



# The breeding structure of the British sheep industry 2012

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Results of the 2012 survey of sheep breeds in Great Britain

# Foreword

By Poppy Frater, EBLEX Beef and Sheep Scientist

**Over the past 40 years, the never-ending quest to develop the perfect sheep breed has resulted in a very dynamic UK sheep industry.**



Changes in the industry have been documented through regular sheep breed surveys, first conducted in 1971 and repeated four times since. This report contains the findings of the latest survey conducted in 2012. The results are a testament to the resilience of the UK

sheep industry as it continually evolves to adapt to external change while producing what the market wants.

The survey capitalises on farmers' knowledge of their breeding programmes to understand their decision-making, as the UK genetic resource pool changes and efficiency is desired. The results show the direction the industry is heading – the increased influence of crossbreds and rise of certain terminal sire and lowland breeds. This insight helps EBLEX target research and development and knowledge transfer efforts to meet the needs of the industry. It helps breed societies understand the influence of their breeds on the commercial sheep industry and provides an overview for the other support organisations.

We are grateful to Geoff Pollott, senior lecturer at The Royal Veterinary College, for the data analysis and writing the report. Geoff was author of the past three surveys and has worked in the field of ruminant livestock genetics for 40 years. His involvement has ensured the survey will continue. The UK sheep industry is the only industry that has documented 40 years of change, to continue this legacy will have immeasurable benefits to future breeding strategies.

## Acknowledgements

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# The breeding structure of the British sheep industry 2012

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A report produced by  
Dr. Geoff Pollott  
Royal Veterinary College

Data derived from the 2012  
British Sheep Breed Survey  
conducted by EBLEX





# Executive summary



## This report describes the breed structure of the British sheep breeding sector at mating in 2012 and is based on data derived from a single-page postal questionnaire sent to the 42,215 wool producers registered with the British Wool Marketing Board.

It is the fifth such survey carried out periodically between 1971 and 2012. Results are available to show how the sheep breeding sector has changed over this significant period of time.

About a third of questionnaires were returned and when they were prepared for analysis the useable forms represented 23% of breeders and 16% of breeding ewes; comparable figures to the last survey in 2003.

The distribution of questionnaire respondents was checked as far as possible. This used independent estimates of the distribution of flocks and breeding ewes between countries/regions of England and between flocks of different sizes derived from census data supplied by the four constituent UK countries. The survey sample was found to be similar to census data, with the exception of a slight under-representation from Wales and smaller flocks (0 – 49 breeding ewes).

Survey results were scaled up to national level using December 2012 Census data from the three British countries. The overall picture presented by December Census data was of 13.1 million ewes mated in 2012, 2.2 million fewer than at the last survey in 2003.

Crossbred ewes outnumbered purebred ewes with 56 and 44% of ewes mated respectively; in 2003 it was 50:50. This change has been mainly due to a reduction in purebred numbers and similar crossbred numbers compared to 2003.

A reduction in ewe numbers in the three main hill breeds (Scottish Blackface, Swaledale and Welsh Mountain) is responsible for most of the drop in ewe numbers nationally since 2003.

The number of breeds found in Britain continues to increase with 106 being found in 2012. New breeds were either imported foreign breeds, reimported UK breeds (eg New Zealand Romney) or composites made up from existing genetic material.

Certain breeds have notably increased in numbers in recent years; the Texel (and its derivatives), the Lleyn, the Bluefaced Leicester and the composite Easycare. Not surprisingly, many breeds are declining in numbers and several were not found in 2012 which were found in previous surveys.

The Lleyn breed has continued to increase in numbers, with about half a million ewes found in 2012. Half were mated pure and the rest to a variety of ram breeds. Lleyn rams were mated to half a million ewes. The Lleyn is now the largest non-hill breed in Britain.

Over 2.8 million mule (Bluefaced Leicester sired) type ewes dominated the crossbred ewes used in Britain at the expense of halfbred types (Border Leicester sired; 180 000). Texel- and Suffolk-sired ewes also played a significant role in the industry; 1.6 and 0.9 million ewes respectively.

North Country Mule ewes were found on about 20% of farms in Britain with the Texel being the next most widespread breed. On the ram side the Texel comprised over a quarter of all rams in Britain and was found on nearly 18,000 farms. The Suffolk was the next most numerous ram breed but was half the number of the Texel.

The three main hill ewe breeds dominated the declining pure-breeding sector but the Lleyn was the next most numerous breed mated pure. The size and number of flocks producing recognised crossbreds was also in decline.

The traditional 'stratified crossbreeding' nature of the British sheep industry was still identifiable but the ratio of stratified: non-stratified has declined from 71:29% in 2003 to 55:45% in 2012. A feature of the 'new' structure is the wide range of ad hoc crossbreds now found in Britain.

When considering the genetic contribution of the different breed types to lamb output from the industry, the terminal sire breeds dominated the picture. They sired 68% of lambs and contributed to 45% of the genetic makeup of the lamb carcase meat produced in the Britain.

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# Introduction

**Sheep numbers in the UK are monitored regularly by its four constituent countries in the form of both a June and December Farm Census conducted by Defra.**

However, these censuses do not make any reference to the breeds of sheep used. Consequently, periodic sheep breed surveys have been undertaken using postal questionnaires sent directly to sheep keepers. These surveys have previously been carried out to coincide with mating in 1971, 1987, 1996 and 2003<sup>1</sup>, with the subject of this report being the fifth such survey in 2012.

The original survey was instigated by the Scientific Study Group of the then newly-formed Meat and Livestock Commission (MLC) to inform its research and development planning in the sheep industry. Subsequent surveys have been commissioned by MLC, MAFF (now Defra) and EBLEX (the beef and sheep levy division of the Agriculture and Horticulture Development Board) to understand the structure of the sheep breeding sector as part of their planning process for policy, animal health and technical strategies. As the original survey was set up by MLC, covering the areas of the UK within its jurisdiction (England, Scotland and Wales), subsequent surveys have used the same format. Hence, this is a report on the sheep breeding sector in Britain and care should be taken when quoting or comparing data involving the whole of the UK.

This body of data now represents a coherent longitudinal picture of how the sheep industry in Britain has evolved over the last 40 years and provides some interesting insights into how British sheep breeders have responded to the political, economic and technical changes that they have had to work with. This report concentrates mainly on the 2012 survey results but data from previous years are used to highlight key changes that have occurred over the years.

Undoubtedly many people have contributed to the formation of this body of data and deserve to be acknowledged. These include the organisations who have funded the work, the researchers and clerical staff who have conducted and analysed the surveys and the British farmers who have responded to the questionnaires and freely provided the information used here.

<sup>1</sup>The Breeding Structure of the British Sheep Industry 2003 report can be found here: <http://archive.defra.gov.uk/evidence/economics/foodfarm/reports/documents/pollott2003.pdf>



# The questionnaire

**The essence of this work is that sheep breeders know certain key facts about the breeds of sheep in their flocks; the number of ewes, the number of rams and how many lambs they sell.**

If a simple single-page form can be designed to capture that information then much can be gleaned about the sheep breeding industry. The 2012 form is shown in Appendix 1 and has five key boxes, each dealing with critical aspects of sheep breeding flocks; ewe matings, rams available, ewe lambs not bred and lambs sold for both meat and breeding. Matings are divided into the three age categories commonly used in Britain to describe sheep; ewe lambs, shearlings and mature ewes.

This questionnaire was sent to all wool producers registered with the British Wool Marketing Board (BWMB), which is a service offered to any producer with four or more ewes. Forms were sent to the 42,215 registered wool producers in Britain in the autumn of 2012. Over 10,000 forms were returned and 9,510 provided useable data for these results, some 23% of forms sent out covering 16% of ewes in the country. Table 1 sets this response in the context of previous surveys and shows an increasing number of farms surveyed over time with a small decline in response rate, even though the number of forms returned is now at its greatest in 2012.

**Table 1. A summary of the number of forms sent out and returned from the 2012 Survey compared to the three previous surveys**

	1987	1996	2003	2012
Farms on BWMB list	86,360	73,800	52,478	45,218
Number of forms sent out	8,636	7,380	33,548	42,215
Useable returned forms	2,430	1,872	8,236	9,510
% returned as useable	28	25	25	23
% of breeders reported	2.8	2.5	15.7	21.0
% of breeding ewes reported	3.2	2.82	15.3	16.4



# The sample

## The sample of farms and ewes covered by the questionnaire responses represents the data available from which to derive the results.

It is worth trying to assess how representative this sample is of the British sheep breeding sector as a whole. Data from the June and December censuses carried out by the various governments' departments for England, Wales, Scotland and Northern Ireland were used as an independent measure of the data collected. Tables 2 and 3 show various comparisons between the 2012 survey sample distributions and their equivalent results from census data. There are slight nuances between sources, which sometimes make the comparisons more inequitable; definitions about what constitutes a flock is one example. The general picture from Tables 2 and 3 is that the sample of farms surveyed is a reasonably representative picture of sheep flocks in Britain, with a slight underrepresentation in Wales and in the smallest flock category (1 – 49 ewes).

**Table 2. A comparison between the Survey and June Census data 2012 for the distribution of both flocks and breeding ewes by country/region of England (% of category)**

Country/region of England	Farms with breeding ewes		Breeding ewes	
	Census	Survey	Census*	Survey
Wales	25	20	28	25
Scotland	23	26	24	26
South-West	13	13	10	10
North-West	8	7	9	8
North-East	4	5	6	7
Yorks/Humberside	7	8	7	7
South-East	5	6	4	6
Eastern	2	2	1	1
East Midlands	5	5	4	4
West Midlands	8	8	7	6

\* 2010 data. Data is not currently published in these categories

**Table 3. A comparison between the Survey and June Census 2012 data for the distribution of both flocks and breeding ewes by flock size (% of category)**

Flock Size (No. breeding ewes)	Number of farms		Breeding ewes	
	Census	Survey	Census	Survey
1-49	35	27	2	2
50-124	22	22	9	7
125-499	30	35	34	36
500-999	9	12	27	31
≥1,000	4	4	27	24

When reading this report it is worth mentioning that the results are based on a sampling process and as such are subject to uncertainty in their exactness; the larger the sample and category the more exact are the estimates. Technically, one can attach what is referred to as a 'standard error' to each figure in this report. This has not been done for ease of reading but typically for breed populations quoted at 1 million ewes, the real value lies within  $\pm 20,000$  and for breed populations of 5,000 and 100,000 the ranges are  $\pm 1,500$  and  $\pm 8,500$  respectively. Equivalent figures for breed populations of rams of 25,000 and 1,000 would be  $\pm 1,750$  and  $\pm 400$ . Consequently, care must be taken when interpreting these results not to put too much emphasis on the actual estimates of small populations.

One further point about methodology needs to be borne in mind when reading this report: the breeds quoted depend on the terminology used by the breeders returning the questionnaires. In a small number of cases some breeds and crosses were described in such a way that it has been difficult to ascribe the animals to a particular breed/cross with 100% accuracy. Of note in this respect are the Cheviots, Dorsets and Mules. Typically, with pure breeds these have been left as 'unspecified' in the tables found in this report. In the case of crossbreds, then these have been allocated to crossbred type based on the country where they were found. Clearly, there may be some slight misallocation of animals to crossbred types as a result of this.

# Breeding ewe and flock numbers

The trend between the last survey in 2003 and the current one is for a reduction in both flock and ewe numbers.

The December Census data in Table 4 shows the British breeding flock to have been 13.1 million ewes in 2012 compared to 15.1 in 2003. This is the lowest of the four most recent surveys, although it is likely to be slightly higher than found in 1971. Flock numbers, as measured by the BWMB registrations, have declined regularly from over 86,000 in 1971 to approximately 45,000 in 2012.

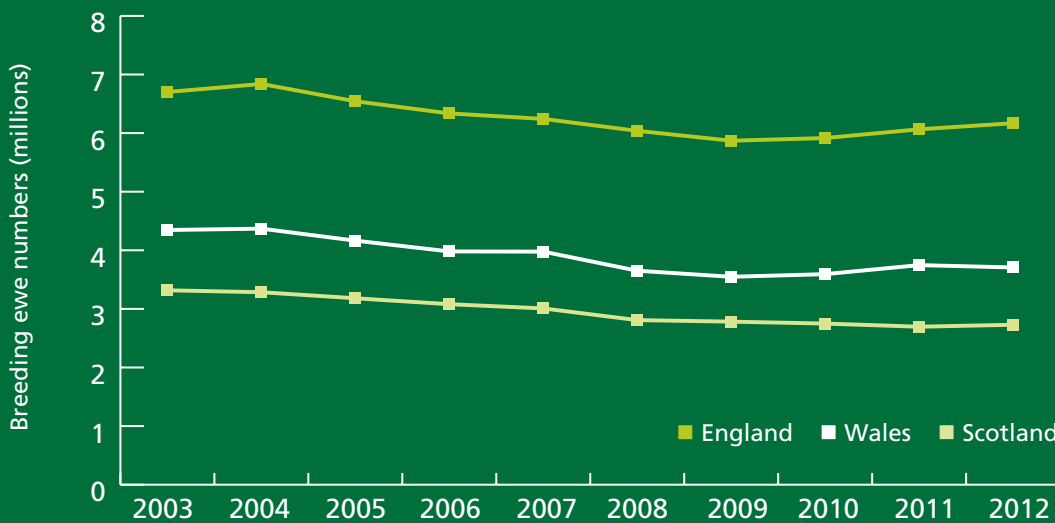
**Table 4. Breeding sheep numbers from 1971 to 2012 from December Census data (000)**

	1971	1987	1996	2003	2012
Ewes mated	11,952	17,375	16,860	14,377	N/A
Ewe lambs mated	See below	1,763	1,194	812	N/A
Total ewes mated	N/A	19,138	18,054	15,189	13,064
Ewe lambs not mated	2,435*	2,103	2,528	2,476	N/A
Rams used	325	487	471	412	365**

\*All ewe lambs. \*\* No longer available; June Census figure. N/A = Not Available



**Figure 1.** The annual total number of breeding ewes in England, Scotland and Wales between 2003 and 2012 (December Census)



The reduction in ewe numbers by 2.1 million since 2003 has been greatest in England (Figure 1; 890,000), then Wales (719,000) and then Scotland (623,000) but because of the disparity in country populations this represents a 13% loss in England, 15% loss in Wales and 18% in Scotland. Table 5 highlights the fact that the greatest annual reductions in ewe numbers were in 2005 (4.3%) and 2008 (5.8%).

**Table 5.** The percentage change in breeding ewe numbers between successive years in Britain and its three constituent countries, 2003 to 2012 (December Census data)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
England	-0.2	1.3	-4.2	-2.0	-2.6	-3.9	-2.2	-0.8	0.8	0.4
Wales	-1.9	-0.7	-5.4	-5.1	0.7	-7.9	-2.4	1.1	5.2	-1.6
Scotland	-0.2	-1.2	-3.2	-3.1	-2.2	-7.0	-0.1	-1.1	-1.6	0.6
Britain	-0.7	0.1	-4.3	-3.2	-1.5	-5.8	-1.7	-0.3	1.5	-0.2

Data in this report are often presented as both absolute numbers and percentages of the 'National Flock'. Because of the overall reduction in ewe numbers between, for example 2003 and 2012, a breed may have been reduced in numbers but achieve a higher proportion of the total ewes mated. Care must be taken in the interpretation of the figures and some clarity required in order not to give confusing messages.



# Ewe breed numbers

**There has been a consistent trend over the years of a reduction in purebred ewes as a proportion of all ewes mated (Table 6).**

In 2012, this reached a ratio of 44% pure to 56% crossbred ewes. Ewe numbers in each category peaked in 1987 and since then there has been a consistent decline in purebred ewe numbers. Crossbred ewe numbers also declined since 1987 but in 2012 there was a slight increase compared to 2003. It can be argued that the recent fall in total ewe numbers in Britain has been due to a decline in purebred ewe numbers, with crossbreds remaining numerically much the same. This fall in purebred numbers is heavily influenced by the fall in hill breeds. Therefore, rather than a conscientious policy to keep more crossbreds, it is perhaps due to a shift in the areas where sheep production is taking place.

**Table 6. Estimated proportion and number of crossbred and purebred ewes in the national flock between 1971 and 2012**

	% Purebred	% Crossbred	No. purebred ewes (000)	No. crossbred ewes (000)
All ewes mated	44	56	6,277	7,988
Ewe lambs mated	32	68	328	723
Ewe lambs not mated	56	44	1,504	1,166
All ewes (2003)	50	50	7,596	7,596
All ewes (1996)	54	46	9,749	8,305
All ewes (1987)	53	47	10,143	8,995
All ewes (1971)	68	32	8,617	4,055

Notwithstanding these changes in purebred ewe numbers, the actual number of breeds found has risen from about 60 breeds in 1971 to 106 in 2012. This increase in breed numbers is made up of three major classes of breed type; imported foreign breeds, re-imported British breeds (eg New Zealand Suffolk) and newly-formed composite breeds. One might imagine that a small island with 60 breeds should have enough genetic material on which to base a sheep industry. This is clearly not so and breeders have attempted to fill gaps in the market with new genetic material from one source or another. However, such dramatic numbers do not tell the whole story. Of the 30 imported breeds reported between 1971 and 2003, five were not found in the 2012 survey and many imported breeds are declining in number. However, imported breeds represented over half a million ewes in 2012; about 20% of all non-hill ewes. Composite breeds are a different approach to producing the 'right' genetic material, which relies on combining readily available breeds to form a stable breeding population. In 2012 six composites were found numbering ~150,000 ewes. The most notable were the Easycare, a popular ewe breed and the Meatlinc, an enduring meat sire. Some six other composites found in previous surveys were not found in 2012.

The three main hill breeds of Britain – Scottish Blackface, Welsh Mountain and Swaledale – dominate the pure breed ewe numbers (Table 7) and between them account for over 20% of all ewes in Britain. In fact, 11 of the 19 breeds shown in Table 7 were hill breeds. Three terminal sire breeds also feature in Table 7, Texel, Suffolk and Charollais and account for 4% of all ewes, even though their main role is to produce rams to sire the British meat lamb crop. Several breeds kept in the uplands and lowlands as maternal breeds were also found to be numerous in 2012; these include the Lley, Romney Marsh, Easycare and Poll Dorset.



**New Zealand Suffolk**



**Easycare**



**Meatlinc**

**Table 7.** The main pure breeds of ewe kept in Britain in 2012 and 2003 based on the estimated number of ewes mated

Breed	2012				2003	
	Breed type *	No. ewes mated (000)	All ewes (000)	% of all ewes	No. ewes mated (000)	% of all ewes
Scottish Blackface	H	1,125	1,327	8.6	1,686	11.1
Welsh Mountain	H	966	1,139	7.4	1,563	10.3
Swaledale	H	721	850	5.5	1,047	6.9
Lleyn	SE	474	560	3.6	237	1.6
Texel	TS	304	359	2.3	326	2.1
North Country Cheviot	H	294	346	2.3	435	2.9
Romney Marsh	LE	251	296	1.9	165	1.1
Cheviot unspecified	H	227	268	1.7	147	1.0
Beulah Speckled Face	H	144	170	1.1	498	3.3
Hardy Speckled Face	H	134	159	1.0	276	1.8
Suffolk	TS	130	153	1.0	230	1.5
Easycare	SE	101	119	0.8	13	0.1
New Zealand Romney	LE	86	102	0.7		
South Country Cheviot	H	83	98	0.6	94	0.6
Poll Dorset	SE	75	89	0.6	94	0.6
Brecknock Hill Cheviot	H	62	73	0.5	73	0.5
Herdwick	H	56	66	0.4	55	0.4
Charollais	TS	56	66	0.4	45	0.3
South Welsh Mountain	H	36	43	0.3	59	0.4

\*H = Hill, TS = Terminal Sire, SE = Shortwool Ewe, LE = Longwool Ewe

In the context of the last 40 years, a number of breeds in Table 7 reflect interesting trends. The Scottish Blackface has always been the most numerous breed in Britain but in the 1996 Survey it was estimated to contain almost 3 million ewes, a contrast to the 1.1 million in 2012. Changes in the number of Welsh Mountain ewes have been less dramatic, although they too have declined from a peak of nearly 2 million ewes in 1971 to their current level of just under 1 million.

By contrast, some breeds in Table 7 have made a dramatic increase in numbers over the last 40 years; in the case of the Texel, Charollais and Easycare from none being recorded in 1971 to significant numbers now. Others, like the Lley, were very rare in 1971 (~7,000 ewes) and the Romney Marsh has recovered from a decline between 1971 and now.

In addition, several breeds not shown in Table 7 are worth commenting on. The Bluefaced Leicester was estimated to have ~5,000 ewes in 1971 but has risen to ~30,000 in the 1980s and 90s and now has ~20,000. These changes reflect the rise in mule-type crossbred ewes which are sired by the Bluefaced Leicester ram.

Together, the three large hill breeds fell by about 1.5 million ewes between 2003 and 2012, accounting for 75% of the drop in ewe numbers. The other hill breeds also contributed to the reduction in overall numbers over this period.

Some breeds were estimated to be numerically small. These are listed in Table 8 for breeds with less than 10,000 ewes. As mentioned earlier, small populations are less accurately estimated in a survey such as this but nevertheless, some of the breeds may be in danger of disappearing altogether.



**Gotswold**



**Zwartbles**



**Rouge de l'Ouest**



**Table 8. Breeds with less than 10,000 ewes**

Badger Faced Welsh	Four Teated	Polwarth
Balwen	Friesland	Portland
Berrichon du Cher	Galway	Radnor
Black Welsh Mountain	Glamorgan Welsh	Rouge de l'Ouest
Black Wensleydale	Gotland	Roussin
Bleu de Maine	Greyfaced Dartmoor	Ryeland
Blue Texel	Hampshire Down	Shropshire
Border Leicester	Hartline	Soay
Boreray	Hebridean	Southdown
British Icelandic	Ile de France	Teeswater
British Milkshoop	Lacaune	Torddu
Cambridge	Leicester Longwool	Torwen
Castlemilk Moorit	Lincoln Longwool	Tregaron Welsh Mountain
Charmoise	Llanwenog	Vendeen
Coloured Ryeland	Manx Loaghtan	Welsh Mountain (Nelson)
Continental	Meatlinc	Wensleydale
Cotswold	Merino	Whitefaced Dartmoor
Devon & Cornwall Longwool	New Zealand Suffolk	Whitefaced Llandovery
Devon Closewool	Norfolk Horn	Whitefaced Woodland
Dorper	North Ronaldsay	Zwartbles
Dorset Horn	Ouessant	
Dutch Texel	Oxford Down	

# Crossbred ewe populations

The balance between purebred and crossbred ewes has changed since the 2003 survey, such that crossbreds now outnumber purebreds (Table 6).

This reflects the fact that no one breed has all the characteristics required to produce lambs for the meat trade in the range of environments seen in the UK. Merging of different breed characteristics allows flexibility into production systems. Historically, this has been achieved through the use of recognised crossbreds based on the Border Leicester (halfbred types) or Bluefaced Leicester (mule types) mated to hill breeds. These recognised crossbreds are still found in the British sheep breeding sector with the North Country Mule comprising 12.5% of the ewes mated (Table 9). However, two recent developments are worth noting. Halfbred types have become less numerous than they have been traditionally and there has been an increase in the number of ad hoc crossbred ewes.

**Table 9. Estimated size of crossbred ewe populations in 2012 and 2003**

	2012			2003	
	No. ewes mated (000)	All ewes (000)	% National flock	No. ewes mated (000)	% National flock
<b>Longwool x Hill</b>					
North Country Mule	1,636	1,822	12.5	1,915	12.6
Welsh Mule	576	657	4.4	738	4.9
Scotch Mule	469	534	3.6	610	4.0
Greyface	91	105	0.7	212	1.4
Welsh Halfbred	41	47	0.3	130	0.9
Scottish Halfbred	44	51	0.3	100	0.7
Masham	34	39	0.3		
Bluefaced Leicester crosses	106	129	0.8	81	0.5
Border Leicester crosses	5	7	<0.1	40	0.3
Other LWC x Hill	3	3	<0.1		

**Table 9. continued. Estimated size of crossbred ewe populations in 2012 and 2003**

	2012			2003	
	No. ewes mated (000)	All ewes (000)	% National flock	No. ewes mated (000)	% National flock
<b>F<sub>1</sub> Hill breed crosses</b>					
Hill x different Hill	116	142	0.9	239	1.6
Texel x Hill	61	73	0.5	92	0.6
Suffolk x Hill	27	32	0.2	81	0.5
Charollais x Hill	4	5	<0.1	9	<0.1
<b>Terminal Sire crosses</b>					
Suffolk x (LW x Hill)	342	409	2.6	590	3.9
Texel x (LW x Hill)	247	282	1.9	307	2.0
Charollais x (LW x Hill)	9	11	0.1	32	0.2
Other Texel crosses	1,236	1,418	9.5	720	4.7
Other Suffolk crosses	584	671	4.5	699	4.6
Other Charollais crosses	87	100	0.7	88	0.6
<b>All other crosses</b>	<b>1,511</b>	<b>1,748</b>	<b>11.6</b>	<b>614</b>	<b>4.0</b>

The breed make up of these recognised crossbreds are described in Appendix 3, p 46

F<sub>1</sub>= First generation cross between two different breeds

**Border Leicester****Bluefaced Leicester****North Country Mule**

# Farms with ewes of different breeds

The number of farms keeping breeding ewes has almost halved in the last 40 years (Table 1) with a reduction from 52,478 to 45,218 since 2003.

Not surprisingly, therefore, the number of farms keeping recognised pure and crossbred ewes has also declined in that time, with some notable exceptions, eg Lleyn, Easycare, Beltex (Table 10). Breeds which are found on less than 250 farms are shown in Table 11 (page 22).

**Table 10. Details of flocks containing ewes of the major breeds and crossbreeds (estimated figures)**

Breed	No. of farms	% ewes mated pure	% ewes homebred	Av. flock size (breeding ewes)	2003 - No. of farms
North Country Mule	7,466	0	18	173	10,531
Texel	4,137	70	76	59	5,697
Scottish Blackface	3,911	67	80	229	4,881
Lleyn	2,628	58	80	144	2,203
Welsh Mountain	2,468	67	83	311	4,073
Suffolk	2,393	50	60	43	5,030
Welsh Mule	2,197	0	43	209	3,463
Scotch Mule	2,153	0	32	174	2,525
Swaledale	1,856	47	78	309	3,147
Cheviot unspecified	1,576	63	74	115	1,115
North Country Cheviot	1,465	73	82	160	2,357
Charollais	985	73	77	45	1,294
Jacob	857	65	59	14	1,154
Bluefaced Leicester	781	84	73	18	1,393
Beulah Speckled Face	630	42	72	182	2,126
Poll Dorset	621	70	83	96	970



**Table 10. continued.** Details of flocks containing ewes of the major breeds and crossbreeds (estimated figures)

Breed	No. of farms	% ewes mated pure	% ewes homebred	Av. flock size (breeding ewes)	2003 - No. of farms
Romney Marsh	564	58	71	242	540
Herdwick	533	76	69	84	450
Zwartbles	519	66	58	15	132
Hardy Speckled Face	462	60	91	232	765
Ryeland	391	91	66	12	410
Greyface	391	0	40	185	981
Beltex	377	70	62	32	237
Masham	377	0	21	72	814
Shetland	373	45	43	37	552
Scottish Halfbred	364	0	31	96	948
Dorset unspecified	364	58	80	68	359
Southdown	324	91	74	21	389
Easycare	324	79	79	248	29
Kerry Hill	315	78	73	26	237

\* when respondents have entered 'Dorset' on the form, it is not possible to determine which kind of Dorset. If this were possible, it is likely that the total Dorset numbers would be higher.



**Lleyn**



**Beltex**



**Swaledale**

**Table 11.** Breeds found on less than 250 farms

Badger Faced Welsh	Exmoor Horn	Norwegian White
Balwen	Four Teated	Ouessant
Berrichon du Cher	Friesland	Oxford Down
Black Wensleydale	Galway	Polwarth
Bleu de Maine	Glamorgan Welsh	Portland
Blue Texel	Gotland	Radnor
Border Leicester	Greyfaced Dartmoor	Rouge de l'Ouest
Boreray	Hartline	Rough Fell
Brecknock Hill Cheviot	Hebridean	Roussin
British Icelandic	Ile de France	Shropshire
British Milksheep	Improved Welsh	Soay
Cambridge	Lacaune	South Country Cheviot
Castlemilk Moorit	Leicester Longwool	South Welsh Mountain
Charmoise	Lincoln Longwool	Talybont Wesh Mountain
Clun Forest	Llanwenog	Teeswater
Colbred	Lonk	Torddu
Continental	Manx Loaghtan	Torwen
Cotswold	Meatlinc	Tregaron Welsh Mountain
Dalesbred	Meatline	Vendeen
Derbyshire Gritstone	Merino	Welsh Mountain (Nelson)
Devon & Cornwall Longwool	Millenium Blue	Wensleydale
Devon Closewool	Monsa	White Faced Welsh
Dorper	New Zealand Romney	Whitefaced Dartmoor
Dorset Down	New Zealand Southdown	Whitefaced Woodland
Dorset Horn	New Zealand Suffolk	Wiltshire Horn
Dutch Texel	Norfolk Horn	
Exlana	North Ronaldsay	

## Ram use

**The crossbred nature of much of the British sheep sector means that the picture of ram distribution between breeds is very different from that described previously for ewes.**

The rams used in Britain were 94% purebred, with the major ram breeds belonging to the three terminal sire breeds Texel, Suffolk and Charollais.

Between them, these breeds accounted for half the rams used in Britain in 2012, and if the different forms of Texel are included, then a similar proportion as in 2003 (Table 12). The next most common breed was the Scottish Blackface, the most numerous hill ewe breed in Britain but it declined in number by 6,000 rams since 2003 and by about 1% of all rams. The prominence of the Bluefaced Leicester as the sire of many crossbred ewes placed it fifth in the ranking of rams but it too decreased in both number and % of rams used since 2003. Apart from the hill breeds, the remainder of the ram breeds in Table 12 are interesting. The Lleyn appeared to have about 50% more rams in 2012 compared to 2003, accounting for more than 3% of rams. The number of Beltex rams almost doubled in size and there now appears to be a large number of Texel-cross rams also being used, mostly from matings between Texel and Beltex. Easycare rams have also become more numerous over recent years.

The level of artificial insemination (AI) in sheep remains low, with less than 5% of rams in any breed shown in Table 12 being used as AI rams. However, the level of breeds with estimated breeding values (EBV) on the rams used was extremely variable; on the one hand the Meatline had over 80% of their rams with EBVs, while the hill breeds show a very low level of EBV use.



**Suffolk**



**Texel**



**Charollais**

**Table 12.** A summary of the main breeds of rams used at mating 2012 and 2003 (estimated figures)

Breed	2012							2003	
	No. rams (000)	No. flocks (000)	Rams/flock	% all rams	% rams homebred	% AI	% EBV *	No. rams (000)	% all rams
Texel	99.0	19.8	6	27.1	17	3	12	100.4	24.4
Suffolk	46.8	10.7	5	12.8	16	3	14	93.9	22.8
Charollais	32.0	8.7	4	8.8	15	3	15	31.0	7.5
Scottish Blackface	24.2	2.9	9	6.6	35	1	3	30.3	7.4
Bluefaced Leicester	21.7	4.2	6	5.9	30	2	3	30.8	7.5
Welsh Mountain	18.5	2.3	9	5.1	34	2	2	26.2	6.4
Lleyn	12.6	3.5	4	3.4	22	2	27	8.2	2.0
Swaledale	9.8	1.4	8	2.7	17	3	0	13.5	3.3
Cheviot unspecified	9.7	2.3	5	2.7	28	2	2	3.4	0.8
Beltex	8.8	2.7	4	2.4	15	3	6	4.7	1.1
North Country Cheviot	7.4	1.4	6	2.0	24				
Texel cross	3.9	0.9	5	1.1	29	0	1		
Romney Marsh	3.0	0.5	6	0.8	33	4	25	3.0	0.7
Meatlinc	2.6	0.6	5	0.7	21	1	80	1.8	0.4
EasyCare	2.6	0.4	8	0.7	42	1	15	0.6	0.2

AI=Artificial Insemination, EBV=Estimated Breeding Value

\* Respondents were asked if their rams had EBVs. This almost certainly under reports the impact of recorded rams within the industry, as many producers are clearly buying recorded rams - but unaware that they have EBVs. For example, 100% of Meatlinc are recorded by Signet but the figure reported here is only 80%. Similar discrepancies are noted in the Texel and Charollais breeds.

The distribution of ewes mated to the different ram breeds is somewhat similar to that of the rams used on British sheep farms (Table 13). The Texel and its derivatives were mated to 30% of the ewes in Britain in 2012, slightly higher than in 2003.

**Table 13. Ram breed use in 2012 and 2003 on both purebred and crossbred ewes (estimated figures)**

Ram Breeds	2012		2003	
	Ewes mated (000)	% of ewes mated to breed	Ewes mated (000)	% of ewes mated to breed
Texel	3,519	26.9	3,614	23.0
Suffolk	1,672	12.8	3,393	21.6
Charollais	1,203	9.2	1,140	7.3
Bluefaced Leicester	923	7.1	1,194	7.6
Scottish Blackface	796	6.1	1,118	7.1
Welsh Mountain	724	5.5	1,152	7.3
Lleyn	500	3.8	324	2.1
Swaledale	367	2.8	579	3.7
Beltex	289	2.2	164	1.0
North Country Cheviot	269	2.1	376	2.4
Cheviot unspecified *	267	2.0		
Romney Marsh	124	0.9	101	0.6
Easycare	122	0.9		
Texel cross	105	0.8		
Meatlinec	98	0.8		
Hardy Speckled Face	94	0.7	156	1.0
Texel x Beltex	86	0.7		
South Country Cheviot	80	0.6		

\* When respondents have entered 'Cheviot' on the form, it is not possible to determine which kind of Cheviot. If this were possible, the North Country- and South Country Cheviot numbers would be higher.

# The pure-breeding sector

Although the proportion of ewes which were purebred was found to be 44% (Table 6), only about 60% of those were mated to rams of the same breed.

Table 14 describes the ewe flocks that were mated pure, these were found on about 23,000 farms. Although the three main hill breeds were the most numerous breeds to be bred pure, the Texel was found to be bred pure on more farms than any other breed, over 3,000. The Lleyn was the fourth most numerous breed bred pure. The Bluefaced Leicester and the Jacob were kept in the smallest-sized flocks, averaging about 16 ewes per flock.

**Table 14. The pure-breeding sector of the British sheep industry in 2012 and 2003 (estimated figures)**

Breed	2012				2003	
	No. flocks (000)	No. of ewes (000)	Av. flock size	% ewes homebred	No. flocks (000)	No. of ewes (000)
Scottish Blackface	2.5	750	241	92	2.9	1,093
Welsh Mountain	1.8	644	288	90	2.9	1,086
Swaledale	1.1	335	248	94	1.9	558
Lleyn	1.7	279	128	86	1.6	169
Texel	3.3	213	51	78	4.7	259
North Country Cheviot	1.1	213	156	93	1.7	281
Cheviot unspecified	1.0	143	113	89	0.6	77
Romney Marsh	0.3	99	231	81	0.3	91
Hardy Speckled Face	0.3	80	249	98	0.5	145
Easycare	0.3	79	246	81	<0.1	10
South Country Cheviot	0.1	72	562	91	0.2	78
Suffolk	1.4	64	36	77	3.5	149
New Zealand Romney	0.8	64	676	88		
Beulah Speckled Face	0.3	60	149	95	1.0	180



**Table 14. continued.** The pure-breeding sector of the British sheep industry in 2012 and 2003 (estimated figures)

Breed	2012				2003	
	No. flocks (000)	No. of ewes (000)	Av. flock size	% ewes homebred	No. flocks (000)	No. of ewes (000)
Poll Dorset *	0.5	53	90	88	0.7	66
Herdwick	0.3	43	104	79	0.3	40
Brecknock Hill Cheviot	0.1	42	249	90	0.1	48
Charollais	0.8	41	42	78	1.0	34
South Welsh Mountain	0.05	25	402	96	0.1	38
Lonk	0.06	20	261	94	<0.1	35
Rough Fell	0.1	17	126	97	0.2	32
Dalesbred	0.1	17	135	87	0.1	17
Bluefaced Leicester	0.7	15	17	77	1.2	21
Derbyshire Gritstone	0.1	11	95	91	0.2	16
Beltex	0.3	10	27	70		
Jacob	0.5	10	15	66	0.7	10

\* when respondents have entered 'Dorset' on the form, it is not possible to determine which kind of Dorset. If this were possible, it is likely that the Poll Dorset numbers would be higher.



**Scottish Blackface**



**Welsh Mountain**



**Swaledale**

# Crossbreeding sector

**Crossbreeding dominates the British sheep industry. Not only were 56% of all ewes mated crossbreds but 40% of purebreds were mated to rams of a different breed; thus about 75% of all ewe matings were crosses.**

Interestingly, the equivalent figures for 1971 were 39% of ewes were purebred mated to rams of the same breed and 61% crossed. The big difference now compared to 1971 is the proportion of the crossed ewes that are themselves crossbred; 32% in 1971 but 56% now. Also, about half the crossbreds in 1971 were halfbred (Border Leicester sired) or mule types (Bluefaced Leicester sired) but this proportion is now down to 41%. In addition, the balance has swung away from halfbreds towards mules.

This situation is reflected in Table 15, which shows the estimated size of the sector producing these recognised crossbred types. There has been a decrease in both the number of flocks and ewes involved with this sector, reflecting the numbers of these crossbred types found amongst the ewes being mated (Table 9).

**Table 15. Details of flocks producing recognised crossbreeds of ewe in 2012 and 2003 (estimated figures)**

Hill breed	2012				2003	
	No. flocks (000)	No. ewes (000)	Av. flock size	% ewes homebred	No. flocks (000)	No. ewes (000)
<b>Bluefaced Leicester crosses</b>						
Swaledale	1.3	349	208	65	2.0	439
Scottish Blackface	1.1	233	166	46	1.6	356
Welsh Mountain	0.5	95	158	45	0.6	87
Beulah Speckled Face	0.3	55	167	56	0.6	148
All Cheviot	0.2	38	122	40	0.2	21
Hardy Speckled Face	0.1	12	91	60	0.1	19
Exmoor Horn	0.1	10	109	69	0.1	7

**Table 15. continued. Details of flocks producing recognised crossbreeds of ewe in 2012 and 2003 (estimated figures)**

Hill breed	2012				2003	
	No. flocks (000)	No. ewes (000)	Av. flock size	% ewes homebred	No. flocks (000)	No. ewes (000)
<b>Border Leicester crosses</b>						
All Cheviot	1.1	14	103	19	0.1	28
Welsh Mountain	0.7	6	70	57	0.2	51
Scottish Blackface	<0.1	4	108	36	0.1	13

The extent and detail of crossbreeding in Britain can further be seen from Tables 16 and 17, which show the matings of purebred and crossbred ewes respectively. Apart from the hill ewes mated to longwool crossing rams, mentioned above, the next largest group of rams mated to hill ewes was from the terminal sires. However, this group of matings were about half the level found in 2003 (Figure 2). Matings between hill ewes and other hill breeds and with other breeds, were relatively few. Ewes from the longwool crossing breeds were largely mated pure while the largest groups of ewes from the longwool ewe and shortwool ewe breeds were crossed with terminal sire rams. Interestingly, this is also true for terminal sire breeds but in this case, this was often crosses between the various Texel types (eg Beltex and Texel).



**Welsh Mule**



**Scotch Mule**



**North Country Mule**

**Table 16. A summary of the mating of purebred ewes in 2012 (estimated figures)**

Ewe type	Ram type	Flocks (000)	Ewes (000)
Hill ewe eg Scottish Blackface, Welsh Mountain, Swaledale	Bred pure	10.3	2,597
	Other Hill	1.2	122
	Longwool crossing	4.2	867
	Terminal Sire	5.0	433
	Other	0.8	134
	<b>Total</b>		<b>4,154</b>
Longwool crossing eg Border Leicester, Bluefaced Leicester, Cotswold	Bred pure	1.1	24
	Terminal Sire	0.2	4
	Others	0.1	1
	<b>Total</b>		<b>30</b>
Longwool ewe eg Merino, Romney Marsh, Greyfaced Dartmoor	Bred pure	0.9	207
	Terminal Sire	0.6	86
	Others	0.1	30
	<b>Total</b>		<b>323</b>
Shortwool ewe eg Jacob, Ryeland, Poll Dorset	Bred pure	4.6	522
	Terminal Sire	3.1	231
	Others	0.6	56
	<b>Total</b>		<b>810</b>
Terminal Sire eg Texel, Suffolk, Charollais	Bred pure	7.2	394
	Other Terminal Sire	3.1	135
	Others	0.9	68
	<b>Total</b>		<b>596</b>

The matings of crossbred ewes, summarised in Table 17, reflect the dominance of the terminal sires in crossbreeding, both in their matings with crossbred ewes but also in their contribution to the composition of the crossbred ewes themselves. One further point of note in Table 17 is the number of 'Other crosses' found in 2012; this has more than doubled since 2003 and is now a significant feature of the British sheep breeding sector at 1.5 million ewes.

**Table 17. The mating of crossbred ewes in 2012 (estimated figures)**

Crossbred ewe type	Ram breed	Farms (000)	Ewes (000)
Longwool x Hill	Texel	8.7	1,455
	Suffolk	4.9	896
	Other Terminal sires	3.4	420
	Others	2.8	271
	<b>Total</b>	<b>19.8</b>	<b>3,042</b>
Hill x Hill	Hill	0.4	45
	Terminal Sires	0.6	44
	Others	0.3	74
	<b>Total</b>	<b>1.3</b>	<b>163</b>



**Devon and Cornwall Longwool**



**Welsh Mountain  
Badger Face**



**Poll Dorset**

**Table 17. continued.** The mating of crossbred ewes in 2012 (estimated figures)

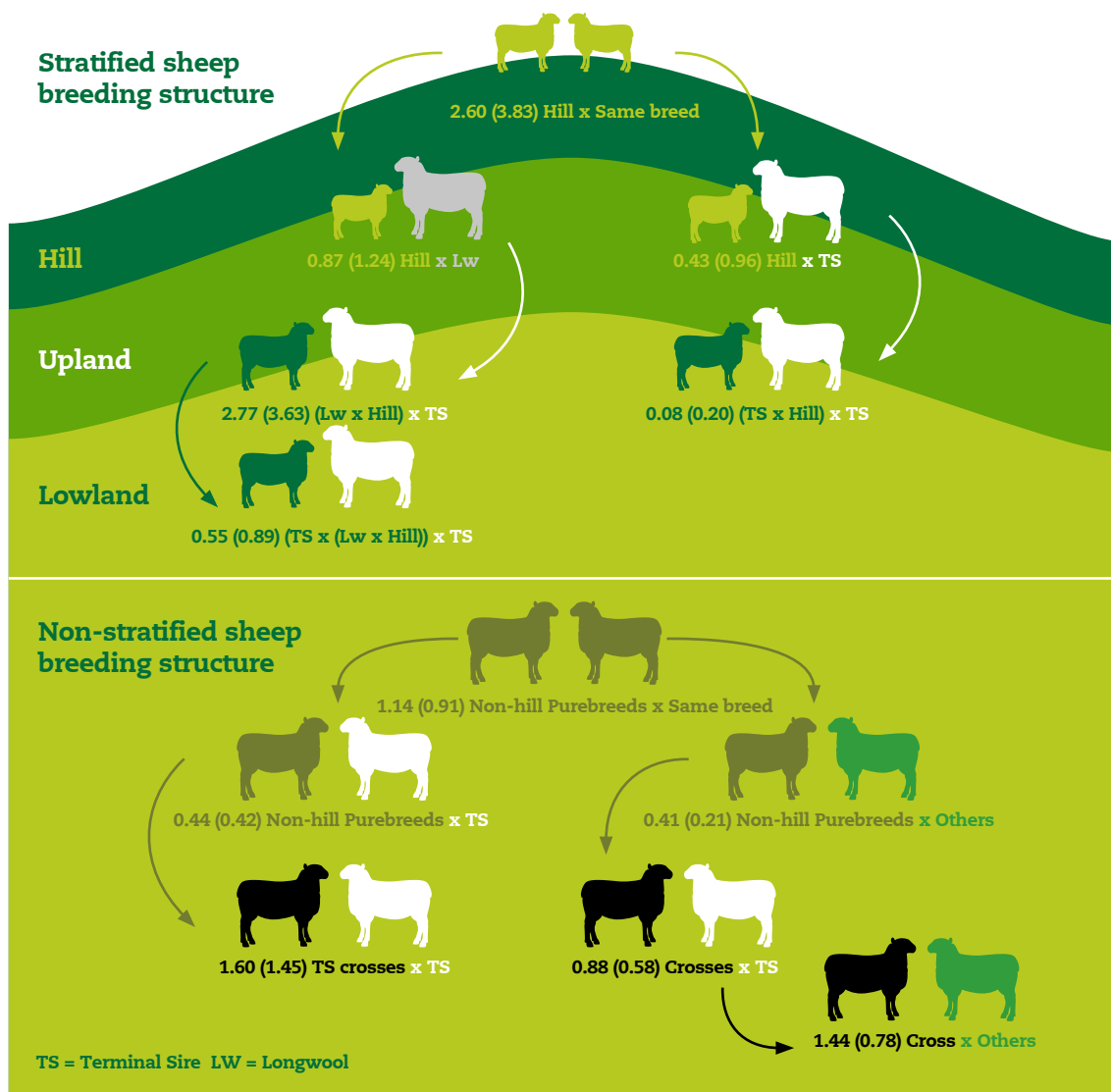
Crossbred ewe type	Ram breed	Farms (000)	Ewes (000)
Terminal Sire x Hill	Terminal sires	0.9	77
	Others	0.3	16
	<b>Total</b>	<b>1.2</b>	<b>92</b>
Terminal Sire x (Longwool x Hill)	Texel	2.9	280
	Suffolk	1.0	71
	Other Terminal Sires	2.0	200
	Others	1.0	68
	<b>Total</b>	<b>6.9</b>	<b>618</b>
Other Terminal sires crosses	Texel	10.2	983
	Suffolk	3.6	243
	Other Terminal Sires	5.6	330
	Others	5.3	300
	<b>Total</b>	<b>24.7</b>	<b>1,887</b>
Other crosses	Texel	2.3	423
	Suffolk	1.2	185
	Other Terminal Sires	1.8	230
	Others	3.9	666
	<b>Total</b>	<b>9.2</b>	<b>1,503</b>



The British sheep breeding sector has always been described as having a stratified crossbreeding structure. This is reflected in Figure 2, which compares the numbers in each stratum in 2003 and 2012.

The traditional structure, shown in the top half of Figure 2, shows a reduction in the number of ewes in this sector at all points. By contrast, the 'non-stratified' structure, shown in the bottom half of Figure 2, reflects an increase in all types. The balance between the two halves (stratified:non-stratified) has changed from 71:29% in 2003 to 55:45% in 2012. Interestingly, this ratio was 86:14 in 1971. This change highlights lamb producers probably trying to find the most suitable cross for their farm at an economic cost for ewe replacements.

**Figure 2. Crossbreeding pattern of the major ewe types (million) with 2003 figures shown in brackets.**



# The lamb crop

Unlike most other sheep industries worldwide, the British sheep industry's main product is lamb meat, which was 276,000 tonnes in 2012.

Table 18 highlights the ewe types responsible for the production of this lamb crop. Almost 66% of the lambs born came from crossbred ewes, which was similar to the situation in 2003. On the purebred side there has been a small shift away from hill ewes towards the shortwool ewes and for crossbreds there has been a move away from longwool x hill types towards more terminal sire crosses and 'Other' crosses. However, the major contributors to the British lamb crop are the mule/halfbred types, hill ewes and terminal sire crosses, in that order.

**Table 18. Estimated proportion of the slaughter lamb crop born to different ewe types**

Ewe type	% of lamb crop 2012	2003 figures
Hill ewes	21.9	23.9
Longwool crossing	0.2	0.5
Longwool ewes	2.2	4.9*
Shortwool ewes	5.6	
Terminal Sires	4.4	5.4
<b>Total purebred dams</b>	<b>34.2</b>	<b>34.7</b>
Longwool x Hill	27.5	32.7
Hill x Hill	1.2	N/A
Hill x Other	1.6	N/A
Terminal Sire x (Longwool x Hill)	7.2	8.4
Terminal Sire x Hill	0.7	1.9
Other Terminal Sire crosses	18.5	14.1
Other crosses	9.0	8.2
<b>Total crossbred dams</b>	<b>65.8</b>	<b>65.3</b>

\*Longwool and Shortwool combined

Table 19 presents the data in a different way by showing the genetic makeup of various indicators of lamb output. These are derived from a simple output model of the British sheep industry (for example, lambing percentages and carcase weight estimations for different breed types), based around the figures obtained from the Sheep Breed Survey. Again, hill ewe genes dominate the 'dams of lambs' category, contributing 37% of the genes of ewes producing British lambs. This represents a reduction from 48% in 2003 and is a result of the fewer hill ewes found and also the reduction in the mule/halfbred types used in 2012. Both longwool ewe and shortwool ewe breeds contributed more as the 'dams of lambs' in 2012 compared to 2003.

**Table 19. The proportional genetic contribution of the different breed types to different measures of output from the British sheep industry (%; 2003 values in brackets)**

Breed type	Dams of lambs	Sires of lambs	Lambs slaughtered	Lamb carcase meat
Hill	37 (48)	12 (16)	25 (31)	22 (27)
Longwool crossing	18 (22)	4 (6)	11 (14)	11 (15)
Longwool ewe	12 (5)	8 (3)	10 (4)	10 (4)
Shortwool ewe	15 (7)	9 (4)	12 (8)	12 (8)
Terminal sire	18 (18)	68 (71)	43 (44)	45 (47)

The genetic composition of the sires of the lamb crop is, not surprisingly, dominated by the terminal sire breeds at 68%. Hill breeds contributed only 12% of the genetic makeup of the sires of lambs, with smaller contributions from the other three breed types. There was a small change from 2003, with a slight reduction in the terminal sire, longwool crossing and hill breeds' contribution and an increase in that of the longwool and shortwool ewe breeds.

Not all lambs born in Britain go for meat and so the genetic contribution of the various breed types to the lambs slaughtered depends on the breeds concerned. About 43% of the genes of the meat lambs come from the terminal sire breeds and a further 25% from the hill breeds. Both these breed types contributed less than in 2003, as did the longwool crossing breeds. Once again, the longwool ewe and the shortwool ewe breeds increased their contribution to the meat-lamb crop. A similar picture is shown for the carcase meat figures, with the terminal sire breeds contributing 45% of the genes of the carcasses produced.

Respondents to the survey were also asked about their lamb sales and retentions during 2012. These are summarised in Tables 20 and 21. The majority of lambs were sold as finished lambs for meat from British farms, some 66%. The distribution of these sales is shown in Table 21, with the highest lamb sales period being between July and November. At least 27% of the lamb crop was still on hand at the end of the year. A further 11% of lambs were sold as store lambs, presumably for finishing later in the year or into the next year. About 20% of lambs were retained for breeding, 6% being mated in 2012 and the rest kept to be mated as shearlings. Less than 4% of the lambs were sold as breeding stock at this stage.

**Table 20. Estimated lamb sales by country and type (000 head)**

Country	Finished lambs sold*	Store lambs sold	Ewe lambs mated	Ewe lambs not mated	Ewe lambs sold	Ram lambs sold	Total
England	5,052	785	409	889	263	17	7,415
Scotland	1,875	605	148	548	87	8	3,272
Wales	3,187	326	282	649	93	15	4,553
Total	10,114	1,717	839	2,087	443	40	15,239
% of total	66	11	6	14	3	0	
2003%**	64	17	3	12	4	0	

\*Plus on hand at the end of the year \*\*2003 total lamb sales estimated from survey was 19,035

**Table 21. Estimated distribution of finished lamb sales by country and month of sale (000 head)**

Country	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	On hand	Total
England	19	53	212	395	538	600	579	590	461	344	1,545	5,052
Scotland	4	3	21	59	138	216	256	257	202	142	604	1,875
Wales	10	29	179	294	345	389	437	459	363	314	586	3,187
Total	33	86	411	749	1,021	1,205	1,273	1,306	1,026	800	2,734	10,114
% of total	0	1	4	7	10	11	12	12	9	7	27	

# Main terminal sire breed changes

**The survey results presented above have highlighted the important role of terminal sire breeds in the British sheep industry.**

Since these surveys began in 1971 there has been a dramatic change in the relative importance of the two major terminal sire breeds currently found in Britain, the Texel and the Suffolk. The Texel is an imported breed which was not found in Britain in the 1971 survey. Since then, it has increased in numbers and currently stands at about 300,000 breeding ewes, some 2.3% of the national flock (Table 22). The rise of the Texel has to some extent been mirrored by the decline of the Suffolk and there appears to have been a breed substitution over the last 40 years. Texel rams now comprise about 27% of national population, whereas the Suffolk ram population has declined from 46% in 1987 to 13% in 2012. These two terminal sire breeds have also contributed to the crossbred ewe population in Britain. In 1971 Suffolk crosses with hill ewe breeds, mule/halfbred types and other crosses accounted for just under a million ewes. Numbers rose and in 1987 this had become 1.8 million. However, the Texel has also taken on a similar role and now contributes to 1.6 million ewes, compared to the Suffolk figure of 930,000 in 2012. Hence, both breeds play an important role as both the sire of meat lambs and also contribute towards their dams' genetic makeup.



**Suffolk ram**



**Texel ram**

**Table 22.** The change in Texel and Suffolk breed numbers, 1971 to 2012. (estimated figures)

	1971	1987	1996	2003	2012
<b>Purebred ewe numbers (000)</b>					
Suffolk	179	429	371	230	130
Texel	0	97	201	326	304
<b>% of national ewe flock</b>					
Suffolk	1.5	2.4	2.1	1.5	1.0
Texel	0	0.5	1.1	2.2	2.3
<b>Ram numbers (000)</b>					
Suffolk	N/A	210	145	94	47
Texel	0	23	79	100	99
<b>% of national ram flock</b>					
Suffolk	N/A	46	31	23	13
Texel	0	5	17	24	27
<b>F<sub>1</sub> Hill crosses (000)</b>					
Suffolk x Hill	154	182	115	81	20
Texel x Hill	0	25	28	92	93
<b>Other crosses (000)</b>					
Suffolk x (Longwool x Hill)	550	603	495	590	374
Texel x (Longwool x Hill)	0	32	220	307	300
Suffolk crosses	237	1,027	670	699	549
Texel crosses	0	199	506	720	1,180

F<sub>1</sub>= First generation cross between two different breeds



# The rise of the Lleyn

**The 1971 survey found ~7,000 Lleyn ewes in Britain. Table 7 indicates that ~474,000 Lleyn ewes were mated in 2012, some 3.6% of all ewes in the country.**

In addition, there were estimated to be 12,600 Lleyn rams in Britain, some 3.4% of all rams used, which were mated to around 500,000 ewes (3.8% of all ewes nationally). About 275,000 Lleyn ewes were mated to Lleyn rams in 2012 (Table 23) and a further 70,000 were mated to Texel rams, 50,000 to Charollais rams and 25,000 to Suffolk rams. Table 23 shows the major ewe breeds mated to Lleyn rams; the major ewe types were Lleyn crosses and Texel x Lleyn ewes. About 372,000 ewes containing some Lleyn ancestry were mated to Lleyn rams. About 78,000 crossbred ewes containing Lleyn genes were mated in 2012; ~27,000 to Texel rams and a further 20,000 to Lleyn rams. Thus, in 40 years the Lleyn breed has risen from a very small local Welsh breed to the largest non-hill purebred in Britain and the fourth largest non-hill ram breed. In addition, it is third behind Texel and then Suffolk crosses for contributing to crossbred ewes, outside the mule/halfbred types.

**Table 23. Lleyn ram mating to major ewe breeds 2012 (estimated figures)**

Ewe breed	Total ewes (000)	Total homebred (000)
Lleyn	279	239
Lleyn cross	61	53
Lleyn x Texel	6	5
Texel x Lleyn	6	6
Texel cross	19	16
Other breeds	60	36



**Lleyn**



**Lleyn flock**

# Bluefaced and Border Leicesters

**In some ways the situation with respect to the Bluefaced and Border Leicester breeds is similar to that of the Texel and Suffolk.**

In 1971 there were reported to be around 12,000 Border Leicester ewes and 5,000 Bluefaced Leicesters. In 2012 this had changed to approximately 4,000 and 18,000 respectively. Both breeds sire recognised crossbreds, which in 1971 numbered 1.1 million halfbred types and 0.3 million mule types. By 2012 this had changed to 0.2 and 2.9 million respectively.



**Bluefaced Leicester**



**Border Leicester**

# Disappearing breeds

**As mentioned in the introduction to this report, such a survey does not estimate breeds with small numbers of ewes very accurately.**

However, it is possible to highlight breeds which appear to be rare in the survey. This can be seen in Tables 8 and 11 for breeds with less than 10,000 ewes or found on less than 250 farms. Breeds may appear in this list because they are newly formed or imported and have not yet built up their numbers, eg Blue Texel, Ouessant, various New Zealand breeds. However, others are old British breeds which no longer play a role in the industry, eg Oxford Down, Kerry Hill, Lincoln Longwool. Table 24 tracks some of the traditional British breeds over the last 40 years, which accounted for nearly 1.5 million ewes in 1971 but now only number 273,000. The Romney Marsh seems to have reversed the trend in 2012 but many of the others show a major decline, particularly breeds like the Clun Forest, which was a major breed in 1971 but is now estimated to be very small.

**Table 24. Some disappearing British breeds (000) (estimated figures)**

	1971	1987	1996	2003	2012
Border Leicester	12	28	13	5	4
Romney Marsh	294	217	159	165	201
Devon Closewool	127	51	6	7	4
Devon and Cornwall Longwool	290	28	4	2	2
Whitefaced Dartmoor	39	1	6	5	4
Greyfaced Dartmoor	33	4	3	4	4
Clun Forest	401	124	44	12	10
Dorset Horn	59	124	17	12	11
Kerry Hill	209	47	2	13	10
Llanwenog	20	3	10	6	7
<b>Total</b>	<b>1,492</b>	<b>646</b>	<b>273</b>	<b>247</b>	<b>273</b>

# Concluding remarks

**This report has described a unique body of data, both in terms of the 2012 Sheep Breed Survey and also as the fifth survey in a comparable series stretching back over 40 years.**



Given the limitations of such a survey methodology and the level of accuracy achievable under such circumstances, the story of the British sheep breeding sector told here is a remarkable one. If you asked the large urban population in Britain what has happened to

sheep in Britain over the last 40 years you would probably be met with blank stares and a veritable lack of an answer. Yet this report, and its four predecessors, paints a picture of a dynamic and ever-changing industry reacting to political and economic pressures in a way unthinkable to those who just see sheep as woolly animals that keep grass down in the countryside.

If we compare the industry in 1971 with that in 2012, what sweeping changes have taken place. Breeds that were non-existent or rare in Britain now dominate our industry. The plethora of local breeds developed after years of isolated farming in our countryside have now been swamped by breeds from abroad, new breeds made up from mixtures of many breeds or even our own breeds returned to us after years of breeding in strange climates. Decreased reliance on the pedigree sector is possibly driven by a combination of new technologies, hard factual information and the realisation that in order to stay in business it is necessary to react to the market. Breeds once thought preeminent have faded, markets once never dreamed of are now a reality and breeding methods once the realm of pig and poultry companies are becoming used more widely.

Looking back at the concluding remarks of the 2003 survey is a sobering lesson in the stupidity of predicting the future. It said 'many traditional breeds which do not suit current market requirements are moving towards becoming rare breeds. A programme needs to be put in place to maintain these genetic resources for future generations. Shortwool and Longwool ewe breeds are most at risk in this context and are likely to disappear in the near future.' Of course this is largely true but did not reckon on the qualities of the Lleyn breed and breeders' ability to assess and use a useful breed.

Whatever happens to the sheep industry over the next few years, there is no doubt that breeds and their qualities, combined with the sheep breeder's never-ending quest for the right combination of characteristics, will fuel an ever-changing breeding structure. Maybe the only thing that might be said with any certainty is that if the 2050 Sheep Breed Survey looks back to 2012 then it will be comparing two very different industries.

# Appendix 1: The postal survey



# Details of sheep breeding stock – mating Autumn 2012

**CONFIDENTIAL**

County

BWMB number

Age class	Ewes put to ram					Rams used to mate ewes			Summary of rams used			
	Name of breed or cross	Number of ewes	Of which, how many homebred	Number of ewes on LFA land	Date rams in	Date rams out	Name of breed	Number of rams	Name of breed	Total number of rams	Of which, how many:	
										Homebred	All rams	Have EBVS
Ewe lambs												
Shearlings												
Mature ewes												

Ewe lambs on the farm but NOT mated		
Name of breed or cross	Total number	Of which homebred

Total females put to the ram in 2011	Number of lambs sold from 2012 lamb crop by month of sale (Do NOT include purchased store lambs)											Lambs on hand at the end of December
	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	

	Sheep sold for breeding in 2012					
	2012 born		2011 born		Older (include draft ewes)	
	Breed	Number	Breed	Number	Breed	Number
Rams						
Ewes						

Telephone number (optional)

Email address (optional)

We would use these to verify the form details if required

**Hill flocks only**  
 Do you keep a small group of ewes to produce rams for sale?  Yes  No  
 If YES, please give breed  and number of ewes

# Appendix 2:

## List of acronyms used

AI	Artificial Insemination
BWMB	British Wool Marketing Board
EBLEX	Beef and lamb levy division of the Agriculture and Horticulture Development Board
EBV	Estimated Breeding Value – an assessment of breeding potential based on the animal and its progeny’s performance data
HCC	Meat Promotion Wales (Hybu Cig Cymru)
Defra	Department for Environment, Food and Rural Affairs
MAFF	Predecessor of Department for Environment, Food and Rural Affairs (Defra)
MLC	Meat and Livestock Commission, previous red meat levy board before devolution



# Appendix 3: Recognised crossbreeds definitions

Crossbred	Breed make-up
North Country Mule	Bluefaced Leicester ram x Swaledale or Northumberland-type Blackface dam
Welsh Mule	Bluefaced Leicester ram x Welsh Mountain, Beulah Speckled Face or Welsh Hill Speckled Face dam
Scotch Mule	Bluefaced Leicester ram x Scottish Blackface dam
Greyface	Border Leicester x Scottish Blackface
Welsh Halfbred	Border Leicester x Welsh Mountain
Scotch Halfbred	Border Leicester x North Country Cheviot

Definitions taken from the respective breed society webpages





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