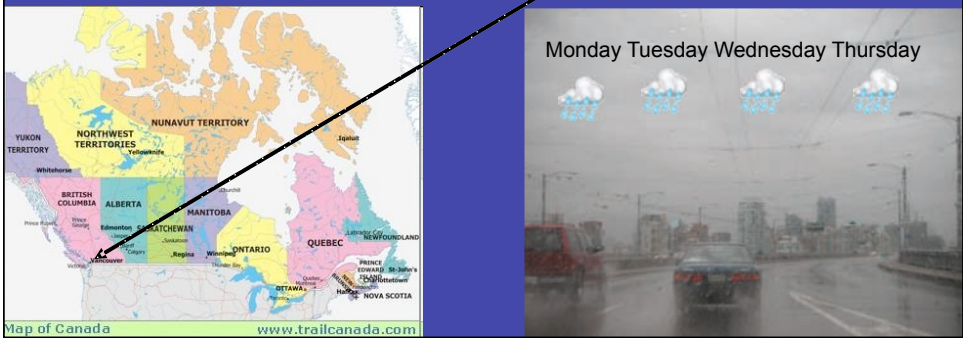
Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

Farm animal welfare assurance- science and its application.

J. Rushen and A. M. de Passillé,

Agriculture and Agri-Food Canada, Agassiz, BC, Canada,



We use science

News release

Government of Canada Helps Farmers Improve Animal Care Practices GUELPH, Ontario, April 30, 2010

"I'm proud to be part of a Government that helps farmers … utilize the latest research …. in farm animal care." Govt representative

"NFACC appreciates the Federal Government's support to address farm animal care issues … utilizing science-based and collaborative processes." Industry representative

And we use science

Canadian Federation of Humane Societies
CFHS FSCAA

The CFHS advocates for science-based changes to farm animal practices

The image cannot be displayed. Your computer may not have enough memory to open the image, or the image may have

"The HSUS protects all animals through legislation, litigation, investigation, education, science, advocacy and field work"

But they ignore science

US National Pork Board

"Animal Welfare Activists Too Often Ignore Sound Science in Their Efforts to Change Animal Agriculture."

and they ignore science

COMPASSION OVER KILLING

veggieboards

"Labeling these eggs "(United Egg Producers) Animal Care Certified" ignores science, deceives consumers…"

The image cannot be displayed. Your computer may not have enough memory to open the

"Ignores science" 29,800 web pages

"UK government *ignores science* on GM crops"

"Arkansas legislature *ignores science*, mandates toxic fluoridation"

"Don't Force the EPA to *Ignore the Science* on Global Warming."

"New USDA Dietary Guidelines *Ignore Science* on Carbohydrate Restriction"

"Spotted owl plan repeats mistakes, *ignores science*"

"Bush Snowmobile Policy *Ignores Science*"

"NY Times ignores science"

"Russia oil, gas company ignores science"

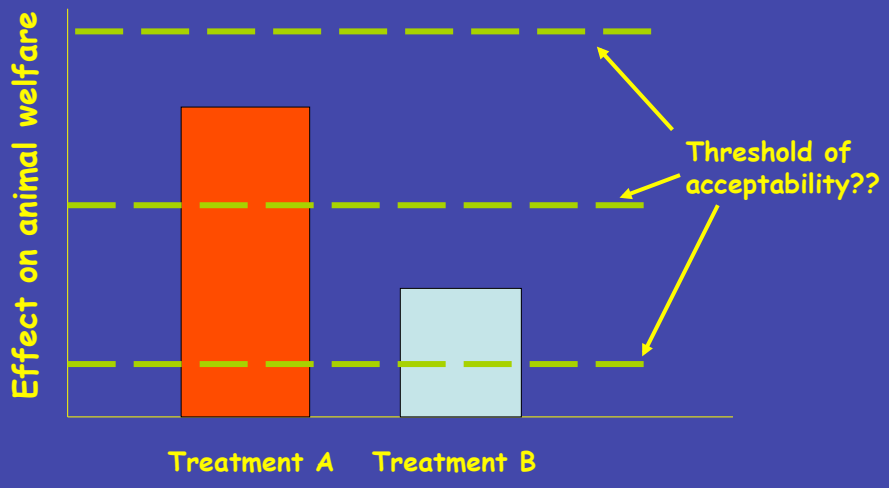
"Canada ignores science…"

Take home message: be cautious when you hear claims about what science says or does not say about animal welfare

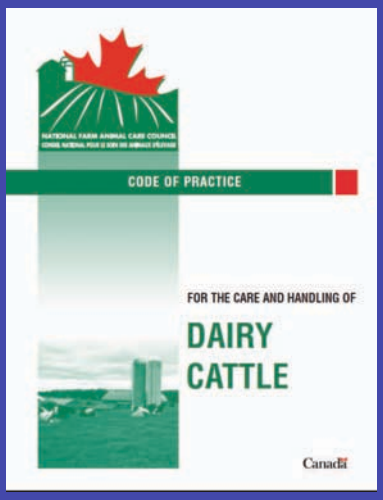
To successfully apply science to resolve issues in farm animal welfare, we need to:

1. Be realistic in our expectations – recognize scientific limitations and uncertainty
2. Identify where research is most effectively applied
3. Recognize the challenges to the application of science

Science can measure the impact on animal welfare but cannot decide what is "acceptable"



Need a clear statement of community standards to determine what is acceptable



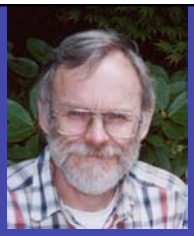
Developed by dairy farmers, animal welfare groups, government, scientists, food retailers, food processors

Welfare assurance in Canada needs to be based on these Codes of Practice

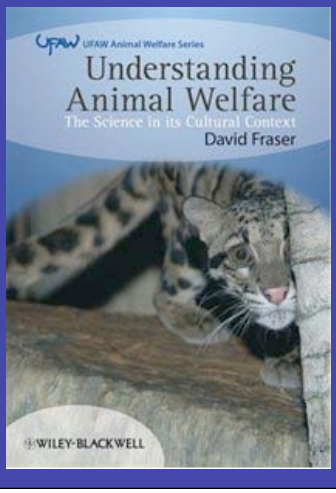
The assurance of good animal welfare needs to be based on…..

a definition of animal welfare that has broad consensus and which is amenable to scientific investigation and input

A consensus definition of animal welfare needs to address the full range of concerns of all stakeholders

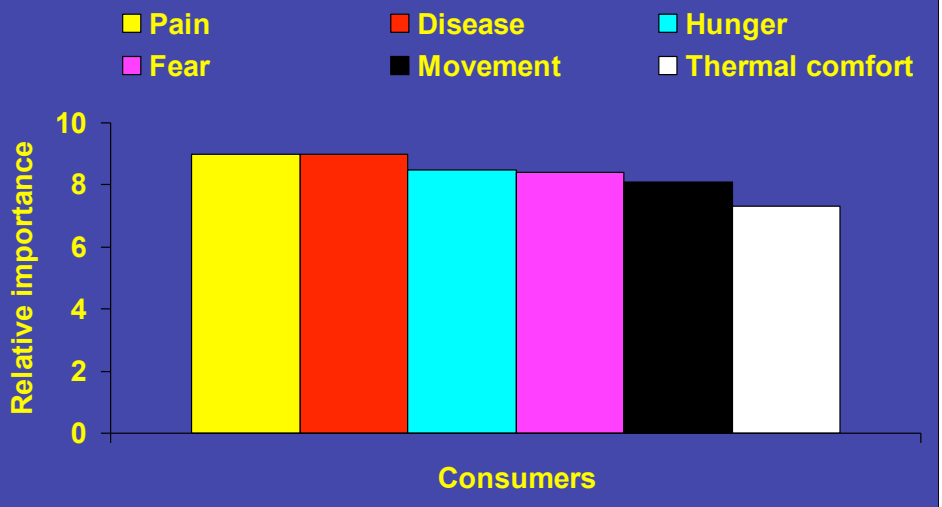


1. Concerns about health, disease, productivity (biological functioning)
2. Concerns about mental or emotional suffering
3. Concerns about "unnatural" practices or inability of animals to fulfill their nature



What are the welfare concerns of consumers?

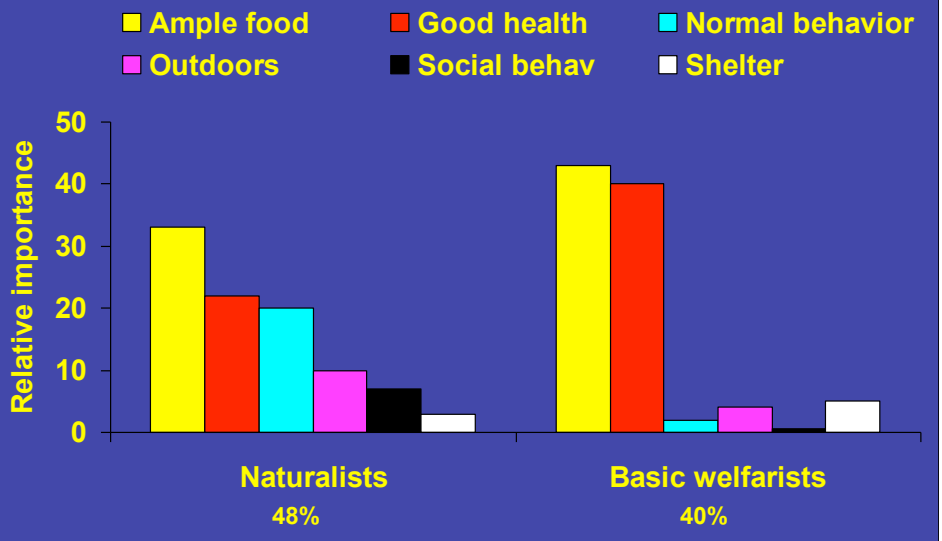
Postal survey- 459 consumers Belgium



Tuyttens et al 2010

What do consumers want for farm animals?

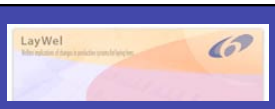
Telephone survey- 1090 US citizens



Prickett et al 2010

Take home message: the public has diverse views on animal welfare and is most concerned about pain, disease, hunger and behavioural problems

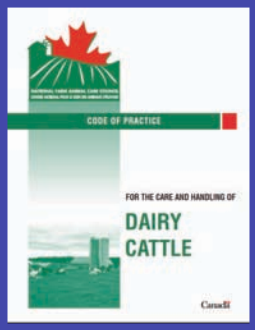
Why we disagree about laying hen welfare



Groups of scientists of diverse disciplines can reach a consensus about animal welfare

Essential: Scientific input into animal welfare standards needs to be balanced and diverse:

Ethologists, veterinarians, nutritionists, physiologists



World organization for animal health

An animal is in a good state of *welfare*…. if it is

- healthy, comfortable, well nourished, safe,
- able to express innate behaviour,
- not suffering from unpleasant states such as pain, fear, and distress

The OIE definition provides the best definition of animal welfare that we have that has broad, global consensus

An *animal* is in a good state of *welfare* if (as indicated by scientific evidence) ……. it is healthy…..

Lameness is a painful, costly condition affecting dairy cows

Each case of lameness costs $400 - $700

What do we know about the incidence of disease among Canadian farm animals?

Bovine respiratory disease in feedlots	Spain	21% - 28%
Footpad dermatitis in broilers	Brazil	20% - 68%
	UK	10% - 98%
Osteochondrosis in fattening pigs	Netherlands	12% - 41%

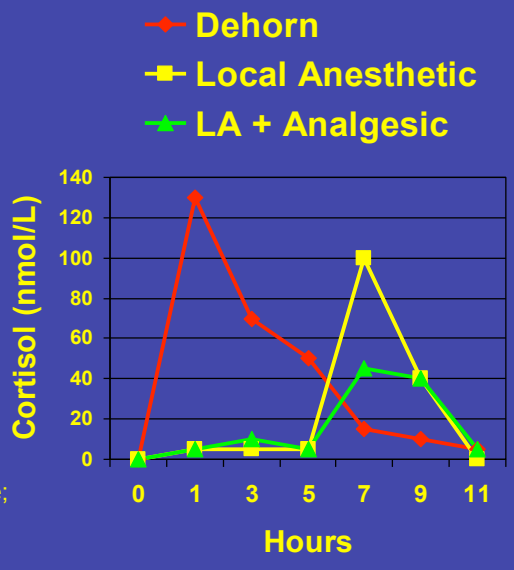
To assure consumers / public that the welfare of farm animals in Canada is good, we need to know the state of health of farm animals in Canada

Is the OIE definition of welfare amenable to scientific research?

An *animal* is in a good state of *welfare* if (as indicated by scientific evidence) ……. it is not suffering from unpleasant states such as pain, fear, and distress.

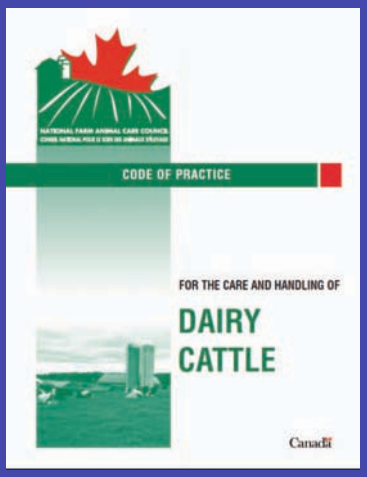
Use of painful procedures is a major concern of the public / consumers

Measuring pain in farm animals: Increases in cortisol show the pain of dehorning and the value of pain control



Local anaesthetic (LA) = lignocaine;
Analgesic (NSAID)= ketoprofen

Stafford et al., 2002 Res Vet Sci 73:115-123



Requirement: Pain control must be used when dehorning or disbudding

Recommended BP: Use a combination of sedatives, local anesthetics and analgesics

Myth: We cannot scientifically assess the amount of pain animals feel.

Reality: There are many scientifically respectable techniques to measure the degree of pain caused to animals

Is the OIE definition of welfare amenable to scientific research?

An *animal* is in a good state of *welfare* if (as indicated by scientific evidence) it is …. able to express innate behaviour,

The issue of behavioral deprivation is central to the animal welfare issue:

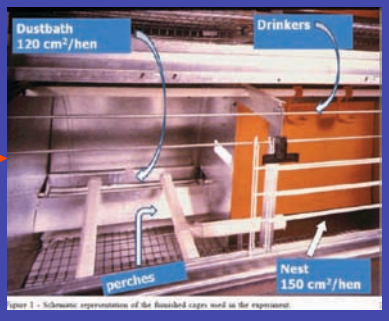
California Proposition 2:

Requires that calves raised for veal, egg-laying hens and pregnant pigs be confined only in ways that allow these animals to lie down, stand up, fully extend their limbs and turn around freely.

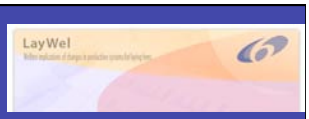
Supported by 63% of Californians in 2008

How important is it to animals to be able to perform their natural behaviour?

Using natural behaviour to improve housing



Improving animal welfare within housing systems



Different housing systems have different advantages and disadvantages for animal welfare and it is very challenging to determine which is best overall

Research can be very helpful in improving each type of housing system

Practical issues associated with auditing farms:

Limits on use of scientific knowledge

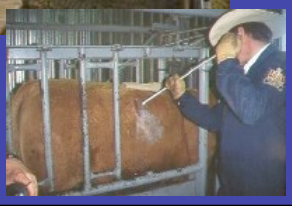
1. Limited time available on farm during audit
2. Audits done by people with limited scientific training
3. Technical limitations e.g. non-invasive measures
4. Assurance on the inputs or the outcomes?

Input-based standards describe the housing and management

e.g. free stall housing

Size of stall

Type and quality of flooring

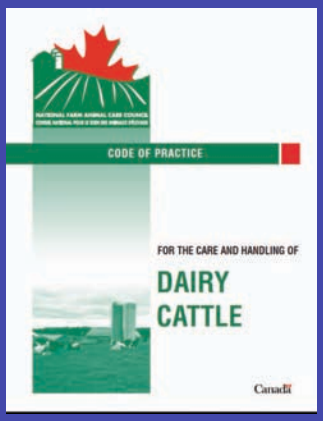


Painful practices e.g. branding, tooth clipping

Housing in cages

perches

Examples of input-based standards



Stocking density must not exceed 1.2 cows per stall in a free stall system.

Resting areas must provide 120ft2 (11m2) per mature cow in bedded-pack pens.

Dairy cattle must not be tail docked unless medically necessary.

Input-based standards

Pros:

- Easier to verify compliance
- Identify presence of risks- Can prevent welfare problems occurring

Cons:

- May not achieve what we want (i.e animal welfare may still be poor)
- Often are based on "average" animal
- Can be inflexible (inhibits innovation)

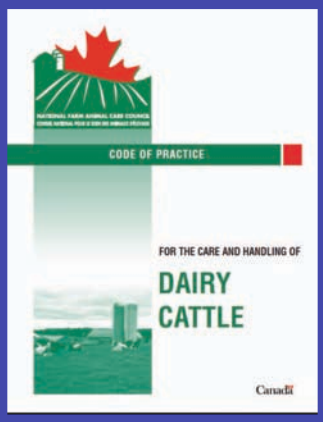
Outcome-based standards describe the actual welfare state of the animals

Abnormal behaviours

Opportunities for normal behaviour

Incidence of illness or injury

Examples of outcome-based standards



Routinely observe cows for lameness and aim for prevalence of less than 10% for obvious or severe lameness

Build stalls to minimize hock and knee injuries and to allow cows to rise and lie down with ease.

Outcome-based standards

Pros:

- Based on actual state of welfare
- Can deal with individuality of animals
- Flexible (unique solutions on different farms)

Cons:

- Assesses state of animal welfare only at one time point
- Difficult to measure and verify compliance
- Difficult to define standards

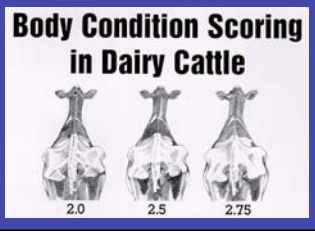
Essential to have both

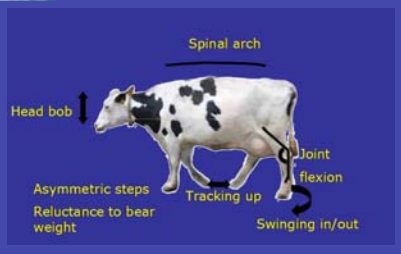
Resource and management based measures - to identify presence of risks: hazards or safeguards

Animal-based measures – to determine actual presence of good or poor welfare at a particular time

Auditor training to assess animal welfare on farm

PAACO
Professional Animal Auditor Certification Organization Inc.
ACCREDITED PROGRAM





To successfully apply science to resolve issues in farm animal welfare, we need to:

1. Be realistic in our expectations – recognize scientific limitations and uncertainty
2. Identify where research is most effectively applied
3. Recognize the challenges to the application of science