



MEDIA RELEASE

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Accurate fertiliser spreading could save NZ agriculture millions

A research study, commissioned by the New Zealand Fertiliser Quality Council (FQC), estimates that New Zealand agriculture could save tens of millions of dollars in lost production and wasted fertiliser – every year.

Conducted by Massey University's Centre for Precision Agriculture, the report, which reviewed spreading accuracy from twin disc fertiliser spreaders, found that several factors contributed to 'off target' fertiliser spreading – including the physical properties of the fertiliser product, demand for spreaders to spread wider, as well as topography and wind.

Research author, Dr Miles Grafton, says: "It is difficult to put an exact dollar figure on the collective impact of these factors but our best estimate is that uneven spreading is costing New Zealand tens of millions of dollars a year."

In the report, Dr Grafton and co-author Professor Ian Yule point out that steps can be taken to limit fertiliser wastage and improve accurate distribution.

"We know that the physical properties of fertiliser affect spread patterns and we know that particle size does vary across products. Measuring particles using a simple sieve box test prior to spreading will give an indication of the best bout width to use to reduce 'off target' application.

"In addition, we know that as spreader trucks have become larger there is a tendency to want to spread wider, with the perception that spreading wider is cheaper and achieves greater efficiency. Whereas, in order to spread wider the fertiliser must be propelled off the disc faster. This means that wider spread patterns are less accurate – and are more susceptible to being affected by adverse landscapes and weather conditions."

Dr Grafton adds that in windy conditions, spread patterns are distorted in the windward direction – as well as on the down hill side of the vehicle when spreading over hills. He says that spread rates can also alter when travelling across a slope.

“It is reasonable to expect that all spreaders will exhibit these general patterns to some degree, even on minor slopes. However, the problem can be reduced by not spreading in poor weather, recognising that spreading wide doesn’t equate to efficiency, and by adjusting specific machines which may be designed to mitigate waste on slopes.”

The report notes that, in New Zealand, more and more four wheel drive trucks with dual tyres are spreading on inclines of 20 degrees which, 20 years ago, would have required fertiliser delivery by aircraft.

Commenting on the study, Ander Crofoot, Chairman of the FQC, says:

“While this report confirms that uneven fertiliser application is costing the industry, it is important that we take on board the message that we can reduce lost production and wastage. Simple measures such as considering the topography and deciding if aerial spreading might not be better; assessing particle size prior to spreading; and refraining from spreading in strong winds, will help. So too will investing in spreader driver training and certifying spreader vehicles via the industry-approved Spreadmark initiative.”

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Note to editors:

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