

An Investigation of Behaviours Displayed by Pre-weaned Dairy Calves in Different Group Sizes on Commercial Irish Dairy Farms



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Objective

Investigate the effect of group size on calf behaviour, when the minimum legal space allowance was provided.

Introduction

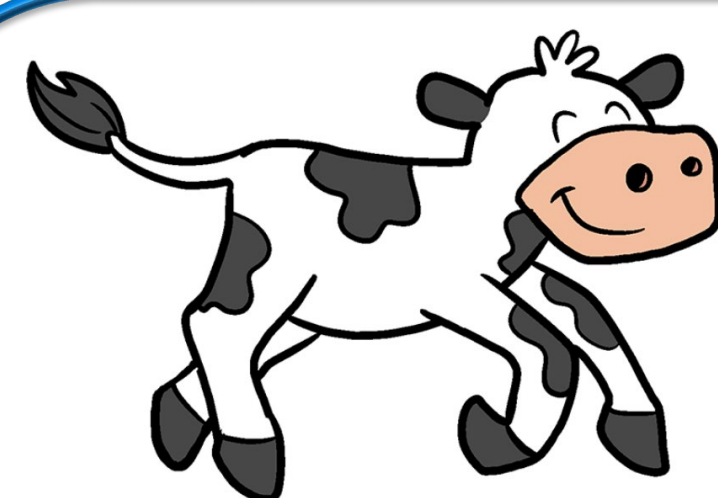
- Benefits of group-housing calves on welfare and performance are well established
- In the EU, a minimum space allowance of 1.5 m² /calf must be provided
- No requirements exist on the number of calves which can be grouped together
- In seasonal calving systems, large calf groups can form
- Cohabiting of large numbers of calves could influence welfare through increased risk of disease transmission, and also expression of behaviour, in a potentially stressful environment

Materials & Method

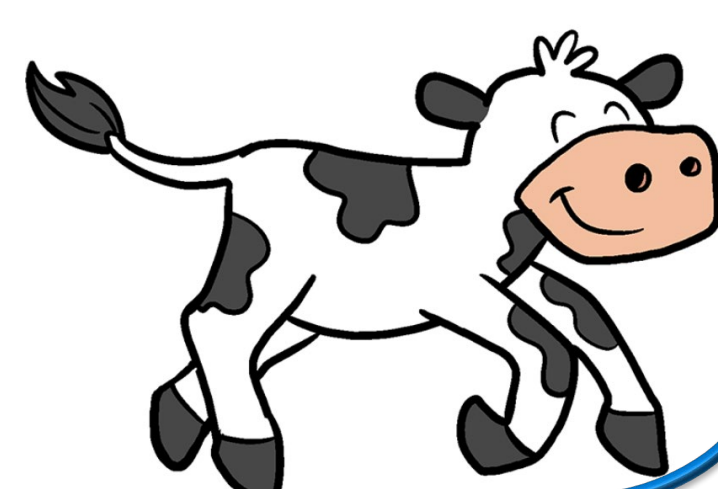
- 47 commercial Irish dairy herds were visited between Feb & Apr in 2017
- 2 separate groups video recorded for 60 mins, all calves observed were < 6 weeks of age
- Recordings analysed by scan sampling at 5 min (\pm 30 secs) intervals using a detailed ethogram
- Group sizes were categorised from 1 to 3:
 - 1= <10 calves
 - 2= 10-15 calves
 - 3= >15 calves
- Effect of group size on behaviour was analysed using a mixed model (SAS 9.4)

Results

Behaviour	Behaviour frequency (%)			SE	P value
	Group 1	Group 2	Group 3		
Standing	17.1	16.6	18.9	2.3	NS
Resting	69.0	72.2	74.2	3.2	NS
Walking	2.1	1.9	1.6	0.3	NS
Grooming	2.1	1.8	1.1	0.2	NS
Eating	5.3	5.7	2.4	1.3	NS
Playing	4.4 ^a	1.8 ^b	1.8 ^b	0.6	<0.05



Higher frequency of play behaviour in groups of < 10 calves



Conclusion

- Play behaviour is generally associated with good welfare
- Limiting group sizes to <10 calves might promote good welfare, in seasonal calving systems

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