



Cow handling: interactions between people and cows

1. Introduction

Efficient milk harvesting requires the cows, people and facilities to be interacting smoothly. This Quick Note discusses how the actions of humans have an impact on making milking easier. The impact of cow behaviour and milking facilities are discussed in Quick Notes 1.1 and 3.1 respectively.

2. Interpretation and relevance to Australian conditions

There is a wide variation in the level of fear that cows demonstrate towards handlers on Australian dairy farms. Extensive research in Australia has shown that the regular interaction between stock handlers and dairy cows will determine the level of fear that cows experience towards people. Importantly whilst we may consider them harmless, many of the routine techniques that are frequently used in handling dairy cows will result in cows becoming highly fearful of humans.

3. Relationship to CowTime goals

The CowTime project aims to save time in milk harvesting and to make it a more pleasant process. Poor stock handling techniques lead to an increase in the cows' fear of humans making them more difficult to handle. This disrupts the smooth flow of cows through the dairy and increases the frustration level and work routine of the milker.

Fearful cows may not enter the dairy calmly whilst the milker is near. In addition, the response to a milker entering the holding yard may also be exaggerated, causing the natural (entry) order of the cows to be disturbed. This further disrupts the milking process. Because fearful cows are also more prone to lameness, the time required for moving cows may be increased. Because nervous cows defecate more frequently, the time required for cleaning is increased too.

4. Features of human behaviour that can help to improve milking

Reducing the cows' fear of humans will improve the ease of handling animals and can improve production. Fearful cows produce less milk and are more likely to be injured, lame or suffer stress. In one Australian study, fear of humans accounted for up to 20% of the variation in farm milk yield with herds of highly fearful cows producing significantly less milk than herds with less fearful cows.

The level of fear of humans can be assessed, practically and objectively, by measuring the average "flight distance" of cows from a person. One way to measure flight distance is for an observer to approach individual cows slowly, calmly and deliberately in a closed yard or amongst a herd of cows at pasture. The average distance to which the observer can approach each cow before she turns to move away is recorded. This process is repeated for perhaps 30 cows to estimate the average flight distance. In one study, cows with very low fear of humans allowed an experimenter to come within an average distance of 2.3m in the paddock or to within 3.2m in a holding yard. Average flight distances for 66 Victorian herds in this study were 5.3m for cows at pasture and 4.4m in a yard. Flight distances in herds with high fear of humans were up to 12m for cows at pasture and 5.7m in the yard.

Cows learn to be fearful of humans from the previous behaviour of the handler towards them. Negative or aversive behaviours by handlers include interactions such as hits, slaps, tail twists, fast speed of movement and shouting, while positive behaviours include interactions such as stroking, rubbing, the hand resting on the animal's back or flank, slow and deliberate movement and talking. A high frequency of negative interactions by the handler is associated with a high level of fear of humans by cows.

Negative behaviours do not need to be intense or forceful to initiate fear in cows. Moderate slaps and pushes of the type many handlers would use habitually will induce fear in cows. Consistent negative handling techniques are most likely to result in fearful cows.

Recent research has demonstrated that the behaviour of handlers towards their cows is largely dictated by the attitudes that the handler has towards their cows. In other words, if the handler thinks the cows are difficult to

handle then they are more likely to use negative interactions that will in turn, increase the difficulty of handling. Fortunately, attitudes are learned and so can be changed.

Some suggested strategies to reduce the fear cows have of humans are:

- Reduce excessive noise, such as banging gates and shouting.
- Reduce negative interactions and use positive interactions more frequently.
- Examine routine habits when handling cows and remove actions that could induce fear.
- Minimise or remove negative or painful procedures from the dairy shed. Do these elsewhere.
- Use solid panels to screen off milkers, negative or unfamiliar milking processes.
- Keep the dairy routine consistent and allow cows time to learn a new change on the farm.
- Move cattle as a group, rather than individually to decrease fear associated with handling.

5. Potential challenges with implementation

Long term improvement in the handler's behaviour towards cows, with the resultant decrease in the cows' fear levels, is largely dependent on a change in the attitude of the handler towards the cows. Attitudes are determined by many factors and are difficult to modify without significant effort. The greatest challenge, perhaps, is to persuade managers and farm employees that there may be room for improvement in their stock-handling techniques. The real difficulty is that even mild forms of pressure, or techniques regarded by many people as normal acceptable practice, may be aversive to cows and so cause fear.

6. Robustness of the information

This information is based on the CowCare program being developed for the Australian dairy industry.

7. References and further reading

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CowTime Guidelines for milk harvesting - Chapters 2 & 4, edited by Klindworth, D. et al (2003). Available on the CowTime website www.cowtime.com.au

Quick Note 1.1: Cow behaviour and milk let-down

Quick Note 1.3: Key factors to ensure a calm, consistent milking routine

Quick Note 3.1: Designing facilities for good cow flow

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