



PTx
Trimble



bilberry

GET THE MOST OUT OF YOUR BILBERRY SYSTEM





INTRODUCTION

In this document, you'll discover how to get the most out of your Bilberry smart spraying system. We'll guide you through key features such as Threshold, Side Safety, and Overspray, explaining their functions and providing practical advice on when and how to adjust these settings. You'll learn how to fine-tune the Threshold setting to control spraying sensitivity, use Side Safety to ensure comprehensive weed coverage, and adjust Overspray to optimize nozzle operation time.

Each section includes step-by-step instructions for modifying system parameters via the Global Settings menu, empowering you to reduce herbicide usage while maintaining effective weed control.

For any additional support, our dedicated team is ready to assist you.

THRESHOLD

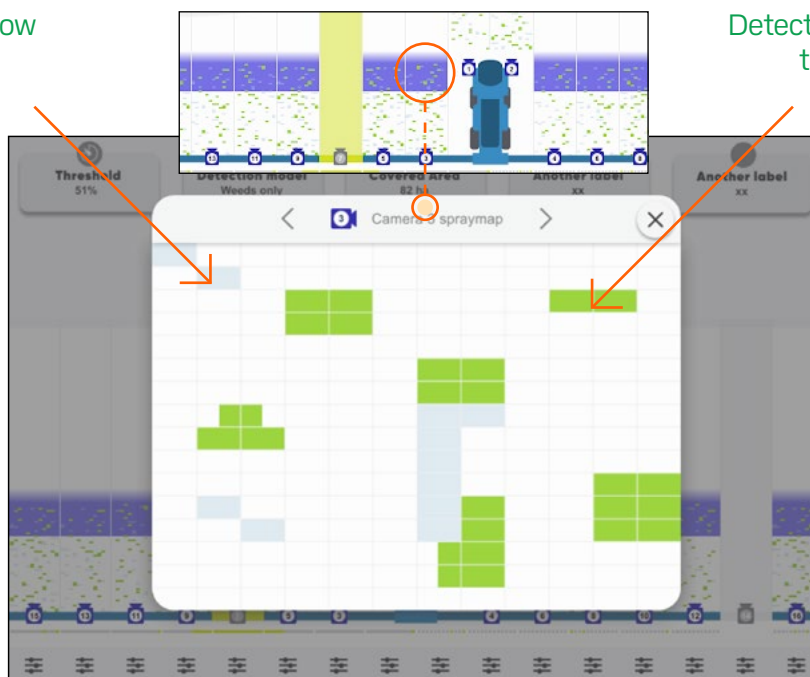
What is “Threshold”?

Threshold is a setting used to control spraying sensitivity. Each image that is captured is assessed using a grid to identify the weed location. Each cell corresponds to a nozzle and distance from the boom. Threshold works by triggering the nozzle to activate when the percentage of weed infestation in a cell is equal

to or higher than the threshold setting. For example, if you set the threshold to 0%, nozzles will be activated whenever any percentage of the cell is covered by a weed. If you set the threshold to 100%, nozzles will only be activated when the cell is 100% covered by the weed.

Detected item below threshold value

Detected item above threshold value



Screenshot from Bilberry user interface showing detections on a specific cameras spraymap



When should you use Threshold?

The following two scenarios are great examples of when you may consider adjusting the Threshold to get the most out of your Bilberry system.

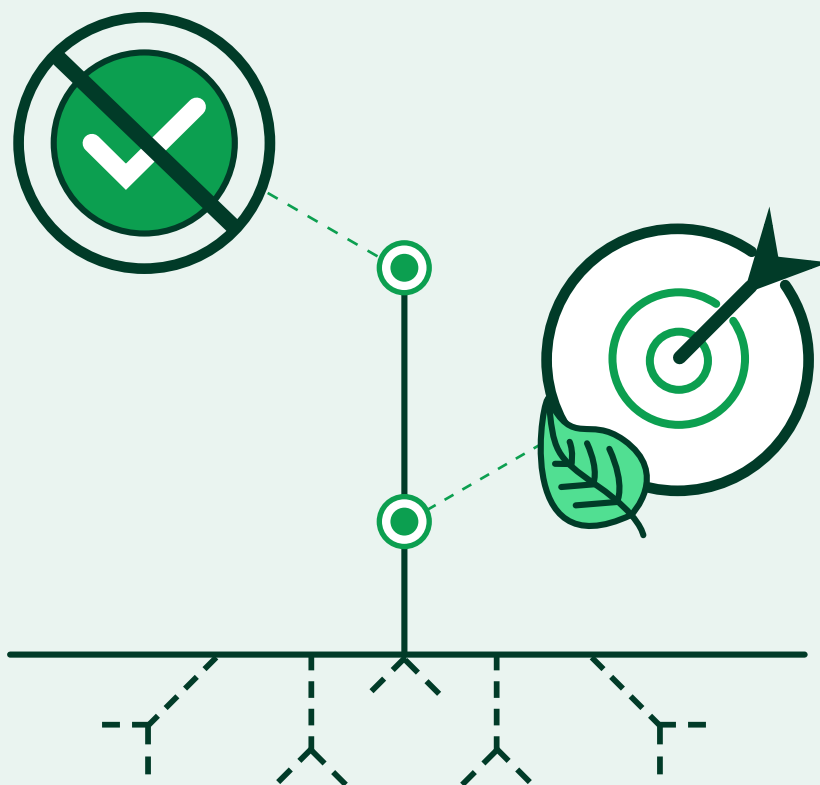
False Positives

If you notice that your system is spraying areas void of weeds this could be due to several factors such as overexposure, hardware limitations, or an algorithm that is too sensitive.

Weeds by Size

If you wish to only target larger weeds in order to get the most out of your tank mix you can adjust your Threshold to achieve this. The system will only activate when the weed infestation score in a cell is equal to or higher than the threshold.

(See previous page)



How to adjust the Threshold

You can easily adjust the threshold from the “**Global Settings**” page on your Bilberry screen.

Simply tap the **Settings icon** outlined below, and then select “**Global Settings**”.

Finally, either increase or decrease the **threshold** using the **plus or minus buttons**, respectively.



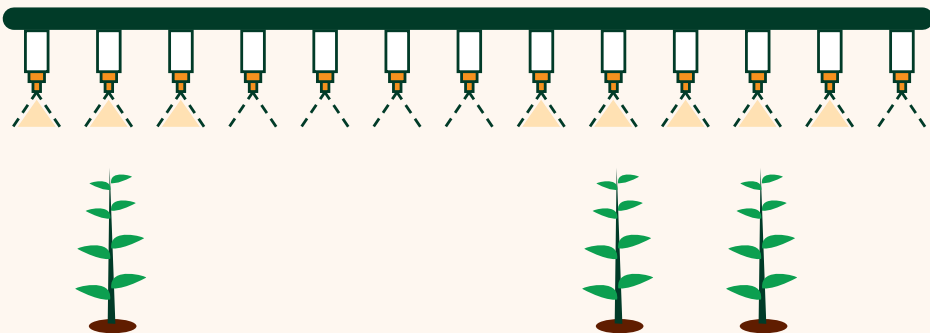
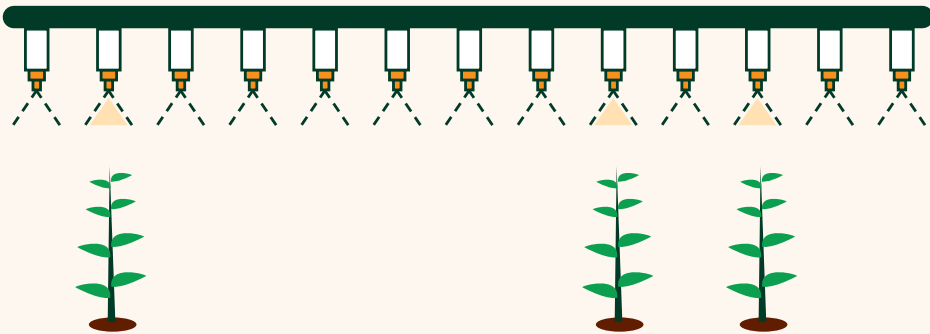
The screenshot shows the Bilberry software interface. At the top, there is a toolbar with icons for Record, a globe, a settings icon (three horizontal lines), a user profile, and a power button. A red circle highlights the settings icon, with a dashed line pointing to an orange box labeled "Global Settings". Below this, the "Global settings" screen is displayed. It features a "Night mode" toggle set to "Off", a "Screen brightness" slider set to 60%, and a "Detection model" section with three options: "Green on Brown Day" (highlighted in green), "Green on Brown Night", and "Green on Green". At the bottom, there are "Cancel" and "Save settings" buttons. A red circle highlights the "Save settings" button, with a dashed line pointing to a green text box that says "Click on 'Save settings' to save your modifications!".

SIDE SAFETY

What is “Side Safety” ?

The side safety feature gives you greater control over the output of your sprayer when spot spraying. When activated, instead of opening one nozzle/section, the nozzles/sections either side will also be opened.

This helps to ensure that the entire weed is targeted and sprayed. Using Side Safety will of course affect the overall reduction in herbicide of the Bilberry system.

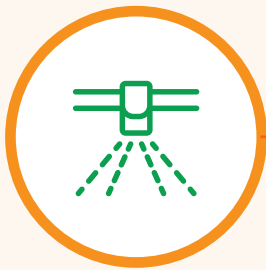




When should you use Side Safety?

Side Safety has many potential benefits and use cases. Below are three of the key situations when side safety should be considered.

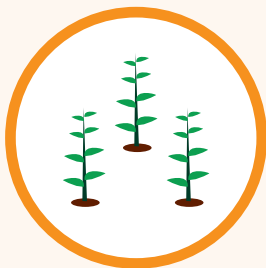
It should be noted that the use cases and benefits will vary depending on whether you are running sections or individual nozzle control on your boom.



Applying a full dose of chemical on a weed in case of resistance



Preventing any high movement of the boom on challenging environments



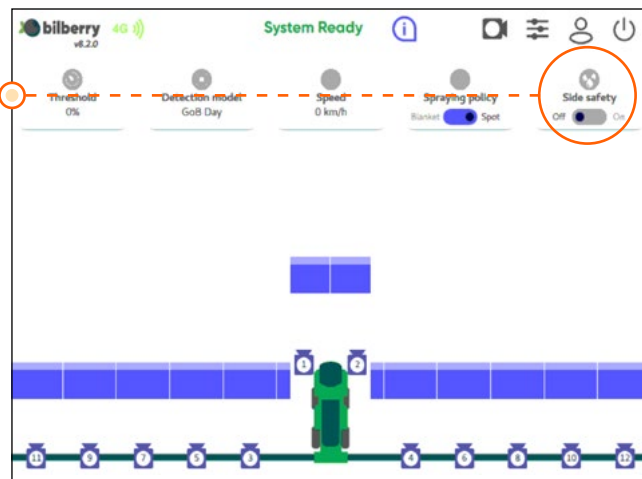
Covering a larger area of infestation for more efficient spot spray

How to activate Side Safety

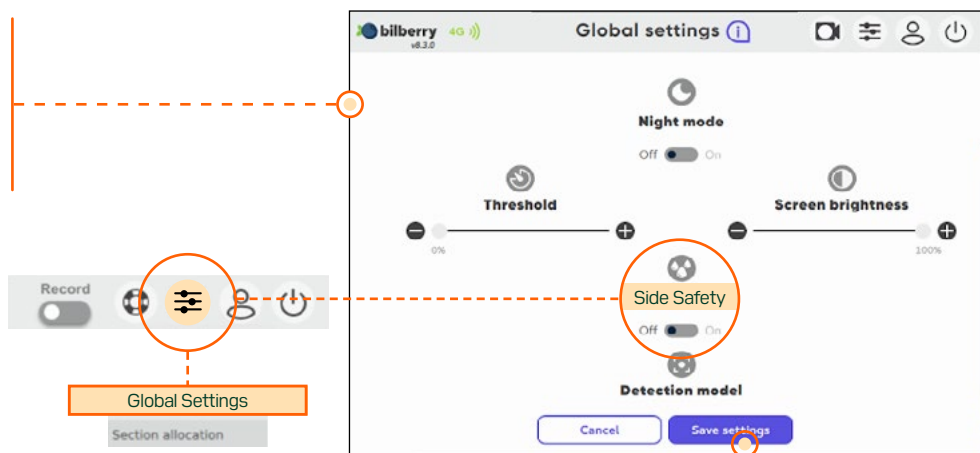
There are **two ways** to activate side safety on the interface :

1. Through the indicator on the main display
2. By going into the Global settings menu.

1



2



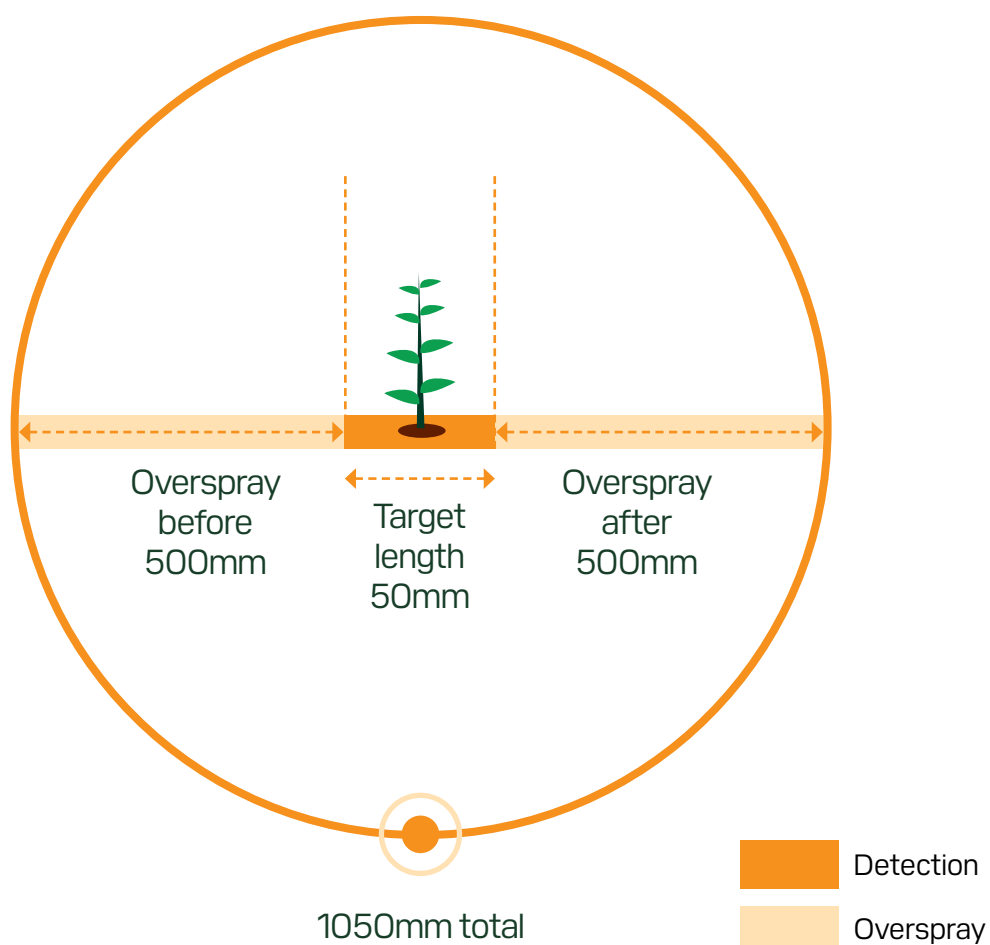
Click on "Save settings" to save your modifications !

OVERSPRAY

What is “Overspray”?

Overspray is a setting that can be utilised to increase or decrease the amount of time that a nozzle is open per detection.

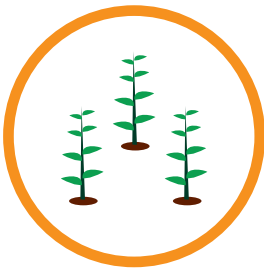
For example, if the target is 50mm long and overspray is set at 500mm, the nozzle will spray 1050mm in total (500mm before + 50mm target length + 500mm after).



When should you increase Overspray?*



If you are experiencing a lot of movement in your boom while spraying, increasing the overspray will improve the accuracy of your Bilberry system.



Increasing overspray can improve weed management in problem areas of your paddock, by spraying small (undetectable) weeds positioned near larger (detected) weeds.

Recommendation

We recommend setting overspray to 500mm for before and after the detection. This has been proven to be an effective distance according to existing users and trials conducted by Bilberry.

*Note that increasing overspray will affect the overall reduction in herbicides gained by using the Bilberry system.

How to adjust the Overspray

You can adjust the overspray of your system through the Global settings page (procedure outlined below).

You have the ability to adjust overspray for both before and after the detection. Generally it is beneficial to set these measurements to the same amount.

You also have the ability to adjust overspray on the go, so that you can optimise the accuracy of your application.



Click on "Save settings" to save your modifications !



THANK YOU

Get in contact with us if you have any queries relating to your Bilberry system. We have a dedicated support team available to offer you assistance when you need it.

Want to see more? Follow us on social media



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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.



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