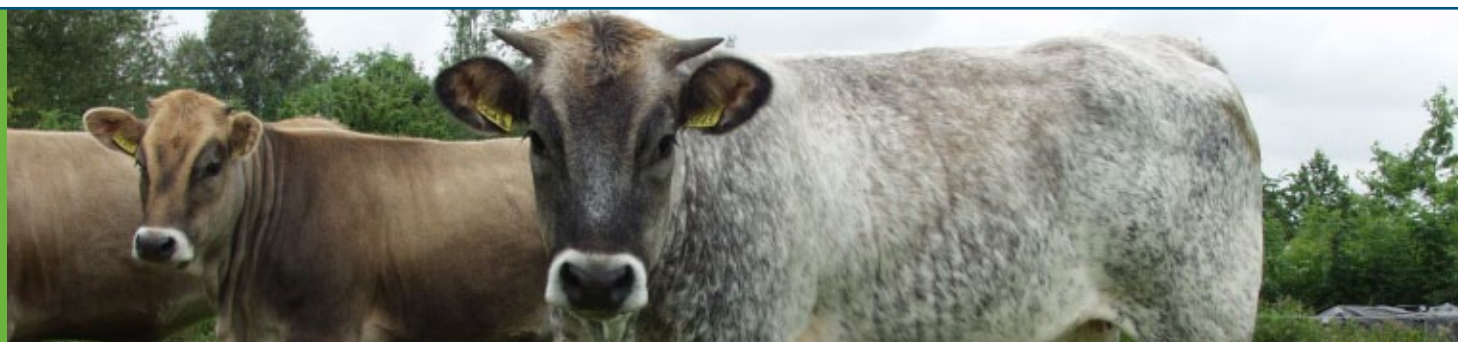


The Overall On-farm Animal Welfare Score



Welfare Quality[®] researchers have spent four years developing ways of assessing animal welfare, both on the farm and at slaughter. With this new information, producers can better monitor and manage their animals' welfare, certification bodies can more easily evaluate participating farms and slaughter plants, and consumers know the animals' welfare is protected.

Welfare Quality[®] broke the 12 welfare criteria (See fact sheet 'Principles and Criteria of Good Animal Welfare') down into between 30 and 50 measurements for seven species of livestock. It may seem difficult to bundle the findings into an overall welfare score. Yet Welfare Quality[®] researchers have developed a solid system that summarises the results of the measurements into an overall animal welfare score, which reflects the level of animal welfare present on a particular farm or at a slaughter facility. This evaluation model is tuned according to experts from animal and social sciences, and stakeholders in the agricultural sector.

Three Steps to Overall Scoring

Scoring the level of animal welfare at a farm or slaughterhouse is a three-step process. It begins with measuring between 30 and 50 factors that take into account different aspects of the animals themselves, their environments and their management. These measurements are funnelled into the 12 welfare criteria that are then again integrated into the four principles (good feeding, good housing, good health, appropriate behaviour). After the final aggregation of measures an overall score is reached which can be used to place farms and slaughterhouses into one of the four categories: excellent welfare, enhanced welfare, acceptable welfare and not classified.

In the first step, measurements collected on farms or at slaughter are transformed into scores on a value scale (0 = worst; 100 = best) to reflect the compliance of a given farm with each of the 12 welfare criteria. Researchers found that animals in poor condition brought down a score more than animals in good condition increased it. Consultation with animal scientists enabled us to design the appropriate transformation of data into scores. An example is shown in Figure 2 where the proportion of lame cows is valued in terms of absence of injuries. In this example, it is clear that the worst off animals (i.e. lame cows) affect the score more than those in good condition: just 7% of lame cows results in a score of 50.

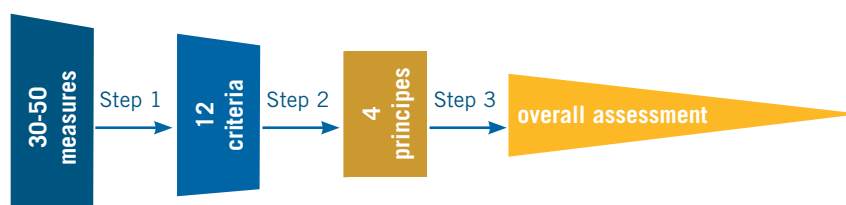


Figure 1. Three steps to overall scoring

The assessment systems and the overall on-farm animal welfare score are developed within the second Sub-project of Welfare Quality®. This Sub-project aims to contribute towards developing an integrated, standardised methodology for the assessment of animal welfare in cattle, pigs and poultry from farm to slaughter. This methodology is to be scientifically based and emphasises animal-based measures, while also including important resource-based and management-based measures. Prof. Linda Keeling is the Sub project leader, linda.keeling@hnh.sl.u.se.

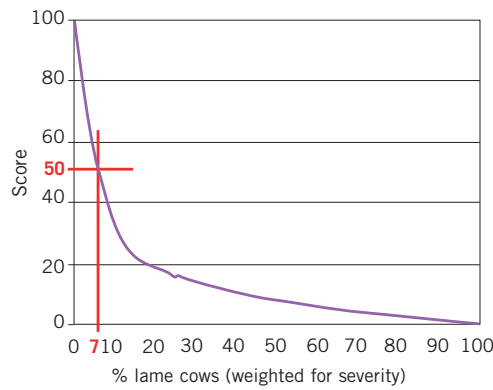


Figure 2.

Next, all of the criteria scores that together equal a principle are compiled. For instance, the scores obtained by a farm for 'absence of hunger' and 'absence of thirst' are combined to reflect a farm's compliance with the principle 'good feeding.' Welfare Quality® researchers found that experts consider some criteria more important than others. For example, the absence of thirst is more crucial than the absence of hunger. Yet the absence of thirst does not compensate for hunger and vice versa. So even if a farm has a high score for 'absence of hunger,' a low score for 'absence of thirst' can lower the entire 'good feeding' score.

Finally, once all of the scores have been added together, a farm or slaughterhouse will then fall into one of the four categories: excellent welfare, enhanced welfare, acceptable welfare, and not classified. Researchers set the excellence threshold at 80, the one for enhanced at 55 and that for acceptability at 20. But, just as in the example with the 'good feeding' principle, high scores in one principle do not offset low scores in another, so categories cannot be based on average scores. At the same time, it is important that the final classification reflects not only theoretical acknowledgement of what can

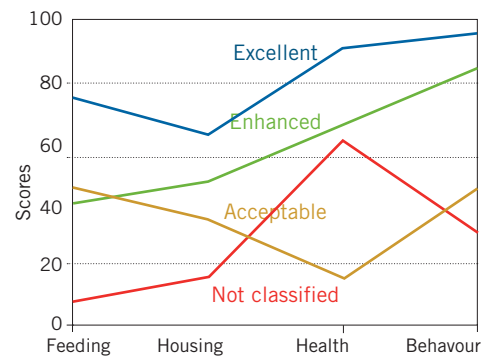


Figure 3. Classification in four categories

be considered excellent, enhanced etc. but also what can realistically be achieved in practice. Therefore, a farm is considered 'excellent' if it scores more than 55 on all principles and more than 80 on two of them while it is considered 'enhanced' if it scores more than 20 on all principles and more than 55 on two of them. Farms with 'acceptable' levels of animal welfare score more than 10 on all principles and more than 20 on three of them. Farms that do not reach these minimum standards are not classified.

What to do with a Score

The categorisation of farms could enable a range of possible uses. For instance, farms certified as 'enhanced' could qualify for a general quality label while products intended for a high quality niche market would require the farms to be in the 'excellent' category. Farmers can also be provided with a broad picture of the welfare status of their animals that helps them to identify aspects requiring their attention. In short, the assessment system can help producers and consumers alike, as well as the animals.

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Welfare Quality® is a European research project focusing on the integration of animal welfare in the food quality chain. The project aims to accommodate societal concerns and market demands, to develop reliable on-farm monitoring systems, product information systems, and practical species-specific strategies to improve farm animal welfare. Forty-four institutes and universities, representing thirteen European countries and four Latin American countries, participate in this integrated research project.

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