

Transforming Weed Control with Trimble's WeedSeeker 2 : An in-depth look

The need for cost-effective and efficient agricultural solutions has never been more pressing. Recent global events, such as the COVID-19 pandemic and the ongoing war in Ukraine, have severely disrupted supply chains, causing the prices of agrochemicals to skyrocket. This escalation in costs has put additional financial strain on farmers worldwide.

Enter the [WeedSeeker 2](#), an innovative spot spraying system developed by Trimble. This cutting-edge technology is revolutionizing weed management by significantly reducing herbicide usage and operational costs for farmers.



Precision Spot Spraying: The Green-on-brown System

At the heart of the [Trimble WeedSeeker 2](#) is its advanced "green-on-brown" technology. This system is designed to identify and target weeds as small as 10 x 10 mm (1 cm x 1 cm), ensuring precise application of herbicides. Unlike conventional systems, the WeedSeeker 2 can operate at varying heights, ranging from 50 cm to 1.2 meters, and does not require stringent calibration. This flexibility allows it to adapt seamlessly to different field conditions and crop heights.

One of the standout features of the WeedSeeker 2 is its ability to operate without the need for a constant speed. Traditional systems often demand a steady speed for optimal performance, which can be impractical when navigating turns, contours, or reaching the end of rows. The WeedSeeker 2 eliminates this constraint, providing consistent performance regardless of speed variations, making it a more sustainable and user-friendly option.

Key Technical Features

- **ISOBUS Compatibility:** The WeedSeeker 2 is ISOBUS compatible, meaning it can be monitored and controlled using any ISOBUS-compatible display that farmers already own. This eliminates the need for new displays and simplifies the integration process.
- **Expanded Coverage in a Lightweight Sensor:** The lightweight sensors of the WeedSeeker 2 cover an expanded area, matching the industry-standard 50 cm spacing of spray nozzles. This ensures even large sprayer booms can be equipped without requiring additional bracing or retrofits.
- **Universal Mount and Redesigned Housing:** The system includes a universal mount that supports easy installation on most sprayer boom configurations. The redesigned housing features channels that allow liquid to drain regardless of the boom's position, preventing residue from blocking the sensor.
- **Faster Operating Speed:** The WeedSeeker 2 can operate at speeds up to 40 kph. While no one would typically operate at such high speeds, this capability ensures that the system can handle a wide range of operational

conditions without sacrificing accuracy. The new sensors take more readings per second and can recognize smaller weeds than previous models, allowing farmers to cover more hectares in less time.

How did it Work on a Real Farm?

The benefits of the [Trimble WeedSeeker 2](#) are not just theoretical. A recent case study highlights its impressive impact on a South African farm. Last season, the farmer spent R2.2 million on herbicides using traditional spraying methods. This season, with the WeedSeeker 2, the cost dropped to just R450,000. This remarkable reduction is attributed to the system's precision, which led to a 73% decrease in the amount of herbicide mixture used. It is important to note that the comparison was based on costs and not on a precise per litre basis.

- **Cost Savings:** R2.2 million (previous season) - R450,000 (current season) = R1.75 million saved.
- **Percentage Cost Reduction:** Approximately 79.55%.
- **Reduction in Tank Mixes:** 293 (previous season) - 81 (current season) = 212 fewer tank mixes, representing a reduction of approximately 72.35%.

The farmer's setup includes a homemade sprayer towed by an old tractor, demonstrating the WeedSeeker 2's compatibility with existing equipment. The system integrates seamlessly with the basic Trimble setup, proving that even older machinery can benefit from this advanced technology. The cost savings achieved in just one season mean the system has already paid for itself.



Conclusion

The [WeedSeeker 2 by Trimble](#) is a game-changer in the realm of weed control. Its innovative green-on-brown technology, adaptability to different heights, and independence from constant speed requirements set it apart from other systems on the market. The significant cost savings and reduction in herbicide usage it offers make it an indispensable tool for modern farmers seeking to improve efficiency and sustainability.

In a world where agricultural practices must continuously evolve to meet growing demands and environmental concerns, the WeedSeeker 2 stands out as a beacon of innovation and practicality. Farmers who adopt this technology can look forward to a future of reduced costs, enhanced sustainability, and improved crop management.

For more information on how the [Trimble WeedSeeker 2](#) can transform your farming operations, contact:

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