



Welfare Assessment Systems: What are the Differences

Renee Bergeron¹, Ashley Roberts¹, Penny Lawlis² and Tina Widowski¹

¹ University of Guelph, ² Ontario Ministry of Agriculture, Food and Rural Affairs

Due to societal values and concerns, the notion of food quality has evolved over time, and now extends far beyond nutritional value to include health, safety, environmental impact, even the local economy. As a result, animal welfare is increasingly seen as an important attribute of the food quality concept. Whether or not consumers are willing to pay more for animal friendly products, they expect their food to be produced under acceptable welfare conditions. In response to these societal concerns regarding animals, various welfare standards have been developed. These include legislation, codes of practice, and quality assurance programs with a welfare component or focusing solely on animal welfare. In order to ensure that standards are being met at the farm level, these various initiatives must include a verification process, ideally performed by a third party.

On-Farm Welfare Assessment

When animal welfare is assessed at the farm level, scientists and animal specialists not only look at the animal itself, through animal-based measures such as body condition score, health, injuries, behaviour, etc., but they also consider the quality of the environment and care provided by the stockperson. Measures associated with the environment of the animal, such as housing, feeding and water, temperature, etc. are called resource-based measures, whereas measures of the quality of husbandry, such as training, standard operating procedures, record keeping, etc., are called management-based measures. Resource and management-based measures may also be called input-based measures, and animal based-measures are the output-based measures (Main et al. 2003).

There is an agreement among scientists that output or animal-based measures are the most valid and flexible indicators to assess animal welfare. They focus on the goal, which is a good state of welfare for the animal, rather than on the way it may be achieved. However, input-based variables are essential to assess the risk for animal welfare, and tend to be more reliable, easy and quick to measure (EFSA, 2012).

Sw Welfare Assessment Systems

This paper presents and compares three systems that have been recently developed to assess pig welfare at the farm level. The objectives of these programs are to help farmers make improvements to their facilities and management, and to inform consumers about the welfare status of farm animals. All three systems are based on a variety of measures, but differ in their focus on input or output variables. The programs also emphasize the importance of assessor training for the validity of data collected.

European Welfare Quality® Program

The European Welfare Quality® program was developed by a team of scientists from various European countries, following a research project that took place from 2004 to 2009. The program provides ways of assessing pig, poultry and cattle welfare at the farm level and to classify farms according to four welfare categories. The criteria used by the program have been discussed with members of the general public, farmers, and other stakeholders (Welfare Quality®, 2009).



Table 1. Animal-based measures used to assess¹ pregnant sow welfare according to three assessment programs

	Welfare Quality®	PQA Plus®	ACA
Animal-based measures			
Health & injuries			
Wounds on the body	X ²	X	—
Vulva lesions	X	X	—
Body condition score	X	X	X
Coughing (respiratory disorders)	X	—	—
Sneezing (respiratory disorders)	X	—	—
Pumping (laboured breathing)	X	—	—
Rectal prolapse (enteric disorders)	X	—	—
Scouring (enteric disorders)	X	—	—
Manure on body	X	—	—
Metritis (reproductive disorders)	X	—	—
Lameness	X	X	—
Skin condition	X	—	—
Ruptures and hernias	X	—	—
Local infections (swelling & abscesses)	X	X	—
Bursitis (pressure injuries)	X	—	—
Shoulder sores (pressure injuries)	X	X	—
Behaviour & comfort			
Huddling	X	X	—
Respiratory rate above normal	—	X	—
Panting (>28 breath/min)	X	—	—
Stereotypies	X	—	—
Social behaviour (positive & negative)	X	—	—
Exploratory behaviour (pen & material)	X	—	—
Fear of humans	X	Notes	—
Qualitative behaviour assessment	X	—	—
Mortality	X	Notes	X

¹ Shaded measures = assessed by the program (PQA Plus®) or program requirements (ACATM)
² Measures marked with an "X" are evaluated by the welfare program(s), "—" are not evaluated.
 Notes = general observations are made without measurement.

The Welfare Quality® program primarily relies on animal-based measures. The criteria and measures used correspond to four main goals, namely “good feeding”, “good housing”, “good health”, and “appropriate behaviour”. Most measures are scored according to a three-point scale, with a score of 0 corresponding to good welfare, a score of 1 to a situation where welfare has been somewhat compromised, and a score of 2 being unacceptable. The results may be summarized into an overall welfare score for the farm (Welfare Quality®, 2009).

The practical application of the Welfare Quality® assessment protocol has been shown to be time consuming (farm visit duration ranging from 4 to 8 hours), and therefore costly. The Welfare Quality Network is working on alternatives in the implementation of the protocol in order to reduce the workload (I. Veissier, personal communication).

American PQA Plus® Program

The American PQA Plus® program was launched in 2007 under the leadership of the National Pork Board. It evolved from previous quality assurance programs (PQA and SWAP) and includes an assessment component. The goal of the program is to build trust among consumers and stakeholders and maintain high food safety and animal welfare standards within the American pork industry (National Pork Board, 2012). It comprises 10 “Good Production Practices”, one of them directly related to swine care and welfare. A total of 12 principles related to swine care are evaluated, and 10 of these are assessed (“acceptable” or “develop and implement action plan”). On-farm welfare assessments are conducted by a trained PQA Plus® Advisor. Producers may also perform a self-assessment of their farm after receiving training. In contrast with the Welfare Quality® program the PQA Plus® program relies more heavily on management and resource-based measures, and less on animal-based measures.

Canadian ACA™ Program

The Animal Care Assessment program was developed by a group of experts, including scientists, producers and other stakeholders, under the leadership of the Canadian Pork Council, to help Canadian pork producers demonstrate that they are following the standards of the Code of Practice. It was launched in 2005 and made available to pork producers on a voluntary basis. In January 2012, the program became an integral component of the Canadian Quality Assurance (CQA®) program, the on-farm food safety program for Canadian producers. In order to maintain their CQA® status, producers will also need to meet ACA™ requirements. The “Code of Practice for the care and handling of farm animals: pigs”, is currently under revision. Because the ACA™ program is meant to be an evolving document, changes will likely be made once the Code revision process is over. The current program comprises mandatory (shaded) questions that are program requirements, as well as optional ones. Some of the optional questions are open-ended and are meant to serve as a base for discussion about best practices. In order to receive their accreditation, producers must demonstrate that they comply with all mandatory questions. Compared with the other two programs, it relies more heavily on management-based measures, and uses very few animal-based measures.

Conclusion

Quality assurance programs are proactive means to demonstrate good practices at the farm level and may serve as educational tools for producers. Programs currently developed vary in the criteria used to assess welfare, which may lead to different assessment results. Regardless of the program, good training is important to ensure intra and inter-observer repeatability.

References

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Table 2. Resource and management-based measures used to assess¹ pregnant sow welfare according to three assessment programs

	Welfare Quality®	PQA Plus®	ACA
Resource-based measures			
Water supply adequate	X ²	X	X
Feeder space adequate and daily feeding	—	X	X
Space allowance adequate	X	X	—
Facilities (floors, fences, equipment)	—	X	X
Air quality and ammonia (>25 ppm)	—	X	X
Lighting provided on a daily basis	—	—	X
Temperatures for comfort	—	—	X
Place to isolate and treat sick animals	—	Notes	X
Management-based measures			
Nose ringing and tail docking	X	—	—
Written euthanasia plan	—	X	X
Timely euthanasia	—	X	—
Veterinarian/Client/Patient Relationship	—	X	—
Medication and treatment records	—	X	—
SOP for humane treatment of sick animals	—	—	X
Document caretaker training programs	—	X	X
Written emergency action plan	—	X	X
Operating emergency backup system	—	X	—
Daily observation records	—	X	—
Proper handling and equipment	—	Notes	X
Training on use of handling device	—	—	X
Willful acts of abuse	—	X	—
Access to the Code of practice	—	—	X
Monitoring interaction with pigs	—	—	X
Daily positive contact with pigs	—	—	X
Maintenance of ventilation systems	—	—	X
SOP for feeding	—	—	X
Daily feeding of sows	—	—	X
Daily monitoring of ESF records	—	—	X
Prompt repair of equipment causing injuries	—	—	X
Stockpersons aware of signs of fighting	—	—	X
SOP for social behaviour problems	—	—	X

1 Shaded measures = assessed by the program (PQA Plus®) or program requirements (ACA™)
 2 Measures marked with an “X” are evaluated by the welfare program(s), “—” are not evaluated.
 Notes = general observations are made without measurement.

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