

## Case Study

# Production of Organic Pineapples in the Eastern Cape

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Between 2001 - 2008, the Eastern Cape Pineapples Growers Association and the Agricultural Research Council (ARC) conducted trials to establish the feasibility of growing pineapples organically. The study compared several Organic and synthetic approaches, with a view to developing “producer friendly” alternatives to the current industry standard.

### The Study:

Talborne Organics was selected for comparison with chicken manure-based products and the inorganic industry standard. The trial plots consisted of well rested soils located in the vicinity of Bathurst, Eastern Cape. The study ran from 2003 to 2007 and the results included data from the plant crop and the first ratoon.

| Block                     | Treatment Description (per ha)   |
|---------------------------|--|
| A1 - Talborne             | <b>Preplant:</b> 2.0t Talborne Vita Veg 6:3:4 (14)<br><b>Post plant:</b> 1.0t side dressing of Talborne Vita Nitro Boost 4:1:1 (10)<br><b>Ratoon:</b> 2.0t Vita Green 5:1:5 (16)   |
| A2 - Chicken Manure       | <b>Preplant:</b> 30t Composted chicken manure, 2.5t dolomitic lime, 2.5t gypsum, 10kg copper sulphate, 3.5kg boric acid, 250g sodium molybdate, 250g cobalt sulphate.<br><b>Post plant:</b> No applications<br><b>Ratoon:</b> 2.0t Vita Green 5:1:5 (16)   |
| A3-6 - Inorganic Standard | <b>Preplant:</b> 1.5t dolomitic lime, 0.5t 1:2:5 (41), 0.1t potassium chloride, 25kg copper sulphate, 25kg manganese sulphate, 15kg Sodium borate, 4kg zinc sulphate.<br><b>Post plant:</b> 2 x 88kg N Ammonium sulphate, 5 x foliar sprays of UAN32, potassium sulphate, zinc sulphate, magnesium sulphate, ferrous sulphate<br><b>Ratoon:</b> 5 x foliar sprays of 250kg N, and 100kg K, 12 kg Mg. |

### Results:

| Treatment             | Plant Crop           |              |                              | Ratoon crop          |              | Total yield (t/ha) |
|-----------------------|----------------------|--------------|------------------------------|----------------------|--------------|--------------------|
|                       | Ave. Fruit Mass (kg) | Yield (t/ha) | Plant condition post-harvest | Ave. Fruit Mass (kg) | Yield (t/ha) |                    |
| A1. Talborne          | 2.050                | 92.3         | Vigorous                     | 1.231                | 55.5         | 147.8              |
| A2. Chicken Manure    | 1.766                | 79.5         | Stressed                     | 0.567                | 25.9         | 105.4              |
| A3-A6. Inorganic Std. | 1.623                | 73.0         | Stressed                     | 1.350                | 46.6         | 119.6              |

A subjective evaluation of the plant size & colour also showed the Talborne treatment gave the best results.



### Summary:

The trial indicated that it is indeed feasible to produce Organic pineapples in South Africa when using Talborne fertilizers. The yields were 23% and 40% when compared to Inorganic standard and Chicken manure respectively. The average fruit mass was also larger. Therefore, a farmer using Talborne can expect increased earnings. Other benefits include improved resilience to drought and a gradual build-up of soil fertility leading to reduced fertilizer usage over time, and healthy soils.

For more information, please refer to the journal article: DEVELOPMENT OF AN ORGANIC PINEAPPLE CULTIVATION STRATEGY FOR THE EASTERN CAPE REGION OF SOUTH AFRICA

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