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Growing Interest in Animal Welfare Farms Must Align with Societal Expectations

The following is taken from an article in the M2 magazine by Dr. Jenifer Van Os.

Animal welfare is both an area of growing societal interest and a topic of scientific inquiry. Human stakeholders who are invested in the welfare of dairy cattle include dairy farmers and others in the industry, dairy cooperatives, processors, and other companies along the supply chain, and potential consumers of dairy products. To safeguard the sustainability of the dairy industry, practices on farms must align with societal expectations for the treatment of animals.

A common framework for discussing animal welfare, sometimes called the “three circles, includes three overlapping categories of ethical concerns which various stakeholders hold regarding whether an animal:

1. Functions well (i.e., health and other aspects of biological fitness).
2. Feels well (i.e., their internal emotional state).
3. Is able to express adaptive, motivated behaviors.

The weights assigned to these three perspectives vary among stakeholders, but it is important to consider that welfare encompasses factors in addition to health and productivity, especially from the point of view of the non-farming public. Social-science research has found that different groups of stakeholders such as producers and non-farming consumers vary in how they prioritize the three areas of animal welfare. Producers, veterinarians, and others directly involved in the dairy industry often consider health and biological functioning as the highest priorities. Although non-farming citizens likewise consider it important for animals to be healthy and physically thriving, they also place emphasis on other aspects of welfare. For example, the public is often curious about pain management for routine procedures such as dehorning, whether animals have social companionship, or the extent to which they have freedom of movement and opportunities to perform a wide range of species-relevant behaviors.

Many corporate animal welfare programs publicly state that they uphold the Five Freedoms principles of animal welfare. This historical framework attests that farm animals should have freedom: 1) from hunger and thirst, 2) from discomfort, 3) from pain, injury, and

The Five Freedoms vs. the “three circles”

- 1) Freedom from **hunger** and **thirst**
- 2) Freedom from **discomfort**
- 3) Freedom from **pain**, **injury**, and **disease**
- 4) Freedom to express [most] **normal behavior**
- 5) Freedom from **fear** and **distress**

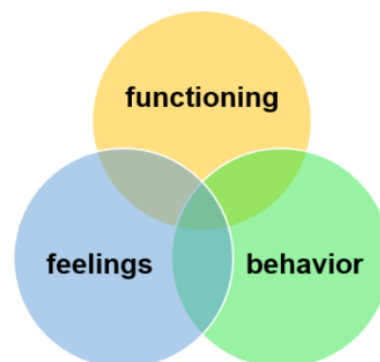


Figure 1. The Five Freedoms of farm animal welfare (Farm Animal Welfare Council, 2009), color coded to correspond to the “three circles” concept of animal welfare concerns (adapted from Fraser et al., 1997). Figure created by Jennifer Van Oss, UW-Madison

disease, 4) to express normal behavior, and 5) from fear and distress. These principles are captured within the “three circles” concept of animal welfare concerns mentioned earlier. Injury and disease are aspects of biological functioning; hunger, thirst, discomfort, pain, fear, and distress are negative feelings; and the ability to express normal or adaptive behaviors is also emphasized.

To provide assurance that farms meet animal care standards, many assessment programs have been developed. In the U.S., more than 99% of dairy farms participate in the National Milk Producers Federation’s Farmers Assuring Responsible Management (FARM) program. On-farm animal welfare assessments typically focus on three areas. First, the most direct indicators of animal welfare are obtained by directly observing the animals (i.e., animal-based or outcome-based measures). Second, evaluators observe aspects of the environment and facilities (e.g., access to clean drinking water) and management; these input-based measures provide indirect insights into animal welfare. Third, evaluators examine paperwork such as records and written protocols (e.g., procedures for moving non-ambulatory cattle), which provide additional indirect insights about inputs which affect animal welfare.

Dr. Van Os has developed an innovative, digital serious game (Mooving Cows™), similar to a flight simulator, for dairy farm personnel to learn to move cows humanely in routine barn environments. The game is in both English and Spanish.

Employees on Wisconsin dairy farms tested the game. Preliminary data indicate that after playing the game, participants answered more questions correctly in a multiple-choice assessment of their knowledge of best practices for cow handling. In addition, they rated the game as enjoyable and potentially useful for both learners with little to no dairy cow experience and for those who already have experience, to review and practice cow handling principles. Upon successfully completing all eight levels in the game, players earn a certificate of completion, which can be used as documentation of continuing education.

In a 2014 survey, 89% of public respondents thought that dairy cows should have access to pasture. From an animal welfare perspective, there are indeed benefits to pasture access, including better air quality and improved locomotion scores over time. In addition, cows show less aggression toward one another when they have more space outdoors. Their preference for pasture depended both on time of day and outdoor weather conditions. Cows expressed the strongest preference for pasture overnight, where they mainly



Dr. Van Os developed this digital game called, “Mooving Cows,” which can be used for dairy farm personnel to learn to move cows humanely in routine barn environments. The game is in English and Spanish.

spent their time lying down rather than grazing, likely because this environment provided both a soft resting surface and space to adopt a range of lying postures. During the daytime, cows spent much of their time indoors, where they had ad libitum feed access. Not every dairy operation can feasibly provide pasture access for all of their cattle. Other studies have investigated alternative outdoor areas, both from the perspectives of the cows and the public. Exercise yards may provide an option for a middle ground which could satisfy many citizens while giving the cows beneficial opportunities in a more feasible manner for a wider range of producers.

Grooming brushes have become an increasingly common fixture in freestall barns. Although for some farmers the decision to invest in brushes is largely based on improving cow hygiene and thus milk quality, recent studies have demonstrated the additional importance of brushes for animal welfare by providing a substrate to express adaptive behaviors. Cows pushed increasingly heavy weights to gain access to a rotating mechanical brush, which, again, corresponded to the levels they pushed to access fresh feed after a period of deprivation. Grooming is an important natural behavior, which cattle begin showing very early in life. Some companies now offer rotating mechanical brushes specifically designed for young stock. A New Zealand study found that when rotating brushes were provided to 2-week-old calves, they were used daily.

Animal welfare is an issue of societal concern with direct implications for the animals themselves, their caretakers, and continued public acceptance of dairy farming practices. Industry-wide animal welfare assurance programs in the U.S. and Canada have established minimum standards for animal care. Their goal has been to drive continuous improvement and update standards based on ongoing scientific research.