

# Maximise yields in tall and bulky barley



Tall and bulky barley crops can achieve significantly increased yields by growers focusing on two key areas:

- |                            |                                  |
|----------------------------|----------------------------------|
| <b>1. Reducing lodging</b> | <b>2. Improved harvest index</b> |
|----------------------------|----------------------------------|

By doing this, in addition to effective foliar disease management, the yield potential of tall and bulky barley crops can be realised



## HOW TO REDUCE LODGING AND IMPROVE A CROP'S HARVEST INDEX

**MODDUS EVO® is a Plant Growth Regulator (PGR) that can increase grain yield in two ways:**

1. By reducing lodging
2. Improving crop architecture

**MODDUS EVO specifically equips plants to withstand lodging in two ways:**

1. Minimising stem lodging by increasing lower stem strength and reducing plant height
2. Thickening the base and stem wall of the plant



Untreated (Barley, Wagga Wagga 2010)

MODDUS EVO applied at 400mL/ha (Barley, Wagga Wagga 2010)

MODDUS EVO also influences root growth, demonstrating an increase in both the number and length of roots to provide increased plant anchorage. This can also provide greater capacity for water and nutrient scavenging by the plant.

## HOW TO APPLY MODDUS EVO

Depending on the crop's potential, 1 or 2 applications of MODDUS EVO can be made in barley crops. Always apply to actively growing, healthy crops.

1 <sup>st</sup> Application – 300mL-400mL/ha	And if required, 2 <sup>nd</sup> Application – 200mL-400mL/ha
<ul style="list-style-type: none"> <li>• Timing - GS30-32 (stem elongation)</li> <li>• Use the higher rate when conditions favour high biomass development</li> <li>• For the majority of barley crops a single application at this timing will be sufficient.</li> </ul>	<ul style="list-style-type: none"> <li>• Apply where conditions favour crop growth compensation (bounce-back)</li> <li>• Timing – GS37-39 (flag leaf just visible to flag leaf fully emerged stage – DO NOT apply after GS39 (or flag leaf fully emerged))</li> <li>• Use the higher rate when conditions favour high biomass development</li> </ul>

Figure 1. MODDUS EVO application timings and rates.

## JOINTING APPLICATION TIMING – FOLIAR DISEASE MANAGEMENT

Foliar disease management is also a key factor to realising the yield potential of barley crops. Leaf Rust and Net Blotch are two diseases in particular, that when controlled effectively, can make a big bottom line difference.

AMISTAR® XTRA is a cereal fungicide that is renowned for its length of protection and broad spectrum activity against all key foliar barley diseases including Barley Leaf Rust and Net Blotch. It also has complimentary application timings to MODDUS EVO.

AMISTAR XTRA can be applied at 200mL/ha to 800mL/ha up to twice in one season to a combined total of 800mL/ha. DO NOT exceed two (2) applications of AMISTAR XTRA or any other Group 3 fungicide and refer to the label for full Directions of Use.

For use effective disease control, Figure 2 presents a suggested AMISTAR XTRA barley program that can be used in conjunction with MODDUS EVO. Generally, two AMISTAR XTRA applications of 400mL/ha will provide better control than one application of 800mL/ha.

1 <sup>st</sup> Application – 400mL/ha	2 <sup>nd</sup> Application – 400mL/ha
<ul style="list-style-type: none"> <li>GS30-32 (stem elongation)</li> </ul>	<ul style="list-style-type: none"> <li>GS37-39 (flag leaf just visible to flag leaf fully emerged stage)</li> </ul>

Figure 2. Suggested AMISTAR XTRA barley program.

### SUMMARY

**1. Tall and bulky barley crops can achieve significantly increased yields by growers focusing on two key areas:**

- I. Reducing lodging
- II. Improved harvest index

**2. MODDUS EVO is a Plant Growth Regulator (PGR) that increases grain yield in two ways:**

- I. By reducing lodging
- II. Improving crop architecture

**3. Foliar disease management is also a key factor to realising the yield potential of barley crops:**

- I. AMISTAR XTRA is renowned for its length of protection and broad spectrum activity against key barley diseases including Barley Leaf Rust and Net Blotch. It also has complimentary application timings to MODDUS EVO.

**4. Jointing application timing – MODDUS EVO and AMISTAR XTRA**

MODDUS EVO	
1 <sup>st</sup> Application – 300mL-400mL/ha	2 <sup>nd</sup> Application – 200mL-400mL/ha
<ul style="list-style-type: none"> <li>GS30-32 (stem elongation)</li> </ul>	<ul style="list-style-type: none"> <li>GS37-39 (flag leaf just visible to flag leaf fully emerged stage)</li> </ul>
AMISTAR XTRA	
1 <sup>st</sup> Application – 400mL/ha	2 <sup>nd</sup> Application – 400mL/ha
<ul style="list-style-type: none"> <li>GS30-32 (stem elongation)</li> </ul>	<ul style="list-style-type: none"> <li>GS37-39 (flag leaf just visible to flag leaf fully emerged stage)</li> </ul>