



# BTSF Better Training for Safer Food *Initiative*

Animal welfare in poultry production (chickens kept for meat production) – IV Session

Rome 22-24 November, 2023

*BTSF*

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## Risk factors affecting the welfare of broiler chickens on farm: - feeding and drinking

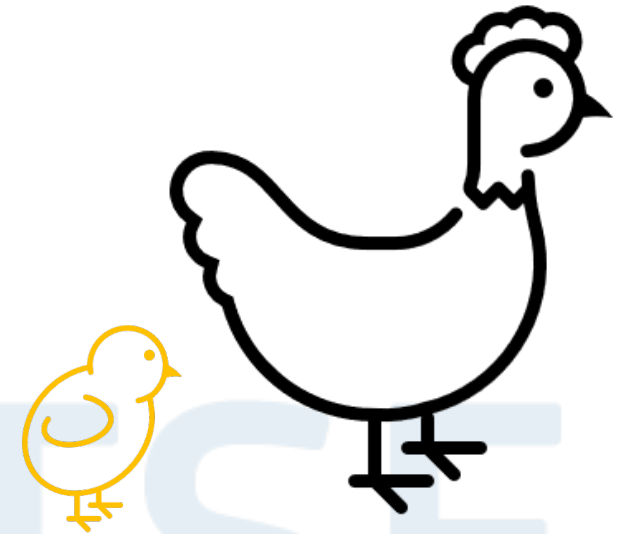
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# BTSF Content:

- Legal requirements:
  - ✓ Council Directive 2007/43/EC of 28 June 2007 laying down minimum rules for the protection of chickens kept for meat production
  - ✓ Council Directive 98/58/CE of 20 July 1998 laying down minimum rules for the protection of farm animals
- Critical points- feeding and drinking



# BTSF Feeding

## Legal requirements:

- Animals must be fed a **healthy diet** which is **appropriate to their age and species** and which is fed to them in **sufficient quantity** to maintain them in good health and satisfy their nutritional needs
- All animals must have **access to feed at intervals appropriate** to their physiological needs.
- **Feeding and watering equipment** must be designed, constructed and placed so that **contamination of food and water** and the harmful **effects of competition** between the animals are **minimized**
- Feed shall be either continuously available or be meal fed and must **not be withdrawn from chickens more than 12 hours** before the **expected slaughter time**.

# BTSF Critical points- feeders

**A- Type of feeders-** according with the age and stage of production

7/10 days



80% of the floor surface

Feeders on the floor

After...



PAN feeders- Better movement of the birds inside the house, have a lower incidence of feed spillage, facilitates the height adjustment, and improves the uniformity of feed distribution

**B- Height of feeders-** according with the age and stage of production



base of the trough or pans its leveled with the top of the breast

Too high/too low- will increase feed spillage, and can compromise feed intake and thus broiler welfare



# BTSF Critical points- feeders

**C- Feeding space/number of feeders-** Insufficient feeding space will reduce consumption.

**D- Function/contamination**



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## D- Distribution

- There is a **close link between feeding and drinking** behaviour so it is important to **place feeders and drinkers near to each other** to allow birds to move freely to and from the drinkers during feeding.
- Feed and water should be **distributed equally** and **uniformly** throughout the house to enable all birds an equal opportunity to eat and drink at the same time.
- 
- **Uneven feed distribution** can result in uneven growth, increased scratching damage associated with competition at feeders and increased feed spillage.



# BTSF Critical points- feed

Animals must be fed a **wholesome diet** which is **appropriate to their age and species** and which is fed to them in **sufficient quantity** to maintain them in good health and satisfy their nutritional needs

- A diet which is **appropriate to their age- size and type of feed particles**
- Feed in **sufficient quantity** to maintain them in good health and satisfy their nutritional needs.
- Feed **always available**
- **Correct feed storage-** Silos- clean, dry conditions and where necessary, pest control should be installed; feed contamination
- **Feed quality-** feed analysis; feed samples

starter	0-10 days  (but can be fed until 14 days if target weights are not achieved)	sieved crumbs or mini pellets
Grower	11-25 days	Transition from starter to grower feed involves a change in texture and nutrient density from crumbs/mini pellets to pellets, and also a change in nutrient density.
Finisher	After 25 days of age	pellets

Example of a feed program



# BTSF Feed and water consumption indicators

- Evaluation at the first 48 hours
- The bird crop is empty/full
- Bird crop is full, soft and rounded – chicks have found feed and water. Crop is full but hard and the texture of the feed can be felt (not drinking properly)



There should be a close monitoring of the feed and water consumption and the condition of the broilers, including live weight, uniformity, diseases and general condition, to assess if the broilers are eating an adequate amount of a quality feed.

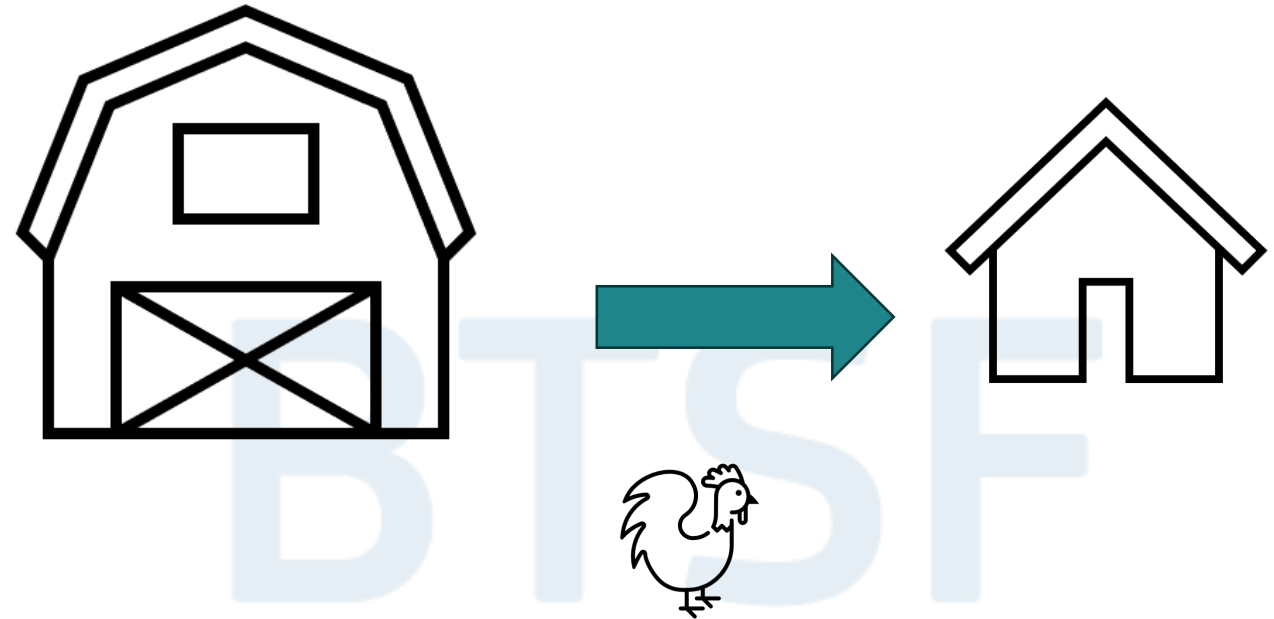


# BTSF Critical points- feeding

The **feed may need to be withdrawn** before the chicks are loaded for transport to slaughter in order to **prevent contamination with faeces during slaughter**. The period should be calculated by taking into consideration:

- catching time,
- transport time,
- holding (lairage) time.

Although feeders are removed, the drinkers should remain in place for as long as possible.



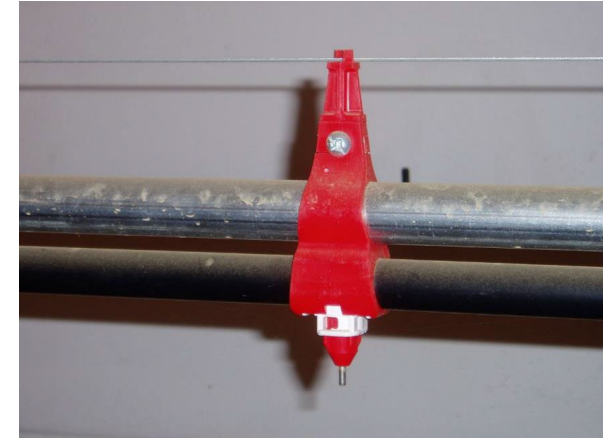
# BTSF Drinking- legal requirements

Animals should have access to:

- A suitable supply of **clean, fresh, good quality water.**
- Feeding and watering equipment which is designed, constructed, and placed so that **contamination of feed and water** and the harmful effects of competition between the birds are minimized
- Drinkers shall be positioned and maintained in such a way that **spillage is minimised**

# BTSF Drinkers- critical points

- Type of drinkers-bell/nipple
- Number of drinkers- water availability- summer time-
- Height of the drinkers
- Drinkers distribution
- Water pressure- important on the first days (higher pressure)- water drop
- Water quality
- Water availability





# BTSF Drinkers- Critical points



Water leakage  
Water  
contamination-  
litter, feed

# BTSF Drinkers- critical points

## Height of the drinkers:

- **minimise contamination** and allow a proper access to the drinkers;
- **Adjust with the age**
- **Bell drinkers**- level of the drinker lip- height of the bird's back when standing normally.
- **Nipple drinkers**- nipple should be at the height of the eye (first days) and of the comb (older animals), and a bit lower for nipples with a spill-cup;
- Animals have to reach up slightly to access the nipple and should never have to lower their head to trigger the pin of the nipple drinker.
- Birds should never have to jump to reach water





# BTSF Water- critical points

- Water availability and consumption- alarms; water consumption (rácio water/feed consumption- animals drink 1,8 of the quantity of the food-consumed)
- Water quality- . Drinking water plays a major role in the transmission of some bacterial, viral and protozoan diseases that are among the most common poultry diseases.
- Origin of the water- evaluate the risk- mains water/borehole water
- Water treatment- example chlorine, etc..
- Water analysis- chemical and microbiological
- Cleaning and disinfection of the water supply system- between flocks (biofilm; approved disinfectants)



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## Thank you

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