

ANIMAL WELFARE POLICY MANUAL **(Nuevo Carnic S.A.)**

This manual is part of the controls for Animal Humanitarian Care included in our Hazard Analysis Critical Control Point Program (HACCP) as well as in the Sanitary Inspection Regulations of Meat in Nicaragua whose effect and application is approved by the sanitary authorities of the Veterinarian Inspection Division of the Ministry of Agriculture and Forestry (MAG-FOR).

Introduction:

Animal welfare depends on three elements: 1) the physical health of the animal; 2) Its psychological balance; and 3) the animal's harmony with its surrounding environment. In this last element, there are environmental and physical factors (facilities) involved.

The International Coalition for Farm Animal Welfare (ICFAW) established five core conditions that ensure animal welfare:

- Animals should not be kept hungry, thirsty, or undernourished,
- Animals should not suffer from pain, wounds, or illnesses,
- Animals should not show fear or agony,
- Animals should be kept in a comfortable location,
- Animals should not show abnormal behavior patterns.

Recommendations on how to optimize animal welfare

- The staff in charge of handling animals must know the principles related to the natural behavior patterns of cattle.
- Bovine animals have good memory, so long-lasting aggressive handling will make it difficult to load them into a truck or get them inside the slaughterhouse plant.
- Free-grazing cattle are always alert and vigilant; these animals have a broad vision scope; therefore, one must avoid sudden noises and movements.
- A bovine is a herd animal and needs to be with its group.
- Animals move easily from more illuminated areas to less illuminated ones, but the light must not hit their eyes directly (either solar or artificial light)
- Cattle advance well in stockyards and chutes because they feel they return to the starting point since they are used to revolving around men and because they do not see the truck, the stocks, or the stunning box at the end of the slaughter pen.
- Distractions that prevent the animal from moving along the pen should be eliminated.

- Both physical (exhaustion and hunger) and emotional stress (panic and fear) have a negative effect on the animal welfare and the final product quality (“dark cuts”). Animal stress causes the disease and it has repercussions on the cow’s rumen and the reproductive activity. It also causes weight loss of the cow, which brings economic losses to the producer.
- A few seconds of excitement entail 20 to 30 minutes needed for the animal’s heart to come back to its normal rate.
- The critical reduction of glycogen derived from frequent aggressions from the grazing field to the slaughter plant would imply days for the animal’s recovery.

Use of Cattle Captive bolt guns:

- We will reduce its use. In case we use the captive bolt gun, we will do it with 25% of animals. When we use it, the gun will preferably be set to 35 CA volts for no more than 2 seconds (never over 50 volts).
- The captive bolt gun will be only applied on the hindquarter of the animal; not on its sensitive areas (eyes, mouth, ears, anogenital region, mucous membrane, etc.).
- The cattle captive bolt gun will be replaced as much as possible by other elements or procedures such as the plastic tube with a plastic bag on its end, flags, plastic pallets, etc.

Livestock Transport

When cattle are transported to a new location, we recommend unloading the animals carefully allowing them to rest (for at least 12 hours). It is also important to give the animals food and water during 24 hours after the travelling time above stated. This will allow the cattle to recover from the trip.

Reception of Animals Management

A very important aspect is the management of the cattle being received. The main purpose of this activity is to allow the animal to recover from the stress they were subject to during the trip to the pen; animals get tired, dehydrated and are exposed to different microbes, which is why they become vulnerable to diseases. The following are some of the good management practices to be implemented:

- Carry out a good reception according to the arrival of the cattle. Avoid animal stress to keep the animals in a better physical and sanitary condition.
- Provide the animals with plenty of clean and fresh water as well as with enough food, especially fodder.

- Handle small groups of animals without cramping them into the cattle chutes or using captive bolt guns or sharp objects to drive them.
- Verify that the animals are in good physical condition.

Reception facilities

It is important to have cattle reception pens where animals receive specialized attention, including the following:

- Locate the reception pens at places where surveillance can be easily implemented so that the cattle can receive specialized attention.
- Verify aspects such as soil humidity, water availability, and easy food provision. If the cattle is frequently moved to other areas, it is necessary to consider having more reception pens.
- Ensure that the reception area has mangers for the animals.
- After the reception unit, the retention pens have to be located to separate the cattle. The retention pens will have at least 2 m² per head of cattle.

Cattle Drive in Corridors

The cattle will be driven along corridors wide enough in order for animals to be moved from one pen to another without being hurt.

Pens

- Pens, fences, and other facilities will be built according to the kind of animal and they will be permanently serviced in order to avoid any risk of wounds or damage to the animals.
- The animals will be protected from the weather (i.e. shade)
- All surfaces, ramps, and pens will be made of non-slippery material.
- All internal chutes will be flat and non-slippery material without sharp ends that might hurt the cattle.
- The caretakers will have to be careful and align the transportation vehicles correctly at the unload ramp to avoid holes that may cause physical damage to the animal.

Unloading the animals

- It is mandatory to control the unloading of the animals at the slaughter plant in the following matters:
- Correct arrival of transport vehicle
- Full opening of the stocks before unloading the first animal.
- Minimal use of the captive bolt gun, noises, etc.
- The truck will unload as fast as possible once it arrives at its destination.
- During the unload process, we must avoid rushes to prevent falls and hits against the concrete floor where animals are not used to moving.
- After the unloading process, the cattle will be slowly driven to the rest pen or to any other slaughterhouse's pre-mortem sanitary facility.
- An animal in great pain and/or injured will be stunned and sacrificed immediately (in no longer than 2 hours). It will never be dragged unconscious.
- Nobody will be allowed to load, unload, or transport an unmoving animal ("fallen") by dragging or pulling it by the head, neck, legs, or tail when said animal is unconscious.

Allocation in the pens

- Caretakers will avoid hitting, punishment, or any other practice against animals that might make them scared or excited.
- Animals will be driven without making them run to avoid slips and falls.
- Whenever possible, tired cows that come from faraway places will be located in stockyards with abundant pasture close to the slaughter plant.
- The company and the producer who owns the cattle will schedule the collection of the animals and their arrival at the facility.
- All animals will have access to drinking water from the moment they get to the facility. If the animals were more than 12 hours in the pens before they are sacrificed, they need to be fed.
- Animals that cannot move will not be dragged without prior stunning. Otherwise, a proper transport system will be used. These animals will be sacrificed in an "emergency slaughter task".

- When a bovine delivers at the pens, both the mother and its baby cow must be treated in a humanitarian way.
- Staff will frequently clean the pavement at the slaughter plant so that the animals will not slip or fall.

As to the Facilities

- All sharp ends or angles that might hurt or injure the animals will be avoided.
- The total capacity of the facility will be consistent with the volume of animal sacrifice of the company in order not to jeopardize the welfare of animals. Cows will be able to stand, lie down, turn around, and get to the mangers.
- The drainages will be properly installed along the walls, protected with grilles. These will not openly pass through other pens or corrals.
- The light level will permit inspection and help the animals move.
- The mangers will be located in such a way that all animals can have access to drinking water.
- The animals will be protected from excessive noise coming from pneumatic or hydraulic facilities, for example. The staff will minimize the transmission of noises coming from the slaughter room.

Cattle Drive in Chutes

In order to reduce stress and avoid accidents of animals, caretakers will have to:

- Move animals to the chute in groups without squeezing or hurting them.
- Instruct the pen workers on the most appropriate way to move the cattle. Avoid the use of captive bolt guns and other tools that hurt the animals.
- The cattle in the chute will always look ahead in order to decrease a broader view.
- When moving an animal into the chute, move or stand behind the animal. To get an animal back, stand in front of it.
- The chute working area must decrease the animal's ability to turn around.
- If the animal falls down, it will not be dragged without being previously stunned. This is the same criterion stated above for the cattle arrival at the slaughter facility.

- Likewise, in this stage, unmoving animals will be separated if there were any.
- The external sides of doors will be protected in order not to hurt the animals.
- The caretakers will avoid distractions (visual, sound, or olfactory) that prevent the animal from moving toward the stunning box.
- Staff will frequently clean the chutes' pavement so that the animals will not slip or fall.

Stunning

- Calmly driving the animals to the stunning box will help obtain quick and effective stunning.
- We will strictly respect the proper use of the stunning system authorized by the sanitary authorities and it will be constantly monitored for good performance.
- The stunning system used will not cause any bleeding or other tissue changes that interfere with the veterinarian inspection procedures.
- The operator will stun the animal for immediate effect and said animal will remain unconscious all the time until decapitation. The animal will not be suddenly touched; it must be paralyzed or its head must be adjusted to the electrode.
- The animal will be under the effects of anesthesia until it is tied, elevated, and sacrificed.
- The operator will insert the cow into the stunning box soon after applying the anesthesia. The cow will not be kept in the stunning box without stunning it quickly. Never will an operator place more than one animal in the stunning box.
- Signs of a well stunned animal: Flat fall of the head, tongue, and tail; lack of ocular and palpebral reflexes, no mooing coming from the animal, no back turning, no attempt to raise the head, no rhythmic breathing.
- The stunned animal can show reflex movements such as in its back legs. For this reason, it is appropriate to evaluate the anesthesia effect at the trail before decapitation.
- If an animal hanging from the trail prior to decapitation shows signs of awareness, it must be anesthetized again right away.

As to the Facilities

- The design of the stunning box or the animal stunning permit to optimize the management of animals to avoid causing fear and facilitate quick and easy access to the animal's head.
- The animal's vision of the slaughter spot will be blocked with walls tall enough (especially the front wall).
- The design of the facilities will not cause danger of wounds for the animals.
- The doors (manual or mechanical operation) will not cause wounds to the animals.

Stunning Team

- A double stunning team will be available (in case a second power shot is needed). A proper Maintenance team will also be available.
- The method used at the "Nuevo CARNIC" facilities is the "captive bolt gun", which does not inject air into the crane cavity. (V. Manual)
- In case a breathing fetus appeared when a cow is being sacrificed, such fetus will be stunned and sacrificed right away.

Decapitation

- No operation will be started on an animal that shows signs of awareness ("Zero Tolerance"). Such an animal will be stunned again immediately.
- The ideal interval between stunning and decapitation for cattle is 15 seconds; 30 seconds is a good time and 60 seconds is the maximum limit allowed.
- The cut can be made at the throat level cutting the carotid arteries and jugular veins or through an incision at the chest (between the first two ribs), the base of the heart, cutting the brachiocephalic trunk; anterior vena cava and the common trunk of the two carotid arteries.
- One must consider that the animal's time of death can be delayed if one of the two carotid arteries is not cut or if the non-selected ends of the arteries become occluded before the bleeding concludes. If only one of the carotid arteries is cut, the time to attain cerebral hypoxia and loss of consciousness can take three times more.

How to identify stunning

In animals who have been stunned with a captive bolt gun, movement of the legs can occur. It is necessary to observe the head. The head must be loose and hanging. These are the signs that show when an animal has been stunned appropriately.

1. The animal may kick, but the head and neck must be relaxed as a piece of cloth hanging.
 - Spasms can cause movement of the neck, but the neck must be relaxed and the head must crumble in 20 seconds.
 - One must observe if there are eye reflexes or if neck movement continues.
2. The tongue must hang out of the mouth; it must be straight with loose muscles. A stiff and rolled tongue is a sign of a possible second stunning attempt.
3. When the animal is hanging from the overhead trolley chain, its head should be hanging straight downwards and the back must be straight.
 - The animal should not show any reflex that makes it back move or get straight.
 - When the animal is partially stunned and hanging from the chain, it will try to lift the head although it is stiff.
 - A sudden collapse of the head IS NOT a sign of straightening.
4. When the captive bolt gun is used, the animal's eyes must be wide-open with an empty sight.
 - The eyes MUST NOT MOVE
 - Immediately after the animal is rendered unconscious by the captive bolt gun shot, it will close the eyes, but later the eyes will relax and show an empty sight.
5. After the captive bolt gun is used, the animal will NEVER have to open and close the eyes; there will not be reflex even if they are touched.
6. There must not be rhythmic breathing.
7. In animals stunned by a captive bolt gun, stunning could be questioned IF the eyes are rolled back or vibrating.
8. Shortly after the animal is hung from the chain, its tail must be relaxed and hanging downwards.
9. When animals are observed from a certain distance, the most important signs of STUNNING that one must watch for are:
 - A hanging and loose head
 - The tongue must stick out of the mouth with loose muscles
 - The back and head must hang straight downwards. No movement or straightening signs must show

Animals that show the above mentioned signs ARE stunned and no opening and closing of the eyes or any other reflex must appear.

Cattle Mooing Measurement

Mooing is an indicator of the animal unrest. The number of times that an animal subject to deliberate stress make mooing sounds in the stunning chute is related directly to their levels of cortisol (the stress hormone) in the blood.

Cattle's mooing is originated by the use of captive bolt pistols, the slips in the stunning area, and the mistakes in the application of the retractable plunger.

Cattle rarely moo during the stunning movement unless the cows are exposed to some annoying circumstances that can be easily noticed.

In order for mooing measurement to be simple, each animal will be classified as mooing or non-mooing. The number of times cows moo will be recorded while the animals are in the measurement areas. The animals mooing will not be recorded in the general pens because the cows waiting calmly frequently communicate with each other by mooing.

Level of performance in animals' mooing (in the retention pen, chute, stunning box, or paralyzing equipment).

(In large slaughterhouses, measure at least 100 animals)

Excellent: 0.5% or less of the cattle moo

Acceptable: 3% or less of the cattle moo

Not acceptable: 4 – 10% of the cattle moo

Severe problem: more than 10% of the cattle moo.

HUMANITARIAN ANIMAL SACRIFICE

Regarding Humanitarian Animal Sacrifice, the Slaughterhouse Plant is enforcing all the "Rules stipulated by the Sanitary Inspection Regulations of Meat for Nicaragua".

CHAPTER XIII.

Articles 158 (158.1, 158.2, 158.3, 158.4)

159 (159.1, 159.2, 159.3, 159.4, 159.5, 159.6)

160 (160.1, 160.2)

161 (161.1, 161.2, 161.3, 161.4)

162 (162.1, 162.2)

163 (163.1, 163.2, 163.3, 163.4)

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166 (a, b, c, d)

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