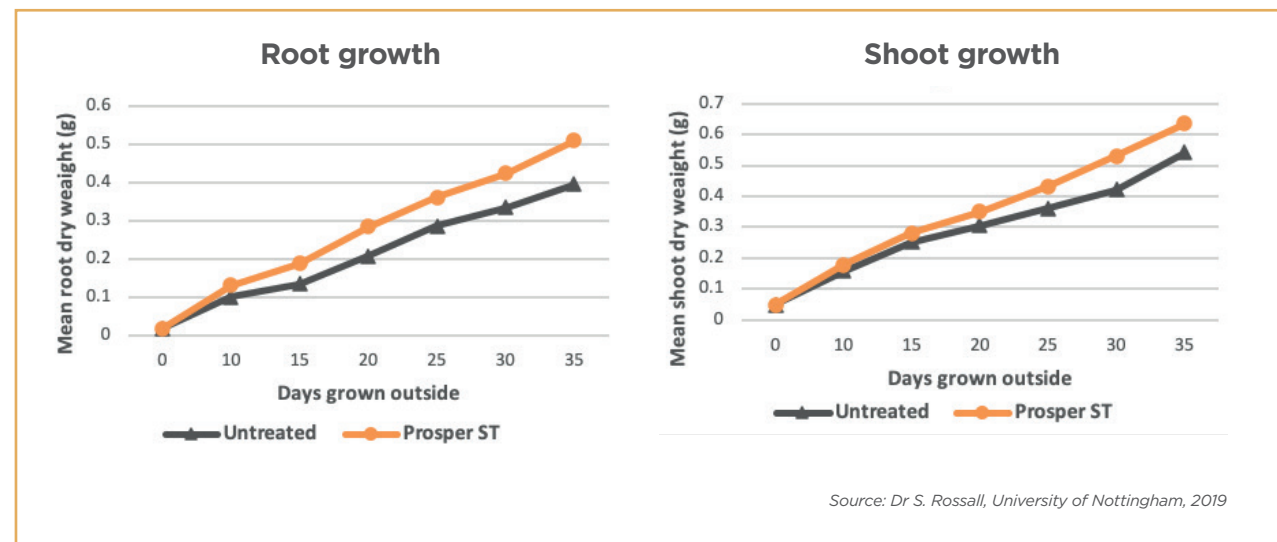


Source: Dr S Rossall, University of Nottingham 2019.
OSR cv. Campus, Wheat cv. Skyfall.

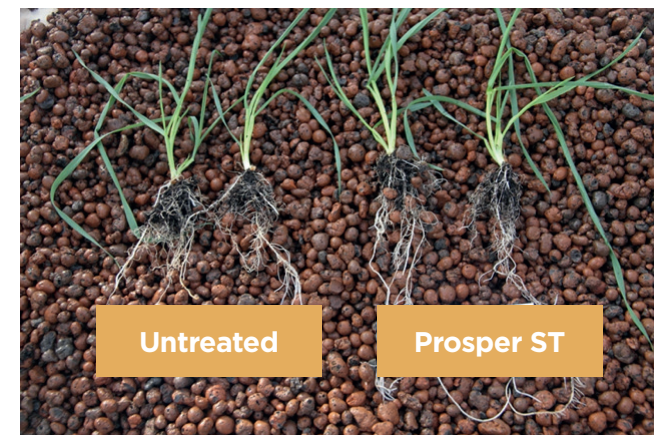


Winter wheat, University of Nottingham 2019

Prosper ST and untreated wheat seed (cv. Skyfall) were sown in peat and plants raised to 2 leaf stage. To enable accurate recovery and measurement of the root system, the seedlings were transferred to large pots containing Hydroleca (clay) beads and maintained by hydroponics whilst grown unprotected outside. Root and shoot growth were assessed at 5 day intervals.



Winter wheat 15 days after sowing



Untreated

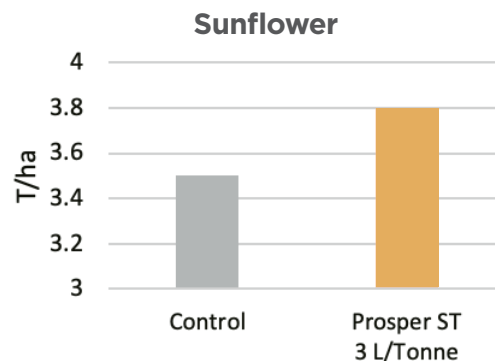
Prosper ST

- Examination of the root mass achieved at 35 days after transfer showed that treated plants had "gained" approximately 10 days, reaching the same weight after 25 days.
- This effect is readily visible after only 15 days in roots recovered from Hydroleca.

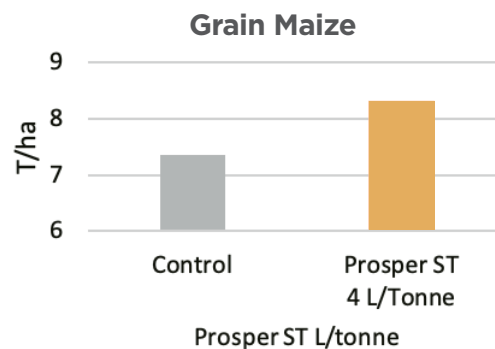
Increased yield

Independent trials conducted by contract research organisations have demonstrated that, by improving crop establishment and building resilience, Prosper ST seed treatment can significantly increase yield.

Contains g/L	Nitrogen (N)	34.6
	Phosphorus (P ₂ O ₅)	335.2
	(P ₂ O ₅ from phosphate 125.02 g/L P ₂ O ₅ from phosphite 210.14g/L)	
	Potassium (K ₂ O)	61.2
	Zinc (Zn)	15.1
	Magnesium (MgO)	7.7
	Manganese (Mn)	7.4
	Copper (Cu)	2.5
	Boron (B)	0.7
	Iron (Fe)	0.6
	Molybdenum (Mo)	0.3
Dose Rate (per tonne)	Cereals	2.0 litres
	Oilseed rape	3.0 litres
	Sunflower	3.0 litres
	Maize	4.0 litres
	Grass	5.0 litres
Pack sizes	20 & 200 litre	
Specific Gravity	1.33	



Syntech 2019 Hungary, Sunflower cv. SY Excelio
Drilled 21/5/19 65,000 seeds/ha
27/9/2019 LSD 0.21 CV 5.63



Syntech 2019, Zákány, Somogy Hungary, Maize cv. P0412
Drilled 24/4/19 73,000 seeds/ha
Yield LSD 0.81 CV 10.19

What is phosphite and what does it do?

