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Turning science into policy: The case of farm animal welfare in Canada

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Implications

- Development of farm animal welfare standards in Canada has evolved significantly over 35 yr in terms of process, leadership, and the role of science.
- Key elements of the current process include:
  1) influential producers and producer organizations that see the benefit of having science-informed standards,
  2) a credible coordinating body to ensure that a well-defined process is followed in developing standards, and
  3) trusted scientists who are engaged in relevant research and willing to participate.
- The process benefits from having a distinct and defined role for the scientists, specifically to analyze relevant science and identify conclusions that are scientifically justified.
- Active participation of the retail sector may prove important for ensuring compliance.

Key words: animal welfare, policy, science, standards

Introduction

Farm animal welfare is a policy issue that combines ethical debate, advocacy campaigns, and commercial interests and touches on other issues as wide-ranging as food safety, workplace safety, access to food and environmental protection. How to create science-informed standards for farm animal welfare is a question that has been answered in different ways in different countries. Canada, over the past 35 yr, has evolved some approaches and insights that may provide useful guidance for other jurisdictions and on other topics that would benefit from science-informed policy.

Evolution of Farm Animal Welfare Standards

In the 1950s, as the Western world began to recover from the devastation of two World Wars and the Great Depression, concern for the well-being of animals returned as an issue that gained widespread public attention. An early policy response was the passing of the Humane Slaughter Act in the United States of America (US) in 1958, accompanied by President Eisenhower’s ironic remark that the volume of mail he received made it appear that the slaughtering of animals was the top political issue of the day. During the 1960s, confinement systems of animal production were widely adopted in the industrialized countries, and they quickly became a focus of public concern, initially in the United Kingdom (UK) and subsequently in other European and English-speaking countries. The UK was arguably the first to create public policy on the issue with an Act of Parliament in 1968 that made it an offense to cause or permit unnecessary pain or distress to livestock and also commissioned the writing of “Codes of Recommendations for the Welfare of Livestock” (The Stationery Office, 1968). The Act specified that failure to follow a code is not in itself an offense but could be used as evidence in cases where a person is charged with the offense that the Act created. This was followed, much later, by more specific legislation in the UK which, in effect, turned some of the provisions of the codes into regulatory requirements, and subsequently by European Union directives that set minimum requirements for many aspects of farm animal production including space allowance, air quality, and freedom of movement.

The policy response in Canada was partly an attempt to copy the British model by creating “Recommended Codes of Practice” for the various animal species but without any form of legal recognition of the codes and in a country where regulating methods of raising animals on farms was not politically feasible. As the first step, the then-Minister of Agriculture in the federal government (who was a staunch champion of agriculture) called for codes of practice to be written. The federal government, although it funded and published the codes, entrusted the leadership of the process to the Canadian Federation of Humane Societies (the national organization representing animal protection groups across the country) whose involvement was intended to give the codes public credibility. For each code, the Federation, acting at the request of the national producer organization for the species, convened a committee consisting of representatives of stakeholder organizations (i.e., organizations of producers, processors, and transporters), plus representatives of government, the veterinary profession, the humane movement, and one or more scientists nominated by scientific organizations such as the Canadian Society of Animal Science. This process continued about 10 yr and resulted in codes (published 1983–1990) for chickens, pigs, special-fed veal calves, mink, fox, poultry, and dairy cattle.

The code development process was contentious for various reasons. With 10 provinces in the country, only a few could be represented, and producers in other provinces sometimes complained about a lack of representation. The Federation was criticized by some of its member organizations for being involved in standards for activities—especially mink, fox, and veal production—which some animal protectionists opposed in principle. And the national organization representing beef cattle producers objected to the Federation leading the development of their code, participating only when they could provide the leadership themselves.

In the meantime, however, a broader process of stakeholder consultation around farm animal welfare was created with the formation (in 1986)
of the national “Expert Committee on Farm Animal Welfare and Behavior.” The Expert Committee included representatives of a wide range of stakeholder organizations including national producer and processor organizations, the humane movement, and government, and thus served as a national consultative body that encouraged communication and common approaches to animal welfare. The Expert Committee also included several scientists, partly because it was intended to report on relevant research issues to the Canadian Agri-Food Research Council.

With this structure in place, and with cracks developing in the existing code development process, responsibility for developing codes was passed to the Canadian Agri-Food Research Council as the parent body of the Expert Committee. The process, however, remained much as before and led to codes published in 1996–2003 for farmed deer, horses, bison, veal calves, livestock transport, laying hens, poultry, and goats. However, when the federal government disbanded the Canadian Agri-Food Research Council and the Expert Committee, allegedly as a cost-cutting measure, the code process was left in limbo.

Given the resulting vacuum, in 2002 the federal government sponsored a two-day “National Forum” (which attracted about 100 participants) to encourage stakeholders to propose a new approach for developing codes and coordinating other actions around farm animal welfare. The report of the Forum called for the creation of a permanent organization that would involve all stakeholders to create communication and coordination of activities and to lead the development of codes (AAFC, 2003). This vision was realized in 2005 by the formation of the National Farm Animal Care Council (NFACC), which has more than 30 organizations as partners or associate members, representing the main sectors of animal production, transport, processing and retail together with the humane movement, government, and a scientist representing the research community. This body has, among other activities, defined a process for the development of codes (NFACC, 2014) and has facilitated the writing of codes for dairy cattle, beef cattle, sheep, equines, farmed fox, farmed mink, and pigs, with others in progress.

**The Role of Science**

Scientists played important roles throughout these events. They were consistently selected to chair and organize the Expert Committee; one co-chaired the 2002 National Forum; and in several cases, a scientist was commissioned to write an initial draft of a code as a basis for discussion. In addition, because scientists were generally seen as unaligned with either the industry or the humane movement, they often played an important role in negotiating wording on contentious issues.

However, the role of science itself was less clear. Before 2005, code development followed the common Canadian formula of decision-making through stakeholder consultation. Scientists, although bringing expert knowledge of relevant research, functioned on the committees like the other stakeholders, serving (at least in name) as “representatives” of their respective scientific organizations.

This approach to incorporating science was unproblematic for many technical issues such as specifying thermoneutral temperatures for animals of different ages. However, where the science indicated a need for significant changes to production practices, the drafting committee commonly declined to make corresponding recommendations. The result was that scientist participants sometimes felt compromised when recommendations that appeared scientifically justified were not included for economic or other reasons.

When NFACC took over the development of codes, it adopted a different procedure that gives a more distinct role to the science. Drawing on processes used by the European Food Safety Authority and by the United Egg Producers for developing animal care standards in the US, it begins...
the development of each code by assembling a committee of scientists. The mandate of this group is to review the scientific literature, identify conclusions that can be reached based on research, and identify areas that require further research before clear conclusions are possible. The scientists’ report is then subjected to peer review, and the finalized report goes to the code-drafting committee, which consists, as before, of representatives of producer and other organizations, with the scientific committee represented typically by its chairperson. This process allows a clear separation: the scientists provide factual background based on research, but the ethical decisions about what the code includes as “recommendations” or “requirements” (explained below) is left to the multi-stakeholder code committee.

Moreover, with a scientific report completed and publicly available, code committees appear to give greater priority to the science. The first code developed in this way (for dairy cattle) was a significant departure from the earlier version. For example, the scientific report summarized literature showing that “tail docking does not improve cleanliness or udder health” and that docking has certain disadvantages such as reducing “the cow’s ability to naturally control flies” (Rushen et al., 2009, p. 34). The code, accordingly, listed among its requirements that “Dairy cattle must not be tail docked unless medically necessary” (NFACC, 2009, p. 34). Similarly, the scientific report concluded “Dehorning is painful for all calves” and that a “combination of sedatives, local anesthetics, and analgesics can be used to control the distress due to the procedure and the pain during and after dehorning” (p. 30). The code included under the requirements, “Pain control must be used when dehorning or disbudding” (p. 32).

Scientific research has shown that tail docking has disadvantages for the cow and does not improve cow cleanliness or udder health. Based on this research the Code of Practice for the Care and Handling of Dairy Cattle now requires that docking not be performed “unless medically necessary”. Photo by David Fraser.

Ensuring Compliance

The early codes were explicitly voluntary, to the point that the word “recommended” was embedded in the title, at least partly in an attempt to defuse producer concerns when the idea of codes was relatively new. The codes thus served an educational function for producers, and a public relations function, perhaps especially for politicians who referred to them routinely when criticized for insufficient action to safeguard farm animal welfare. Over time, however, it was recognized that voluntary documents did little to assure the public that appropriate standards were being followed. Non-compliance was also a concern for conscientious producers who wanted to see appropriate standards followed throughout their sector. For example, in interviews about animal welfare, cattle ranchers in western Canada often expressed concern over inexperienced or part-time producers who do not follow appropriate standards (Spooner et al., 2012).

Given these concerns, NFACC took a stronger stance in its codes, by dropping the word “recommended” from the title and dividing the provisions of the codes into “requirements” and “recommendations.” Requirements were described as “fundamental obligations” that “represent a consensus position that these measures, at minimum, are to be implemented by all persons responsible for farm animal care.” Recommendations, in contrast, were intended to provide useful advice such as to “refrain from using loud noises to frighten or move cattle” and to “ensure only trained persons carry out disbudding/dehorning procedures” (NFACC, 2009).

Despite the stronger language, however, there is no legal means to ensure that the requirements in the codes are followed. Canada has national regulations pertaining to humane transport and humane slaughter, together with criminal law which prohibits acts of willful cruelty or neglect toward animals, but there is no federal law that regulates methods of keeping animals on farms and that might give legal weight to the codes. Most provinces have some form of animal protection law, and several provinces reference the codes as appropriate standards, but in most cases, the legislation falls well short of making the requirements of the codes mandatory.
The situation has led to attempts to find non-legal means to ensure (and assure the public of) compliance. The most promising of these involves the use of “animal care assessment programs” to assess compliance with the requirements in the codes. As currently envisioned, these will be created separately for the different species, in accordance with a framework that NFACC developed to give the programs common features that will help ensure their credibility (NFACC 2013). Different levels of assessment are proposed, based on the needs of the sector.

1) Self-assessment would primarily serve an educational purpose by allowing producers to identify areas where their farms are not in compliance.

2) Second-party assessment, for example by a potential customer, would provide assurances needed for the purpose of branding or to assure retail customers.

3) Third-party assessment, by fully independent auditors, would be used to demonstrate the level of compliance to the public.

Once the assessment programs are in place, it is expected that means of encouraging or ensuring compliance will follow. For products regulated by Canada’s supply management system (dairy, eggs, and poultry), producers may be required to demonstrate compliance to continue to produce (Fraser et al., 2001). In other cases, labels assuring compliance may come to be recognized and valued by consumers. The most powerful impetus may come from the retail sector: if major retail companies require compliance as a condition of purchase, this could make compliance with the codes the norm for producers of significant size.

Successes and Challenges

The development of national, science-informed standards has been made possible by a number of factors coming together.

One is the involvement of influential producers who recognize that having well-regarded standards can be beneficial, for example by maintaining public trust and allowing access to certain international markets. The existence of a national producer organization for each commodity (Dairy Farmers of Canada, Canadian Pork Council, etc.) has clearly facilitated the process by allowing communication and a unified approach within each sector.

A second factor has been the existence of an appropriate, high-level body (NFACC) that involves broad-based participation, ranging from pro-
ducers to retailers, and is widely trusted by participants. This has created a uniform and disciplined process of code development which gives the codes a degree of legitimacy that they would likely not have if each sector was left to develop its own standards by its own process (Bradley and MacRae, 2011). The involvement of the retail sector in this organization may prove crucial to achieving implementation.

A third factor has been the availability of scientists who are known and trusted by the participants and are willing to engage in a process that is time-consuming, can generate debate, and that may even bring scientists into conflict with those producer organizations that help fund their research.

A remaining challenge is to communicate science-informed standards to the public. Social science research has consistently shown that the public tends to have a simplistic conception of animal welfare, often equating good animal welfare with specific (seemingly “natural”) production systems such as free-range (Spooner et al., 2014). This creates a temptation for retailers to meet consumer concerns over animal welfare simply by stocking products from defined production systems. In contrast, scientific approaches to improving animal welfare are much more diverse, typically including protection of animal health and minimizing negative states such as fear, pain, and discomfort. A challenge will be to convince consumers, perhaps through the retail sector, to value compliance with science-informed animal welfare standards rather than simply selecting products from specific production systems.

Another challenge is to maintain appropriate and credible scientific input. Finding scientists who will support the process, and who are capable of assembling and interpreting research done worldwide, is a challenge with relatively minor species such as deer and rabbits. However, maintaining credible scientific input may become a challenge even with major species. During the tenure of the minister of agriculture who first promoted the writing of codes, the federal government became the country’s largest provider of farm animal welfare research. However, after two rounds of staff reductions, government research institutions now play a relatively minor role. At the same time, in a strategy meant to increase the industrial relevance of research, other federal research funding in agriculture was largely restricted to projects that had some form of industry support. In the case of animal welfare, however, research support from industry organizations goes mostly to short-term projects to solve recognized problems in current production systems. This leaves little or no support for exploring alternative production methods that might better address public concerns, issues like pain control if they are not current priorities for producers, or research relevant to policy and regulations (NFAHWC, 2014). Moreover, with almost all animal welfare research being supported by industry in one way or another, there is a risk that the science (and scientists) will be seen as industry biased. At present, the scientists still appear to enjoy public credibility, but a different system for funding animal welfare research is needed to maintain the perceived legitimacy of science-informed standards into the future (NFAHWC, 2014).

‘Professional’ Animal Production

In time, a shift toward a “professional” model of animal production may help promote the adoption of science-informed standards.

The intensification of animal production after 1950 was seen by many producers as a form of modernization whereby automation, environmental control, and other science-based innovations led to increased production efficiency. To its critics, however, intensification was widely perceived as a form of industrialization as captured in phrases like “factory farming” and “industrial agriculture.” This perception was accompanied by an appetite to regulate the “factory farm” environment—including space allowance, air quality and other elements—to protect the welfare of animals, much as has been done to protect the welfare of factory workers in the manufacturing sector (Fraser, 2014).

Regulating the environment is, however, only a very incomplete means of protecting farm animal welfare because of the large role that human factors play (Hemsworth and Coleman, 2011). For example, animal welfare is influenced by genetic selection, nutrition, disease prevention, group composition, animal handling, and pain control (Fraser et al., 2013), all of which depend on the knowledge, skill, and performance of producers and their staff.

“Professions” are a model of work that typically fosters a high level of knowledge, skill, and performance and hence makes a better fit to the complex demands of safeguarding farm animal welfare. Professions typically:

1) provide an important service,

2) ensure competence as a requirement to practice,
3) maintain a self-regulatory system to ensure that practitioners adhere to ethical expectations, and
4) where relevant, modify practices according to research.

Applying a “professional” model to animal production would have seemed impossible 50 yr ago when animal production was conducted by millions of unspecialized, small-scale producers. Today, however, much of animal production in the industrialized countries is conducted by a relatively small number of specialized producers. In this situation, the animal care assessment programs currently being developed, if administered by producer organizations in a consistent manner with credible oversight by an organization like NFACC, could be an important step toward demonstrating competence and adherence to ethical standards, and thus moving animal production toward a professional model. In time, such a shift could well be the most effective way to institute standards, create public trust, and ensure that science is incorporated into policy and action (Fraser, 2014).

Concluding Comments and Lessons Learned

In this example of generating science-informed policy, it was valuable to have a defined and distinct process for incorporating scientific input rather than having scientists present only as participants in a broad consultation process.

In addition, scientists individually were able to fulfill key roles in policy development because they were widely seen as trusted players. However, the funding of policy-relevant research needs to be independent of industry or other aligned parties for the science, and the scientists, to continue to enjoy such trust, and for the country to be seen as having a trustworthy approach to farm animal welfare policy.

The creation of a national, collaborative multi-stakeholder organization to lead the process has given a degree of legitimacy to the resulting standards that would not likely be achieved if the different sectors were left simply to develop their own standards by their own procedures.

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