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Ram Management and Purchase

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Ram Management and Purchase

This booklet follows an industry workshop held in Edinburgh in 2010 and has been written to help breeders bring out rams that live longer and farmers make better decisions on ram purchase and management to maximise economic returns.

Success comes from repeat ram purchases by happy commercial farmers which is more likely where rams last 3-4 years. But too many die or have to be culled early because of infertility or feet and leg problems. To leave a return for the commercial farmer rams must stay alive and mate successfully. They must produce vigorous lambs at birth that survive and express the improved genetics of the ram.

Trials suggest that around 20% of rams need to be culled prematurely, and there have been concerns for many years that breeding rams are being presented overfed, which may be limiting their breeding performance.

This is a response to strong market signals where buyers prefer the biggest rams. However, it is important to consider the consequences for the animal.

Over-feeding reduces the numbers of years a ram lives and the number of ewes he mates per year. It can mask genetic merit for traits such as grazing ability and parasite resistance and cause welfare issues due to joint and kidney problems.

For these reasons we are encouraging both breeders and buyers to reconsider how rams are reared. Fundamentally, over-feeding can make sheep production less efficient, as more cereals are fed and more rams are needed. It is simple - rams that have been reared mainly off forage are likely to be fitter, more fertile and live longer, and with the current cereal price, less costly to produce. So there are wins for both seller and buyer from fighting the wrong market signals and using ram condition score as a guide.

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Economics

How many lambs a ram leaves in his lifetime determines the return on his purchase cost as shown below for a £650 ram.

Cost per lamb produced (£)

Lifetime (mating seasons)	No. ewes mated per season per ram (lambing at 150%)			
	40	60	80	100
1	10.83	7.22	5.42	4.33
2	5.42	3.61	2.71	2.17
3	3.61	2.41	1.81	1.44
4	2.71	1.81	1.35	1.08

The number of ewes a ram can mate depends on how many ewes he is allocated. "Normal" levels for lowland flocks are 1 ram to 40 ewes but where rams have been brought out mainly on forages 1:100 has been possible with shearling rams on mature ewes provided the ram is not over fat and has good legs and feet. Hill rams used where the ewes are mated over a large area need traditional rates.

The potential saving in ram costs per lamb born are around £4 where rams are able to mate 100 ewes per year for 4 years compared to 40 ewes per year for two years, as often happens now. Achieving these savings, at around £4 per lamb born, is worth a similar amount as that possible from genetics i.e. the difference in lamb value between a lamb born from a high index versus a low index terminal sire. Thus aim for both a high genetic index and rams that leave more lambs as these effects are additional.

Normal ram:ewe ratio 1:40

Feeding rams for breeding- Physiological effects of concentrate feeding

In an attempt to maximise the growth rate of ram lambs, pedigree breeders have acquired a reputation for excessive reliance on concentrate feeding. The perceived need for concentrates is understandable given the genetic potential for growth, particularly in terminal sire breeds. But excessive feeding of concentrates can disrupt the normal body growth and development processes. The consequences are adverse effects on health and welfare with consequent reductions in mating ability and longevity. Identifying how excessive concentrate feeding affects the organs (rumen, kidneys, testicles) and tissues (muscle, bone, fat) of the growing lamb provides a basis for guarding against an over-reliance on concentrates.

Growth rate and body composition

At a fixed live weight the faster growth rate that accompanies concentrate feeding results in carcasses with more intramuscular fat, i.e. marbling. The skeleton is usually weaker, the muscles smaller and less compressed and the connective tissue more tender. While these characteristics may enhance the eating quality of meat they are not conducive to producing the necessary physical strength and prowess for mating.

The rumen

Concentrates decrease the pH of the rumen fluid and inhibit the rumen microbes that breakdown plant fibre. High intake of starchy concentrates combined with diets lacking in long fibre (which promotes saliva production that buffers acid production) can result in rumen acidosis. Longterm feeding of concentrates also increases the proportion of propionic acid in the rumen fluid which in turn leads to the production of soft oily carcass fat high in branched-chain fatty acids that have a low temperature melting point. Highly-processed (ground, milled) energy-rich cereal grains (barley, wheat, maize) are the components of compounds with greatest effects. In extreme cases they can cause damage to the papillae that line the inside of the rumen wall. As a result bacteria can enter the bloodstream leading to liver abscesses and sudden death.

Feed grain whole and maintain a minimum of 60% forage in the daily dry matter intake for a healthy rumen

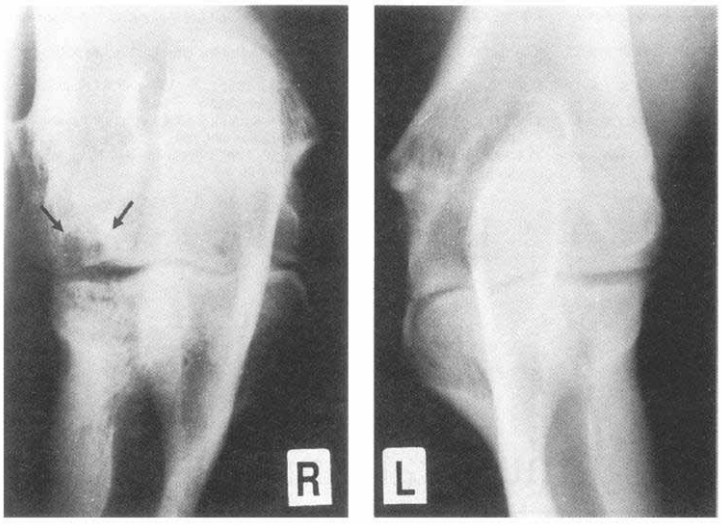
Bone development

High growth rate promoted by concentrate feeding leads to a reduction in bone density with lower concentrations of calcium and phosphorus. Thus, for a given rate of live weight gain, ram lambs consuming grass (as opposed to concentrates) have stronger bones. This is reflected in higher contents of the key structural mineral elements, calcium and phosphorus. Concentrate-fed lambs are therefore prone to joint defects such as dyschondroplasia and osteochondrosis. These defects manifest themselves in lameness and/or wobbly walking around May in January-born lambs on *ad libitum* creep feeding at grass. The problem is linked to the acid-base status of the lamb's blood. Attempts to avoid the condition through adjustment of the acid-base balance by including bicarbonate in the concentrate diet are accompanied by the risk of triggering urinary calculi (or urolithiasis).

Effects of grazing and grass on bone composition

Mineral	Composition of empty body weight gain (g/kg)		
	Grass outdoors	Grass indoors	Concentrate indoors
Calcium	9.6	9.4	5.6
Phosphorous	5.2	4.5	3.8

From Wan Zahari et al (1989)



(R) Caudocranial study of the right elbow showing a radiolucent defect (arrowed) within the subchondral bone on the distomedial aspect of the medical humeral condyle.

(L) Caudocranial study of the normal left elbow.

Doherty et al. (1996)

Problems caused by overfeeding concentrates: X ray picture showing bone/joint defects

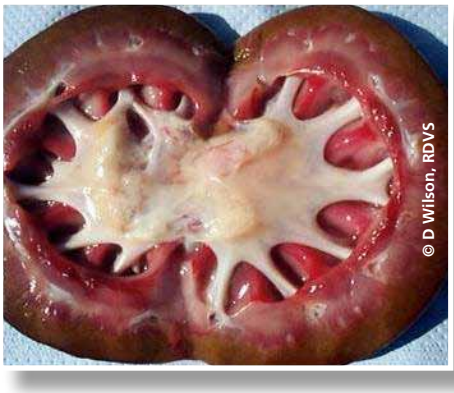
Kidney function

Concentrate-fed ram lambs are prone to the precipitation of mineral elements in their urine. The precipitate takes the form of crystals that block the urethra, thus restricting the passage of urine out of the bladder. Avoiding excess magnesium intakes and adding ammonium chloride to the diet to reduce the pH of the urine, thereby reducing the tendency for crystal formation, minimises the risk of developing the condition. But over-correction with ammonium chloride increases the risk of the bone development problems referred to earlier. The avoidance, when feeding large amounts of concentrates, of urolithiasis on the one hand and poor bone mineralisation on the other, involves careful diet formulation. In particular protein sources such as rapeseed meal and feed by-products like middlings, rice bran, maize gluten and molasses are high in magnesium. Care is needed in formulating compound concentrate feeds to ensure that levels of inclusion do not exceed the recommended upper limit for overall magnesium concentration of 0.2%, that phosphorus concentrations are below 0.5% in the dry matter and that the calcium to phosphorus ratio is at least 2 to 1. Avoid high inclusion rates of feeds with magnesium content over 0.4% (see table below)

Variation in magnesium content of common feeds fed to rams

Feed source	% Magnesium in DM
Rapeseed meal	0.56
Molasses	0.47
Maize gluten	0.41
Dark distillers grains	0.30
Beet pulp nuts	0.30
Barley /wheat /oats /dried citrus	to 0.13

The upper limit for magnesium content of feeds for rams is 0.2% in the DM



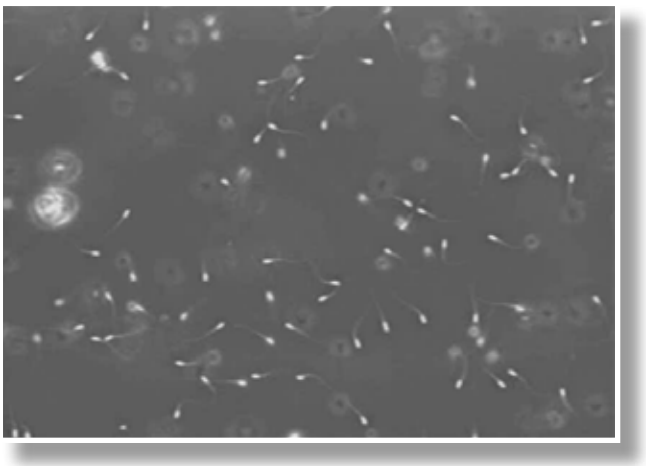
Kidney showing stones in pelvic area due to high magnesium in ram diets

The testes and sperm

Excessive concentrate feeding leads to a high content of fat in the scrotum. Associated adverse effects on spermatozoa are reduced numbers, a higher incidence of abnormalities and an overall reduction in the capacity for linear forward movement. These effects are compounded by the increased heat production and extended lying times that accompany high levels of concentrate feeding. If concentrate feeding takes place indoors bedding around the feeding troughs, where animals often choose to lie, can become contaminated with feed. The resulting increase in temperature caused by the fermenting feeds adds to the adverse effect of scrotal heating on sperm quality. High scrotal temperatures also reduce blood testosterone levels which, in turn, decrease libido. Other associated detrimental effects are reduced sperm survival following freezing and thawing and increased embryo mortality.

Effects of concentrates on semen characteristics (Fourie et al (2004))

	Grass plus bucket	*Ad–lib* concentrates
Scrotal fat (g)	45	109
Semen volume (ml)	101	101
Motility index	3.3	2.3
Linear progression	2.6	1.6
Semen concentration (million/ml)	1170	732
Percentage normal sperm	88	83



Excessive heat which can occur with excessive concentrate feeding disrupts sperm maturation

Supplementation for breeding fitness

Free access to concentrate feeds originated from the provision, from around 10 days of age, of highly palatable creep feeds in order to stimulate rumen development and minimise the adverse effect on growth rate of the post three week decline in the ewe's milk production. Free access to creep feed continues in many flocks, yet as young spring grass becomes available in increasing quantities, creep feed merely becomes a substitute for grass rather than a supplement to grass. It is during this phase that free access to creep feeding has its most damaging effect on the strength and density of bone.

There is a mid-season decline in grass quality and lower efficiency of utilisation for growth of the metabolisable energy of mid-season as opposed to early-season grass. Thus concentrate-fed lambs will grow faster than lambs on grass only. In the absence of an alternative high quality succulent forage to take over from spring grass, continued concentrate feeding was the only other option on many farms. But, in the context of producing rams that are physically fit and reproductively sound, greater reliance on other purpose-grown succulent forages, when grass quality wanes, is preferable to relying solely on high levels of concentrates. Some concentrate feeding will still be necessary as a carrier of high quality rumen undegradable protein. It should also be a supplier of those trace minerals and vitamins, notably zinc, selenium and vitamin E, which have been shown to improve sperm production and survival. On the basis that spring grass is a rich source of polyunsaturated fatty acids and, in view of their importance in maintaining sperm membrane integrity, a small inclusion of n-3 fatty acids in the form of fish oil, which is a rich source, is warranted.

Whole cereals provide a more appropriate feed than milled or rolled grains

Bringing out rams for sale as shearlings

A ram lamb of a terminal sire breed, born in mid March, should weigh around 100 kg by sale in mid September the following year at 550 days of age. For the first 150 days, up to weaning, feeding must allow full expression of growth potential. Milk, creep feed and high quality forage are all important ingredients of the diet. Growth rates of up to 500 g/day are feasible and can average 400 g/day so typically a ram should weigh 60 kg at 20 weeks (scanning weight) in August.

Subsequent increase in weight totalling 40 kg to reach target weight at sale can be quite moderate, averaging about 100 g/day for 400 days. Maximum concentrate levels to achieve these gains are shown in the table below. These rations are suitable for conventional and organic rams as they do not exceed the 60:40 forage to concentrate ratio on a dry matter basis. The 60:40 ratio is a good maximum that will not compromise health. Rams eat about 3% of bodyweight/day as dry matter on forage based diets but will eat more on concentrates. Current feeding levels of concentrates to rams prior to sale which may reach 4 kg/day are not warranted; they compromise the health and welfare of rams and reduce their serving capacity.

Practical feeding

To avoid the problems caused by sub-acute acidosis do not exceed 40% of concentrates in the dry matter of the diet overall. Where concentrates are fed follow these guidelines:

- Feed grain whole and do not exceed 0.5 kg/feed
- Provide long roughage to encourage the flow of saliva which contains buffers
- Replace up to 30% of starchy cereal with sugar beet pulp pellets or roots
- Incorporate yeast products that stimulate fibre digesting bacteria
- Feed roughage *ad-lib* as hunger increases variation in intake at the trough
- Allow enough trough space so all can eat together and 24 hr access to water
- With TMR use ingredients not easily separated out
- Build up gradually over 4 weeks to full rations

Shearlings can be grown to 100 kg without excessive concentrate load

Recommended feeding for rams brought out to be used as shearlings

Period (days)	Target weight at end of period (kg)	Daily Gain (g/day)	Forage	Concen-trate (kg/day)
Birth on March 14th to back fat scanning August 1st (140 days)	60	400	Grass + Milk	*Ad lib* 18%CP creep feed to end of May, wean onto best pasture and restrict to 0.5kg/day proprietary conc.
Scanning–Housing November 19th (110 days)	65	45	Grass	0.225
Housing–Turnout April 18th (150 days)	75	65	Silage	0.45
2nd summer grazing to July 17th (90 days)	95	225	Grass	nil
Preparation for sale September 13th (60 days)	100	85	Grass	0.45
Totals : Birth to sale (550 days)	100	175	Ad lib	50kg Creep + 140 kg conc.

The levels in the table above, using around 200 kg of concentrate to bring a shearling ram out, are maximum levels suitable for terminal sires. For maternal breeds use of creep for multiple born rams and compounds to make up for low quality forages or poor grazing quality are justified with totals below half that used above as a guide. Rams brought out for own use should get creep where necessary up to mid June (50 kg max/ram) to allow full expression of growth potential. From then on access to mineral and vitamin supplements and good forage should suffice. Offer *ad lib*, free-access 1 bucket (22.5 kg) per 20 head or less, all year round. Mature rams have moderate energy and protein needs for maintenance, requiring about three quarters as much as a crossbred ewe needs at lambing. They winter happily on *ad-lib* average hay and 0.3-0.5 kg of compound/day and will manage on access to high quality forage or grazing and a suitable feed block. Spring grass meets their full requirements for energy and protein but as the grazing season progresses grass quality falls and rams may lose condition. Low stocking rates result in stemmy pastures of lower digestibility but frequent mowing where possible will help maintain pasture quality into August. Up to 0.5 kg of concentrates/day should be fed to achieve condition score 3.5 by mating if grass is not achieving this.

Condition scoring rams to minimise losses

Condition scoring is a simple effective technique that it is worth adopting to determine feeding levels for rams. Rams are scored on a scale from 1-5 by palpating the back using the fingers to probe for spine, muscle and bone. See page 23 for a guide to condition scoring rams. Rams are valuable but less hardy than ewes so maintain them above condition score two. After mating rams can be in poor condition (≤2), particularly if used on the hill. Leaving the rams out for over 28 days rarely produces more lambs. If mating has not been weather-affected get hill rams back in before serious loss of condition occurs. Frequent scoring with appropriate feeding:

- Minimises welfare problems
- Reduces losses
- Maximises longevity and mating success

Target scores for rams

Period	Score	Feeding level to achieve optimum score
Pre-mating/Mating	3.5	Over mating supplement Blue faced Leicester rams with up to 0.5kg whole oats in one feed per day, other breeds should not require feeding over mating.
Post mating (Winter)	2.5	Restore weight by housing and *ad lib* good forage plus 0.5kg concentrates/day as a single feed for rams between score 2.0 and 2.5 and up to 1kg/day (as two feeds) for rams below score 2.0
Summer	2.5-3	Grass + min/vit supplement. Supplement BFL rams in prolonged wet weather or house

Practical targets and management of rams

Prior to the mating period the target score is 3.5 (scale 1 to 5), supplement rams below this with 0.5kg concentrates/day. Severe loss of condition during the mating period of up to two units of condition score endangers ram welfare and may predispose animals to respiratory disease and other infections. Ill-fitted ram keel harnesses and blocks can cause slow-to-heal brisket sores that reduce condition. Only raddle rams where ewes have to be batched for housing and use keel paint rather than raddles if possible. Foot care is often neglected in rams leading to loss of condition.

Mating management and grazing risks

Rams serving 100 ewes should be used in groups of at least three rams along with mature ewes. They need to be stocked reasonably heavily at over 25 ewes/ha on saved grass. Move the mating group to a fresh field when half the sward height on offer has been removed by grazing. Normal ratios are recommended for rams used on an open hill. Prior to mating the rams should be looked over by a vet as many potential reproductive problems can be detected by physical examination and, if unsure, a vet can take a semen sample for analysis.

Red clover

Red clover can impair breeding through the effects of plant secondary metabolites. These are plant components that have chemical structures similar to hormones that control reproduction. Plant breeders are trying to reduce the concentration of formononetin, the major oestrogenic factor in red clover varieties. This, when converted to phyto-oestrogen in the rumen, will disrupt breeding. Current advice is that swards with over 30% red clover should not be fed to ewes or rams 45 days either side of tupping. Ensiling red clover concentrates the oestrogens and red clover silage should not be used to supplement rams around tupping time.

Sewage pellets

Recent research at MLURI and SAC has found that in sewage sludge pellets there are chemicals, each benign within its own EU safety limit, but as a cocktail they act as endocrine disrupters. Through foetal programming they can have lifetime effects on ram behaviour and reduce the number of Sertoli cells in the testes that connect and nurse the sperm producing cells. Whilst sewage sludge treated pastures grow a lot of grass and are safe for finishing animals they are best avoided by the ram breeding flock.

Avoid feeding swards with over 30% red clover to rams around mating due to oestrogenic effects

Grazed chicory for rams

The reduced performance of concentrate fed, physically unfit rams that get overheated and exhausted when required to work can be avoided by grazing forages. If these are grazed prior to the mating season the effects of spending long hours of grazing on a low dry matter forage makes legs stronger and rams fitter, producing rams more likely to be sexual athletes. This allows more ewes to be allocated to the ram.

Purpose grown chicory, as an alternative to heavy concentrate feeding, can be rotationally grazed using four paddocks grazed for 10-14days each. From a sowing in May chicory is available for the first grazing in July, but as this will be weedy it is best to mob stock it with ewes and lambs to graze it down from 20 cm to 5 cm in under a week then put rams on the re-growth 3-4 weeks later. Second year chicory can be grazed from May and again use hard grazing pressure with ewes and lambs or hoggets for the first grazing to stop it bolting.

Chicory has natural anthelmintic properties and can halve the number of drenches required. For rams chicory should be sown out at 3-6kg/ha. Varieties Puna 2, or Grasslands Choice along with 0.6 kg/ha of Plantain (Ceres Lamb Tonic) and a white clover blend to provide nitrogen. Additional grass can be added to the mix as Timothy if needed, but avoid perennial ryegrass as it out-competes the chicory. Each hectare will feed 110 rams to mid Sept then 75 rams to late October. In wet weather rams can get dirty and may need to be taken off the crop temporarily. Feeding up to 0.5 kg concentrates/day can aid this and be used as a source of minerals and vitamins. For advice on chicory establishment see http://www.grassdevcentre.co.uk/Factsheets.htm

Grazed chicory can effectively replace concentrates

Chicory – Plantain (on left) are high in trace elements

Trace element problems

Grass for rams is likely to be low in the trace elements cobalt and selenium. Also occasionally there are deficiencies of zinc and copper. Rams have high nutritional requirements for zinc, cobalt and selenium. 50mg of barium selenate given by subcutaneous injection 12 weeks pre-mating has beneficial effects on sperm mobility and viability and is recommended for farms with known selenium deficiencies. Rams need extra zinc; as lambs they will often go lame before ewe lambs on the same diet. They also benefit from added PUFAs (poly unsaturated fatty acids as found in fish oils for example) and Vit E which are low in mature grass. These trace elements can be provided by proprietary trace element supplements. Chicory/plantain mixes will usually provide sufficient trace elements for rams but could be low in cobalt in some areas so it is worth doing a mineral analysis to check. Your local adviser or mineral supplier can organise this and advise on the need for supplementation. Note rams are prone to copper accumulation and toxicity, often due to high levels of concentrate feeding, with Texels and Lleyns being susceptible breeds. Molybdenum and sulphur exert antagonistic effects on copper availability. Copper levels must be kept below 15 mg/kg as fed in complete feedingstuffs, take technical advice on copper levels when home mixing. Red clover has been implicated in problems of copper toxicity which can develop in susceptible breeds such as the Texel when grazed for long periods on red clover as it is high in copper and can be low in both molybdenum and sulphur in some areas.

Strong legs and good mineral status after grazing chicory

Ram purchase

When buying a ram it is important to balance the quality element he will bring to his future offspring with the quantity of live lambs produced. Blocky conformation will make progeny sell well at live auction but must be accompanied by a higher degree of supervision provided at lambing e.g. indoors to ensure high survival rates of any lambs needing assistance at lambing. Rams have changed shape over the last 30 years with legs shorter, conformation blockier and bones thicker. These changes, brought about by selection for genes affecting bone morphogenesis, reduce the ease with which lambs are born.

Blocky conformation is liked by butchers as it is a sign that animals have grown without check so the meat is young and tender, but blocky conformation is not related to saleable meat yield in sheep. Saleable yield is dependant on the amount of meat in the loin, leg and shoulder which progressively sell for less/kg. Current conformation grades are a poor indication of meat distribution between these areas. Selection based on muscle depth, as practiced by Signet, increases muscularity with very little influence on the shape of the lamb at birth (the muscles are later developing than bones). The industry is bringing in objective classification of lambs using video image analysis to replace subjective grading on the EURO grid and eventually will pay on this.

The supermarkets want R3L 19-21kg lambs. In summer lamb legs are cut into steaks for the barbeque and extreme carcass shape is not wanted. Selecting maternal breeds on shape is very risky as the maternal component of lambing ease is likely to be affected by this. The easiest lambing ewes have a large pelvis area and the right pelvic angle, this is not readily observable so you cannot breed for it by looking at the ram. This is where the maternal EBV is useful as it combines milk production (8 week weight) and lamb rearing ability.

Balance quality with lamb survival traits when choosing rams

Easy lambing means less work

Selection of rams has effects on lamb survival and breeders who have selected for easy lambing have made rapid progress. Lambing assistance at levels of less than ten interventions per thousand has been achieved in heavily culled breeds lambed outdoors. Similarly selection for lamb vigour at birth is a heritable trait that is related to lamb survival. Newborn lambs lose heat to the ground four times faster than to the air so how quickly they stand can be the difference between life and death. Lamb vigour at birth together with the instinct to suck is very important, particularly if you are lambing ewes outside. Breeders who routinely remove lambs at birth for assistance produce breeding stock that require more work for their clients at lambing. Lamb vigour is genetically related to survival and lambing ease (as a trait of the lamb). Lambs that are vigorous and suck early get more colostrum and protection against disease and this improves lamb survival. Suffolk and Texel breeders have been recording birth difficulty, lamb vigour and sucking ability on a 1 to 4 score. Interim analyses of these traits show they are moderately heritable and that they are closely correlated genetically, with no adverse correlations with performance traits.

Genetics Of Lamb Survival

Trait	Heritability
Lambing ease	0.26
Lamb vigour	0.39
Suckling ability	0.31

In conclusion lambs have to survive to reach market and most of the losses are around birth. These losses can be due to heritable traits such as lamb vigour and sucking ability. If these have been neglected by the breeder your losses and workload can be much higher.

Selected for easy lambing conformation

Buying a ram – Essential checks of teeth, toes and testicles

Shearling rams should have two broad incisors that meet the hard pad at right angles not sloping forward; cheek teeth can be felt from outside the jaw and should be regular. Feet should be sound with no inter-digital growths. Check there are two testicles that move freely in the scrotum and feel firm but not solid, are free from any hard lumps and have an epididymis the size of a table tennis ball at the base. Target scrotal sac circumference for small breeds is 34-36 cm and for large breeds 36-38cm. Carry a small tape measure to sales and check this.

Why Record Scrotal Circumference?

Scrotal circumference is an indicator of male fertility and serving capacity and correlated with early maturity in female offspring. Rams with greater scrotal circumference are more likely to leave ewe lambs that take the ram in their first year

Remember to buy from flocks that are CLA – monitored, MV accredited and Scrapie genotyped

Direct Farm Sales

An on-farm sale or auction where rams are brought out without overfeeding and genetic superiority is identified by figures offers an alternative purchase option. Where rams are brought out on grazing then the production EBVs are measured in the same environment that their lambs are expected to perform in, thus avoiding possible unfavourable genotype by environment interactions. These are known to occur between breeds, as hill ewes do better than lowland ewes in the hills, but not in the lowlands. So it is possible there will also be interactions within breeds where sheep reared on concentrates do not perform as well when faced with grazing.

Consider the following advantages of selling on-farm:

- Greater dependence on home grown forages
- Lower concentrate feed bills
- Biosecurity issues – reduced risk of disease compared with rams brought back from sales
- Later lambing and rearing on grass with a ready commercial outlet for culls

A common misconception is that a high plane of feeding is needed to get high EBVs. Providing breeders have good genetic connectedness, so BLUP works efficiently, it will remove feeding effect differences between farms completely, giving unbiased EBVs whatever is fed. However huge differences in farm environments increase the environmental component of variation reducing the heritability of traits, so the target should be to test rams under normal commercial practice. This can involve normal levels of worm challenge associated with a grazing based system.

On-farm sales

The on-farm sale and auction alternative

A Perthshire farming family sell Texels and Lleyns at an on-farm auction that has been running for four years now.

> The philosophy is 'An ounce of breeding is worth a ton of feeding'. A target of over one kilo of lamb reared to 100 days per kilo of Lleyn ewe mated demands good genetics and ability to finish off grass. An easy care system where sheep lamb outside on grass without daily feeding has low intervention levels achieved by hard culling for mis-mothering, lambing difficulty or assistance to suck.

By showing how it can be done and selling on the genetics from animals in the top10% of the breed on index these breeders aim to meet the demands of commercial producers with low labour availability.

On-farm auction rams

An Aberdeenshire farming family who competed in and were winners of the Farmers Weekly sheep farmer of the year competition in 2010, have been on farm selling for a number of years now and their sale has become a very well attended event with purchasers coming back and reporting better ram survival and higher ewe:ram ratios.

These three examples show a growing market for rams sold on the basis of their EBVs – there are willing buyers looking for rams bred naturally and sold on figures.

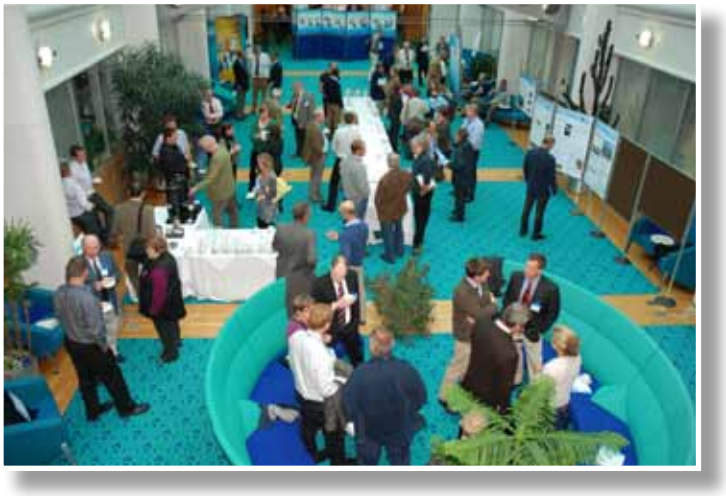
On-farm sales

Purchase checklist

Wherever rams are sold it is important to check their economic production index. Shown as £'s – half this amount (as the ram provides half the genes) is the likely advantage they confer to their lambs. All the rams present at a sale can be checked on the BASCO database which is on the web at: http://www.egenes.co.uk/bascosearchsheep

If you know the name of a ram that you have already bought you are only two clicks away from seeing his full pedigree and all the latest EBV information on him. EGENES, based in Edinburgh do the Signet genetic evaluations to international standards. A ram's EBV can change over time as more information on his progeny becomes available. Some rams can gain over 100 points in a year or two which can make very interesting reading. If you have bought a ram over recent years and want to check him out to see whether he has gone up or down since you bought him click on the database, put in the last name then scroll down alphabetically to the first name then click the EBV button. Try this for some high-priced rams and be surprised how poor their figures are. If you want to get ahead get a ram with good figures. Also check:

- They are not overfed concentrates so are capable of high ewe:ram ratios
- EBVs are recorded on grass not concentrates
- They are selected for easy lambing traits by culling for lambs that lack vigour or need assistance to suck. In the case of maternal breeds, select for ewes that stay close to their lambs at birth
- Individual EBVs are available to help match rams to flock needs



Delegates at ram seminar see BASCO database demo

Parasites

Check rams in poor body condition for health issues. Poor condition can be due to worms as rams are often kept close to the steading in small fields constantly under grazing pressure. Ram lambs, with higher growth rate than ewe lambs, partition more protein to growth making them more susceptible to worms after weaning when protein supply from milk is reduced. Updated SCOPS quarantine treatments recommend purchased rams should be treated on arrival sequentially with a macrocyclic lactone preparation (3-ML) and the new anthelminitic monepantel (4-AD). Holding overnight in the pens prevents pasture contamination with potentially resistant nematode eggs. Turnout to contaminated pasture dilutes any resistant strains still present. Grazing bioactive forages such as chicory in summer can reduce the frequency of drenching and build up of anthelmintic resistant worms.

Rams are also susceptible to fluke which is a growing problem and can be identified by signs of anaemia, bottle jaw and from eggs found in faeces (specifically ask your vet to test for this). Rams purchased in the autumn should be treated with triclabendazole to remove a potential immature fluke risk.

Biosecurity

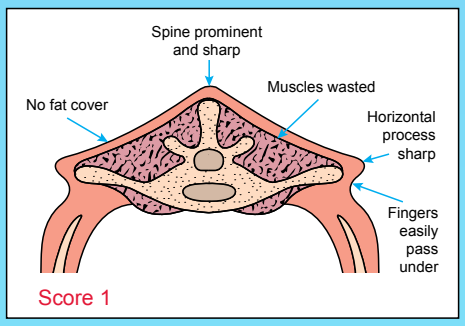
Hopefully having purchased a ram most of the expense is over but if he brings in disease the expenses have just started! Remember to buy from flocks that are CLA monitored MV accredited and Scrapie genotyped. Use a quarantine health plan constructed with your vet, typically this will recommend each ram to be individually examined and that:

- Added sheep are kept separate from all other sheep by at least 2 metres (no nose to nose contact)
- Quarantine for at least 28 days
- Separate handling facilities should be used
- Equipment should be sterilised if it must be used between groups of sheep.
- Fully disinfect protective clothing between groups or preferably have dedicated kit for quarantine use

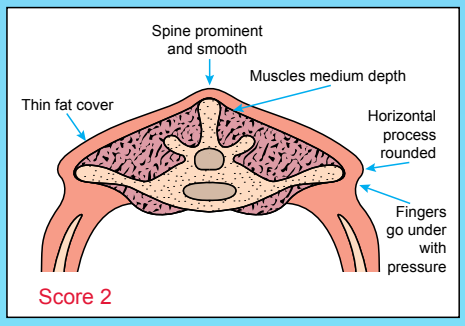
To avoid risks do not believe what you are told! Sheep bought from a mart have additional risks and quarantine must be applied to all rams. Avoid sharing/hiring rams as this has a very high risk.

Health costs

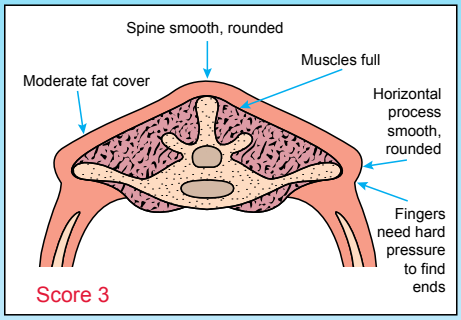
Costs and procedures after purchase	**Cost per ram**
• Drench all tups with Monepantel (keep inside for 48hrs)	£1.50
• Inject all sheep together with Macrocyclic Lactone at correct dose e.g Cydectin 2% LA for scab control	£1.25
• Or dip in OP (but drench as above)	£0.80
• Fluke drench with triclabendaole/closantel/nitroxynil	£0.30
• *Run through Footbath = 2p - 12p+ (x 2)*	
• *Repeat after 14 days*	£0.20
• Clostridial/Pasteurella/Other vaccinations	£2.00
TOTAL	= £5.25



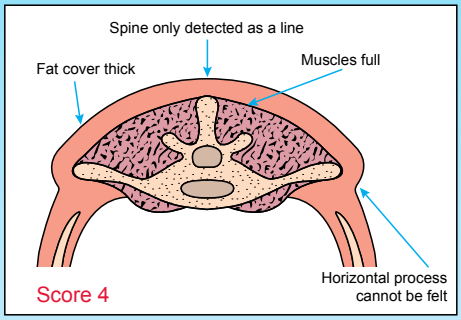
Too thin, welfare compromised, possibly diseased



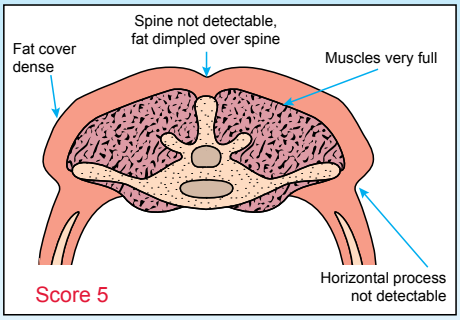
Too thin, typical of hard used ram, needs supplementary feeding



Optimum condition for mating



Overfat



Grossly overfat, achieved by high concentrate feeding, health and mating ability compromised

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Ram Care

Feeding breeding rams fit for the future

Specifications & Intakes

Protein %	15
Oil %	5
Fibre %	1.2
Ash %	20
ME MJ/kg/DM	12
Calcium %	4.1
Phosphorus %	2
Sodium %	1.2
Biotin mg/kg	5

Selenium mg/kg	15
Cobalt mg/kg	75
Iodine mg/kg	75
Manganese mg/kg	300
Zinc mg/kg	2500
Iron mg/kg	150
Vitamin A iu/kg	90,000
Vitamin D3 iu/kg	18,000
Vitamin E iu/kg	1200
Vitamin B12 mcg/kg	1000

Intakes

Ram lambs 30-50g/day (1 bucket per 20 head/month)

Shearlings rams 50-80g/day (1 bucket per 12 head/month)

Offer one LIFELINE RamCare bucket (22.5kg) per 20 head or less, all year round.

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Two EasyRam lambs bought by Forrest Irving, Hawick, served 200 ewes with assistance from one other ram.

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Lamb bought by Sandy Anne and Tom Welsh, Mossfennan, served 140 ewes with one other ram.

One of two Ram Lambs bought by Derek Steen, Lockerbie, served 180 ewes.

Lamb bought by Jim Laurie, Corrie, served 55 ewes.

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WORKING GENES

Ram Sale
Incheoch

(Messrs Finlay McGowan)

Thurs 6th September 6pm

Call Neil & Debbie to arrange prior
viewing 01828 633652 / 07788 100010

Tups on view sale day from 2pm, Barbecue 4pm
Sale by auction 6pm conducted by United Auctions.
Entire shearling ram production offered.

50 Texel **50 Lleyn**

Grass fed only

Hardy, active tups Bred to Perform

All rams will be insured for mortality for 3 months from fall of the hammer.
Rams can be left at Incheoch, at the owner's risk, until 4th October.
Rams treated with Cydectin LA - quarantine cover against worms and scab.

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Breeders:

- Produce sheep that will improve client profitability
- Under management conditions that are the same
- With no dislocation from the real industry
- Deliver a service to the buyer on a par with other service providers

Buyers

Ask for rams that leave lambs with easy care traits and proof of production trait genetics for continuing increases in productivity. Demand rams that are physically fit to mate and last for 4 seasons. Ask for evidence from the breeder of genetic gains, e.g. an increase in flock index over time.

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John Vipond

Colin Morgan

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