



TransCel®

Technology Benefits



- UK based state of the art R&D laboratories and formulation plant
- Research chemists, biochemists and regulatory experts
- Development of improved agrochemical delivery systems
- Application of novel formulation technologies to generic-proprietary products



TRANSCCEL[®] TECHNOLOGY

Overview

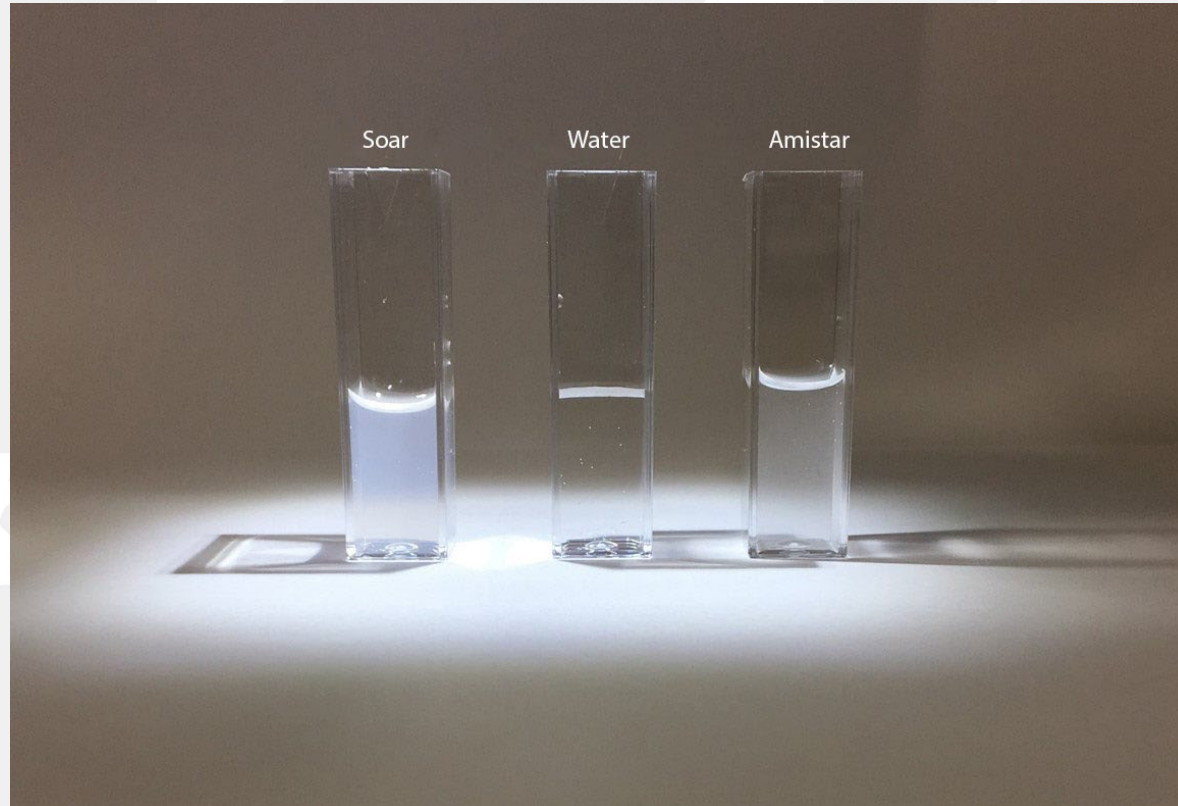
- Agform's TransCel[®] technology produces formulations of insoluble agrochemical actives, as nanosuspensions.
- Unlike ordinary suspension concentrates, with particle size ranges of 2-5 microns, TransCel[®] formulations have particle size ranges of 0.2 – 0.5 microns.
- When compared with suspension concentrates, nanosuspensions not only enhance dissolution rates, but improve solubility as well and hence, provide a higher bioavailability of the active material formulated in this way.
- Advantages of TransCel[®] technology over SC's.
 - *Increased bio-availability due to enhanced solubility and dissolution rate.*
 - *High adhesiveness.*
 - *High physical stability due to absence of aggregation and crystal growth.*
 - *Improved biological performance.*
- The increase in biological activity provided by TransCel[®] technology has been demonstrated over years of greenhouse, field trial and commercial use. Products utilizing this technology include Whip[®], a herbicide containing diflufenican, Hopper[®], a herbicide mixture of flufenacet and diflufenican and Soar[®], a fungicide product containing azoxystrobin, formulated as nanosuspensions.

- Exploring the benefits to other actives
- Application to herbicides, fungicides, insecticides and biological compounds
- Excellent results with azoxystrobin and diflufenican
- UK & EU trials indicate comparable levels of fungal control using Soar[®] at less than half rate of Amistar[®]
- UK trials indicate comparable levels of weed control using Whip[®] at less than half rate of Hurricane[®]



Azoxystrobin 250 g/l Nanosuspension

The Tyndall Effect



Light passing through a Soar® spray suspension where the scattered blue light dominates, giving the nanosuspension a blue appearance, compared to a standard suspension.

A large, light gray, torn-paper-style graphic that serves as a background for the text. It has irregular, jagged edges and a circular hole on the right side.

Soar[®] Trials Results

68 Sites – Maritime & Mediterranean Zones

Trials Summary

Soar[®] was safe to winter wheat & winter barley at all rates in all trials over both seasons.
Enhancement in yield recorded

2015: 24 Sites

- Soar[®] at only 94 gai/ha provided similar control to Amistar[®]/Ortiva[®] at 250 gai/ha against SEPTTR & PYRNTE

2016: 27 Sites

- Target Wheat: SEPTTR (PUCCSS), Barley: PYRNTE (PUCCSS)
- Good disease levels in many trials in both North & South
- In general across both zones, 125 gai/ha of Soar[®] was required to consistently match the disease control seen from Amistar[®] / Ortiva[®] at 250 gai/ha against SEPTTR & PYRNTE

2021: 17 Sites

- Target Wheat: SEPTTR (PUCCSS), Barley: PYRNTE (PUCCSS)
- Again, only 125 gai/ha of Soar[®] was required to consistently match the disease control seen from Amistar[®] / Ortiva[®] at 250 gai/ha against SEPTTR & PYRNTE

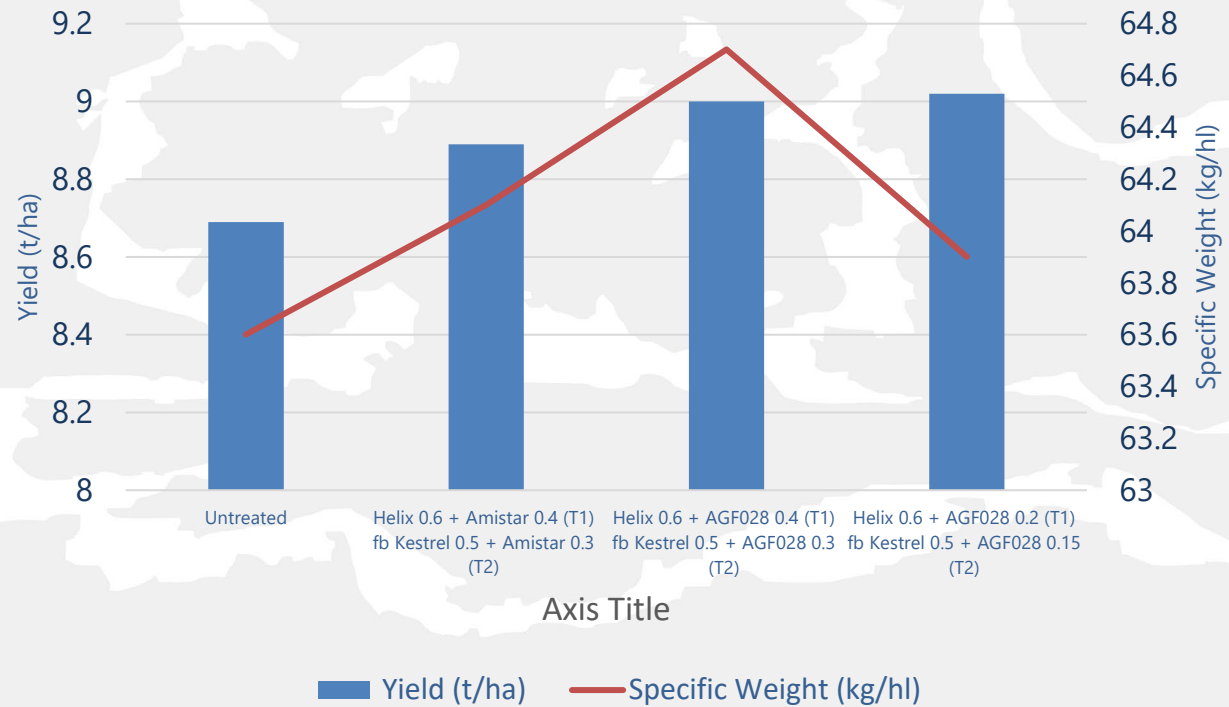
The background of the slide is a light gray, torn-paper-style graphic. It depicts a large, leafy tree on the left and a bright sun with rays on the right, both rendered in a soft, light gray tone. The text "Soar® Grower Trials" is centered over this graphic in a dark blue, sans-serif font.

Soar[®] Grower Trials

Soar[®] Azoxystrobin – Spring 2018

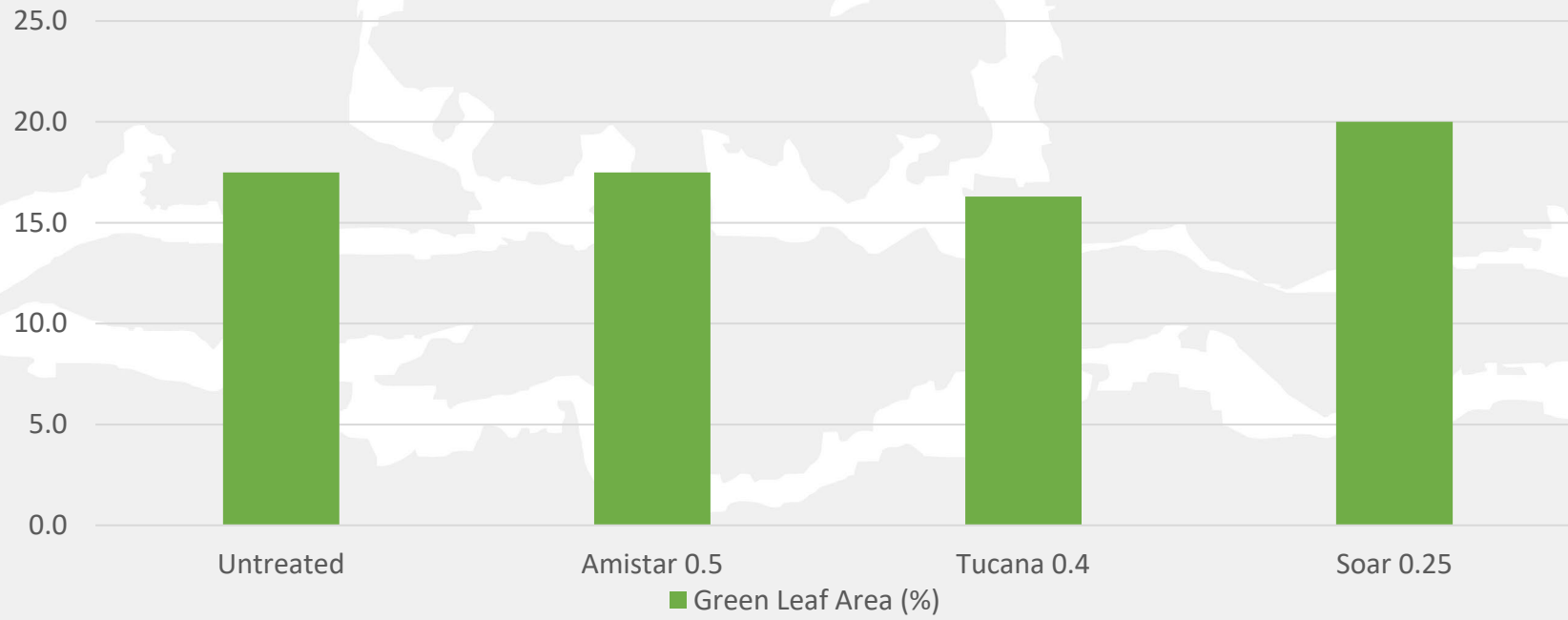
Winter Barley Yield

Trial 18121 – Winter Barley Fungicide Programmes Trial – Bacon End
Yield and Specific Weight by Fungicide Programme

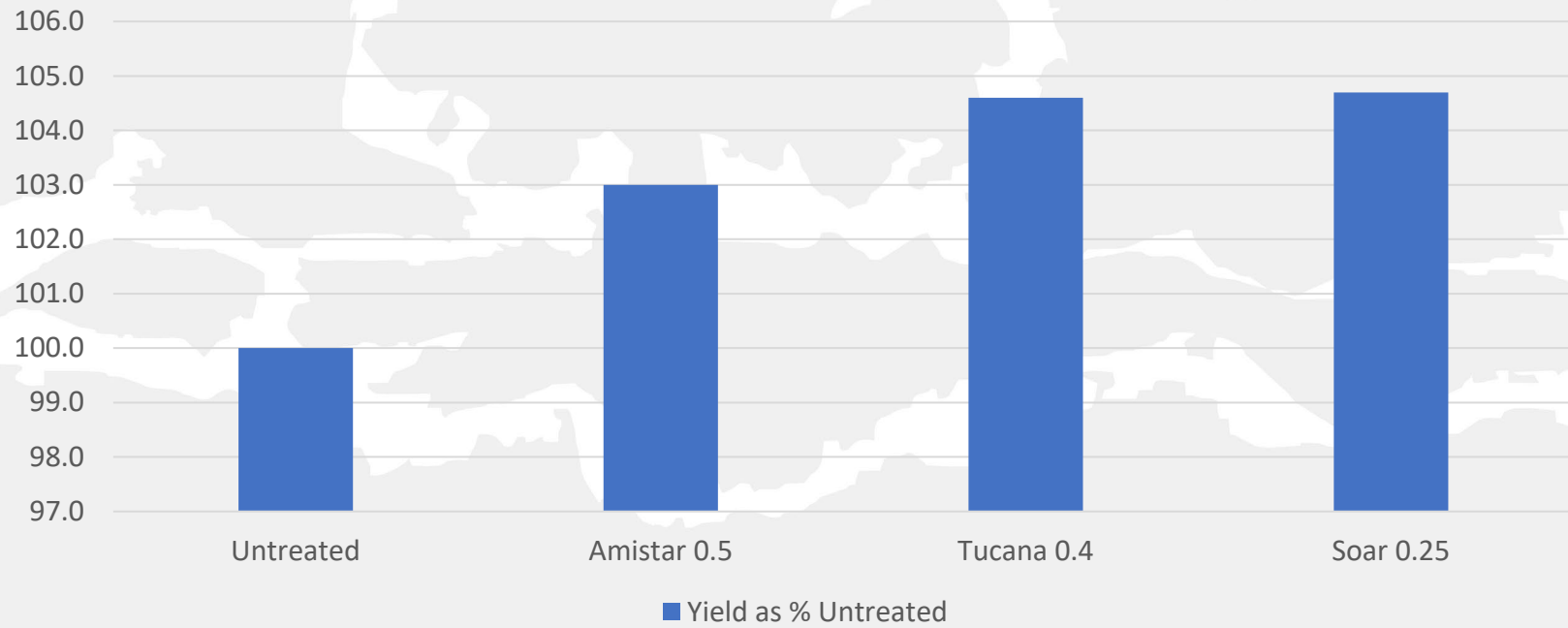


Treatment List	Applied: 23/04/2018		Applied: 09/05/2018		Brown Rust (%)	Yield (t/ha) @15% m.c.	Yield % Untreated	Specific Weight (kg/hl)
	Application A - T1 (GS31)		Application B - T2 (GS39-49)					
	Product/s	Rate/ha	Product/s	Rate/ha				
1	Untreated		Untreated		1.3	8.69	100.0	63.6
17	Helix + Amistar	0.6 + 0.4	Kestrel + Amistar	0.5 + 0.3	0.0	8.89	102.3	64.1
20	Helix + Soar	0.6 + 0.4	Kestrel + Soar	0.5 + 0.3	0.0	9.00	103.5	64.7
21	Helix + Soar	0.6 + 0.2	Kestrel + Soar	0.5 + 0.15	0.0	9.02	103.8	63.9

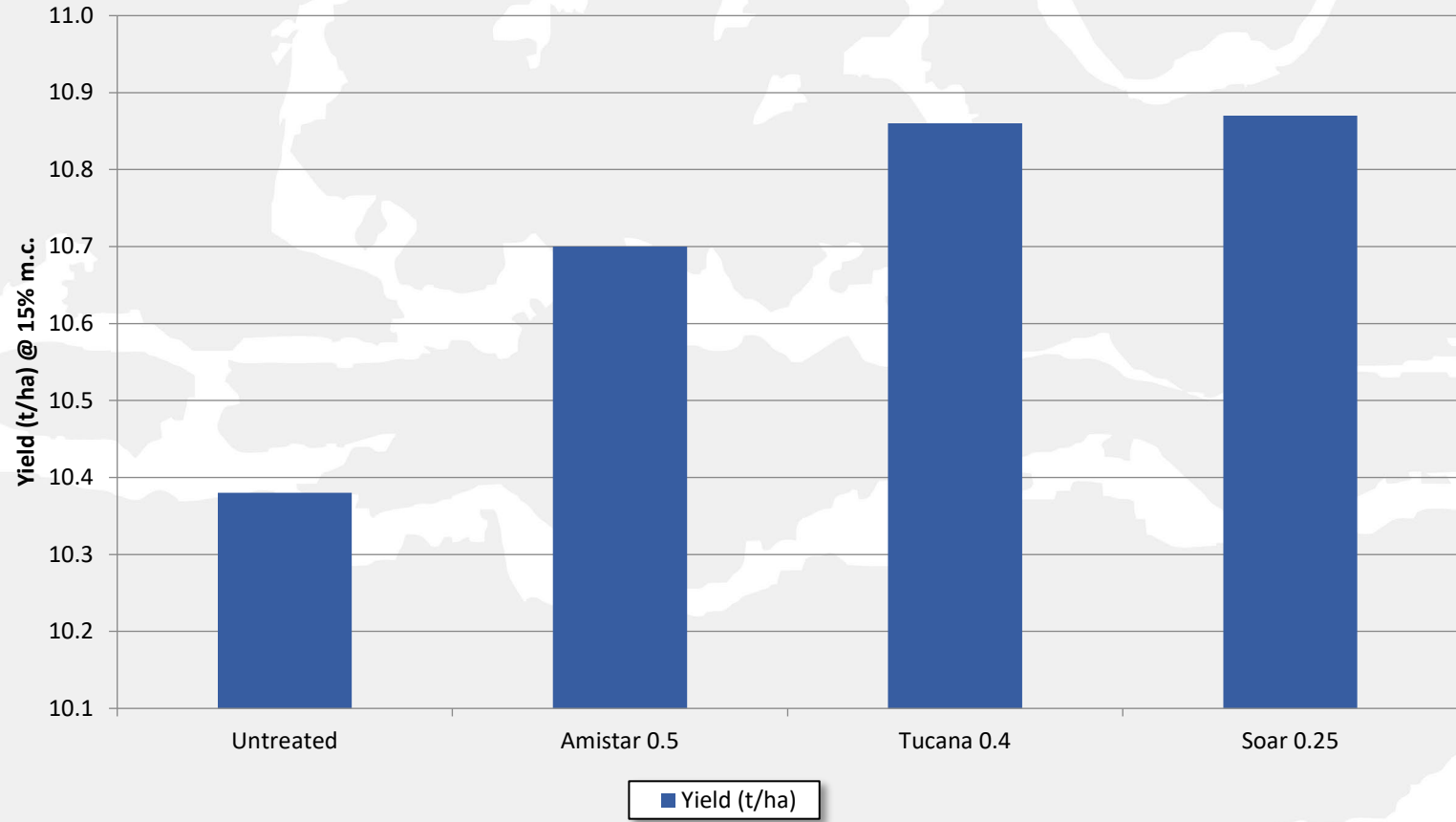
Soar[®] – Winter Wheat 2022
Green Leaf Area



Soar[®] – Winter 2022
Winter Wheat Yield



Soar[®] – Winter 2022
Winter Wheat Yield



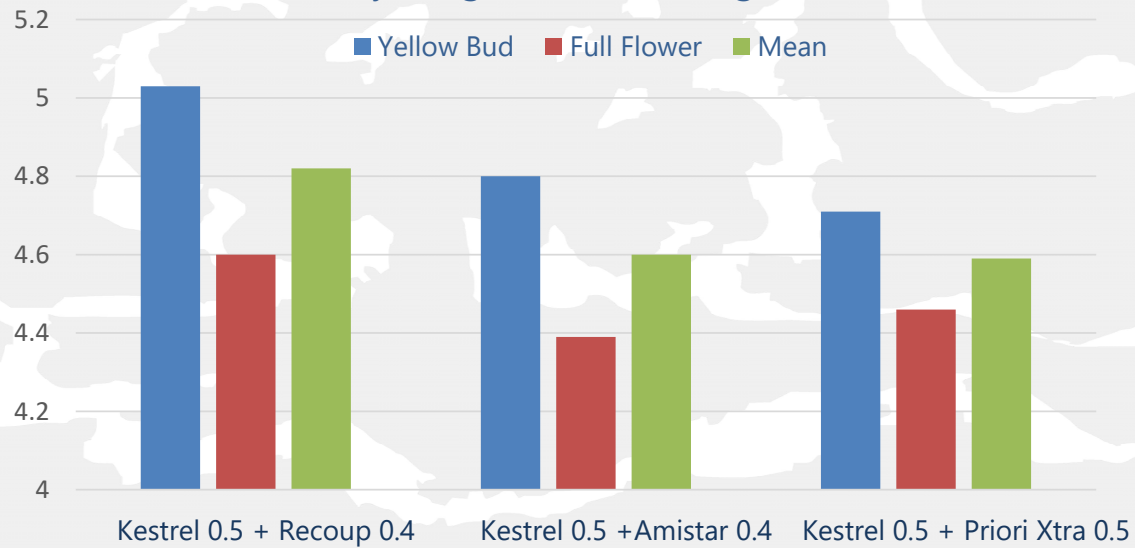
The background of the slide is a light gray, torn-paper-style graphic. It features a faint, circular watermark in the upper right quadrant that contains a stylized plant or leaf design. The text "Recoup® Grower Trials" is centered over this graphic in a dark blue, sans-serif font.

Recoup[®] Grower Trials



TransCel® Azoxystrobin – Spring 2018
 Winter Oil Seed Rape Yield

WOSR Flowering Fungicide Trial – Lenham
 Yield by Fungicide and Timing



Fungicide Programme	Timing		Mean
	Yellow Bud	Full Flower	
Kestrel 0.5 + Recoup 0.4	5.03	4.60	4.82
Kestrel 0.5 + Amistar 0.4	4.80	4.39	4.60
Kestrel 0.5 + Priori Xtra 0.5	4.71	4.46	4.59
Mean	4.85	4.48	

Yield (t/ha) @ 9% m.c.

Untreated = 4.62t/ha

The background of the slide is a light gray, torn paper effect. A large, irregular hole is cut out of the center of the paper, revealing a white background. The edges of the paper are jagged and uneven. In the upper right quadrant of the white area, there is a faint, circular outline, possibly representing a hole or a specific feature related to the herbicide trials.

Herbicide Trials Results



WHIP®

With TransCel® plus technology

Diflufenican 500 g/l Nanosuspension

Whip[®] Efficacy Data – 2021

Whip[®] at all rates was safe to winter wheat & winter barley in all trials during 2020-2021:

- Target Winter Wheat: Control of broad leaved weeds and grasses in comparison with Hurricane[®]
- **Whip[®] at 62.5 gai/ha** provided similar control to **Hurricane[®] at 125 gai/ha**



HOPPER[®]
With TransCel[®] technology

Flufenacet 400 g/l – Diflufenican 100 g/l Nanosuspension

Figure 1: Efficacy Results 2017 – 10 Sites

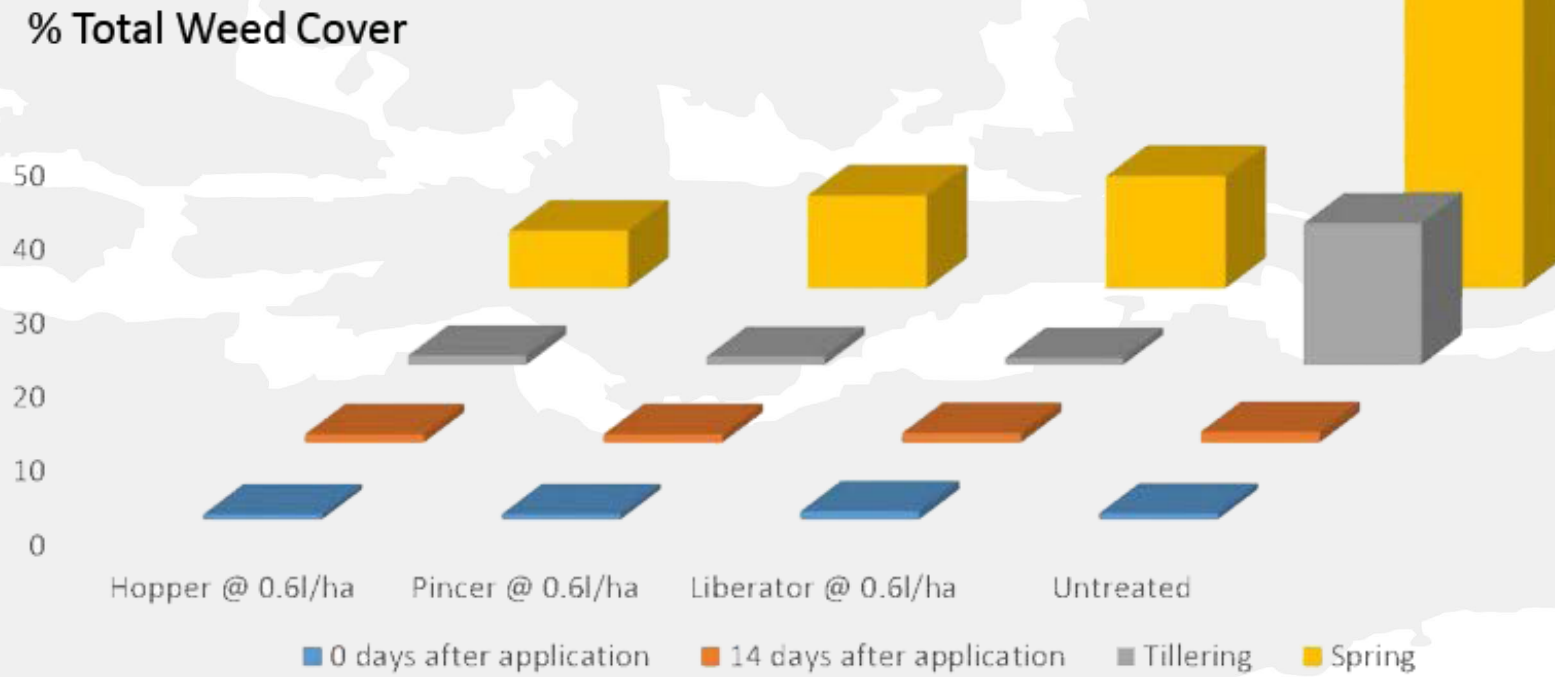


Figure 2: Efficacy Results 2018 – 10 Sites

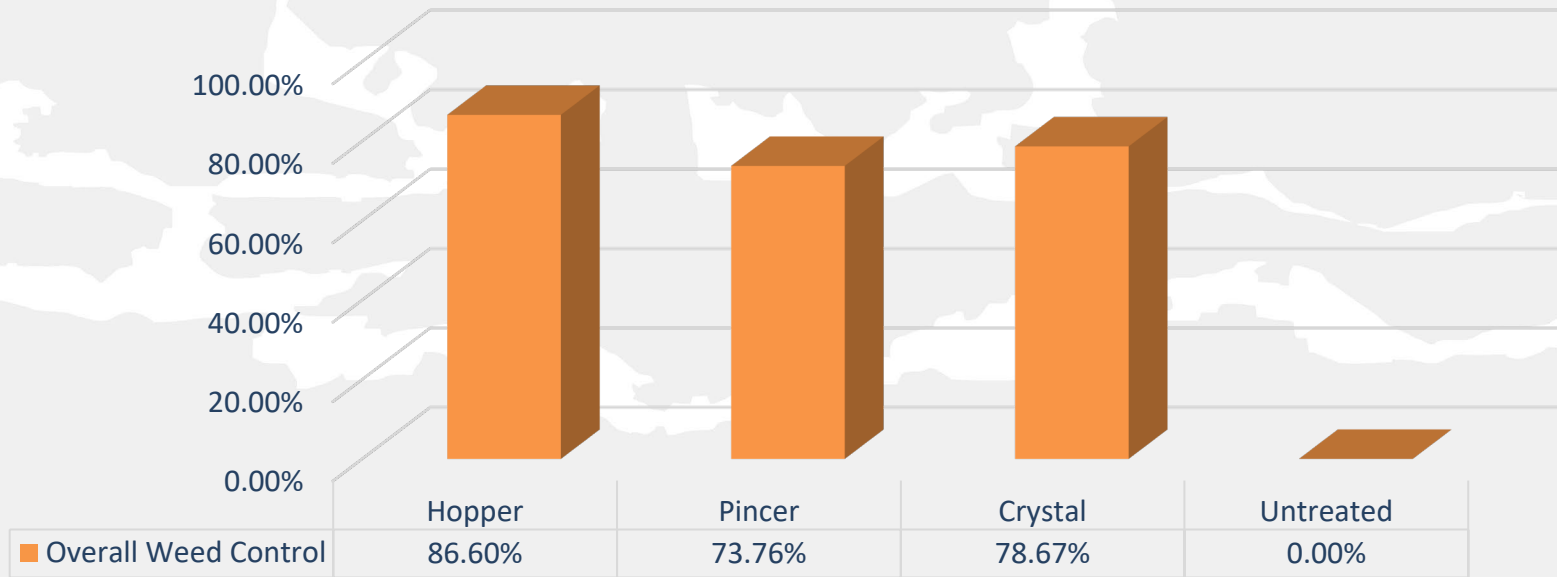
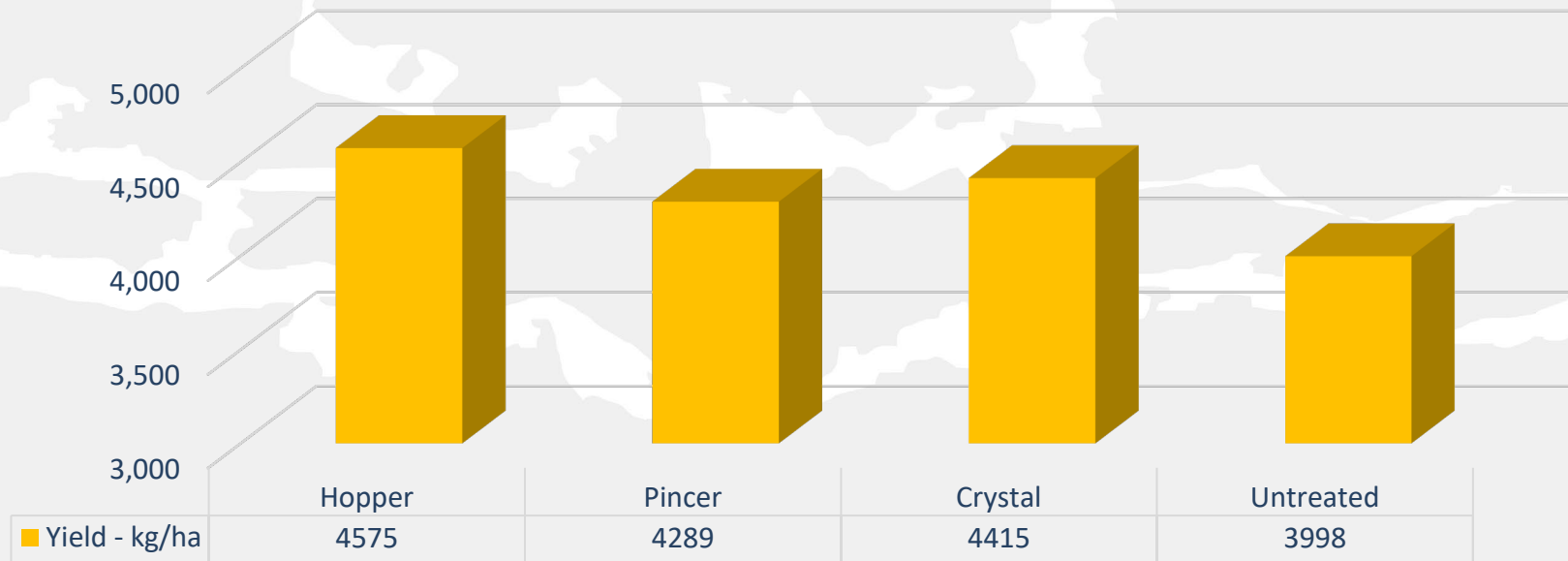


Figure 3: Small Plot Crop Yield 2018 - 10 sites



Hopper[®] Yield Benefits

Product	Cost of Treatment/ha*	Yield Improvement Value/ha**
Hopper [®]	£32	£80
Crystal [®]	£50	£57
Pincer [®]	£30	£40

* Distributor price

** Assuming wheat price of £137/tonne

Hopper[®] is a registered trademarks of Agform

Pincer[®] is a registered trademarks of Albaugh

Crystal[®] is a registered trademark of BASF