

Interview with Col Harper on his low input Profitable Cropping System.



Col Harper farms 5000 acres in Ariah Park, NSW. In 2007, when the cost of Superphosphate “went through the roof”, he decided to try a more biological approach. He now operates a low input farming system with good profits and can sow a wheat crop for about \$70 per acre with a breakeven point being 4 bags, an easily achievable yield in his low input system.

“Taking the stress out and putting the enjoyment back into farming”.

Col believes having a high microbial population in his soil takes the guess work out of farming. Instead of wondering if it needs a bit of N, or a bit of Boron, or a bit of Zinc, Col knows the microbes are taking care of all of that for him by sourcing it from the soil.

Long Term Farming Program.

Col believes a crop comes from five years of management, rather than how much you’re spending on fertiliser. “Farming Biologically brings your inputs right down, cuts your risks down and takes the stress out of farming.”

Col’s biologically based farming system includes aged manure applications of 2.5 T/ha, NutriSoil Organic Worm Casting applications 250kg/ ha and 5L/ha of NutriSoil in furrow at sowing. He also uses an Exhaust Fertiliser System, where exhaust fumes from the tractor are cooled and pumped back into the soil consisting of CO₂ and N elements.

Using NutriSoil and Exhaust Fertiliser at seeding coats the seed and germination zone with beneficial microbes, nutrients and carbon for strong germination, which means preventative pickling is not needed.

At times, Col applies lime, he is able to use less lime per/ha due to the high microbial population in the soil chelating the lime and making it more plant available.

Col has a 5 year rotation of canola, wheat and three years of clover pasture.

In between crop phases in the summer, Col lets his weeds grow. “They’re just another plant growing which provides solar panels for the soil pumping sunlight and carbon into the soil.” Col explains.

If applying herbicide, Col will use either Best TM Ag or humate which buffers his microbial populations from the chemical.

Using Sheep in the System

Col brings sheep into graze stubble, weeds and spilt grain which self sow in the summer. Sheep are positive for his whole farm system as they utilise the stubble and growth in the summer while making money out of the clover pasture phase.

The sheep cycle nutrients by feeding on the stubble and pastures, manuring the nutrients back into the paddock.

Col has seen a change in his sheep’s manure since farming biologically. “It’s bigger, more like a cow pat which is a sign of more fibre and better food. The dung is a different colour, it looks healthier and the sheep are healthy.”

Col doesn’t drench his sheep anymore, so the chemical no longer passes through their manure onto the soil. Col now lambs with minimal trouble and is having a lot of multi lambs.

Manure v’s NutriSoil Organic Worm Casting Trial

Col embarked on some trials with his canola crop last year, comparing the benefits of Manure and Worm Castings. Results proved that Worm Castings were significantly higher in all areas. Taking into consideration these findings, Cols plan for the future will be to continue to use the aged manure as it is a minimal cost and sourced locally and apply the Worm Castings every three to five years to prime his system.

Comparison Results on Canola			
Soil Indicator	Control	Cow Manure	NutriSoil VermiCast
Nutrient Solubilisation	46.2%	59%	82.6%
Nutrient Cycling	91.4%	95.9%	100%
Disease Resistance	64.1%	72.7%	88.4%
Drought Resistance	57.4%	59%	82.6%
Nutrient Accesibility (VAM)	14.8%	18%	65.2%
Residue Breakdown Rate	100%	100%	100%
Overall Microbial Balance	76.7%	83.9%	91.5%

**Results provided from Microbewise test, Microbiology Laboratories Australia.

Harvest Results

In a tough season, with dry September and October periods, most farmers would have expected high screenings due to the lack of moisture.

In Col’s low input farming system this year he was able to harvest grain that was graded APH2 and H2 with the weight between 83 to 87 kg/hl. His tonnage was lower due to no spring rain but, with low inputs and high grain quality, it was a season he could ride. It just goes to show that nature can adjust to the season and still produce quality. “Trying to get more out of nature with high inputs is a much higher risk.”

Nakala Maddock

NutriSoil