

Poultry welfare in developing countries

What is animal welfare?

The welfare means “**well-being; happiness; and thriving or successful progress in life**”. In relation to animals, different cultures emphasize **different aspects**.

The World Organization for Animal Health (OIE) definition of animal welfare refers to **how well an animal is able to cope with the conditions in which it lives**.

Thus, people from different backgrounds give different relative importance to animal welfare factors such as:

- 1- Health and normal biological functioning.
- 2- The subjective “feelings” of the animals.
- 3- The animals’ ability to live a natural life.

OIE considers that **good animal welfare requires:**

- 1- Disease prevention and veterinary treatment.
- 2- Appropriate shelter.
- 3- Management.
- 4- Nutrition.
- 5- Humane handling.
- 6- Humane slaughter/killing.

In general, many different components of an animal’s state must be considered to **judge whether** its welfare is **good** or **bad**.

- Some of the components that FAO considers important are that the animal should be:

- 1-**healthy**
- 2- **comfortable**
- 3- **well-nourished**
- 4- **safe**.

Measuring animal welfare

The state of an animal's welfare can range from **very good** to **very bad**. Sometimes, however, one component of welfare is good but others are not. For example, an **animal might be in good health** but its **ability to move** maybe **restricted** by **caging** or **tethering**.

It is therefore important to be able to measure each component of welfare, and to devise ways of integrating the different measures to reach an overall conclusion.

The Five Freedoms, principles and criteria for good welfare

In the United Kingdom, the welfare of farm animals has been considered a formal discipline since 1965, when the Brambell Committee suggested that farmed animals should have five basic "freedoms" of movement.

However, they are rather narrow, so to take account of a broader range of animals' physical and behavioral needs, these Five Freedoms were modified in 1979 by the United Kingdom's Farm Animal Welfare Council (FAWC,1979), which proposed that all farm animals should have:

1. Freedom from **hunger** and **thirst** (by providing ready access to fresh water and a diet to maintain full health and vigour)
2. Freedom from **discomfort** (by providing an appropriate environment including shelter and a comfortable resting area)
3. Freedom from **pain, injury** and **disease** (by prevention or rapid diagnosis and treatment)
4. Freedom to **express normal** and **natural behaviuor** (by providing sufficient space, proper facilities and company of the animal's own kind)

5. Freedom from **fear** and **distress** (by ensuring conditions and treatment which avoid mental suffering)

The Five Freedoms have been highly influential, and OIE accepts them as one of the guiding principles governing animal welfare. They are also referenced in most European welfare legislation, referred to by veterinary and animal welfare organizations worldwide.

Recently, the European Welfare Quality consortium has expanded and clarified the components of animal welfare, proposing a set of four principles and 12 criteria, as shown in Table 1.

Table 1: Welfare principles and criteria as defined by Welfare Quality

Welfare principles	Welfare criteria
Good feeding	1. Absence of prolonged hunger 2. Absence of prolonged thirst
Good housing	3. Comfort around resting 4. Thermal comfort 5. Ease of movement
Good health	6. Absence of injuries 7. Absence of disease 8. Absence of pain induced by management procedures
Appropriate behavior	9. Expression of social behaviors 10. Expression of other behaviors 11. Good human-animal relationship 12. Positive emotional state

Resource-based and animal-based measures

Once the principles and criteria for good welfare have been agreed, ways of measuring each criterion need to be devised. These measures can be used on farms or other livestock enterprises to assess animal welfare. Early assessments of animals on farms were made by **observing whether key resources** (e.g., **nests** or **clean drinkers**) were present; such measures are

called **resource-based measures**. However, the **presence of a resource does not mean necessarily mean that it is being used effectively**. Recently, there has therefore been a move to make direct observations and measurements of the animals themselves, using **animal-based outcome measures**. This is important to ensuring the good welfare of all individual animals within a flock or herd.

Thus, the **absence of hunger** can be measured by assessing emaciation on an **agreed scale**, and **thermal comfort** can be measured by assessing whether birds are **panting** or **huddling**. In drawing an overall conclusion about the welfare of chickens at a specific site, the measures for each criterion can be given different weights, with higher weights given to criteria that are thought to be especially important.

Scientific assessment of welfare

It is important that the measures used on farms to assess animal welfare are backed up by more fundamental scientific research, to ensure that they really do measure factors associated with quality of life. The scientific assessment of **poultry welfare usually depends on measuring a range of physiological, behavioral or clinical indicators**, and comparing these measurements among chickens that are housed or treated differently in some way. An alternative scientific approach has therefore been to examine the environmental conditions chosen by chickens.

* Early studies examined the environmental choices of chickens for:

- **food types**, - **laying**, - **foraging - exploratory materials (heat, lighting, and social conditions)**.

Important new scientific research is examining how welfare indicators and the environmental choices of chickens interrelate (relationship).

The International Society for applied **Ethology** is a scientific body with an interest in how animal behavior can be used to assess animal welfare.

Interactions between welfare and productivity

It is often thought that good production will itself guarantee good welfare, but the relationship between production and welfare is more complex than this. In the following two examples, welfare and production are positively associated:

1- In **some backyard, village environments**, chickens may be able to express **normal behavior**, but their overall **welfare may be poor** if they are affected by **disease, parasitism** or **malnutrition**. Addressing these welfare issues will also result in increased productivity.

2- In many cases, **acute or chronically stressful** events will **reduce productivity**. For example, moving hens from **pens** to **cages** produces a marked short-term decrease in **egg production**. Similarly, **chronic stress** can **impair immune function** and **lead to increased disease and mortality**, and reduced production. However, in the next two examples, welfare and production are in conflict:

3- Intense genetic selection for production traits can have adverse consequences on other aspects of bird health. For example, **laying hens selected for high egg production** have **increased skeletal problems**, and broiler chickens selected for very **high growth** rates have problems with leg health and lameness.

4- **Restricting the quantity of feed** fed to broiler-breeding flocks/birds is a normal management method because **egg production** and **hatchability** are **poor** if **female breeding birds** are fed *ad libitum*. However, this means that the birds experience chronic hunger.