



Ag & Vet Weekly

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All the news on ASX-listed agriculture and veterinary companies

Dr Boreham's Crucible: Terragen

By TIM BOREHAM

ASX code: TGH

Share price: 19 cents; **Shares on issue:** 186,820,902; **Market cap:** \$35.5 million

Chief executive officer: Justus Homburg

Board: Dr Paul Schober (chair), Justus Homburg, Sam Brougham, Dr Greg Robinson, Dr John Ryals, Ingrid van Dijken

Financials (year to June 30 2019)*: revenue \$981,000 (up 15%), loss before interest, tax depreciation and amortization \$3.55 million (previously \$4.54 million deficit), after tax loss \$3.21 million (previously \$3.44 million loss), cash of \$1.83 million**.

* From IPO prospectus. At that time Terragen was an unlisted public entity.

** The company raised \$20 million in this month's initial public offer to list on the ASX

Major shareholders: Sam Brougham (Stamina Pty Ltd, Crofton Park Development) 6.3%, Rubi Holdings (John Rubino super fund) 2.25%, Washington H Soul Pattinson 2.14%, Dempsey Capital (Greg Robinson) 2.14%, Scobie D Ward 2.14%, Action Always Pty Ltd 2%.

For the last century, intensive agriculture has done a damned fine job of keeping the world's swelling populace - or at least the part of it known as the western world - well nourished.

CEO Justus Homburg says that Mother Earth is starting to show signs of productivity fatigue, with both arable land and the yields on the available acreages declining.

An exponent of “biological agriculture”, ASX newcomer Terragen has developed products that address soil health, plant productivity and animal health and nutrition without relying on chemical fertilizers, pesticides or antibiotics.

“The cumulative effects from decades of increasing reliance on - and often inappropriate use of - these inputs has led to many unintended detrimental consequences which are increasingly evident to farmers,” the company says.

Despite the \$20 million offer being oversubscribed, Terragen shares closed at 20 cents on the December 11 debut, shy of the 25 cents listing price. The offer was underwritten by brokers Bell Potter and Evans Dixon.

What udder relief

To date Terragen has gleaned most of its revenues from Great Land, a live microbe soil conditioner. Its other commercial product is Mylo, which is not a warm malt drink but a probiotic feed supplement for production animals.

Terragen also has two veterinary medicines simmering away for production animals, notably dairy cattle.

One is Lactolin, a teat conditioner to improve the udders of lactating beasts. The other is Halo, an anti-inflammatory to treat dairy cattle with mastitis.

Halo also has potential to treat companion animals with mobility issues related to inflammation, such as arthritis.

To date, Terragen has derived most its sales from selling Great Land in Australia and New Zealand, while it launched Mylo in February this year.

The company is preparing to sell the products in the US, with an initial focus on the California-based dairy sector. For Mylo, the extensive feedlot cattle industry is also an attractive target.

Terragen is also preparing for commercial trials of Lactolin locally and in Europe, while Halo is subject to early-stage registration trials.

Mr Homburg says soil health is complex, because it depends on variables such as climate, soil characteristics and how the soil is used. “That why it’s taken us years to understand how to get all of those elements correct,” he says.

“You don’t just put Great Land on and walk away. You have to make sure the bugs do their thing under the most suitable conditions.”

Animal health is a little easier because it doesn’t involve the same variables: if Daisy the cow’s coat gets sleeker and she puts on a few kilos, you know the treatment is working.

The story to date

Terragen was founded in May 1996 by parties including Athol Hodgetts, a Tasmanian Australian Rules football legend who played for his local club Cooeee, before joining North Melbourne.

In case you're wondering about the relevance, he had links to the dairy industry.

The company was largely inactive up to 2009, but then hit its straps after acquiring the relevant genome-sorting technology from two Queenslanders, organic chemist Dr Wayne Finlayson and microbiologist Dr Karen Jury.

(Dr Jury remains the company's manager of discovery sciences).

Terragen became a public company in 2014, after which it embarked on commercializing Great Land by partnering with select farmers (not just dairy cockies but macadamia, grape and banana growers as well).

Along the way, Terragen used independent research organizations to undertake validation trials.

A Fulbright Scholar, Mr Homburg took the CEO role in 2017. He worked for Monsanto for 15 years and was also the chief of the ASX-listed Progen Pharmaceuticals (founded by Dr Finlayson), Nestle's Vital Foods and Chirogen Pharmaceutical Technologies.

Dr Schober has 30 years of animal health experience, with roles at Eptech, the ASX-listed Anantara Lifesciences and Apex Laboratories.

Terragen has a close relationship with the University of Queensland's veterinary school, which conducts animal health and nutrition trials for the company.

In 2018, the company opened its research and production facility at Coolumb, on Queensland's Sunshine Coast.

Putting microbials to good use

Terragen sources the microorganisms - generally from the lactobacillus group - from soils, plants and animals and then creates a genomic profile of them.

The microbes are then tested against various targets, with micro-organisms combined to achieve optimal efficacy against specific target applications.

Mr Homburg acknowledges there are other microbial treatments on the market, but Terragen is moving away from treating just one deficiency.

"If you are trying to kill off a particular insect or disease [many of the current microbial products] work really well," he says.

“I wouldn’t say so much that we’re better than anyone else, just different. We are not just adding one particular microbe to the soil microbiome, but changing the whole microbiome’s structure.”

As a soil conditioner, Great Land is classed in the same regulatory bracket as fertilizer, so it did not need approval from the ag and vet gatekeepers. Ditto Mylo, which as an exempt nutritional and dietary supplement merely needs to adhere to ‘generally recognized as safe’ ingredient guidelines.

As animal therapeutics, Lactolin and Halo will require approval from the vet drug police, although that’s not the case with Lactolin in the US where only a label notification and review process is required.

Mr Homburg says the company could develop other applications, such as fungicides which would require regulatory assent.

Finances and performance

The float prospectus shows Terragen chalked up \$981,000 sales in 2018-’19, mainly direct-to-farmer sales of Great Land.

The company is in the “early stages” of generating revenue from Mylo.

The products are sold via agency tie ups with Elders Rural Services, Rural Co, Murray Goulburn and EE Muir and Sons.

The agents typically take a base commission of 20 percent, plus up-to another 10 percent based on on-time payments and meeting sales targets.

Of the \$20 million raised in the initial public offer, \$4.3 million is earmarked for Australia and New Zealand commercialization activities, while a further \$8 million goes to marketing support for both the soil and animal products.

The Coolum facility is running at only four percent capacity and at full bore it would be able to generate \$25 million to \$33 million of annual revenue. This means the company can chalk up additional sales with little additional manufacturing cost.

Dr Boreham’s diagnosis:

According to Grand View Research, the biological agriculture sector was worth \$US16 billion (\$23 billion) in 2018 and is forecast to rise to \$US32 billion by 2025 (compound annual growth of 11 percent).

The company says it has no “distinct competitor” in what are highly fragmented sectors.

While Terragen is harnessing the 'feed the world' macro theme, in reality its products need to be affordable, or else Daisy's udders are going to remain swollen and sore.

Mylo, for example, sells for the equivalent of 10.5 cents to 12 cents per animal. But three separate field trials showed that the beasts were seven to 23 percent bigger when fed the substance, so it's marvelous what a difference Mylo makes.

By now, readers might be wondering why Terragen is not playing in the human health sector with its microbial manipulation.

The answer is that the human applications are licenced to Servatus Biopharmaceuticals, an unlisted Coolum-based outfit headed by no other than Doc Finlayson. Servatus is progressing separately with its programs and it sounds like a case of 'watch this space'.

In the meantime, Terragen is happy to assist humanity by promoting a farming future that's organic, chemical-free and capable of feeding the world's heaving billions.

Disclosure: Dr Boreham is not a qualified medical practitioner and does not possess a doctorate of any sort. He has seen enough natural fertilizer on media releases over the years to nourish a whole paddock.