LMC

Know what you're looking at

A guide to stock judging

About LMC

Our Mission

To support, examine & inform the marketing and development of the Northern Ireland beef and sheep meat industry.

Acknowledgements

For decades, Young Farmers and others have competed in stock judging

Some consider placing four animals or carcases in order as an art form. However, good stock judging results from sound observation and an understanding of an animal's makeup. It also depends on being able to explain your choices simply and clearly.

Good stock judging skills are increasingly important in livestock farming. There is constant pressure to match animals to the market demands – a good eye, sound observation and rational choice will all help to ensure maximum returns. This guide also provides useful information on using Estimated Breeding Values (EBV's) to judge breeding potential of cattle and sheep.

CONTENTS

BASICS OF JUDGING

Preparing to judge
Be smart, look the part.

Before you start
Establish what has to be judged. Are you judging animals for breeding or for the butcher?

Establish how long you have to judge the class.

Read the judging card to establish the criteria against which you will be judged and consider prioritising the areas that have most marks.

Stand back
Have a good look from a distance at the group.
Understand what you have to judge including its general appearance and type. First impressions are often the best.
When judging livestock for slaughter refer to carcase quality and killing-out percentages. Don't rush in.

Giving reasons

Establish how long you have, be clear and concise.

Memorise your reasons, as much as possible. Picturing the animals will help.

Stand up straight and look the judge in the eye. Speak clearly and slowly enough for the judge to follow.

Describe the stock fully, refer to any distinguishing features (e.g. white face). As you deliver your reasons compare as much as possible, going from front to back or back to front using the same style for all animals in the class with emphasis on the important areas.

This means that you are less likely to get confused and allows the judge to follow your reasons more easily.

Use the full time allocated, the clearer your reasons, the better your chances.

Thank the judge when you have finished – whether you enjoyed the experience or not. Judges rarely remember if you thank them, they always remember if you don't!

Example of a presentation

Starting
*"Mr / Madam Judge.
These are my reasons for placing this class of ... in the following order."*
(always check your order matches your card)

List your reasons....
... and finishing
"Those Mr / Madam Judge are the reasons why I have placed this class in the order a, b, x, and y."

DAIRY COWS

BEFORE YOU START
Stand back and have a good look from a distance at the group. Get a general impression of the animals to judge appearance, type and distinguishing features.
Be methodical: start at the head and work your way to the rear inspecting all the important dairy characteristics.

Head
- ✔ Long, feminine head
- ✔ Broad muzzle

Topline
- ✔ Level & strong spine
- ✔ Weak over loin
- ✘ High tail head

Neck
- ✔ Blends to finely set, angular-shaped shoulder
- ✘ U-shaped

Body capacity
- ✔ Wide chest
- ✔ Plenty of length and depth
- ✔ Plenty of width and well-sprung open ribs
- ✘ Straight, tight ribs

Udder
- ✔ Fore attachment must be strong and carried well forward blending into the body wall
- ✔ Fine-textured, silky skin with veination
- ✔ Plenty of width to rear with high strong attachment
- ✔ Prominent defined central ligament not only in the rear udder but through to the bottom of the stomach
- ✔ Even length teats in the centre of even quarters
- ✔ Prominent milk vein
- ✘ Pendulous and fleshy
- ✘ Weak or uneven quarters
- ✘ Low rear udder attachment
- ✘ Loose fore udder attachment
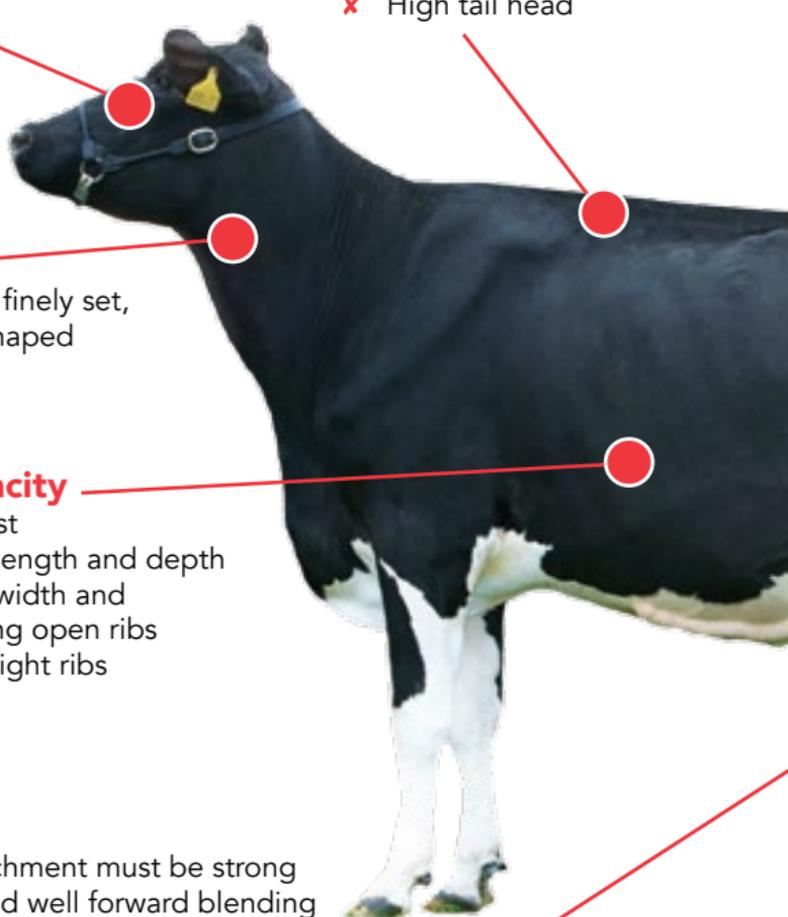
WHAT TO LOOK FOR

The cow should show dairy character:
- Being fine throughout
- Fine and supple skin
- She should show longevity and angularity

Strength, barrel or rib-cage length and width (spring of rib) is very important giving her excellent body capacity, a well balanced capacious udder and she should parade well.

Rump
- ✔ Plenty of length from hook bone to pin bone
- ✔ Gently slope from hooks to pins
- ✔ Plenty of width between pin bones
- ✘ Pins higher than hook bones

Constructing your reasons

Always be positive *when giving your reasons, using comparative words e.g. Longer, Cleaner, Sharper, Stronger, Higher, Wider.* ***Make sure you tell the judge why one animal is better than the other in certain traits****, structuring your reasons from the front of the animal to the back.* ***Make sure you are describing the animals in the class on their merits****, being accurate will gain marks.*

Rear Legs Rear View

EXTREME TOE-OUT   PARALLEL FEET
Direction of the rear feet when viewed from the rear. In case of a significant difference the worst/extreme side must be scored.

Legs and feet
- ✔ Parades well with rear feet following the front feet
- ✔ Well shaped, forward facing front feet
- ✔ Hind legs with medium set
- ✔ Strong pasterns
- ✔ Plenty of heel depth
- ✔ Flat, flinty clean bone
- ✘ Closed-hocked
- ✘ Overly sickled or overly straight hocked
- ✘ Overgrown clees will make them overstretch
- ✘ Lameness on parade
- ✘ Down at heel

FINISHED BEEF

BEFORE YOU START

Stand back and have a good look from a distance at the group. Get a general impression of the animals to judge appearance, type and distinguishing features.
Be methodical: start at one end and work your way to the other end inspecting and handling (if permitted) as you go. Remember, you should always handle the loin on the left hand side, as the kidney hangs loose on this side.
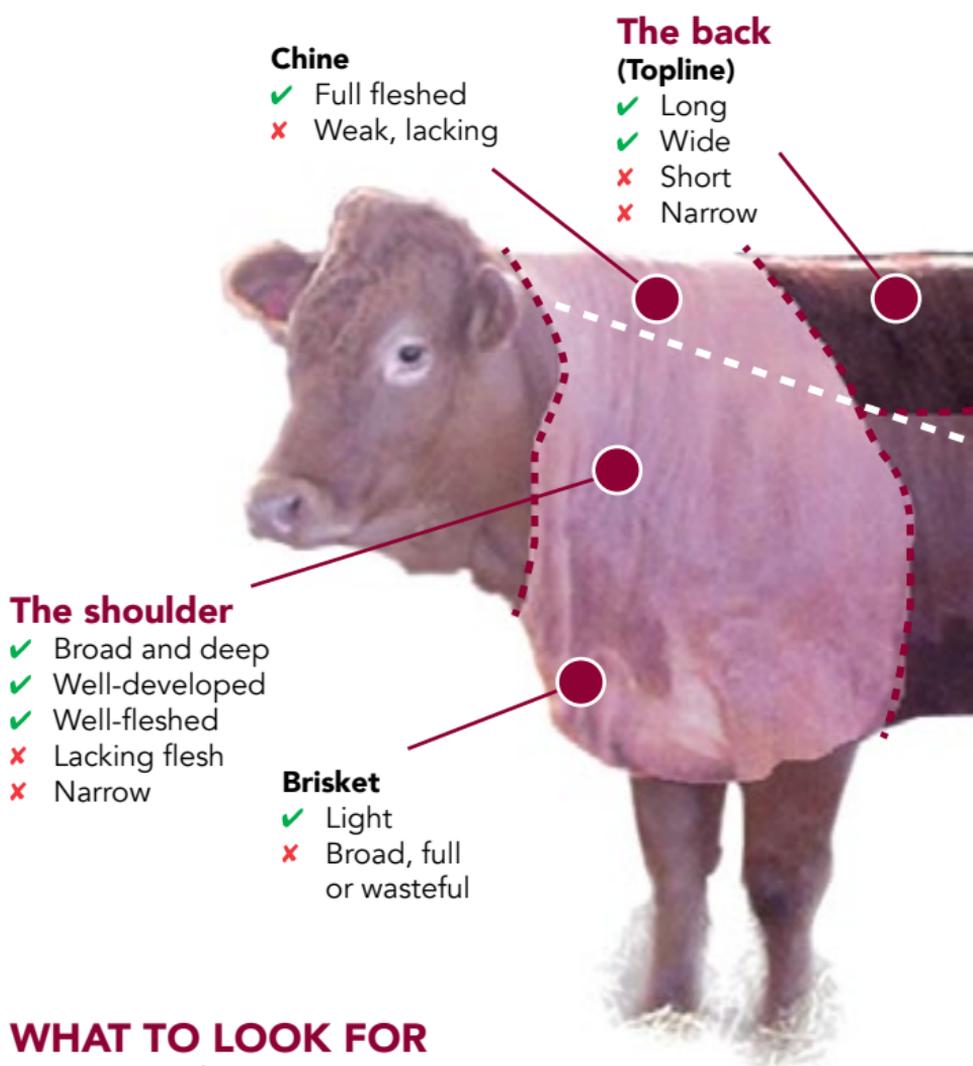
Chine
- ✔ Full fleshed
- ✘ Weak, lacking

The back
(Topline)
- ✔ Long
- ✔ Wide
- ✘ Short
- ✘ Narrow

The shoulder
- ✔ Broad and deep
- ✔ Well-developed
- ✔ Well-fleshed
- ✘ Lacking flesh
- ✘ Narrow

Brisket
- ✔ Light
- ✘ Broad, full or wasteful

Ribs
- ✔ Well sprung and trim
- ✘ Soft and fat

WHAT TO LOOK FOR

Always look for length, width and depth of fleshing throughout.

Above and below the white dotted line:
As much as possible above the line
– good quality, expensive cuts

As little as possible below the line
– lower quality, cheaper cut

HINDQUARTERS

RUMP

OUTER THIGH

SECOND THIGH

INNER THIGH

Loin
- ✔ Long and deep
- ✔ Full
- ✘ Lacking flesh
- ✘ Narrow

Rump
- ✔ Well-rounded
- ✔ Broad
- ✘ Shallow and concave
- ✘ Pin bones prominent

The round
Hindquarters
- ✔ Well fleshed in first and second thighs
- ✔ Muscle development carried well down to the hocks
- ✘ Flat and shallow
- ✘ Narrow, lacking width
- ✘ Lacking muscle development

Belly (Underline)
- ✔ Clean
- ✔ No waste
- ✔ Parallel with top line

Legs and feet
- ✔ Parades well with rear feet following the front feet
- ✘ Lameness on parade

Finish **Should carry an even degree of finish (ie the fatter the animal the softer to the touch it becomes).**

BEEF CARCASE

BEFORE YOU START

Stand back and have a good look from a distance at the group. Get a general impression of the carcases to judge appearance and type. Identify if heifer, steer or bull carcases.

Be methodical: start at

- **the round** (second thigh, top piece and rump)
- **then back** (loin and fore rib)
- **then shoulder**

WHAT TO LOOK FOR

A Shank

B Thick Flank & Knuckle

C Silverside

D Topside

E Rump

F Fillet

G Loins

H Flank

I Ribs

J Brisket

K Chuck, Clod & Bladeneck

L Shin
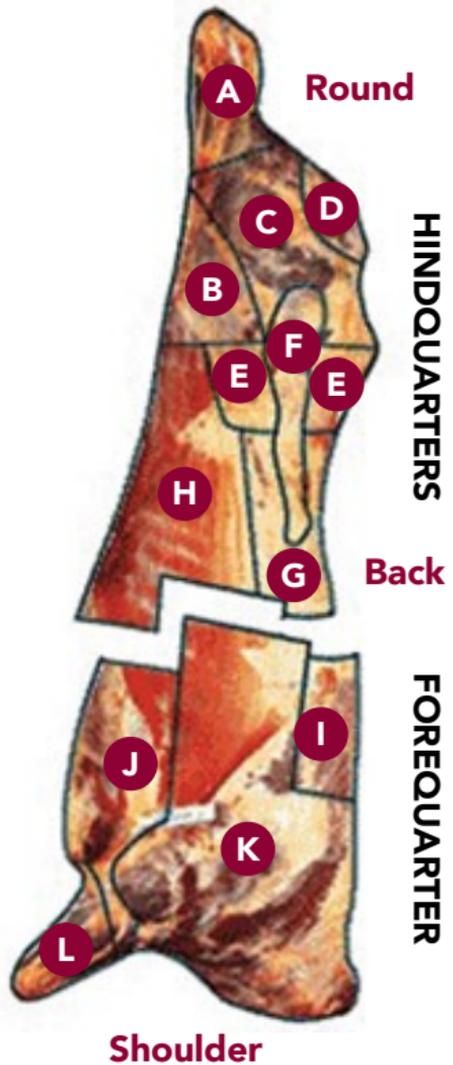
Proportion of hindquarters to forequarters – well-fleshed hindquarter to light forequarter is preferable.

Round

HINDQUARTERS

Back

FOREQUARTER

Shoulder

Amount of fat over brisket
Even distribution with no excessive depth requiring trimming.

CONFORMATION

THE ROUND

Shape of round
- ✔ Well-rounded, convex in profile, fullness of flesh through the second thigh, top piece and rump.
- ✘ Narrow, concave in profile.

THE BACK

Thickness of back - In proportion to the size of the carcase, should be broad and thick.

Depth and area of eye muscle - Deep and broad loin with fleshing carried well around the ribs.

THE SHOULDER

Thickness of shoulder area - Look for neat, compact shape that blends well with forequarter.

Shape of forequarter - Compact and well-fleshed while still being well balanced in proportion to the hindquarters.

FAT

Distribution of fat throughout carcase - There should be a light cover of fat, evenly distributed with no patchiness or heavy fat deposits internally or externally that require trimming.

Amount of fat over eye muscle - Even distribution, thin layer (4–8mm) covering the external surface.
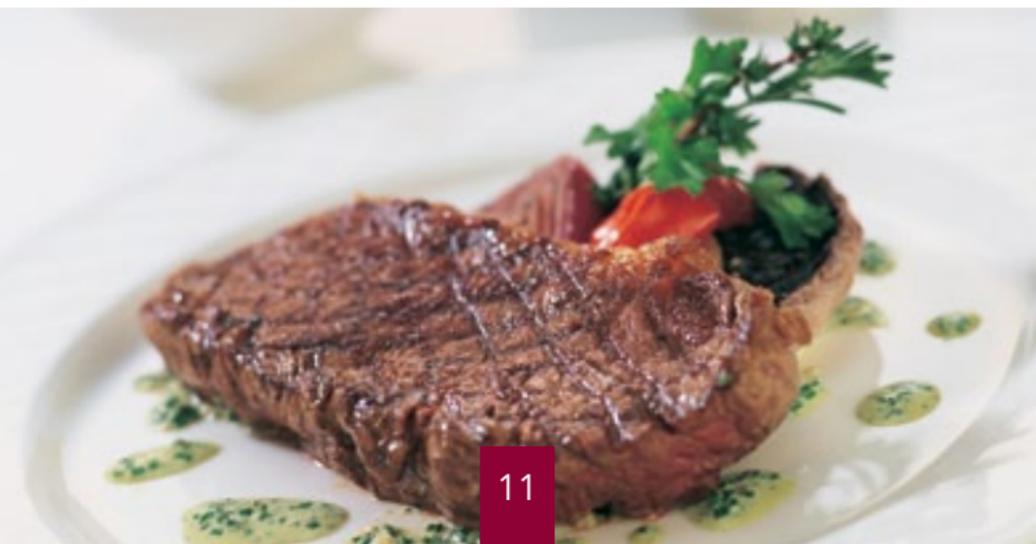
MARKET

Conformation class

Carcase assessment addresses conformation and fat. Fat cover is scored on a 1–5 scale. Conformation is assessed from E to P. Combining scores for conformation and fat determines the markets which suit best.

CONFORMATION

Excellent — E

Very Good — U

Fat class — Increasing fatness

FATNESS

1

2

REQUIREMENTS

Conformation is determined by a visual appraisal of shape, taking into account carcase profile and fullness of legs. No adjustment is made for influence of fat on overall shape. Classes are subdivided into – (minus), = (equal) & + (plus)

Fat is determined by visual assessment of external fat cover. There are five main classes. Classes are subdivided into – (minus), = (equal) & + (plus)

BREEDING EWES

BEFORE YOU START

Stand back and have a good look from a distance at the group. Get a general impression of the ewes to judge, appearance and type. Pay close attention to distinguishing marks, colour of wool and face.

Remember wool can mask a great deal about the animal, so handle animals at the key points.

Shoulders
✔ Wide, well-covered shoulders
✘ Narrow, lacking flesh

The Head
✔ Bright, bold eyes
✘ Short, broad head

Mouth
✔ Clean mouth with no signs of wear and no gaps:
  2 broad teeth = 1 yr old
  4 broad teeth = 2 yrs old
  6 broad teeth = 3 yrs old
  8 broad teeth = 4 yrs old, or older

Up to 12 months old, sheep will have a full set of milk teeth. In older sheep, the teeth will start to wear down, have gaps and fall out.

✘ Broken mouth with signs of wear/gaps/teeth fallen out indicates an old ewe
✘ Overshot
✘ Undershot

Legs
✔ Strong boned, placed on each corner of ewe
✘ Bad legs
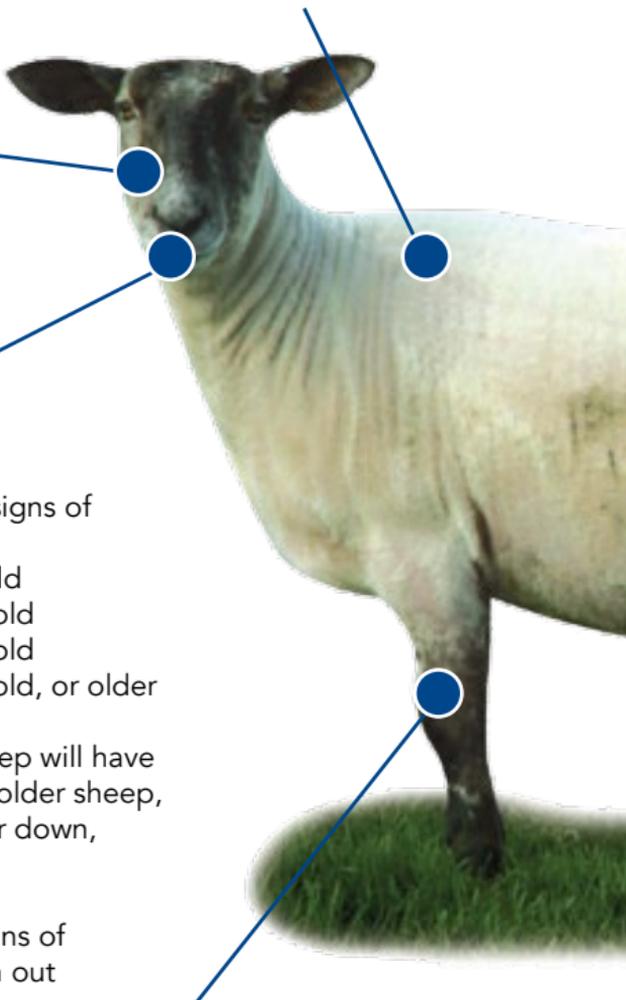
WHAT TO LOOK FOR

The ewe needs to be healthy with length, width and depth of body; she needs to eat, walk and feed two lambs. So the order of checking is:

1) Teeth – eating is essential

2) Feet – need to be able to walk to find food

3) Udder – to rear two lambs.

The body
- ✔ Good length, width and depth
- ✘ Short
- ✘ Narrow and lacking depth
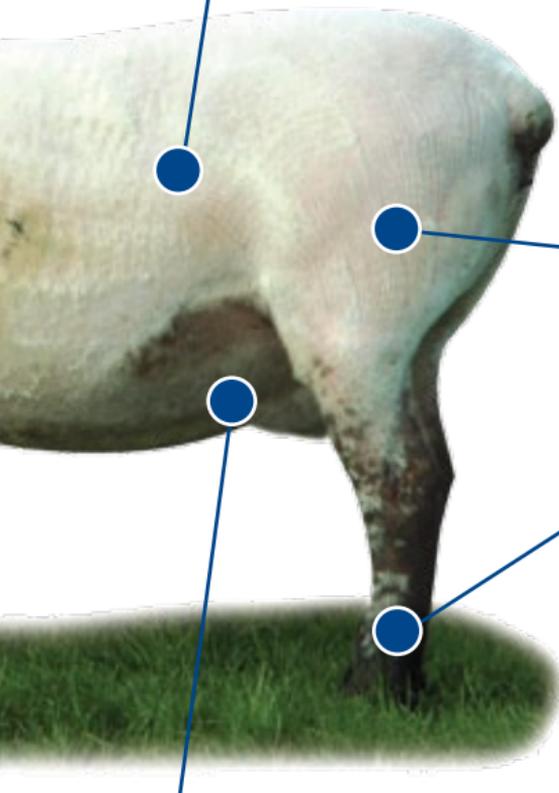
Wool
- ✔ Even growth of staple in fleece
- ✘ Open fleece

Feet
- ✔ Deep heel with short clees
- ✔ Well up on pasterns
- ✘ Lame feet
- ✘ Down on pasterns

Udder
- ✔ Sound supple udder and two well-placed teats
- ✘ Swollen quarters, hard lumps or sores
- ✘ Excessively large teats

FINISHED LAMB

BEFORE YOU START
Stand back and have a good look from a distance at the group. Get a general impression of the lambs to judge, appearance and type.

Pay close attention to distinguishing marks, colour of wool and face.

Handle with Care
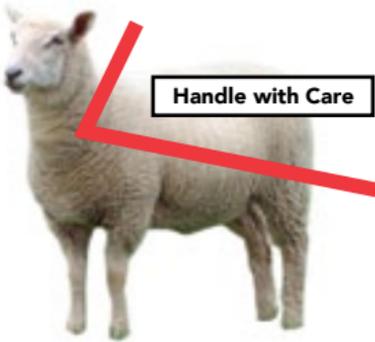
Remember
Wool can mask a great deal about the animal, so handle animals at the key points.

SHOULDER

Shoulders
- ✔ Neat and compact
- ✔ Eye muscle development extended well forward
- ✘ Narrow and lacking flesh

Transverse Process

Spinous Process
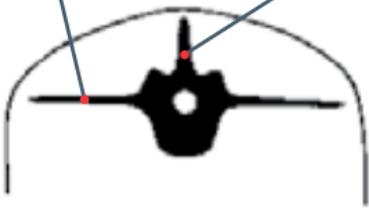
The loin
- ✔ Spinous and transverse processes felt as corrugations with light pressure.
- ✔ Good width and fullness of eye muscle

LOIN

TAIL

RIBS

LEGS
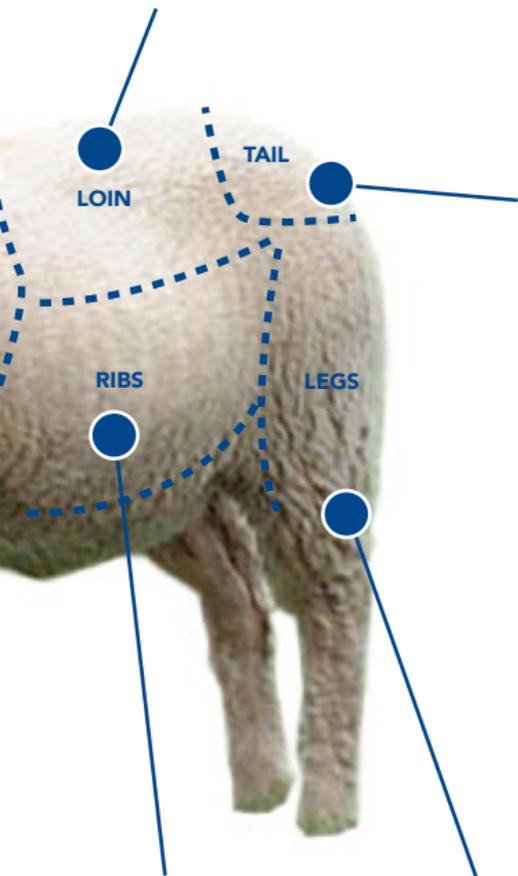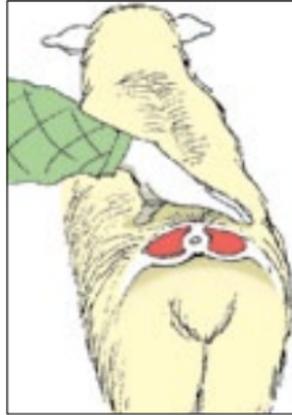
The tail (dock)
- ✔ Individual bones easy to detect with light pressure
- ✘ Not too lean (narrow and bones bare)
- ✘ Not too fat (broad, soft and individual bones undetectable)
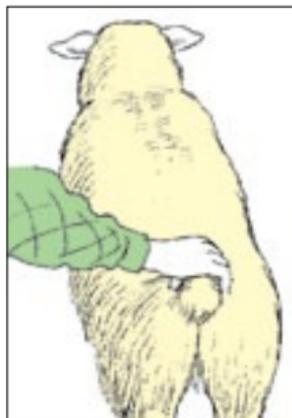
The ribs
- ✔ Light covering, individual ribs easily detected on each corner of ewe
- ✘ Not too lean (bare)
- ✘ Not too fat (individual ribs undetectable)

The legs
- ✔ Broad and well filled to the shank
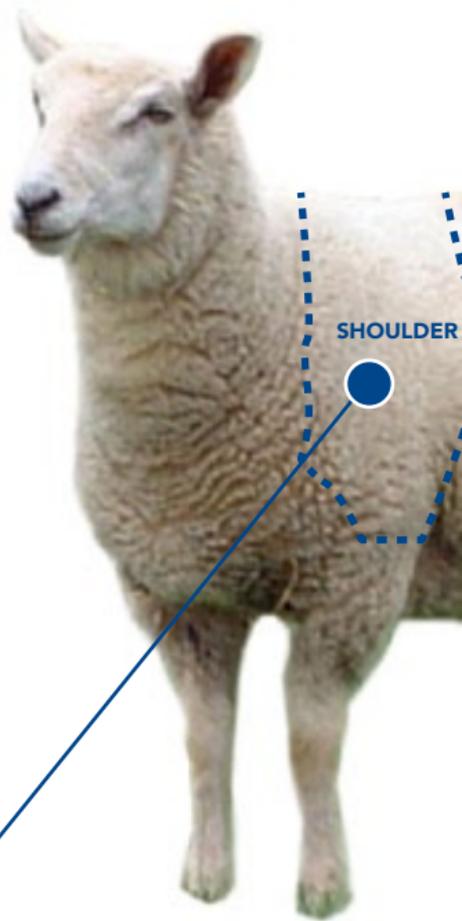
LAMB CARCASE

BEFORE YOU START

Stand back and have a good look from a distance at the group. Get a general impression of the carcases to judge appearance and type.

Be methodical: start at

- **the hind leg**
- **then chump**
- **then back**
- **then shoulder**

WHAT TO LOOK FOR

A   Shank

B   Leg

C   Chump

D   Flank

E   Loin

F   Tender Loin

G   Shoulder

H   Neck

I   Shin
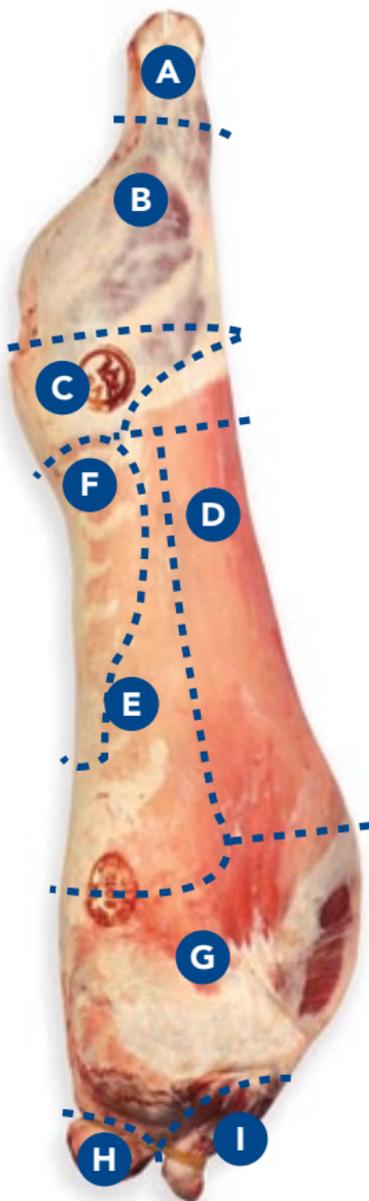
CONFORMATION

The legs
- ✔ Short boned
- ✔ Broad and well filled to the shank
- ✘ V-shaped

The chump
- ✔ Well-developed
- ✔ Full and broad

The loin
- ✔ Good width and fullness of eye muscle

The shoulder
- ✔ Well extended eye muscle
- ✔ Neat and compact

FAT

Depth of fat over legs and loin should be in correct proportion.

Fat on breasts to be in correct proportion.

Ribs – light with high lean to fat ratio.
Dock – broad dock indicates excess fat.

MARKET

Conformation class

Carcase assessment addresses conformation and fat. Fat cover is scored on a 1–5 scale. Conformation is assessed from E to P. Combining scores for conformation and fat determines the markets which suit best.

CONFORMATION

Excellent **E**

Very Good **U**

Fat class

Increasing fatness

FATNESS

1

2
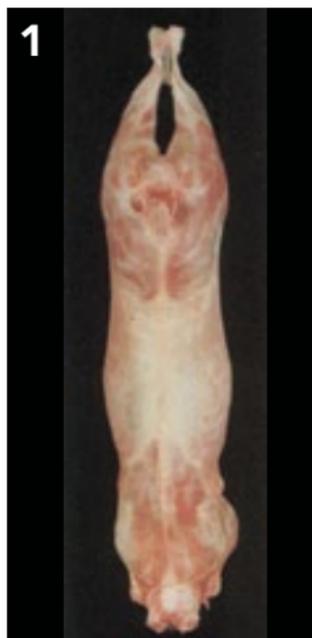
REQUIREMENTS

Conformation is determined by a visual appraisal of shape, taking into account carcase profile and fullness of legs. No adjustment is made for influence of fat on overall shape.

Fat is determined by visual assessment of external fat cover. There are five main classes. Classes 3 and 4 are subdivided into L (leaner) and H (fatter).

INTRODUCTION TO ESTIMATED BREEDING VALUES (EBVS)

Producers strive to improve herd /flock performance as this should help improve profitability. Good genetics are the basic building blocks of animal production. No amount of good feed or management can overcome poor genetics. Whether selling finished cattle or improving sheep breeding and lamb performance, EBV's can help a producer make the right decision when purchasing a bull or a ram. It is clear that selecting a bull or ram is not something that can be left to the stockman's eye alone – no matter how experienced that eye may be.

Producers must identify the traits that will have the greatest economic impact in their herd/flock and select bulls/rams with appropriate Estimated Breeding Values.

EBVs provide a measure of the breeding potential of an animal for a specific trait. They are expressed in the same units as the recorded trait (e.g. kg for birth weight). The pedigree and performance data collected is analysed to calculate how much of each animal's performance is due to its breeding merit and how much is due to the environment in which it has been raised. This assessment of breeding potential is expressed in units known as Estimated Breeding Values, or EBVs.

UNDERSTANDING EBV PERCENTILE GRAPHS FOR BULLS

The coloured bar charts represent a quick and easy way to compare the animal against its contemporaries. The vertical midpoint on the graph is the breed average for each recorded trait. Coloured bars that appear on the right of the mid-point are advantageous whilst those on the left have to be treated with caution. This bull is very easy calving as shown by the yellow Calving Ease Direct bar to the right of breed average which shows he is in the top 5% of the breed for this trait.

Trait	
Calv. Ease Direct - Harder	
Calv. Ease Dghtrs - Harder	
Gest. Length - Longer	
Birth Weight - Heavier	
200 Day Weight - Lighter	
400 Day Weight - Lighter	
600 Day Weight - Lighter	
Mat. Cow Weight - Lighter	
200 Day Milk - Lower	
Scrotal Size - Smaller	
Eye Muscle Area - Smaller	
Fat Depth - Leaner	
Retail Yield - Lower	
Intra Muscular fat (IMF) - Lower	
Terminal Index - Lower	
Self Replacing Index - Lower	

100   90   80   7

This is a reflection of the short gestation length shown for this bull plus his calves being lighter at birth. His progeny are fast growing with 200 day, 400 day and 600 day weights shown by the green bars all in the top 5% of the breed. Carcase characteristics are excellent with a Retail Meat Yield in the top 5% together with superior muscling. The only bars showing on the negative side of the graph are those for Fat Depth and Intramuscular Fat indicating that this bull will produce leaner carcases but progeny may take longer to lay down an acceptable level of fat cover for slaughter purposes.

	Easier
	Easier
	Shorter
	Lighter
	Heavier
	Heavier
	Heavier
	Heavier
	Higher
	Bigger
	Bigger
	Fatter
	Higher
	Higher
	Higher
	Higher

70 60 50 40 30 20 10 0
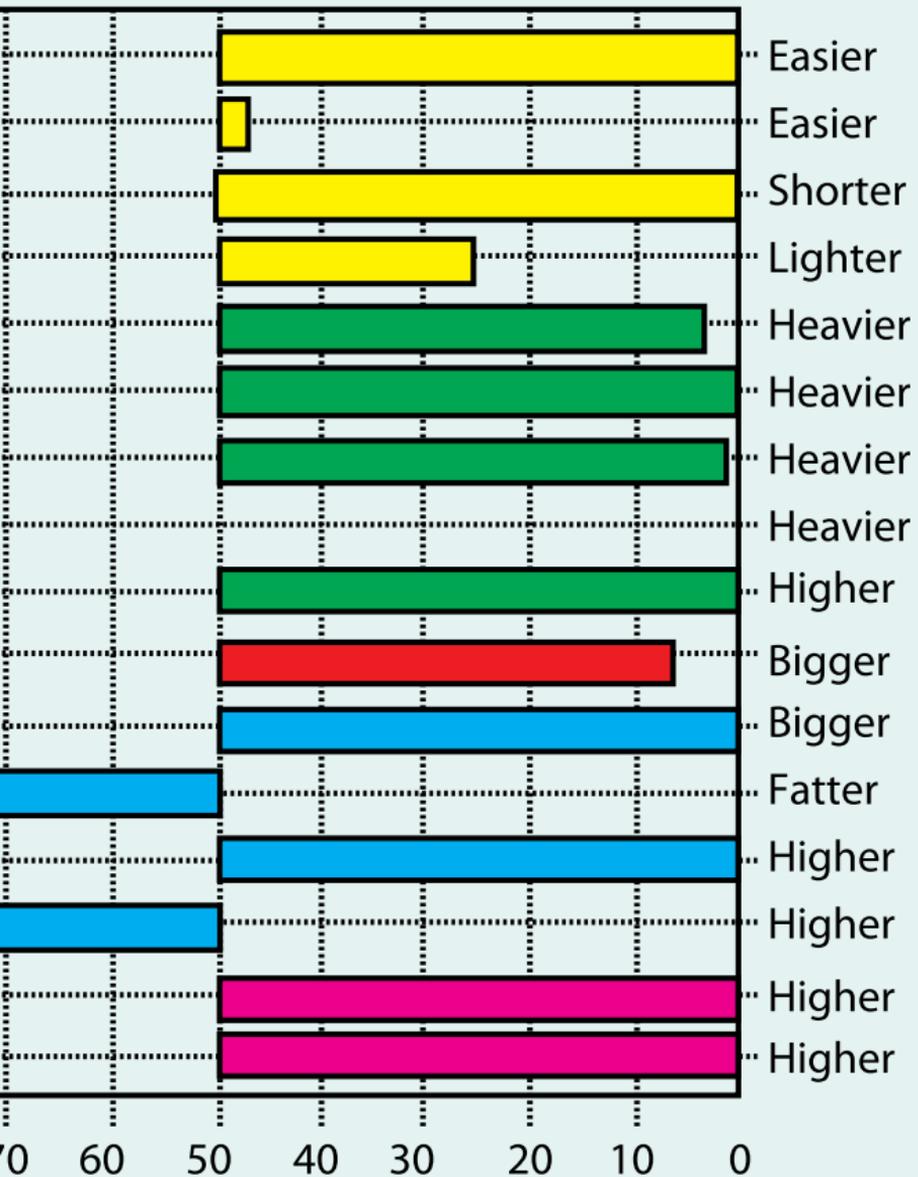
EXAMPLES OF EBV'S FOR CATTLE

EBV	Interpretation	Notes
TERMINAL SIRE EBVs		
Birthweight (kg)	Negative Values = Lighter calves at birth	High birth weights are more likely to be associated with difficult calvings
Gestation Length (days)	Negative Values = Shorter gestations	Short gestation lengths result in easier calvings, because birthweights tend to be lower. A short gestation also increases the interval between calving and the start of mating, giving the cow more time to recover body condition.
Calving Ease (Direct) (%)	Positive Values = More unassisted calvings	Estimates the percentage of unassisted calvings that can be derived from a particular sire.
Calving Ease (Daughters) (%)	Positive Values = More unassisted calvings for bull's female progeny	Estimates the percentage of unassisted calvings that can be derived from the daughter of a particular sire.
200-Day Growth (kg)	Positive Values = Faster growth rates	Selection for faster growth will result in animals that have heavier carcases at a constant fat class or leaner carcases at a constant age.
400-Day Growth (kg)	Positive Values = Faster growth rates	Selection for high growth rates also tends to result in an overall increase in mature size (and therefore higher birthweights).
Muscle Depth (mm)	Positive Values = Deeper loin Muscles	Selecting for these traits will increase the yield of lean meat in the carcase.
Backfat Depth (mm)	Negative Values = Leaner carcases	Indicates animals capable of producing lean carcases or, if required, can be taken to heavier carcase weights without becoming overfat.
MATERNAL EBVs		
Longevity (days)	Positive Values = Longer breeding life	Predicts the length of an animal's breeding life in the herd
Age at 1st Calving (days)	Negative Values = Puberty reached at an early age	Herds looking to calve heifers at two years of age should identify bulls with superior (negative) EBVs for this trait. This will increase conception rates at first mating.
Calving Interval (days)	Negative Values = Cows that get back in calf more quickly	This EBV can be used to breed cows with short calving intervals that get in calf again quickly
200-Day Milk (kg)	Positive Values = More productive female replacements	This EBV is the maternal component of 200Day Weight. It indicates how well a bull's heifer calves will perform when they become mothers and is greatly influenced by milking ability
Maternal Calving Ease (%)	Positive Values = More unassisted calvings	Identifies females that will calve more easily. Should not be confused with Calving Ease Direct (see above), which is an EBV predicting how easily born a bull's progeny will be.

WHAT EBV'S TO LOOK OUT FOR?

Producing Replacement Heifers	Producing Slaughter Stock	Mating with Replacement Heifers
200 day Milk (Kg)	Calving Ease Direct (%)	Calving Ease Direct (%)
Calving Ease Direct (%)	Carcase Weight (Kg)	Birth Weight (Kg)
Scrotal Circumference (mm)	200 and 400 day Weight (Kg)	Gestation Length (days)
Calving Ease (Daughters) (%)	Muscle Depth (mm)	Backfat Depth (mm)
	Backfat Depth (mm)	

(Source: CAFRE)

For more information on EBVs contact your CAFRE advisor at Greenmount.
Contact details available online:
www.dardni.gov.uk/index/farming/livestock/beef-cattle/beef-contacts/beef-greenmount-team.htm

UNDERSTANDING EBV'S FOR SHEEP

Many producers buy a ram on looks alone and this allows for some assessment of locomotion, length, soundness, condition etc. However, it is impossible to tell by looks alone how a ram will perform.

EBVs provide a measure of the breeding potential of an animal for a specific trait, A recorded ram will only pass on half of its genes to its lambs so its EBVs must be halved in order to estimate the average genetic worth of its progeny. EBVs are easy to interpret, for example:

A ram with an EBV of +6 for scan weight is estimated to produce progeny who, on average, will be 3kg heavier at 20/21 weeks than animals produced by a ram with an EBV of 0.

Examples of EBV's for Sheep

EBV	TRAIT	RAW DATA
Litter Size	Prolificacy	This trait is defined as the total number of lambs born alive and dead when pregnancy reaches full term.
Maternal Ability (kg)	Maternal ability of ewe, relates to milk production	The component of a lamb's growth to eight weeks of age that is influenced by the ewe's breeding potential for milk production.
Eight Week Weight (kg)	Growth rate to 8 weeks of age Maternal ability of Ewe	Weight at 8 weeks of age. To achieve an adjusted 8-week weight lambs must be weighed between 42 and 84 days of age.
Scan Weight (kg)	Growth Rate to 21 weeks of age	Weight at scanning time, when lambs are 21 weeks of age.
Muscle Depth (mm)	Carcase muscling	Measured at 21 weeks of age. Ultrasound measurements at the third lumbar vertebra.
Fat Depth (mm)	Leanness	Measured at 21 weeks of age. Ultrasound measurements at the third lumbar vertebra.
Mature Size (kg)	Ewe efficiency	Ewe liveweight at first mating.
Carcase Lean Weight (kg)	Muscle Yield	Quantity of muscle tissue in the carcase assessed using Computed Tomography (CT) image analysis of breeding stock at 21 weeks of age.
Carcase Fat Weight (kg)	Leanness	Quantity of fat in the carcase assessed using Computed Tomography (CT) image analysis of breeding stock at 21 weeks of age.
Gigot Muscularity (mm)	Carcase shape	Thickness of the muscle tissue in the gigot assessed using Computed Tomography (CT) standardised to a fixed femur length.
Faecal Egg (FEC)	Worm resistance	Faecal samples are taken from lambs at 21 weeks of age and submitted for laboratory analysis to measure the worm egg count in the sample.

(Source: Signet Breeding Services)

WHAT ARE THE BENEFITS OF RECORDING MY FLOCK?

Pedigree breeders and ram buyers can benefit from an objective way of assessing the genetic potential of rams. The best way to do this is by performance recording.

Performance recording enables breeders:

1. To **market breeding stock** more effectively, because:

- Buyers can purchase rams on performance
- Rams can be sold on the merit of their EBVs
- Rams can be compared to those bred in other flocks of the same breed
- Better performing rams are produced for sale

2. To make **breeding decisions**, using EBVs to assist with the:

- Identification of the best performing ram lambs to be retained as stock sires
- Mating decisions within the breeding flock
- Selection of female replacements

3. To **make more money** from pedigree sheep production.

For more information and the opportunity to get involved in sheep recording contact AFBI (Hillsborough) on Tel: 028 9268 2484
Email: info@afbini.gov.uk.

BASICS OF JUDGING CONCLUSION

Delivering your reasons for placing animals or carcases in a particular order is almost as important as the actual order.

Remember, you are required to give both descriptions of what you have seen and comparisons between the animals or carcases you are asked to judge.
The following provide some useful expressions that will help you give accurate answers that are both descriptive and comparative, so gaining extra points without going over time.

Descriptive
Bright, bold and alert
Balanced
Compact
Wide/Width
Deep/Depth
Proportioned
Strong
Tremendous
Prime
Superb
Sound
Outstanding
Scope
Fullness
Rounded
Convex/concave
Capacity
Converter of forage
– dairy
Fleshy*
Meaty*
Muscle development*

Volume of saleable meat*
Killing out percentage*
Percent of high priced cuts*
Highest proportion of lean:fat*
Suitable for today's market*
Fat cover*
Fat colour*
Area or depth of eye muscle*

Comparative
Greater
Thicker
Wider
Deeper
Better proportioned
Stronger
Shorter
Narrower
Meatier

particularly suited to describing a 'meat animal' when you can refer to its likely carcase qualities.

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