

The effect of feeding practise on behaviour in group-housed pregnant sows

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Collective pens equipped with partitions at trough are the most common group-housed pregnant sows housing in France. Aggressive competition at feeding may reduce the feed intake of low-ranking individuals. Feeding practises have to assume adequate feed supply to each sow. The influence of meal frequency (one or two meals/day) and feeding designs (short stalls with head partitions (HP) or shoulder partitions (SP) at the trough) on the feeding behaviour was investigated.

Sows in small groups

- Experimental station of Guernevez (Chambres d'agriculture de Bretagne)
- Animal were kept in group of six sows
 - Feeding design at trough
 - 2 groups in HP : short stalls with head partitions
 - 3 groups in SP : shoulder partitions
 - Alternativement : meal frequency
 - 1 meal/day during 2 weeks
 - 2 meals/day during 2 weeks
 - meal frequency rotated between batches
- Average dry food : 3 kg / sow/ day (2 meals of 1,5 kg for the sows fed twice)
- During the meal time, the presence of each sow at the trough was recorded by scan sampling at 30 s intervals
- Changing positions at trough (disturbed or voluntary changes) were continuously recorded during meal (data pooled every 30 s)
- Statistical analyses : Anova with « R »



Head partitions (HP)

Shoulder partitions (SP)

More changing places with two meals and head partitions

- The average duration of meal for the sow fed once is 12,7 min (+/- 2 min) vs 5,8 min (+/- 1 min) for the sows fed twice a day
- Most changes place of the sow fed twice take place at the end of the meal. Changes place increase from the third minute for the sows fed twice (Fig. 1).
- The sows fed once the day spent 92,7 % of their meal time at trough and the sows fed twice 87,6 %

Fig 1 : Changing place during the meal

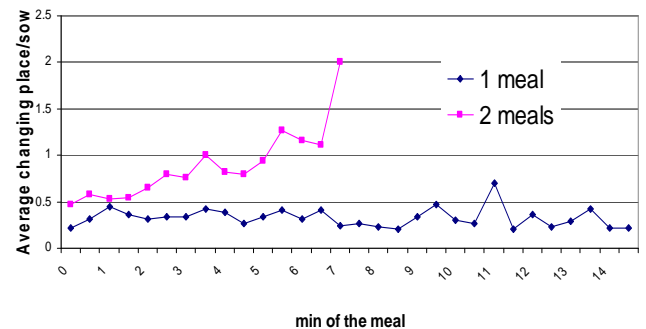


Table 1 : Feeding behaviour of sows fed one or two meals/day with different feeding designs

Meal per day	Head partitions (HP)		Shoulder partitions (SP)	
	1	2	1	2
Time spent at trough during meal (%)	95,2	88,0	91,9	87,4
Average changing place /sow/ min	0,9	1,9	1,0	1,5

- The frequency of changes of trough was lower for sows fed one meal per day (0,96 changes / min vs 1,61 / min, P<0,05).
- With head partitions at trough the differences between one and two meals were more pronounced (P<0,05) for time changes at trough (95,2 vs 88 % of meal time respectively) and changing places (0,9 vs 1,9 / min respectively) (Table 1)

One meal : less meal disturbance

Shoulder partitions were more effective than head partitions to reduce the number of changing place. One large meal instead of two smaller meals per day reduced the meal disturbance for pregnant sows, especially with head partitions at trough. The large meal reduce the number of changing place, possibly because portions were larger and sows were full and didn't have reason to fight and change place for more feed.

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