

Farrowing Objectives

- Batch Farrowing (eg HA 32 litters / 3 weeks)
- Maximise number Born Alive
- Minimise Birth to Wean Mortality
- Maximise piglet weaning weight
- Maximise number weaned per Litter
- Do not compromise sow condition with respect to rebreeding performance

Performance

	Average		Top 10%		Harper Adams
	Outdoor	Indoor	Outdoor	Indoor	
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
Mortality (%)	13.8	11.29	13.56	9.66	12.7
Weaning wt (kg)	6.93	7.25	7.26	7.25	8.4
Age at weaning	26.3	26.5	25.9	27.1	26
Kg weaned /sow/year	149	186	183	214	231
Tonnes Feed/sow/year	1.7	1.33	1.6	1.29	

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

Late Gestation Management

- Increase Daily Food Intake by $\frac{1}{2}$ kg in last 2/3 weeks to increase birth weight.
 - Take care not to over feed max Condition Score 4
 - Too much feed around farrowing can cause mastitis
- Vaccinate with E.Coli, Erysipelas and Parvo if necessary 3 weeks prior to farrow
- Treat for Lice/Mange and worms if required.
- Remember Piglets are born Disease Free!!

Mummified Piglets

- Died mid-late gestation (after day 35)
- Earlier deaths re-absorbed
- Prevention
 - Treat Sow infections (eg erysipelas, E coli)
 - Vaccinate (eg Parvovirus)
 - Avoid Mouldy Straw & Feed (estrogenic mycotoxins)
 - Avoid Stress
 - Mixing & moving
 - Environmental change

Farrowing

- Move sows into farrowing accommodation 5 days prior to due date
 - To Acclimatise sow and gilt
 - Take care of early farrowing – Gestation is 115 days ± 2
- Farrowing Environment
 - Clean & Draft free
 - Sow 18 – 22 °C, Piglet 34 °C

Signs of Farrowing

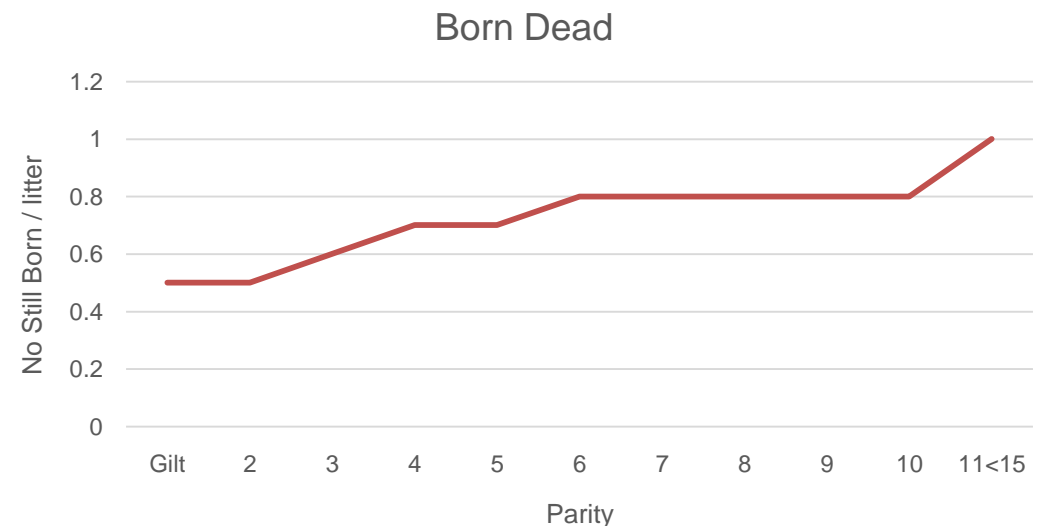
- Vulva Swells
- Udder turgid (Milk 6-12 hours prior)
- Nesting Behaviour + Seek Isolation
- Agitation – Noise level up, tail twitching (2hrs)
- Expulsion of blood (<2hrs)
- Gilts
 - Can show signs of stress and aggression given first time
 - Outdoors need to make sure gilts farrow in individual arc

Duration of Farrowing

- 90 minutes → 12 hours
 - Gilts tend to take shorter time
- 1 pig every 40 minutes
 - Very important to record time of birth
 - Observe for signs of stress (Obvious pushing with no result)
 - Need to consider intervention after 40 minutes (less for gilts)

Still Births

- 80% of still births suffocate during farrowing
- 90% of still births in the second half of farrowing
- Still Births increase with Parity
 - AHDB Pig Year Book 2015
- Reducing Still Births
 - Cull old sows
 - Avoid stress acclimatise sows
 - Correct body condition
 - Check sows regularly
 - **Induce** sows to farrow during working hours



AHDB Pork Year Book 2015



1999



2003

2007

Original Farrowing Rooms



1999



2014



2013

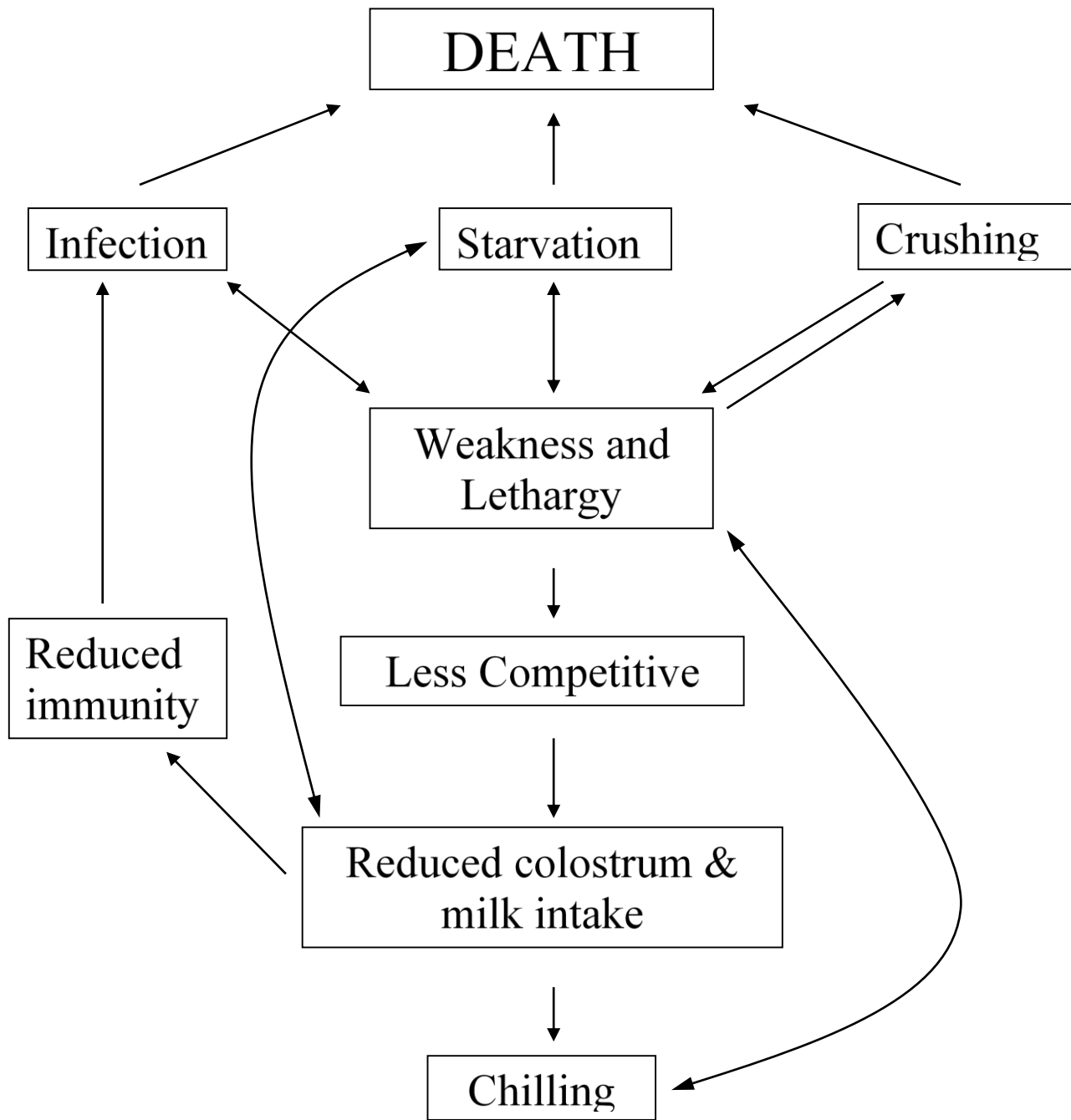
Refurbished Farrowing Rooms

Piglet Mortality Analysis HAU 2014 data

AGE	0-1	2-3	4-7	8-14	15-27
% Of those that died					
Laid on	38.8	6.7	3.0	3.2	0.7
Lame				0.2	0.2
Starved		4.7	3.7	1.7	0.7
Savaged	2.0				
Not viable	11.6	8.9	0.2		
Scour					
Meningitis			0.7	0.2	0.7
Splay	1.0	4.0	0.5		
Other (need comment)	2.5	1.2	0.2	1.0	1.5
HAU 2014 (12.7% Mort)	56	25	8	6	4
PR English 1977 (18% Mort)	28	35	10	15	9

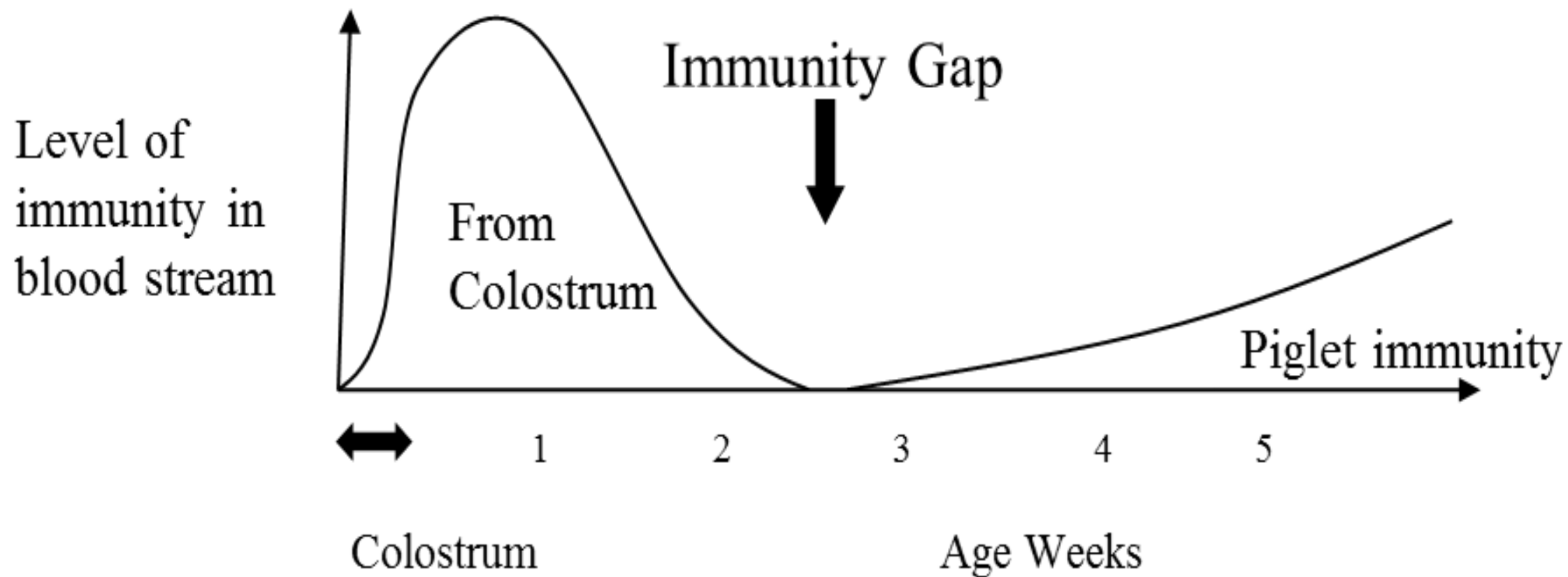
Piglet Mortality Analysis HAU 2014 data

	%	Mean Birth Wt	Ave Age (days)
All (n = 3956)		1.46	
Weaned	89.61	1.50	
Died	10.39	1.08	
Laid on	5.36	1.21	1.59
Not viable	2.15	0.67	1.26
Starved	1.11	1.08	5.98
Splay	0.56	1.17	2.0
Savaged	0.20	1.06	0
Meningitis	0.18	1.16	12.9
Lame	0.05	0.93	13.0
Scour	0.00		
Other (Various)	0.79	1.21	7.12



Analysis of Piglet Mortality

- Remember Pigs Start to die the day they are born



Nooyen Rising Farrowing Crate



Nooyen Rising Farrowing Crate



2014-2015 Harper Average
14.75 Tot Born
13.4 Born Alive
11.7 Weaned
12.7% Mortality BA - Wean

%Overlays 2014-15 (537 Litters)

Parity	Nooyen	Other
All	2.97	6.66
7+	2.83	8.12

- 4 year pay back?

REDUCING PIGLET MORTALITY

1. Good health and hygiene
2. Efficient breeding stock (free from genetic defects)
3. Gilts with good underlines (at least 14 teats)
4. Good management in pregnancy reduces Stillborn and Mumified pigs
5. Crossbred sows and gilts
6. Good farrowing pen and crate design - adequate micro-environment for piglet (esp. temp)
7. Batch farrowing Encourages better stockmanship and enables fostering
8. Good stockmanship (esp. with gilts – remove temporarily pigs in danger of being savaged)
9. Feed suckling sows for milk production
10. Regular checks on sow health (appetite, temp., piglet appearance)
11. Fostering piglets where necessary (even up litters, lack of milk)
12. Prevent anaemia
13. Cull poor performing and older sows vigorously

Milk Supplementation

The Issue

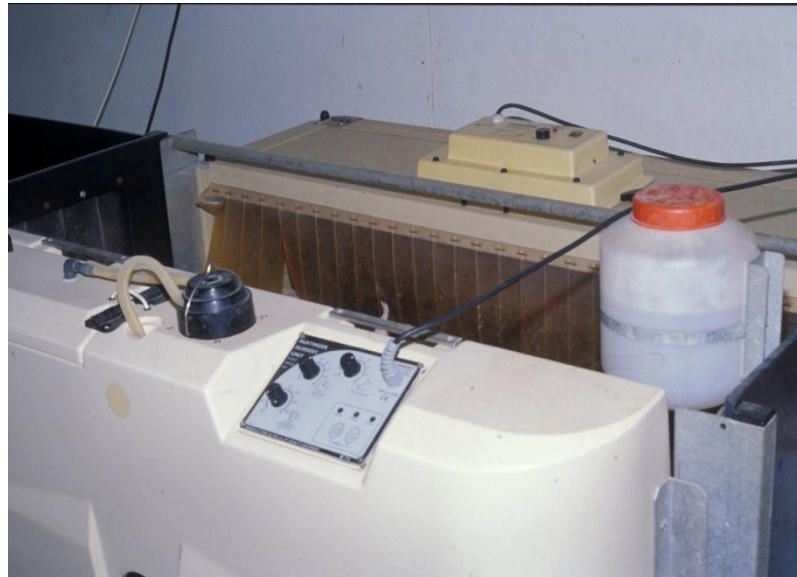
- Increasing litter size over 13 pigs per litter
- Target 11-12 Pigs weaned per litter
- Greater pressure on sow ?
 - $8.2 \text{ kg} \times 11.7 = 96\text{kg}$ @ 26.3 days
- Piglet Nutrient Supply ?



RESCUE DECK



Artificial rearing



Question ?



Does supplementary
milk from birth
reduce piglet losses?

Do piglets have a choice?



Results

	No Milk	Milk from farrowing	Milk from day 7	Sig
Number post fostering <12 hr	11.36	11.39	11.47	0.897
Number died fost - week 1	0.62	0.59	0.78	0.590
Number died/removed Week 1-Weaning	0.673 ^a	0.096 ^b	0.355 ^b	0.002
Number weaned	10.05 ^a	10.71 ^b	10.33 ^{ab}	0.029

HA 2006

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Sow weight loss inc. pregnancy (kg)	30.1 ^a	23.4 ^b	27.3 ^{ab}	0.045
P2 Loss (mm)	5.02	3.59	4.94	0.081

HA 2006

Lactation Alternatives



- Multi-suckling
- Free Farrowing



Freedom Farrowing 2012



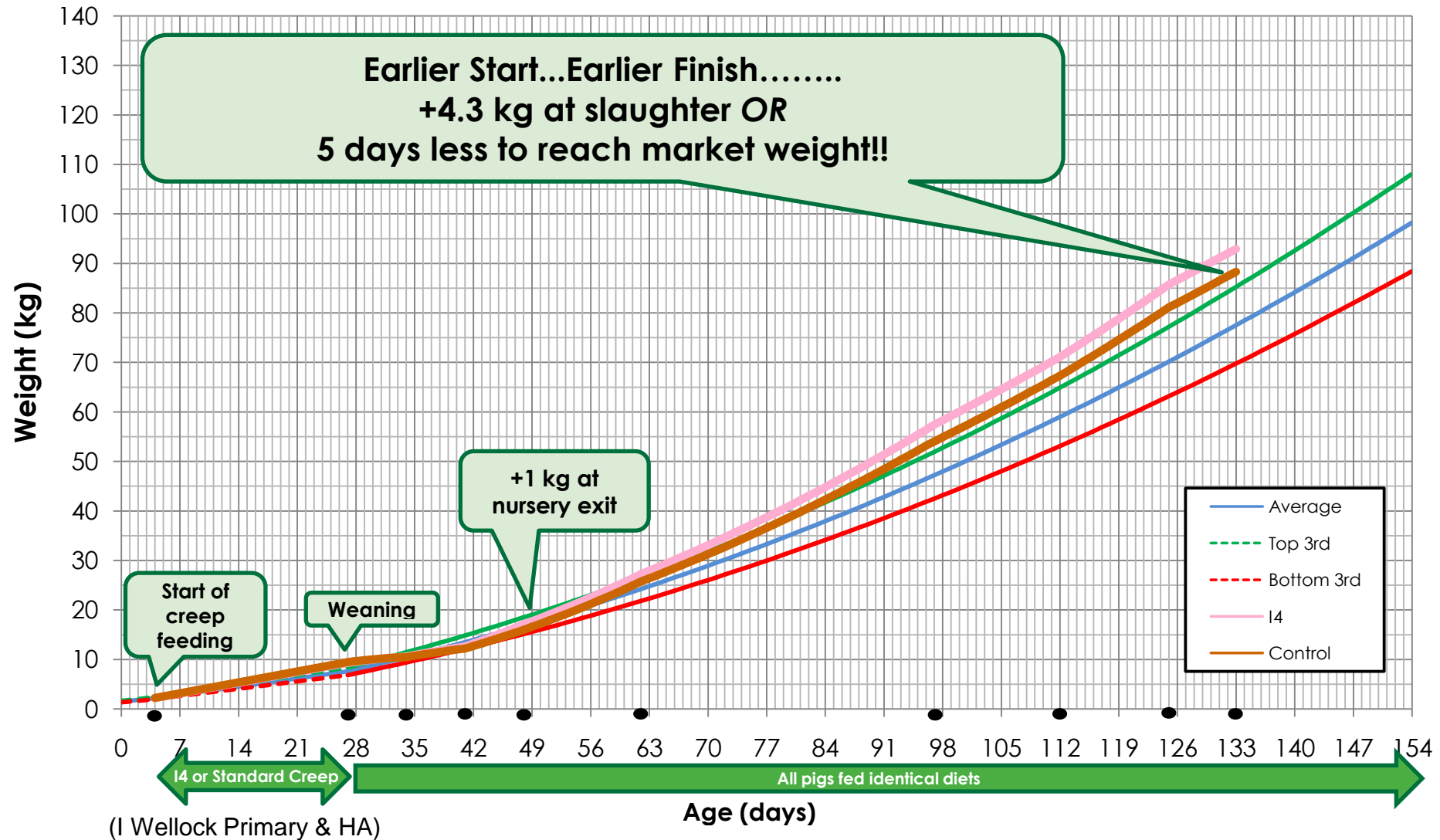
Feeding the Lactating Sow

- Diet 18% crude protein 14.5 Mj DE/kg
- Graduated feeding scale
 - 2.5kg day 0 - Increment by 0.6 kg to Day 14
 - 11+ kg/day, to appetite or Ad-Lib from day 14
- Feed in 2 or 3 meals per day
- Water 30-40 litres per day (can be limiting)
- Keep sow cool to maximise appetite

Weaning Objectives

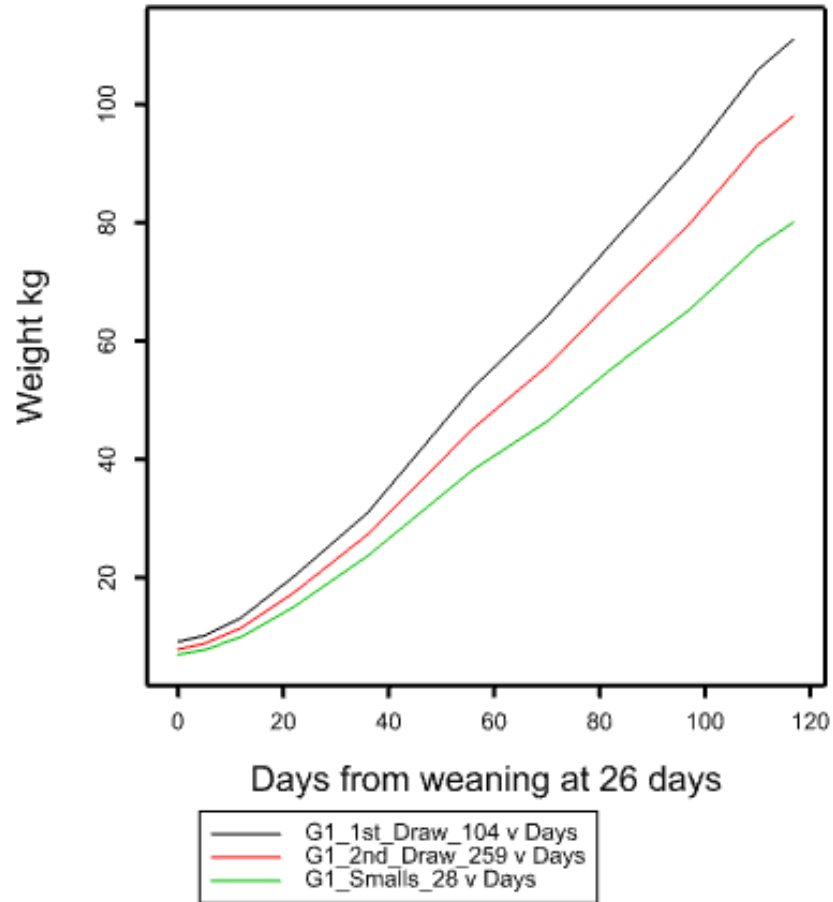
- Maximize Weaning weight (Target 8+kg at 26 days)
- Minimise Post - wean Mortality
- Reduce Weaning Stress
- Maximise post weaning performance
- Maximise sow productivity (eg Reproductive efficiency)
- Optimum Weaning Age???
 - Natural 10-16 weeks
 - EU No less than 21days - 28 recommended
 - USA Any time (often 10 days)

Creep feed can impact lifetime performance

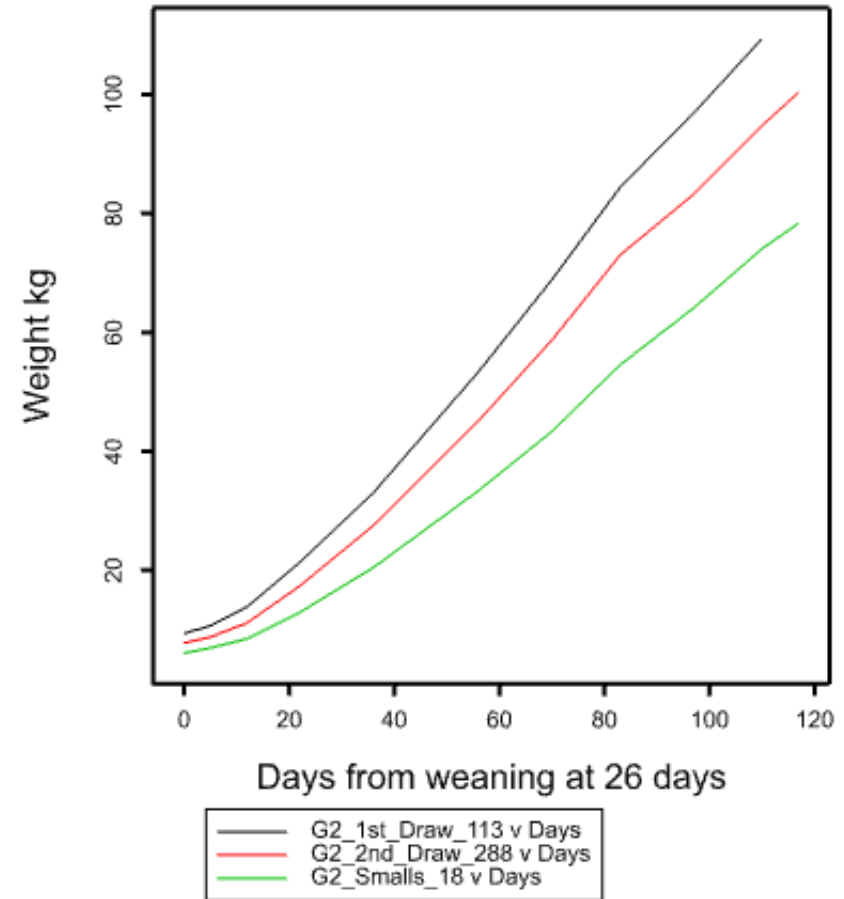


- Current HA Creep Intake 1kg+ per piglet birth - wean

Growth Curves of pigs Slaughtered on Same Day



Growth Curves of pigs drawn in two groups



Current Contract 360 85 -120 kg livewt

- Select 1/3 , 2/3
- 20-30 <85 Sold at second draw
- Wean Wt 9.4, 7.8, 6.1

Reducing Weaning Stress

- Stressors
 - Mix, Move, Minus Mother, Diet Change
- Litter penning reduces mixing
- Mix litters prior to weaning – Multisuckle
- Leave piglets in farrowing pen for a few days
- Keep nurse sow for smalls
- Creep feed from day 14
- Outdoor production?



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