

Application Booklet Green on Green



Vetch in Lentils

April 2023

Version 1

<https://bilberry.io>

Any questions? hello@bilberry.io

Introduction

*Bilberry has been developing a technology capable of detecting and spot spraying weeds in crops, known as Green on Green, for more than 3 years. **Vetch in Lentils** is a great application of our Green on Green market leading technology, showing promising results in minimising crop damage and herbicide expenses whilst maximising profit through sustainable practices.*

This booklet will set out best practice guidelines to ensure users maximise the benefits of the camera system and overall integrated weed management strategies on farm. Included are use cases and testimonials from a range of users, highlighting different approaches to obtain the same goal: sustainably optimising weed control at a whole farm scale.



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1. Application Guidelines

Which weeds does it detect?

The application is able to pick up the **purple vetch flowers** only. The application is trained not to detect lentil flowers to avoid unwanted spraying on the crop.



What is the best timing?

The application is optimally used when vetches are at the full blooming stage. That way, chances for detection are maximised as there are numerous flowers on the same plant or patch.

Also, this timing generally occurs when the vetch is on top of the canopy, and flowers are not likely to be hidden by the crop.



2. System Basics and Benefits

Spray What You Can See

"If you can see the weed with your eyes, the camera will see it." - Broden Holland

Cameras can be affected by high stubble loads, crop shading, and canopy closure. If they cannot see the weeds in question, they cannot spray them, it's as simple as that.



20km/h
recommended
spraying speed

Get Significant Chemical Savings

Average chemical savings are around 80% and can go up to 98% depending on the weed infestation in your paddock and the section size.

Best Light Time

Ideal spraying timing starts 2h after sunrise and stops 2h before sunset, when the natural light is the strongest.

➔ **and many other benefits for your farm**
check them out [here](#)

3. Use Case - Tim Rethus

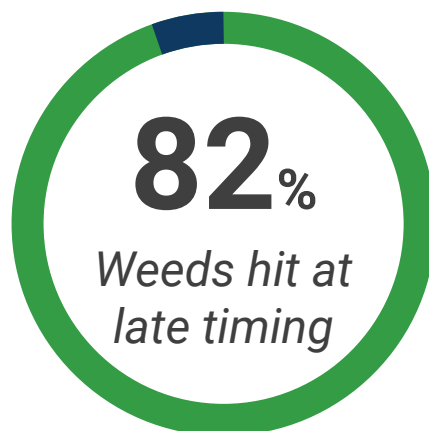


Farming Snapshot:

- Location: Horsham, Victoria Australia
- Crops: Wheat, Barley, Beans, Canola and Lentils
- Soil: Wimmera Cracking Clay
- Rainfall: 400mm annual rainfall
- Machine: Agrifac Condor Endurance 2

Large scale testing of the Vetch in Lentils application has been conducted on Tim's farm during 2022. The results indicate that this application is going to be a very useful tool in controlling wild vetch in lentil crops.

According to the Spot Spraying Efficiency Tests (SSET) conducted on Tim's farm, a hit rate of 82% can be expected from the use of this application. The total savings on herbicide were more than 90%.



"This application has the potential to be a real game changer for us. I will be using a stronger herbicide next season now that I have confidence in using it" - Tim Rethus



4. Application in Action



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Disclaimer

The content and data presented in this document is correct at time of writing and contains some anecdotal information which may not align with the results you experience on your farm. If you are experiencing varied performance with your Bilberry system please bring it to the attention of your local sprayer representative or Bilberry support team member.