Moddus, Large Scale Commercial Evaluation

Syngenta has joined forces with SEPWA to evaluate the potential of Moddus, a new plant growth regulator which helps prevent crop lodging, in the SEPWA trials this year.

Moddus reduces the overall height of the plant, increases stem wall thickness, reduces internodes and promotes better root growth. These four factors are the major contributors to crop lodging.

Farmer scale trails are going to be conducted on wheat and barley crops throughout the Esperance Port Zone (EPZ) to evaluate Moddus, as part of the ongoing improvement of grain production on the south coast.

The product is being trialled this year and will be registered in cereal crops in 2013 for the prevention of lodging.

Some of the "side effects" of Moddus are still yet to be quantified, but paddock observations and trial results have suggested there are "Crop Enhancement" benefits as well.

Some of the benefits of Moddus include better root growth which leads to better water use efficiency and nutrient uptake and an increased stem wall thickness which has shown a reduction of head loss in barley. Another benefit is stem wall thickness that results in the increased flow of carbohydrates to the grain which increases yield and quality; and also a reduction of overall plant height that has the potential to reduce stubble issues in the following season.

Objective: To evaluate the efficacy in terms of lodging reduction as well as yield enhancement and crop safety of MODDUS when used in cereal crops. Area sprayed across SEPWA Wheat Variety trial and boom strip in Gairdner Barley at Mr. Andrew Duncan property at Mt Madden.

Andrew Duncan
8th October, 2012

Early growth vigour (28th June) and Zadok Score (8th October) SEPWA Wheat Variety Trial

Plot	Variety	Early Vigour 28th June	Zadok Score 8th Oct	Maturity
1	Mace	6	83	Mid
2	Scout	6	81	Mid
3	Corack VW2316R	6	85	Early-mid
4	Mace	6	83	Mid
5	Justica	7	79	Mid-late
6	Estoc	5	80	Mid-late
7	Mace	6	83	Mid
8	Envoy LRPB 1157	5	82	Mid
9	Yitpi	5	79	Mid-late
10	Mace	6	82	Mid
11	Cobra LRPB07-0956	7	84	Early-mid
12	Emu Rock	7	84	Early-mid
13	Mace	6	82	Mid

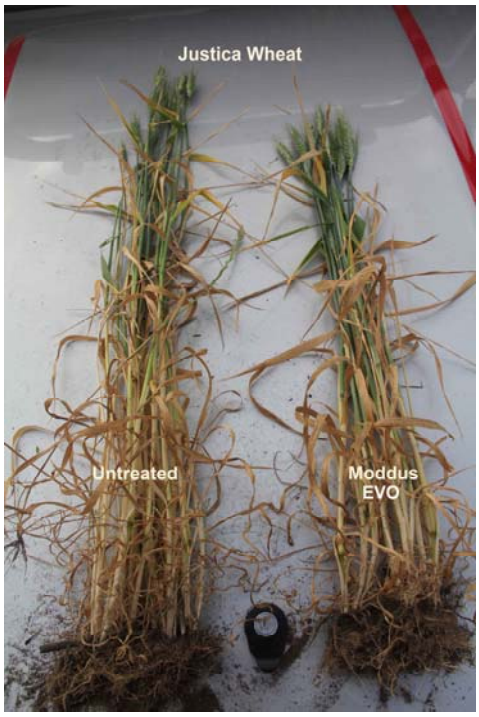
Early Vigour score – 1 (very poor) - 9 (Excellent)

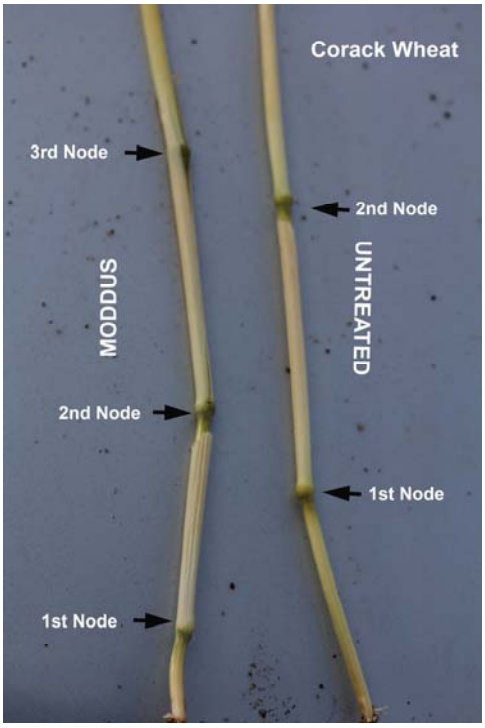
Andrew Duncan 8th October, 2012

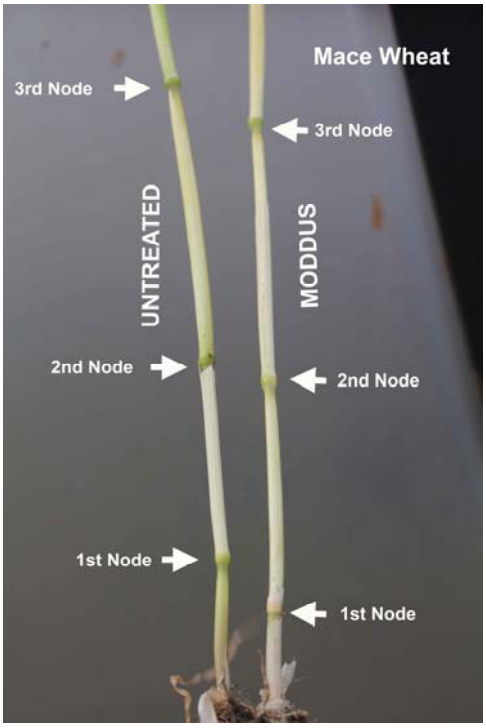
SEPWA Wheat Variety Trial

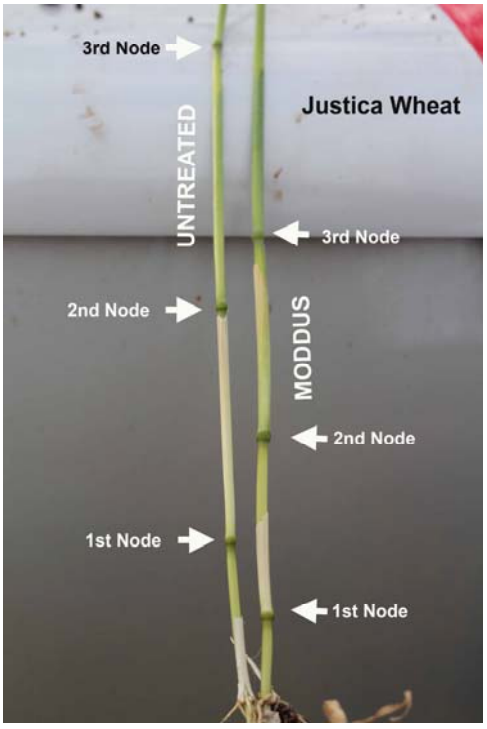
A 14 metre strip on the western end of the wheat trial was sprayed with Moddus at 300 mL/ha on the 16th August, 2012. Trial was sown at 60 kg/ha on the 16th May 2012.
A slight reduction in height can be seen throughout the trial. Samples of Corack (early-mid season), Mace (mid-season) and Justica (mid-late season) were taken from both the Moddus and untreated area. The Moddus did not affect the maturity of the varieties.

Height, node interval and cell wall thickness - Wheat









Cell wall thickness - wheat

Justica appeared to be the most affected of the three varieties with the application of Moddus and is probably due to Justica being a later maturity variety than both Corack and Mace. Corack being the earliest of the varieties did not show much difference in height.