

Hydroponics in the Gascoyne

By Fiona Shallcross, appeared in Northern Guardian, 2002

Through the assistance of the Gascoyne Murchison Strategy, Lyndon Station proprietors, Tim, Chris and Sean D'Arcy, are utilising new innovative technology in hydroponic construction and growing methods to provide cattle fodder.

A formal trial is being conducted with the Department of Agriculture to determine the feed constituents of the hydroponically grown 'auto grass' slabs and subsequent weight gain of the trial cattle.

Tim D'Arcy has been researching the benefits of hydroponically grown fodder since 1995 after visiting a shed in New South Wales. 'Tim was convinced of the benefits of it as a feed source and for ensuring continuity of supply to markets' Chris D'arcy said.

Hydro Feed Systems Australia then designed a revolutionary shed, addressing the flaws of it's predecessors, now being trialed at Lyndon Station. The 'Auto Grass Shed' is aptly named the Drought Buster with full automation and freedom from disease problems.

'The machine uses a flood and drain irrigation concept rather than misting, which eliminates the fungal diseases that are common with traditional hydroponic sheds' Tim D'Arcy said.

'The results have been very encouraging to date with 1 tonne of 'auto grass' slabs produced per day from the hydroponics shed on a 6 day rotation basis' Tim D'Arcy said.

On the first day of loading the system, the seeds are given a boost with nutrient fortified water, 8 times during the 1st 24 hours. From day 2 to day 6 the trays of seeds become barley sprouts with 3 waters per day.

Equally impressive are the growth weights of the trial steers. At this point of time only 17 steers are being trialed to determine the right amount of the 'auto grass' slabs to feed.

'The steers have been growing at a rate in excess of 1kg/hd/day on less total dry matter than typically expected. The next stage of the trial is to adjust the balance between dry matter and the 'auto grass' slabs to determine the optimum combination to maintain the weight gain' Tim D'Arcy said.

Over a period of seven weeks the trial steers have been fed roughly 5kg dry matter per head per day consisting of 40% 'auto grass' and 60% hay. Initial analysis of 'auto grass' slabs indicate it contains about 87% water (13% Dry Matter) and has a dry matter digestibility of 80.7% (11.6 Mega Joules Metabolisable Energy/kg Dry Matter) and protein content of about 21%. The analysis of the hay has not been completed. Geoff Tudor, Senior Beef Research Officer, Department of Agriculture says 'this daily gain with the quantity of feed consumed (only around 2 kg dry matter 'auto grass'/head per day) is very good and certainly warrants further investigation.'