

**AVOIDING FRUSTRATION BY PROVIDING A CHEAP ALTERNATIVE – USING A NOVEL MAXIMUM PRICE PAID TEST TO QUANTIFY THE MATERNAL MOTIVATION IN DAIRY COWS (*BOS TAURUS TAURUS*)****Emma H Jensen<sup>1</sup>, Melissa Bateson<sup>2</sup>, Heather W Neave<sup>1</sup> and Margit B Jensen<sup>1</sup>**<sup>1</sup> Department of Animal Science, Aarhus University, Tjele, Denmark<sup>2</sup> Centre for Behaviour & Evolution, Newcastle University, Newcastle upon Tyne, United Kingdom  
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In most western conventional dairy production systems, the cow and calf are separated shortly after calving. This procedure ensures more saleable milk for the farmer and can reduce the separation stress experienced by cow and calf, as they are prevented from forming a strong bond. However, consumers are increasingly criticising this practice, and research has found that calves benefit from prolonged cow contact. Similar animal welfare benefits are associated with contact to the dam and contact to so-called nurse cows, who nurse one or more calves that are not their own. Little research has focussed on the possible benefits gained by the cow of rearing her own calf. Our study therefore aims to assess and quantify the cow's maternal motivation, as strongly motivated behaviours can be interpreted as behavioural needs, which have important impacts on the animal's welfare. We compare the maternal motivation across three housing conditions: cows and calves housed together full-time, cows and calves housed together during the day but separated during the night, and cows and calves separated 48 h postpartum (controls). To quantify motivation, we use a novel maximum price paid (MMP) test. Two motivations are assessed: the strength of the cow's maternal bond to her calf, and the cow's motivation to nurse her calf. Both tests use the same set-up; cows are asked to walk through pneumatic gates, on which the weight is progressively increased. If the work required to obtain calf contact exceeds the cow's motivation, she will not walk through the gate. MMP tests can potentially result in frustration for the animal at high prices, if there is no alternative. Our novel take on the method thus provides the cow with a cheap, but less attractive, alternative to the highly motivated resource. This introduces an element of choice, and thus is expected to avoid frustration, if the animal is not willing to pay the price of the attractive resource. To our knowledge, we are the first to use this novel take on the MMP test, as well as the first to assess the cow's motivation to nurse her calf. With this poster, we wish to present the method in more detail, as well as some preliminary results from our ongoing study. Furthermore, we want to discuss the applicability of the method in other studies.

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