

## Precision Agriculture in the paddock – grower experience

### Kurt Mayne, 'Broken Plains'

### Rolleston, Queensland

**Farming area:** Kurt has a mixed operation of cattle and cropping over 6000 hectares (ha), 1400ha of which is designated to cropping.

**Crops:** Given the opportunity, sorghum in summer and wheat or chickpeas in winter.

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#### What changes have been made?

Previously, Kurt had been using a Hayes 24-metre trailed spray rig, which is still used to cover the larger areas when required.

He then decided to purchase a 36-metre Croplands WeediT second hand as he believed that the WeediT technology has proven itself.

'I did not want to invest in a new technology with no data surrounding it. This way I got something that I knew was going to perform and do the job I wanted it to.'

His decision was an easy one to make as they were starting to use high rates of chemicals with the boomspray to get adequate weed control.

'Along with the cost, we knew resistance would occur if we continued that process,' Kurt said.

'We went with the wider boom (36m vs 24m) to negate the slower speed at which we now spray. The extra width still allows us to cover 50ha/hr while staying on our 12-metre CTF tram tracks.'

#### Benefits

The biggest benefit Kurt found is the extent of weed control achieved.

'Two of us could drive around our cropping area now and have every weed chipped out of the ground. It will miss the odd weed, especially thin, spindly grasses but you are on the paddock that often that it will likely get those on the next pass,' he said.

'We now have Feather Top Rhodes grass under control as well. Being a hard to control weed this is a massive achievement in our system.'

Kurt had no problem buying the WeediT second-hand.

'We only farm 1400ha so I had to think of what we could afford and how it would fit in our system.'

'I do not have an exact payback period but I aimed to pay off the \$200,000 machine over seven years and we are definitely on track to do that after the two years I have owned it.'

He does not have exact figures involving chemical savings over the years he has owned the machine. However, he did have information from a recent WeediT spray he conducted on his property.

'The paddock had approximately 7% weed coverage all around medium in size. The paddock was 800ha, which we sprayed with a mix of glyphosate and tribenuron-methyl,' Kurt said.

'The rate was 3L of glyphosate and 50g of tribenuron-methyl, which is not a rate that you would even consider elsewhere. However, by concentrating on spot spraying we only sprayed 56ha out of the 800ha.'

'With the cost of glyphosate being \$7.30, in that alone we saved \$16,274 by spot spraying.'

As a rough estimate in glyphosate, Kurt saved approximately \$20/ha in his 800ha paddock, a cost saving of 93%.

'Even with the extra time and sprays spent in the paddock, the savings are still massive.' Kurt said

## Issues

'Unfortunately, there are always issues; for example it does not seem to be just plug and play anymore,' Kurt said.

Accessing adequate parts and service support has also been an issue at times.

'Luckily, the WeediT is structurally basic and there are very few parts that I would not be able to manufacture myself.'

Another issue is the screen itself.

'For technology that is up to date, the screen is 'stone age'. It takes about five or six pages just to get to one nozzle. It is not very user friendly in this sense.'

## Future opportunities

Kurt does not believe there is anything involved with the WeediT at this stage that he would look into upgrading.

'I believe that the future of this technology is green on green spraying.'

'In an ideal world, I would like to invest in the Agrifac spot spraying technology that attaches one camera every five metres on the boom.'

'This coupled with a self-propelled rig would allow for the chemical savings possible with spot spraying but increases ground coverage.'

## Recommendations

Kurt said his biggest piece of advice is to be prepared to be putting in the extra hours of labour.

'It is not a machine that you buy and use once or twice a year; it's a machine that you will need to constantly use.'

'I am no longer deciding if the time is right to spray, I just go and as a result do not end up with a mass of weeds setting seed.'



Figure 1: Kurt's WeediT in the paddock. Photo: Kurt Mayne.