

Tabled at Hearing 09/05/2013

#### Fertilizer spreading problems

Good morning, my name is Jeremy Talbot I am an "A" grade automotive engineer by trade and I have been farming since 1979 and have been testing fertilizer spreaders since then. And after complete dissatisfaction after extensive testing, including some done for European manufacturers some of which we had purchased, saw me taking on a franchise for a Danish machine, Bogballe and establishing it as the premium machine here in NZ between 1995 until 2005 when pressure of work saw me sell the franchise to a major NZ company. I have continued with my quest to get NZ fertilizer up to internationally recognised standards and have also imported fertilizer when economic to do so. I was one of the first people to produce a simple practical test kit that farmers could use to set their machines up and these are still in use today.

We are the only company to have sent out of NZ 22 tonnes of local product for comparative spreadability testing at an internationally recognised test hall in Demark So I think that I could be regarded as an expert witness in this matter. Certainly more experienced than most at least.

Since the introduction in the late 1940s of the application of superphosphate on to our pastures and soils to gain extra productivity, the biggest issue facing the industry has been the even accurate placement of fertilizers.

Be it from the ground through full width sowers, pneumatic boom spreaders, spinning discs or from liquid suspension application the same issues have arisen.

This is because the products are primarily a mixture of sizes, granule strength and weight.

So in order for this to be able to be spread it was found some years ago that the spinning disc was the most practical, easiest to build and cheapest to maintain.

All of the others have now faded in to the past as proving to be too expensive to operate and maintain or not having enough output to be practical.

So with the proliferation of Kiwi built spreaders in the 1980's and 90's came the realisation that these were not perfect, practically from arable farmers who as bigger users could see the huge variations in their crops from each pass of their spreaders.

So in the late 1990's the Spreadmark system was established to find away of ensuring that commercial machines were tested and given a width rating to operate at. This all sounded fine in theory, but as the products from each fert company differed markedly in consistency and spreadability it has been of limited success. Spreadmark has only ever been a test of pass to pass accuracy and has no standard or test of boundary spreading which is what we are concerned about here today.

Under the spreadmark testing scheme, many local manufacturers soon discovered that they needed to change the spread pattern from a narrow umbrella shaped pattern to a much longer tapered pattern as used by most of the European manufacturers who have their machines all tested in Demark every 5 years as part of a Govt scheme to show buyers what the machines are capable of.

So with this basic change in design the machines have by and large been able to comply with the highly variable fert made here in NZ. That is until last year when the manufacturers ran out of a critical component to give the granules strength was omitted and all subsequent tests have shown the spread width to be reduced by 25% for certification by spreadmark. The drivers have no idea of what they are picking up as there is as of today no standard for spreadability of the fertilizers here in NZ. This means that he will have fertiliser travelling about 18m from his wheel marks.

So this now presents a problem, currently the driver has been told that his machine is rated to spread Superphosphate at a driving width of up to 18m. When he now picks up

the product this month with the critical compound back in the product, it will now spread out to 28m or it will go up to 28m from his wheel marks .

I now hope you can see that the drivers are in a no win situation until we can get consistency with a recognised testing regime in place and certainly very difficult to comply with the rules as currently laid out.

However the Europeans have since the early 1990's had on their machines the capability to limit the spread width to the boundary and these systems have now been developed in the last 10yrs to the state where now less than 2% of the applied rate falls outside of a 1m strip from the boundary. Often less than 1%. These are predominantly farmer owned and operated machines.

So with this in mind the current suggested rule is going to be favouring those with the poorest machines doing the poorest job. Not quite what I think we all want.

Another issue that farmers will feel is a huge economic loss from the area that will be very under fertilized in the machines without any boundary limiting device.

With most machines looking to operate today at widths of about 24m, this would mean that when using a bulk spreader that there would be a strip at every boundary where there is a strip some 15 /20m width where less than 50% of the required fertilizer is applied. In most situations this will result in crop losses regardless of the crop of about 50% or more. On 2 sides of an 10ha paddock this related to approx 1 ha and in a 10t/ha crop about a 5 ton loss and at today's price this would be a loss of \$2000.00+GST in one field !!!!! Farmers cannot afford to sustain such losses.

As this is a very important part of environmental rules we do need to get it right the first time and not be swayed by commercial interests.

So I would put it to you that what we need is a simple, easily enforced and checked on rule that we can all work with regardless of the method of application.

So I would propose that the rules be changed to read as follows

No Fertilizer shall be spread outside of the property boundary without the permission of the neighbouring land owner occupier, and that no fertilizer shall be placed within 5m of flowing water or stream / river bed.

As most fertilizer can be clearly seen it is easy for the operator to get of his seat and check that they are not in breach of this rule and equally it is a simple matter for enforcement officers who also see and check up on.

Another reason that the Spreadmark system should not be used is that it is a private company with an exclusive trademark and not easily available to all at reasonable cost.

Machines bought in to NZ from Europe all have been made to a standard and superior in all respects to current locally made products which the majority of the bulk ground spreaders use. The European machines also often have Auto calibration on them as they have integral load cells that in conjunction with the machines ground speed sensors adjust the rate so as accuracy is as high as + or - 1kg /ha at rates of up to 600kgs/ha.

It should also be let known that when some of the European machines have been fitted locally to trucks, the ability to limit the spreading to the boundary has been lost. Locally bulk spreaders also do not seem to have the ability to shut one side of and be able to throw from the boundary in to the field only so as to give a clear cut off point. A facility usually found on farmers un spreadmark certified machines.