

Newsletter FEBRUARY 2022

J GRENNAN & SONS



Bulk Spreading – It Has Never Made More Sense

By Hilda Dooley - (B.Sc. M.Sc. Ph.D.) Ph: 086 6074729

Headlands and short ground are significant areas of overlap and losses when applying fertilisers. It is generally accepted that unless GPS technology is used, a 5-10% loss due to this wastage is inevitable (5% in larger fields and 10% in smaller paddocks) due to inaccurate spreading.

J Grennans & Sons state-of-the-art bulk spreaders use GPS, have auto steering, weight cells and automatic turn on/off, are well maintained and are calibrated regularly for unbeatable accuracy. When we spread your fertiliser, it will significantly reduce wastage, not to mention saving you time and money on hauling, handling and spreading your own fertiliser, as well as spreader calibration and maintenance. If you are truly honest when analysing the cost of spreading your own fertiliser, then you will see from the table below that getting your fertiliser bulk spread is relatively cheap.

Table 1: True cost of Bulk Spreading. Two scenarios for a 10t load of fert, bulk spread with GPS technology.



In 10t spread with 5% waste, 0.5t will be lost. Assuming a typical cost of €750/t this year, this amounts to a loss of €375 = €37.5 saved per tonne spread. The improvements in accuracy alone make huge sense.

Load size (T)	Paddock type	Rate/ac	ac/load	Estimated spreading time (hr)	ac/hour	Cost/ac
10	Large - Silage	3 bags	66.6	1.5	44.4	€1.58
10	Small - Grazing	1.5 bags	133.3	4	33.3	€2.10

Published Scientific Paper Proves the Value of New Terra Technology

A big thank you to all our customers who have duly assisted us in trialling the Terra range of fertilisers (containing PSI362 technology) over the past two years. With your support, a scientific paper has recently been accepted for publication detailing the trial work and proving the N-Saving benefits of this technology. The research was carried out by Brandon Bioscience in Tralee IT in association with J Grennans & Sons and our customers across the Midlands. The paper outlines the success of the PSI362 technology to date, and our own Aisling Claffey is co-author. This technology also won the sustainable Agriculture Award at the Enterprise Ireland Innovation Arena Awards in 2021.

PSI362 has been shown to improve N uptake and utilisation, and a 20-25% reduction in N can be achieved by swapping your standard fertiliser application for the equivalent Terra product (e.g., Cut Sward for Terra Cut on silage ground). Draft proposals for the Nitrate Action Plan suggest a 10% cut in N levels for the coming year and using a Terra fertiliser is a simple and effective strategy to achieve this without interfering with your current farming practices.

So, if you are interested in saving money, improving NUE and meeting new targets with as little stress as possible, discuss the Terra range of fertiliser with a member of the Grennan's team today!

J Grennan Calf Jackets – Why You Should Use Them!

By Aisling Claffey - (B.Agr.Sc., Ph.D.) – Ph: 086 0317483

Studies have been completed across Irish and UK farms which suggest that calf jackets can contribute to better health and performance, particularly with young calves. Approximately 1/3 of farms have draughty conditions which can result in excessive heat loss, and calf jackets have been shown to

- Increase ADG in young calves in particular (first 3-4 weeks).
- Reduce impact of 'cold stress' when temperatures drop below lower critical limit.
- Reduce disease incidence in young calves, particularly scour.
- Lower stress levels in calves (bought in calves at transportation/mixing with other sources).

When a calf is born their lower critical temperature is approx. 13°C and reduces to approx. 6°C by the

time they are 30 days old. When housed in draughty conditions, on damp bedding or during cold periods, young calves will use their energy to maintain body temperature instead of contributing to ADG, immune function and organ development.

In the first four weeks of life the calf is most vulnerable to disease. Ensuring energy intake is devoted to thrive and reducing sources of stress to the calf will ensure a more effective immune system to tackle disease challenges that arise.



For every 5°C drop in temperature a calf's requirement for milk replacer increases by 50g or approx. 0.5 litre milk. Increasing nutrition to counteract the cold in young calves can often be overlooked during such a busy period on farm, so J Grennan Calf Jackets help to ensure the calf's body temperature will be maintained and extra feed is not needed.

So don't forget to:

- Ensure the calf is dry before putting on the jacket.
- Ideally leave on until 4 weeks of age
- Prioritise the most vulnerable animals (Less than 10 days or ill).
- Machine wash at 60°C and dry thoroughly between calves.
- Do your utmost to reduce draughty conditions and maintain dry, clean beds.

Colostrum Management for Freshly Born Calves

By Shane Gonoude – (B.Agr.Sc.) – Ph: 086 6466707

The quality of colostrum is defined by the concentration of antibodies and can vary between cows. The second and subsequent milking's of a dairy cow contains less antibodies and should not be considered as colostrum but as transition milk. Transition milk is not saleable from the first eight milking's, so don't be tempted to mix it with colostrum for new-born calves.

Calves that do not get sufficient antibodies through colostrum after they are born will have failure of passive transfer (FPT) of antibodies, and therefore have a higher chance of becoming ill and dying. Those that survive have poorer growth rates than calves that received adequate colostrum.

Colostrum quality can be measured using a Brix Refractometer and we provide this service at all branches.



Brix refractometer

Colostrum 1,2,3 for dairy calves

1. Use colostrum from the first milking for the first feed.
2. Give colostrum within 2 hours of the calf's birth.
3. Give at least 3 litres.

Keep calves from potential sources of infection in these early hours

- Calves should be moved directly after birth to a clean well bedded pen.
- Colostrum Hygiene is very important, as there are plenty of opportunities for bacteria to infect colostrum and cause problems.
- Do things quickly and efficiently, taking care to keep colostrum clean and reduce the time bacteria have to breed.

Store and Thaw Colostrum Management System

The Store and Thaw colostrum management system allows efficient collection of colostrum so that it can be tested and frozen for future use.

It can then safely thaw and warm 4 litres of frozen colostrum in 15 minutes, avoiding damage to the delicate immunoglobulins.



Managing Lambs on Ad-Lib Systems:

By Damien Conboy – (B.Agr.Sc) - Ph: 087 2124036

Ad-lib feeding systems such as the Pylon heatwave or the Ewe 2 feeder have become a very popular cost-effective way of artificially rearing orphan and surplus lambs. These systems reduce the labour requirement as fresh product can be mixed up once a day and they can feed up to 25 lambs. Ad-lib feeding from a few days old will reduce the risk of digestive upsets and bloat vs bottled feeding. Once correctly managed these artificially reared lambs will often out-perform their naturally reared counterparts. For these systems to work to their full potential, good management and hygiene standards are vitally important.

Key points on good management of this feeding system include:

- Mix enough Wonder Lamb to last 24 hours (once-a-day).
 - Mix Wonder Lamb powder at a rate of 200g to 800ml water to make 1ltr milk (20% concentration).
 - Clean bucket daily, pipes and teats twice weekly, and change teats at the first sign of wear.
 - Max. 8 lambs/teat.
 - Keep lambs of same ages and weights together to avoid bullying and allow same weaning dates.
- Teat height should be 12-15" from the ground (monitor this as bedding may become high over time).
 - As lambs get older turn down thermostat to reduce milk intakes before weaning. If feeding warm, 20°C max.
 - Every day – offer fresh concentrate ad-lib, fresh water ad-lib, and fresh bedding.
 - Use straw or hay as a fibre source.

Weaning:

- Target weaning weight is 2.5 times the lambs birth weight (10kg) minimum.
- Target weaning age 42 days old. (min 35 -max 49).
- Lambs should be eating sufficient levels of concentrate feed to weaning, 300-400g/head/day.
- Abrupt weaning is the best approach to avoid digestive upsets which are often associated with gradual weaning.
- Note: artificially reared lambs will consume approx. 11-13kg of powder on these systems.

INTRODUCING WONDER LAMB MILK REPLACER

Grennan's Wonder Lamb is a high spec, whey-based lamb milk replacer containing 22% protein and a high fat content. It is easily mixed and can be used in both bottled and ad lib feeding systems. Wonder Lamb contains a very robust health package to optimise lamb performance. Key features include: high levels of vitamin A, D and E to enhance overall immunity; contains medium chain Triglycerides which help prevent bloat; contains an organic source of selenium and anti-bacterial additives to aid digestion and improve rumen function.



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Management of Newly Purchased Calves

By *Conor Condron (B.Agr.Sc.)* – Ph: 086-1453416

Healthy calves are the most efficient convertors of feed into liveweight gain. Ensuring calves remain 100% healthy has obvious benefits in terms of financial payback, not to mention the costs associated with treating sick calves and high mortality rates.

Stress to calves, in any form but especially through housing, feeding or vaccination, reduces the calf's ability to fight disease. It must be avoided or at least minimised.

Housing

- Housing should be draught free with dry bedding.
- Calves housed in high roofed or cold sheds should receive a good quality, breathable jacket on arrival. These are available in all J Grennan & Sons stores.

Milk Feeding

- Automatic feeders need to be calibrated at least three times a week.
- Calves sourced via marts should not receive milk on arrival. Their first feed should consist of 2 litres of warm electrolyte (e.g. Nugget Pectolyte).



- The first milk feed should be delayed until 4 hours after arrival and should not exceed 2lt.
- Normal milk feeding programmes can be introduced from then on.
- Make concentrate feed available to calves to aid in rumen development.

Hygiene and Vaccination

- Teats on all feeders need to be cleaned daily. Ideally use 2 sets of teats to enable you to rotate daily and sterilise fully. Also check daily for cracks/tears and replaced if damaged.
- Vaccination programme needs to be designed in accordance with your own circumstances. Take care not to vaccinate calves at times of stress.
- Probiotics can play an important role in terms of disease prevention and speeding up recovery time post infection.
- Anti-inflammatories are often overlooked and have a key role to play in terms of pain control and recovery time.

For more information, contact any member of our technical team.

Maximising Energy Intake in Early Lactation

By *Aisling Claffey - (B.Agr.Sc., Ph.D.)* – Ph: 086 0317483

Energy density of the diet and dry matter intake are two of the most critical factors for the dairy cow post-calving to ensure a healthy and productive lactation. Dry matter intake is naturally reduced as the cow nears calving. While peak milk yield is reached in approx. 8 weeks, it takes 10-12 weeks for the cow to reach peak dry matter intake again, resulting in negative energy balance for much of early lactation. Inflammation and infection post-calving can also put a huge strain on glucose requirements, resulting in the cow rapidly mobilising body condition. To compensate for this, it is critical that we introduce an energy dense and palatable feed to the cows to minimise this energy deficit.

Silage is generally the foundation of the diet in the early weeks of lactation, so offer good quality, palatable silage to freshly

calved cows to maximise gut fill and intake. It is worth investing in a top-quality nut such as Mega Milk 16 in early lactation, as the higher UFL values support the high levels of milk production, encourage better milk solids and reduces mobilisation of body condition in early lactation.

When we look at herds with poor milk protein in early lactation, energy is often the limiting factor. Excess protein should be avoided as it stimulates the cow to mobilise her reserves to further increase milk production, often to the detriment of cow health, fertility, and milk solids. Where possible, spring grass is one of the highest energy and protein feeds for the early lactation cow, but it is essential that this does not compromise dry matter intake, particularly when cows are turned out on very wet days.