

THE BOOM SOLUTION

Forty years, hundreds of models, millions of components. From modest beginnings, today Maurice 'Cutter' Hayes designs and manufactures the world's biggest boomsprays that work in some of Australia's steepest and roughest farm country.

Words and photographs by Mark Pearce

Situated in Goondiwindi, Queensland, Hayes Spraying has been making and breaking boomsprays for over 40 years. Their machines vary in scope: anywhere from 16 metres to a whopping 50 metres wide. The company itself is a small turnkey operation, nevertheless significant to the rural industry across Australia.

In 1976, Maurice 'Cutter' Hayes began working for his brothers Tim and Denis at Crooble, near Moree in New South Wales, where they embarked on a contract spraying business together. Incredibly, they all became self-taught engineers and were the first to start a commercial operation in the town.

"My brother Timmy originally built the first boomsprays. We had three machines attached to our four-wheel drives that were the original prototypes for our plant equipment," laughs Cutter.

When Timmy turned to farming in 1978 and moved on from the business, Cutter founded his own company which he eventually expanded in 1980, setting up shop in Goondiwindi.

Along the journey, Cutter evolved his brother's designs and Hayes Spraying ultimately became the pioneers of Australian

conservation tillage farming. The company was involved in the first commercial-size, conservation tillage program at Goondiwindi in 1983 and since then the entire farming industry has switched over to managing the soil as a substitute for ploughing.

Naturally there's been a huge expansion in the spraying industry since; by 1989 Cutter began concentrating on small, line manufacturing machines for farmers. A steady growth has seen Hayes' boomsprays pop-up across the country, with the bulk of business increasing throughout southern Queensland and northern New South Wales.

With word-of-mouth traveling great distances, they've also developed an export division to the South African farming market. Not only does Hayes design the world's biggest suspended sprayers, they've gained a true market advantage by building reliable, tough machines that have stood the test of time.

"We started working in the steepest, roughest country in Australia, which was east of Moree and Goondiwindi, so our equipment has always needed to be very robust and low maintenance," says Cutter.

"We're always testing the boundaries, and sometimes breaking them, hence we



Maurice 'Cutter' Hayes – Owner, Hayes Spraying



Hayes Spraying spare parts workshop – Goondiwindi, Queensland



Hayes Spraying manufacturing facility – Goondiwindi, Queensland



David Wells – Sales Manager, Hayes Spraying.

build the world's biggest boomsprays. It's a challenge because it's a battle of weight and strength, as it always is with design work, but it all hinges around durability and reliability."

Over the last decade, end-users have yearned to spray their crops quicker and requested larger carrying capacities to improve cost control and gain greater farm profitability. These smart farming factors are the key pillars behind sustainable growth and have pressed engineers to design machines with much larger tanks and bigger booms.

A working example is the sought-after Hayes hydraulic folding trailed boomsprays, complete with front or rear mounted booms, ranging up to 50 metres wide. The machines are engineered with single and tandem axles to avoid any ride and stability issues – however, just recently Hayes fitted one of these rigs with a BPW walking beam suspension for the very first time.

"Over time we've gone from rigid rockers to leaf spring axles, and then to coil springs for cost effectiveness. Now we see the self-steer market as being significant," explains David Wells, Sales Manager at Hayes Spraying.

"We looked at BPW suspensions underneath chaser bins that worked with much larger capacities in different parts of Australia. What we found was the ground conditions were much smoother when using chaser bins fitted with the BPW system, compared to bins that weren't," David claims.

The BPW walking beam fitment to the boomspray was a customer-generated concept, originating when farmer Ross Uebergang from the North Star region in northern New South Wales used BPW axles on his fertilizer spreader.

"When I found the Oztec chaser bins that were on BPW, I thought to myself, that's what I want on my boomspray," Ross

stipulated. "I wouldn't buy a bogie chaser bin in our tight contour terrain because I know the axle would get screwed off it on the first day."

The 10-tonne, 24-metre boomspray package that Ross purchased from Hayes in August 2015 was widened to a 3-metre wheel track system to gain more ride stability in his undulating field conditions. It includes a 6000L tank and a self-leveling, front-mounted boom system with individual wing tilt which sits on top of a BPW tandem self-steer axle assembly with flotation tyres.

"It doesn't wreck anything because it's on flotation tyres and it's one-hundred percent load sharing... we've got equal weight on every single axle, so there's little aggressiveness on the soil," he points out. "The combination of the BPW suspension and the self-leveling system is excellent – it ticks all the boxes."

The self-leveling system allows Ross to spray over contours compared with his

old self-propelled rig, which could only spray bay-by-bay. It works the paddock at 120 hectares per tank, three times a day, so with shorter spraying times and less wheel tracks, the multi-efficient system has convinced Ross to order a second unit.

"It's everything we anticipated it to be so we've ordered another," he says. "The BPW gear should be standard on all dual systems because it's less maintenance, it's smooth, and it works."

Hayes will be offering up a 10,000L version on the tandem BPW axle units in the near future as bigger capacities become ever more prevalent.

Smart farming is about innovation, and agricultural machine manufacturers like Hayes are faced with advancement challenges defined by scale and efficiency. Cutter believes that to meet the economic future head-on, Australian manufacturers must take robotic machining and other technologies on-board, because if they don't, not only will they not compete in the

global market, they won't even get to first base.

"Manufacturing is not our [Australia's] strength, so we have to make it our strength again. I think there's an opportunity for small line manufacturers now because we have the technology that can keep us competitive. It's about having access to the technology through networks," Cutter says.

As of five years ago, Hayes Spraying was introduced to a robotic machining centre within 100 metres of their manufacturing premises. Their goal today, in support of smart farming practices, is to bring modern design and innovative engineers together and take advantage of it.

"We do a lot of things really well in Australia but we don't realise how well we do it. I can now walk around the corner and say... 'here's my component – I want you to make me one hundred of these next week.' It's all possible now. Overseas companies might be able to make it cheaper but to get it here, sell it, service it, get it in the hands of the

end-user, suddenly the guy next door to me is not too far away."

Hayes has always been prepared to back-up their products in the field whether they're purchased through dealers or sold direct. They make their machines work for long periods because they use and fit components that can be serviced anywhere.

"When an axle manufacturer that manufacturers a high value item like a complete suspension assembly, it's very important that they have a presence on the ground. It's not so much about money but the knowledge and serviceability factor that BPW offer which is a good fit for us because it follows our policies," says Cutter.

Cutter and his experienced team continue to churn out groundbreaking, custom-built spray equipment, providing home-grown and holistic solutions to farm productivity in Australia, and embracing hi-tech advances that will ensure a bright and booming future for Hayes Spraying. 

