

Take Off PGA

Phosphite-based Seed treatment



Key Benefits

- + Based on a specially formulated blend of:
 - + Stabilised phosphite bio-stimulant
 - + Patented plant metabolite pyro-glutamic acid (PGA)
- + Improves emergence, establishment, root mass and early crop vigour
- + In some cases, this has been translated into yield benefits up to 1.2t/ha.
- + Crops are more drought tolerant and have better winter hardiness
- + The more robust root system is better able to withstand root disease such as take-all

What Does Take Off PGA Do?

Stabilised phosphite is a proven bio-stimulant that is active during germination and early crop establishment. It is proven to increase seedling vigour across a range of crops including winter and spring wheat and barley, oats, beans, maize and oilseed rape.

The pyro-glutamic acid it is a natural plant metabolite which is involved in two metabolic process in plants. It can be applied to seed and is routinely used as a foliar application to stimulate crop growth. PGA has been shown to:

1. Increase carbon fixation due to up-regulating photosynthesis
2. Increase nitrate utilization by increasing N-reduction rates

Together they work in a complementary way to improve early crop growth, vigour and yield.



Where Should Take Off PGA be Used?

- Dry soils during establishment
- High Ca and Mg soils
- High pH soils that limit nutrient availability
- Less vigorous varieties
- Root disease issues
- Later drilled crops
- 2nd/3rd cereal crops
- Poor establishment conditions
- Frost pockets

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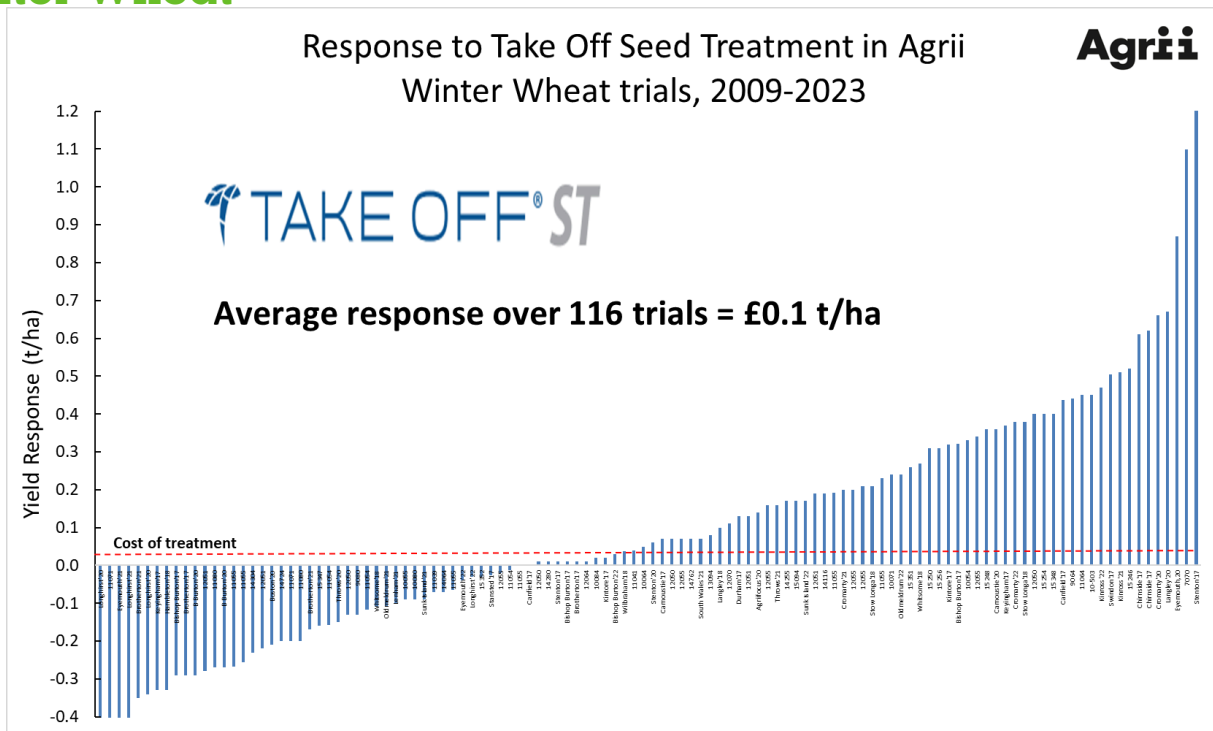
Agri intelligence



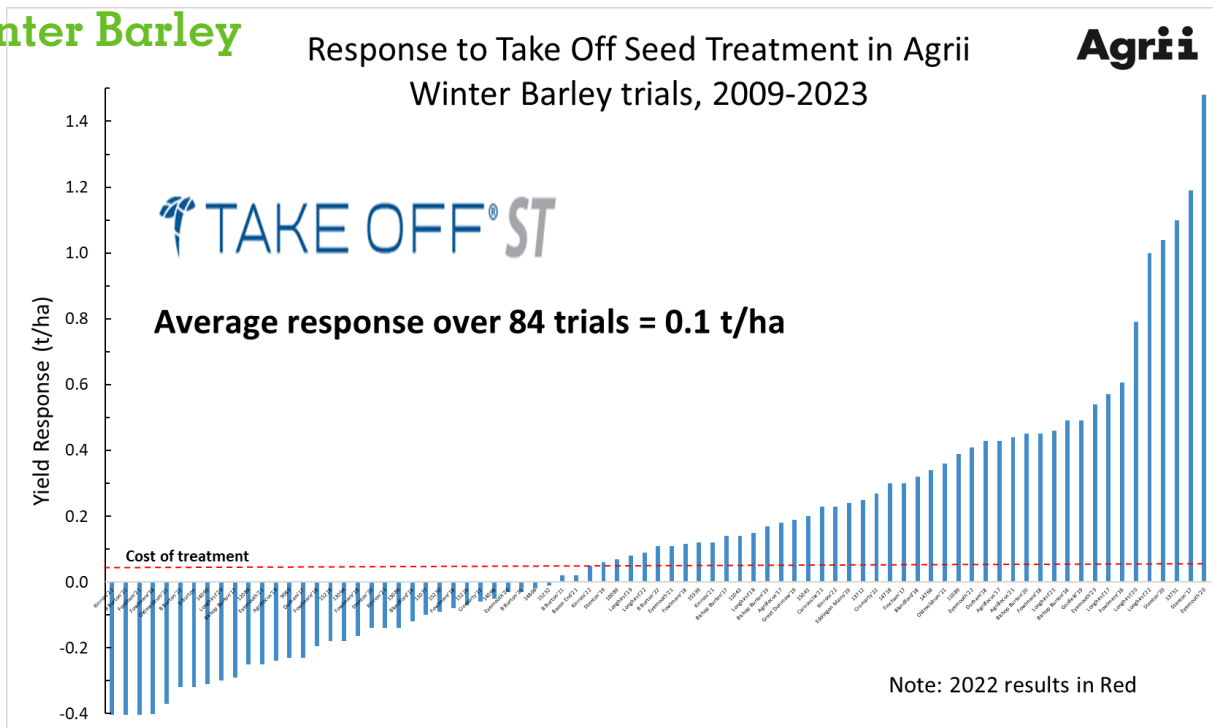
Crop Responses to Take Off PGA

- Take Off PGA has been tested extensively in Agrii's trials since 2009
- The results from winter wheat and barley and spring barley trials are presented in the tables below

Winter Wheat



Winter Barley



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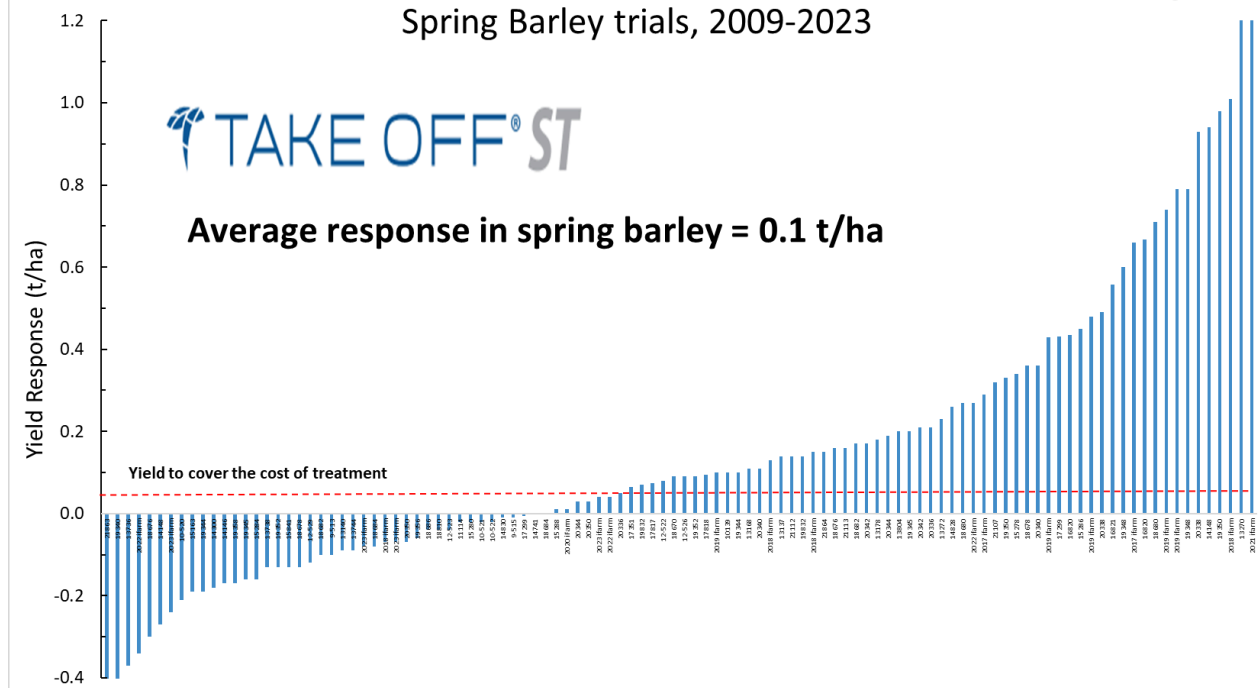
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Spring Barley

Response to **Take Off** Seed Treatment in Agrii
Spring Barley trials, 2009-2023

Agrii



More information

- Further information can be found on the Verdesian Life Sciences website
- <https://eu.vlsci.com/products/take-off-eu>