



Bio Dunder® - good for the crop and the environment

Tony Bugeja says Bio Dunder has delivered good results for productivity and the environment.

Mackay grower Tony Bugeja can list off plenty of reasons for using Bio Dunder® liquid fertilisers across his family's cane farming operation.

He likes the precision of application, the variable rate capability and the efficiency that comes with using a contract fertiliser applicator.

He also likes the way it supports the family's whole-system approach to farming, which considers how all elements work together to lift productivity.

"We've been using Bio Dunder for more than 30 years and it has delivered good results. It's good for productivity and, used properly, it's good for the environment," he said.

Tony farms about 335ha in the Palmyra-Rosella area with his wife Margaret, brother John, and son Mark. Their five-year average tops 100

tonnes per hectare and their CCS is above the Racecourse Mill average.

Tony says their focus has always been on maximising productivity and achieving more sugar tonnes per hectare.

The BMP-accredited farming enterprise gets professional advice from private agronomy firm Farmacist and uses variable rate nutrient application across the whole farm.

"The right nutrient program is one of the most important issues when it comes to production," Tony said.

"Our fertiliser contractor Nathan Ross takes a very professional approach to his task. He uses GPS guidance in conjunction with variable rate application, so we know that the correct nutrient value is applied in the right places."

The Bugejas apply Bio Dunder to their plant paddocks and till it in just prior to planting.

"This saves us time and money during the crushing, and gives us more time to focus on irrigation."

They also use a 'follow the harvester' approach in the crush.

"We apply Bio Dunder as soon as possible after harvesting and then we follow that up with irrigation."

Tony said they changed their approach to irrigation scheduling about 15 years ago on the advice of their agronomist.

"We used to keep water back in case we got a dry January-February. Now we irrigate as hard as possible from cut to Christmas.

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New delivery statement coming

To help you meet your record keeping obligations under the new Reef Regulations, we are providing some additional information about your fertiliser deliveries.

This year, we will send you a detailed delivery statement containing essential reporting data. It will have a table with the following information at a block level:

- date of application
- fertiliser product name and percentage of nitrogen and phosphorus in the product
- product application rate (m3/ha)
- amount of product applied (m3 and tonnes)
- amount of nitrogen and phosphorus applied (kg/ha).

We will email your delivery statement within three days of application so you can meet the legislative requirement to have made a record within

three days of fertiliser being applied to your farm.

For these new delivery statements to be accurate, your contractor needs to know which block they are applying fertiliser on.

Please ensure your contractor has a copy of your mill-supplied farm map. You will also need to confirm which farm and block number they are applying fertiliser to, before they start application.

In addition to the new delivery statement, we will send you a delivery docket and tax invoice list as normal.

In January, after the completion of the crushing season, we'll also provide you with a statement summarising all of your application data for that season. The data will be presented in a table.

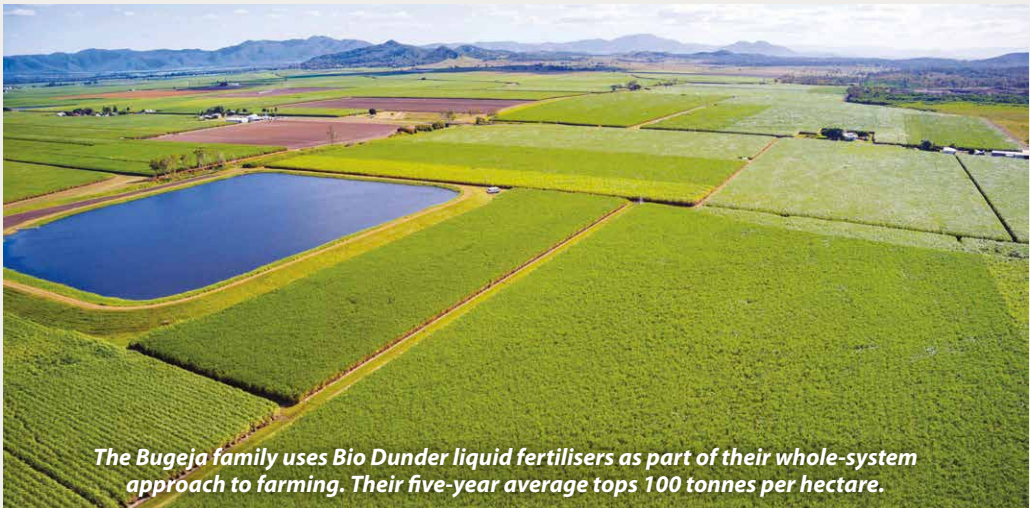
We will update you with more information about the new delivery statement in the coming weeks.

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"With better irrigation scheduling, we believe the plant is taking up those nutrients before the wet season hits. The cane matures earlier and that allows more time for the plant to convert energy into sugar," Tony said.

"We've definitely seen an improvement in our CCS since we started taking this 'cut to Christmas' approach to irrigation.

"When I look at our production figures and CCS, I know we're achieving maximum nutrient use efficiency."



The Bugeja family uses Bio Dunder liquid fertilisers as part of their whole-system approach to farming. Their five-year average tops 100 tonnes per hectare.

“

We used to keep water back in case we got a dry January-February. Now we irrigate as hard as possible from cut to Christmas.”

Tony Bugeja



Tony Bugeja at the private dam which was built in 1995 at the family's Palmyra farm. It covers an area of six hectares and holds 300 megalitres.



Centre pivot irrigators are used extensively across the Bugeja family's farms.

Bio Dunder® and reef compliance



The new Reef Regulations have generated a lot of discussion in farming circles about what's allowed under the new laws and what's not.

There has also been some confusion around whether liquid fertilisers meet the new standards.

The Bio Dunder® fertiliser range is reef compliant, when used correctly.

Bio Dunder fertilisers are liquid applied under pressure to the crop row – not broadcast. The right nutrient formulation is matched to your soil test results. And it is precision applied to the crop by a professional contractor.

Bio Dunder liquid fertilisers can be surface banded under pressure to the crop row, or sub-surface banded using a stool splitter.

Our Bio Dunder contractors use precision application equipment to apply the fertiliser under pressure to the sugarcane stool after harvest.

Our products can also be applied to either side of emerging plant cane to assist with wetting-up, if that is an issue on your farm.

In some locations, contractors and growers use a stool-splitter to apply dunder beneath the soil surface. The Dunder Under applicator at Proserpine is an example of this.

All of these application techniques meet the new

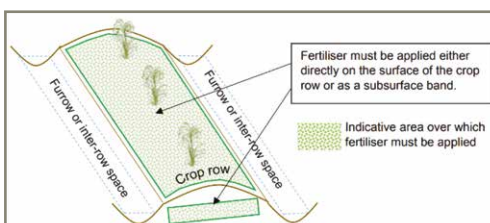
Reef Regulations.

The message from Government and Reef Regulations is simple: No fertiliser is to be applied in the inter-row (see diagram).

There are some exceptions to that rule. If you have an exceptionally wet year and can't get in the paddock, you can apply fertiliser by aircraft. But this of course is cost-prohibitive. The other situation where fertiliser can be broadcast is on pasture grass paddocks.

Wilmar AgServices agronomists can answer any of your questions regarding Bio Dunder fertiliser applications, and how they relate to the Reef Regulations.

You can call our office on 1800 881 957 or contact Menno Bokma directly on 0419 174 616.



This diagram indicates the area over which fertiliser must be applied.

Source: Fertiliser placement guide, Queensland Government Department of Environment and Science (2020).

Formulated to be on top

In the early 1990s, we began doing trial work on value-adding to the Bio Dunder® product to create a complete N, K, S blend.

It led to an important discovery: The sulphuric acid that was used to provide the sulphur requirement for the crop also helped keep the pH low. This in turn kept the nitrogen in a more stable form.

Over the following years, numerous trials showed that Bio Dunder liquid fertilisers, when placed on the surface of the cane row, could deliver comparable results to the granular placed fertiliser.

Further trial work, such as the Landloch Rainfall Simulation Trial (Loch, R. 2014), showed that surface application of Liquid One Shot® resulted in lower nitrogen mobilisation in run-off, or leachate, than in the granular equivalent that was applied sub-surface.

It was also shown that placement of Liquid One Shot had no significant effect on nitrogen losses, and no benefit was observed from sub-surface placement.

There is a large body of evidence showing there are no significant nutrient losses when Bio Dunder liquid fertilisers are surface applied. This trial work, and the fact that Bio Dunder has been specifically formulated to be on top of the soil, is why Bio Dunder is permitted for surface application on the crop row under the current Reef Regulations.

Reference:

Loch, R. (2014). Assessment of Nutrient and Sediment Mobilisation from a Sugar Cane Cropping Soil Fertilised with Liquid One Shot®, Landloch Pty Ltd, Toowoomba, QLD.



Be REEF COMPLIANT with BIO DUNDER®

When you choose **Bio Dunder®** liquid fertilisers, you can be confident about meeting the new Reef Regulations

- ☒ Liquid applied under pressure to the crop row
- ☒ Large range of products to match your soil test results*
- ☒ Support from experienced agronomists and contractors

To find out more, contact your local Wilmar AgServices agronomist: **Menno Bokma** ☎ 0419 174 616

*Products must be used in compliance with the Reef Regulations

Wilmar AgServices ☎ 1800 881 957
www.wilmaragservices.com.au



Application contractors

MACKAY REGION

A1 Farming
Tractor
M 0429 143 074

Andrew Chetcuti
Truck
M 0428 185 307

Damian Gunning
Tractor
M 0427 070 110

Peter Hackett
Trucks
M 0428 564 607

Keating Haulage
Tractor
M 0413 769 769

Mel Janke
Truck
M 0408 147 740

Trent Janke
Truck
M 0439 526 537

Darren Little
Tractor
M 0407 731 115

Joe Quattromani
Truck
P 4950 3925
M 0419 782 673

Van Damme Plant Hire
Truck
P 4956 2214
M 0427 996 898

Nathan Ross
Tractor
M 0438 523 774

Phillip Ross
Tractor
M 0408 701 693

Vella Haulage
Truck
M 0419 651 242

Shane Webb
Tractor
M 0419 728 285

PROSERPINE

Stacey Hadlow
Dunder Under
M 0427 678 572

Paul McDougall
Tractor
M 0448 374 831

BURDEKIN

Griggs Haulage
Tractors
M 0407 731 213

R&D update

Follow the harvester trial results



The results of Wilmar's 'Follow the Harvester' trial are in.

The trial, which was carried out on Peter Hackett's Koumala farm in 2018-19, compared the performance of Q240 second ratoon crops when the same

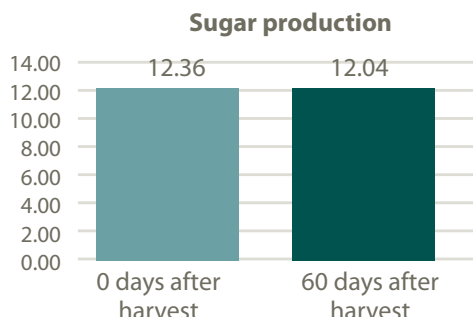
formulation of Bio Dunder® liquid fertiliser was applied:

- 0 days after cane harvest and
- 60 days after cane harvest.

We measured plant growth, plant tissue nutrition, tonnes of cane per hectare, CCS, and tonnes of sugar per hectare. In all areas, there was no statistically significant difference between the treatments.

The results indicate that the timing of Bio Dunder liquid fertiliser application on sugarcane ratoon crop at 0 or 60 days after harvest has a similar positive effect on plant growth, plant nutrition uptake and sugar production.

While this single trial cannot be regarded as conclusive, it does show that following the harvester with the application of Bio Dunder does not adversely affect sugar production and might even be of greater benefit than when applied at 60 days after harvest.



There was no statistically significant difference in the treatments for tonnes of sugar per hectare.



New role for Liana

After six years as Wilmar AgServices' Research and Development Agronomist, Liana Lillford (pictured) has moved into a new role within the business.

Liana has been appointed Stockfeed Product Manager, which will see her focus on the development, management and marketing of Wilmar's liquid stockfeed product lines.

Research and development for our liquid fertiliser products remains an important focus for our business.

Please get in touch on 1800 881 957 should you wish to collaborate with us on trials.

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