

Meeting Future Demands for Animal Care

Tina Widowski

Department of Animal & Poultry Science, University of Guelph, Guelph, ON N1G 2W1

Email: twidowsk@uoguelph.ca

■ Introduction

With changes in consumer expectations and the rapid development of animal welfare programs by major food retailers in the U.S., the terms “welfare audits” and “measurable indices of animal welfare” have suddenly entered the lexicon of the North American food animal industries. Although these terms may be new within the context of North American animal agriculture, the concepts of defining animal welfare standards and then somehow verifying that those standards are applied in practice are not. For those of us who conduct research on animals, a system for providing written protocols for animal care as well as documentation and auditing to ensure compliance with standards defined by the Canadian Council of Animal Care has been in place for years. With regard to food animals, various schemes for auditing welfare at the farm or herd level have been evolving in Europe since the 1980’s –the earliest were developed for certification of organic animal products in Austria and Germany (Johnsen et al., 2001). Increasingly, animal welfare standards are being included in quality assurance schemes around the world (Andersen, 1997; Gready, 1997; Barnett, 2001).

There are several different approaches and a variety of tools that can be used for objectively assessing the welfare of animals on farms. The purpose of this paper is to outline some of those approaches and to give some specific examples of how different tools can be used for welfare auditing schemes on the farm. A discussion of how our Codes of Practice might fit in to welfare assessment on Canadian farms is included.

■ *How do we assess animal welfare?*

In laboratory studies, a variety of measures that indicate animals’ biological responses to housing or handling are used to evaluate welfare. These

measures include stress hormones, immune function, behaviour, productivity and incidence of injury or disease. Some of these indicators are best suited for the laboratory, as they require expensive biological testing or are very time consuming. However, there are a number of practicable measures that can be used on farms. It is well recognized in the scientific literature that no single measure accurately reflects the welfare status of an animal and that some combination of indicators is necessary for a valid assessment of welfare. This is true for on-farm assessment as well for research.

■ What measures *can* be used on farms?

In general, there are two broad categories of parameters that can be used for practical welfare assessment.

The first category involves *specific standards for housing and management systems*. These sorts of measures have been referred to as “environmental” parameters (Johnsen, et al., 2001), or “resource and management” standards (Main et al., 2001) and are commonly referred to as “engineering standards” in laboratory animal care (Bayne, 1998). These types of parameters are basically a prescription for the features of the physical environment and husbandry procedures that are generally thought to promote welfare. Housing standards might include such things as space allowance, feeder space, number and flow rates of drinkers, floor types, etc. Husbandry and management standards might include such things as specific ages and/or techniques for castration and processing, approved methods for euthanasia or even training requirements for stockpeople. The advantages of using this type of parameter for on-farm welfare assessment are that they are clearly defined and relatively easy and inexpensive to audit. They also often serve as a good basis for problem solving. The disadvantage is that “engineering standards” do not account for the level of care or attention to detail that the stockpeople provide, which may be just as, or even more important for welfare, than the design of the facilities.

The other broad category of parameters includes measures of the *animals’ reactions or responses* to the production system. These have been referred to as “animal-based” parameters (Johnsen et al., 2001), measures of “outcome” (Main et al., 2001) or “performance standards” when referring to lab animals (Bayne, 1998). This type of measure would include such things as records of veterinary treatments, deaths and culls, incidence of disease and injury, or scoring for body condition or behaviour. Temple Grandin’s welfare audit for slaughter plants is a good example of a “performance” based system in that it tracks the numbers of animals slipping or falling anywhere in the facility, vocalizing during handling and stunned correctly on first attempt (Grandin, 1999). Grandin developed these measures by identifying the critical control points for welfare during handling and stunning.

One advantage to using animal-based parameters is that they usually involve some measure of behaviour, health or physiology, and therefore, are more direct assessments of welfare. Another advantage to the animal-based approach is that, while it provides criteria for expected outcomes, it does not specify how to achieve it. This allows more flexibility in the design of housing and husbandry systems and acknowledges the fact that acceptable welfare can be achieved in more than one way. However, the recording of some animal-based parameters is more time consuming and difficult to accomplish in practice.

■ **Putting Those Measures Together: Some Examples**

The choice of tools used for measuring welfare depends on the specific goals of an assessment program. If the purpose is to certify to customers that some minimum standards for animal care are being met, the measures must be easily verifiable by a third-party assessor. Sometimes those measures are integrated into a single index or score for describing the welfare status of a farm and for comparison with other farms.

If the goal of the assessment is also to increase awareness of best practices or to provide individual producers with information that allows them to detect and alleviate specific welfare problems on their farms, the scheme may also include some self-assessment that is not easily verified during an audit.

At the time of writing this paper, the National Pork Board in the U.S. was in the final stages of developing the Swine Welfare Assurance ProgramSM (SWAPSM). The first phase of the program concentrated on gestating sows (Swine Welfare Indexing SystemSM), but now the program has been expanded to include two parts: breed-to-wean and wean-to-finish. Although details of the system have not yet been released, background information on the index for gestating sows have described it as an “outcome” based system. It primarily uses farm records for mortality and health, in addition to observations such as body condition and skin lesions as measures. It was intended to be applicable to all production systems, independent of type of housing (indoor or outdoor, loose or gestation stalls) or size of operation. Certain aspects of the facility, such as use of a warning or alarm system and hospital pens, are also included as measures. Each measure is given a score, and some measures are weighted more heavily than others in calculating the final overall score for the farm. SWAPSM was developed as a voluntary program for producers, similar to the PQA, and designed to easily fit within an educator to verifier program.

In Australia, The Rural Industries Research and Development Corporation is developing welfare audits for various livestock industries. The Welfare Audit for the Chicken Meat Industry was completed in 2001, and the Pork welfare audit

is expected to be released in June 2003. The Australian welfare auditing system comprises a series of questionnaires used to document husbandry and management practices. It is based much more on a "resources and management" approach in that the forms consist of series of yes or no questions about housing and management (e.g. "[At bird placement] Were waterers at the correct height? Was water available at all nipples/cups/bells? Were unthrifty birds culled?"). Auditors are to refer to these forms as well as barn records for verification. Questions are divided into three categories: "critical for welfare", "good practice" and "hard to verify". A certain number of required questions on each page must be answered in order to pass the audit. What is interesting about this approach is that excerpts from the Australian Codes of Practice are used throughout the forms as bases for recommendation (e.g. specifications for barn temperatures, minimum fan capacities). Some of the questions, although not verifiable, are simply intended to increase awareness of best practices (e.g. "Were the chicks tipped gently ...")

■ Welfare Audits for Canada?

The Canadian Recommended Code of Practice for the Care and Handling of Farm Animals - Pigs have provided a national set of welfare guidelines for the Canadian pork industry since the early 1980's. The Codes were developed through a consultative process that involved many stakeholders including animal scientists, veterinarians, and representatives from government agencies, national commodities and humane societies. So why are the Codes of practice no longer sufficient on their own? Two of the goals of the Food Marketing Institute/National Council of Chain Restaurants Animal Welfare Program are "implementation of practicable and attainable guidelines based on science; and a measurable audit process". Although the Codes might serve as guidelines, it is often suggested that many producers do not use them or are not even aware of their existence. Also, many of the guidelines included in the Codes are not auditable as written.

A recent report by the George Morris Centre (Mayer, 2002) states that although the Canadian food animal industries have not (yet) felt the pressure from food retailers as in the U.S., "commodity groups... should move ahead with developing compatible animal welfare standards and auditable programs to implement these standards." The report also recommends that the Canadian Codes of Practice should serve as a basis for the development of measurable animal welfare standards, and that quality assurance and on-farm-food safety programs should serve as vehicles for implementing third-party animal welfare audits in Canada.

It is not yet clear what direction animal welfare audits will take in Canada - how they will be administered or what types of measures will be made on farms - but

some form of verification of the standards of animal care provided on farms is likely to be in our future. The Canadian Pork Council has established an Animal Welfare Working Group that is now in the early stages of examining auditable standards for animal welfare in the Canadian hog industry.

■ References

- Andersen, T. (1997) Quality assurance in Denmark. *The Pig Journal* 39:23-28.
- Barnett, J. (2001) *Welfare Audit for the Chicken Meat Industry*, Rural Industries Research and Development Corporation, Barton, ACT, Australia.
- Bayne, K. (1998) Developing guidelines on the care and use of animals. *Annals of the New York Academy of Science* 862:105-110.
- FMI/NCCR (2002) Report of the Animal Welfare Program of the Food Marketing Institute/National Council of Chain Restaurants (June 2002) <http://www.fmi.org>
- Grandin, T. (1999) Critical control points (CCPs) of humane slaughter and handling. <http://www.grandin.com>
- Gready, R. (1997) A whole industry approach to farm and quality assurance: Farm Assured British Pigs. *The Pig Journal* 39:90-96.
- Johansen, P.F., T. Johannesson, P.Sandoe (2001) Assessment of farm animal welfare at herd level: many goals, many methods. *Acta Agriculturae Scandinavica, Suppl.* 30:26-33.
- Main, D.C.J., A.J.F. Webster, L.E.Green (2001) Animal welfare assessment in farm assurance schemes. *Acta Agriculturae Scandinavica, Suppl.* 30:108-113.
- Mayer, H. (2002) Animal welfare verification in Canada: A discussion paper. The George Morris Centre, Calgary, AB.