

# 2012 Syngenta Barley Crop Enhancement Trial – Conmurra SA”

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## **Key Outcomes:**

- A strong trend was evident in this trial indicating that the new plant growth regulator Moddus Evo when used in combination with Amistar Xtra gave positive yield results. These results were beyond what could be attributed to anti lodging with Moddus Evo and disease control with Amistar Xtra
- The addition of tank mix partners were not seen to be antagonistic to the results and in fact also trended positively however Syngenta recommends not mixing Flexi N or phenxy herbicides with Moddus Evo. . The herbicide mix's greater yields may have been linked to improved weed control.

## **Trial Objectives:**

To assess the crop enhancement effects of Moddus Evo and Amistar Xtra when used in combination. Whilst Moddus Evo is a PGR that is pending registration for anti-lodging and Amistar Xtra is a superior fungicide both these products have been shown to individually contribute to yield increases beyond anti lodging and disease control respectively. In addition trial work has previously shown the combination of these two products to be synergistic with respect to the crop enhancement affect. The aim of this trial was to explore these affects in more detail.

**Trial Duration:** Harvested 28/12/2012

**Location:** Conmurra, SA

**Soil Type:** Heavy clay

**Farmer Co-operators:**

Lachie Seears

## **Treatments:**

All trials were sown with small plot equipment and managed as per usual agronomic treatment. All sites were sprayed with fungicides to control any foliar disease. Grain yield was determined by machine harvest.

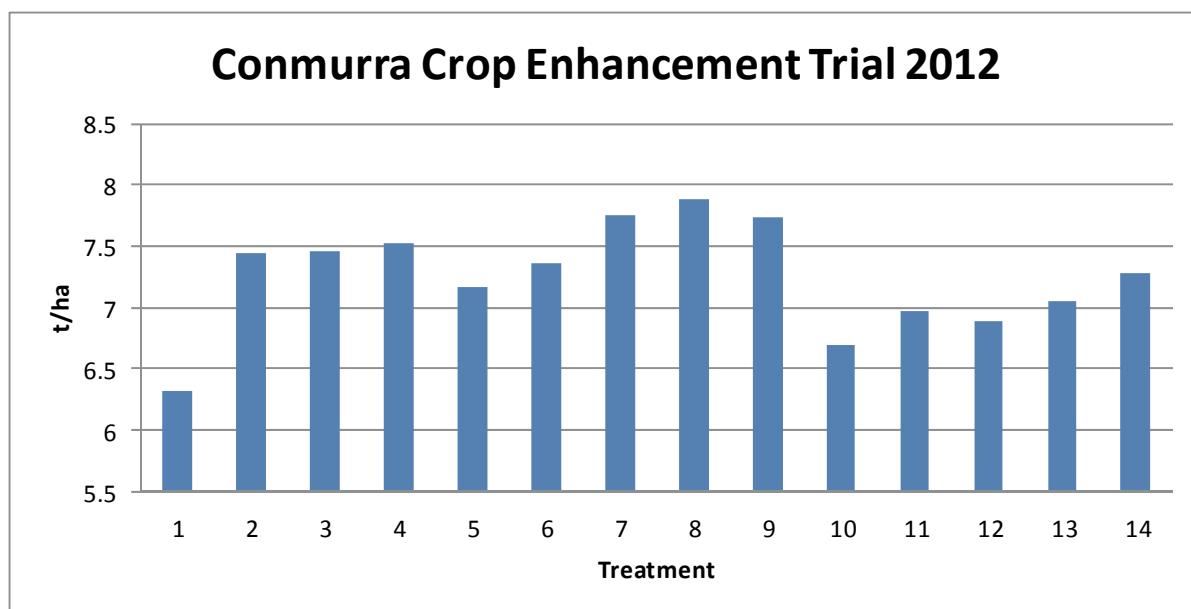
**Table 1.**

**Treatments and treatment timings**

NO.	TREATMENT	PRODUCT RATE	TIMING GROWTH STAGE	AMISTAR XTRA FUNGICIDE	TIMING GROWTH STAGE	Ave t/ha across 3 reps
1	UTC	Nil		Nil		6.324
2	Moddus Evo	300ml	GS 31	400ml FB 400ml	GS 31 FB GS 49	7.441
3	Moddus Evo	400ml	GS 31	400ml FB 400ml	GS 31 FB GS 49	7.466
4	Flexi N + Moddus Evo	50L + 400ml	GS 31	400ml FB 400ml	GS 31 FB GS 49	7.528
5	Moddus Evo FB Moddus Evo	400ml FB 200ml	GS 31 FB GS 37	400ml FB 400ml	GS 31 FB GS 49	7.17
6	Moddus Evo FB Moddus Evo	400ml FB 400ml	GS 31 FB GS 37	400ml FB 400ml	GS 31 FB GS 49	7.365
7	Moddus Evo + MCPA + Ally	400ml + 500ml + 5g	GS 31	400ml FB 400ml	GS 31 FB GS 49	7.747
8	Moddus Evo + Axial + Adigor	400ml + 300ml + .5%	GS 31	400ml FB 400ml	GS 31 FB GS 49	7.886
9	Moddus Evo + 2,4-D Amine	400ml + 1000ml	GS 31	400ml FB 400ml	GS 31 FB GS 49	7.741
10	Moddus Evo + Tilt Xtra	400ml + 500ml	GS 31	Nil		6.689
11	Tilt Xtra	500ml	GS 33	Nil		6.976
12	Amistar Xtra	400ml	GS 33	Nil		6.889
13	UTC	Nil		Nil		7.047
14	UTC	Nil		Nil		7.278

**Results:**

**Chart 1.**



**Statistics**

Fpr	0.004
Standard errors of differences	
Average:	310
Maximum:	355.2
Minimum:	289.5
Average variance of differences: 96363.	
L.S.D (5%)	623.1

**Comments:**

Moddus Evo is not currently registered at the time of this trial and was used under the APVMA trial permit - PER13408. Moddus Evo is expected to be registered by June 2013 in time for the 2013 cereal season and will initially be registered for anti-lodging in wheat, barley and oats. Syngenta intends to further explore the yield enhancement aspects of both Moddus Evo and Amistar Xtra. It is important for best results with either of these products to get application timing right and to not apply under stress conditions. Please consult with your agronomist if intending to use either or both of these products this season.

Where Flexi N is mixed with Moddus Evo crop phyto is often seen and it is recommended to apply separately.

When phenoxy herbicides are mixed with Moddus Evo there is need to be cautious as it has been shown that crop phytotoxicity can occur, in addition it can reduce the activity of Moddus Evo, particularly when phenoxy's are mixed at higher rates.

**Conclusion and into the paddock**

Whilst Moddus Evo will be an excellent new tool to help growers manage lodging in wheat, barley and oats, trial results such as these continue to show that significant yield improvements can also be achieved if conditions are favourable.

Amistar Xtra continues to be a very valuable fungicide offering best in class preventative disease control and work continues to quantify its crop enhancement affects.

This trial has demonstrated that the combination of Moddus Evo and Amistar Xtra when applied alone or in tank mixes with a range of other products can increase yield significantly. While additional work needs to be carried out to further investigate the reasoning for this yield increase, the result reinforces the crop enhancement capability of the two products in Moddus and Amistar Xtra.

**Acknowledgements**

Syngenta would like to thank the MacKillop Farm Management Group for their co-operation in setting up and managing this trial.