

More lambs, more profit, fewer antibiotics

Reducing lamb mortality and unnecessary use of antibiotics are key goals for the lambing season

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Estimates suggest that, on average, nearly one in every five lambs conceived does not make it to market. Apart from the reduced returns associated with losing lambs, there is a financial cost when treating sick/weak lambs and a significant amount of time spent looking after them.

For the last three years, Teagasc has been running lambing workshops aimed at helping farmers to improve key management practices and skills. Another goal is to reduce preventative use of antibiotics for conditions such as watery mouth and joint ill. The following is an outline of the topics that are covered at the workshops.

Nutrition

Adequate and appropriate nutrition is essential to ensure that ewes are free from metabolic diseases such as twin lamb disease, milk fever and prolapse. It's vital to feed ewes according to litter size, expected lambing date and body condition score.

In practical terms, this means at a minimum separating singles, twin and triplet-bearing ewes. Thin, single-bearing, ewes should be housed with twin-bearing ewes. Thin, twin-bearing ewes should be housed with triplet-bearing ewes.

The amount of concentrate to be fed to each category of ewe will depend on the forage type, quality and feeding method. High DMD and chopped,

silages will result in the highest intakes and consequently necessitate the least amount of concentrate supplementation (see Table 1).

Feeding levels should be targeted to deliver lambs that are born large enough to maximise survival, but at the same time minimising lambing difficulty resulting from oversized lambs. Optimum lamb birth weights for lowland lambs are; single 5.5–6kg, twin 4.5–5kg and triplets 3.5–4kg.

It is also important to feed the ewe adequate protein to ensure she can produce sufficient good-quality colostrum. This is where soyabean meal comes in. Aim to feed ewes approximately 100g of soyabean meal per lamb carried per day (i.e 200g for ewes with twins, 300g for triplets) in the last two weeks of pregnancy.

If feeding a compound, this means having at least 20% soyabean meal in the ration. For rations with lower levels of soyabean meal, simply top up the meal by sprinkling additional soya on top of the concentrate feed for the last two weeks of pregnancy.

Trough space

As important as providing enough feed for the sheep is, it is equally important that they have sufficient trough space. All sheep must be able to eat at the same time. (See article in Jan/Feb edition of *Today's Farm*). *See link to short clip on nutrition of the ewe pre-lambing (right). To view the video associated with this QR code, simply turn on your smartphone camera and point it at the QR code and follow any further instructions.*



Causes of mortality

The two main causes of death in newborn lambs are infection and hypothermia/starvation. Successfully reducing lamb mortality involves addressing these two issues, by paying particular attention to hygiene and colostrum feeding.

Hygiene

Think of the level of hygiene we see in human medicine – it's not realistic for the lambing shed, but we should strive to get as close to it as possible. There are simple practices available that can help farmers to sterilise equipment when lambing/feeding newborn lambs. *See video clip on a simple bucket system that can be used to sterilize all your lambing and feeding utensils.*



The use of arm-length gloves and lubricant are important when assisting in the birth process. A new glove should be used for each lamb delivered, to prevent dirt and straw entering the womb of the ewe.

Clean clothes are also important. Regular cleaning and washing down with a suitable disinfectant will help to prevent the spread of bugs to newborn lambs when they are being handled after birth.



A clean environment is essential to prevent the newborn lamb from being challenged by disease immediately after arrival. Plenty of clean straw provides a useful barrier between the dung/dirt in the pen and the lamb during the birthing process.

Shortly after birth, the ewe and newborn lambs should be moved to an individual pen. This will allow for a strong mother-offspring bond to develop, which allows for better supervision of suckling, etc. More importantly, it allows for the lamb to be placed in a clean environment. Lambing pens should be cleaned out and disinfected using a suitable product, such as hydrated lime, cubicle lime, etc, between lambings.

See video clip on reducing lamb mortality with hygiene.



Navel disinfection

The navel is essentially a tube offering bugs direct access to the internal organs of the lamb. Consequently, it is important that it is disinfected properly to prevent infection while it is drying and shrivelling up. The navel of the lamb should be disinfected as soon as is practical after birth and again four to six hours later. Immersing the navel in disinfection fluid is preferable to spraying.

Colostrum – nature's antibiotic

Colostrum, the first milk produced by the ewe is a wonderful product with three very important characteristics:

- It contains disease-tackling antibodies, which protect the lamb in early life (before it has a chance to develop its own immune system).
- It acts as a laxative, cleaning out the digestive tract of the newborn lamb.
- It supplies the lamb with a complete feed, which meets all of its nutritional needs.

Key points regarding the management and feeding of colostrum to lambs are:

- Ensure that each lamb gets 5% of its body weight of ewes' colostrum in the first four hours of life to get the animal off to a good start. Five percent of a lamb's bodyweight for the average 5kg lamb is 250ml. Many farmers give at best two or three 60ml syringes per lamb, which is totally

inadequate for all but the smallest of lambs. In addition, giving a small feed stimulates the gut of the lamb to start closing, thus preventing immunoglobulin transfer later on.

- Make sure that all lambs get at least some ewe colostrum. Colostrum substitutes, while useful to have on hand, are not an effective substitute for ewes' colostrum in terms of supplying lambs with relevant immunoglobulins against diseases, for which your ewes have been vaccinated.

Where an ewe has insufficient colostrum to meet the needs of her lambs, divide the available colostrum equally between her lambs and make up the shortfall with colostrum from another ewe in the flock (best case scenario) or, failing that, make up the shortfall with a colostrum substitute or cows' colostrum.

If using cows' colostrum, it is important to mix the colostrum from two or more cows. Some cows have antibodies in their colostrum that will cause death in lambs. The advice is to mix colostrum from several cows to dilute the effect. If using cows colostrum, it is important to increase feeding levels by 30%, as cows colostrum is more dilute than that from ewes.

- Be aware that Johne's disease in cows is transmissible to sheep in the colostrum.

- If the lambs are not able to suck, then the colostrum should be administered using a stomach tube.

For advice on the correct procedure for stomach tubing lambs please follow this link:



Conclusion

Keeping lambs alive is in everyone's best interest. Reducing mortality and illness in newborn lambs increases profit and reduces labour associated with nursing sick lambs. It also reduces the need for antibiotics to help fight disease and therefore is helpful in the global fight against antimicrobial resistance. This is truly a win-win scenario for man and sheep. May I wish all our readers the best of luck with lambing 2020.

Table 1: Recommended meal levels (kg/day)- unshorn twin bearing lowland ewes in good condition– ad lib silage (20% DM).

Silage quality	Weeks pre-lambing					Total (kg)
	10-9	8-7	6-5	4-3	2-1	
Excellent (75% DMD)			0.2	0.4	0.6	16
Good (70% DMD)		0.2	0.3	0.5	0.7	23
Moderate (65% DMD)		0.2	0.4	0.6	0.8	28
Poor (60% DMD)	0.2	0.4	0.6	0.8	1.0	42

sheep

Damian Costello,
Teagasc sheep
specialist.



Sheep farming in east Galway

Bernie Leahy
Teagasc Advisor, Ballinasloe

Anthony Smyth of Weston, Ahascragh is one of 4,128 flock owners in East Galway. DAFM census figures for 2018 show that there are 408,835 sheep in Co Galway alone. Census figures also indicate that Galway has the highest number of lowland sheep (14%), with 181,638 lowland and lowland-cross ewes out of a total of 277,536 breeding ewes in the county.

Anthony is farming approximately 49ha, comprising a mixture of loamy, and lowland soil types, some shored and only suitable for sheep, in addition to commonage land.

“We also run a suckler cow, calf-to-weaning enterprise with 31 sucklers. We breed our own replacements by natural service,” says Anthony. “Breeding stock is produced according to the Department of Agriculture BDGP scheme.”

The suckler cow enterprise is complimented by Anthony’s lowland breeding enterprise, which is made up of a mixture of Suffolk, Charollais and Texel cross ewes. He is increasing his breeding ewe numbers to 140 (including 50 hogget ewes). All of his five-star rams, two Texel and one Border Leicester are bought from a local pedigree breeder. The Border Leicester ram is used on hogget ewes.

It is fitting that Anthony’s son John has come on board to farm with him. Both are nurses are attached to St. Brigids Hospital, Ballinasloe. This busy partnership requires them to efficiently divide their farming between their job and their mixed farm enterprise.

“A good friend of mine, an electrician who is sadly recently deceased, installed cameras in the lambing sheds and linked them to our phones. It’s great that I can ring John when I see a ewe getting sick on the phone while I’m on night duty!”

The first batch of lambing started in early February with 50 ewes and finished between 10 February and mid-month.

After a break of a few weeks, the second lambing period kicks off from St. Patrick’s day onwards with the remaining ewes and hogget ewes.

Anthony pointed out that housing all in one batch was not possible because of limited shed space, hence the two batches. Further investment in sheep housing is a likely option, now that John is doing his Green Cert.

Early lambing flocks are scanned approximately 90 days post-ram turnout and grouped according to whether they are carrying triplets, twins and singles.

“I tend to be strong on triplets, which



Anthony Smyth of Weston, Ahascragh, east Galway, with his son John and Teagasc Ballinasloe advisor Bernie Leahy.

can be labour intensive,” he says.

We noted the fine body condition of the ewes. They are grazed outdoors and housed at night nearer to the lambing period.

Anthony believes in carrying on the tradition of feeding his ewes from Christmas onwards.

A locally purchased feed mixture is barley-based, with distillers, grains, beet pulp, soybean and molasses also included.

Anthony feeds ewes with high protein concentrate (20% CP) at least three weeks before lambing. He feeds the recommended mineral mixture (2.5kg per T) separately to ensure all ewes get an adequate amount.

Anthony and John hosted a recent Teagasc lamb mortality workshop, where the benefits of good lambing management practices could be seen.

Carefully limed and cleaned pens were bedded with fresh straw. The two nurses set about delivering a sick ewe, with the lamb navel dipped promptly and the lamb sucking ample supplies of colostrum by the time the workshop ended. No stomach feeding of colostrum was needed here!

Figures from Anthony’s KT Farm Improvement Plan have shown a constant improvement.

No of lambs scanned per ewe	1.8 (2016) increasing to 2.0 (2018).
The number of lambs weaned per ewe	1.7 (2016) to 1.8 (2018).

It is also interesting to note that the Smyths have worked very closely with their veterinary surgeon, Conor Geraghty, to comply with The KT Flock Health Plan and Sheep Welfare Scheme.

At the workshop, Killeen Farrell, part of Geraghty’s vet team, informed farmers about a flock health mortality study conducted by Excel Vets Ireland. By adopting veterinary recommendations in managing vaccination, abortion, clostridial diseases and treatment for worms and fluke, lamb mortality figures can be reduced to under 10%.

Anthony and John Smyth, with their careful and simple work practices, have done even better, maintaining a lamb mortality figure of 5%.