

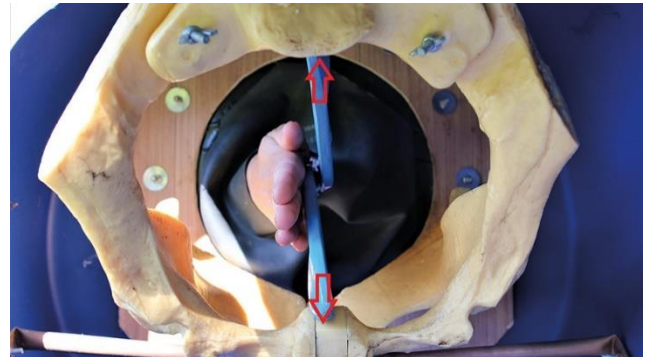
# Reducing Calving Difficulty Pelvic Scoring Heifers Case Study

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## What is Pelvic Scoring

Pelvic scoring of heifers is an inexpensive tool which can be used to identify heifers which have a narrow pelvic area and would be most likely to have difficult calvings. Pelvic score is measured through rectal examination using a Rice Pelvimeter. Horizontal and vertical measurements are taken of the pelvic and then multiplied together to give the pelvic area.



## Calculating the Optimum Pelvic Area

Extensive work has been carried out in America by the University of Nebraska to determine the correlation between pelvic score and the size of calf which should be deliverable and is shown in the table below (weights have been converted from lbs to kg's)

Heifer Weight (kg)	Age Measurements (months)			
	8-9	12-13	18-19	22-23
227	1.7	2		
272	1.8	2.1		
318	1.9	2.2	2.6	
362		2.3	2.7	3.1
408		2.4	2.8	3.2
454		2.5	2.9	3.3
499				3.4

## Auchentibbert Case Study

John Howie, Auchentibbert Farm, Sandhead, Stranraer has been using his local vet to pelvic score his replacement heifers since 2016 and by using the information has reduced the number of difficult calving's from 42% to 6%. John has recorded the pelvic scores for each batch of heifers and then given each heifer a Calving Score and taken notes on calving ease to help his selection policy going forward.

**Table 1 – Guide to Calving Score**

Calving Score	
1	Calved themselves
2	Slight pull, some could have calved themselves but were not getting on quick enough
3	Need a good bit of assistance
4	Calved by vet
5	Caesarean

The heifers were scored prior to the bull going out and a minimum pelvic size agreed with the vet. Heifers below the minimum size were not mated and were moved to the finishing group. The pelvic scores and subsequent calving scores for the last 6 years are shown in the tables below

**Table 2 – 2016, Limousin X, average age at scoring 14m, 22days**

Animal	Horizontal Score	Vertical Score	Pelvic Area	Calving Score	Comments
500712	12.3	14.5	181.25	4	Average sized calf, not a lot of room
400725	13	15	195	2	
600881	11.5	15	172.5	3	Small calf, not a lot of room
102048	12	14.5	174	5	Big calf, no chance of coming out
300521	13	15	195	2	
600552	12.5	14	175	3	Av sized calf, not a lot of room
600852	13	15	195	2	
701353	12	16	192	3	Av sized calf, needed more width
401371	13	14.5	188.5	2	
401629	13	17	221	1	
201648	13	15	195	2	
201422	12.5	16.5	206.25	1	

**Table 3 – 2017, Limousin X, average age 14m, 27days**

Animal	Horizontal Score	Vertical Score	Pelvic Area	Calving Score	Comments
400935	13.5	15.5	209.25	2	
600937	13	16	208	1	
600931	13.5	15.5	209.25	1	
200599	13.5	16	216	5	Massive Calf
102054	13	15.5	201.5	2	
200590	13.5	14.5	195.75	2	
500593	13	15.5	201.5	1	
300598	13	15	195	2	
100624	12.5	15	187.5	4	Av sized calf, not a lot of room
700909	13	15	195	3	Good calf
300926	13.5	15	202.5	2	
401389	14	17	238	1	
101470	13.5	15	202.5	1	
501481	14.5	15.5	224.75	1	
201485	13	15.5	201.5	3	Good calf
401508	13.5	15	202.5	2	
501509	13.5	15	202.5	1	
100536	13	14.5	188.5	4	Big calf, not enough room

**Table 4 – 2018, Limousin X, average age 14m, 24 days**

Animal	Horizontal Score	Vertical Score	Pelvic Area	Calving Score	Comments
603342	15.5	16.5	255.75	1	
203359	13.5	16	216	1	
501136	13.5	14.5	195.75	2	
401142	13	16	208	1	
201520	13	15	195	3	Big calf
101526	14	15	210	1	
401529	13	16	208	2	
701532	14	16	224	1	
401543	13	15.5	201.5	2	
501544	14.5	15.5	224.75	1	
701546	13.5	15	202.5	2	

**Table 5 – 2019, Limousin X, average age 13m, 11 days**

Animal	Horizontal Score	Vertical Score	Pelvic Area	Calving Score	Comments
700843	14.5	14.5	210.25	1	
700648	14.5	15	217.5	2	
301591	14	17.5	245	1	
601594	13	15	195	3	Big Calf, not a lot of room
101255	13.5	15	202.5	2	
201901	14.5	15	217.5	1	
101907	15	16.5	247.5	1	
202026	14.5	16	232	1	
402035	13	15	195	2	

**Table 6 – 2020, Limousin X, average age 13m, 18 days**

Animal	Horizontal Score	Vertical Score	Pelvic Area	Calving Score	Comments
404422	13.5	15.5	209.25	1	
204462	14	14.5	203	2	
700878	13.5	15	217.5	3	Big calf
100670	13.5	16	216	1	
500686	14.5	14.5	210.25	1	
600797	15	16	240	1	
400802	14.5	15.5	224.75	1	
700819	14	15	210	2	
301273	14.5	16	232	1	
301626	13.5	15.5	209.25	1	
301633	13.5	15	202.5	2	
101638	14.5	16	232	1	
200384	13.5	15	202.5	2	
300385	14	15	210	2	
500387	13.5	17	229.5	1	
200391	14.5	15	217.5	1	
500394	13.5	15.5	209.25	1	
600395	13.5	16	216	1	

**Table 7 – 2021, Simmnetal X, average age 13m, 7 days**

Animal	Horizontal Score	Vertical Score	Pelvic Area	Calving Score	Comments
402524	15	17	255	1	
502118	14.5	16	232	1	
602119	14	15	210	2	
402138	13.5	16	216	2	
502146	13.5	15.5	209.25	2	
102955	14	15.5	217	1	
602960	14	16.5	231	1	
102962	15	15.5	232.5	1	
102969	14	16.5	231	1	
402972	15	15	225	1	
704374	14.5	16	232	1	
404385	15	16.5	247.5	1	
404399	14.5	16	232	1	
704402	14.5	16	232	2	
504484	15	16	240	1	
404546	14.5	15.5	224.75	1	
601671	14	15	210	2	
601678	13.5	15	202.5	3	Big calf

John started pelvic scoring as he was experiencing lots of difficult calvings in the heifer group which was leading to increased labour requirement to calve heifers and deal with calves which are often slower to get going and suck, increased vet bills due to assisted calvings and caesareans and heifers which were slower to recover and get back in calf. By using pelvic scoring to select heifers before they go to the bull, he has successfully made calving the heifer batch less stressful for both the animals and himself.

## Key Take Home Messages

- A big heifer does not necessarily mean a big pelvis
- Pelvic scoring is a cheap and effective way of selecting the optimum heifers for breeding
- Keeping accurate records allows you to record the success of the process
- Continually selecting only, the heifers with the largest pelvises will ultimately lead to an increase in mature cow weight. Select the average from the group to maintain modest cow size.

## Further Reading

**Technical Note - 744 Management of Replacement Heifers into the Suckler Herd.**

<https://www.fas.scot/publication/technical-note-tn744-management-of-replacement-heifers-into-the-suckler-herd/>

**Video – Checking Heifers Pre-Breeding**

<https://www.fas.scot/publication/checking-heifers-pre-breeding/>

**Technical Note – Utilising Maternal Trait EBVs of Beef Bulls**

<https://www.fas.scot/publication/tn-754-utilising-maternal-trait-ebvs-of-beef-bulls/>