Facilitating Change – The Role of Benchmarking as sound business practice; Implementing the lameness assessment program
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Reducing lameness and maximizing cow comfort while maintaining profitability is a challenge for dairies across the globe. To help address these issues, Novus International offers value-added services to their customers through the Novus C.O.W.S. Program. The program includes a comprehensive on-farm cow comfort assessment. To date, over 500 assessments have been completed on dairies in North America, by only a handful of assessors, ensuring accurate and consistent methodology.

Cow-based measures (including lying behavior, leg injuries, and lameness), and facility and management measures are documented for each dairy. Across North America average daily lying times ranged from 7.5 to 13.5 h/d, and average prevalence of hock injuries, knee injuries, and lameness ranged from 0 to 100%, 0 to 53%, and 2 to 88% respectively. The data are compiled to create regional benchmarks (Freestalls: Canada, California, Midwest US, Northeast US; Open lots: Texas/New Mexico).

Benchmarking, “a standard or reference by which others may be measured or judged” (Merriam-Webster Dictionary), is used to give broader context to dairy-specific data. In addition to receiving cow comfort and behavior data for their dairy, producers are given the opportunity to see how they compare to other dairies in their region based on the benchmark. Benchmarking is a valuable practice when conducting cow comfort and lameness assessments as it brings outside information on to each dairy. The use of benchmarks can help identify the presence and magnitude of an issue on-farm. It can then motivate change, and also be used to track improvements in measures such as lameness prevalence.

After participating in a Novus C.O.W.S. assessment, many dairies create action plans to make changes moving forward. Through re-assessments, producers can track how they have improved on their farm, as well as within the regional benchmark. Across the country, the Novus C.O.W.S. Program has documented several dairies that have made changes resulting in reduced lameness prevalence and increased cow comfort. One dairy in particular was very motivated by their results, mainly their initially high lameness prevalence compared to the regional benchmark. After modifying their stall base and altering other management factors, they were able to cut their lameness in half, and maintained milk production even after the removal of BST. This is a great example of the role benchmarking can play in cow comfort and lameness assessments to address issues, motivate change, and ultimately lead to improved cow comfort and dairy profitability.

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The principal driving force behind the vast majority of those that commit themselves to the veterinary profession is a lifelong desire to care for animals. Indeed, upon graduation, all veterinarians are required to take an oath which states “...... I solemnly swear to use my scientific knowledge and skills for the benefit of society through the protection of animal health and welfare, the prevention and relief of animal suffering, the conservation of animal resources, the promotion of public health, and the advancement of medical knowledge”. The addition of the statement on animal welfare in 2010 by AVMA, came in response to the external perspective that veterinarians were lagging behind in this important area of emphasis. It has often been argued that veterinarians focus on biological function to the exclusion of the other major overlapping concerns of affective state and natural living. This is perhaps not surprising, since their training largely focuses on health, with minimal formal training in ethics and behavior. One can similarly argue that animal ethologists and ethicists do not focus enough on biological fitness in their attempts to improve welfare, and the situation is complicated further by the perspectives of the consumer, who tend to include food safety and proper drug use in the animal welfare discussion.

Veterinarians can no longer be passengers in the welfare debate. They are well trained to assist livestock producers make informed decisions to improve welfare. Often, they are intimately aware of the struggles producers have managing their stock and are well informed to help them implement change. However, they must avoid the temptation of aligning too closely with industry and simply becoming apologists for archaic practices. Rather they should use their knowledge of the industries to find the best path forward, using science when it is available and informed judgment where it is not. Recently, we have seen AABP formulate recommended guidelines on bovine related issues such as tail docking, castration and dehorning, transport, lameness and management of the non-ambulatory animal, which is I believe a necessary step in facilitating change on a national scale. On a local scale, the veterinarian must evoke and lead the discussion and provide the solution on smaller farms. Their relationship with these producers largely follows the ‘physician’s model’ where the primary focus is the care of the individual animal. The welfare debate forces us to break this role and become the ‘consultant’, where we serve as the primary advisor. Many veterinarians find this switch very challenging, particularly when dealing with an emotive issue such as welfare, and maintenance of the producer as a client becomes a concern. Indeed, this challenge is magnified on larger farms where the veterinarian maybe fearful of damaging a relationship permanently. Large farms have no shortage of advice from the myriad of consultants that come knocking at the farm gate. What they lack is a person that has knowledge of their operations, is sympathetic to their concerns, capable of triaging ideas and finding a way to implement the best ones. The veterinarian is ideally situated to act as a ‘facilitator’ in these situations – serving as the person driving change and monitoring success or failure. I will use specific examples to highlight this facilitator role using The Dairyland Initiative as an outreach vehicle.

Acronyms: AVMA: American Veterinary Medical Association; AABP: American Association of Bovine Practitioners (Cattle Veterinarians)

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MONITORING THE INDIVIDUAL ANIMAL ON LARGE FARMS: TECHNOLOGICAL INNOVATIONS AND ENGINEERING SOLUTIONS
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The dairy industry in the US continues to consolidate. A greater proportion of milk is produced in dairy farms with more than 500 cows even in more traditional states in the Midwest and Northeast. In 2012, 50.1% of milk came from those herds in New York, 33.2% in Minnesota, 38% in Wisconsin, 75.2% in South Dakota and 57.8% in Michigan compared to 16, 8.5, 9, 26, and 20% in 2000, respectively (USDA Census of Agriculture). This rapid shift appears to be the trend for the future, which means that cows are housed in larger groups, making it more difficult to observe the individual animal. These operations are more labor efficient, but the question is whether there is enough time available per individual animal.

A continuous attention to the individual cow is important for improving/maintaining good animal welfare. Good animal welfare is a societal requirement, therefore a need for market access, and of course it is the right thing to do. Human labor is limited, how can we monitor our cows 24/7? Various technologies, available in the market today or in development, can provide automated monitoring, feeding and milking of dairy cows and calves. The list includes individual cow sensors that can measure their temperature, activity, resting time, rumination time, feeding behavior, and more; voluntary robotic milking systems that automatically milk cows and feed them grain while recording lots of information about the animal; and automated calf feeders that feed milk or milk replacer to young calves and measure their feeding behavior at the same time. The list keeps growing.

When would be the most important time to observe cows to make sure their health is not negatively affected and that their well-being is improved? Cows are more at risk for diseases during the transition period from late gestation to early lactation due to the various hormonal and immune system changes taking place during that time. The use of individual cow sensors during the transition period can be a valuable tool to predict cows at risk for transition health disorders, so appropriate care is given to those animals as needed. These data can also be used to evaluate the overall transition management on the dairy farm. Cows that are more susceptible to stresses in their environment will be sentinels to alert producers for the need to improve housing, handling, nutrition, feeding management, grouping, and so on.

In conclusion, new technologies available and being developed by various companies in the dairy industry are helping us improve the welfare of individual animals in our dairy farms.

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How should we treat animals? This is one of the oldest running debates of human culture. The question is now being asked again, at least partly because scientific research in anatomy, animal behavior and other fields has gradually narrowed the gap that people perceive between humans and animals.

A tension exists in our culture between “Romantic” versus “Industrial” world-views. The Romantic world-view values freedom and emotion, and it sees a good life as one that is lived close to nature. The Industrial world-view values productivity and “progress”, and sees a good life as one where science and technology overcome the hardships imposed by nature. Both world-views are deeply embedded in Western culture.

The different world-views have led to competing views of animal welfare. One focuses on the “affective states” of animals including comfort, contentment and avoidance of pain and distress. Another focuses on the basic health and productivity of animals. A third emphasizes the ability of animals to live reasonably “natural” lives. Because these different views of animal welfare are linked to deep-seated cultural values, standards and practices need to find a balance among the three if they are to be widely accepted as promoting animal welfare.

Social developments during the Industrial Revolution have also helped to shape more recent responses to the intensification of animal production. During the Industrial Revolution, major concerns arose over the welfare of workers, and a major response was to regulate features of the physical environment of factories and to limit hours of work. In countries that had experienced an Industrial Revolution, the intensification of animal production during the 1900s was widely perceived as another instance of industrialization, and the response was once again to try to safeguard welfare – in this case animal welfare – mostly by regulating features of the physical environment such as space allowance and air quality.

However, research shows that the same type of physical environment can produce very different animal welfare outcomes. For example, some dairy farms using free-stalls have a very high incidence of lameness and leg injuries while others have virtually none. These differences point to a disanalogy between industrial manufacturing and intensive animal production. Specifically, when animals spend their entire lives under human care, their welfare is affected by many factors – hygiene, nutrition, health care, genetics, handling – which in turn depend on the knowledge, skill and attentiveness of the producer and staff. In short, animal welfare depends not only on the physical environment but also, and perhaps most importantly, on the quality of animal care. How to ensure a high level of animal care in intensive systems is the next challenge in farm animal welfare.

Further reading

Lessons Learned from Other Food Animal Species: The US Egg Industry

David Inall, United Egg Producers

More than 10 years ago, UEP convened an independent and unpaid scientific advisory committee to evaluate egg-laying hen welfare standards, review existing research, conduct new research and recommend industry changes. Today, more than 80 percent of the eggs produced in the U.S. are done so by egg farmers adhering to these strict guidelines.

With the migration of families from the farm to urban areas, egg farming needed to change. Modern egg farming was born in response to this demand. To meet a changing market, farmers needed to upgrade their production facilities while keeping in mind the health and welfare of the birds. They also recognized the need to deliver eggs to the market in the quickest and most economical manner possible.

United Egg Producers developed the first industry guidelines in the early 1980s. Recognizing the growing concern for animal welfare worldwide, UEP commissioned an independent Scientific Advisory Committee for Animal Welfare in 1999. The committee was asked to review the scientific literature on specific topics relevant to the well-being of egg laying hens and to identify areas where future research was needed. UEP’s mission was to establish animal husbandry guidelines, based upon science that can be implemented voluntarily by all egg producers, regardless of the system of egg production.

Launched nationwide in 2002, the UEP Certified Program and the resulting seal featured on egg cartons provides an assurance that those eggs originate from farms dedicated to following responsible, science-based farming methods to ensure hen welfare.

Today, we are seeing more egg farmers constructing enriched colony housing, the next step from conventional cages. However, unfortunately American egg farmers are now preparing to navigate through an unwieldy patchwork of regulations and other laws that will adversely impact their production planning process. The challenge for egg farmers now is to plan and prepare for the future at a time when significant market disruption is looming.

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Farm Animal Welfare: What’s behind the labels?

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Consumers and retailers of livestock products in many countries are interested in animal welfare. The food industry has responded to this interest in a variety of different ways (FAWC, 2011). For example products can be labelled as adhering to certain assurance or organic scheme standards (Mench 2008). Products may also be labelled according to their method of production, such as free range or outdoor-reared. Some products may also use more general higher animal welfare marketing claims, such as "higher welfare" or "welfare friendly". In addition to consumer-focused labels or descriptors, animal welfare criteria can be included alongside other food safety or quality specifications required by retailers. Retailers may include this requirements as part of pro-active Corporate Social Responsibility policies or as part of a defensive strategy to diffuse potential negative media interest. Whilst all these initiatives are essentially market driven some systems such as labelling of eggs and organic standards are supported by a European legislative frameworks. Voluntary certification schemes can vary in extent of welfare requirements and in the levels of credibility. Animal welfare focused schemes such as the RSPCA Freedom Food scheme in UK or Beter Leuven scheme in Holland go beyond legislation and include requirements such as higher space allowance or access to pasture depending upon the species. Whereas industry-based schemes such as Red Tractor Assurance in UK and AMA Gütesiegel in Austria whose membership includes the majority of the industry are primarily based upon national welfare legislation. Even though standards of these schemes may not be particularly high they can confer genuine benefits where farms are regularly inspected. Schemes accredited to the generic certification scheme standard EN45011 are normally visited annually which in Europe is more frequent than official inspections undertaken by the competent authority (normally 2% of farms annually). Most approaches to consumer information place strong emphasis on resource requirements. The resources provided can give the animals values resource opportunities (Edgar et al, 2013). A key problem with a pure resource-based approach is that the variability between farms in day to day management can lead to significant variability in animal welfare. Expert animal welfare advisory groups, such as EFSA (2012), have promoted an increased use of an outcome-based approaches. As part of the AssureWel project, the RSPCA Freedom Food and Soil Association scheme have introduced the formal assessment of outcome measures, such as feather cover and cleanliness for laying hens, to promote improvement amongst their members (Main et al. 2012). This includes encouraging the producer to seek further advice and support and, where appropriate, using the result to justify a non-compliance against relevant standards relating to the management of the issue. The ultimate goal of this approach is to promote continuous improvement amongst its members. This requires a scheme-level proactive approach (Main et al, 2014).


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In Canada, like in the United States, a small percentage of the population farms and the urban population is increasingly interested to know more about farming. While generally positive, this thirst for knowledge also brings challenges about the perceived treatment of farm animals by a pet-owner society. Various actors and activists want to influence societal values and the retailers, who are then asking questions about the sustainability footprint of their value chain, including animal care issues. The food value chain created the National Farm Animal Care Council (NFACC) in 2005, with the support of the federal government. With NFACC, addressing farm animal care is about producer, processor, transporter, retailer, restaurateur, veterinarian, researcher, government and humane organization working in partnership to bring real progress on responsible farm animal care, while helping to ensure animal agriculture is viable in a climate of increasing market demands. NFACC’s first mandated priority was to update “codes of practices” for the care and handling of farm animals, in a way that would be more meaningful for the industry and bring real improvement in the welfare of farm animals in Canada. The dairy sector’s old Code was created in 1990, so Dairy Farmers of Canada (DFC) volunteered to be first to test the new process for updating Codes. The new Code not only has recommendations of best management practices, it has requirements that both respect (neglect, abuse) and go beyond the regulations in place (no tail-docking, use of pain control measures when disbudding/ dehorning, etc) for animal welfare, which have become policy of dairy organizations.

The second step in the NFACC process is to create an assessment program. Animal care is seen as a pre-competitive issue by NFACC stakeholders. Moreover, DFC believes farmers should take the lead in elaborating their own program, and a draft program has been tested once on farms. DFC’s vision is that all dairy farms should be assessed because we comingle milk. The precedent and infrastructure already exists as the HACCP-based on-farm food safety program has already been brought to all farms. Currently 85% of farms are validated with the remaining farms to receive their certification by fall 2015. As societal pressures are not only about animal welfare, the dairy industry – and other agricultural sectors – are also looking at integrating environment, traceability, biosecurity and other good farming practices together. This integration approach is what the Canadian Government has coined “assurance systems”.

Finally, an assurance system needs its marketing scheme. DFC has started its dairy marketing campaign by highlighting the dairy farmers’ commitment to quality in 2014.
Consumers are asking more questions than ever about the source of their food and are pushing retailers, manufacturers, and farmers to be more transparent about how food is produced and, in the case where food is animal sourced, how that animal is treated during its lifetime. Consumers want assurances that animals are treated humanely and that ethical food production practices are being followed.

Recent activity by humane animal organizations has prompted passage of additional animal welfare legislation in response to what is seen as inhumane treatment of animals. It has also focused public attention on the more unpleasant or unnecessary practices that are currently in use. For example, in the dairy industry, focus has been on issues such as tail docking, dehorning, and treatment of downed cows among others.

To respond to these concerns, retailers are looking to the dairy industry to provide transparency in their operations, specifically as they relate to animal welfare. One way to do this is through animal welfare audit programs. The use of welfare audit programs that demonstrate and verify farmers’ commitment to responsible management practices can help to assure the consuming public and industry critics that the dairy industry is dealing adequately with animal welfare issues.

At Costco Wholesale we are committed to the welfare, and proper handling, of all animals that are used in the production of food products sold at Costco. This is a long-standing commitment, and we pledge our diligence in working with industry and academia in the pursuit of new and improved technologies and methods to further enhance animal well-being. This is not only the right thing to do, it is an important moral and ethical obligation we owe to our members, suppliers, and most of all to the animals we depend on for products that are sold at Costco.

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LuAnn Troxel
Strategies for Improving Animal Welfare
2014 ADSA Discover Conference
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“The Importance of Dairy Welfare to Our Industry”

Animal Welfare on our dairy farm and in our own veterinary practice

Housing
Procedures with animal welfare concerns:
  Dehorning
  Castration
  Separation of cow and calf after calving
  Heat detection / Breeding
Foot and leg health
Non-ambulatory cases
Using social media to communicate about our farm

Personal perspective on veterinary practice evolution over the past 30 years

Changes in using anesthetics
Changes in prescribing medications
Challenges moving forward

Benefits and personal perspective of 3rd party animal welfare programs

Showing compassion to man and beast

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There is increasing public awareness of farm animal welfare issues in the US and approaches to address this issue have emerged. These approaches can be divided into three categories: legislation, auditing programs and voluntary assessments.

Legislation has been passed to address specific practices. For example, in 2010, California banned tail docking of cattle. In general, legislation is the least common form of assurance in the US. Auditing programs, often associated with a specific product label, have become more common. These programs, including American Humane Certified, Certified Humane, Animal Welfare Approved, and Validus, vary in both methodology and number of operations covered. All have specific requirements; aspects of the farming practice or operation that must be met in order to participate in each program. In all cases, the audit is performed by a 3rd party, with no affiliation or interest in the farm. Some of these programs also utilize a weighted index or score to determine compliance. This approach involves auditing features of the operation, assigning a value to the outcome and requiring a minimum overall score in order to use a given label on product. In all of the 3rd party-auditing programs described here, nonconformance is documented and timelines for corrective action outlined. While there are a number of similarities among these audited programs, ideological differences are also apparent in their requirements (e.g. no tie stalls allowed or only certify pasture-based operations). Finally, National Milk Producers Federation has implemented a nation-wide voluntary program, Farmers Assuring Responsible Management (FARM). This program covers 70% of the industry. FARM is comprised of a questionnaire and evaluation of key animal- or outcome-based measures, namely lameness, injury, body condition and hygiene once every three years. The process involves the farmer and a 2nd party evaluator, with connection to the farm (e.g. veterinarian, processor representative). A 3rd party audit is used to evaluate the repeatability of the 2nd party evaluations in a sub-sample of farms. Requirements designed to be inclusive; no willful acts of abuse or refusal to allow 3rd party evaluators on the farm are the only exclusion criteria. The primary goal of FARM, a check-off funded program, is educational and to foster improvement over time.

There is considerable diversity among the current approaches to dairy welfare in the US. The scale, scope and level of oversight are all topics for discussion here at the 27th Discover Conference.
Treating animals in a humane manner is the right thing to do. It is our ethical and moral obligation to provide for animal wellbeing. Improving animal welfare can also improve handler safety because calm animals are less likely to injure people. We must also protect our social license to operate by listening to what the public thinks about animal care.

Third Party animal welfare audits play an important role in accomplishing the objectives set up to improve the wellbeing of animals at the farm. Annual certification of animal care by third parties provides the necessary identification of areas that need improvement in an unbiased, responsible manner. A third party that bases the audit on defendable sound practices is key for the success of a certification program. A well founded scientific advisory committee that reviews the audit process annually is paramount.

Even though certification does not yet seem to create a premium value to the product, it does create competitive advantages in the market place. Animal Welfare certification provides retailers a tool for credible response’s to consumer questions about animal welfare in the media. Certified Animal Welfare products differentiate themselves from products without this attribute.

For continuous improvement of Animal Welfare, we are working on developing a higher level of third party audits. Items such as unannounced inspections and third party video monitoring of operations as well as verification of detailed implementation of SOP are being proposed.

As described by Charles Arnot, “Producers must maintain a balanced production system. A system that is economically viable, scientifically verifiable and ethically grounded.” Third party audits and certification is one important tool in helping maintain that balance.

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In 1989, US pork producers developed the Pork Quality Assurance® program, a producer education and certification program to reduce the risk of violative animal health product residues in pork. Modeled after the Hazard Analysis Critical Control Point programs used by food manufacturers to ensure the safety of food products, PQA was customized for on-farm use. It was designed to identify practices with potential to result in a food safety hazard and minimize this potential risk through producer education of relevant on-farm practices. The success of the program was demonstrated by significant producer participation, customer acceptance and more importantly, a measurable reduction in the instances of violative residues in pork.

The program was revised repeatedly, approximately every three years, with updated content take from new scientific knowledge, and to address the evolving industry and changing production practices. As consumers show greater interest in the attributes of the products they purchase for food, their interest in the well-being of the animals raised by pork producers has come to the forefront. While pork producers have had programs and educational materials in place since the mid-1990’s, the PQA program was enhanced in 2007 to include animal care and became known as Pork Quality Assurance Plus (PQA Plus®). This new version of the program has resulted in over 50,000 certified individuals and over 75% of the US swine inventory being raised on site assessed farms.

The domestic and international marketplace is dynamic and continues to evolve and so to should industry assurance programs. Four pork processing companies began to develop an on-farm audit in response to customer demand. Pig farmers who sell to more than one processing company asked their industry organizations to facilitate discussions among producers, packers and customers to develop a common foundation for on-farm animal welfare audits, facilitate equivalency among packers, and minimize the need for multiple audits on a farm supplying multiple packers. The common foundation for this audit should be based on PQA Plus and TQA. A swine industry Audit Task Force was created and has been working to:

- Provide stakeholders with a consistent, reliable and verifiable system that assures on-farm animal well-being and food safety.
- Eliminate duplication and minimize the administrative burden placed on producers.
- Develop consensus about consistent standards between and among various independent audit programs with PQA Plus serving as the foundation.
- Create a standard process that results in inter- and intra- observer consistency and protection of herd health through biosecurity protocol.

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