



T1. Ferndale - Grazing on Nitro Humus®

Property	"Ferndale" - Newbridge NSW (Central Tablelands) Cliff & Robyn Kelly
Overview	<p>General: 1500Ha mixed cropping & grazing operation in the undulating hills of the Central Tablelands south-west of Bathurst.</p> <p>Stock: - 10,000 head self-replacing merino flock - 150 head Poll Hereford cattle.</p> <p>Cropping: approx. 200 ha sown each year for Nile grain and hay, and improved pastures and Lucerne.</p> <p>NB: - Cropping can be either fodder cropping &/or certified seed production.</p>
Key Farm Issues	<p>Productivity:</p> <ul style="list-style-type: none"> • Reduced yields in crop yields • Uninspiring conversion rates in stock • Reduced seed weight <p>Nutrition:</p> <ul style="list-style-type: none"> • Declining pasture quality despite increased artificial nutrient application • Depletion of Nutrients in soil
Compost Proposal	Yield & nutritional issues most likely linked to soil health, low O.M., microbiology & C.E.C. Application of Nitrohumus to crops to provide a comprehensive source of macro and micro nutrients, and to enhance current organic content in their soils to enhance microbial colonization and nutrient availability. Bio-solids to be applied as a full replacement for artificial fertilizers on permanent pastures.
Application Rates	<ul style="list-style-type: none"> • 8 ton/ha applied to fallow and sown oats 2011-2019 • 80 ton/ha of bio-solids to permanent pasture, Nitrohumus top dressed on selected permanent fodder crops 2013-2019
Observations and Quantifiable Outcomes	<p>Cropping:</p> <ul style="list-style-type: none"> • Certified seed production increase in individual seed weight by 12% and in total yield from 4 ton/ha in 2015 to 5 ton/ha in 2019 an increase of 25%. • Increased returns from seed sold as a result of increased seed weight. <p>Pasture Improvement:</p> <ul style="list-style-type: none"> • Increased plant growth provided earlier grazing period providing the best growth rates in lambs and calves experienced. • 100 calves- daily weight gain 1kg/hd/day for 30 days at \$2.00/kg value-\$6000 1400 lambs- daily weight gain 200gr/day for 30 days at \$2.00/kg value-\$16 800
Summary	With a declining pasture quality, uninspiring lamb growth rates Cliff had to step back and look at the bigger picture, increased application of artificials just was not improving his overall output. He realized to be able to increase what he was taking out of his farm he had to put back in to his soils his focus has changed to a greater consideration of the health and vigor of his livestock underground as well as above.