

Case study

Organic mangoes in WA's remote Kimberly region

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The Ord River Irrigation Area (ORIA), situated in the far north eastern corner of WA around the town of Kununurra, is a major horticulture region, producing sugar cane, mangoes, melon, bananas, grapefruit and many other crops.

Mangoes were identified as a prospective crop for conversion to organic production in the ORIA. The comparative advantage for organic mango production relates to their relatively low requirement for nitrogen fertiliser, few pest and disease problems and the presence of an existing established mango industry that is progressive and innovative.

The Department of Agriculture in conjunction with the Rural Industries Research and Development Corporation developed a project to establish a demonstration site for conversion to organic mango production. Partners in the project are mango grower Parker Poynt Plantation and compost producers Kununurra Compost.

The demonstration site is a 1.2 hectare block of 10-year-old Kensington Pride (KP) mangoes. A small initial block was chosen to reduce the commercial risk in the event of crop failure, while providing a commercially realistic scale to gain knowledge and experience in order to assess the commercial and technical feasibility for future expansion of the organic system.

Before considering organic production, the existing mango production system used by Parker Poynt Plantation had progressed for some time towards a soft conventional approach. Interest in developing a more integrated and biological approach had resulted in a reduced need for many of the conventional fertilisers and sprays normally used. This meant that the transition into a fully organic certified system was unlikely to require dramatic changes to management practices and that crop quality and yields should remain relatively stable.

The site is situated at the entrance to the property and was chosen because it is away from most of the other conventional mango, banana and other cropping areas. This allows for relative isolation to reduce the risk of contamination from adjacent land use and means the area needed for buffer zones between organic and conventional crops are minimised.

The existing mature mango trees were considered healthy and there were no major production problems relating to soil conditions, weeds, or disease. So establishing an organic system was unlikely to face serious existing problems.

Choosing mature trees was also considered an advantage because older KPs are considered to have less tendency for

biennial bearing. The benefit to conventional production of the growth regular paclobutazol, commonly used to even out cropping patterns, would be less pronounced than may be the case for younger trees. Therefore any yield disadvantage would be minimised.

An attractive price premium remained for the organic product as conventional mango supplies increased.

One of the first step steps in the transition to formal organic certification was to write down an organic management plan. This plan covers the normal management issues faced by producers, such as management of soil and nutrient, weeds, pests and diseases, water and irrigation, as well other topics such as contamination risk,

biodiversity and staff awareness. The real value of writing down these details is, as the grower, said "it forces you to really think about each issue and how you plan to deal with it." Writing a plan also reveals those issues where you don't have a satisfactory solution – for example, in this case, control of termites remains unresolved and doubts remain about in-field and postharvest treatments for anthracnose (although anthracnose is rarely a major problem in the ORIA).

An application for organic certification was lodged in September 2003. The timing of this was critical to ensure that the inspection and documentation was valid before harvesting of fruit. The first year, pre-certification period, was completed and reinspection was conducted in September 2004 without problem, giving the site and the 2004 mango crop organic "in conversion" status.

This season has seen the first organic "in conversion" mangoes from Kununurra on the Perth market. Reports from Perth wholesalers and retailers indicate that fruit quality has been excellent. The usual early shortage of new season mangoes has meant that the organic product was snapped up by eager buyers irrespective of their special organic status. However, an attractive price premium remained for the organic product as conventional mango supplies increased.

Mangoes from the Kununurra are transported across the country to all major cities. Because the ORIA has freedom status from fruit fly and mango seed weevil, quarantine treatments for some destinations are not required.

Several other mango growers are now considering the transition towards organic production and opportunities for conversion to organic melon and organic grapefruit production are under consideration.

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