

Bovine Welfare & Pain Control An Evolving Issue

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“There is a fundamental difference between cows and screwdrivers. Cows feel pain and screwdrivers do not. I am allowed to kill the cow for food but she must be killed in a manner that will not cause pain.”



Consumer Preferences for Farm Animal Welfare: Results from a Telephone Survey of US Households

- Consumers desire high standards of animal care-even if it raises food prices and involves government regulation
- Most wanted animals to exhibit natural behaviors and be able to exercise outdoors
- Consumers were broken into three classes:

Department of Ag Economics, Oklahoma State University, 2011

- **Naturalists**- 46 %-place great importance on animals exhibiting natural behavior and exercise outdoors
- **Welfarists**- 40 %-need to provide food, water and treatment for injury and disease
- **Price Seekers**-14 %-concerned with low prices only



Tackling Dairy Cow Welfare Issues:

“Laura Boyle and Gabriela Olmos describe their work on elucidating the advantages of grass-based dairy systems from an animal welfare perspective, thereby increasing the competitiveness of the dairy industry.”

TheDairySite.com

“Repeated reimpregnation, short calving intervals, overproduction of milk, restrictive housing systems, poor nutrition, and physical disorders impair the welfare of the animals in industrial dairy operations.”

An HSUS Report: The Welfare of Cows in the Dairy Industry

Tie-stalls Are on the HSUS Attack List

Penn State Dairy and Animal Science

“Positive interactions between a cow, her workplace and her caregivers lead to cow welfare, happy employees and a productive herd.”

N. Anderson

“Animal welfare is emerging as one of the key social concerns regarding animal agriculture. Concern for the welfare of farms animals is not new, but the last few years have seen increased interest in farm practices.”

M von Keyserlingk, D Weary

“The Dairy Code of Practice reflects current dairy management practices. It identifies welfare hazards, opportunities and methods to assure well-being. The authors recognize producers have more than one way to ensure welfare of their livestock.”

Code of Practice for the Care and Handling of Dairy Cattle - 2009

CODE OF PRACTICE

FOR THE CARE AND HANDLING OF

DAIRY CATTLE



4.3 Disbudding and Dehorning (66)

REQUIREMENTS

Pain control must be used when dehorning or disbudding.

Bleeding control must be used when dehorning.

4.4 Identification and Branding

REQUIREMENTS

All cattle must be identified using an approved ear tag as stipulated by applicable regulations.

Pain control must be used if branding is necessary.

Face branding is prohibited.

4.5 Castration (69)

REQUIREMENTS

Pain control must be used when castrating.

4.6 Tail Docking (67)

REQUIREMENTS

Dairy cattle must not be tail docked unless medically necessary.

5.1.2 Preparing Cattle for Transport

REQUIREMENTS

Calves must have received adequate colostrum before being transported.

Dairy animals must be fed and watered within five hours before being loaded, if the expected duration of the animal's confinement is longer than 24 hours from the time of loading.

Dairy Cattle

Animal Welfare (Dairy Cattle) Code of Welfare 2010

A code of welfare issued under the Animal Welfare Act 1999

National Animal Welfare Advisory Committee

C/- Animal Welfare Directorate, MAF Biosecurity New Zealand, PO Box 2526, Wellington 6140

Key to Minimum Standards

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Minimum Standard No. 18 – Pre-transport Selection

- (a) The person in charge must examine the selected dairy cattle prior to transport, to ensure that all animals are fit and healthy for transportation.**
- (b) All dairy cattle, including calves, must be able to stand and bear weight on all four limbs and be fit enough to withstand the journey without suffering unreasonable or unnecessary pain or distress.**
- (c) Any animal likely to give birth during transport must not be selected.**
- (d) Every unweaned calf to be transported off the farm must have been fed at least half of that day's ration of colostrum or milk, not more than 2 hours before transportation.**
- (e) Electric prodders must not be used to drive calves.**

1.3 What animals does this code apply to?

This code applies to all dairy cattle. This includes all calves born from dairy cows until weaning wherever they are being reared, all dairy replacement stock wherever they are being raised, and calves sent for slaughter. It also includes dairy cattle that are kept as “house cows” and any bull brought onto the farm for the purpose of mating dairy heifers or cows or kept at a breeding centre. It does not include dairy cattle, once weaned, raised for beef production.

1.4 What happens if I do not follow the minimum standards in this code?

Failure to meet a minimum standard in this code may be used as evidence to support a prosecution for an offence under the Animal Welfare Act. A person who is charged with an offence against the Animal Welfare Act can defend him or herself by showing that he or she has equalled or exceeded the minimum standards in this code.

**Animal Welfare
(Painful Husbandry
Procedures)
Code of Welfare 2005**

A code of welfare issued under the Animal Welfare Act 1999

National Animal Welfare Advisory Committee
C/- MAF
P O Box 2526
Wellington
NEW ZEALAND

Minimum Standard No.1 – Justification for Painful Procedures

Painful husbandry procedures must only be performed where there are no other practical, economically viable, effective, less noxious alternatives to the procedure; and they

- (i) result in an overall enhancement of the animals' welfare through reduced susceptibility to ill-health, injury or compromised welfare; or
- (ii) facilitate advantageous farm management systems; or
- (iii) result in an enhanced animal product; or
- (iv) result in reduced safety risk to humans.

Pain relief should be provided when animals are disbudded or dehorned.

Castration and Shortening of the Scrotum (Cryptorchid)

Calves

- rubber ring or high tension bands with local anaesthetic, or surgery with local anaesthetic plus analgesic
- rubber ring without pain relief or surgery without pain relief
- high tension bands without pain relief.

- Well, that is New Zealand, what about us?
 - Milk consumers quite rightly see milk producers as excellent stewards of their cattle;
 - Dairy farmers promote that image;
 - Animal ‘rights’ campaigners will promote exceptional misdeeds as ‘normal’ practice on many dairy farms (inhumane treatment of calves, inhumane treatment of downer cows)

- Does that mean we don't need to improve?
 - Consumers seem to increasingly interested in how their food is produced.
 - Many of the improvements in welfare are also linked to increases in productivity, better animal health and longer productive lives.
 - Much of the recent research in cow welfare is aimed at trying to understand what cows want rather than what we want for cows.

- New ways to look at animal welfare issues;
Ask the cows?

What Do Cows Prefer - Pasture Or Barns?

“This study indicates that cows do not have an overall preference for either a well-designed freestall barn or for pasture; instead preference varies depending on the time of day and environmental conditions. From the cow’s perspective, the best option may be to simply keep the barn doors open, allowing cows to access pasture when they choose. One potential disadvantage of using pasture is that cows have access to a less energy dense diet, making it difficult to maintain high levels of milk production.”

“cows with access to pasture can maintain very high levels of TMR intake and milk production.”

- New ways to look at animal welfare issues;
Ask the cows?

**Does overnight access to pasture reduce lameness
in dairy cows?**

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²Agriculture and Agri-Food Canada, Agassiz, Canada

“Cows housed continuously on pasture show improved gait scores over those housed on concrete, but continuous access to pasture can compromise feed intake and milk production in high producing cows.”

“Parturition and parity are critical risk factors for lameness. Housing on pasture overnight is a practical way of increasing access to pasture without reducing feed intake or milk production but this does not appear to provide obvious beneficial effects on lameness.”

- New ways to look at animal welfare issues;
Ask the cows?

Associations between cow hygiene, hock injuries, and free stall usage on US dairy farms

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“....severe hock injuries were less common on farms that used dirt as a stall base or sand as bedding compared with farms that did not.”

“A higher percentage of cows were lying in a stall when sand bedding was used, when bedding was added more frequently, and during the spring months.”

“Results of this national survey indicate that tail docking provides no benefit to cow hygiene.....”

- Painful conditions in Dairy and Beef cattle:

- Calving
- Lameness
- Mastitis
- Pneumonia
- Calf scours
- Other diseases??

- Painful procedures in Dairy and Beef cattle:

- Dehorning;
- Castration:
- Branding;
- Teat removal;
- Foot ‘surgery’;
- DA surgery;
- C sections
- Prolapse Uterus
- Cancer Eye Removal

- Well, where is the WIIFM ?
 - Are there any benefits beyond the feeling of ‘doing the right thing’?
 - Newer products focus research on the impact of treatment:
 - on growth,
 - on long-term survival in the herd and
 - on long-term productivity.

- How do you manage to meet welfare and business needs?
 - Pay attention to what the cows are telling us.
 - Adopt procedures that are less painful.
 - Consider that some diseases and management procedures will cause pain.



- What drugs are available to deal with pain:
 - Anesthetics (especially local);
 - Sedatives
 - Analgesics
 - Anti-inflammatory



Tools for managing pain

- What drugs are available to deal with pain:
 - Sedatives:
 - These drugs usually make the animal easier to handle and they may reduce the amount of stress that cattle feel:
 - Xylazine: it also acts as an analgesic but is a prescription drug (Rompun and others similar drugs);
 - Acepromazine: is a mild sedative but is not an analgesic (Atravet)

- What drugs are available to deal with pain:
 - Analgesics (NSAIDS):
 - ASA, aspirin
 - Ketoprofen (Anafen)
 - Flunixin meglumine (Banamine, Cronyxin, Flunazine,
 - Meloxicam (Metacam)

- What drugs are available to deal with pain:
 - Are there differences between NSAID's:
 - How long they last:
 - » Shortest acting:
 - ASA
 - Ketoprofen
 - Flunixin
 - Meloxicam
 - » Longest acting.

- What drugs are available to deal with pain:
 - Are there differences between NSAID's:
 - Ease of administration:
 - ASA is easy to give, but only about 30% of a bolus is actually absorbed.
 - Flunixin is only approved for use in cattle when given in the vein. When given in the muscle, it is very difficult (impossible?) to determine the appropriate milk and meat withdrawal.
 - Flunixin causes severe tissue damage and results in tissue residues commonly if given IM or SC

Flunixin Residues and Injection Site Damage – A Serious Problem Requiring Serious Attention by Bovine Veterinarians

Flunixin Residues and Injection Site Damage – A Serious Problem Requiring Serious Attention by Bovine Veterinarians

1. Flunixin was the second leading violative residue reported in 2007.

According to the USDA Red Book, which reports drug residues found in meat and milk products, in 2007, just under 1% of dairy cows had violative residues (inspector generated sampling), with flunixin being the second most common (number one is penicillin). Flunixin residues were found in 259 cows.

The FDA Center for Veterinary Medicine (CVM) has already warned veterinarians to use flunixin meglumine in the proper and labeled manner. The FDA-CVM states that using a different route of administration for convenience is not adequate reason for extralabel use, making most IM or SC use of flunixin illegal.

2. Flunixin must be given IV.

Withdrawal times are established by a drug manufacturer using the labeled dose, route, frequency and duration. If any of those parameters change, the withdrawal time on the label may not be sufficient. In fact, FARAD has stated that they do not have adequate information to extrapolate a withdrawal time for IM or SC flunixin.

3. Flunixin causes serious tissue damage when given subcutaneously or intramuscularly.

Photographs of the damage caused by flunixin given IM or SC at 14 days post-administration can be found on the AABP website select “Members” the “Member Resources”. Even when damage is not visible from the outside of the animal (no lumps or bumps), damage to tissues has occurred, and we can assume that these lesions are painful. In addition to the damage to meat product such as excessive trim, reduced quality, and prolonged absorption of drug leading to violative residues, IM or SC use of flunixin is potentially harmful to the animal. This is an illogical use of a product that is administered to relieve painful and inflammatory conditions.

- What drugs are available to deal with pain:
 - Anti-inflammatory:
 - NSAIDS
 - Corticosteroids (steroids):
 - Dexamethosone
 - Prednisolone
 - Flucort (flumethasone)
 - Predef 2X (soflupredone)

- What drugs are available to deal with pain:
 - Anti-inflammatory:
 - Corticosteroids (steroids):
 - Reduce inflammation but don't reduce pain directly;
 - Can be used to ease impact of diseases where inflammation is causing pain or discomfort;
 - Are also beneficial in ketosis (steroids also increase blood sugar).

- Dehorning:
 - Freezing will last for about 1.5 hours. After that calves will be painful depending on how they were dehorned.
 - Using small butane dehorner are less painful than using Rinehart dehorner;
 - Using 1 dose of Metacam gives about the same pain relief as 2 doses of Anafen.

- Calf scours:
- A research trial in Ontario looked at giving a single dose of meloxicam when calves were first seen with scours.
 - Calves also were fed electrolytes.
 - Treated calves drank their milk better, ate more starter and weaned sooner.
 - Treated calves gained 10 more pounds in the 7-8 weeks after they got diarrhea.



- Mastitis:
 - Cows (in New Zealand) with clinical mastitis were treated with an antibiotic with or without one injection of Metacam.
 - The cows were followed into the next lactation.
 - Cows treated with Metacam had lower SCC after treatment and were also more likely to remain in the herd for another lactation.

Veterinary Attitudes

- Why bring this up now?
 - 352 cattle veterinarians in Denmark, Norway and Sweden filled out a survey about their attitude on pain and on managing pain in cattle.
 - The opinions were vastly different depending on what decade the veterinarian graduated from veterinary school.

- Why bring this up now?
 - If you graduated in the 70's, you were more likely to say that giving something for pain would:
 - Mask the fact that cattle were getting worse;
 - Might lead them to move around more;
 - Cost so much that dairy farmers wouldn't want to use them.
 - Older veterinarians were more likely to assert that pain was not entirely a bad thing.

- Why bring this up now?
 - If you graduated in the 2000's, you were more likely to say that analgesics would:
 - Help an animal to recover faster;
 - Not likely cause unwanted side effects;
 - Not necessarily be seen as a significant cost.
 - The more recent graduates were more likely to believe that farmers would want to reduce pain in their cattle.



Dr Gordon Atkins- UCVM

- *For the record I saw this calf on Saturday and it has learned to get up and down very well, is bearing weight on both legs, and is doing excellent.*

Questions?

Thank you