



DANONE



DANONE

DANONE | A practical guide
for farmers
Dairy Animal Welfare Program

For any question,
please contact your SSD milk department.

DANONE Dairy Animal Welfare Program - 2012

DANONE | A practical guide for farmers Dairy Animal Welfare Program

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- ✓ Good practices guidelines
- ✓ Self-testing sheets



This guide is based on international references and on Danone and on its farmers' experience



EDITORIAL



Philippe Bassin

SSD Vice President for the Dairy Division & General Manager for the Danone Ecosystem Fund

BUILDING TOGETHER THE MILK OF TOMORROW

“Developing a competitive agricultural sector that generates social value, respects its local environment and promotes a better nutritional balance, this is our ambition. Involving our partner farmers at the beginning of this transformation is essential to turn this ambition into a reality. Dairy producers have know-how and competencies

which are incredibly valuable. This is even more true for Animal Welfare, which is at the heart of their job. Animal Welfare is a growing concern for all of us, and we are convinced that, together with our farmers, we have to play an active role on this topic to reinsure our consumers. The quality of our products starts at farm!”



Myriam Cohen-Welgryn

General Manager for Nature

HAPPIER COWS, HEALTHIER MILK AND MORE COMPETITIVE BRANDS

“Nature is our first supplier, with milk being our number one ingredient. For this reason, it is essential for our business to ensure that our practices contribute to protect the nature, helping fight climate change and helping protect natural resources like water, soils and biodiversity.

better understand how the products that they consume are made and they are also increasingly sensitive to Animal Welfare.

With Animal Welfare everybody wins: the cows, the farmers, the brands and the consumers. This is because well-fed and well treated cows make happier cows. Happier cows make more milk and healthier milk, which then can bring consumer preference.

Further, consumers are more and more concerned by the environmental impact of our agricultural practices. They want to

Working hand in hand with our farmers, we can invent more sustainable practices, for a healthier future.”



Paul Gardner

Global SSD Director milk and dairy ingredients for the Dairy Division

OUR RESPONSIBILITY DOESN'T STOP AT THE COWSHED DOOR

“Over the last few years we have moved into a tense situation with regard to agricultural raw materials, with scarcity of certain products and major price fluctuations. This situation is not temporary, but will continue and probably worsen. That is why today more than ever, the sustainability of our company relies on the sustainability of the 27,000 dairy farmers we are working with.

We have already started and have many great initiatives in place: our Dairy Farm audit program, a gold standard in assuring quality & sustainable milk. The RESPECT program shared & rolled out with our suppliers. We have many pilots – Brazil, France & Russia to name but a few – which are developing the social, environmental & economic interactions with a view to creating value for the consumer.

To keep providing healthy and tasty products to our consumers whilst reducing the environmental impact of milk production, ensuring social fundamental principles among suppliers and maintaining the profitability of the farmers and Danone: this is our challenge for the coming years!

Today we are extending the RESPECT program to the millions of cows who produce milk for us every day. The Dairy Animal Welfare Program is aimed at helping farmers & Danone identify the best conditions for the cows well being – a life worth living. After all, they are the most expensive asset on the farm, why wouldn't we make sure they are cared for?”



WHAT THIS DOCUMENT IS ABOUT

This guide outlines Danone's proposals for a common approach to Animal Welfare. It is aimed at all Danone's teams and at the farmers who will be supplying milk to Danone in years to come.

Given that farm profiles vary widely from one country to the next, the measures set out in this document are intentionally generic. Farmers may therefore need to adapt the proposed guidelines to their particular circumstances, to ensure compliance with local regulations and to reflect local economic and sanitary conditions.

Four steps, from awareness to good Animal Welfare management:

1 A COMMON INTEREST FOR DANONE AND FARMERS

Get to know the importance of Animal Welfare for both Danone and farmers, and be familiar with the three main axis of the Danone Dairy Animal Welfare Program.

- ✓ Major challenges for Danone and farmers
- ✓ The Danone Dairy Animal Welfare Program

2 UNDERSTANDING

Get to understand the fundamentals of Animal Welfare and link them with farm's performance.

- ✓ Danone Animal Welfare Pyramid
- ✓ The five Freedoms to be respected

3 EVALUATING

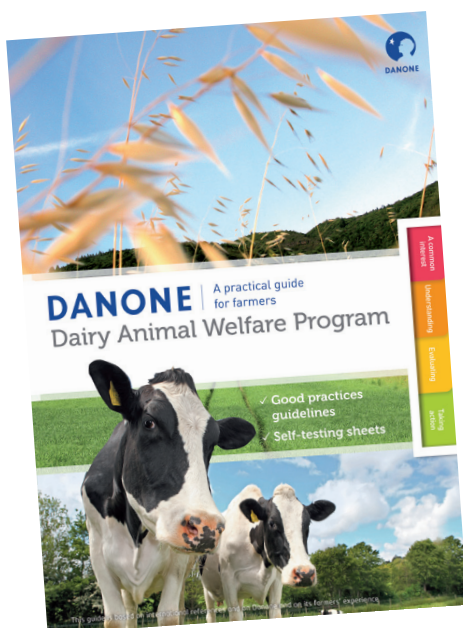
Get to know the main criteria for a good Animal Welfare evaluation and start assessing your farm using the four animal-based criteria selected.

- ✓ Indicators for Animal Welfare evaluation
- ✓ Empty assessment grids ready to be completed

4 TAKING ACTION

Get to improve Animal Welfare management by following good practices.

- ✓ Practical advice and examples
- ✓ Checklist for Danone audits





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1

A COMMON INTEREST FOR DANONE AND FARMERS

GET

- ✓ Major challenges for Danone and farmers
- ✓ The Danone Dairy Animal Welfare Program

1.1

MAJOR CHALLENGES FOR DANONE AND FARMERS

ANIMAL WELFARE, SUSTAINABLE MILK FOR OUR CONSUMERS

Consumers do not just want to buy quality products. They are also increasingly concerned with the conditions in which milk is produced, especially its impact on the environment and animal well-being. With the Danone Dairy Animal Welfare Program, the company is moving a step forward towards higher quality and sustainable milk.

IMPLEMENTATION OF DANONE DAIRY FARMS AUDIT PROGRAM ON MILK QUALITY

This program is aimed at assessing and developing farm performance in specific areas. It allows farmers working with Danone not just to comply with international regulations, but also to anticipate society's expectations and future regulatory developments.



1990

2000

STRENGTHENING OF DANONE DAIRY FARMS AUDIT PROGRAM

To prevent health crises, Danone set up new milk safety and traceability guidelines.

2005

ESTABLISHMENT OF DANONE RESPECT PROGRAM

To ensure suppliers respect fundamental social principles.

2008

DETERMINATION OF DANONE FIVE NATURE PRIORITIES

- Fight against climate change
- Protect water resources
- Reduce the impact of packaging
- Develop sustainable farming
- Preserve biodiversity

The first target set was to reduce Danone's carbon footprint by 30% by 2012.

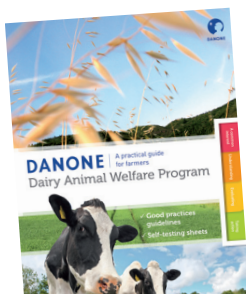
2009

CREATION OF DANONE ECOSYSTEM FUND

In all countries where Danone manufactures fresh dairy products, raw materials are sourced almost exclusively locally. In about forty countries, the economic activity of large numbers of farmers is strongly tied to the Danone's one. They are often faced with major challenges and have to adapt continually to new demands, both national and international. Danone's role in the organization of collection, through cooperatives for example, can help to improve the living conditions and incomes of farming families.

For more information about the Danone Ecosystem Fund, visit the website at:

<http://ecosysteme.danone.com/>



CREATION OF DANONE DAIRY ANIMAL WELFARE PROGRAM

2011

ENHANCEMENT OF DANONE DAIRY FARMS AUDIT PROGRAM WITH SOCIAL AND ENVIRONMENTAL CRITERIA ADAPTED TO FARMING

ANIMAL WELFARE, SUSTAINABLE FARMING FOR DAIRY PRODUCERS

Good Animal Welfare management impacts positively on farming in several areas.

MILK PRODUCTION

Well treated animals are free from stress and tend to produce more milk. Simply put, Animal Welfare improves farm performance.

FARM SAFETY

Good Animal Welfare management makes the farmer's job easier. Good shelter or milking conditions not only make the animal more comfortable, but also limit the risks for humans in contact with them.

COMPLIANCE WITH REGULATIONS

By complying with Animal Welfare regulations, farmers can keep their business running.

In recent years, food industry regulations have been developed in response to crises affecting the sector and to society's new expectations. Animal Welfare has been gradually incorporated into those regulations.

Keeping up to date with Animal Welfare regulations is key for both farmers and Danone. In many countries, compliance with such regulations is mandatory and farmers who breach them may be banned from producing milk or denied from certain subsidies.

By following the milk specifications and good practices outlined in this document, farmers can stay one step ahead, ensuring they are always compliant with both current and future Animal Welfare regulations.

FOCUS ON

MASTITIS IMPACTS ON COWS' HEALTH AND MILK PRODUCTION

Animal pain and milk losses

► **Direct impact:** sick cows no longer producing milk, milk losses while animals are treated, high cost of treatments...

► **Indirect impact:** reduced output by chronically affected animals...

Lost farm income

► 10 to 20% of the farmer's income
► Price penalties imposed on milk with high somatic cell levels in certain countries

Animal culling

► Increased replacement rate of cows
► Reduced cow longevity

Measures to prevent disease will help to reduce cases of mastitis and thereby to avoid negative impacts on farm income.

FOCUS ON

ECO-CONDITIONALITY RULES IN EUROPE

The conditionality rules introduced in 2005 are designed to ensure more sustainable agriculture, thereby helping to promote wider acceptance of the Common Agricultural Policy by all citizens.

Under the rules, qualification for certain forms of community subsidies relies on compliance with basic requirements in areas such as good agricultural and environmental condition, health (public health, animal health, plant health) and Animal Welfare.

As regards Animal Welfare specifically, a single sheet (Animal Welfare sheet) sets out the basic conditionality requirements to be met by farms.

Sample items take into account:

- The state of the livestock buildings
- Prevention of injury and distress
- Care for sick or injured animals
- Animals' management
- Outdoor-reared animals

DID YOU KNOW?

- Several practices that are mandatory today in many countries, were recommended by Danone as early as 1998. They include animal identification and feed traceability procedures.
- Danone people are regularly trained to be aware of ongoing changes in animal health and welfare regulations to provide farmers with better advice.

1.2

THE DANONE DAIRY ANIMAL WELFARE PROGRAM

This guide is part of the Danone Dairy Animal Welfare Program (developed in conjunction with scientists, farmers and Animal Welfare organizations), based on three main axis:

FIRST AXIS: RAISING FARMERS' AWARENESS ABOUT ANIMAL WELFARE

GOAL To ensure farmers are familiar with basic Animal Welfare principles, so Danone's products can be made with milk sourced from farms that respect Animal Welfare.

HOW By providing farmers with all the information and practical tools needed to ensure a good level of Animal Welfare. This document is one such example and will be distributed to all farmers.

SECOND AXIS: REWARDING GOOD ANIMAL WELFARE PRACTICES

GOAL To provide consumers with specific guarantees where exceptional efforts are made.

HOW When farmers take steps to ensure a high level of Animal Welfare, Danone will support them to get some form of recognition (label, awards etc.).

THIRD AXIS: ACHIEVING A HIGH LEVEL OF ANIMAL WELFARE WHILE IMPROVING MILK PRODUCTION

GOAL To improve farm's performance through Animal Welfare optimization.

HOW Based on each farm's specific circumstances, Danone will work with farm management specialists to draw up specific action plans, designed to improve both Animal Welfare and farm performance. These plans are based on on-site audits, that will take place in the following years.

IN A NUTSHELL

The Danone Dairy Animal Welfare Program is a series of measures to be taken at farm level, not just to ensure Animal Welfare but also to guarantee product safety, to anticipate regulatory developments and to secure the farmer's income for both the short and long term.



2 UNDERSTANDING

GET

- ✓ Understanding of the fundamentals of Animal Welfare
- ✓ Understanding of the link between Animal Welfare and milk production

2.1

WHAT ANIMAL WELFARE MEANS

“The greatness of a nation and its moral progress can be judged by the way its animals are treated.”

Mahatma Gandhi

Animal Welfare can be described by considering the animals' state of well-being. In dairy production systems, this includes not only animals producing milk, but also newborns, young females to be used as replacements and calves.

According to the non-governmental organization CIWF (Compassion In World Farming), Animal Welfare is based on three pillars:

- ▶ Mental well-being
- ▶ Physical well-being
- ▶ Natural living

As illustrated in the pyramid on the following page, these three pillars cover the five needs met by animal management practices respecting five freedoms:



FEED & WATER

Animals should be free from thirst and hunger

This means:

- ▶ A sufficient and appropriate supply of feed and water to maintain health and vigour



HOUSING & COMFORT

Animals should be free from discomfort

This means:

- ▶ Suitable shelter and comfortable resting area



HEALTH

Animals should be free from pain, injury and disease

This means:

- ▶ Prevention, early detection and proper management of animal diseases
- ▶ Protection against unnecessary or unreasonable pain



NO STRESS

Animals should be free from fear and distress

This means:

- ▶ Ban on practices causing mental suffering and distress to animals



NATURAL PATTERNS

Animals should be free to express normal animal behaviour

This means:

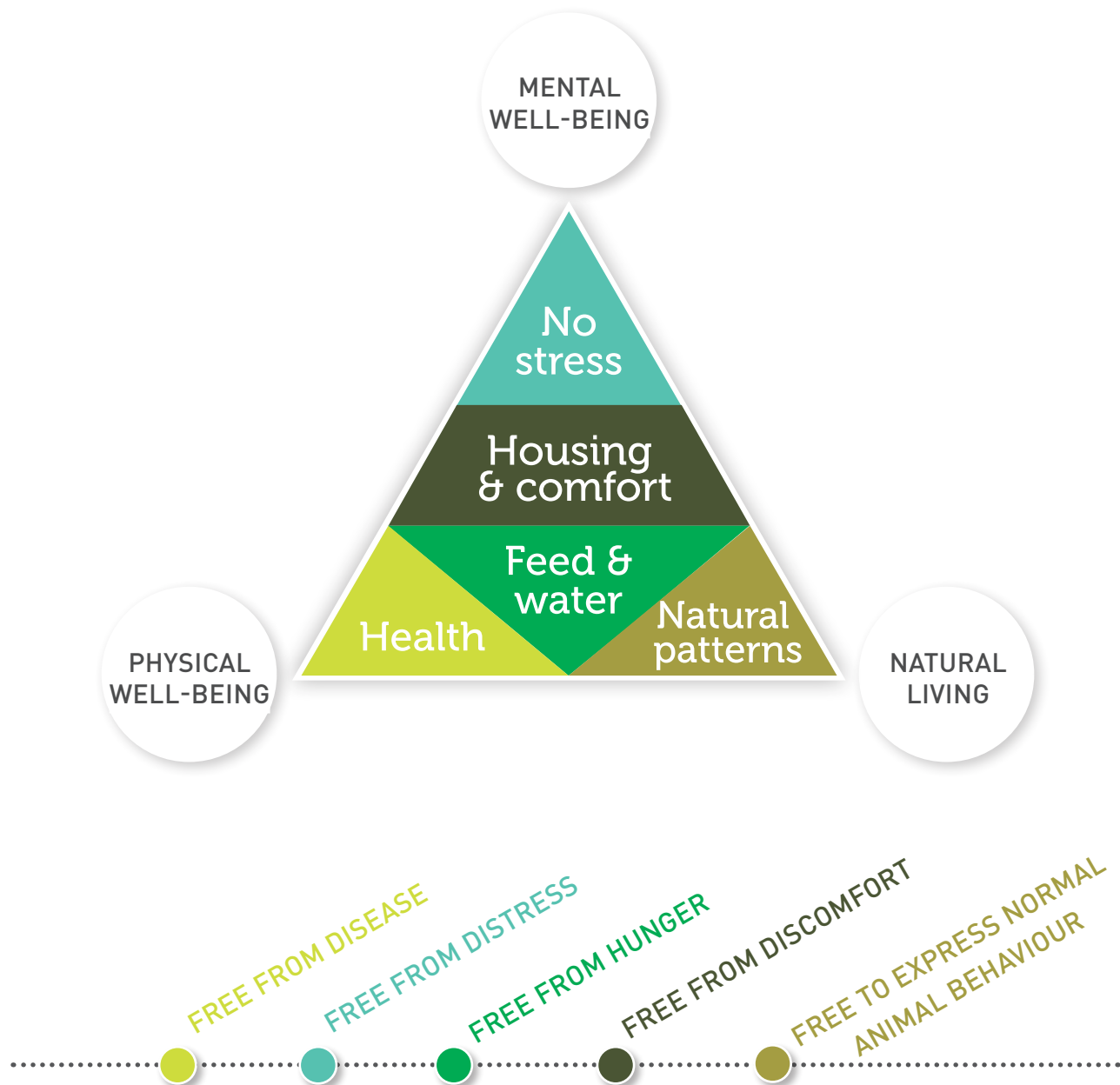
- ▶ Respect for the animal's "normal patterns" of behaviour by allowing them to express species-specific behaviour
- ▶ Life in reasonable harmony with its environment, especially by providing sufficient space, proper facilities and company of the animal's own kind

The basis of the Animal Welfare Pyramid

“Animal Welfare is often equated to the physical well-being of the animal. In its holistic sense however, Animal Welfare cannot be dissociated from the animal’s psychological well-being and the ability of the animal to live a species-specific life. All three elements are encompassed in the five freedoms.”

Amélie Legrand,

Food Business Manager for Compassion In World Farming (CIWF)



2.2

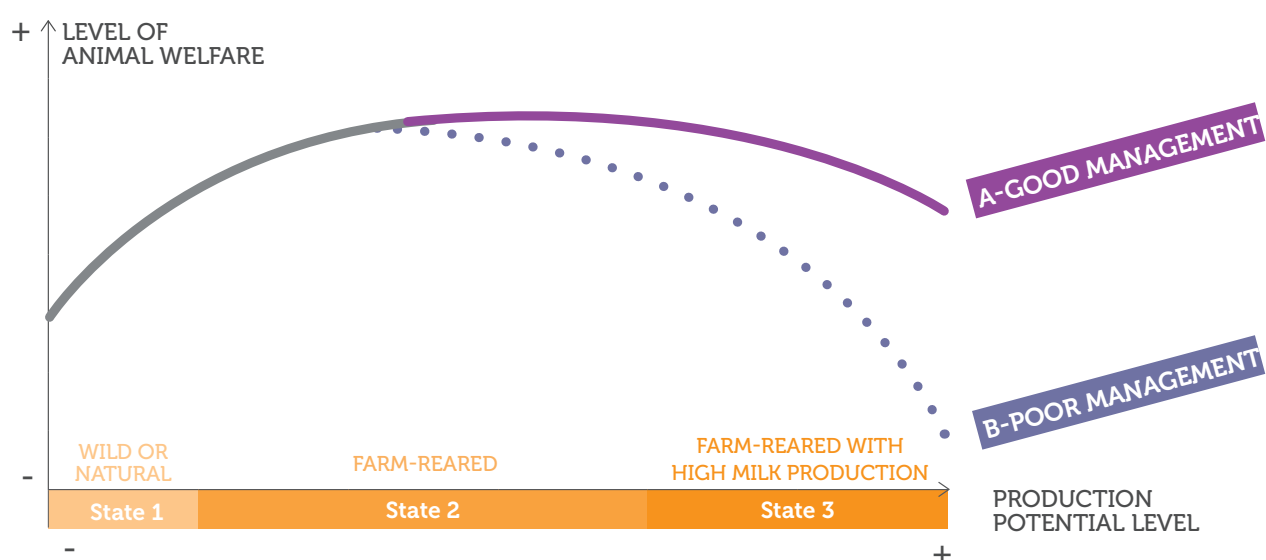
IMPACT ON MILK PRODUCTION

An animal has two kinds of needs:

- **Basic needs:** those that are essential for the animal's survival
- **Well-being needs:** those that are essential for producing milk

Well-being needs can be met by good Animal Welfare management.

The chart* below shows how Animal Welfare level is linked to milk production levels and consequently how it can impact the farm's profitability.



DID YOU KNOW?

- Mistakes in milking management increase mastitis levels.
- Poor housing and facilities increase lameness or may have a negative impact on production levels.
- Poor feeding management causes metabolic diseases or lower productivity.

All lead to a decrease of milk production.

State 1: wild or natural state

ANIMAL WELFARE LEVEL: not maximized due to predation, disease, lack of food and other adverse natural events.

PRODUCTION LEVEL: natural production
PROFITABILITY: low

State 2: farm-reared animal

ANIMAL WELFARE LEVEL: improved as more animal needs are fulfilled. Depends on farmer's management:

- Can be maximized if secondary needs such as protection from diseases or shelter are met.
- May decrease in case of poor management by farmer (lack of shelter, excessive walking distance to milk unit, insufficient feed supply etc.)

PRODUCTION LEVEL: increased as a result of Animal Welfare improvement.

PROFITABILITY: good

State 3: farm-reared animal with high milk production

State 3 - A: With good farm management

ANIMAL WELFARE LEVEL: maximized
PRODUCTION LEVEL: maximized
PROFITABILITY: maximized

State 3 - B: With poor farm management

ANIMAL WELFARE LEVEL: decreasing due to excessive drive for very high production without providing resources to meet animal needs based on their production capability.
PRODUCTION LEVEL: possible reduction in case of pathologies, stress etc.

PROFITABILITY: decreasing due to additional costs generated by the low level of Animal Welfare. For example, with a low level of Animal Welfare, milk quality will fall and the replacement rate will rise. Parameters of this kind strongly impact farm profitability.

* Inspired by John Mc Inerney's economic framework, considering three states of Animal Welfare

3 EVALUATING

GET

- ✓ Discovering the criteria for assessing Animal Welfare effectively
- ✓ A first assessment for your farm with the self-evaluation

3.1

CRITERIA FOR ASSESSING ANIMAL WELFARE EFFECTIVELY

The following criteria are suggested by Danone to help farmers assess their Animal Welfare management. They may be “Animal-based criteria” or “System-based criteria” (indicating whether good practices are in place).

ARE YOUR ANIMALS “FREE FROM HUNGER”?

The “Free from Hunger” criteria will help you assess your ability to provide food and water to your cows in the appropriate quantity and quality.



ANIMAL-BASED CRITERIA CONCERNING FEED

We recommend assessing:

- ▶ **Body condition score** → see p.18
- ▶ **Adequacy of feed** to meet the needs of the animals (depending on physiological state).
- ▶ **Fibre content of feed.**
- ▶ **Proportion of animals ruminating while resting.**
- ▶ **Uneaten feed** can mean that feed quality is insufficient (e.g. silage that has been stored improperly or has a risk of mycotoxins). On the opposite, if no feed is left over, this may reflect that animals do not have enough feed.

ANIMAL-BASED CRITERIA CONCERNING WATER

We recommend assessing:

- ▶ **Water access** (unlimited fresh and clean water).
- ▶ **Adequacy of water resources** to meet the needs of the animals.
- ▶ **Water quality:** free of contamination (e.g. E. coli), chemical composition.

GET STARTED

Want to take action? Go to the **part 4.2 Appropriate feeding all year long, p.22 to p.23**

GET STARTED – FOCUS ON CALVES

All the criteria listed apply equally to calves. Go to the **part 4.8 Suitable feed, housing and practices for newborns and young animals, p.33 to p.34**

ARE YOUR ANIMALS “FREE FROM DISCOMFORT”?

The “Free from Discomfort” criteria will help you assess your ability to provide clean, comfortable and quality housing for your animals.



ANIMAL-BASED CRITERIA

We recommend assessing:

- ▶ **Locomotion score** → see p.18
- ▶ **Quality of resting area:** use the Cow Comfort Index (CCI) calculated as the number of cows lying down divided by the total number of cows in stalls (standing or lying).
- ▶ **Lesions linked to poor housing management,** such as hock rubs, open sores or injuries.
- ▶ **Cow cleanliness.**
- ▶ **Cow comfort indoors:** regularly look for abnormal behaviour at various times of the day. Abnormal behaviour includes: ruminating while standing, standing instead of lying after feeding, lying in alleys instead of lying in a stall.

SYSTEM-BASED CRITERIA

We recommend assessing:

- ▶ **Air quality:** measure inhalable dust and ammonia levels. Inhalable dust should not exceed 100 mg/m³ and ammonia levels should not exceed 15 ppm. At 25 ppm, urgent corrective action is needed.
- ▶ **Lighting:** measure light at cow’s eye level. It is recommended that housed cows should have access for the normal period of daylight hours to an area lit to a level of 200 lux at cow’s eye level.
- ▶ **Stocking density** (m²/100 kg live weight): measure the number of stalls / number of animals ratio.
- ▶ **Hygiene, cleanliness and comfort:** check the manure evacuation system and ensure that bedding is clean and sufficient.

GET STARTED

Want to take action? Go to the **part 4.3 Appropriate housing throughout the animal's life, p.24 to p.25**

ARE YOUR ANIMALS "FREE FROM DISEASE"?

The "Free from Disease" criteria will help you to prevent illness from affecting your animals and assess your health management.



ANIMAL-BASED CRITERIA

We recommend assessing:

- ▶ **Mastitis score** → see p.18
- ▶ **Levels of the main diseases:** metritis, metabolic, respiratory, and hoof diseases etc.
- ▶ **Ratios** such as calf morbidity and mortality, reasons for culling etc.

SYSTEM-BASED CRITERIA

We recommend assessing:

- ▶ **Health management plans and records** of animal diseases and treatments.
- ▶ **Use of anaesthetics/analgesics** when performing painful procedures.
- ▶ **Selection of males more likely to sire smaller calves/percentage of assisted births.**

GET STARTED

Want to take action? Go to the **part 4.4 Disease prevention and treatment, p.26 to p.28**

ARE YOUR ANIMALS "FREE FROM DISTRESS"?

The "Free from Distress" criteria will help you ensure your animals do not suffer from stress or pain.



ANIMAL-BASED CRITERIA

We recommend assessing:

- ▶ **Flight distance score** → see p.18
- ▶ **Animal behaviour that indicates stress or distress,** e.g. fighting due to mixed social groupings.
- ▶ **Dunging in the milking parlour or while being milked.**
- ▶ **Kicking at the bucket or milking machine** due to painful milking procedures.
- ▶ **Increased respiratory rate** due to heat, stress, fearfulness of humans.

SYSTEM-BASED CRITERIA

We recommend assessing:

- ▶ **Levels of training, skills and attitude** of stockpersons and availability of veterinary assistance.
- ▶ **Average maximum transport time vs. transport conditions.**

GET STARTED

Want to take action? Go to the **part 4.1 Farmer's attitude and farm worker skills, p.20 to p.21** and go to the **part 4.5 Good husbandry practices, p.29 to p.30**

ARE YOUR ANIMALS "FREE TO EXPRESS NORMAL ANIMAL BEHAVIOUR"?

- ▶ The "Free to express normal animal behaviour" criteria measure how closely your farm resembles the animals' natural living environment.



- ▶ **Your animal management practices** need to be appropriate for the local situation (climate etc.) and should take into account local customs.
- ▶ Some examples of these criteria include the number of days animals spend in pasture, the amount of space for calves to engage in normal behaviour, building types (whether animals are tethered etc.).
- ▶ **Farmers who comply with these additional criteria** may receive specific awards recognized by CIWF.

GET STARTED

Normal behaviour needs to form the basis of your Animal Welfare approach. The guidelines given in the **part 4. Taking action** are designed to help you achieve this.

A first step towards satisfying the criteria would be to:

- ✓ Move away from tethered systems.
- ✓ Increase the time spent by your animals in pasture or exercise areas.

3.2

FOCUS ON FOUR SIMPLE ANIMAL-BASED CRITERIA FOR YOUR FIRST SELF-EVALUATION



BODY CONDITION SCORING (BCS)

FREE FROM HUNGER

This criterion will help you to assess body fat reserves, indicating the cow's energy balance and informing feeding and management decisions for individuals.

You can:

- ▶ Assess body fat reserves.
- ▶ Determine the cow's energy balance.
- ▶ Adjust rations and manage decisions for the lactation stage.

BEGIN YOUR ASSESSMENT

→ Refer to the Body Condition Scoring self-testing sheet (p.37) and calculate your body condition score.



LOCOMOTION SCORING

FREE FROM DISCOMFORT

Lameness is a major cause of poor welfare in dairy cattle and often results in significant loss of production. Producers are generally aware of one in four cases of lameness, highlighting the need for regular scoring to be carried out in order to detect lameness at an early stage.

By assessing your locomotion score, you will measure the impact of different elements on lameness problems such as poor housing.

BEGIN YOUR ASSESSMENT

→ Refer to the Locomotion Scoring self-testing sheet (p.39) and measure your herd's lameness level.



MASTITIS SCORING

FREE FROM DISEASE

Mastitis is the most common and most costly disease among dairy cattle. Mastitis may be detected by the appearance of local signs, but also using the milk cell counts, which reveal any subclinical inflammation of the udder tissue in cows.

BEGIN YOUR ASSESSMENT

→ Refer to the Mastitis Scoring self-testing sheet (p.41) and determine your herd's mastitis rate.



FLIGHT DISTANCE SCORING

FREE FROM DISTRESS

The flight distance indicates how close an observer can get before a cow moves away. It is an indicator of the relationship between the farmer and his herd, the quality and quantity of handling and stockmanship. For animals suffering from stress or pain, this distance may be high.

BEGIN YOUR ASSESSMENT

→ Refer to the Flight Distance Scoring self-testing sheet (p.43) and assess the flight distance of your herd.



4

TAKING ACTION

This section focuses on management practices and takes into account the diverse nature of dairy production:

- ✓ **Herd size:** from single female animals up to many thousands
- ✓ **Feeding systems:** from extensive forage or grazing only to full total mixed rations
- ✓ **Outdoor/indoor animals:** from pasture all year long to exclusively indoor housing

Successful Animal Welfare management is dependent on **outcomes for the animal**, rather than on the resources deployed in the system.

4.1

FARMER'S ATTITUDE AND FARM WORKER SKILLS

GET

✓ Proper management to meet animals' needs

MEASURES TO IMPLEMENT

A professional stockperson will have empathy for the animals in their care, an ability to identify their needs, and will take action to satisfy their requirements.

“It is crucial to avoid excessive increases in body condition scores during the dry period, as this predisposes dairy cows to metabolic diseases around parturition, such as fat cow syndrome.”

Sylvie Andrieu,

European Ruminant Technical
Manager for Alltech



Skills and training for personnel responsible for animals' care

► Knowledge of the normal appearance and behaviour of animals:

- Understand the significance of a change in the animal's behaviour, essential for monitoring their health and welfare.
- Recognize early signs of distress or disease, and decide promptly whether to seek veterinary advice or intervention.
- Handle animals compassionately to anticipate potential problems and take necessary preventive actions.

► Management skills:

Adopt management skills appropriate to the scale and technical requirements of the production system, or have appropriate supervision.

► Veterinary-related skills:

Be able to demonstrate skills, especially for husbandry procedures that could cause suffering (e.g. disbudding/dehorning or animal obstetrics) and use analgesics where necessary.

► Educational programs for farmers:

Should include basic knowledge of animal behaviour and good practices for proper Animal Welfare.

Farm quality assurance program and Animal Welfare management

In some countries and supply chains, there may be farm quality assurance programs relating to Animal Welfare.

For some years, **Danone has incorporated Animal Welfare considerations into its quality assurance program**, due to the close relationship between Animal Welfare, milk quality and safety.

For example, animals affected by mastitis are in distress and this alters the milk they produce. Similarly, animals housed in poor conditions are often dirty, with the result that milk may be more easily contaminated.

These programs imply some key measures.

► Compliance with standards:

- Be familiar and comply with all relevant national regulations and key industry standards, assurance schemes relating to product quality and safety.
- Ensure records are maintained to demonstrate compliance with regulations and assurance schemes.
- Include animal handling procedures as a component of farm quality assurance systems.

► Self-training and training:

Keep up-to-date with technological developments that can prevent or correct welfare problems.



STANDARDS ASSESSED DURING DANONE AUDITS

Criteria specific to Animal Welfare

- ✓ The farmer has been informed of the measures he needs to take for proper Animal Welfare. He has been issued with an information document.
- ✓ The farmer allows the animals to express their natural behaviour (sufficient exercise area, time in pasture depending on the local climate and land capacities etc.).

“Animal Welfare is actually often common sense. One should know and observe the animals. Animals with a problem are very quickly identified with experience.”

Farmer,
Member of a think tank
created by Danone

DID YOU KNOW?

In some areas, Danone will support a specific approach aimed at ensuring a high level of Animal Welfare and excellent living conditions for animals. In countries where it is possible, special attention will be paid to the amount of time animals spend in pasture over the year, depending on the local climate.



4.2

APPROPRIATE FEEDING ALL YEAR LONG

GET

✓ Appropriate feed and water for animals' needs

MEASURES TO IMPLEMENT

Animals' needs depend on their age, the level and the stage of production. Feed and water must be adapted to ensure the animals receive a good balance of the main components at all times: energy, protein, water, minerals etc.



Adequate feed and water supply

- ▶ Provide a diet (nutritional composition and quality of feed) that takes into account the animals' physiological state. For instance, lactation, pregnancy and growth.
- ▶ Ensure balanced rations for lactating dairy animals.
- ▶ Animals must have access to sufficient good quality food and drinking water to maintain good health, meet their physiological and production requirements, minimize metabolic and nutritional disorders.
- ▶ Introduce changes of feed into the diet gradually.

Safe feed and water supply

- ▶ Determine the origin of feed and water, to avoid any potential toxic contamination.
- ▶ Ensure that the feed and water supplied do not contain levels of biological, chemical or physical substances which may be harmful to health.
- ▶ Protect animals from toxic plants and chemicals or any other harmful substances they could ingest. Run-off from effluent and chemical treatments of pasture and forage crops should not enter stock water supplies.

Feed and water equipment monitoring

- ▶ Ensure automatic feeding and watering systems are in working order and any problems are promptly rectified.
- ▶ Ensure there is enough space for all the cows to have access to water (one stop for 15 cows) and enough mangers for all the cows to have access to feed.

Body Condition Scoring (BCS)

- ▶ Monitor body condition scores at regular intervals throughout the lactation period and drying off.
- ▶ Set appropriate minimum levels, below which urgent remedial action must be taken or veterinary advice sought (→ Refer to the self-testing sheet p.37).

DID YOU KNOW?

Cows should not see their body condition score fall too much during the eight weeks following calving or during lactation. In addition, it is crucial to avoid excessive increases in body condition scores during the dry period, as this predisposes dairy cows to metabolic diseases (fat cow syndrome).





“ What is important for the animals’ well-being, as for other things, is to have a global view of livestock. A farm is a whole. For example, if animals are stressed when food is distributed, because there is not enough space to reach it or for any other reasons, the animals will not eat enough and this will have an impact on their production and body condition.”

Farmer

Member of a think tank
created by Danone

STANDARDS ASSESSED DURING DANONE AUDITS

Criteria specific to Animal Welfare

- ✓ Proper management of feeding all year round.

Criteria relating to feed

- ✓ No prohibited raw materials. No contaminants in feed and water. Feed stored securely.
- ✓ Traceability of purchased feed: labels, invoices, composition kept for five years.
- ✓ Feed samples kept for 12 months and free of contaminants.
- ✓ Good harvest preservation, deteriorated feed removed, feeding plan.
- ✓ Authorized feed suppliers (with official authorization).
- ✓ No polluting activity around feed storage, field or pasture (fire etc.).
- ✓ Animals: unlimited access to good quality drinking water (all year round).

Other criteria recorded during the audit

Body condition scoring (→ Refer to the self-testing sheet p.37).

4.3

APPROPRIATE HOUSING THROUGHOUT THE ANIMAL'S LIFE

GET

✓ Comfortable housing suitable for the cows' size, weight and type

MEASURES TO IMPLEMENT

The farmer should define a housing system which respects the needs of the animal at every stage in its lifetime (lactating cow, dry cow, heifer etc.) and which is appropriate to specific local conditions (temperature etc.).

Housing systems

► Provide clean and sufficient bedding for all animals housed indoors:

- Clean bedding areas regularly and/or replace bedding as it becomes soiled.
- Ensure sufficient space to:
 - prevent discomfort,
 - ensure the animals are able to express normal behaviour, i.e. lying down/resting, moving about, eating, drinking and eliminating faeces and urine etc. without coming under excessive social pressure.

Ventilation

► Ensure that air circulation, temperature and concentrations of ammonia, carbon dioxide and slurry gases are kept within limits which are comfortable for the animals or at least not harmful.

Manure management

► Ensure manure is removed regularly and that there is sufficient drainage in housing and walkways.

Outdoor shade and shelter

► Protect animals from adverse weather conditions.

They can be stress factors: extreme weather and other conditions causing cold or heat stress.

• In hot conditions, provide shade or an alternative means of cooling such as fans, misters and sprinklers to reduce heat load.

• In cold conditions, provide shelter and additional feed inputs.

WARNING

Where exposure to weather conditions causes health problems, remedial action should be taken to minimize the consequences.

DID YOU KNOW?

► Over-crowding increases social and microbiological stress in all age groups.

► As a general guideline, the minimum space provided for a bedded lying area should be 1 m² per 100 kg of live weight, but the actual space allowance that is provided should ensure that the animals achieve adequate lying/resting times. If there are cubicles, they should measure 1.2 x 2.4 m.

Appropriate lighting

► Ensure lighting is sufficient but not too intense:

- Bright enough to allow the animals to be inspected and to provide them with a reasonable circadian pattern of light and dark periods.
- But not so intense as to cause discomfort.

An easy and quick way to evaluate this parameter is to ask yourself the following question: "are you able to read a book in animals housing?".



EXAMPLE

CARING FOR CATTLE IN HOT CONDITIONS

In some countries, farmers use sprinklers during hot periods to cool the cows, alleviate stress caused by high temperatures and improve metabolic functions in order to maintain productivity.



Milking environment

► Dairy animals can be milked either in their usual housing or outside:

- Design and maintain dairy facilities so as to minimize obstructions and hazards with the potential to cause distress or injury.
- Ensure the ground is stable and non-slippery, well drained and free of mud and manure.

► If there are dairy facilities (milking parlours and handling yards):

- Ensure floors provide satisfactory footing and can be cleaned easily.
- Design fences, gates and loading ramps in a way that allows good animal flow and prevents injury.
- Ensure head bails and crushes allow efficient handling of cattle and easy release of animals and do not endanger animals or operators.

Feedlot areas and yards

► Ensure that the surface type and area are appropriate for the nature and frequency of use to prevent any discomfort for the animal.

STANDARDS ASSESSED DURING DANONE AUDITS

Criteria specific to Animal Welfare

- ✓ Properly designed and managed housing.
- ✓ This criterion takes into account all the elements outlined in this chapter.

Other information recorded during farm audit

- ✓ Type of housing, to identify the different organizations and whether animals are tethered.
- ✓ Number of days spent in pasture depending on season.

Other criteria recorded during the audit

Locomotion scoring (→ Refer to the self-testing sheet p.39).

4.4

DISEASE PREVENTION AND TREATMENT

GET

- ✓ Disease prevention and choice of suitable and effective treatments

MEASURES TO IMPLEMENT

This section relates to health management in relation to Animal Welfare.

When should farmers call in the veterinarian, for example in case of mastitis?

“In my opinion, veterinarian has to be called when:

- *A proportion of animals higher than the threshold defined by the vet and the farmer is suffering from clinical mastitis.*
- *Some animals have acute mastitis with local and general clinical signs.*
- *The treatment used to treat non-acute mastitis does not solve the problem.*
- *There is suspicion that an infectious and contagious germ is present (somatic cell levels increase at farm level).”*

Dominique Remy,
Veterinarian and Professor at
Alfort Veterinary School

Herd health management programs

► Implement a planned herd health management program including:

- Preventive treatments, vaccination and vermifugation programs.
- Management of diseases and injuries.
- Mineral and vitamin supplements, to ensure animals have sufficiently strong immune systems to withstand disease.
- Magnesium supplements before calving time, and where necessary, calcium supplements after calving to manage downer cow syndrome and other metabolic diseases.
- Permanently satisfactory levels of cleanliness and hygiene in animal housing, pastures and milking facilities.

► Implement a biosecurity plan when introducing new stock:

This plan may include feasible preventive measures such as vaccinations and treatment for parasites and should also consider the potential need for a quarantine/isolation period.

Seeking veterinary advice

► Always refer to qualified veterinarians on all matters relating to animal health management:

Consulting unqualified personnel may result in severe Animal Welfare problems, due to incorrect diagnoses and treatments or poor surgical techniques with incorrect anaesthesia and pain relief.

► Seek veterinary advice where:

- The proportion of animals in a herd affected by a disease exceeds the official threshold stipulated in the country.
- You observe persistent poor performance.
- First aid or other initial farm treatments do not resolve the problem.
- An animal is unable to stand and does not respond to treatment after 12 hours.
- You suspect a infectious and contagious disease.
- An animal has suffered injury or severe lameness.

Farmers' animal health capabilities

- Ensure that personnel responsible for Animal Welfare are skilled at identifying sick or injured animals.
- Take professional advice where appropriate (see above).
- Ensure that stock handlers are familiar with the most common health problems and organize prompt and expert attention.

Animal inspection

The frequency of stock inspections depends on the management system used.

► Careful inspection is particularly important:

- When animals are close to calving.
- In emergency situations such as outbreaks of contagious disease (e.g. foot and mouth).

Lameness management

► Manage animals so as to minimize the incidence of lameness:

This will require:

- Procedures for moving animals that avoid placing unnecessary pressure on feet and legs.
- Lanes, yards and facilities designed and constructed for good flow and appropriate surfaces (→ Refer to the part 4.3 Appropriate housing throughout the animal's life).

► Assess cow locomotion using a standardized scoring system that allows lameness to be detected at an early stage:

Levels of lameness should be investigated to determine causes and appropriate treatment (→ Refer to the part 3. Evaluating).

► Inspect hooves frequently and carry out hoof-care in a timely manner using professional assistance.



Use of veterinary treatments

► Use only registered stock remedies or veterinary medicines as prescribed by a veterinarian:

- Treatments must be administered in the correct manner, to avoid undesirable side effects such as painful swellings.
- All treatments and withdrawal times for medicines must be used as directed by the veterinarian.

► Use only non-expired products.

Registration of diseases and treatments for efficient monitoring

► Keep up-to-date records to facilitate management and quickly reveal problem areas:

Minimum record requirements include:

- Mortalities and their causes/age.
- Incidence of mastitis.
- Reproductive disorders.
- Abortions, neonatal deaths.
- Incidence of lameness.
- Incidence and details of preventable diseases and injuries.
- Vaccinations, tests.

STANDARDS ASSESSED DURING DANONE AUDITS

Criteria specific to Animal Welfare

- ✓ Good management of diseases and animals in good health.

Animal Health criteria

- ✓ Sanitary rules respected (tests, quarantine) for animals purchasing.
- ✓ Cowshed free/tuberculosis and brucellosis, respect sanitary rules.
- ✓ Systematic analysis after abortion and declaration of diseases.
- ✓ Animals monitoring, milk discarded and prevention programs.

Veterinary treatments criteria

- ✓ The animals under treatment are identified or isolated.
- ✓ Treatment and withdrawal periods respected. Only authorized substances used.
- ✓ Milk discarded during the period with colostrums.
- ✓ Treatments and pathologies traceability: register and prescription.
- ✓ Correct storage of medicine.

Other criteria registered during the audit

Locomotion scoring (→ Refer to the self-testing sheet p.39).

Mastitis scoring (→ Refer to the self-testing sheet p.41).



4.5

GOOD HUSBANDRY PRACTICES

GET

✓ Pain and injury avoidance

MEASURES TO IMPLEMENT

The main husbandry practices concerned by Animal Welfare are those relating to everyday work (milking, handling etc.) and to pain (dehorning etc.).

Husbandry procedures

- ▶ Adhere to national regulations on painful husbandry procedures.
- ▶ For treatment/surgery use anaesthetics/analgesics.
- ▶ Eliminate painful procedures wherever possible.
- ▶ Justify the welfare benefit of carrying out a potentially painful procedure in terms of benefit to the animal.
- ▶ Consider alternative procedures e.g. trimming tail hair rather than tail docking to maintain udder cleanliness.
- ▶ Have a competent person perform the hoof trimming.
- ▶ Avoid dehorning and perform disbudding with consideration for the animal's welfare and using analgesia/anaesthesia.
- ▶ Identify animals clearly to facilitate post-operative inspections.

Animal handling

- ▶ **Handle animals at all times in such a way as to minimize the risk of injury or distress.**

All animals, in particular young animals and stock bulls, should be managed and handled in a manner that promotes good temperament and docility.

- ▶ When handling animals, bear in mind that they have **different eyesight in terms of distance and detail**. They also **should not be subjected to unnecessary loud noises**.

Animals should be moved at a pace that lets them see where they are going and where they are placing their feet.

- ▶ Use **handling aids** such as dogs carefully, so as not to cause pain or distress. Dogs must be reined and under full control.
- ▶ Use of electric goads is strictly prohibited.
- ▶ **When droving animals** for longer than normal distances, ensure that the droving speed and distance take into account the conditions and the fitness of the animals.
- ▶ **When mixing animals**, provide sufficient space so that newcomers can move into free space if pushed and observe their behaviour carefully.
- ▶ **Apply restraint in such a way as to minimize the risk of injury to the animals and the handler:**
 - Take a quiet approach at all times with animal restraint.



- Nose rings and equipment used for animal restraint must be fit for purpose and used in a manner that does not inflict unnecessary pain or discomfort.
- Animals restrained for husbandry procedures must be kept under supervision. Workers should be conversant with safe operation and such equipment should be kept in good working order.
- ▶ Since most dairy animals are social animals, **use husbandry procedures that do not unnecessarily compromise social activity** and do not isolate them unnecessarily as their herd instinct is strong.

Reproduction and birthing

- ▶ **Select males that have a greater likelihood of siring low birth-weight offspring, for mating with young or smaller framed females.**

Large young male can cause significant damage to small dams, particularly during their first parturition.

- ▶ **Provide animals close to giving birth with a quiet and hygienic place where they can be observed carefully:**
 - **Animals giving birth outdoor:** the pens or paddocks should provide shelter and protection from adverse weather conditions, and be well drained.
 - **Animals having difficulty giving birth:** appropriate assistance should be given immediately.
 - **Animals unable to stand:** should be provided with feed, water, shelter and placed on bedding or on soft ground.
 - **Use apparatus to support recumbent animals with care.** In particular, animals must be able to breathe freely and not suffer unnecessary discomfort.

“ It is important to ensure the animal's welfare, especially during milking. When animals are stressed, they are more reluctant to give milk and production will decrease. It's important to be careful if someone else is carrying out the milking, because if the animals are stressed there will be less milk and sometimes mastitis can occur. ”

Farmer,

Member of a think tank
created by Danone

Milking

► **Make milking comfortable for the animal.** In particular, animals should not be over-milked or under-milked to prevent pain and damage to the udder and teats.

► **Establish a regular milking routine:** lactating females need to be milked two to three times per day to relieve udder pressure and maintain udder health.

Animals milked by machine

► **Maintain the equipment to a level that minimizes the risk of damage to teats and udder.** In this case, some basic measures must be applied during milking:

- Prepare the udder (wash only the teats).
- Wait 30 seconds before milking (to allow time for the hormonal discharge of oxytocin).
- Practise teat dipping after milking.

► **Ensure that the equipment is regularly inspected** (particularly the vacuum level and pulsation frequency).

Animals milked by hand

► Apply correct techniques in order to avoid damaging the udder or teats.

Animals being milked for the first time

► Take special care with these animals: familiarize them with the milking facility prior to calving.

STANDARDS ASSESSED DURING DANONE AUDITS

Criteria specific to Animal Welfare

✓ No stressful practices, no fear and distress.

Criteria concerning milking

- ✓ Authorized cleaning/disinfectant products and equipment only.
- ✓ Cleaning water controlled and in sufficient quantity.
- ✓ Equipment and milking parlour presenting satisfactory level of cleanliness.
- ✓ Milking machine inspected annually and repairs carried out as necessary.
- ✓ Milking areas cleaned: milking parlour, waiting area.
- ✓ Good milking hygiene.
- ✓ Teats systematically disinfected after each milking.

4.6

FOCUS ON: REGULATION AND MEETING ANIMALS' NEEDS DURING TRANSPORT

GET

- ✓ Distress and pain minimization during transport

This chapter outlines good practices:

- ▶ That you should apply if you are transporting your herd yourself.
- ▶ Or that you should pass on to your transporter.

MEASURES TO IMPLEMENT

In many cases animals need to be transported over short or long distances. In all cases, drivers and handlers should be well trained to avoid unnecessary stress during transport. The vehicles must be suitable, in good condition, regularly cleaned and disinfected.

DID YOU KNOW?



- ▶ The vast majority of cattle are bruised during loading and transport.
- ▶ Feed and water deprivation for 14 hours results in vigorous attempts by cattle to obtain feed and water.
- ▶ Cattle prefer to remain standing during transport.
- ▶ Sufficient head height for normal head position is very important.
- ▶ Mortality of cattle during road transport increases with the length of the journey.
- ▶ Cattle have considerable difficulty negotiating steep ramps. A maximum ramp angle of 11° would be best for cattle. A maximum of 20° is acceptable, provided the ramp has a non-slip surface.

Basic rules for transport

- ▶ Ensure that all domestic transport operations are **compliant with national regulations or international (OIE) standards**, as guidelines for both domestic and international animal transport.
- ▶ Ensure that **vehicles used are appropriate** and that animals are not over-crowded.
- ▶ Ensure that all animals selected for transport off the farm are **fit enough to withstand the planned journey**, without suffering unnecessary pain or distress.
- ▶ **For longer journeys**, allow sufficient feeding, watering and resting times.
- ▶ **For sea journeys**, use appropriate ramps or approved slings for loading and unloading.

Specific cases for transport

- ▶ **Consider the animals' physiological state** (e.g. female in peak lactation), as well as the method and duration of the trip when preparing and planning for transport.
- ▶ **Transport pregnant animals close to calving with particular care and consideration for their condition.** They should not be transported except in an emergency or to improve their welfare, e.g. moved to a different location:
 - To improve transitional nutrition.
 - For closer monitoring during calving.
 - For veterinary care.
- ▶ **Prior to transportation**, feed every unweaned animal to be transported off the farm at least half of its daily ration of colostrum or milk.
- ▶ **Avoid transporting animals that are unable to stand.** Emergency humane slaughter should be carried out on-farm.
- ▶ Ensure transport collection areas **for young animals** provide adequate shelter and comfort and facilitate their handling.

Taking delivery of new animals

- ▶ Keep them in a quiet environment with feed and water for an appropriate adaptation time.
- ▶ Pay careful attention to their behaviour.
- ▶ Introduce them into an appropriate group at the appropriate time.

STANDARDS ASSESSED DURING DANONE AUDITS

Criteria specific to Animal Welfare

- ✓ Animal comfort and unnecessary stress avoidance during transport.

4.7

FOCUS ON: MANAGEMENT OF ANIMALS' END OF LIFE AND SLAUGHTER PRACTICES

GET

✓ Unnecessary pain avoidance

This chapter outlines good practices to be passed onto the purchaser responsible for slaughter

MEASURES TO IMPLEMENT

When it is necessary to slaughter animals, the farmer must be careful to comply with international regulations and take account all the basic rules on avoiding unnecessary pain. The farmer must pay attention to the conditions in which animals are transported and slaughtered (even if this is not directly his responsibility).

End of life and slaughter at farm level

When it is necessary to slaughter sick or diseased animals or those in pain:

- ▶ Take veterinarian advice to avoid unnecessary pain.
- ▶ Where a captive bolt device is used, select an appropriate cartridge strength for the particular class of animal.
- ▶ Immediately after stunning, bleed out the animal to ensure death.

STANDARDS ASSESSED DURING DANONE AUDITS

Criteria specific to Animal Welfare

- ✓ Respect for Animal Welfare when slaughter at farm level is necessary.

Rules for slaughter house management

- ▶ Use an efficient stunning method, to limit the number of animals regaining consciousness after stunning and cases of double shooting (where the first shooting is not effective).
- ▶ Prefer facilities minimizing stress and discomfort: chute design, non-slip floor, ventilation/T°C, stocking density etc.
- ▶ Ensure personnel are properly trained to avoid unnecessary pain and distress (on the slaughter line).



4.8

SUITABLE FEED, HOUSING AND PRACTICES FOR NEWBORNS AND YOUNG ANIMALS

GET

- ✓ Appropriate feeding, housing and socialization of calves

MEASURES TO IMPLEMENT

Feed must be appropriate for the physiological state of the animal. A newborn calf needs to be fed first with colostrum, then with milk and, as its stomach develops, with concentrate and fibrous feed.

It is vital to provide clean housing for animals after calving to reduce the risk of diseases and infection. The goal should be to provide enough space for each calf, ensure good hygiene, disease management and socialization (animals not separated).

Caring for calf health begins in the first few minutes after calving (hygiene, disinfecting the umbilicus etc.) and caution is required at every stage in their development.

Hygiene after birth

- Maintain hygiene after birth to prevent diseases such as infections of the umbilical cord.

Colostrum

- Ensure newborn dairy animals receive an adequate quantity of colostrum or, if this is not possible, an appropriate substitute.
- Calves should preferably be fed their first colostrum within one hour of birth.
- There are health, welfare and economic benefits to providing calves with good quality colostrum.

Liquid feed

- In situations where young dairy animals cannot be allowed to suckle:
 - Provide animals with liquid feed in a way that fulfills their need to suckle.
 - Young ruminants should be weaned off liquid feeds when the rumen has developed sufficiently to allow them to digest solid feed.

Solid feed

- Give calves fibrous feed in sufficient quantity (ideally ad libitum) from two weeks of age:
 - Energy rich feed is critical for ensuring adequate rumen papillae development.
 - Cud feeding may be a good alternative for the development of rumen physiology in young animals.

Feeding equipment

- Clean all feeding equipment used for young animals thoroughly after use.

Growing insurance

- Monitor feeds and grassland/pasture use to deliver the appropriate quality and amount of feed to growing dairy animals.

Growing animals should be fed well to achieve optimal growth, so that they meet the requirements for replacement dairy animals.

DID YOU KNOW?



- A newborn calf has a poorly developed immune system.
- Over the 8 weeks following birth, calves with low immunoglobulin level in their blood 48 hours after birth have twice the mortality rate of calves with acceptable serum immunoglobulin level.



What are the risks associated with poor calf hygiene (animals, equipment, barns etc.)?

“ On a dairy farm, calves are born all year round. The farmer therefore has to manage animals of different ages. Thus, measures to ensure the health and immunization of calves and their mothers are crucial in order to limit potential cross-contamination between animals a few months or weeks old and newborn calves which are highly susceptible to new infections. ”

Pierre Sans,
Veterinarian and professor at
Toulouse Veterinary School

Managing small groups of animals

- If possible, do not isolate and tether calves. House them in groups where possible, or in pairs where group housing is not possible.
- Keep groups of young animals to a reasonable size, to minimize social and microbiological stress and sort by size/age to prevent bullying. Some studies show that the risk of certain viral diseases increases with the number of calves in groups, especially above 20 or 30 animals.

Protecting young calves

- Provide young animals that have been removed from their mothers with shelter from conditions that are likely to affect their welfare negatively.

Management and treatment of disease

- Apply preventive health programs (vaccinating calves and also cows to improve colostrum efficacy) for the most frequent diseases (respiratory, diarrhoea etc.) to limit potential problems and financial losses such as veterinary costs.

Records of morbidity and mortality

- Ensure these records are maintained, in order to identify risk factors and improve calf management.

Transporting young animals

- Ensure newborn animals are not transported to be sold until they are sufficiently hardy, e.g. adequate body weight and a dry umbilicus.

Handling and moving

- Handle and move newborn and young animals in a manner that minimizes distress and avoids injury, bruising and suffering.

STANDARDS ASSESSED DURING DANONE AUDITS

Criteria specific to Animal Welfare

- ✓ Appropriate feeding of calves at every stage.
- ✓ Good housing for calves.
- ✓ Calves well treated to prevent disease and lower mortality rates.
- ✓ Good calf management to prevent stress.



5 | APPENDIX



BODY CONDITION SCORING (BCS)

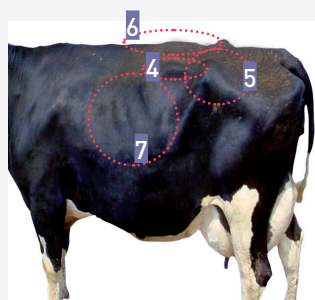
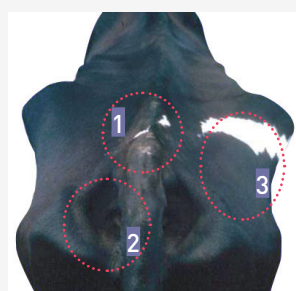
How to calculate the BCS?

View the animal from behind and from the side, and evaluate the body condition score in seven zones.

The individual cow gets a score of :

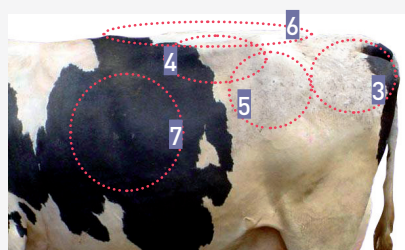
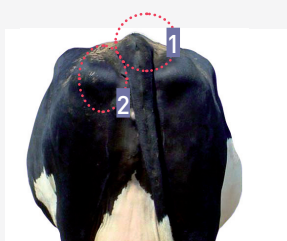
- ▶ **Body score = 1** If it is very lean (at least 3 body regions where there are some very lean indicators present)
- ▶ **Body score = 2** If it has a regular body condition
- ▶ **Body score = 3** If it is very fat (at least 3 body regions where there are some very fat indicators present)

Score = 1 Very lean



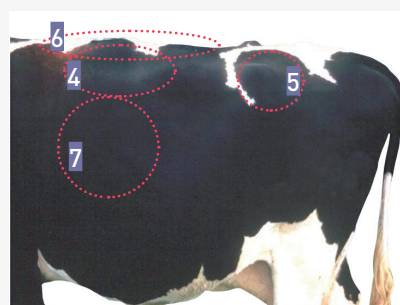
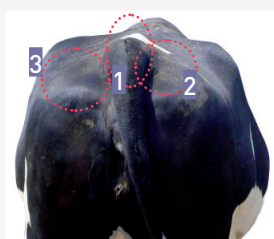
- DO***
- 1 TAIL HEAD: prominent
 - 2 TAIL: deep cavity
 - 3 LOIN: deep depression
 - 4 VERTEBRAE: ends of transverse processes sharp
 - 5 HIPBONES: prominent
 - 6 SPINE: prominent
 - 7 RIBS: prominent

Score = 2 Regular body condition



- 1 TAIL HEAD
- 2 TAIL
- 3 LOIN
- 4 VERTEBRAE
- 5 HIPBONES
- 6 SPINE
- 7 RIBS

Score = 3 Very fat



- 1 TAIL HEAD: outlines of fat patches visible under skin
- 2 TAIL: full cavity and folds of fatty tissue present
- 3 LOIN: convex between backbone and hip
- 4 VERTEBRAE: transverse processes not discernible
- 5 HIPBONES: outlines of fat patches visible under skin
- 6 SPINE: outlines of fat patches visible under skin
- 7 RIBS: outlines of fat patches visible under skin

SPECIFIC CASE : BREEDS USED FOR MILK AND MEAT PURPOSES

The indicators for a very lean cow require a slight adjustment:

- ✓ A very lean cow has a cavity around the tailhead, a visible depression between the backbone and hip bones.
- ✓ Ends of transverse processes are distinguishable and tailhead, hip bones, spines and ribs are visible.



SELF-TESTING SHEET

Indicative number of cows to evaluate according to scientific approach

Nb of cows to evaluate	<30	30-100	100-300	300-400	400-500	For each additional 100s, add 10 cows to your evaluation
Nb of cow in the herd	All the cows	30	50	60	70	

GUIDELINES

► If you need to evaluate more than 30 cows, copy this page as many times as required.

► If there are several groups of animals (animals grouped in different production units), be careful to evaluate a sample of cows in each group.

► Remember to evaluate a representative sample for all lactation stages.

To fulfill this table, note at least the body condition score for each cow and their identification number. If possible, complete the lactation stage.

	Identification of the animal	Body condition score (1,2,3)	Remarks
Ex	123 432	2	This animal calved 20 days ago
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Synthesis for the farm

Number of cows / score	
Score	Total per score
1	
2	
3	
Total	
% very lean cows (Total score 1/Total)	

Situation of the farm

% Very lean cows	Score	Farm situation	Result
0%	100		OK
0-5%	95		IMPROVEMENT NEEDED
5-10%	85		
10-15%	55		ALERT LEVEL (Be careful, if too many cows are fat, the situation may be classified as problematic)
15-25%	30		
25-50%	10		
>50%	2		

To fulfill the table above, note the number of cows per level.

Define the score of the farm according to the % of very lean cows. (Put a X in the good line)



LOCOMOTION SCORING

How to calculate the locomotion score?

Mobility scoring should be conducted on cows in small groups, with uninterrupted walking on a relatively flat surface.

The number of cows with scores 1,2 or 3 (1 being “normal mobility”) in each group is then recorded and the incidence of each score within the herd calculated as a percentage.

- ▶ **Score = 1** not lame: timing of steps and weight bearing equal on four feet.
- ▶ **Score = 2** lame: imperfect temporal rhythm in stride, creating a limp.
- ▶ **Score = 3** affected.

▶ Score = 1

Good Mobility



- ▶ Flat back (walking and standing)
- ▶ Steady head carriage
- ▶ Hind hooves land on or in front of fore-hooves (track-up)

▶ Score = 2

Imperfect Mobility



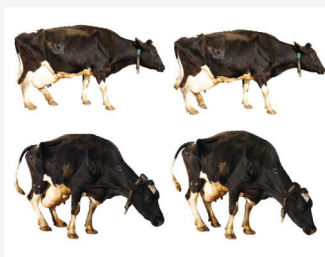
Impaired Mobility



- ▶ Mildly to obvious arched back, at least during walking
- ▶ Assymetric gait
- ▶ Head steady or head bobs slightly
- ▶ Joint stiff

▶ Score = 3

Severely Impaired Mobility



- ▶ Extremely arched back
- ▶ Obvious head bob
- ▶ Assymetric gait
- ▶ Obvious joint stiffness characterized by lack of joint flexion with very hesitant and deliberate strides
- ▶ Inability to bear body weight on one or more limbs

SPECIFIC CASE : TETHERED ANIMALS

Lameness may be evaluated by using other indicators:

- ✓ Resting a foot.
- ✓ Frequent weight shifting between feet (“stepping”).
- ✓ Standing on the edge of a step (to avoid bearing weight on one foot / part of foot).
- ✓ Reluctance to bear weight on a foot when moving.



SELF-TESTING SHEET

Indicative number of cows to evaluate according to scientific approach

Nb of cows to evaluate	<30	30-100	100-300	300-400	400-500	For each additional 100s, add 10 cows to your evaluation
Nb of cow in the herd	All the cows	30	50	60	70	

GUIDELINES

- If there are several groups of animals (animals grouped in different production units), be careful to evaluate a sample of cows in each group.

To fulfill this table, note the locomotion score and the identification number of the animals you evaluated.

	Identification of the animal	Locomotion score (1,2,3)	Remarks
Ex	123 568	2	This animal just had hoof trimming 2 days ago
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Synthesis for the farm

Number of cows / score				
Score	Number of cows/score	% of the score	Weight	Total (% of the score * Weight)
1			0	0
2			0.3	
3			1	
Total		100%		

To fulfill the table above, note the number of cows per level.

Situation of the farm

% Lamé cows (weighted)	Score	Farm situation	Result
0%	100		OK
0 - 5%	80		IMPROVEMENT NEEDED
5 - 8%	65		
8 - 10%	50		ALERT LEVEL
10 - 25%	35		
25 - 50%	20		
50 - 75%	5		
>75%	2		

Define the score of the farm according to the % of lame cows (Put a X in the good line).



MASTITIS SCORING

How to calculate the mastitis score?

To evaluate the farm's situation regarding mastitis, different criteria may be used:

- 1 If the farmer keeps a regular record of mastitis cases throughout the year:
 - a. The number of acute mastitis cases¹ may reveal an infection with environmental germs (E.Coli, Klebsiella).
 - b. The number of clinical non-acute mastitis cases² may reveal an infection with germs such as streptococcus dysgalactiae or staphylococcus aureus.
- 2 The number of mastitis treatments (administered by intramammary route) is a good indication of the farm's real situation.
- 3 The bulk Somatic Cell Count (SCC), measured at tank level, is an indicator of the number of cows infected with subclinical mastitis.
- 4 The individual Somatic Cell Count measures cell levels for each animal, and is a good way to detect animals with subclinical mastitis. An SCC result higher than 300,000 is deemed to indicate an infection.

¹ Acute mastitis: significant change to milk, signs of udder inflammation and fever

² Non-acute mastitis: no general signs and only some moderate changes to milk (clots) and udder (heat, pain and potential swelling)



GUIDELINES

- It is best to use at least two indicators: one for clinical mastitis (criteria 1 or 2) and one for mainly subclinical mastitis (criteria 3 or 4).



Number of cows (in average:
milking cows + dry cows)

The last table allows you to have a synthetic mark for your herd. To obtain the final mark, you have to calculate the average of the different levels.

(2) Non Acute mastitis: no general signs and only some moderate change at milk level (clots) and at udder level (heat, pain, and potential swelling)

	Bulk Somatic cells count for the 12 last months												Average
	1	2	3	4	5	6	7	8	9	10	11	12	
Bulk Somatic cell count (3) (BSCC)													
[3] Presence of somatic cells in milk reveals a moderate inflammation												% > 300	

4	Individual Somatic cells count for the 12 last months												Average	% cows tested	
	1	2	3	4	5	6	7	8	9	10	11	12			
Nb of cows tested															
Nb of cows >300 000 Somatic cell count															

Registered culling for mastitis during the year	Number	% of culling

		Threshold			
		Farm Result	OK	IMPROVEMENT NEEDED	ALERT LEVEL
1	% acute mastitis		<5%	[5;10]	>10%
2	% non acute mastitis		<20%	[20;40]	>40%
3	Nb of mastitis treatments /100 cows		<25%	[25;50]	>50%
4	% of BSCE > 300 000		<20%	[20;50]	>50%
5	% of ISCE > 300 000		<15%	[15;25]	>25%





FLIGHT DISTANCE SCORING

How to calculate the flight distance score?

The test can start when at least 75% of the cows are back in the barn after milking.

- Make sure the cow is standing still in an area where it has enough room to move away from you.
- Place yourself on the feed bunk at a distance of 2 metres in front of the animal to be tested. The head of the animal must be completely past the feeding rack.
- Make sure the animal is aware of your presence.
- Approach the animal quietly and steadily with your arm held in front of you, directing the back of your hand toward the animal. Do not look into the animal's eyes, but focus on the muzzle. Do not hold noisy papers in your hands for the cow to see, but hide them behind your back or hold them tightly against your chest.

► Estimate how close you are able to approach before the cow makes to move away (movement of head, movement of one foot or the whole animal).

► Record this distance (flight distance) in metres. If you are able to touch the cow, the flight distance is equal to 0.





SELF-TESTING SHEET

Indicative number of cows to evaluate according to scientific approach

Nb of cows to evaluate	<30	30-100	100-300	300-400	400-500	For each additional 100s, add 10 cows to your evaluation
Nb of cow in the herd	All the cows	30	50	60	70	

To fill in this table, note the identification number of the animal and the approximate flight distance (0 if you can touch the animal, 50cm, 1m, 1.5m, 2m, >2m..)

	Identification of the animal	Flight distance (meters)	Remarks
Ex	123 568	2	This animal was bought just one week ago, and is not used to the farm yet
1			
2			
3			
4			
5			
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30			

Synthesis of your farm situation

What is the average flight distance of your herd?

Repartition of your herd according to flight distance		
Flight distance	Number of Cows	% of cows/level
[0;0.5]		
[0.5;1]		
[1;2]		
>2		

Interpretation

IMPROVEMENT NEEDED

If the average flight distance is between 1 and 2 meters

ALERT LEVEL

- If the average flight distance is more than 2 meters
- If you have >25% of cows moving away at >1 m
- If you have >50% of cows moving away at >0.5 m





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International References

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* Sourcing & Supplier Development, the procurement department within Danone organization.



CREDITS

PHOTOGRAPH CREDITS:

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This list is not exhaustive: only the main reference documents are quoted.

Danone stays at the readers' disposal to supply further information.

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