



Impress Wheat vs Scope Barley Demonstration: Assessing Imidazolinone Crop Weed Control

Elly Wainwright, R&D Coordinator, Liebe Group

Aim

To assess whether imidazolinone tolerant wheat or barley provides better weed control and which gives the best economic return.

Background

Tight rotations and herbicide resistance has led to weeds becoming increasingly difficult to manage. The conventionally bred Clearfield™ technology provides imidazolinone (IMI) tolerance, allowing flexibility in using the broad-spectrum IMI-herbicides without risk of crop damage. This opens up the IMI-group to be used to control brome and other grass weeds in a cereal crop and removes the risk of any plant-back crop damage from IMI use the previous season.

Impress CL Plus is a high yielding Clearfield Plus APW wheat registered for label rates of Intervix. It is early-mid maturing, similar to Wyalkatchem. Scope CL is a high yielding Clearfield malt barley suitable with early to mid-maturity. These variety options provide flexibility in Intervix use, enabling a Clearfield barley to follow a Clearfield wheat, without risk of residual-herbicide crop damage. The use of Clearfield technology must be used as part of integrated weed management (IWM) program to ensure the longevity of the Group B chemistry in our farming systems.

The Carter family (located in Xantippe) were having trouble getting on top of brome and barley grass and decided to try the Clearfield barley variety Scope and wheat variety Impress. Impress and Scope were planted in the same problem paddock with the aim of comparing yield and weed control.

This demonstration was conducted using farmer equipment. Farm scale demonstrations are a valuable way to explore new varieties, products, or practices, complimenting results which are produced through more scientifically rigorous small plot trials.

Demonstration Details

Property	Xantippe Farm, Xantippe	
Plot size & replication	30ha Scope, 20ha Impress planted side by side, single replication	
Soil type	Heavy red clay	
Soil pH (CaCl₂)	0-10cm: 6.5	10-40cm: 8.3
EC (dS/m)	0-10cm: 0.11	10-40cm: 0.22
Sowing date	26/05/2015	
Seeding rate	50 kg/ha (Impress wheat) 30 kg/ha (Scope barley)	
Paddock rotation	2013 wheat, 2014 pasture	
Fertiliser	Impress –	26/05/2015: 35 kg/ha MAP 10/07/2015: 20 L/ha Flexi-N
	Scope –	26/05/2015: 40 kg/ha MAP 10/07/2015: 20 L/ha Flexi-N
Herbicides, Insecticides & Fungicides	Impress –	12/05/2015: 2 L/ha Glyphosate, 0.25% Hot-Up 26/05/2015: 1.2 L/ha Trifluralin, 10 g/ha Glean, 2 L/ha Paraquat 25/06/2015: 375 mL/ha Intervix, 400 mL/ha LVE-MCPA 10/07/2015: 145 mL/ha Tilt, 200 mL/ha Chlorpyrifos
	Scope –	12/05/2015: 2 L/ha Glyphosate, 0.25% Hot-Up 26/05/2015: 2.8 L/ha Trifluralin, 150 g/ha Metribuzin, 2 L/ha Paraquat 25/06/2015: 375 mL/ha Intervix, 400 mL/ha LVE-MCPA 10/07/2015: 145 mL/ha Tilt, 200 mL/ha Chlorpyrifos
Growing season rainfall	319mm	

Results

This was an unreplicated farmer demonstration, thus interpretations of results are to be made with caution.

Table 1: Yield, quality and grade of Scope barley and Impress wheat, Xantippe 2015.

Variety	Yield (t/ha)	Hectolitre Weight (kg/hL)	Protein (%)	Screenings (%)	Grade
Scope	1.5	60.79	12.8	51.01	BFED1
Impress	1.2	78.86	10.8	1.73	APW1

Comments

The Carters were pleased with the yields for both the Scope and Impress. They were also pleased with the overall weed control on the target weeds like mustard, marshmallow and radish. There was poor ryegrass control; however IMI herbicides only offer suppression of that weed. Yields were down compared to other parts of the farm but this was likely due to time of sowing and emergence, not the variety.

Acknowledgements

The Carter family for implementing and managing the demonstration.

Paper reviewed by: Jessica Smith, Agronomist.

Contact

Jenni Clausen, Liebe Group
jen@liebegroup.org.au
(08) 9661 0570