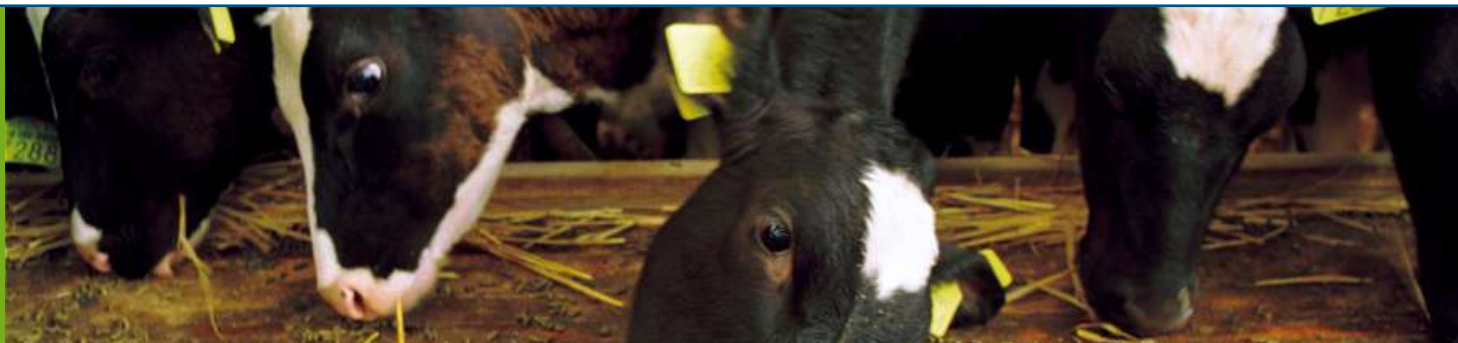


Preventing Social Stress in Cattle in Feed Bunks



Animal welfare can be a difficult concept to pin down, and many people have their own personal views. Despite this, there is general agreement within the scientific community that animals should not suffer from fear, distress or prolonged hunger, as described in the Welfare Quality[®] fact sheet 'Principles and criteria of good animal welfare'.

Social stress in beef cattle is one of the issues being tackled by Welfare Quality[®], an EU-funded project designed to integrate farm animal welfare into the food chain by developing reliable on-farm welfare assessment systems and practical strategies to improve farm animal welfare.

In feedlots, several different factors can lead to aggression as the cattle face increased competition in the feed bunk. These include: a badly designed feeder, an excessive density in the pens, or inappropriate length of the feed bunk. This situation can become particularly disturbing when calves arrive in the feedlot or when animals establish, or redefine, the social rank in the group. Social pressure and aggressive interactions at the feeder may induce stress that in turn may alter normal feeding patterns, increase metabolic activity and reduce performance.

More stress means less profits

According to researchers participating in Welfare Quality[®], farmers significantly underestimate how the amount of stress that cattle experience during group feeding not only reduces the animal's welfare but also loses the farmer valuable profits.

For example, our research revealed that Friesian calves that had to face strong competition for food during their first 4 weeks in a feedlot took 10 days longer than normal to reach their required slaughter weight.

The economics are clear: more days at the feeding facilities means higher feed costs, higher management costs, and lower overall profit per head.

Additionally, calves that competed intensely for feed had twice as many instances of

abscessed livers which later had to be removed during slaughter. In total, between the need to feed for more days and the loss in income from discarded livers, with calves that endure higher stress levels because of increased feed competition a farmer's income would be reduced by 3-5%.

Effects of sharing a feeding space

Recently, Welfare Quality[®] researchers looked at how competition for feed affects calves during both the adjustment period to a feedlot and during the actual fattening period. The study monitored the rumen for pH levels as well as other indicators like weight gain and liver health when a feeding place was shared by two, four or eight calves. Increasing social competition for

This research was executed within the third Subproject of Welfare Quality®, which focuses on the development of practical strategies to improve farm animal welfare. Research topics are:

- Improving human-animal relationships
- Genetic solutions to welfare problems
- Eliminating injurious behaviours
- Reducing lameness in cattle and broilers
- Minimizing neonatal mortality in pigs
- Alleviating social stress in pigs and cattle

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feed, from two or four to eight per feeding place, not only reduced dry matter intake but also decreased daily weight gain. But stress isn't just a matter of how much feed a calf gets or what kind. When more calves have to fight for the same feeding place this significantly reduces their overall welfare.

Here's the bottom line...

Thanks to our research it appears that four calves per feeding place might be adequate in a feedlot from an animal welfare perspective. More than four calves per feeding place could potentially reduce animal welfare, production efficiency, and profit per head so further crowding

should probably be avoided. Of course, this recommendation might vary according to the breed of animal or the type of food.

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This fact sheet is available in several languages on the Welfare Quality® website www.welfarequality.net. Other topics like 'Principles and criteria of good animal welfare' and 'Reducing Lameness in Dairy Cows' are also listed there in easily downloadable documents.



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Welfare Quality® is a European research project focussing on the integration of animal welfare in the food quality chain. The project aims to accommodate societal concerns and market demands, to develop reliable on-farm monitoring systems, product information systems, and practical species-specific strategies to improve animal welfare. Forty-four institutes and universities, representing thirteen European countries and four Latin American countries participate in this integrated research project.

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