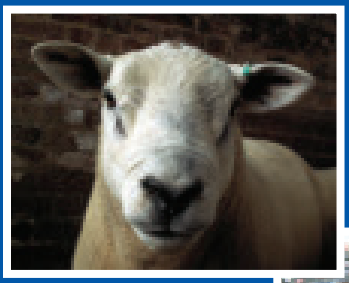
SCOTTISH SHEEP STRATEGY

The Benefits of Better Breeding in the Scottish Sheep Sector



Sheep Focus Farm Project – Year 5
The Final Results from Phase one

www.scottishsheepstrategy.org.uk
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NOTES

The Benefits Of Better Breeding In The Scottish Sheep Sector - Executive Summary

Across: Six farms

Four Tupping Seasons

3,963 lambings

the value of the High Index tups averaged approximately:

£11 per ewe more than the Low Index tups

£5 per ewe more than the Farm Choice tups

So if you are looking to improve your commercial flock, not just this year but in future years as well, then read on……

INTRODUCTION by Maimie Paterson, SSS Chairman

The first Focus Farm project was designed to discover whether superior genetics can be passed down to succeeding generations, and although the project was not a tightly-controlled scientific experiment, the final results speak for themselves.

In the words of Robert Burns, 'The facts are chiels that winna ding, and downa be disputed.' In other words, you can't argue with facts.

In this case the facts are that the daughters of high-index tups produced more kilos of lamb, and better returns, than those of the low-index or farmer's choice sires.

It's a project that any producer can easily try out for themselves on a smaller scale, so think about buying a recorded tup with good EBVs and give it a go!

The second Focus Farm project is now under way, and this time the spotlight is on the Suffolk breed and its reputation for fast finishing lambs.

High-index tups are being used in the project and the performance of their progeny will be closely scrutinised and compared to the progeny of non-recorded tups. No doubt it will all make for interesting and lively debate as the results become available, and we'll see if the Suffolk breed's 'doubting Thomases' are right or wrong.

Many thanks to the new group of farmers who have let the Sheep Strategy loose among their flocks and we look forward to some interesting results.

Best Wishes

Maimie

Success has many fathers. Failure is an orphan.

Foreword by Rod McKenzie, SSS Development Manager

They say time flies when you are enjoying yourself, and it is hard to believe that we have now completed phase one of our Focus Farm Trials.

It would be easy to be smug and say: "We've proved all we set out to prove, job done". However that would not give the full picture of what happened in different farms on different years. The fact that the trial was run under strictly commercial conditions undoubtedly gives the results more validity for the ordinary farmer.

Over the course of the four years we ran into many of the problems that Scottish sheep farmers face on a regular basis. During this time we had an outbreak of Foot and Mouth Disease, a change in farming policy on one farm, a problem with enzoootic abortion, farmers making commercial decisions to sell some of the lambs for breeding or to keep some of the ewe lambs for their main flock.

Of course all these things happen in the real world too, and what is pleasing is that the results still prove beyond any shadow of doubt that using tups of high genetic merit pays handsomely.

We know that there are people who consider that anybody could tell you this, and that it's not clever at all. We all agree with this, the clever bit is identifying tups with the strengths that you need. All the community groups had the opportunity to view the tups prior to the first tupping time, and it is fair to say that the high index tups got a less than enthusiastic reception on most of the farms.

On one of the farms the results from the first year were disappointing, and some people felt that their comments were vindicated. Nobody could put their finger on what happened, but we continued as planned, and at the end of the trial we proved that the financial benefit on that particular farm was substantial. The figures can all be found elsewhere in this booklet.

The question which we must now all ask ourselves is why this technology is not being taken up more rapidly by the sheep industry?

There appear to be many reasons, but one that keeps cropping up is the time and extra paperwork involved. For the commercial farmer who buys his tups annually, the only extra time would be in doing a little research beforehand, to find out where the sheep with the economic advantage are.

The majority of tup breeders are keeping detailed records of their sheep as a matter of course so there is not an exceptional burden of extra work thrust upon them either. Tremendous time and effort goes into producing tups for sale and Performance Recording would not add significantly to this burden. One could argue that in the long term, it would save time as people would not be so interested in the presentation of the tups.

It is inevitable that breeders that are not recording are selling a number of tups each year which will not benefit their customers, and this will not benefit them in the long term. The use of figures in the "stud flocks" would go a long way to reducing the number of tups coming onto the market that have a negative effect on the profitability of sheep enterprises.

The sheep industry in the UK has enjoyed a period when prices have been more realistic, but like every other industry there is the constant challenge of escalating costs.

We have proved over the four years of this exercise that substantial differences in the bottom line can be achieved by a combination of small improvements.

With the high price of feed and fuel, many people will have the target of reducing the number of days to slaughter. That can be done!

Others may wish to increase slaughter weight of their lambs. That can be done!

Many more will wish to improve the number of lambs which survive from scanning to sale. That can be done!

The Progeny of any tup can help you or haunt you for years.

Acknowledgements

The project has been running from 2006 till 2011 and without the help of our host farmers and their stock handlers over the past five years, this work would not have been possible. The Scottish Sheep Strategy is indebted to:

Alexander and Alistair Brewster, Rotmell Farm, Pitlochry who trialled Scottish Blackface tups on Scottish Blackfaced ewes

Dorothy and Amy Clark and Billy Thow, Kinnahaird Farm, Strathpeffer who trialled Texel tups on Highland Mule and Cheviot Mule ewes

Forrest and Mary Irving, Whitechesters Farm, Hawick who trialled Hill North Country Cheviot tups on Hill NCC ewes

Andrew and Bryan Robb, Westerhall, Dollar who trialled Scottish Blackfaced tups on Scottish Blackfaced ewes

Lord Roseberry, Dalmeny Home Farm, South Queensferry who trialled Texel tups on Mule/Texel ewes and Mule/Lleyn ewes with the help of David Arkley, Hugh Kyle and Andrew Smurthwaite

Derek and Cindy Steen, Hazelbank, Lockerbie who trialled Lleyn tups on Lleyn ewes with the help of Keith and Doreen Whitelaw

Their enthusiasm, co-operation and dedication has enabled the Scottish Sheep Strategy to show sheep breeders that Performance Figures do matter as much as the animal's looks.

This project was managed by Signet Breeding Services and we would like to thank Alison Glasgow, Liz Genever and Sam Boon for all their input to the project outcome.

Nothing else in the world is so powerful as an idea whose time has come – Victor Hugo

TRIAL OUTLINE AND RESULTS – by Alison Glasgow, Signet

Objective

The project was established to achieve two aims:

A) To run six on-farm trials to compare the genetic merit of progeny produced by sires of different genetic merit

B) To share the knowledge and skills of local producers via on-farm meetings

A) The Farm Trials

Over the four-year term of this project (lambing 2007 to lambing 2010), the financial performance of lambs from High Index tups was compared to that of lambs from Low Index tups and also to that of lambs from 'Farm Choice' tups (i.e. those without performance information, typically bought 'by eye') in terms of:

- The value of the finished lambs produced, and
- The breeding value of the females retained

The purpose of this is to identify and quantify the economic benefit of High Index recorded tups in terms of their value…

- as sires of the slaughter lamb generation, and
- as sires of breeding ewes

…under normal commercial conditions.

The trials commenced with the 2006 tupping season, where four tups were purchased for each farm at an average price of £500/tup. Two tups on each farm had high EBVs (Estimated Breeding Values) and two had low EBVs for each of the following traits: Growth, Muscle Depth, Fat Depth, Litter Size and Maternal Ability.

In Years one and two of the trial (2007 and 2008 lambing), these tups were mated to two groups of randomly selected ewes of similar breed type and age. A third group of ewes were mated to the Farm Choice tups (i.e. those without any performance data) that had already been purchased by and used on the farms.

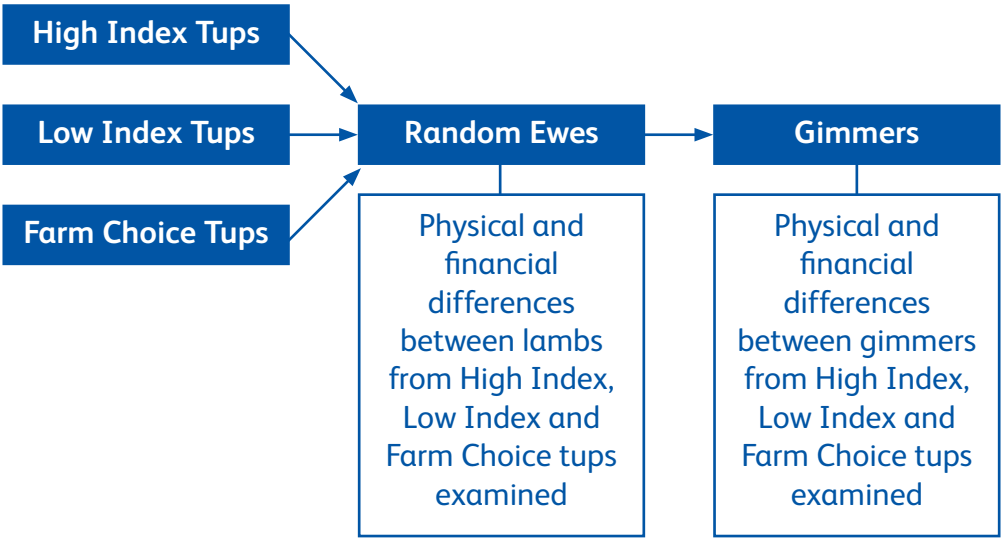
Lambs born to all three sire groups were tagged at birth with a unique identifying number and basic lambing details recorded in terms of sire, date of birth and whether it was a single, twin etc. Lambs were weighed at around eight weeks of age and again when they were drawn for slaughter. Finally, details from the abattoir kill sheets were recorded.

In Years three & four, the performance of the daughters bred in Years one and two was compared in a similar manner by mating them all to the same tup (or tups of known breeding value if more than one was used).

The comparison aimed to draw out differences in:

- Prolificacy – both in terms of the number of lambs produced and the number reared
- Early lamb growth rate – due to both the maternal ability of their mothers and their own genes for growth.

The complete trial approach can be illustrated as follows:



A summary of the results from each year of the trial is on **Page 10** of this booklet.

Full details of the 2010 lambing results follow on **Page 12**. Details of previous years' results are available in the booklets titled "Sheep Focus Farm Project – Year 2", "…Year 3" and "…Year 4" copies of which can be downloaded from the Scottish Sheep Strategy Website www.scottishsheepstrategy.org.uk

If you only do what you've always done, you will only get what you've always had.

B) Farm Meetings

One of the main vehicles for disseminating the information from these trials were meetings held regularly on each of the trial farms, with around three occurring on each farm every year.

A fixed group of around 15 to 20 local producers and other industry representatives were invited to attend each meeting. The purpose was to examine and discuss the breeding policy of each flock, including target setting and review. The trial results and gross margin data (prepared once per annum by an independent adviser) were an integral part of this process.

The difference between a tup lamb and a wether lamb is about 30 seconds.
It could be time well spent!

SUMMARY OF FINAL RESULTS: ALL FARMS 2007 - 2010

Over the four years, the degree of financial benefit varied from farm to farm, but, on all farms, High Index tups outperformed Low Index tups on all but one occasion.

Table 1: High Index Tups v Low Index Tups – Complete Results

Lambing Year	Gross Return (£/Ewe)					
	Dalmeny	Hazelbank	Kinnahaird	Rotmell	Westerhall	Whitchesters
2007	-£0.63	Started in '08	£3.29	£11.42	£3.13	£13.95
2008	£0.44	£20.49	£17.94	£7.37	£17.93	£7.97
2009	£18.37	£32.04	£14.68	£15.92	£1.06	£21.93
2010	£6.00	£4.53	Trial end '09	£5.91	Trial end '09	£5.03
Overall Returns	£24.18	£57.06	£35.91	£40.62	£22.12	£48.70
Average Return p.a.	£6.05	£19.02	£11.97	£10.16	£7.37	£12.18

Note:
The results highlighted in purple indicate returns from the finished lambs. The results highlighted in yellow indicate finished lamb returns from the daughters bred by the original High and Low tups.

Example of interpretation: the finished lambs bred by the High Index sires at Dalmeny in 2007 were worth £0.63 less than those bred by the Low Index tups. In 2009, the daughters bred by the High Index sires at Dalmeny were worth £18.37 more than the daughters by the Low Index sires. Averaged over the four-year duration of the trial, lambs & daughters sired by the High Index tups at Dalmeny were worth £6.05/ewe more per annum than lambs & daughters by the Low Index tups.

These financial benefits were expressed in different ways on different farms, but they included:

- **A reduction in the number of days to slaughter**
- **The production of heavier carcases**
- **A lower risk of lambs becoming over fat**
- **Better conformation carcases**
- **More uniform batches of lambs**
- **Lambs sold to hit a better trade**
- **More efficient growth leading to a reduction in costs of production**
- **Heavier store lambs**
- **Heavier ewe lambs and gimmers prior to tupping**
- **Greater rearing & finishing success amongst daughters**

If you think you are a man of influence, try working someone else's dog!

On each farm a "Farm Choice" tup was selected by the farmer and their progeny evaluated alongside those of the High and Low Index tups.

The performance of lambs sired by Farm Choice tups was highly variable. On a couple of occasions a Farm Choice tup proved to be of high genetic merit – but more frequently the Farm Choice tups performed less well.

The conclusion from this part of the trial is that the purchase of tups that have not been recorded is a gamble. The genetic merit of a tup can't be assessed on a purely visual basis.

Table 2: High Index Tups v Farm Choice Tups – The Final Results

Lambing Year	Gross Return (£/Ewe)					
	Dalmeny	Hazelbank	Kinnahaird	Rotmell	Westerhall	Whitchesters
2007	£0.06	Started in '08	-£1.32	n/a	n/a	£22.10
2008	£3.34	-£0.62	£3.76	£17.19	n/a	-£3.53
2009	£9.52	£21.92	n/a	£1.86	n/a	£5.21
2010	£10.19	n/a	Trial end '09	£13.62	n/a	£11.09
Overall Returns	£23.11	£22.54	£2.44	-£1.71	n/a	£34.87
Average Return p.a.	£5.78	£11.27	£1.22	-£0.43	n/a	£8.72

Note:
The results highlighted in purple indicate returns from the finished lambs. The results highlighted in yellow indicate finished lamb returns from the daughters bred by the original High and Farm choice tups.

Example of interpretation: the finished lambs bred by the High Index sires at Dalmeny in 2007 were worth £0.06/ewe more than those bred by the Farm Choice tups. In 2009, the daughters bred by the High Index sires at Dalmeny were worth £9.52/ewe more than the daughters by the Farm Choice sires. Averaged over the four-year duration of the trial, lambs & daughters sired by the High Index tups at Dalmeny were worth £5.78/ewe more per annum than lambs & daughters by the Farm Choice tups.

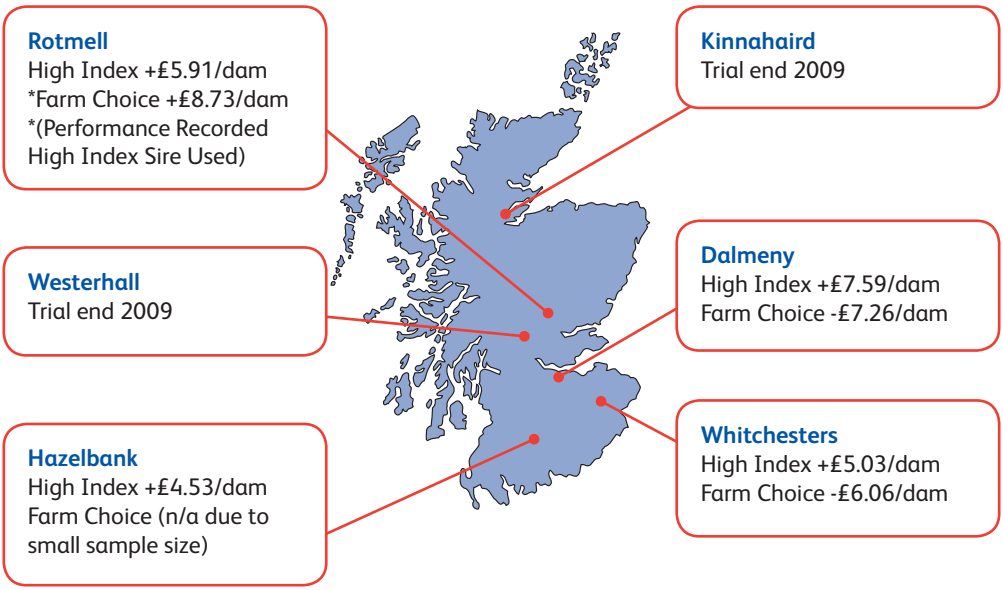
Striving for maximum production is vanity, striving for maximum profit is sanity.

FARM RESULTS – YEAR 5 (2010 Lamb Crop)

The following pages detail the results from the final year of the trial, the 2010 lamb crop. Details of the results in previous years can be found in the booklets titled "Sheep Focus Farm Project – Year 2", "…Year 3" and "…Year 4" copies of which can be downloaded from the Scottish Sheep Strategy Website www.scottishsheepstrategy.org.uk

SUMMARY

The summary diagram below illustrates how daughters bred by High Index and Farm Choice sires compared with those bred by Low Index sires in 2010…



- Ewes sired by High Index tups out performed ewes sired by Low Index tups on all four farms where they were trialled in 2010.
  In general they expressed:
  - Higher levels of prolificacy, producing and rearing more lambs
  - Greater maternal performance, with lambs that grew faster to 8 weeks of age and beyond
- The financial benefit ranged from £4.50 /dam to £7.50/dam

It's the things you don't do that you regret.

Dalmeny Estates

Breed: Texel tups on Mule/Texel ewes and Mule/Lleyn ewes

At Dalmeny Estates a comparison was made between the performance of three groups of lambs whose mothers had been sired either by a High Index, Low Index or Farm Choice tup.

The ewes by High Index tups produced and reared more lambs than those by the Low Index tups, lambs' weights were also higher due in part to the genetic potential for milk production of the ewes.

Physical Performance

	Rearing percentage	Lamb Wt @ 63 days (9wks) adjusted for lamb age and rearing type
Year 1 Ewes		
High Index	189 %	48.37kg/dam
Farm Choice	175 %	44.61kg/dam
Low Index	177 %	46.53kg/dam

Rearing percentage	Lamb Wt @ 63 days (9wks) adjusted for lamb age and rearing type
Year 2 Gimmers	
178 %	46.03kg/dam
163 %	39.84kg/dam
173 %	41.88kg/dam

Impact of breeding:

- Daughters from High Index sires were more prolific and their lambs grew faster to nine weeks of age than those by Low Index and Farm Choice sires.
- Daughters from High Index sires produced up to 4kg more lamb to nine weeks of age than those by Low Index sires and 6kg more than the Farm Choice.
- Slaughter data indicated lambs in the High Index group were slightly heavier at slaughter, with a higher proportion of them being multiple-born and reared.

Financial Performance

	Extra Value (£/Dam) relative to the ewes by the Low Index sire	Farm benefit for 50 ewes lambing over 3.5 years
Year 1 Ewes		
High Index	**+ £4.42**	**£774**
Farm Choice	**- £1.11**	**-£171**
Low Index	**£0**	**£0**
Year 2 Gimmers		
High Index	**+ £7.59**	**+ £1328**
Farm Choice	**- £7.26**	**-£1271**
Low Index	**£0**	**£0**

Let your performance do the thinking.

Hazelbank

Breed: Purebred Lleyn

Although Hazelbank joined the trial in Year two, it is farm policy to lamb the ewes as hoggs which quickly brought its schedule back in to line with the other farms.

Lamb Growth to Eight Weeks of Age

	Lamb percentage	Lamb Wt @ 56 days (8wks) adjusted for lamb age and rearing type
Year 1 Gimmers		
High Index	192 %	37.99kg/dam
Low Index	200 %	37.68kg/dam
Farm Choice 1	192 %	35.46kg/dam
Farm Choice 2	193 %	36.44kg/dam

Rearing percentage	Lamb Wt @ 56 days (8wks) adjusted for lamb age and rearing type
Year 2 Hoggs	
140 %	32.17kg/dam
123 %	27.85kg/dam
144 %	30.86kg/dam
145 %	32.02kg/dam

Lamb Growth to 21 Week of Age

Rearing percentage	Lamb Wt @ 152 days adjusted for lamb age and rearing type
Year 1 Gimmers	
High Index	79.85kg/dam
Low Index	74.42kg/dam
Farm Choice 1	75.51kg/dam
Farm Choice 2	75.42kg/dam

Lamb Wt @ 152 days adjusted for lamb age and rearing type
Year 2 Hoggs
60.98kg/dam
50.83kg/dam
59.24kg/dam
60.81kg/dam

Impact of breeding:

- At 8 weeks, lamb losses amongst Hoggs & Gimmers sired by High Index tups were lower than those amongst dams sired by the Low Index and Farm Choice tups.
- At 8 and 21 weeks of age, dams by the High Index sires produced considerably more kilogtups of lamb than dams by Low Index and Farm Choice tups.

Financial Performance

Owing to changes in lamb sales policy, the proportion of 2010 lambs sold finished was very small. The financial returns shown for Year 5 at Hazelbank have therefore been based on returns from the wider commercial flock where High and Low Index tups were used on the ewes aged 2-crop+ i.e. similar to the evaluation of the 2008 and 2009 lamb crops.

- Lambs by High Index sires had heavier carcases and a greater proportion of them were multiple-reared than lambs by Low Index sires, with the result they were worth an additional £4.53/dam.

	Extra Value (£/Dam) relative to the lambs by the Low Index sire	Farm benefit for 50 ewes lambing over 3.5 years
High Index	**+ £4.53**	**£793**
Farm Choice	**£0**	**£0**

The key to change is to let go of fear – Rosanne Cash

Rotmell

Breed: Purebred Scottish Blackface

At Rotmell a study was undertaken to compare the performance of Scottish Blackface lambs produce by three different groups of ewes; daughters from High Index, Low Index and Farm Choice sires. On this occasion it should be note that the Farm Choice tups were performance recorded and were in fact also High Index sires. For the purposes of this trial, therefore, they and their progeny can be considered a second High Index group.

Physical Performance

	Lamb percentage	Lamb Wt @ 56 days (8wks) adjusted for lamb age and rearing type
Year 1 Ewes		
High Index	160 %	27.15kg/dam
Farm Choice	n/a	n/a
Low Index	100 %	15.80kg/dam

Lamb percentage	Lamb Wt @ 56 days (8wks) adjusted for lamb age and rearing type
Year 2 Gimmers	
150 %	24.59kg/dam
143 %	23.10kg/dam
146 %	25.89kg/dam

Although weights amongst the High Index lambs were slightly lower at 8 weeks of age, their superior growth potential started to be expressed at 24 weeks of age. Gimmers bred of the High Index and Farm Choice sires went on to rear an extra 4.5kg to 6.7kg of lamb compared to those by the low index sire.

	Lamb percentage	Lamb Wt @ 169 days (24wks) adjusted for lamb age and rearing type
Year 1 Ewes		
High Index	160 %	55.63
Farm Choice	n/a	n/a
Low Index	100 %	37.90

Lamb percentage	Lamb Wt @ 169 days (24wks) adjusted for lamb age and rearing type
Year 2 Gimmers	
150 %	50.37
143 %	45.72
146 %	52.44

Impact of breeding:

- High index sires produced daughters that reared more lambs and had superior breeding potential for growth.
- The net result was a marked increase in ewe productivity. Large numbers of lambs were retained for breeding as a result

Ignoring the fact does not change the fact.

A high proportion of the 2010 lambs were retained for breeding purposes, resulting in small groups only being finished. To evaluate the differences between the dam groups at the point where all lambs were available, a store value of £1.30/kg is applied to the above weights recorded at 24 weeks of age…

Financial Performance

	Extra Value (£/Dam) relative to the ewes by the Low Index sire	Farm benefit for 50 ewes lambing over 3.5 years
Year 1 Ewes		
High Index	**+ £30.05[1]**	**+£5259**
Farm Choice	**£0**	**£0**
Low Index	**n/a**	**n/a**
Year 2 Gimmers		
High Index	**+ £7.59**	**+ £1034**
Farm Choice	**- £7.26**	**+ £1528**
Low Index	**£0**	**£0**

Note: assumptions based on store value of £1.30/kg @ October 2010
[1]This value relative to Farm Choice. Low Index Yr 1 Ewe Group results not available.

Start catching up now, don't wait till you fall behind.

Whitchesters

Breed: Purebred Hill North Country Cheviot

At Whitchesters a comparison was undertaken to compare the performance of lambs produced by three groups of North Country Cheviot gimmers. The gimmers in each group had been sired by either a High Index, Low Index or Farm Choice tup.

Physical Performance

Year One Ewes & Year Two Gimmers

	Rearing percentage	Average Kg/Dam at 8 Weeks of age adjusted for rearing %
High Index	157 %	29.69kg/dam
Farm Choice	147 %	28.50kg/dam
Low Index	150 %	28.29kg/dam

Impact of breeding:

- Ewes sired by High Index tups were more prolific than those by Low Index tups and their lambs grew faster to 56 days of age – despite more of them being reared as multiples.
- The High Index daughters' lambs finished faster than lambs out of the Low Index and Farm Choice daughters, with a higher proportion of them being multiple-reared. The overall benefit was worth £5.03/dam more than the Low Index and £11.09/dam more than the Farm Choice.

Financial Performance

	Extra Value (£/Dam) relative to the ewes by the Low Index sire	Farm benefit for 50 ewes lambing over 3.5 years
High Index Sire	**£5.03**	**£880**
Farm Choice Sire	**-£6.06**	**-£1061**
Low Index Sire	**£0**	**£0**

SECTION 2: FOCUS FARM PROJECT PHASE 2

The success of Phase 1 of this initiative and the benefits to commercial producers from the information it generated led the Steering Group of the Scottish Sheep Strategy to commission a second phase in the latter part of 2010.

Officially launched in May 2011, the aim of this new phase is "..to investigate how production efficiencies can be maximised on commercially operated farms using the Suffolk breed of tup"

The approach to deliver this is similar in nature to that of Phase 1, drawing from the successes of that model…

- Three farms will be involved in the trial
    - o Kings Arms, Ballantrae by kind permission of Messrs H R & C Dalrymple with assistance from Farm Manager, Andrew McLean
    - o Dumfries House Estate, New Cumnock by kind permission of Wm Morrisons Supermarkets plc with assistance from Farm Manager Andrew Robinson and Jim Holden
    - o Wellheads, Huntly by kind permission of Mr & Mrs J Gordon
- High Index Suffolk tups will be used on the farms over two seasons (2011 and 2012 lambings). Lamb performance will be monitored through to slaughter and compared to the performance of lambs sired by Farm Choice sires (unrecorded, bought 'by eye').
- Farm meetings will be held twice each year; in the early weeks after lambing and once all lambs have been finished and full results are available. These are open to all local producers and industry representatives.

If you would like to become involved in one of the farm groups, please contact Alison Glasgow, Signet on 0131 535 3237 or email alison.glasgow@eblex.ahdb.org.uk

To follow the progress of the trial, click on the Scottish Sheep Strategy web site www.scottishsheepstrategy.org.uk

SECTION 2: THE SCOTTISH SHEEP STRATEGY

The aim of the Scottish Sheep Strategy is to increase the uptake of breeding technologies within the Scottish Sheep Industry, leading to a reduction in production costs, improvement in the quality and consistency of Scotch lamb and an increased demand for recorded breeding stock.
This is achieved through a variety of activities and information sources, available free of charge to all producers.

Open Days/Industry Events

Date	Venue	By kind permission of
Regular meetings on the Focus Famrs	Scottish Sheep Strategy Focus Farms	Host Farmers
EBV Workshops and producer meeting throughout the year	See press or www.scottishsheepstrategy.org.uk	Host Farmers
17th May 2011	Launch of Phase 2 Dumfries House Estate, New Cumnock	Wm Morrisons Supermarket plc
22nd - 24th June 2011	Royal Highland Show	Visit the QMS stand
9th September 2011	Kelso Tup Sales	Visit the SSS Stand in the central sale ring avenue
23rd November 2011	Scottish Winter Fair	Visit the QMS stand

ITS ALL ONLY A CLICK AWAY! www.scottishsheepstrategy.org.uk

All Scottish Sheep Strategy Information is available on the web site, including:

- Assistance in performance recording your own pedigree flock
- Assistance in buying a tup using EBVs, including
- A directory of recorded flocks
- Leaflets “How to Buy the Right Tup for Your Flock” and “Planned Carcase Production”
- R.A.M.S Recording – a method of low level recording for commercial flocks
- ELSA – a guide to breed replacement selection for the commercial flock
- Details of forthcoming events and reports from previous events
- Bulletin Board

For further details, please contact Rod McKenzie on 01463 811804 or email rod.mckenzie@sheepstrategy.org.uk

Information on sheep breeding is available from a number of sources:

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SCOTTISH SHEEP STRATEGY

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