

Mill Mud

Applicators

2011



Precision Application of Mill Mud

Mackay Sugar's John Markley plays a pivotal role in mill mud applicator development

Mud has long been used by cane farmers as a source of nutrients that can be cheaply added back on to paddocks. A by-product of the milling process, mill mud is particularly high in nitrogen, phosphorus and calcium and is produced at a rate of roughly 10% of the sugar cane milled.

However, mill mud can contribute to elevated levels of nutrients in streams and waterways, if applied at high rates and run off

occurs. Increased levels of nutrients can have adverse effects on fresh water and marine environments including coral and sea grass communities.

In the past mill mud has been spread on the field in a very ad hoc manner at a nominal rate of 150 tonnes of wet mud per hectare (t/ha) with large variability in application rates of between 0 – 300t/ha.

As each grower is allocated a set tonnage of mud by the mill according to the cane they produced, poor application can result in only small coverage and may require significantly more

fertiliser to be purchased and applied.

Mackay Sugar has considered this an inefficient application method resulting in increased cost for growers and reduced water quality benefits for the Mackay region.

With funding from Reef Rescue, Mackay Sugar has designed and commissioned new spreaders to aid in the precision application of mill mud.

The new spreaders apply mud directly onto the middle of the rows rather than a blanket spreading done in the past.

Reef Rescue is funded through the federal government's 'Caring for our Country' program.



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Old distribution



New applicator



New distribution on row

Mud is also able to be applied to three rows at a time reducing compaction on the inter-rows and reducing fuel and time costs. "Mud is now applied at a reduced rate of 50t/ha effectively tripling the land one manager can service with his allocation of mud," said Mackay Sugar's productivity Coordinator John Markley.

Distributing the mud over the field in this manner also reduces the chance of run-off; which has been problematic in the past, by:

- 1) Placing the mud in the centre of the row which is elevated;
- 2) Ensuring no mud is distributed onto the wheel tracks where the ground is more likely to have been compacted and is therefore more prone to water run off; and
- 3) Incorporating mud into the soil soon after application when planting occurs.

The development of the spreaders allows growers to apply mud to more hectares and as a result may see a reduction in their costs of fertiliser as mill mud is provided back to the growers at a cost significantly lower than traditional fertilisers.

Mackay Sugar originally commissioned three prototypes and after some initial design problems commissioned four more newly modified applicators. Reef Rescue has just now provided Mackay Sugar further funding to build seven more applicators and modify the three original prototypes taking the total to 14 applicators for the Mackay region. "We hope to have these ready by early May," said John.

With the fourth year of Reef Rescue due to start in July 2011, eligible activities have been expanded to include the construction of mill mud pads. Growers will now be eligible to receive up to 50% of the cost of the mud pad up to a maximum of \$10 000. With this incentive and 14 new applicators this will no doubt result in more efficient use of Mill mud, insuring increased efficiency for growers and an improvement in water quality entering the steam and waterways.



Applicator new design

Reef Catchments

Reef Catchments is the regional NRM body who oversees the Reef Rescue program in the Mackay Whitsunday Isaac region on behalf of the federal government.

Contact Chris Dench at Reef Catchments on (07) 4968 4200 or email: chris.dench@reefcatchments.com.au
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If you are interested in finding out more about Mill Mud Applicators please contact John Markley of Mackay Sugar on ph: (07) 4953 8571 email: J.markley@mkysugar.com.au