

Bush tucker case study

Type of Farming System

Converted from a native stand into a commercial operation with flood irrigation on an "as needed" basis.

Products used in trial



Background

The Bush Tomatoes have been brought on line from a native stand where cultural practices have increased production from typically two to eight months a year. The local Indigenous community owns the farm and operates it commercially.

Crop farming in Central Australia has a number of barriers to overcome including: extreme climatic conditions, soils that are inherently low in fertility and the tyranny of distance to market.

The community has been experimenting with sustainable production systems for 10 years where the key drivers have been to:

- increase yield and fruit quality;
- manage soil health and nutrition; and
- improve plant health.



Harvesting Bush Tomatoes at Desert Garden Produce
(source: ABC Rural)

Farmer's Name: Max Emery

Business Name: Desert Garden Produce

Crops grown: Bush Tomatoes. It is the largest commercial and possibly the oldest Bush Tomato venture in Australia

Farm Data

Location: Rainbow Valley, NT

Area: 4-5ha

Established: Commercial production since 2002

100% of the farm is under the Bactivate Program



Bush Tomatoes ready for harvesting

Outcomes and Benefits

The Bactivate Program was initiated in 2010 to improve soil health. Following soil biological and chemical analysis, the program included the application of trace elements to meet micronutrient deficiencies.

The adoption of the Bactivate Program has produced outstanding results with increases in yield and fruit quality. Yields have increased from 42gms to 5kg per plant in three years and further to this fruit size has achieved a consistency not experienced before. Typically the first Bush Tomatoes picked in the season are greater than 30mm in diameter and reduce in size as the season progresses, now there is consistency throughout the season.

Max Emery, owner of Desert Garden Produce, commented that the current harvest is the best they have experienced.

He has credited the success to the adoption of organic inputs and the adoption of the Bactivate Program.

In a report written by Max, he has said "A noticeable benefit has been in 'strengthening' the plant to be resistant to soil-borne diseases. In the past any fruit that touched the soil would rot on the plant, this is no longer the case.

"Another observed benefit has been that the Bush Tomato stand is free of white fly, grubs and beetles". Max put this down to the increased strength of the plant.

"Fresh weight from Dec 2011 to March 2012 - 645kg (avg. temp. 38°C. Rainfall 179mm). Total fresh yield: 858Kg.

"Fresh weight from Dec 2012 to March 2013 - 576Kg (avg. temp. 43°C. Rainfall 9.2mm). Quite noticeable is the fact that the yield rate has doubled, but because of the high temperatures and no rain, the fruit size and weight was reduced by 1/3rd. Predicted gross yield: 700kg.

"Crop has had only 1 application of the Bactivate Program, in November 2012. Second stage of fruiting now fully active under irrigation. Current max temp. still 40°C on 20th March. Soil tests indicate that Bactivate has not depleted and is fully functional. Fruit size now increasing as the night temperatures have come down from 30°C to about 18°C. All seedlings in nursery are the best we have ever seen as a result of a strict BioBoost+ and Bactivate program.

"First you will see that the water pH is 7.7. The soil pH average is 7.2. The original average prior to Bactivate was 8.9 to 9.2. In areas that were originally 8.5, they are now 6.5. and the rest of the areas are around 8.3.

"When the garden was first started, there was a lot of residual sodium bicarbonate. Now there is none. Even if there is an excess occasionally after watering, it has completely gone within 24 hours.

"With the exceptionally hot weather we have had and with only two passes of water since December, with the slight cooling of the night temperatures, the fruit are producing at 100% efficiency".

After 3 years on the Bactivate Program, Desert Garden Produce is now producing high quality, uniform bush tomatoes, even under the harshest of conditions. This is a real testament to the exponential benefits of using the Bactivate Program over a number of years.



Bush Tomatoes in the desert grown with Bactivate.

"In the past any fruit that touched the soil would rot on the plant, this is no longer the case" Max Emery