

PO Box 1385, Griffith NSW 2680  
T 02 6964 6600 F 02 6964 1605 enquiries@nuffield.com.au www.nuffield.com.au  
A.B.N. 33 092 327 396

2006 SCHOLARSHIP SUPPORTERS  
ABB Grain  
Australian Wool Innovation  
Gardiner Foundation  
Grains Research and Development Corporation  
Incitec Pivot  
Landmark  
Meat and Livestock Australia  
Rabobank  
Rural Industries Research and Development Corporation  
Sidney Myer Fund  
Sylvia and Charles Viertel Charitable Foundation

Page 1 of 3

8 June 2007

## Nuffield Scholar relishes chance to develop tomato know-how

Balladist John Denver famously elevated “home-grown tomatoes” alongside true love, claiming that money could not buy either. But Tasmanian horticulturalist Anthony Brandsema begs to differ.

Like his Italian ancestors, he is proud of the “nostro”, or “local” philosophy that guides his hydroponics tomato business, and has focused on expanding and streamlining operations over the past year to ensure a plentiful supply – home-grown and ripened on the vine.

Sponsored by the Rural Industries Research and Development Corporation (RIRDC), the producer won a Nuffield Farming Scholarship to study controlled environment management and plant physiology in closed production systems, spending the major component of his overseas fact-finding tour in Holland – the world’s leading greenhouse tomato producer.

Returning to his family’s Turners Beach horticulture business energized by the experience, Mr Brandsema is currently doubling the greenhouse production area to 1.2 hectares, making it the largest tomato operation of its kind on the Apple Isle.

“What has really hit home since the Nuffield tour is my increased confidence to manage an operation of this size – the plants, the staff, the business,” he says.

Mr Brandsema co-manages J & A Brandsema Pty Ltd alongside his brother Marcus. The two-hectare property in north-west Tasmania supplies supermarkets, wholesalers, small retailers and farmers’ markets throughout the State, and there is interest from Asia.

Founded in 1954, J & A Brandsema experimented with various vegetable lines before concentrating on production of cherry and premium vine-ripened tomatoes. While varieties continue to be selected based on taste, yield, and disease tolerance and resistance, the move into hydroponics four years ago has provided the opportunity to overcome crop variability dictated by climate and other factors.

“The property is established on black sand which is mineral deficient and hardly ideal for vegetables,” Mr Brandsema says. “Greenhouse production favours tomatoes and is particularly attractive in Australia as it provides greater control over climatic variations. Since taking the leap into hydroponics, we are less reliant on the environment and have the opportunity to extend our season.”

J & A Brandsema uses a closed hydroponics system that produces crops in isolation from the soil and captures nutrient solution run-off after each application for recirculation.

In modern hydroponics, automation has simplified the process of measuring the pH and electrical

### For information

Penny Fannin or Melissa Branagh

03 9670 1168

E pfannin@coretext.com.au / mbranagh@coretext.com.au

## Page 2 of 3

conductivity of solution to gauge its acidity or alkalinity. However, according to Mr Brandsema, managing the nutrient balance is difficult and requires regular chemical analysis and adjustment of the recirculating solution.

## Nuffield tour provides Dutch courage

The Nuffield opportunity saw Mr Brandsema scour the world for best practices, and inspired the confidence to both enlarge his business and employ smarter processes.

The Tasmanian toured Belgium, the United Kingdom, Canada, Mexico and California, and invested several weeks in Holland, where legislation requires hydroponics producers to grow crops in closed systems.

“Holland has access to a large European market and producers have to grow efficiently to compete with growers in Spain, where production costs are lower,” Mr Brandsema says. “This drive for efficiency has motivated the development of innovative production technologies that are delivering environment management and labour benefits.”

The advancements are providing the capacity to monitor greenhouse carbon dioxide levels over a 24-hour surveillance period, and Mr Brandsema “got a handle” on using computer technology to adjust nutrient balance based on his own interpretation of plant behaviour.

The technology has influenced similar systems in Canada and Mexico, and has also been modified to generate nutrient balance recommendations based on laboratory water tests.

“Developments have largely been driven by necessity in Holland,” Mr Brandsema says. “Because profit margins are low, labour is monitored closely. Workers are required to register all activities in a computer management system that measures performance against plant growth.”

## Overseas experience prompts growth

Mr Brandsema is already adapting what he has learned overseas to improve crop quality.

The 6000 square metres under plastic greenhouse cover at Turners Beach are being supplemented by a new 6000-square metre glasshouse component that will see greenhouse infrastructure occupy the entire flat area – 60 per cent of the property.

“We anticipate the glasshouse component will generate a 20 per cent production boost over the plastic system due to additional light and a higher rate of photosynthesis,” Mr Brandsema says. “This equates with a yield increase to 65 kilograms per square metre of tomatoes and 32 kilograms per square metre of cherry tomatoes.”

The Nuffield Scholar has recently installed an advanced computer system to monitor irrigation, pH balance of water run-off and nutrient concentration, which is helping to “maintain a more consistent environment and steady growth, focusing more on quality improvement than yield”.

He is also working with a consultant who is adapting a Dutch calculation system to provide “a better understanding of what the plants want”, enabling the producer to monitor plant growth and influences year-round and to improve nutrient management. “I will continue to use the laboratory to test water, but this system will allow me to apply the results more effectively,” he says.

### For information

Penny Fannin or Melissa Branagh

03 9670 1168

E [pfannin@coretext.com.au](mailto:pfannin@coretext.com.au) / [mbranagh@coretext.com.au](mailto:mbranagh@coretext.com.au)

## Page 3 of 3

Typical of the hydroponics industry, labour intensity at the Turners Beach property is high, with 20 staff working across 1.2 hectares during the peak summer season. In an effort to streamline operations, Mr Brandsema plans to introduce performance-related remuneration, training and more field-based management.

However, he says Australian producers are not under the same pressure as Dutch growers to maximise efficiency. "Our margins are better so there is less of a push, but there are things we can do to improve our speed of operations."

Declared free of fruit fly and blue mould by the Japanese Government, Tasmania is the only Australian state that can export tomatoes to Japan and interest from Asia is strong.

But Mr Brandsema is yet to determine whether international trade is feasible.

"At the moment we enjoy supply and demand equilibrium, and big is not necessarily best, especially in this game," he says. "Quality is often compromised when operations become too large – it's about control."

## 2007 NUFFIELD FARMING SCHOLARSHIP – APPLY NOW

Farmers from across Australia have the opportunity to extend their knowledge overseas as 2007 recipients of Australia's most prestigious agricultural award – the Nuffield Farming Scholarship.

Winners will be selected based on agricultural and leadership capabilities, and their potential to make a strong contribution to the future of Australian agriculture. Each Australian scholarship is valued at \$25,000 and is supported by leading Australian commodity, agribusiness and philanthropic organisations.

The Rural Industries Research and Development Corporation (RIRDC) contributes to the future viability and prosperity of the Australian rural sector through a focus on human capacity building and initiatives to develop rural leaders, including sponsorship of the Nuffield Farming Scholarships.

Scholarship applications close on June 30, 2007. Application forms are available from the Nuffield Australia office on 02 6964 6600, [enquiries@nuffield.com.au](mailto:enquiries@nuffield.com.au) or on the website: [www.nuffield.com.au](http://www.nuffield.com.au)

**Contact:** Anthony Brandsema, 03 6428 3127, 0409 217 037, or [jbrandse@bigpond.net.au](mailto:jbrandse@bigpond.net.au)

PHOTO: Nuffield Scholar Anthony Brandsema

### For information

Penny Fannin or Melissa Branagh

03 9670 1168

E [pfannin@coretext.com.au](mailto:pfannin@coretext.com.au) / [mbranagh@coretext.com.au](mailto:mbranagh@coretext.com.au)