The Mackay Whitsunday Isaac Region Sustainable Horticulture Guide provides relevant information and tools to assist producers in achieving sustainable management of their land, whilst maintaining or enhancing farm efficiency and productivity. It is designed to be a resource for finding comprehensive advice on horticulture management.

This guide has been written for horticulture producers in the Mackay Whitsunday Isaac region. It links to the Mackay Whitsunday ABCD Management Practice Framework for Horticulture: 2015 Update (Reef Catchments, 2015).

A Class or innovative practices from the ABCD Framework are identified throughout this document.

The Mackay Whitsunday region includes the catchments of the Pioneer, O’Connell and Proserpine River systems and covers an area of approximately 6,000 square kilometres. The climate is subtropical to tropical with a distinctive wet season. The average rainfall is 1,300 to 2,000 millimetres and over 50 percent of this falls in three months between January and March.

Horticulture is a minor land use in the Mackay Whitsunday Isaac region, with sugarcane, grazing and natural areas being the most significant.

The Mackay Whitsunday Horticulture Management Practices ABCD Management Framework has been designed to support the identification, validation, implementation and review of horticulture practices that can improve both freshwater and marine water quality and ecosystem health, as identified in the Mackay Whitsunday Regional Water Quality Improvement Plan (WQIP) (Robins et al. 2014).

The development of ABCD frameworks for a range of industries is pivotal to implementation, monitoring, measurement and continual improvement through the WQIP process. The ABCD frameworks are designed to highlight and facilitate communication about the different levels or standards of management practices (as opposed to resource condition) for different water quality parameters (i.e. sediment, nutrients and chemicals).

The classification provides a definition and scale of improvement from Aspirational, through Best Management Practice and Conventional to Dated practices. New and innovative practices require further validation to determine industry wide environmental, social and economic costs/benefits. Validation requires R&D and if appropriate, some validated practices will become recommended BMP.

Hort360 is a computer based tool, which is designed to give a 360 degree view of farm business operations. It assists producers to identify potential risks, capitalise on business opportunities and highlight unnecessary farm expenses. It’s a whole of farm business approach.

For more information please contact Reef Catchments Limited (RCL).

Mackay Office
Suite 1/85 Gordon Street Mackay QLD 4800
P: 07 4968 4200

Proserpine Office
45 Main Street, Proserpine, QLD 4800
P: 07 4945 2321

For more information please contact Reef Catchments Limited (RCL).

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**Innovation Trial**

**Microbial Biofertilisers**

This Sustainable Agriculture Innovation trial aims to demonstrate improvements in soil health and tree crop productivity in the Mackay, Whitsunday and Isaac region by applying a range of microbial and organic fertility products. Trial sites have a range of volcanic rocks from 0.6m to 1m, red-brown, non-cracking clay soil that is formed situated mainly on Wagoora soil. This soil is a moderately deep (0.6m to 1m) and has a pH range of 4.0 to 5.7. The soil is rich in organic matter, humus, minerals, and red clay. This allows for the application of various microbial and organic fertility products to improve soil health and tree crop productivity.

**Trial details**

- **Mechanical systems:** These systems are designed to suit the application of various microbial and organic fertility products to improve soil health and tree crop productivity.
- **Irrigation systems:** These systems are designed to suit the application of various microbial and organic fertility products to improve soil health and tree crop productivity.
- **Nutrient management:** These systems are designed to suit the application of various microbial and organic fertility products to improve soil health and tree crop productivity.
- **Pest management:** These systems are designed to suit the application of various microbial and organic fertility products to improve soil health and tree crop productivity.

**Trial methods**

- **Trach Shiel (n):** This soil is rich in organic matter, humus, minerals, and red clay. This allows for the application of various microbial and organic fertility products to improve soil health and tree crop productivity.
- **Mackay Whitsunday Isaac:** This region is well known for its productive agricultural lands. The region is blessed with a range of volcanic rocks and has a high diversity of soil types. The region is well suited for the application of various microbial and organic fertility products to improve soil health and tree crop productivity.

**Microbial Proven Product Information**

- **Total bacteria (TC):** This is a group of microorganisms that are responsible for the production of various microbial and organic fertility products. These microorganisms are found in the soil and play a crucial role in the productivity of the region.
- **Fungi:** These microorganisms are responsible for the production of various microbial and organic fertility products. These microorganisms are found in the soil and play a crucial role in the productivity of the region.
- **Total fungi (MH):** This is a group of microorganisms that are responsible for the production of various microbial and organic fertility products. These microorganisms are found in the soil and play a crucial role in the productivity of the region.
- **Microbial diversity (k):** This is a measure of the diversity of microorganisms that are responsible for the production of various microbial and organic fertility products. This measure is an important indicator of the productivity of the region.
- **Fungi beta diversity (10):** This is a measure of the diversity of fungi that are responsible for the production of various microbial and organic fertility products. This measure is an important indicator of the productivity of the region.

**References**


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