

Reef Regulation Questions (Burdekin specific)

Do growers in the Burdekin have to have a Green Cane Trash Blanket?

No the minimum standards do not mandate the implementation of a green cane trash blanket. The erosion and sediment control standard is outcome based and recognises that practices differ between regions. To minimise soil loss and surface water run-off, measures must be implemented and maintained on the agricultural property. A green cane trash blanket is one example of an erosion and sediment control measure a grower may choose to take, however it is recognised that green cane trash blanketing is not currently a common practice in the Burdekin. Other examples are provided in the minimum standards, and include having a cover crop in place following harvest.

Are growers in the Burdekin allowed to have a bare fallow?

No, all fallow blocks must have either a cover crop (which may include grass) established after harvest, or sugarcane trash in place.

Note the following dot points were discussed verbally with Qld Govt around clarifying the definition of a 'bare fallow'

- Bare fallow – the definition of fallow is 6 months. So this means if the ground is bare for less than 6 months then it is not considered a 'bare fallow' under the regs. So growers should not be concerned if they are keeping ground bare to control weeds, prepare ground etc, as long as the period it is bare is less than 6 months.
- It was also discussed that the intent of this part of the regs was to manage erosion control. I stated that most of the land in the Burdekin is under 1% slope and is considered very low risk for erosion/sediment loss. The department agreed and stated that they did not want to have 'regionally specific standards', and that each property would be considered on a case by case basis. I gave the example of someone with a 7 month bare fallow, that had a slope less than 1%, good off paddock drainage, low flood risk and they agreed that this "should" not be an issue. Any extra practices would also be viewed favourably to minimise sediment loss such as a drainage plan, recycle pits etc.
- I also raised that there will be areas of the Burdekin that have low flood risk, and possibly a weed problem that they need to keep bare to ensure the weed seed bank does not increase, or they do not have water allocation to grow a cover crop. This was noted by the department and I stated that we do not want to see growers have poorly managed fallows (whether that be bare or cropped), simply as a result of following regulations, that will result in extra costs and/or poorly performing subsequent cane crops.

Can I use the District Yield Potential of 180T/Ha as long as on any block on the farm I have cut over 150T/Ha 3 times in the last 15 years?

Yes, If verifiable yield records or other reasonable evidence from the past 15 years show that blocks on your farm have produced yields higher than 150 tonnes of cane/ha in at least three (3) harvest periods (seasons) (to the satisfaction of the administering authority), you may use the District Yield Potential of 180 t/ha and the baseline nitrogen application rate of 220 kg N/ha for that farm.

Note: For the purposes of this method, to determine which district yield potential to use in the Burdekin, "farm" is an area covered by one (1) unique farm identity number.

If I have historically harvested 200T/Ha on my farm, what is the process where I can fertilise according to that as my yield potential? Do I need to show that I have grown that yield 3 times in the last 15 years on that block? What if I have a block beside it that has the same soil type (as shown on soil maps), but the years that it was planted (with potentially high yields) were very wet and overcast, so yields were less than 200T/Ha? The potential is still there to grow that yield, however environmental conditions have dictated I can't produce records for that particular block (or blocks).

If a grower can demonstrate to the satisfaction of the administering authority (through verifiable yield records or other reasonable evidence from the past 15 years) that a block or a number of blocks has produced yields higher than the district yield potential in at least three (3) harvest periods (seasons), the baseline nitrogen application rate can be adjusted for those blocks only to reflect the block yield.

Do I have to stay at the 150T/Ha yield potential if I have just bought a poorly managed farm that yielded poorly and below 150T/Ha? What if the farmer who owned it before me did not irrigate appropriately, or have good pest and disease control, or had the wrong variety. How do I demonstrate that my practices will have higher potential than the previously poorly managed practices?

You would need to compile verifiable yield records once you take over the farm to show that yields are greater than the 150 t/ha yield potential. However, the same conditions apply in that you would need to show higher yields in at least three years from the last 15 years.

Along similar lines to above, what if I had a significant change to my farming practices after discussions with an advisor, and plan to completely change my farm management that should remove yield limiting factors. My records might show I have a lower yield potential, but can I move to 180T/Ha with the new practices? Or once I do not have 3 instances in 15 years with over 150T/Ha yield potential, am I locked into that yield potential?

The same conditions apply in that you would need to demonstrate higher yields in at least three years from the last 15 years. However if a grower wanted to implement a N&P budget developed with an appropriate person prior to it becoming a requirement, i.e. for the 2020 season they could utilise the whole of farm amount to apply higher rates where they believe it would be appropriate as long as these rates are off-set on other areas of the farm and the whole of farm amount is not exceeded. Note that guidance for the N&P Budget is available [online](#) now.

Do all growers in the Burdekin have to have a recycle pit?

No, the minimum standards do not mandate the implementation of specific measures. A recycle pit is just one example of an erosion and sediment control measure a grower may choose to take. Other examples are provided in the minimum standards, and include maintaining a constant gradient less than one percent. Alternatively a grower can implement any other measure that achieves the outcome of minimising soil loss and surface water run-off.

If a grower wishes to apply a nitrogen rate higher than the regulated method allows, then can they apply this higher rate only if they offset it by using a lower rate (discounted by the same amount that the other rate is exceeded by) on another block (does this other block need to be exactly the same area?), and have a whole of farm N&P budget where the sum of all N&P does not exceed what should be used for each block under the regulated method?

Yes but only if an N and P Budget is prepared. Higher rates can be used on part of the farm if it is offset elsewhere, so that the whole of farm N and P amounts do not exceed what should be used for each block under the regulated method. The block/s with the lower rates do not have to be the same area as the block/s with higher rates as it may be that a number of blocks with small rate reductions are used to offset fewer blocks with higher rate increases as long as the whole of farm amount is not exceeded.

Can soil samples be collected from a small area (eg: within a 2-3m diameter)/single point?

The *Prescribed methodology for sugarcane cultivation* (formerly *The method for soil sampling and analysis*) outlines acceptable soil sampling methods. In brief, for an area less than 15 hectares at least 20 core soil samples need to be taken and mixed together to form the composite sample. For an area greater than 15 hectares, at least 40 core sites must be taken and mixed together to form the composite sample. This method also recognises the Fertcare soil sampling guide for planning appropriate sampling procedures.

Does every farm have to have a Farm nitrogen and phosphorous budget developed? If so, from what date is this required? Is there a template of an example N&P budget?

Yes, from 1 December 2021 every farm in the Burdekin, Wet Tropics and Mackay Whitsunday regions will need to develop an N&P Budget. For the Fitzroy and Burnett Mary regions, the requirement is from 1 December 2022. However, you may develop an N&P Budget earlier than these dates if you wish. The N&P Budget guide (available [online](#)) outlines one possible example layout, however growers may record the N&P Budget in a format of their choice, so long as it contains all of the required elements.

What is the verification procedure for a Farm N&P budget – is there a form for an advisor or the farmer to complete? How often does this need to be completed?

The first N&P Budget must be developed and verified by an appropriate person/s. The N&P Budget must then be reviewed, updated and verified every five years by an appropriate person. There is no form to complete, however you must record the name and contact details of the appropriate person who developed and/or verified the N&P Budget and the dates the Budget was developed and verified. The records can be kept in any format.

Is there a requirement to take a soil sample every 5 years? Or is it once a crop cycle – what if the crop cycle is longer than 5 years? If it is the former, does this mean a grower need to take a sample in a 4th (or 5th depending on time of planting or previous soil sample) ratoon, then take another sample if they choose to plough out the following year?

No, soil must be sampled and tested, at a minimum, within the 12 months prior to fertiliser being applied to the first crop of a crop cycle (plant). For the purposes of the regulation a crop cycle is defined as one plant and four ratoon crops. However, the same soil sample can be used to inform N and P rates for older than fourth ratoon, as a minimum standard.

Can a liquid fertiliser product be applied to the soil surface (eg: Dunder, Easy N, others)

Yes, as long as the product is applied to the crop row only and not to the furrow or inter-row space. The regulations apply to all fertiliser applications, including liquid and solid fertiliser products, split applications, top dressing and variable rate technology.

Has the method for calculation of N rates changed with the 'new regulations?'

No, the method has only undergone minor changes (for clarification), growers and advisors must still use the regulated method. The name of the method is now *Prescribed methodology for sugarcane cultivation* and this document contains both the soil testing and nutrient calculation methods and is available at: https://www.qld.gov.au/data/assets/pdf_file/0016/113146/prescribed-method-sugarcane.pdf.

Do the proposed changes to 2,4-D use (ie: buffer areas) affect any other chemicals, and is this part of reef regulations?

The requirement for agricultural chemicals under the Reef regulations is to keep a records of their application, including the date of application, product name, and application rate. Changes to 2,4-D are not part of the reef regulations.

Do I need to account for legume crops in my nitrogen budget? What if I harvest my legume crop, how much nitrogen do I put on then?

Nitrogen available from legumes is not regulated, so not a requirement of the N&P Budget. If you wish to account for the N, perhaps to provide an off-set you should work with an agronomist to calculate any deductions due to the legume crop.

What if I grow corn or rice and then want to grow cane. Do I have to make any deductions for nitrogen if I have applied nitrogen in those crops?

No, the intent is to recognise the nitrogen added or mineralised from the fallow period. The glossary definition for fallow in the method is: Fallow: An area of land that is typically used to grow sugarcane, and that is left with either grass/weedy cover, green manure or a leguminous crop (i.e. crop or ground cover with low or no nitrogen demand) for a period of at least six (6) months. Therefore, crops such as rice and corn are not considered a fallow.

Do I need to account for nitrates in water in my nitrogen budget?

You can if you wish, however this not a requirement of the N&P Budget or the regulated method.

Can I broadcast mill mud, or do I have to apply it in a band?

You may still use broadcast application methods for soil conditioners (also known as ameliorants or soil additives), including mill mud and mill ash. However, mill mud and mill mud/ash mixes can only be broadcast across the entire paddock if it is incorporated into the soil during the fallow period. At all other times, mill mud must be banded.

Can I apply less than 100T of mill mud on any paddock and not deduct any nitrogen or phosphorus from my fertiliser application?

That is correct, there are no changes to the existing method.

Can I use Collwell P to determine phosphorous application rates if my pH(1:5 water) is greater than 7?

Yes, in the method the threshold for using Colwell P to determine phosphorus application has been revised slightly to above pH (water) 7.

If I grow a different crop, other than cane for the next 5 years. Can I just plant cane again or will there be regulations that I have to abide by?

No, this would not trigger the new cropping requirements because the land will have been continually cropped (just with something other than cane). You would only need to follow the new cropping requirements if you have not cropped on a particular block of land for at least three years in the last 10, with one of those years being in the last five years.