

ASX Announcement

Terragen's Ruminant Probiotic delivers 4.6% increased average daily weight gain in beef feedlot trial, yielding a \$57 per carcass value increase and an expected 4.73x net carcass return on investment

Coolum, Australia / 17 December 2024 – Australian research, development and commercialisation company Terragen Holdings Limited (“Terragen”) is pleased to announce the results of one of Australia's largest formal ruminant probiotic trials. The trial was conducted at the Charles Sturt University (CSU) feedlot under the guidance of renowned feedlot veterinarian and ruminant nutritionists Dr Paul Cusack (Australian Livestock Production Services) and Professor Jane Quinn.

About the study

The beef feedlot trial tested Terragen's dry ruminant probiotic feed supplement on beef cattle at different dose rates against liquid MYLO and control groups for equivalence and dose rate response. The test groups were: liquid MYLO, Dry Ruminant Probiotic 1x dose, Dry Ruminant Probiotic 2x dose and a control group (no supplement). The project undertook controlled, replicated randomised block design-controlled feeding. Angus steers were purchased from six vendors in Southern New South Wales, and 264 Angus steers were selected to enter the trial. Steers had an average live weight of 400kgs upon induction (with an average weight range of between 380kgs to 420 kgs). The steers were fed a ration implemented by Dr Paul Cusack for 110 days and upon exit were sold to Teys Australia (Wagga Wagga), where all carcasses were assessed and graded according to the Meat Standards Australia (MSA) index.

Key results:

- Dry Probiotic 2x dose delivered the highest exit live weight of +8.8 kilograms heavier than control.
- Dry Probiotic 2x dose had a 4.6% higher average daily weight gain than control across the trial period.
- Feed conversion ratio (FCR) in all probiotic treatment groups showed a strong numerical trend in favour of probiotics. Dry Probiotic 1x recorded a 12.8% better FCR vs control.
- Dry Probiotic 2x dose achieved a 4.73x net carcass value return on investment on a National Feedlot Accreditation Scheme (NFAS) grain grid.
- At an average ration cost of \$380 per tonne, Dry Probiotic 1x average FCR of 12.8% above control delivered a \$48.64 per tonne saving.
- Dry Probiotic 1x dose achieved 7% higher marble score compared to the control.
- The probiotic treated groups outperformed the control in hot standard carcass weight (HSCW), yield percentage per carcass, eye muscle area, marble score, ossification score, MSA index and carcass value.

Terragen Ruminant Probiotics

The CSU beef feedlot trial results build on existing data and evidence through peer-reviewed published research papers that Terragen's probiotic delivers productivity gain increases including:

- 24% increase in average daily weight gains in feedlot lambs above the control
- 4.6% to 4.8% increase in average daily weight gains in beef feedlots above the control
- Up to 10% extra milk production, which is a \$500 net benefit per cow per lactation, which includes the probiotic costs
- Lactating cows up to 21% heavier in body weight

- Wean dairy calves up to 10 days earlier, delivering a net saving of \$40 per calf and setting their rumen up for a productive life

Terragen's dry Ruminant Probiotic is anticipated to launch in March 2025 and will be commercially available in Australia from this time. Terragen's liquid probiotic range is currently available.

About Terragen

Terragen specialises in the development of biological products that improve animal and plant health for use in agriculture. Our proprietary research has led to the creation of innovative products that improve livestock and crop yields and deliver positive environmental outcomes, helping to decarbonise agriculture.

Currently, Terragen has two products available for sale across Australia and New Zealand, Ruminant Probiotic and Great Land Plus (GLP). Ruminant probiotic is a feed supplement that increases average daily weight gain and reduces methane production. GLP is a plant bio-stimulant targeted for use in cropping that reduces reliance on chemical-based fertilisers, decreasing scope emissions. GLP also increases crop yields and soil organic carbon levels.

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