laconik

CASE STUDY

Laconik Combine™ – Reducing risk for Bayer

Bayer Crop Science is the global leader in crop protection and its Market Development Team are always on the look-out for smarter ways to bring new crop protection solutions to market for grain growers.

Trial host Ben Creek with Craig White, Agronomist, Knowledge Transfer & Engagement Lead, Bayer Crop Science

RICK HORBURY — HEAD OF MARKET DEVELOPMENT

“Growers take more confidence from data gathered through large scale commercial trials over the yield trends generated from our small plot trials.”

Using their screening panel that regularly monitors emerging digital products the Bayer Team identified that Laconik Combine™ aligned with the team’s operational needs.

Rick Horbury, Head of Market Development for Australia and New Zealand for Bayer, says that they weren’t generating the meaningful yield data from grower applied trials they were aiming for and that historically most trials were laid out for convenience rather than to capture variation across a paddock.

“Growers take more confidence from data gathered through large scale commercial trials over the yields trends generated from our small plot trials,” Rick says.

Previously the Bayer team were using replicated small plot trials for earlier phase assessment (three or four years pre-launch) and grower applied trials in the year or two prior to the launch of crop protection solutions or new traits. Small plot trials are usually situated for the highest likelihood of success and may be on the best performing or weedier parts of a paddock to ensure a result albeit one that may not completely reflect performance and returns across the variability of a paddock.

“To build knowledge and confidence in the performance of any of our innovations prior to launch we always look to run grower applied trials ahead of commercialisation.”

“Like small plot trials they also have limitations with the volume of product or seed required potentially being controlled due to permit area, product availability or the time taken to apply the treatments are all factors constraining them from being completely effective.”

"With neither type of trial truly capturing the natural variation across grower's paddocks let alone a national picture we were seeking ways to optimise our pre-launch activities to ensure success for the grower and demonstrate the confidence we have in our new innovations coming to market."

"Laconik Combine™ connects the dots from the confidence we have in our products, due to our extensive small plot trial program, to a grower reality."

Bayer first used Laconik Combine™ for fungicide trials and now are testing herbicides using the system. They can see value in expanding the use of Laconik's technology to test new traits, seeds, insecticides and biologicals as they move through the R&D pipeline but also in how it partners with their newly launched digital farming platform FieldView. The data flow both up and downstream via the FieldView platform makes initiating and gathering data via Laconik Combine™ even easier for the grower even when they are using a range of machinery types on a particular paddock.

"Running our grower trials using the Laconik swarm trials method really allows us to represent a more complete picture of how our Bayer Crop Science innovations will perform and gives growers the most realistic experience of how new products will perform on their farm." Rick says it takes a lot of time and investment to bring new chemistries and solutions to market and building grower confidence and experience in the use of new products is imperative to their success. "Using the Laconik Combine™ platform together with growers is a way to build that necessary trust and confidence in new products," Rick says.

At Bayer Crop Science we always look to implement strong stewardship of our chemistry and traits. If we get that right then we can ensure their long-term effective use as tools for growers and that investment by the grower in our solutions ultimately underpins new investment and further development of new tools for Australian growers.

> **"When I saw how Laconik Combine™'s swarm trials could be spread across a paddock I quickly saw that this was a tool to enable us to do real-world ground truthing on farm".**

Rick Horbury, Bayer
Head of Market Development for Australia and New Zealand

LACONIK COMBINE™ IS AN ENABLING TECHNOLOGY

"Using the technology, we can work with more growers and give more growers around Australia the opportunity to test crop protection solutions on their own farms."

CRAIG WHITE — KNOWLEDGE TRANSFER & ENGAGMENT LEAD

Craig White, Agronomist, Knowledge Transfer & Engagement Lead
Bayer Australia & New Zealand

Craig White, Agronomist, Knowledge Transfer & Engagement Lead at Bayer sees Laconik Combine™ as a disruptive enabling technology.

“Growers are not fully utilising ag-tech that is at their fingertips in their machinery. There are so many benefits for us at Bayer in engaging with growers and using Laconik Combine™ but also for growers to learn how to use this digital ag technology by working with us,” Craig says.

“Using the technology, we can work with more growers and give more growers around Australia the opportunity to test crop protection solutions on their own farms. Additionally, this enables Bayer to capture the environmental variability across farms, regions and states leading to very high understanding of the fit of the new solution for that grower.”

“As the swarm trials are of larger scale than small pots and capture the variability across a grower’s paddock we are finding they are a vast improvement on small plots in illustrating to growers how chemicals will work for them on their farm, and across the variability that exists.”

“We can link Laconik Combine™ swarm trials with GPS locations to do further in- crop sampling and measurements and follow up to monitor weed seed bank and emergence the next season.”

“As Darren Hughes, the founder of Laconik, hails from a farming family and has tertiary training as an agronomist he is passionate about on-farm experiments and providing solutions for growers and industry,” Craig says

“Darren is really accommodating and keen to participate in the whole process.”

“He is really helping Bayer manage the risk of bringing new agro-chemicals and crop protection solutions to market, which is of high benefit to growing more.”

MATTHEW WILLIS — MARKET DEVELOPMENT AGRONOMIST

"Laconik helps with better understanding the variability across a paddock or farm on a larger scale to help growers better understand the variability in crop safety and efficacy that can exist on their own farms."

For Matthew Willis, Market Development Agronomist for Bayer Australia using Laconik Combine™ is all about more rigorous crop safety testing.

"Laconik helps with better understanding the variability across a paddock or farm on a larger scale to help growers better understand the variability in crop safety and efficacy that can exist on their own farms."

"At this final stage of product development we do not always have large volumes of chemical, so to be able to use Laconik Combine™'s swarm trials to pick up greater environmental variation and test over more environments gives growers a lot more confidence on the extensive work Bayer has already done on ensuring crop safety for new products prior to release," Matt says.

"Chemical performance can be affected by a range of factors including soil type, slope and elevation and air flow through the canopy."

Matthew Willis
Market Development Agronomist for Bayer Australia

Laconik takes you straight to the treated spots in a crop!

"We simply can capture so much more field relevant information using the Laconik Combine™ system."

"With Laconik Combine™ we are able to work directly with growers using their equipment to put in more comparison treatments across paddocks to capture product performance over a greater variety of soil types, crop biomass and weed density to build deeper confidence in the product."

"We can also layer further measurements flying the plots with drones mounted with different sensors, capturing NDVI and other information to better assess the performance or crop safety of new chemistry"

"We simply can capture so much more field relevant information using the Laconik Combine™ system."

These trials capture a greater representation of the paddock and environmental variation and are essential to demonstrate the crop safety and efficacy of new crop protection solutions as they are released to growers.

And Matt says the encouraging aspect of using the Laconik Combine™ technology system is growers remark on the fact that it is just so easy and seamless to use with their equipment.

The swarm trial maps and rates are generated by Laconik and the files are provided directly to a growers' digital farming platform in their spray unit for application.

Yield measurements are taken over the whole field by growers and the performance of the swarm trials can be easily identified.

Transforming the way agriculture gathers and acts on the data that matters most.

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