SAC

Managing the change to lower input systems with UK sheep breeds

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Foreword

This booklet is about managing the change to lower input systems. It is aimed at farmers with traditional UK breeds who would like them to be less work but do not wish to change breed in order to achieve this. Managing the change to easy care systems is important –its not about 'leaving animals to get on with it' as this can reduce welfare. Breeding and selection within the right management system can avoid many current problems.

Suddenly farmers are facing huge rises in input costs – for sheep farmers these have not been matched by increased value of lambs so they are in a cost-price squeeze. The way out is to be more efficient – more kilos output per ewe kept – and reduce dependence on those inputs that have risen the most in cost – feed, fertiliser and fuel. The management plan is based around mating ewes later, taking advantage of longer growing seasons. It's about getting them off the best grass in winter and lambing outside on this saved grass with much lower concentrate use. To get later-born lambs finished grassland management must be improved (reseeding and management) and the use of forage brassicas and new finishing crops are described. Changes to breeding include selection and culling within the flock and identification of superior sires that have been specifically bred to meet the new production system- having high production figures and being selected for easy care traits in a grass-based environment. Farmers who have taken up these systems have lower costs, good output, less work and bigger profits. Pick and mix from these tried and tested ideas and see how your sheep can be easier kept and the 'grass to meat' potential of your land fully realised.

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Contents

1 Grassland management for lambing

Lower input systems are not about year round management of sheep on grass, if you try this on most Scottish farms there is nothing left to graze in the spring when you need it most. Inwintering is necessary on many farms, on others hill grazing or a sacrifice area with supplementation is needed to free up good pasture to produce high quality feed for lambing and lactation.

Timing and Expectations

The main feature of low labour input lambing is that ewes lamb outside on grass without daily supplementation as it causes mismothering. This requires a good grass supply – a sward height of at least 4 cm and preferably 6 – 8 cm from 10 days pre lambing. Recent Irish work has shown how grass is an ideal feed and responses to supplementation are nil. Unsupplemented ewes outdoors had heavier birth weights and faster daily gain to weaning (see table) compared with indoor lambing ewes on silage and concentrates.

Unsupplemented grass lambing

Greenmount studies on effect of lambing system on lamb mortality and growth rate (mean of 2 years).

	Indoor Lambing	Grass Lambing
Number of lambs born per ewe	1.81	1.78
Lamb birth weight (kg)	5	5.2
Percentage lamb mortality (birth to weaning)	11	14
Number of lambs weaned per ewe	1.61	1.51
Lamb growth rate (g/day) Birth to 6 weeks	317	331
Lamb growth rate (g/day) Birth to weaning	281	292
Weaned lamb output (kg/ewe)	57.0	55.9

Lambing in many parts of Scotland would thus need to be in mid- late April with grass set aside for this grazing over Feb-April. Scanning percentages may be 10% lower than with an indoor March lambing but is made up for by significantly lower feed, labour and lambing sundries costs. Time is saved by not having to move lambs to grass after lambing. Skimping on vaccinations and drenches is counterproductive, plan health care and use sensible preventative medicine on the basis of need.

Easier Management at Lambing

Easier lambing and better bonding occurs when a ewe has had time to choose her lambing spot and is left on it for a few days. On lowland farms stock twin bearing ewes at 17 per hectare and singles at 27. Thus a 15 acre field would carry 100 twins or up to 150 singles. Inspect three times a day using an ATV where available, bike ramps reduce travelling time and are a useful investment.

Bike ramps reduce the labour cost of opening and shutting gates

The singles can be brought in at night if oversize lambs become a problem. Abandoned lambs from multiples picked up in the day can be set on overnight using a wet foster method. Dunk the lamb to be set on in warm water, smear with amniotic fluid from the foster ewe and present just before she delivers her own lamb.

Ewes need to be in condition score 2 – 2.5 at turnout (almost thin!), ewes that are fatter are prone to prolapse and hung lambs. One person can look after up to 600 ewes with a bit of help with the singles in the sheep house.

Lambs can be tailed and rung as soon as fully bonded after birth and left in their field for a few days and then drifted further out while unlambed sheep are drifted in towards the

Selection for good mothering ability aids lambing management.

steading. Alternatively (and preferably in bad weather) lambs can be left entire and undisturbed. If necessary they can be castrated using a burdizzo (Ritchey Nipper) and tailed at 2 – 3 weeks of age. Use a set of mobile gates in the field to reduce having to move young lambs and ewes.

2 Summer pasture management

Measuring sward height

Summer management must achieve high lamb growth rates to finish a reasonable proportion off grass. Checks to growth must be avoided. Top priority is to manage grass quality, delayed finishing costs money, so finish quickly. Every extra day a lamb is on the farm takes a day's flushing feed off the ewe and contaminates pastures with worm eggs affecting next year's lambs.

High stocking rates to maintain sward height at 4cm in May improves pasture quality in July/ August and maintains the sown species content of swards. Target growth rates on grass based swards are 250 – 280 g/day to weaning at 16 weeks and 300 – 320 g/day on clover dominant swards. After weaning growth rate targets are 100 and 180 g/day at 4 – 6 cm sward height respectively. Try to finish lambs off grass, red clover silage aftermaths and sown forage crops. High clover content swards cut fertiliser costs and labour for spreading and allow lambs to finish earlier.

Post weaning management

Weaned lambs with high growth rate need less feed to grow from 30 to 40 kg

Growth rate g/d	Days to finish (d)	Feed requirements	
		per day (kg)	Total (kg)
100	100	1.0	100
200	50	1.4	70
300	33	1.7	55

Clover content is key to pasture quality as it results in low fertiliser bills and high intake that drives animal growth rate.

Pasture specification to achieve target gains shown above

Growth rate (g/day)	Species mix	Sward height	Parasite status
100	Grass only	4 – 6 cm	Lambs challenged and dosed
200	30% clover (DM basis)	4 cm	Worm-free
300	30% clover (DM basis)	6 cm	Worm-free

Grazing mixtures containing late heading tetraploids are compatible with white clover. For conservation and aftermath grazing use red clover/hybrid ryegrass mixtures.

Getting more lambs finished off grass

To move lambs off grass cheaply and quickly:

- Control scald by footbath treatment (3% Formalin) at the first sign.
- Maintain short, leafy swards (4 – 6 cm) with high intake characteristics.
- Avoid worm challenge, but where necessary use long acting products on ewes and treat lambs with a high FEC.
- Use rams with high EBVs for growth rate.
- Where appropriate, supplement with cheap cereals.
- Avoid weaning stress.

Will feeding supplements pay?

There is a temptation to use supplements to finish later born lambs but with barley on farm at around £160 ton and lamb finisher at £200/ton the economics are now debatable. Feeding with hoppers using pelleted feed introduced to lambs within 5 kg of their target liveweight results in a FCE of about 7.5:1post weaning (lambs creep fed pre weaning convert at around 4:1). Move to a 50:50 cereal: pellet mix to cut costs once intake is established. Alternatively build lambs up to 0.5 kg of mineralised whole cereal per day fed from troughs – this takes more labour but if all the lambs are trained to eat together they will finish together making marketing easier. Supplementation should not cover up for poor management and where most lambs clearly will not finish off grass grow specific forage crops.

High index texels

3 Lamb finishing and ewe wintering with forage crops

Later lambing systems often rely on using forage crops to finish a proportion of lambs. These may also be used to feed ewes over flushing/tupping and early winter. Forage crops have an important role in the establishment of reseeds as they remove weeds and build fertilty. Potential crops are shown in the table below. Decide when quality feed is likely to be short. Choose a crop your farm is good at growing and a field that is suitable then plan the lamb finishing and ewe feeding around this resource.

Forage crops for later born lambs

Crop and situation	Sowing date	Typical varieties	Feed During	Lambs finished /ha	DM yield Tons/ha
Forage rape usually sown after grass then resown next year to grass	June July	Hobson, Bonar Swift (New)	Oct – Dec/Jan	35 – 60	3 – 5
Stubble turnips after winter barley	July August	Rondo Barkant Samson	Mid Nov – Feb	20 – 35	3 – 5
Stubble turnips after grass	May – June	Tyfon	Aug/Sept	35 – 60	2 – 7
Kale – full crop	May – June	Maris Kestrel	Nov – March	50 – 90	5 – 7
Kale – as catch crop	Mid July	Grampian	Nov/Dec	35 – 60	3 – 5
Swedes:	Late April May	Airlie Magres	Nov – March	50 – 90	6 – 9
Red clover /hybrid ryegrass mix(silage)	April	Milvus	Aftermath Sept	45 – 70	3 – 4
Perennial Chicory +grass	April /May	Puna II	July/Aug	70 – 100	5 – 7

- Forage rape does not tolerate frost as well as swedes, the variety Swift, a kale/rape hybrid is hardier.
- Kale is best utilised around November – March Maris Kestrel is the popular variety, utilisation is difficult on heavy land.
- Swedes are best utilised January – April, high dry matter varieties eg Gowrie last longer after New Year.

- Stubble turnips are good for summer drought eg Tyfon sown May/June or can be sown later eg Rondo sown in July – Mid August and used from mid November – January.
- Chicory – now a perennial – may be sown at 1kg/ha. as part of a grass/clover mix or sown at 4 – 6 kg as a pure stand or with white clover and rotationally grazed. For crop establishment details see 'Profit from forage crops' booklet Advanta seeds 01529 304511. For further information contact British seed houses 01179823691.

Expect gains of 120 – 200 g/day, supplement leafy brassicas with up to 0.5 kg/day mineralised whole grain, add protein to 25% CP only when feeding bulbs/stems. Long roughage as silage or hay helps utilisation of forage brassicas.

Case Study

Lowland farm finishing lambs on a chicory /plantain mix in September

Working at Auchincruive farm a mixture (90:10) of Grassland Puna 11 chicory and Ceres Tonic plantain was direct drilled on 4th July after Roundup treatment to burn off grass. Costs per acre were £97. Lambs had a F.e.c. going to the crop of over 500 e.p.g in early September but were not dosed saving labour and anthelmintic cost. The lambs were not daggy, daily gain over a month was 300g/day, which is excellent. At the end of a month all except 5 lambs from 123 were finished.

chicory and plantain

Thus the field finished around 18 lambs /ac at a cost of £5.50 /lamb. To do the same job on concentrates indoors would have cost £6.50 for feed alone with the additional costs for labour for feeding, dosing and straw probably coming to well over £10/head. In addition the chicory /plantain mix recovered from the hard grazing and could have finished a further 5-10 lambs /ac or could be used to flush thin wormy ewes. It will be also available as a deworming and lamb-finishing crop and probably last up to three years.

The high cost of lamb finishing may make very lightweight lambs (under 25Kg) uneconomic to finish with attendant welfare risks – this crop has the potential to lift underweight lambs to saleable weights by using a series of breaks on the crop but it is early days in its evaluation.

Chicory

Not only does a pure stand of chicory finish lambs but also in SAC trials it reduced worm burden by 40% over a short term, so it can save the costs and labour of drenching. It is highly digestible and can be regrazed –look on it as a 'permanent rape crop'. Typically on highly digestible feeds there can be loose dung and dirty tails to dag out before lambs are sent away. To counteract this add plantain as a complementary forage component that will also regrow after grazing.

Plantain

NZ farmers add an improved variety of Plantain (Ceres Tonic) when sowing out grass. This is done to improve mineral status of sheep, reduce scouring during wet weather and reduce dagging. There are no claims for it to have anthelmintic properties – apparently it slows down food passage in the gut due to mucilage production, reducing scour. Recent trials show it significantly improves liver copper and selenium content. Advantages over perennial ryegrass in dry matter production were also recorded in dry North Island conditions and NZ farmers are encouraged to add 20 % Tonic as a complementary pasture component to ryegrass pasture mixes to improve mineral balance.

Advanta seeds(www.advantaseeds.co.uk) now market Ceres Tonic in the UK – a flexible forage herb with a big fleshy leaf. The brochure (www.pggseeds.com) claims it can support gains of over 200g/day.

Case Study

Upland Farm finishing lambs on Kale

Kale is the finishing crop of choice. Treflan is incorporated for weed control. Seed consists of 2 kg of Maris Kestrel and 0.1 kg of Marian swede which, although a very low rate gives two weeks extra feed. The land is ploughed and drilled using a Vaderstat drill and the crop is established in the third week of May. Fertiliser consists of 140 kg per hectare of 15-15-15 and 75 kilograms per hectare of nitrogen when the crop is 6 inches tall. This is used to feed lambs from September – December when they reach 16 – 18 kg. It is not strip grazed but fed in breaks. Growing costs are £110 per acre.

Tips for finishing lambs and tupping ewes on forage brassicas

- Sow 45 m strips of kale and 9m strips of yellow turnips across the field to provide easier access to set up breaks.
- Introduce kale gradually – on and off for the first 3 – 4 days, then full time.
- Provide an adjacent field of long forage as a runback or straw in the field margin.
- Sort lambs into weights ranges with 5 kg increments.
- Apply Iodine solution on the back of neck in Iodine deficient areas
- Hoppers – feed ad-lib concentrate from hoppers to smaller lambs. A mix of thin whole cereals and short lengths of straw that has come through combine is best with leafy brassicas.
- Use a "raft" of rolled out straw around the hopper to reduce risk of spreading footrot in muddy conditions.
- Remove lambs to sheep house with hopper for 3 – 4 days to clean up before sale.
- Ewes can be put on and off for 24 hours but avoid re-introducing them to kale on a frosty morning.
- Tups can be put out whilst ewes are on kale.

Case Study

Upland Farm wintering ewes on Kale

Several farmers in the UK now winter breeding sheep on forage brassicas to reduce feed and labour costs, key elements include –

- Provision of silage.
- Avoiding dirty sheep and environmental problems.
- Keeping labour costs down.

Feeding silage on forage brassica fields in winter using tractors creates tracks that can increase soil erosion and cause pasture damage. By placing baled silage on the field before the start of winter tractor damage can be avoided. To reduce crow and pheasant damage to the bales they should be wrapped using 6 layers of wrap. To ensure even allocation of feed they can be placed on end like a can of beans on unploughed strips in a straight line in the same direction as the break fence is moved. When the fence is moved the wire is lifted over the bale giving sheep access, the bale wrap is removed except around the bottom and a light ring feeder is put round it.

Last year George Allison of Greens Farm, Newbigging, Lanarkshire overwintered over 1,200 Meatlinc and Lleyn X ewes in 2 mobs, of 600 each outside. Each mob ran on a 20 acre field 15 ac.of which was down to kale. Last winter each mob ate 3 big bales of silage weighing 650kg every two days. The wintering system meant 1200 ewes wintered on only 40 acres at 30 ewes /ac, thus releasing the rest of the upland farm from grazing. This made sure there was grass to turn ewes onto for lambing outside in mid April. Ewes received on average a diet estimated at 1.6Kg fresh silage (25%dm) and about 3 kg of kale (15%dm) per day over 107 days of winter. A fortnight prior to lambing ewes were taken off the crop and set stocked at around 7/ac.on grass. They were then supplemented with snacker – fed cobs through to lambing and just after.

Labour requirement on the crop was around 1½ hours per day. Each mob was moved every second day, this was achieved by switching off the electric fence and holding the sheep back using a dog. The track for the fence was made using an ATV. The 3 wire Rappa fence was moved in 2 stages onto the new track, 5 posts were grouped together and moved half the distance working down the field, it is important to keep the strings tight or it tangles in the kale. The second move established the posts onto the track then they were spread out again.

Wintering sheep on kale offers significant feed and housing cost reduction. Feed costs were estimated at Silage - £2.30, Kale £2.26 and concentrate + minerals at £1.00. There were no costs associated with housing or bedding and the ewes left the field well fertilised for a following crop. It is important that the field chosen is free draining and does not poach badly, as there is a risk with this system of sheep getting dirty. Run back areas of grass and shelter must also be provided and sheep need access to water.

4 Handling facilities and health planning for easier sheep management

Too many farmers waste time with inadequate handling and feeding facilities – thinking ahead saves time and work. Use preventative vaccinations and drenches based on a health plan rather than fire-brigade action

Use clean grazing (no lambs in the previous year on this years summers grazing) to avoid worm challenge and work associated with drenching. To achieve this avoid stocking next year's lamb finishing fields with sheep after weaning.

Many Scottish farms have copper, cobalt and selenium deficiencies. Monthly trace element drenching is labour intensive and fails to provide a daily cobalt supply. Free access minerals are expensive and may contribute to scouring due to their magnesium content when lambs are parasitised. Pasture dressings of trace element supplements eg Grasstrac save time and labour. Treating fields that are also used for tupping on gives a double benefit as it is saves feeding concentrates at tupping to supply trace elements.

Oral Moxidectin anthelmintic given to lambs identified with a high faecal egg count at around 3 weeks pre weaning is a useful strategy. At weaning any finished lambs can be sold and the remainder left on the field rather than moved to an aftermath. The Moxidectin continues to protect lambs whilst on dirty pasture after weaning. This method reduces stress allowing regular drawing of finished lambs. By removing ewes sward height rises encouraging high intake and lambs to fatten, moving them later onto hay or silage aftermaths.

Concreting pens to give a hard standing after footbathing reduces footrot problems significantly, allowing lower treatment frequency. Consider vaccination if control is poor. A set of Prattley aluminium or similar mobile handling facilities are invaluable and the new Ritchey Combi clamp makes life easier as sheep are restrained as long as the operator applies gentle pressure to

Combi Clamp

the footplate. For larger farms and for farmers with back problems the NZ Racewell that clamps ewes pneumatically allows advanced drafting capability and one man operation. It enables easy recording for breeding and management purposes especially with electronic tagging.

Racewell handler

Increasingly quad bikes are used for checking stock. The labour cost of opening and shutting gates at 18 hours per gate per year is high versus the alternative of bike ramps at £180 - £200 or £50 - £60 in materials.

5 Autumn/ winter management and feeding

Low input wintering systems involve more reliance on forages. Many farmers need not feed concentrates at all to most of their stock. This can simplify housing/feeding set ups. Inwintering is necessary on many farms to protect pastures from treading, on drier farms feeding silage on a sacrifice area or hill grazing works.

At mating maximise lamb crops by having ewes in score 3 – 3.5, avoiding stress and maximising food intake. Pastures should be sheltered with over 6 cm grazing. Stock heavily and move to fresh pasture when 50% of the sward is eaten.

- Use teasers on hoggets two weeks before rams for a compact lambing.
- In late tupped flocks, where swards are below 4 cm access to high energy feedblocks can increase lambing percentage by around 10%.

- Check Fluke has not appeared on your farm by getting abattoir reports from lambs, or from dung analysis, it can reduce lambing percentage markedly.

Control of feeding should aim to reduce condition score to 2 – 2.5 at turnout. To make it easier to see ewes lambing outside they need to be crutched in March. Alternatively inwintered sheep can be winter shorn – shear both ewes and rams before tupping if tupping inside. The decision to house adds cost, not value and is forced on the farmer in a winter wet area with wet soil type, high stocking rate and can only be justified where there is considerable winter damage to pasture by sheep.

When outwintering silage feeding is commonly used, however, sheep find it hard to pull out material from dense bales with hard centres in ring feeders. These feeders provide too small a feeding area in relation to bale usage resulting in bullying, feed wastage and listeriosis. Ewes stand on the feeding area to get at the bale top and then reject the mud-contaminated areas they have trampled on.

A feeder with sides pushed in by the sheep solves these problems, a bale is shaken up so that it covers the area of two bales at half the height and a horizontal offset bar on the feed face stops the sheep putting their feet on the feed. This reduces silage wastage and ewes lamb in more even condition.

Silage feeder with moveable sides

As the winter feeding stops 2-5 weeks pre lambing when demands are highest, quality forages fed alone in many years can meet most needs for housed and outwintered ewes. This significantly cuts feed costs and trough requirements.

Sheep houses can carry up to 30% more ewes on easy care systems. Conventionally fed ewes inside need 1.2 m²/ewe and 0.45 m. trough space/ewe. Sheep pens with feeding down one side only are thus only 2.6 m deep and with mechanised feeding too much space ends up as tractor passes. Unrolling big bales of straw down these narrow pens is very labour intensive.

Trough space requirement can be eliminated by on-floor feeding on straw-based systems or relying on silage + feedblocks /buckets. Removing all passageways and feeding a TMR

through the outside walls of the shed is possible where there is access around the sides. This reduces feed space per ewe to 20 – 30 cm and pens can be 10 – 12 m deep, increasing carrying capacity of the shed. Mechanical strawing of pens is possible but if ewes are fed restricted silage in the early part of winter they will pull apart big straw bales if not put in a ring feeder and bed themselves. In early pregnancy feeding silage for 5 days and straw on a weekend cuts labour costs and keeps condition under control.

Allowing ewes to select straw aids bedding up

6 Breeding for easier management

New Zealand easy care systems were a farmer led initiative driven by subsidy withdrawal. Some farmers have imported their genetics, others are using their methods on UK breeds to get easy care sheep following the rule: "Never make an excuse for a sheep, it does not matter how good an animal looks, if it has had problems, was assisted at birth or to suck do not breed from it." Quotes from farmers who have adopted this approach:

- "Easy care selection of Blue faced Leicesters certainly worked for me".
- "Out of 350 mixed age Mules I only lambed 2 when they were mated to 50 % New Zealand X Suffolk rams."

Many farmers like the Mule as an easy care breed, with the right sire they suit easy care systems. How can you achieve figures like these?

Choose terminal sires with smaller heads, longer necks and light shoulders so that the lambs are born without too much trauma and therefore get up and suck vigorously. Select rams which themselves have shown high vigour at birth as lambs and leave vigorous lambs at birth. Avoid rams born by caesarean and which have very blocky conformation

THE EASICARE SELECTION TOOL BOX

The Easicare selection tool box has been prepared to help breeders who want to reduce problems either in their own commercial flocks or pedigree flocks. It has been developed from an analysis of the practices of leading proponents of easy care systems, taking consideration of the scientific principles and research findings in the inheritance of economically important traits.

Selection for easy care is simple and involves a minimum of record keeping. Basically if you intervene and save a life mark the animal and do not keep its progeny. Interventions that occur outside of normal gatherings are recorded and include :

- Assistance of ewe at lambing
- Assistance to suckle –either because the ewe is at fault due to poor mothering ability or the lamb is weak and lacks vigour
- Repeated treatment for footrot
- Excessive dags
- Prolapse
- Backing(ewe stuck on back -often fatal!)

Permanently mark the ewe by ear notching or notching of flag type tags or putting an elastrator ring around a pin type tag. Use your own system and depending on how fast you want to go cull as hard as necessary- from 1-3 strikes and you are out. Mate young culls to a terminal sire, do not keep the progeny. In self contained flocks use the Easicare selection toolbox to select your replacement rams. Select rams that score +1, +1, and +1 for all traits below.

Easicare selection toolbox

Score	-1	0	+1
Lambing ease	Assisted	Very minor help	No assistance
Mothering ability	Leaves lamb	Stands well back	Follows whatever
Lamb vigour	Has to be sucked	Slow to suck	Up and sucked

Lambs are tagged as the ewe and lamb are moved out of the lambing field/house and scores written in a diary. To score mothering ability note how close the ewe stays to her lamb when it is tagged.

What tasks take all the time at lambing?

SAC research showed 4.6 hours of human intervention costed at £46 were needed per 100 live Blackface lambs. However 28 hours were required per 100 Suffolk lambs costing £280. More time at lambing is spent on helping lambs to suck than assisting births which usually only takes 2 – 5 minutes. Housed ewes are easy to catch but for outdoor lambing you must have breeds or sires that lamb without assistance and ewes that stay longer with their lambs on the lambing site. The Suffolk and Texel breed societies are now working with Signet and SAC on identifying sires within the breed that are better than breed average for lamb vigour at birth and lambing ease. Ask for information on these traits when buying rams.

Assisting Lambs To Suck

First parity ewes and ewes with triplets always need more assistance to get lambs started with sucking. Is it worth culling ewes helped to lamb? The SAC trials showed a third of ewes were only assisted once. It was not the case that once helped a ewe expects help every year. There is no need to cull ewes that have been helped only once to lamb, although assisting a second time should be a reason for culling. However some ewes have big teats, mark these and put to a terminal sire. Better to select replacement rams that leave active and vigorous lambs that suck unaided at birth – more effective than culling ewes that fail to rear lambs or need help at lambing. After 5 years most farmers will find little need to assist at lambing but remember the maxim "no excuses!

7 Making ram investment pay

Mainly self – contained flocks such as purebred Lleyns are increasing in popularity (there were 83,000 Lleyn ewes in 2003 rising to 230,000 this year). These flocks allow farmers to have high biosecurity and to select for both the maternal performance traits and the easy care traits they deem important. Bought in sheep are restricted to rams.

Most of the breed improvement effort in the UK has been put into improving carcass traits and growth rate – worth around £2 – £3 per lamb between high and low index rams, but farmers are now realising that selection for easy care traits and breeding for performance, not looks, offers much higher rewards.

Sheep in closed flocks have the benefit of being bred in the environment in which they are expected to perform and can be selected for improvement in maternal and easy care traits as well as performance. Breeding for performance traits actually helps easy care, in the table below less intervention at lambing was needed in a selection line.

Lambing	Selection (S)	Control (C)	Industry (I)
Percentage assisted (after adjusting for birth weight)	7	5	11

Industry rams selected for a blocky conformation needed more help. If you choose rams with wide shoulders then you will need to assist lambs.

Terminal sire breeding

UK traditional terminal sire breeding based mainly on selection for size and conformation with high levels of concentrate feeding prior to sale is fine for intensively managed early breeding flocks. Farmers lambing at grass however need lamb vigour and the ability to finish without creep feed and dosing. This is driving innovation in our terminal sire breeds.
The Meatlinc benefits from selection based heavily on EBVs and is a widely used sire in easy care sheep production systems.

There has been recent interest in New Zealand bred Suffolks where Irish evidence shows reduced incidence of lambing difficulty saves in shepherding costs. There was tentative

evidence that lambs gained faster on grass – possibly because NZ EBVs are measured under grazing and parasite challenge rather than where concentrates are fed. Using NZ Suffolk sires will bring conformation grades down and this can affect price. Mainly R grades can be obtained if used on Continental X Mule ewes.

Meatlinc sires

8 Sourcing rams selected for easy care systems

Ram purchase is not a cost – it is an investment in your sheep business. It is an opportunity for you to increase efficiency, to offset the pressure squeeze of rising input prices and falling lamb returns.

A high index ram can contribute £2 – £3 per lamb in extra output. However some sires could be adding up to £3-5 per lamb to your shepherding costs and mortality at lambing because their lambs fail to stand quickly and suck causing extra work/losses.

- Selection for blocky conformation, 'bone and strong heads' adds to lambing difficulty.
- Overfeeding of concentrates masks the ability of EBVs to reflect true conversion of grass to meat and parasite resistance.
- Overfeeding reduces ram life and ram mating ability, reducing ram to ewe ratios.

By bringing out rams slowly they can serve 100 ewes rather than 40 and they will live twice as long saving over £2 per lamb in ram costs. Farmers worry that with rams grown more slowly any old poor growing ram could be passed off as a good one. But if the ram has a high index

then this is not a concern as these figures are more reliable than looks. If you select on looks and expect performance then expect to be disappointed, as you cannot breed by looking for things you cannot see – for example the ability of a ram to leave daughters with good maternal traits. Visual inspection should concentrate on 'teeth, testicles and toes'.

The Sheep -Easy group (http://tinyurl.com/216wsy) consisting of a small number of breeders from Scotland, England and Northern Ireland was established in 2007 to provide appropriate breeding replacements The mission statement for the group is:-"The development of productive, profitable sheep selected to thrive in low input, high welfare, easily managed systems".

New Zealand bred rams improve Suffolk lamb vigour

9 Culling unproductive ewes

Farmers in hill areas are less likely to cull barren sheep because in a harsh hill environment barrenness due to poor condition is common. A thin Blackface ewe that is losing condition due to bad weather after tupping will often be barren. However a barren gimmer is a different story, she has not had to rear a lamb the previous year and should be easily capable of getting in lamb and producing and rearing at least a single. She should have sufficient condition to see her through bad weather after tupping.

Recent research from ARINI in Northern Ireland showed the following –
Subsequent Barrenness and Lambing Percentage From Sheep That Either Lambed As 2 year olds or were Barren.

Lambing results at 2 year Old	Lambing Results As 3 Year Old		Lambing Results As 4 Year Old	
	% In Lamb	Scanning %	% In Lamb	Scanning %
Lambed	87	143	89	160
Barren	74	123	86	138

More ewes were barren at subsequent lambings if they were barren at their first chance. The scanning percentage shows that even if ewes conceive at a subsequent mating after being barren when tupped as a gimmer there is less chance of them producing twins.

If hill lambs are valued at a modest £30 the ewe that lambed as a gimmer produces an extra 0.6 extra lambs in the next 2 years worth £17. The message is clear – If you have a ewe that turns out barren when mated as a gimmer cull it, no matter how good she looks never give a barren gimmer a second chance. Sometimes you may get a batch of barren gimmers from a tup that leaves infertile daughters. In one Scottish recorded flock a bought in unrecorded ram was estimated to have daughters with only half the lifetime production of daughters of average rams – a good reason not to risk your future profitability on tups with no records.

10 Planning your way to easier management

Easier Management does not necessarily mean rapid and radical change. It takes time and planning.

Nowadays you need to be master of more than one trade, but also to have time for alternative enterprises and to "have a life". Easier Management is not a recipe for putting your feet up but to work smarter, not harder, to boost existing business productivity and sheep welfare.

- Study your systems and compare them to the Easier Management options.
- Examine your physical and financial records to see where your business would benefit most. Paying attention to overheads and labour costs/ewe.
- Identify those areas in which you believe you can readily adopt and manage change.

For more information see www.easicare.info

easicare

Managing the change to lower input systems with UK sheep breeds

This booklet was printed with financial support from the Scottish Government
Printed on environmentally friendly paper