

Past success helps Bulmers dig deep

An auger that could only go down 50mm was proof enough for Stewart and Fran Bulmer that something needed to be done about their soil health.

The solution came in turning to a system they had already had success with on previous properties.

The auger test was done in a selected paddock on the newly purchased Bolivia Station on the New England Highway at Tenterfield.

Established in 1841, Bolivia's 2947 hectares are made up of 245ha of cultivation mainly used for fodder cropping, a further 182ha of cocksfoot, phalaris, fescue and clover improved pasture, and 2520ha of native pasture.

At the time of purchase in December 2011, the property ran 600 breeders.

While Stewart had considered expansion for many years, he said he

needed an edge to make it a viable proposition.

Rather than look for more land, he decided to make better use of what he already had.

For the previous 18 months, he and Fran had been using the Petrik system on their existing properties.

The Petrik system combines nutritional assessment of the soil with optimising the soil's biological systems.

Sections of Stewart's property required trace element adjustments. The traces copper and boron were applied as required.

He then implemented the Petrik system by utilising feed lot manure which was readily available, applying the Petrik humifying biology.

The results on the existing properties convinced the Bulmers they could make the system work on a bigger scale and increase the



A pasture sample from a once hardened Bolivia Station paddock shows the benefits of improving the soil's natural biology.

carrying capacity of Bolivia.

Soil testing on Bolivia commenced soon after its purchase. They showed them to be granite based but still suffering from compaction particularly in the areas that had been farmed.

It was highlighted with the 50mm soil auger test, which meant root growth was limited to this point also.

Stewart said he believed compaction was one of the biggest limiting elements in modern agriculture as it restricted rooting depth, limiting access to nutrients and soil moisture, as well as inhibiting rainfall infiltration.

Based upon his previous experience with the Petrik system, Stewart used

manure rates of 0.5 to 1t/ha with the Petrik biology applied through four spray nozzles mounted on the back of the 8t Marshall spreader.

Trace elements were applied as required with the manure. Sulphur was added as waste gyprock.

The legume component of the pasture was the first to respond with Astrid clover standing out particularly in the airstrip paddock where the auger test had first been done.

The 2012 season featured a prolonged dry, however green pick was seen throughout the season.

Inspection of the profile showed easy penetration to

250mm and prolific root growth down to 225mm, an improvement of 175mm prior to the Petrik treatment.

The property currently runs 830 breeders as well as 850 ewes and lambs.

Both lambs and yearling cattle are finished on fodder crops for the local butcher.

At present the Bulmers are finalising preparation for application of a formulation of Petrik and nutrients from the air on the portion of the property that has not been stick raked and is not accessible to spreaders.

Stewart is currently preparing 200ha for winter oats which will be planted on the feedlot manure treated with Petrik.



Stewart Bulmer, Bolivia Station, Tenterfield with his Marshall spreader used to apply manure treated with the Petrik biology applied through four spray nozzles.

“ You will not find a worm in this paddock. I have never seen one.”

Graham Bowman – ‘Red Hill’, Barraba NSW



Soil carbon is not always soil humus.

Five minutes after Graham said he had never seen a worm in his paddock, he was looking at a shovelful of his soil with ten worms on it. Petrik had been applied six months earlier.

High worm numbers are an indicator of a rapidly improving soil. In modern agriculture, compaction is a massive restriction.

Application of the Petrik humifying biology with the correct husbandry initiates the humus creation process, providing an environment where worms can again function improving rooting depth, water infiltration and nutrient access.



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