

**Animal &  
Grassland Research  
and Innovation  
Programme**

**Teagasc**

# **Hill Sheep Conference 2018**

**Knockranny House Hotel,  
Westport, Co. Mayo.  
Wednesday 21st February 2018**



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## Programme

**Venue:** Knockranny House Hotel, Westport, Co. Mayo.

**Date:** Wednesday, 21st February 2018.

## Conference Outline

- 17:30 **KT Sign-in**  
*Chairman James Keane, Regional Manager, Mayo Advisory Region.*
- 18.00 **Conference Opening**  
*Professor Gerry Boyle, Director, Teagasc.*
- 18:15 **Why are you here today? Focus on Take-Home Messages**  
*Andy Ryder, Teagasc, Westport , Co. Mayo.*
- 18.25 **How to exploit the full potential from your hill flock**  
*Frank Campion, Teagasc, Athenry, Co. Galway*
- 18:55 **Jaagsiekte – the tip of the iceberg**  
*Jason Barley & Patrick Grant, AFBI Veterinary Science Division, Stoney Road, Belfast & Parklands Veterinary Group, Molesworth Road, Cookstown*
- 19:25 **Growing the family farm: land use and improved breeding**  
*Joe Scahill, Prospect, Westport, Co. Mayo.*
- 19:55 **Marketing of hill and hill crossbred lambs**  
*John Walsh, General Manager, Irish Country Meats, Camolin, Co. Wexford*
- 20:25 **Close Conference**  
*Michael Diskin, Teagasc, Athenry, Co. Galway*
- 20:30 Tea/Coffee, Sandwiches & finger food served

**Organising Committee:** Michael Diskin, Philip Creighton, Frank Hynes, Michael Gottstein, Fiona McGovern, Frank Campion & Ciaran Lynch.



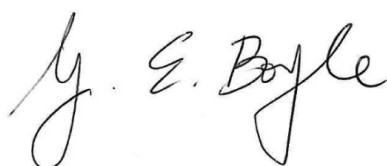


# Foreword

Sheep production is a significant contributor to the agricultural and national economy producing 67,000 tonnes of sheep meat valued at more than €320 million. Over the past number of years we have seen small but steady increases in sheep numbers. Currently, there are 36,313 flocks in Ireland, producing a high quality product of which about 85% is exported. In 2017 almost 2.94 million sheep were processed in Irish processing plants with 57,000 tonnes of sheep meat exported and valued at €274 million. This represents a 14% increase in volume exported and a 12% increase in the value of exports over 2016 exports. This is an excellent performance, notwithstanding weaker sterling and the pressure it is putting on Irish lamb in on both the British and Continental Europe market. The welcome increase in output and value of output partially reflects the expansion in the size of the national flock and also the development of new export markets for Irish sheep meat. New markets, particularly in Canada and Switzerland, are welcome. These markets will become increasingly important in the context of Brexit.

The Irish Hill Sheep sector plays an important role in the economic health of rural economies and the maintenance of the natural landscape in many of Ireland's most scenic areas. Low output and often depressed markets for male store hill lambs has resulted in low margins for this sector. Notwithstanding this, the Scottish Blackface hill ewe is very hardy and resilient breed and is hugely responsive to improved nutrition. The hill ewe has a significant untapped potential both in the hill environment and as the dam of prolific cross bred ewes for the lowlands. This Teagasc Hill Sheep Conference focusses on, maximising the potential of the hill sheep industry in the West of Ireland, new merging disease threats, marketing of hill and hill crossbred lambs. I look forward to hearing the success story of local sheep farmer and 2017 Sheep Farmer of the Year. His paper illustrates the untapped potential in the hill land cross bred sector. Notwithstanding the physical and land quality issues that operate in the hill areas, it is clear from the results emerging from the BETTER Farm Hill sheep programme that significant improvements in productivity and profitability are possible from relatively small changes in the main drivers of productivity. The results emerging from on-going studies with finishing of hill lambs in Athenry also provides a clear roadmap for increasing the value of the hill lamb crop.

I welcome the increase focus of this year's Teagasc Sheep Conference on Take Home Messages. Its only when knowledge is applied at farm level will you see the benefits in terms of efficiency, productivity and ultimately profitability. Over the years significant amounts of new information is presented at these sheep conferences and this year is no different. Continuous generation of new information is critically important and the incorporation and application of this information into on-farm production systems must be the on-going goal of sheep farmers. There are a number of important take home messages from each of the papers. Farmers should focus on implementing a number of these messages on their farms. This booklet collates and summarises a significant body of knowledge on technical issues in sheep production and should prove an invaluable reference to sheep producers. I would like to thank all of the speakers, the Teagasc Staff who assisted with the organisation of the National Sheep Conferences and especially the organising committee without whose efforts we would not be here today – they are; Michael Diskin, Frank Hynes, Phil Creighton, Ciaran Lynch, Fiona McGovern, Frank Campion and Michael Gottstein. I also acknowledge the help and input of local Teagasc advisory staff.



**Director, Teagasc.**



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# How to exploit the full potential from your hill flock

Frank Campion<sup>1</sup>, Ciaran Lynch<sup>2</sup> & Michael Diskin<sup>1</sup>

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## Take Home Messages

- Ensure you have enough grass for ewes pre-mating to build live weight and BCS
- Availability of grass in the autumn will play a large role in dictating what you do with weaned lambs
- Finishing lambs to heavy weights indoors requires lambs to gain 6-8kg at grass first to maximise indoor performance margins
- Finishing lambs to light carcass weights is a potential outlet for the hill sector but these markets need development.
- Significant scope exists to through producers and marketing groups to improve the marketing of hill lambs.

## Introduction

Hill sheep farming plays a vital role in Irish agriculture and in maintaining the natural landscape along with providing income to local communities. In Ireland, hill breed ewes account for 23% of the national ewe flock with a further 18 % the national ewe flock are hill breed crosses. Almost 30% of these hill breed ewes are found in Galway and Mayo (DAFM Sheep Census, 2016). Despite the hill sheep industry making up a prominent part of the Irish sheep industry, particularly along the Western seaboard, the sector is characterised by low levels of production, poor economic margins and difficult working conditions. Work from Teagasc and international research groups has demonstrated that adopting the latest on-farm technologies can significantly improve flock output and on-farm efficiencies which ultimately increase margins on hill sheep farms. Much of these gains can be made at either end of the production cycle improving breeding ewe management pre-mating and by how the lamb crop produced is managed and marketed post-weaning. This paper will highlight some of the options available to hill farmers to improve the output from their flocks through better management at mating and weaning time.

## Improving lamb sales

The key driver of output on any hill sheep farm is the number of lambs sold, regardless of price. However, if the product isn't available to sell then no margin big or small will accrue out of it. In recent years work on the Teagasc sheep BETTER farms and work carried out in the research in Athenry has highlighted a couple of key ways in to increase the output from hill flocks and the margin from this output. This work has also demonstrated that relatively high levels of production are achievable on ordinary hill sheep flocks as shown in Table 1. Indeed this message has been consistent across the reports from the BETTER farm programme (Lynch & Diskin, 2014). However, in order to achieve this level of performance there are two key areas that need careful consideration: ewe live weight and BCS at mating and the management of the lamb flock post-weaning. Both events occur at opposite ends of the production cycle but overlap in term of the time of year when the events take place on farm.

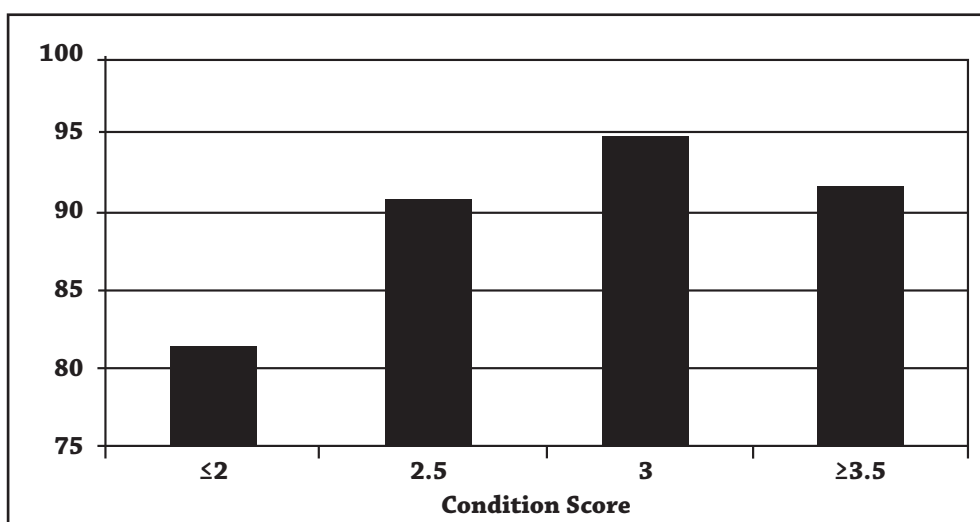


**Table 1.** Pregnancy rate, scanning rate and weaning rate for three of the Teagasc Hill Sheep BETTER Farms in 2017

	<b>Flock 1</b>	<b>Flock 2</b>	<b>Flock 3</b>
County	Cork	Donegal	Mayo
Pregnancy Rate (%)	94.5	91.7	94.6
Litter size	1.3	1.4	1.2
Lambs weaned/ewe joined	1.1	1.1	1.1

## Improving ewe output

In order to ensure ewes are of adequate live weight and BCS at mating, ewes must be assessed 8-10 weeks pre-ram turnout and corrective action taken where necessary to improve thin and underweight ewes. While this is far from a new concept, work carried out by Lynch and Diskin (2014) using data from the Teagasc BETTER Hill sheep farms has demonstrated how increasing ewe BCS at mating improved pregnancy rates by up to 10% (Figure 1). To put this in context per 100 ewes weaning 1.0 lamb per ewe joined, having ewes in BCS less than 2.5 can lead to a decrease of up to 10 lambs, which could equate to a loss of over €500 and higher depending lamb price and how lambs are sold.



**Figure 1.** Pregnancy rate of ewes differing in condition score at joining on the BETTER farm hill flocks (Adopted from Lynch & Diskin, 2014)

Indeed improving pregnancy rates and ultimately weaning rates also opens up the options for cross breeding more of the flock. As weaning rate increases the level of cross breeding that can be carried out on the flock can also increase without negatively impacting the number of replacement ewe lambs available (Lynch, 2012). A prime example of this comes from one of the Teagasc BETTER hill farm flocks running pure bred Lanark ewes. During mating 2014, 2015 and 2016 the average BCS of the ewes was 3.1 while ewe live weight averaged 53 kg at mating. This helped the flock achieve pregnancy rates > 90% weaning rates between 1.1 to 1.2 lambs per ewe joined.

## Cross breeding

Ewe performance like this could allow the flock to cross breed up to 52% of the ewes in the flock which would help increase weaning weights and the performance of lambs post-weaning. Cross bred ewe lambs bred from prolific rams are highly attractive to some low land producers and where lambs are well bred can obtain prices far in excess of a factory lamb. Niche marketing options like this, where viable, are vital to any sector but particularly the hill sector. There benefits from adopting this approach are as follows:



- More saleable cross bred wether and ram lambs.
- Heavier lambs (3-4 kg at weaning)
- Improved selling price
- Better performance during the finishing period
- Prolific females available for lowland farms/sales

The potential for crossbreeding within each flock ultimately depends on the replacement requirement and for the most part is determined by the existing level of ewe and flock productivity. A guideline for the percentage of a flock that is required for producing replacements is outlined in Table 2.

**Table 2.** Potential breeding strategies for hill flocks at different levels of output

Lambs reared per ewe joined	Pure breeding (%)	Crossbreeding (%)
0.80	66	34
0.85	62	38
0.95	56	44
1.00	53	47
1.05	50	50
1.10	48	52

Source: Adapted from Lynch 2012

### Performance recorded rams

Another key element of pre-mating management to maximise ewe output is to pay attention to the rams being used on the farm. While the availability of performance recorded rams for the Scottish Blackface breed is limited the benefits or developing this in the coming years is clear. On the Teagasc BETTER hill sheep flocks progeny testing from rams from hill breeds has been in place for a number of years. In Table 2 the performance of rams on one of the farms during the 2015 and 2016 season is summarised. The data clearly shows the potential for differences in birth weights, growth rates, weaning rates and mortality between different rams used on flocks. These differences can lead to large differences in weaning rate and weight of lambs at weaning time. As presented in Table 2 within the Lanark rams used over 4 years on the Donegal BETTER sheep farm there were only minor differences in weaning weight but substantial differences in lamb mortality, with there being a nearly 6.5 percentage points between the rams recorded. Given the average output on hill sheep farms who completed Teagasc profit monitors in 2016 was 0.97 lambs per ewe to the ram and average flock size was 159 ewes this a 6.5 percentage point increase in lamb mortality would be an extra 10 lambs available for sale.

**Table 3.** Progeny performance during the 2014, 2015, 2016 and 2017 production year from four rams

Ram	No. of Progeny	Birth Weight (kg)	Weaning Weight (kg)	Mortality <sup>1</sup> (%)
Lanark 1	161	4.13	25.6	8.1
Lanark 2	141	3.99	25.5	11.3
Lanark 3	130	4.31	26.0	14.6

<sup>1</sup> Combination of mortality at birth and lambs not presented at weighing's

### Options for finishing hill lambs

It is only prudent increasing lambing rates and weaning rates once there are routes for manging the lamb crop post-weaning. The first major step in this is to wean lambs at approximately 14 weeks to allow the ewe time to recover



and also to have lambs in suitable condition for whatever route to sale is chosen. While the best available option to manage lambs post-weaning will differ between farms and be influenced by lamb prices and indeed weather conditions to a degree, it is still important that farmers are aware of their options and have a plan in place prior to weaning time. The primary options available are:

- Sell as stores at or close to weaning
- Finish after weaning on ad-lib concentrates
- Graze lambs until mid-November and sell as stores
- Graze until mid-November and finish and ad-lib concentrates

Ultimately the decision on what way to market hill lambs post-weaning is dependent on the grass available on the farm. Post-weaning grass should be reserved firstly for ewes pre-mating in order to build live weight and BCS so as to improve pregnancy rates and weaning rates. In cases where the available grass will only be enough to meet the demands of the breeding ewe flock then selling lambs as stores shortly after weaning is the most sensible option. Good flock management is essential in any lamb finishing system or morality rates and poor lamb performance will lead to high costs of production. Target mortality should be less than 3% and a stringent protocol for dosing and vaccinating lambs is essential. The performance potential from housing lambs in the autumn shortly after weaning and finishing on ad-lib meals has been shown in studies carried out in Teagasc Athenry (Diskin et al., 2015). Recently these studies have moved towards looking further into finishing lambs after being grazed at lighter carcass weights (12-16kg).

### Finishing lambs to light carcass weights

The study under taken to ascertain if it was possible to finish light Scottish lambs to produce carcasses of 12-16 kg with a suitable covering of fat and also market suitability for these carcasses which is currently very limited . The results of this study do show though that it is possible to produce suitably fat covered carcasses at 12-16 kg fat and the feedback from the processor was very positive. In this study, lambs were housed approximately 1 month after weaning and slowly built up to ad-lib concentrate intake. Both wether and ram lambs were used for the study and were drafter for slaughter once over 30 kg live weight for wethers and over 31kg live weight for ram lambs. Where lambs, particularly ram lambs, exceeded 36 kg live weight then they were retained and finished to 'French' market specification. As presented in Table 3 the average time to slaughter from housing was approximately 60 days with 15% of the lambs initially housed being sent for 'French' market specification as they got too heavy.

These studies show that this might be a viable option for light hill lambs and certainly producer organisations and processors should further explore this option.

**Table 4.** Performance of light Scottish Blackface lambs finished on all-concentrate diets to light carcass weights

	Rams	Wethers
Housing Date	12th September	
Housing live weight (kg)	25.2	26.6
Slaughter live weight (kg)	33.9	33.9
ADG <sup>1</sup> from housing to sale (g/day)	152	117
Days to slaughter	59	64
Concentrate intake (kg DM/day)	1.14	1.18
Carcass Weight (kg)	14.6	14.7
Carcass grade <sup>2</sup>	2.4	2.5
Fat score	2.2	2.4
KO%	43.1	43.6

<sup>1</sup> Average daily gain

<sup>2</sup> Based on EUROP scale with 5 = E and 1 = P



Selection for slaughter was also based on condition of the lamb with lambs deemed to be under fleshed held back until the next draft. A key part of getting lambs into factory specification at 12-16kg live weight is having sufficient muscle and fat cover, a typical example of the type of light carcasses being sent for slaughter is presented in Figure 2.



**Figure 2.** On the left a 14.6 R2 carcass slaughtered at 33.5 kg live weight and on the right a 15.7 kg R2 carcass slaughtered at 34.5kg live weight.

### **Housing Lambs Mid-November for finishing on ad-lib meals**

The performance of ram and wether lambs on this system from an experiment carried out in 2017/18 is summarised in Table 4. For this particular study the lambs were grazed from time of purchase in mid-August to housing in mid-November and had been introduced to concentrates at grass from 3 weeks prior to housing in order to get lambs eating meal. Once housed the lambs were slowly built up to ad-lib concentrate intake with silage offered throughout as a roughage source. This option is usually the most profitable system for finishing hill lambs as shown in Table 3 but is reliant on obtaining 6-8kg of live weight gain at grass and selling lambs at a target carcass weight of 21kg from January onwards. This is something most hill farms will struggle to achieve given that this period clashes with mating meaning grass may be in short supply.

Once housed these lambs can achieve good average daily gains indoors as shown and can be finished relatively quickly. In the study discussed here 15% of the lambs were finished pre-Christmas with the remainder being drafted in January.

### **Producer Groups**

The establishment of producer groups not only to market prolific crossbred ewe lambs but also to market hill and crossbred males and hill ewes is something worthy of consideration by hill sheep farmers. Specialised, well-promoted, sales can be organised or the producer groups could arrange direct contact between producers and prospective buyers thereby facilitating on-farm sales. Many purchasers of sheep, particularly those that are very conscious of flock biosecurity and flock health, prefer to purchase directly from known sources rather through marts. Frequently, these are annual repeat purchases from the same flock. Many purchasers are now anxious to acquire and are willing to pay extra for sheep that are vaccinated and are known high health status. Therefore, the establishment of producers groups to assist with the marketing of hill land crossbred lambs has significant potential.



**Table 5.** Performance of Scottish Blackface lambs finished on all-concentrate diets after being grazed until mid-November

	<b>Rams</b>	<b>Wethers</b>
Purchase live weight (kg)	32.3	30.3
Housing Date	16th November	
Housing live weight (kg)	36.3	32.6
ADG <sup>1</sup> from purchase to housing (g/day)	72	57
Days to slaughter	118	118
ADG from housing to sale (g/day)	192	151
Slaughter live weight (kg)	46.8	40.8
Carcass Weight (kg)	21.4	19.4
Carcass grade <sup>2</sup>	2.8	2.6
Fat score	3	3
KO%	45.9	46.5

<sup>1</sup> Average daily gain

<sup>2</sup> Based on EUROP scale with 5 = E and 1 = P

## Maximum utilisation of green ground

The use of in-bye or green ground at mating and weaning etc. has been referenced numerous times in this paper so far and its importance at key times of the year cannot be over stated. As discussed having the grass available in these areas at key times of the year can make a big difference to hill sheep flocks and the management requirements of the flock. As presented in Table 5 the percentage of land on hill farms in the Mayo/Connemara area that is classified as arable/mowable is small and as such, requires careful management. The more limited the “mowable” areas on the farm are the more limited the options for the flock are, and this is often cited by hill farmers as a major limiting factor on their farms.

However, developing a system to suit the level of green ground available is essential i.e. selling weaned lambs as stores quickly to save grass for ewes. A key message from the BETTER Farm hill flocks has been to develop a management system on each farm to make the best use of the available land. These systems revolve around soil testing green areas and reacting accordingly to these results to improve the grass production ability of the land. While it will not be possible to fully lime or fertilise some of these areas any area that can be limed and fertilised will significantly improve grass production. Another key message seen on the BETTER farms has been the use of fencing to establish areas to ease management, such as separating twin and single bearing ewes at lambing. Fencing these areas will also allow grass to be accumulated for weaning and mating in certain areas by closing stock out of the area when necessary.

**Table 6.** Percentage of land including commonage classified as arable/mowable<sup>†</sup>

<b>Location</b>	<b>% mowable</b>
Twelve Bens	5
Maam	3
Tourmakeady	41
Louisburg	25
Newport	15
Bangor Erris	6
Leenane research farm	7

<sup>†</sup> 50% of the farms have commonage. (Adapted from Nolan 1999)







## Summary

Improving output from hill flocks is first major step to improving the viability of the sector and adopting key technical efficiencies as outlined in this paper will help flocks reach a sustainable level of production. Careful planning around autumn flock management is essential to maximising the lamb crop born on the farm and achieving the best possible sale price from the lambs sold. Significant scope exists by both producers and processors to improve the marking of hill lambs which would ultimately benefit primary producers.

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# Jaagsiekte – the tip of the iceberg

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<sup>2</sup> Parklands Veterinary Group, Molesworth Road, Cookstown BT80 8NU

## Take Home Messages

- Jaagsiekte is an infectious lung tumour of sheep caused by jaagsiekte sheep retrovirus
- The disease is difficult to diagnose in the live animal and is certainly very much under-reported in Northern Ireland and Ireland
- Ultrasound scanning of the chest is currently the best way of diagnosing the disease in an individual sheep and can be used in conjunction with post mortem examination of cull ewes to detect and help control levels of disease in a flock

## Introduction

Jaagsiekte also known as ovine pulmonary adenocarcinoma (OPA) is a contagious tumour of the lungs of sheep (Scott: 2015) caused by a virus known as jaagsiekte sheep retrovirus (JSRV) which spreads largely by the aerosol route but may also transmit from ewe to lamb via the colostrum and *in utero*. The disease is common in most sheep producing countries and the UK and Ireland are no exception. Flocks affected with jaagsiekte experience considerable loss through lowered production and increased ewe mortality and culling. Diagnosis in the live animal remains problematic and chest scanning for the detection of tumour tissue (**FIGURE 1**) is the best available method.



**Figure 1.** Sheep lung affected by jaagsiekte, foci of tumour tissue are visible and the large volume of fluid present in the lungs of affected sheep can clearly be seen

## Detection of the disease in flocks and individual sheep

The disease is common in most sheep rearing countries of the world and Northern Ireland and Ireland appear to be no exception. In 2016 the total number of diagnoses of jaagsiekte by AFBI diagnostic laboratories in Belfast and Omagh increased to 3.8% of all submissions excluding abortions from a 2012 level of 2.2%. Given that jaagsiekte gives rise to chronic debilitating pneumonia and ill thrift and that thin ewes and culls are only infrequently



submitted for veterinary post mortem examination, this diagnostic rate is certainly the 'tip of the iceberg' because diagnosis of the disease in the live animal is problematic.

Progress towards a usable diagnostic test applicable to single sheep and useful for early diagnosis has been unrewarding to date although research is continuing. The established text book 'wheelbarrow' (**FIGURE 2**) test in which sheep are tipped forward to cause typical fluid to pour from the nostrils is only useful in late stage cases, is not wholly sensitive and of little use in allowing effective within flock control.



**Figure 2.** The 'wheelbarrow' test, a large volume of fluid will pour from the nostrils of jaagsiekte affected sheep. The test detects only late stage infection and sheep giving a positive wheelbarrow test will have been shedding virus for some time. The test is distressing for the sheep and positive animals should be euthanased once the test is complete.

Currently ultrasound scanning of the chest to detect early changes associated with tumour growth in the lungs is the best option for early diagnosis and can be used in conjunction with a routine cull ewe post mortem screen to establish the presence of the disease in a flock and individuals. Given the highly infectious nature of the disease and quite rapid spread within affected flocks close attention to the possibility of the presence of the disease in flocks is necessary and a flock health planning approach is often the most successful way of first raising awareness and causing early intervention.

### Attention to thin ewes

Jaagsiekte is a part of the pneumonia complex of sheep along with other bacterial, viral, mycoplasmal and occasionally parasitic causes and whilst late affected sheep at least will be discernibly pneumonic the disease may first be suspected by paying attention to the number of thin ewes in a flock highlighted during the health planning process. Thin ewes may occur singly or in groups and the causes may differ, for example parasitism and low nutrition may give rise to groups of thin ewes whilst cheek tooth disease or internal abscessation may be more a problem of individuals. Jaagsiekte may cause individual ewes to be thin but mostly groups are affected and a high number of thin ewes in a flock should trigger an investigation for possible presence of Jaagsiekte.

### Ultrasound scanning of the chest

The ventral lung lobes are scanned through the chest wall on the non-wooled area behind the shoulder, the sheep is physically restrained standing with the leg extended upwards towards the head to allow access with the ultrasound probe. Imaging will assess for damage to the pleural surface of the lung, consolidation indicating tumour growth



within the lung and if any abscesses are present. Interpretation of the results is immediate and determined by the size and extent of the lung damage. Individual farms may vary on how severely the lung scans are interpreted, with an aim to confirm positive lesions as soon as possible (around 2.0 cm in diameter). All minor lung damage is recorded allowing the option for early re-scanning.

### **Control within a flock**

Virus from the ewe will infect the lamb early in life and there is evidence of colostral transfer and possible in utero infection although the extent of this and the contribution of this to actual spread is not known. In theory snatching, colostrum deprivation and artificial rearing with isolation from potentially infected sheep within the flock is possible but the potential problems are obvious and this approach is not likely to be suitable for commercial flocks although small pedigree units may attempt it.

Ewe lambs born to known affected ewes (detected by scanning or culling or post mortem following death) should not be retained for breeding as they themselves are highly likely to be infected. Young sheep may shed less virus than older animals so separation of the older ewes at lambing and the management of single age groups as far as possible is useful and replacements may be kept from ewe lambs and perhaps shearlings unless the flock is heavily infected in which case even first season lambs may be affected and shedding virus. Quarantine testing is difficult because there is no easy to use diagnostic test, but chest scanning is possible certainly for rams and as much history as possible should be obtained from the source flock.

### **References**

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# Growing the family farm: land use and improved breeding

*Joe Scahill, Prospect, Westport, Co. Mayo.*

## Take Home Messages

- Good integration of lowland and hill is very important.
- Good fencing, liming and fertiliser application ensures good grass production and utilisation.
- A good flock health programme is vitally important
- Producer groups are an efficient means of marketing lambs

## Introduction

My name is Joe Scahill. I live on our family farm in Prospect, Westport, Co. Mayo. I am married to Cathy and we have four children Lisa (19), Kate (17), Sean (14) and Joseph (12). Together, we farm around 400 acres (162 Ha). Much of this is mountain grazing with some of the farm up to 370 m (1,200 ft) above sea level. The terrain is a mix of heather, blanket bog, upland grassland and some good quality lowlands. We keep 600 Scotch Blackface ewes. The flock is made up of Lanark and Lanark Mayo Connemara crosses. Furthermore, we have a small flock of pedigree Blueface Leicester ewes. We also purchase around 20 weanling cattle each year to sell off grass the following autumn. I very much consider this is a family farm with all members of the family involved.

## History

I left school at the age of 13 to work on the family's hill farm. At that time the farm consisted of just 23 acres. This included 2.5 Ha (6 ac) of owned fenced land and 6.9 Ha (17 ac), being our share of commonage, which was not fenced. When I began farming my father Sonny kept a small number of cows and sheep on the home farm. At 17 years old, I rented some land in my own name. I bought 200 Scotch Blackface ewes and applied for my own herd number as soon as I was eligible. We were fortunate over the years that a couple of neighbouring farms came up for sale and we were in a position to buy them giving us a reasonable land base to work with. After buying this land we were able to set up a grazing system by fencing the commonage land. I was lucky to have a contracting business that my brother and I set up as this provided me with steady employment and a source of income over the years. I work off farm seven or eight months of the year with the contract work of sheep shearing and sheep showering businesses.

## Breeding

We operate basically two flocks. The best 200 ewes are picked for breeding with Scottish Blackface rams to produce our own replacements. The remaining 400 are mated to Bluefaced Leicester rams. The objective for this group of ewes is to produce females for sale at the Mule and Greyface breeding sales in Ballinrobe. Here, it is generally lowland producers from around the country that purchase these as replacements for their own flocks. About 17 years ago I introduced the Scottish Breed Lanark to my ewe flock. I believe this has brought great improvement to our breed of sheep over the years. In the early years, we crossed the Lanark with the Mayo Blackface to produce cross bred ewes. These ewes were then mated with the Bluefaced Leicester ram to produce Mules. Annually, we



produce around 250 to 300 Mule ewe lambs but this varies depending on the male to female ratio of the lambs born in any year.

I am confident that the Mayo Mule is a very suitable ewe breed type for part-time farmers. They are great mothers, well capable of lambing on their own with little supervision and are well capable of rearing two good fast-growing lambs. Therefore, they suit a low labour system. They are also highly prolific. Mules and Greyface ewes have no difficulty delivering weaning rates of 175% and even more when properly managed. They are top-class mothers great for producing excellent fat lambs for slaughter when crossed with terminal sires. So, when properly managed they can produce a big crop of lambs and farmers will end up with a lot of lambs for sale.

I believe that the quality of the Bluefaced Leicester ram is very important. In my view it is well worth spending an extra bit of money on the ram. Because of AI in sheep it is now possible to access the top sheep genetics at a relatively low cost. This can make a huge difference when producing Mules for example, by giving Irish farmers access to high merit Bluefaced Leicester rams from Scotland or other places. We have used such semen in our flock of Bluefaced Leicester ewes. This means that farmers generally can access progeny from this breeding through the organised sales which includes pedigree Bluefaced Leicester rams as well as the highly prolific Mule and Greyface females.



**Figure 1.** Good integration of hill and green land must be a key objective in hill systems

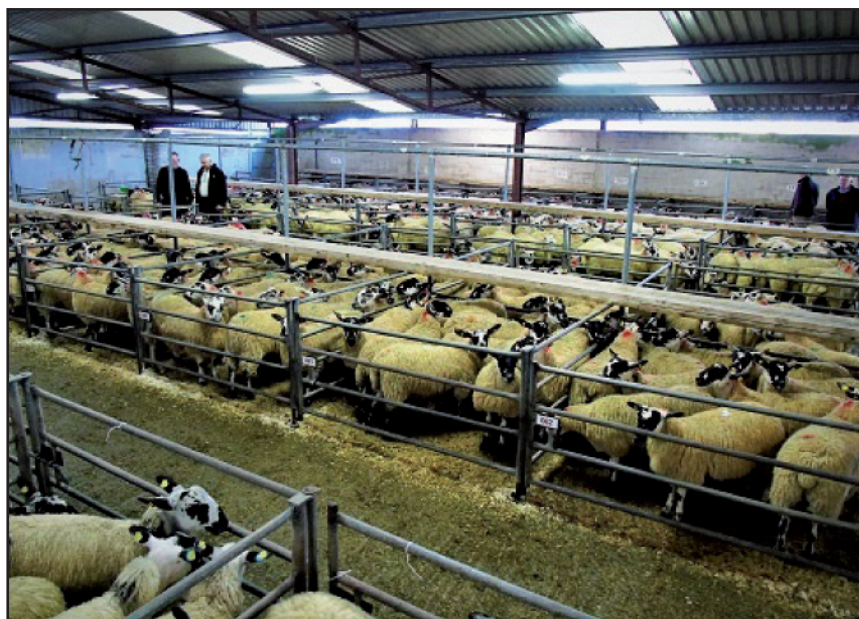
## Marketing

In Mayo, we see a producer group approach to marketing our lambs as being very important. Over the years I have been involved in a number of groups. In 1984, the Mayo Mule and Greyface group was established in the area. The aim was to produce quality productive ewes for lowland sheep farms. I joined the group in 1995 and in 2014 I became chairman. The group has three sales in autumn with the premier sale having around 3,000 mule ewe lambs and hoggets on offer. The special breeding sales are a great way to sell. The sellers have an opportunity to put top class sheep together for the sale that they know buyers will be interested in. From the buyer's perspective, when they come to these sales they are confident of the spec of the animals on sale. Over the years, many buyers return every year knowing they will continue to find top quality breeding stock. Having our special sale days in-place gives the producer a sale date and a market to work towards. Our male lambs are sold through another producer group, the Blackface Group. This group was set up in 2004. We currently deal with Kildare Chilling. On our farm, we usually aim for a target carcass weight of about 19kg.

## Technical Management

Putting fences in place meant we could get better use of the land being able to out-winter and feed a lot of our ewes on the rough grazing. We regularly take soil tests where appropriate on the better-quality land and attempt to maintain soil fertility at an optimum level. This includes applying lime as well as phosphorous and potash according to recommendations. Liming is important to maximise the value we get from fertilisers. We also attempt to maintain pasture in good condition by reseeding some of the better-quality land over time.





**Figure 2.** Mule ewe lambs prior to sale in Ballinrobe. Producer groups are an efficient way to market sheep.

In 2017 we grew a crop of Typhon. This is essentially a stubble turnip variety that has high levels of leaf production. It is the leaf, not the root that is the main target for grazing. We grew it as a leafy catch crop to finish lamb lambs at a lower less than feeding meals. We sowed about 6 acres of Typhon in total. This was planted the first week in June and was ready for grazing about 4 weeks later. We stocked it at the rate of 20 lambs per acre. It took 4-5 weeks to eat it down and this was sufficient time to finish these lambs. The lambs we grazed on the crop were forward store lambs. After the first grazing the Typhon we applied one bag of nitrogen per acre and found it was ready for grazing again two weeks later. We grazed the crop three times in total in 2017 and finished 350 lambs in total on it. This was under-sown with grass seed. However, we have noticed that the new grass is patchy but hope that it will thicken in spring time when we apply some fertilizer. We were very happy with the results and we intend on sowing some again in summer 2018.

Because of better grassland management and better breeding, we manage to achieve a good litter size, and this helps give us achieve a relatively good gross margin. We aim for a weaning rate of 1.5 lambs reared per ewe mated. We get the ewes scanned around the middle of February. We leave the singles outdoor to lamb while those carrying twins are often housed. We have both slatted and straw-bedded accommodation. Those with twins or triplets need extra care both from the weather and especially from foxes.

## Flock health

Flock health is very important. You can't expect animals to thrive if they are not adequately dosed as required. Lameness, worm control and liver fluke are all major issues to be kept under control. Vaccinations, such with clostridial vaccines following the correct programme is another important factor. We try to follow the advice given by Teagasc and by our veterinary surgeon to maintain a healthy flock.

## Male lambs

At the moment the Mule male lambs are castrated. We find the mule lambs are easier finished if they are castrated and they naturally grow into a heavy carcass. They bring this growth and size from the Bluefaced Leicester while the Scottish Blackface lambs are left entire as they grow into heavier carcasses.

Since bringing in the Lanark breeding all of our lambs are killing out heavier carcasses. This is especially noticeable in our Blackface ram lambs. These lambs are now killing on average four kilos heavier than ten years ago.



## Concerns for the future

- A major gap exists in the market for light carcasses such as the 10 to 13 kg carcasses. Farmers and factories need to find an outlet for these lighter lambs. This is particularly important to farmers perhaps without any or with a limited amount of lowland to finish off lambs at a higher weight. At present there is very poor demand for these types of male lambs with a lot of them being sold as stores for further feeding. If these types of lambs could be slaughtered for a decent return, they would be out of the supply chain and help to keep a floor under the price of spring lamb the following year.
- There is a large gap between what the producer gets and what the housewife pays for lamb in the supermarket or butchers. We usually get less than €5/kg for lamb while the average price the shopper pays is somewhere in the region of €16/kg. That is too big a gap.
- Marketing of lamb as a convenient and healthy food is poor and leaves a lot to be desired.
- Much more needs to be done to encourage young people to eat lamb and to promote lamb meat generally.
- At present we seem to have less young farmers entering hill sheep farming. I see poor market returns for hill lamb and land availability being the two main reasons for this. In
- In my opinion, there is a need for a new farm retirement scheme. There are a high proportion of farmers who cannot afford to pay into private pension scheme. They find themselves not in a position to hand over their farm to their son or daughter as they would not have any source of income until they would qualify to the old age pension. For many people, they find their families are now in their late 30's / early 40's and have chosen a different career path.
- As I work as a contract sheep shearer, I am concerned about the very poor price of wool. With the very low price, the money received for the wool only subsidises the cost of shearing. It would be much better if the price received for wool would at least cover the cost of a shearer. For myself personally, while I enjoy shearing, I consider it is a hard-tough job, it is a young man's game and I think my days are probably numbered at it. I would like to get to the situation where I could quit the off-farm work and concentrate on farming.
- I would consider expanding further in terms of ewe numbers. However, I need to look at where these extra ewes will be kept. If it means renting extra land, this is probably prohibitive due to the cost of land rental.

## Conclusions

I have been farming all my life. It has always been a family business and continues to be that way. While it often takes a lot of hard work and determination I believe it is a great way of life and a great environment to bring up a family. I would love to continue farming and eliminate the off-farm work. I believe it is important to maximise the use of whatever land is available to me and have always tried to do that. This includes effective use of fertiliser, operating a rotational grazing system taking good care of livestock. By working with other farmers in a group approach to marketing, it is possible to exploit whatever potential there is in the market. By operating an effective breeding programme, it is possible to produce good quality stock that buyers demand. .





# Marketing of hill and hill crossbreed lambs

*John Walsh*

*General Manager, Irish Country Meats, Camolin, Co. Wexford .*

## Take Home Messages

- Irish Sheepmeat production has delivered increased output in 2017, with the national kill touching almost 3 million head for the first time in over a decade.
- The increased output has helped processors to consolidate supply with strategic customers across Europe and has assisted to displace non EU product.
- The introduction of the CLP coupled with the proposed implementation of EID will strengthen the appeal of Irish lamb in the wider marketplace.
- Bord Bia continue, with the support of the EU to promote Irish lamb within Europe and further afield.

## Introduction

Hill lamb is an important component of the overall Irish Sheepmeat industry. Whether sold straight from the hill as a carcase lamb serving a customer requirement for light lambs or being sold on to lowland finishers as a store, hill lamb contributes significantly to supporting the seasonal nature of Irish lamb.

## Sheepmeat Exports

Sheepmeat exports account for 70% of all Irish lamb production. In the past, the main markets for light Irish lambs were Spain, Portugal, Italy and Tunisia. In recent years however, there has been significant growth in the Nordic markets, to the point that Sweden is now the second largest importer of Irish Lamb in Europe.

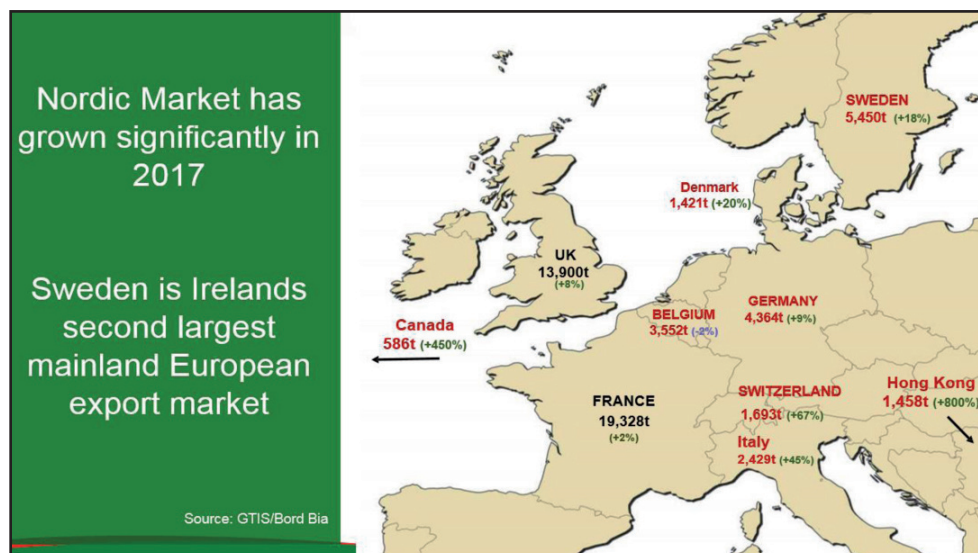
There are many further opportunities to consolidate the growth of the last 12 months. The uncertainty of Brexit, while presenting challenges, will no doubt uncover further opportunities. Europe has a market of over 500 million customers, with production self-sufficiency of less than 80%.

Furthermore New Zealand and Australia are withdrawing from European markets in favour of Asia. NZ hasn't used its European quota in full for many years and in the last 5 years has gone from 90% to 70%. With British retailers increasingly insistent on using British lamb, one of the key challenges during Brexit negotiations will concern the handling of the NZ quota in Europe.

## Market Influences

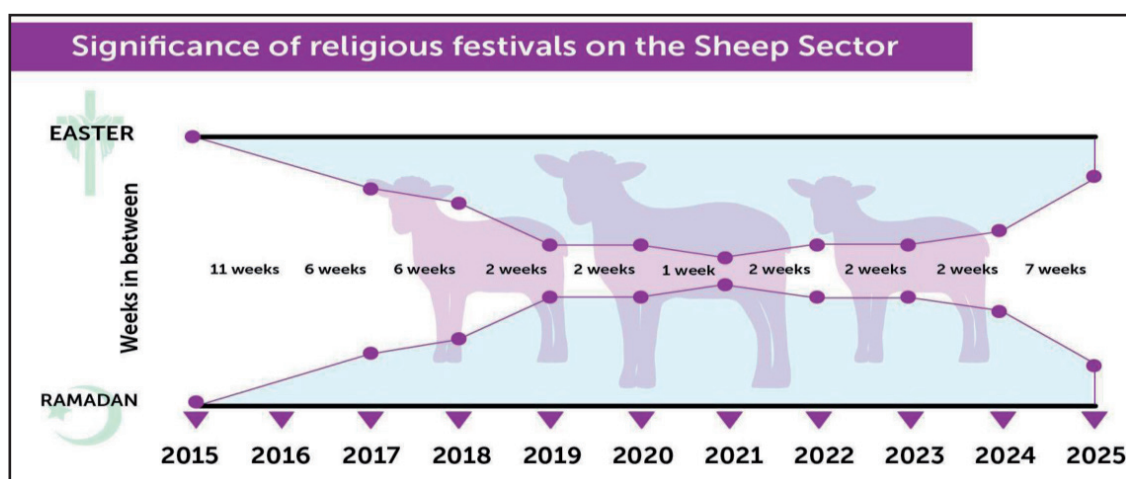
While it is important for sheepmeat processors and producers to seek out opportunities to grow the overall market, it is also necessary to examine the market influences outside of our control. Lamb is synonymous with many religious festivals. While Easter in Ireland is a traditional time to consume lamb it is important to understand that there are global events occurring concurrently that will increase the demand for sheep meat at particular times of the year.





**Figure 1.** Growth markets in Europe in 2017.

Figure 2. Demonstrates the convergence of Easter & Ramadan culminating in a one week gap between the two in 2021. Despite the difficulties and pressures that the two most significant festivals requiring a supply of lamb being so close together pose, there are also huge opportunities for the sector with careful planning of supply.



**Figure 2.** Importance of religious festivals

## Quality lamb production.

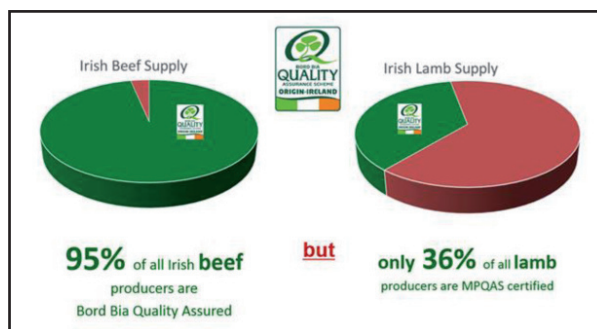
In order to maximise the opportunities noted above, it is imperative that we continue to provide quality product to the market. In order to maintain and improve the quality of Irish Lamb it is vital that processors and farmers work in tandem.

## Quality Assurance

The importance of quality assurance is already evident in the domestic retail market, where all of the main retailers insist on their meat being from Bord Bia Quality Assured farms. While 95% of all Irish Beef producers are Bord Bia Assured only 36% of lamb producers are accredited. The development of the industry will require a far greater participation rate as European retailers will in time require assurance membership.



**Figure 3.** Levels of quality assurance accreditation of Irish beef and lamb producers



## Traceability

Traceability underpins the security of our food. Key to this traceability in Sheepmeat production, is the introduction of electronic tagging. We lag behind many of our European competitors in this regard. While the current traceability system served its purpose at the point of its introduction, it must now be brought to the next stage. EID tagging will strengthen and assist in market access opportunities for Irish lamb in global markets in the future.

## Clean Livestock Policy (CLP) for Sheep

An effective CLP is very important not just in terms of basic food safety but also as a reputational issue for Ireland's meat industry and to safeguard our ongoing export trade. DAFM introduced the Ovine CLP in June 2017 categorising sheep in terms of livestock presentation.

**Table 1.** Clean Livestock Policy (CLP) categories for Sheep

### Category A – Satisfactory –

Sheep that can be slaughtered, without an unacceptable risk of contaminating the meat during the slaughter process, by using the standard hygienic dressing procedures routinely employed by the plant;



### Category B – Acceptable –

Sheep that can only be slaughtered, without an unacceptable risk of contamination of the meat during the slaughter process, by putting in place extra defined hygienic dressing controls;



### C – Unacceptable –

Sheep unfit for slaughter because of hide condition. Livestock must not be presented for ante mortem in this condition and it is the responsibility of the FBO to take the required remedial action









## CLP Summary

### Importance

- Critically important –everyone has a role to play
- Implications for food safety, trade, shelf-life
- Market access and reputation
- In addition to meat exports, trade in skins is crucial in delivering overall returns

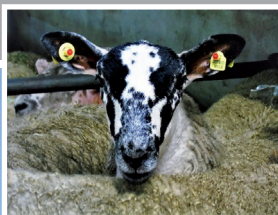
## Conclusion

Irish Sheepmeat production has delivered increased output in 2017, with the national kill touching almost 3 million head for the first time in over a decade. The increased output has helped processors to consolidate supply with strategic customers across Europe and has assisted to displace non EU product. The introduction of the CLP coupled with the proposed implementation of EID will strengthen the appeal of Irish lamb in the wider marketplace. Bord Bia continue, with the support of the EU to promote Irish lamb within Europe and further afield. With the increasingly sustained quality and supply of our lamb, further opportunities will present in markets that we currently don't have national access to.









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