

REVOLUTIONARY INVENTION:

RIGHT now more than 60% of Queensland is in severe drought. The situation is dire.

Growing demand for Australian beef overseas coupled with the pressures of production back home has triggered increased focus for innovative sustainable crop production alternatives.

But on a small farm on the fringe of Boonah, south-west of Ipswich, an agricultural engineer has developed a ground-breaking solution to the chronic agricultural feed shortage in Queensland. His invention eliminates the need for thousands of hectares of land to produce livestock. Frank Anvari has spent the past two years fine-tuning a fully automated crop production prototype he says is an answer to Australia's food security problem.

The hydroponic system cultivates seed into feed in six days using merely water and a specifically designed fertiliser. And his cows can vouch for it. They are arguably the healthiest in the country. Inside a greenhouse, barley, oat, corn, cow peas and other seeds are automatically fed into a hopper twice daily and onto a conveyor. At the end of the conveyor is a luscious, omega three-rich carpet of grass. There's no soil and it's produced in less than a week.

The machine shaves the fodder into bite size pieces, which are delivered by another conveyor to the cows at the other end. The single conveyor prototype at 15m long produces 200kg of food a day. Mr Anvari says he is able to keep 30 cows on his 10ha property, instead of 10, increasing profits three-fold.

The dimensions and number of conveyor levels can be increased to feed anywhere from tens to hundreds of thousands of cattle, a nutritionally rich grass diet.

"With this machine there is no reliance on the climate, it's not drought or flood affected," he explains.

The benefits are plentiful and the result is increased meat quality.

"There is no reliance on the weather, no pests, very little labour cost, little amount of energy and water use and it can be hooked up to solar power," he says.

"This machine will dramatically reduce costs and help Australian growers."

The 71-year-old's passion for agriculture and engineering stemmed from the 1970s when he established a pistachio farm in Victoria. By the mid-1980s Mr Anvari was one of the first in Australia to grow seedless watermelons from his farm at Gympie.

In the late 1980s he founded the international fertiliser company Grow Green, based at Kalbar. He sold the business and retired in 2011, but the formulation he invented continues to be used across America, the Middle East, India and Europe.

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