

# Animal Welfare Measures

## Input-based measures

(Resource or management-based)



Housing



Feeding



Stockmanship



Physical (hock lesions)



Behavior



Records

## Outcome-based measures

(Animal-based)

Animal welfare assessments can be used on farm to assess animal welfare using a set of defined measurements. These measurements are broadly categorized into two categories: input-based and outcome-based measures. The difference between input-based and outcome-based measures can sometimes be confusing.

Input-based measures are the resources available to the animal (e.g. space allocation, bedding material) and the management practices (e.g. how often cows are milked, breeding strategies) that contribute to a welfare outcome for the animal. Outcome-based measures are the animal's behavioural and physiological response to the external factors acting upon them (e.g. behaviour, body temperature, body condition).

Outcome-based measures provide direct information about animal welfare based on animal health, behaviour, feeding, and housing. Input-based measures vary for each operation and such variation can be difficult to quantify because the effect of a given environmental factor (e.g. size and design of housing, weather conditions, quality and quantity of food) on the welfare of animals depends on the specific characteristics of each animal. Therefore, the use of outcome-based measures, that ultimately demonstrate the effect of input-based measures are more reliable and accurate.



The emphasis on outcome-based measures of animal welfare allows each producer to achieve an appropriate level of animal welfare in a way that suits their operation.

## How audits use input and output-based measures to assess animal welfare:

The primary role of an audit is to conduct an independent evaluation of animal care and welfare on a farm. Thus, third party audits are performed by audit organizations (e.g. PAACO, Validus) or an independent certification body. Audits verify that measures of animal care and welfare are within critical levels, and validate that records accurately reflect farm management.

Input-based and outcome-based measures are used to assess the Code of Practice requirements of the livestock species under assessment. Auditors undergo comprehensive training to ensure that they understand the difference between input and outcome-based measures, including the methods used to assess each.

An example of outcome-based measure: observing that animals can lie down at the same time without laying on top of each other. An example of input-based measure: measuring that 120 square feet per cow of resting area is provided in bedded-pack barns.

**Welfare indicators should be valid, reliable and practical, and should cover all aspects included within the concept of animal welfare.**

## Outcome-based measures may be used by:

- **Producers** - to track changes in animal outcomes resulting from changes in management or environment
- **Veterinarians** - as part of herd health management
- **Auditing organizations** - to check that a farm satisfies animal welfare requirements according to legislation or to their auditing program
- **Scientists** - carrying out an experiment, so that their results can be compared with the results collected by other scientists

**Welfare assessments allow producers to determine the welfare status of their herd and individual animals, and can also help identify risk and problem areas. Additionally, it provides assurances to consumers that high welfare is being achieved.**

**Why Should Producers Think About Welfare Assessment?**

