

Managing The Gilt and Dry Sow

Alan Stewart

Performance Objectives At Service

	Average		Top 10%		
	Outdoor	Indoor	Outdoor	Indoor	Harper Adams
Farrowing Rate %	81.5	83.2	88.5	89.8	87
Litters/sow/year	2.2	2.29	2.38	2.38	2.35
Total Born	11.8	13.4	12.9	14.5	14.6
Born alive	11.3	12.7	12.3	13.8	13.4
Born dead	0.45	0.71	0.56	0.73	1.2
Reared/litter	9.75	11.22	10.59	12.42	11.7
Reared/sow/year	21.5	25.7	25.2	29.6	27.5

(Source AHDB Pork Performance Web page Updated June 2015 - Agrosoft data base)

- To Maintain planned batch size and throughput (eg HA 32 sows farrow/ 3weeks)

Gilt Management

- Aim
 - Planned gilt introduction to maintain batch size.
 - The life time performance of 6 litters with 12+ pigs weaned per litter
 - Maximise efficiency with minimal lost days

Reasons for culling sows

- Average replacement rate 40%-50%/yr

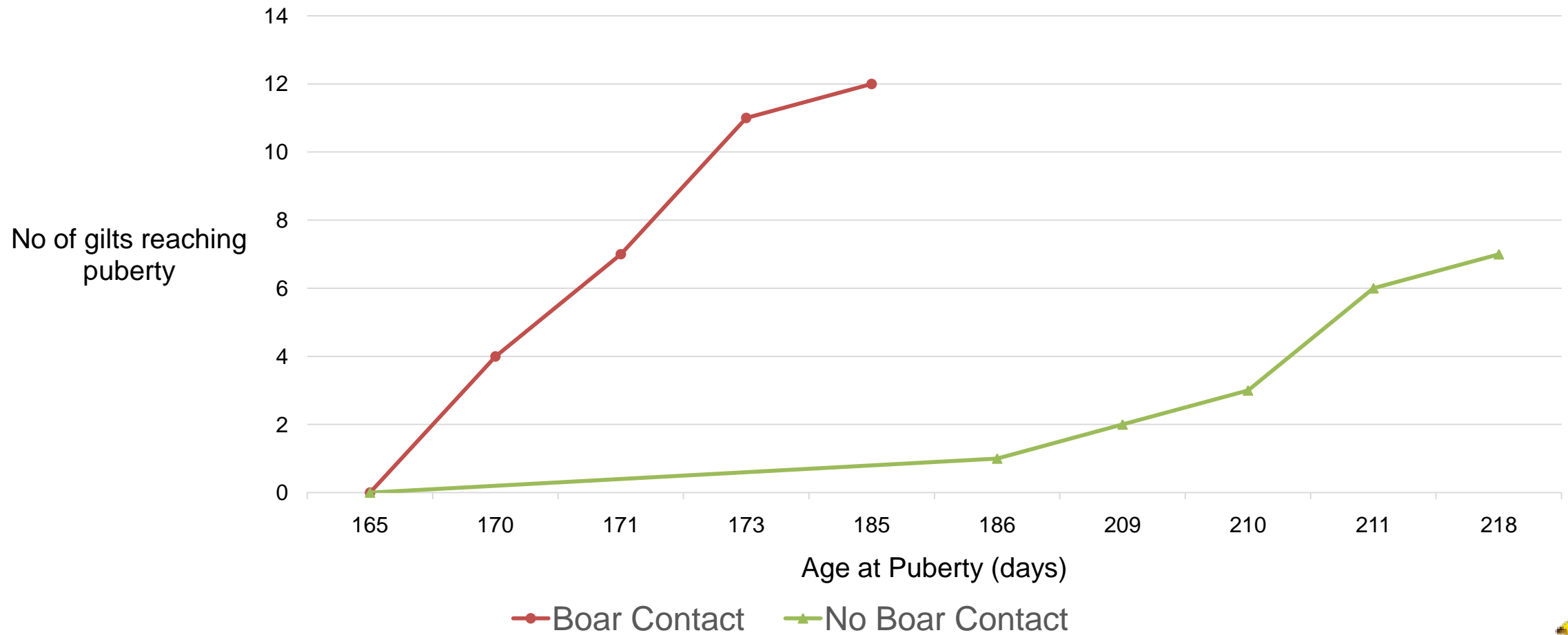
Lack of milk	5%	No Heat	5%	Age	25%
Lameness	12%	Failure to concieve	12%	Poor Performance	14%
Disease	3%	Not in pig	17%		
Abortion	6%				
	26%		34%		39%

Week Beginning	No due to Farrow	No due to Wean	No due to Serve
29-Aug			
05-Sep	5		
12-Sep	3		
19-Sep	6		
26-Sep	4		
03-Oct	6	5	
10-Oct	13	3	5
17-Oct	4	6	3
24-Oct	11	4	6
31-Oct	12	6	4
07-Nov	6	13	6
14-Nov	12	4	13
21-Nov	10	11	4
28-Nov	10	12	11
05-Dec	6	6	12
12-Dec	14	12	6
19-Dec		10	12
26-Dec		10	10
02-Jan		6	10
09-Jan		14	6
16-Jan			14

Farrowing Structure

- Example weekly batch of 9?
- 3 weeks post service you know the gilt requirements 4 months in advance

Influence of boar contact on age at puberty



Gilt Management

- Targets at first service
 - Age (First litter born near first birthday)
 - Puberty – 180 days
 - Service – 240 days
 - Weight 140 kg
 - Condition 20mm Back Fat
 - Oestrus cycle 3rd or 4th

Effect of mating gilts at 1st, 2nd or 3rd oestrus

Oestrus	1	2	3
Pigs born parity 1	8.4	9.8	10.4
Pigs born alive parity 1	8.3	9.6	9.8
Total pigs born alive over three parities	30.9	32.9	31.6

Gilt Breeding

- Breeding gilts too early results in:
 - Low numbers born over several parities (not just first)
 - Problems maintaining body condition on the sow
 - Bone and leg weakness which may lead to premature culling
- Stimulate Puberty from 160 days
 - Boar contact daily for 10 minutes
 - Moving, transport and mixing
- Synchronise gilt heat using Regumate®
 - Feed for 18 days withdraw and gilts will cycle together 5 days later





HA Gilt Rearing

- Select at 70kg
- Reared in batch group
- Feed to achieve: 140 kg @ 240 days
20 mm Back Fat



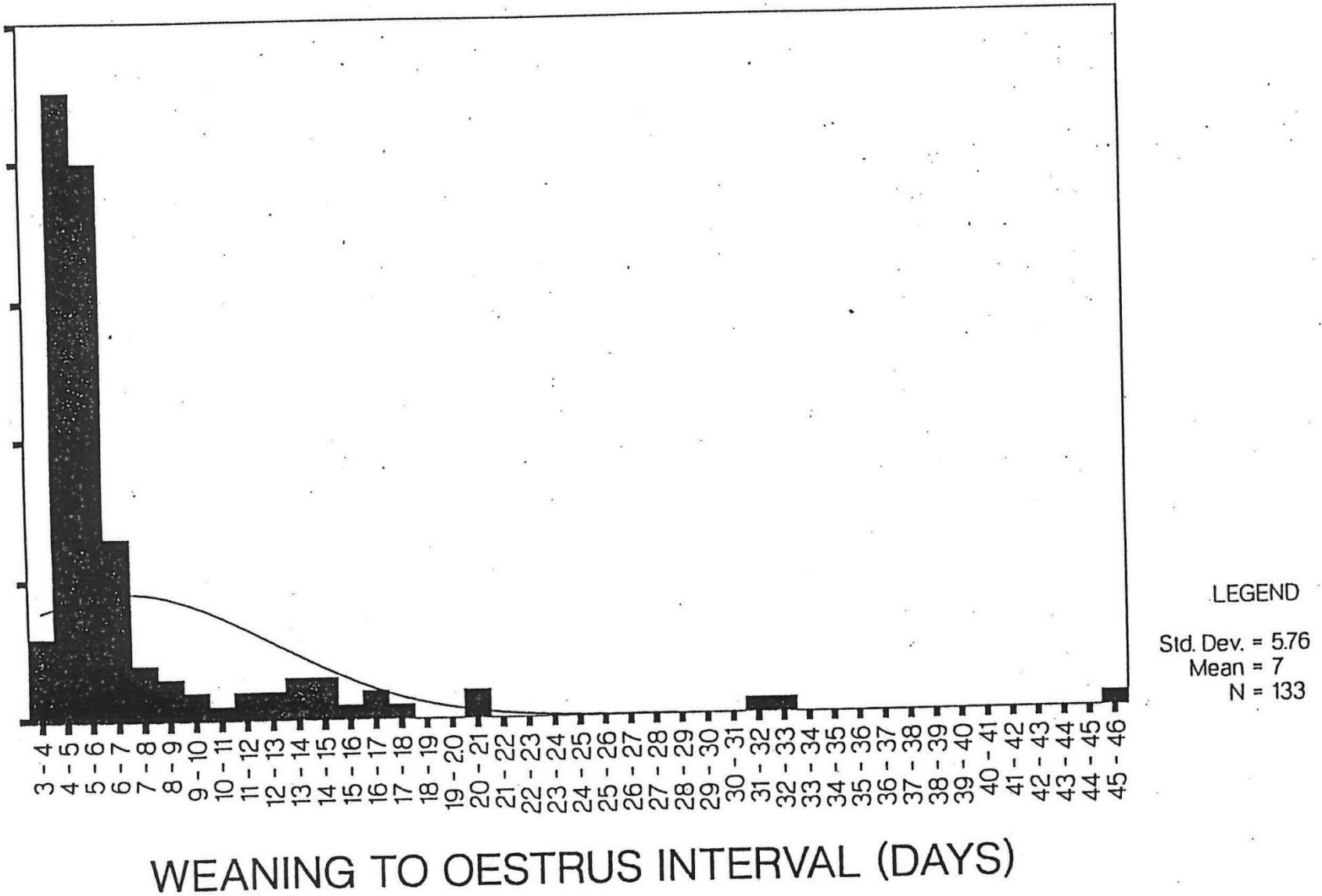
- Stimulate puberty using a mature boar
- For Batch Management Synchronise gilts using a Progesterone analogue
- eg Regumate® Feed for 18 days. Show heat 5 days post withdrawal



Service Management

- Weaning to Service
 - Target Interval 5-6 days
 - Feed Sows Adlib (eg Approx. 4kg Dry Sow Ration 14% CP)
 - House within Sight, Smell, Sound & Touch of mature boar
 - Stimulates the sow to come into OESTRUS
 - Makes OESTRUS DETECTION easier

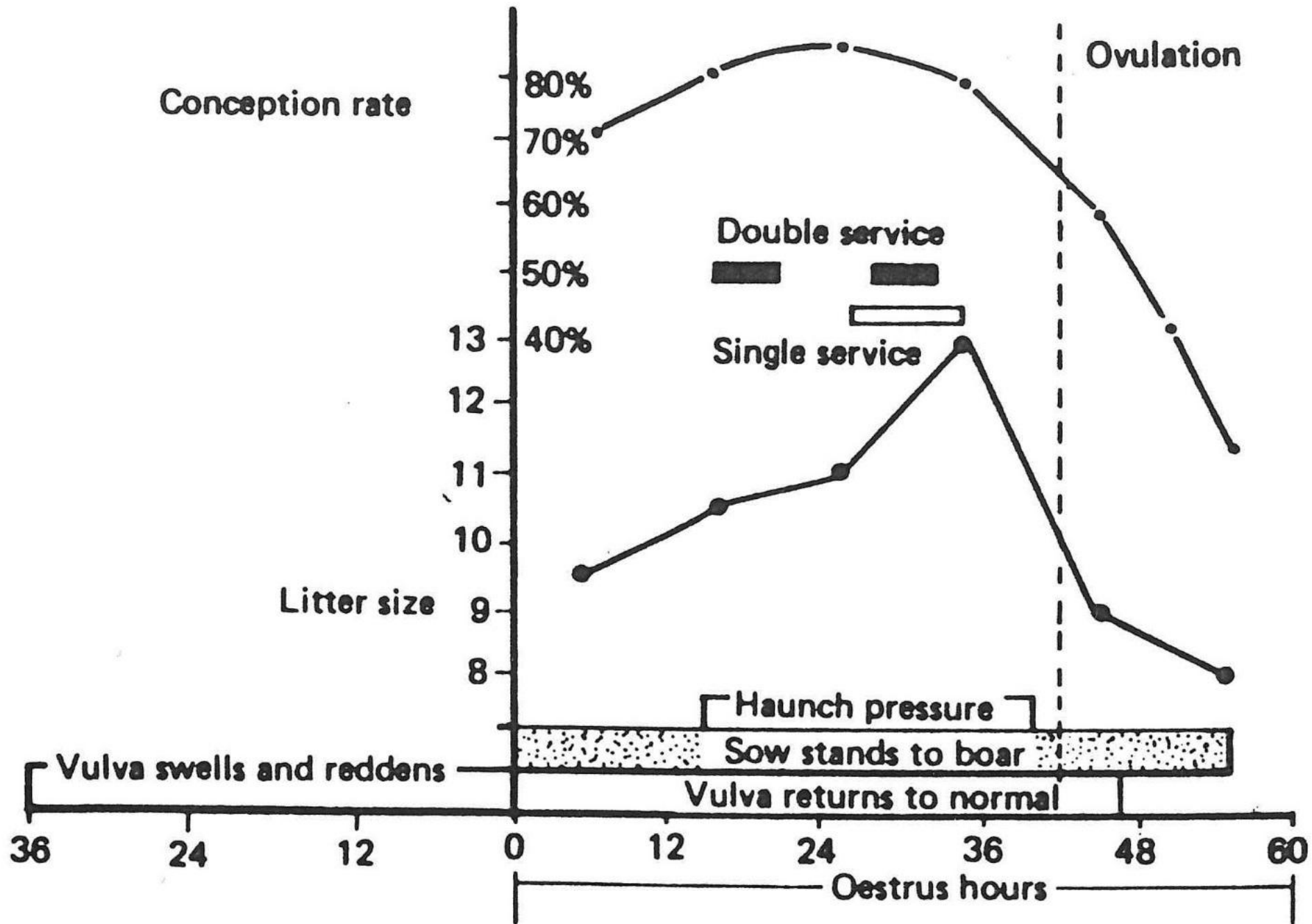
WEANING-OESTRUS INTERVAL DISTRIBUTION



Standing Heat Detection

- Check sows **twice a day** for signs of oestrus
 - swelling of vulva
 - reddening of vulva
 - riding other sows
 - increased activity and vocalisation
 - reduced feed intake
- use of '**back pressure test**'
 - Sow will stand rigid with ears pricked in the presence of a boar when the stockman applies pressure on the back.

- Objectives at Service
 - To get sows pregnant (Target 85 % conception rate)
 - To maximise number of piglets conceived
- Key Points
 - OESTRUS lasts 2-3 days (Gilts maybe only 24 hours)
 - OVULATION occurs - 36 hours after the onset of oestrus (3/4 way through oestrus)
 - BUT range can be 24-60 hours in individual sows
 - SPERM need to be in the tract 6-8 hours before fertilisation to allow for capacitation
 - OVA remain viable until - 12 hours after ovulation



Timing is Crucial!!!!

- Good sow condition and health
- Good boar stimulation
- Correct mating conditions
- Quality insemination (Natural 15%, AI 85%)
- Calm

Gilt Mating





HAU Mating Area



<http://practicalpig.ahdb.org.uk/indoor-breeding/service/service-ai>

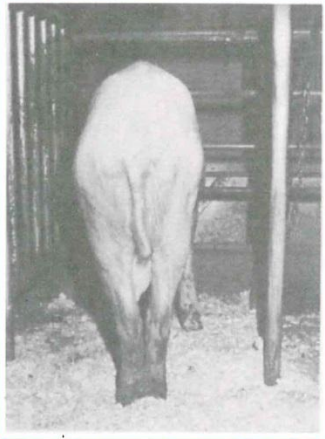
Gestation To Maximise Litter Size

- Individual management
- Feed to Condition Score
- Gestation or Dry Sow Ration (2.5 – 3 kg feed per day)
 - 14% Crude Protein, 0.6% Lysine, 14 MJ/kg Energy

BOCM PAULS

Sow Condition Score Card

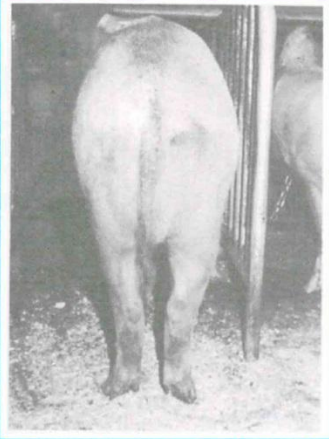
1 THIN:
Hollow tailhead, prominent pinbones, ribs and backbone.



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

Total No. of thin sows **1**

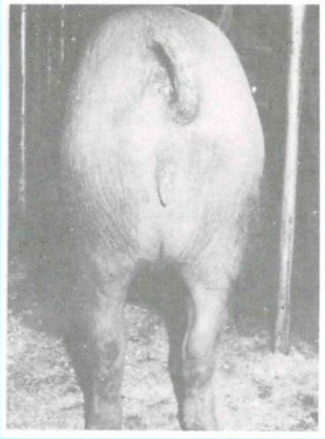
2 MODERATE:
Backbone still visible and ribs covered but easily felt.



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

Total No. of moderate sows **2**

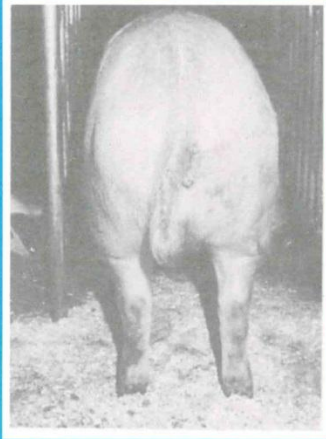
3 GOOD:
Satisfactory cover over pinbones, backbone and ribs.



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

Total No. of good sows **3**

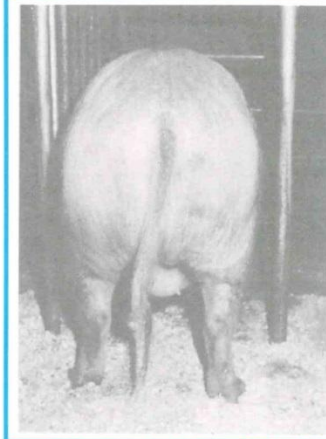
4 OVERFIT:
Pinbones, backbone and ribs cannot be felt.



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

Total No. of overfit sows **4**

5 FAT:
Heavy deposits of fat on tailhead, back and over ribs.



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70

Total No. of fat sows **5**

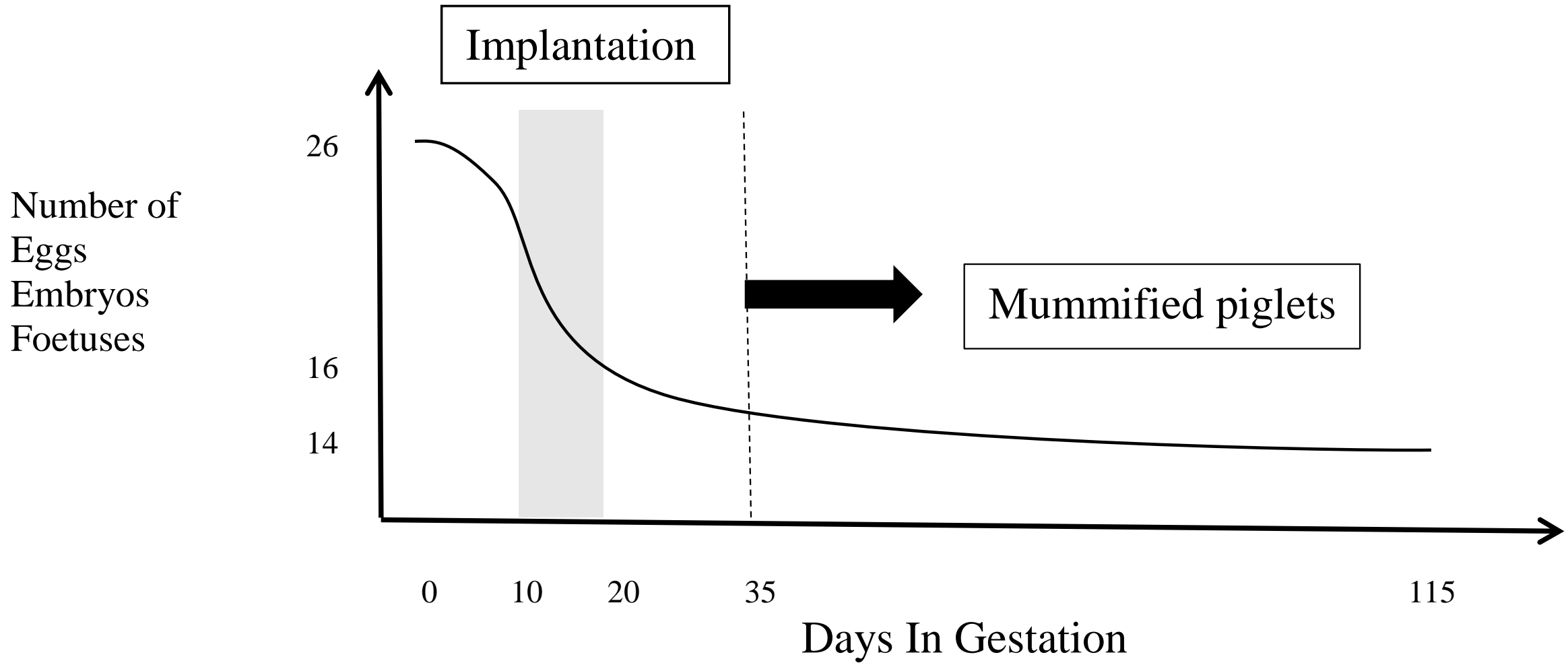
Why Condition Score?

- To avoid excessive weight loss
- To maintain adequate fat cover and extend the active breeding life of the sow.
- To monitor the influence of feeding BOCM PAULS Pigbred range of sow diets on condition and performance.

Calculation

Record the number of sows which fall into the above 5 categories. Multiply the number in each section by the appropriate score number 1,2,3,4 or 5, to find the 'score rating'. Divide the total score rating by the total sows recorded. This will give you your **AVERAGE HERD SCORE**.

No. of sows	Score	Average Score						
1 <input type="text"/>	Multiply by 1 = <input type="text"/>	<table border="1"> <tr><td>B</td><td><input type="text"/></td></tr> <tr><td>Divided by =</td><td><input type="text"/></td></tr> <tr><td>A</td><td><input type="text"/></td></tr> </table>	B	<input type="text"/>	Divided by =	<input type="text"/>	A	<input type="text"/>
B	<input type="text"/>							
Divided by =	<input type="text"/>							
A	<input type="text"/>							
2 <input type="text"/>	Multiply by 2 = <input type="text"/>							
3 <input type="text"/>	Multiply by 3 = <input type="text"/>							
4 <input type="text"/>	Multiply by 4 = <input type="text"/>							
5 <input type="text"/>	Multiply by 5 = <input type="text"/>							
Total No. of Sows A <input type="text"/>	B <input type="text"/>	Signed..... Farmer/Specialist						



Gestation To Maximise Litter Size

- Individual management
- Feed to Condition Score (3 at service 4 at farrowing)
- Gestation or Dry Sow Ration (2.5 – 3 kg feed per day)
 - 14% Crude Protein, 0.6% Lysine, 14 MJ/kg Energy
- No mixing post service (if Possible!)
- How many Eggs does a sow Ovulate?
- Extra care through Embryo implantation (10-20 days)



Treatments (from day 14 - Farrow)

- Free access to sow operated feeders (FA)
- Restricted access to feeders for 30 minutes at feeding time only (RA)
- 41 Sows/ Treatment (Parity 2-4)
- Sow Performance
- Feed competition rank hierarchy (week 12)

Sow Performance Litter Size

Treatment (T)	Free access		Restricted access			Significance		
Hierarchy (H)	Top	Bottom	Top	Bottom	Sed	(T)	(H)	(TxH)
Total litter size	13.95	13.47	12.53	11.28	0.814	0.049	NS	NS
Treatment means	13.71		11.90					

Conclusion - Do your sows have choices??