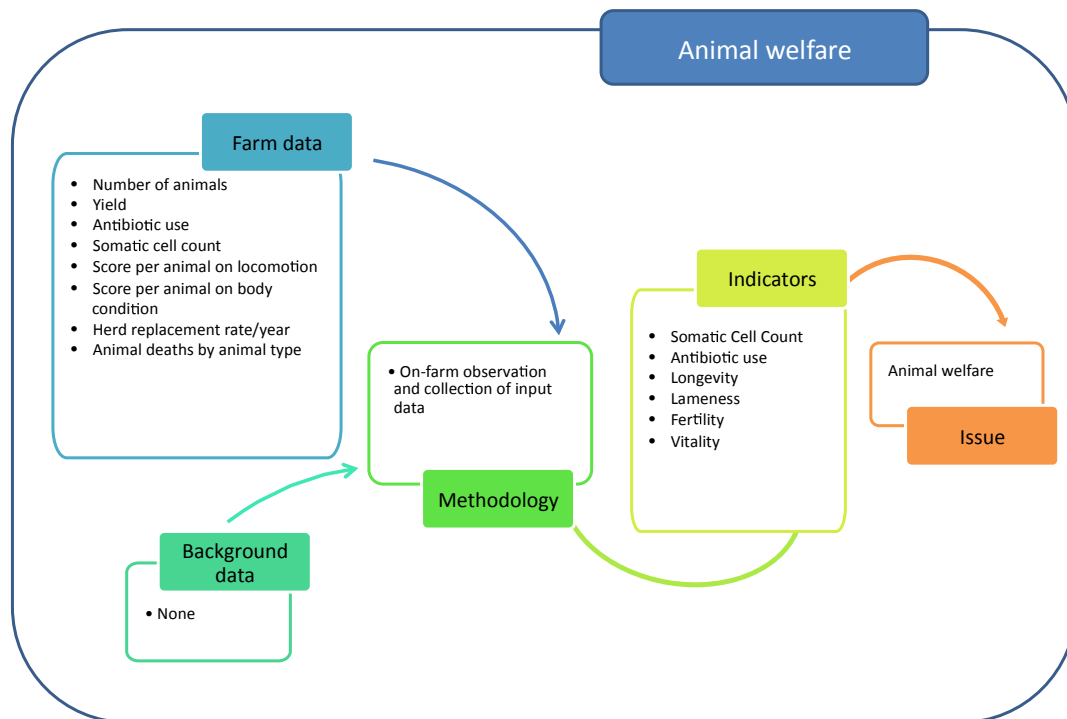# Guidelines for Sustainability Performance Assessment of farming practices (SPA)

New Module: Animal welfare

About this paper

This paper contains a chapter on animal welfare, to be added to the SAI-Platform's Guidelines for Sustainability Performance Assessment of farming practices, the SPA Guidelines. The guidelines were published in April 2012.

The chapter is based on work within the SAI Dairy Working Group (DWG), who have selected the indicators and metrics. These were not subject to a round of stakeholder consultation. However, the DWG did a comparative review against the European Animal Welfare Platform's Programme, in which NGOs, farmers and other stakeholders were consulted. The SAI preferences are largely, though not entirely, aligned with EAWP Programme.

The indicators and methodology are the current state of affairs: clear preferences though not set in stone. As the SPA Guidelines notes: "The current report should be seen as the 1.0 version, which will be revised and further developed in the coming years. Future versions will include suggestions for a sharper focus and further improvement, based on feedback received from end users."

The chapter below is structured in consistence with all thematic chapters in the SPA Guidelines (which explains why some 7 sub-chapters are very concise and may seem somewhat redundant).

1. The issue

Animal welfare is a sustainability item with considerable public interest, not only in western societies but also worldwide. Animal welfare is important because there is a strong relationship with animal health. Therefor animal welfare and health are of high interest for both farmers and other levels of the dairy supply chain. After all, happy cows are healthy cows, and healthy cows require less medicine and are more productive.

The welfare of an animal includes its physical and mental state and as such, good animal welfare implies both fitness and a sense of well-being. Any animal kept by man, must at least, be protected from unnecessary suffering. The welfare of animals whether on farm, in transit, at market or at a place of slaughter should be considered in terms of **Five Freedoms**. These freedoms define ideal states rather than standards for acceptable welfare. They form a logical and comprehensive framework for analysis of welfare within any system together with the steps and compromises necessary to safeguard and improve welfare within the proper constraints of an effective livestock industry.

1. **Freedom from Hunger and Thirst** – by 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 or Disease** – by prevention or rapid diagnosis and treatment.
4. **Freedom to Express Normal Behaviour** – 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 the cornerstone of much legislation and policy, have been used widely in marketing and form the basis of welfare assessment. Recently the aspect whether an animal has a life worth living, from its point of view supplements the Five Freedoms.

The way in which the Five Freedoms are managed varies widely in different countries. For instance, some regions include in the Five Freedoms issues such as grazing, or a ban on dehorning.

2. Output indicators

Animal welfare is expressed in 11 numerical scores covering 6 indicators. These are listed below.

Indicator	Metric (s)
Somatic Cell Count (SCC)	• Somatic cells in milk (#/ml)
Antibiotic use	• Antibiotic treatment (days/year/animal) • Cows treated with dry cow antibiotic therapy (% of herd)
Longevity	• Annual herd replacement (%/year) • Survival rate or deaths by age class (%) • Rate of on farm deaths (%)
Lameness	• Locomotion score (1-5)
Fertility	• Finally pregnant by insemination (%) • Insemination period (days) • Conception rate cows (%)

Vitality	• Body Condition Score (1-5)

3. Methodology

The methodology is straightforward. In most cases the farmer's input data directly produce the indicator. This is the case with SCC, antibiotic use, longevity and fertility.

The Locomotion Score and Body Condition Score are standardized visual observations of the way dairy cows walk and of the condition of dairy cows. In several countries dairy farmers have this information by regular inspection of the cows and use these scores for their management.

4. Farm data

The following farm data are required:
- Number of animals (calves, young-stock, cows)
- Yield (kg milk)
- Antibiotic use (days of treatment)
- Somatic cell count (herd average)
- Score per animal on lameness/locomotion, resulting in average herd mobility score
- Score per animal on body condition, resulting in average herd body condition score
- Herd replacement rate/year (%)
- Animal deaths by animal type (number)

5. Background data

There are no background data necessary for determining or calculating the animal welfare indicators.

6. Preferences and rationale

In SPA, the ambition is to work with outcome indicators as much as possible. After all it is the outcome on sustainability issues we are interested in. However, in some cases outcome indicators are not in the farmer's grasp (e.g. surface water quality) or data are hard for a farmer to collect (e.g. occurrence of specific insect species). In such cases, good proxies are input or process indicators, for instance management measures.

In the case of animal welfare, good management practices or farm conditions (e.g. herd management, ventilation, cubicle-size, floor area per animal, roughness of the stable floor, a feed and laying spot for every animal, etc.) do give an indication of animal welfare. But since we seek numerical indicators in SPA that can be used to track performance over the years, to perform benchmarks and to steer improved management, and given these outcome indicators are available, we have chosen the current set.

There are no single measures that indicate the status of animal welfare. That is why the combination of seven indicators has been chosen. Some of these metrics are proxies for specific conditions e.g. SCC for mastitis prevalence. Other measures such as herd replacement rate are more general and reflect performance in a number of areas including fertility, genotype, animal management, nutrition and the impact of diseases.

Several additional indicators have been considered, among others: days in pasture, space for animals, time laying and sudden change in production. These indicators were eliminated in the end, because they were too complex to reliably measure, or because scores would differ widely due to variations in management systems across the globe.

7. References and resources

World Organisation on Animal Health (OIE). Ad Hoc Group on animal welfare and dairy cattle production systems, ongoing work.

http://www.animalwelfareplatform.eu

International Organisation for Standardization (ISO) is working on animal welfare standards, aimed to be completed October2013.