Queensland
REEF WATER
QUALITY
Program

Reef protection regulations
Farming in Reef catchments

Fertiliser placement guide

Version 2

(Agricultural environmentally relevant activity standard for banana cultivation)

#31879 | 0322

Queensland Government

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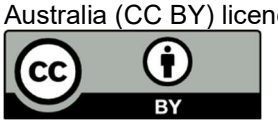

Updated April 2022

STANDARD CONDITIONS 9 - 10: PLACEMENT OF FERTILISER

Under the Reef protection regulations, the following standard conditions for fertiliser application must be implemented as part of the Agricultural Environmentally Relevant Activity (ERA) standard for banana cultivation – version 2.

Standard condition 9

Ground-based application of fertiliser containing nitrogen must only be applied to the crop beds and not the inter-row space.

Standard condition 10

Ground-based application of fertiliser containing phosphorus (and not nitrogen) to the entire block must not occur on the agricultural property unless:

a) in preparation for the impending establishment of a plant crop on that block; and
b) the fertiliser is incorporated into the soil within three (3) days of application.

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Glossary

Activity: The environmentally relevant activity (ERA) to which this Agricultural ERA standard applies.

Commercial: For the purposes of this guide, commercial is defined as undertaking the activity (banana growing) for a fee or reward.

Fallow: Refers to an area of land that is typically used to grow bananas, that is left without that crop for a period of at least 6 months.

Fertigation: Refers to the application of fertiliser to the crop via an irrigation system.

Great Barrier Reef catchment: Has the same meaning in the *Environmental Protection Act 1994*. The Great Barrier Reef catchment is the area shown on a map prescribed by regulation as the Great Barrier Reef catchment.

Surface banded application: Refers to fertiliser applied in bands along the crop beds on the soil surface.

Variable rate technology: Refers to equipment that can apply fertiliser, chemicals, lime, gypsum, irrigation water and other farm inputs at different rates across a field, without manually changing rate settings on equipment or having to make multiple passes over an area.

Introduction

The *Environmental Protection Act 1994* requires **commercial** beef graziers, sugarcane growers, banana growers and horticulture and grain growers in the Wet Tropics, Burdekin, Mackay Whitsunday, Fitzroy and Burnett Mary regions of the **Great Barrier Reef catchment** to comply with commodity-specific minimum practice agricultural standards under the Reef protection regulations.

The purpose of the Reef protection regulations is to protect the health of the Great Barrier Reef by reducing pollutant run-off (nutrients, sediment and pesticides) in waterways that flow to the Reef.

The regulated minimum practice agricultural standards are based on the best available science and agricultural industry expertise to deliver significant water quality benefits for the Reef while driving better land management practices for profitable and productive farming.

The correct placement of fertiliser plays a critical role in reducing fertiliser losses in run-off, to the air or through the soil profile. Restricting fertiliser application to the crop bed or using **fertigation** minimises the chance of losses to the environment, and can result in more efficient uptake of fertiliser by the plant and an increase in profitability due to reduced wastage of fertiliser. Fertiliser placement in this guide focuses on nitrogen and phosphorus, two nutrients of environmental importance because of the risk they pose to water quality in Great Barrier Reef coastal and marine ecosystems.

The explanatory information in this document is to be used by growers, and others involved in providing advice on fertiliser application on agricultural properties.

The Great Barrier Reef catchment consists of the Cape York, Wet Tropics, Burdekin, Mackay Whitsunday, Fitzroy and Burnett Mary natural resource management regions (Figure 1).

Producers in Cape York are not currently required to meet minimum practice agricultural standards as the region has met its Reef water quality targets (under the Reef 2050 Water Quality Improvement Plan 2017-2022).

You can find out if your property is in one of these regions by completing this online form available at www.qld.gov.au/ReefRegulations.

The online form gives you the number of hectares of your Lot/s in each Reef catchment. If a Lot on plan (i.e. the boundaries of your property) crosses the outer boundary of the Great Barrier Reef catchment, the Lot is considered within the Reef catchment if more than 75 percent of the Lot, or more than 20,000 hectares of the Lot, is within the Reef catchment boundary. If a Lot is located across the boundary of two Reef regions, the Lot is taken to be in the region where more than 50 percent of the Lot is located.

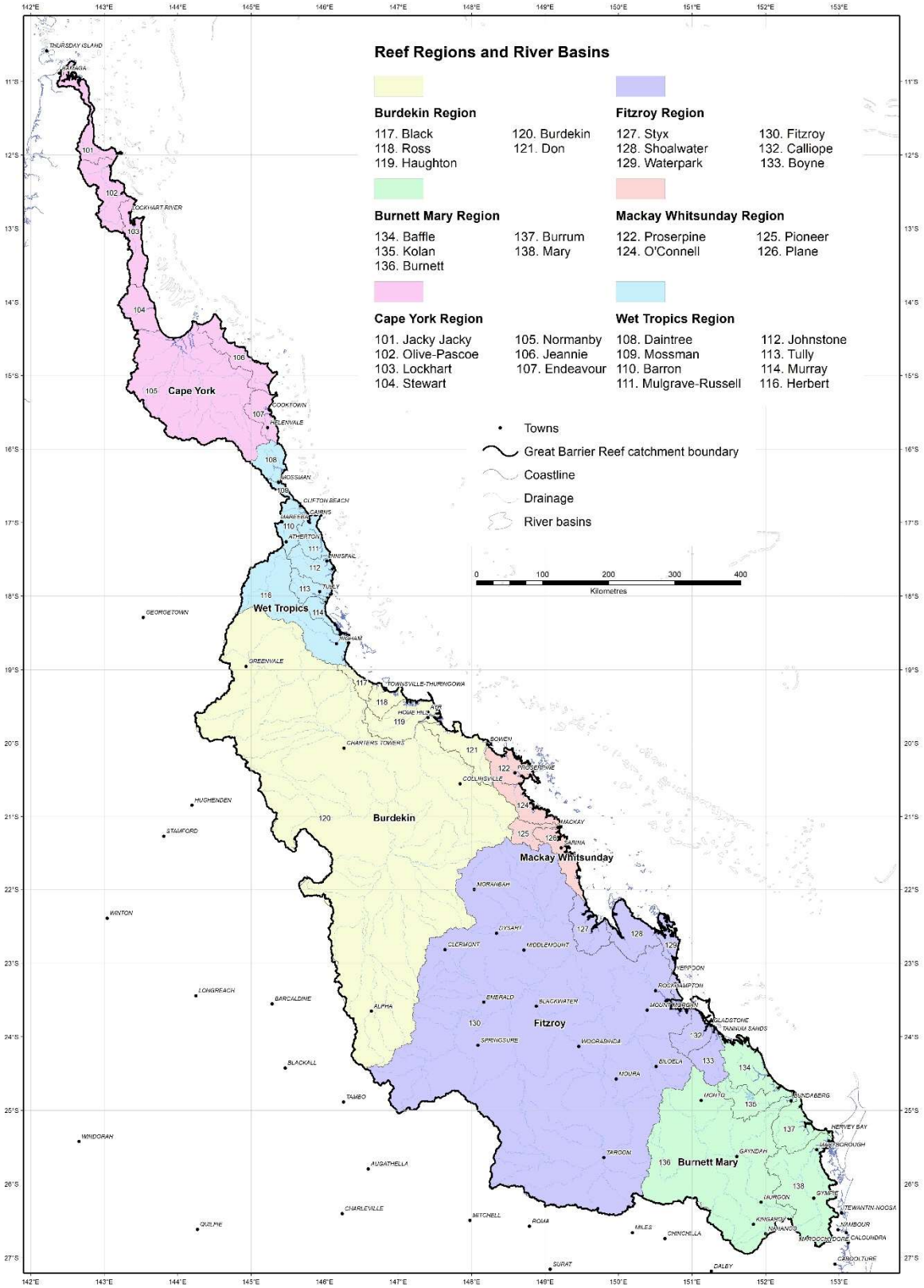

Figure 1: The Great Barrier Reef stretches more than 2,300 kilometres along Queensland's coastline. It receives run-off from 35 catchments which are spread over six natural resource management regions.

Purpose of this guide

The purpose of this guide is to provide information to enable you to comply with the standard conditions for nitrogen and phosphorus fertiliser placement in accordance with the Agricultural Environmentally Relevant Activities (ERA) standard for banana cultivation – version 2 under the *Environmental Protection Act 1994* by:

- outlining acceptable practices that can be used on banana farms; and
- providing information on where to find help and further information.

This guide outlines the minimum practice standards that you are required to use to meet the Reef protection regulations. You are not limited to these minimum practice standards, and higher practice standards are encouraged.

Regulations timeframe for commercial banana growing

The Reef protection regulations apply to different regions at different times. Please refer to the table below for the timeframes for commercial banana growing.

Commodity	Region	General record keeping requirements	Minimum practice agricultural standards
Banana cultivation	Wet Tropics	1 December 2019	1 December 2020
	Burdekin, Mackay Whitsunday, Fitzroy and Burnett Mary	1 December 2019	1 December 2022
	All Great Barrier Reef catchment regions	From commencement of an environmental authority for ERA13A – Commercial cropping and horticulture in the Great Barrier Reef catchment – banana cultivation	

What do I need to do?

Applying fertiliser containing nitrogen

To comply with the Reef protection regulations, you must apply any fertiliser containing nitrogen to the crop bed only, by using **surface banded** targeted/directional spreading or fertigation application methods, or another method that only applies fertiliser to the crop bed (Figure 2). You must also record the method of application as part of the record keeping requirements.

The regulations apply to all fertiliser applications, including liquid and solid fertiliser products and includes application by hand, machine, fertigation, and **variable rate technology**.

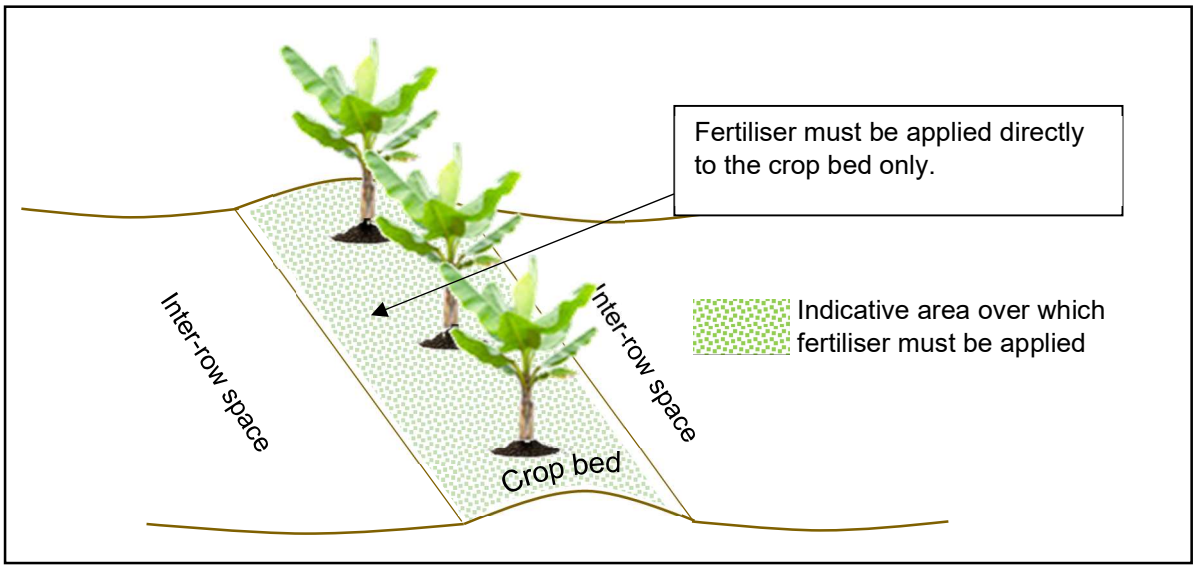

Figure 2: Diagram to indicate the area over which fertiliser must be applied.

Applying fertiliser containing phosphorus

To comply with the Reef protection regulations, ground-based application of fertiliser containing phosphorus to an entire block must only occur in preparation of a plant crop being established, and when the fertiliser is incorporated into the soil within three days of it being applied.

What if I cannot access my paddocks to apply fertiliser?

If you are unable to use existing infrastructure, such as fertigation (for example after periods of extreme weather), you can use aerial broadcast application to apply fertiliser. It is recommended that you keep a record relating to the reason for using aerial application.

Record keeping

To comply with the Reef regulations, you must keep a record of the method you used to apply fertiliser. The record must be made within three days of application, kept for at least six years and made available for inspection to an authorised person upon request.

How do I apply soil conditioners?

You may still use ground-based application methods for soil conditioners, for example lime and gypsum. Mill mud and mill mud/mill ash mixes may be spread across the entire block and incorporated into the soil during the **fallow** period. You can also apply phosphorus across the entire block (but not nitrogen) where it is being used to support crop establishment, but it must be incorporated into the soil within three (3) days of it being applied.

What should I avoid?

Fertiliser containing nitrogen must not be applied to the inter-row space (see Figure 2) because of the greater chance of fertiliser losses, which pose a higher risk to water quality.

You should avoid applying fertiliser to your paddocks when heavy rainfall is forecast. You can monitor forecast rainfall by regularly checking the Bureau of Meteorology website (www.bom.gov.au) for your region.

Contacts

For further information you can contact the following organisations:

Department of Environment and Science (DES)
13 QGOV (13 74 68)
officeoftheGBR@des.qld.gov.au
www www.qld.gov.au/ReefRegulations

Department of Agriculture and Fisheries (DAF) extension officers can be contacted on:
13 25 23 (cost of a local call within Queensland), or 07 3403 6999
callweb@daf.qld.gov.au
www www.daf.qld.gov.au/about-us/contact-us
Contact details for regional offices can be found here:
www www.daf.qld.gov.au/contact/offices

Australian Banana Growers Council
07 4015 2797
info@abgc.org.au
www www.abgc.org.au

Natural Resource Management (NRM) groups
www www.nrmrq.org.au/find-your-regional-group