

Comparison between computerised liquid feeding and ad-libitum dry feeding for sows during lactation



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Introduction

Producers may inadvertently restrict the intake of liquid-fed lactating sows by using feed curves that do not provide sufficient feed to match their needs. This leads to excessive lactation weight loss, increased days to oestrus, reduced farrowing rate and reduced litter-size at the subsequent farrowing. The objective of this study was to determine the effect of *ad-libitum* dry feeding or computerised wet feeding regimens on sow feed intake, body-weight loss and piglet performance to weaning.

Experimental design

Landrace x Large White sows (n=39/trt) were blocked on litter and weight in an RCB design

Treatment 1 - Curve 1 (Figure 1)

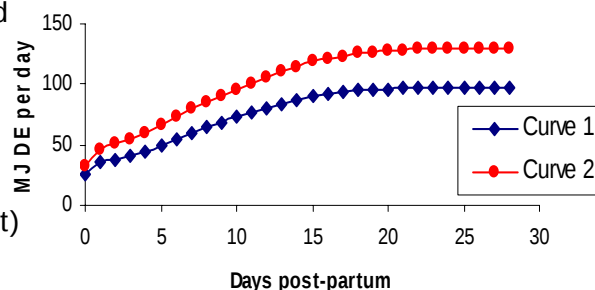
Treatment 2 - Curve 2 (Curve 1 plus 32%)

Treatment 3 – *Ad-libitum* dry pelleted feed

All diets contained 14.2 MJ DE and 9.1g lysine per kg (fresh-weight)

Duration: farrowing to weaning (*ca.*28 days).

Figure 1 Lactation Curves



Results

Effect of Treatment on sow feed intake, weight loss and piglet growth

	Treatment			se
	1	2	3	
Sows				
Mean lactation feed intake (MJ/day)	70.2 ^c	98.2 ^a	80.8 ^b	3.06
Lactation weight loss (Kg)	25.3 ^b	15.6 ^a	12.8 ^a	3.41
Piglets				
Number weaned per litter	10.1	10.0	10.2	0.41
No pre-weaning deaths per litter	0.8	0.9	1.3	0.20
Mean piglet weaning weight (Kg)	7.7	7.5	7.6	0.16
CV weaning weight (%)	20.8	20.3	19.0	1.21
Pre weaning piglet ADG (g/day)	224	222	222	5.3
CV pre-weaning piglet ADG (%)	24.3	24.1	22.2	1.57

^{abc}. Means within a row with different subscripts are significantly different (P<0.05)

Treatments 2 and 3 both had higher mean lactation feed intakes than Treatment 1 (P<0.001).

Treatments 2 and 3 both lost less weight during lactation than Treatment 1 (P<0.01).

Treatment 3 tended to have a higher number of pre-weaning deaths per litter than treatment 1 or 2 (P=0.10).

Effect of parity on sow feed intake, weight loss and piglet growth

	Litter Grouping			se
	Gilt-L1	L2-3	L4+	
Sows				
Mean lactation feed intake (MJ/day)	72.5 ^b	89.3 ^a	87.4 ^a	3.06
Lactation weight loss (Kg)	30.2 ^b	13.9 ^a	9.5 ^a	3.41
Piglets				
Number of Weaned	10.4	10.3	9.7	0.41
No pre-weaning deaths per litter	1.0	1.0	1.0	0.20
Pig Wt Weaning	7.5	7.8	7.6	0.16
CV weaning weight (%)	18.5	19.6	21.9	1.21
Pre weaning piglet ADG (g/day)	218	228	222	5.3
CV pre-weaning piglet ADG (%)	21.9	23.1	25.6	1.57

^{abc}. Means within a row with different subscripts are significantly different (P<0.05)

No Treatment X Litter Grouping interaction was observed and for this reason only the main effects are presented

Mean lactation feed intake was lower for Gilt-L1 than either of the other two litter groupings (P<0.001)

Mean lactation weight loss was higher for Gilt-L1 than either of the other two litter groupings (P<0.001)

Conclusion

- ▶ Sow lactation feed intake can be increased by using curve 2 or by *ad-libitum* feeding a dry pelleted diet.
- ▶ Sow body weight loss during lactation was reduced by using curve 2 or by *ad-libitum* feeding a dry pelleted diet.
- ▶ However, pre weaning piglet mortality tended to increase with *ad-libitum* dry feeding.