

# Welfare of animals in marginal areas

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## **DEVELOPMENT OF ANIMAL PROTECTION OVER THE CENTURIES**

- **Lipit-Ištar, ruler of Isin in the years 1934 - 1924 BC - the first legal standard containing regulations related to the breeding of domestic animals - provisions for the protection of the animal owner - punishments for damage to livestock. For an injury with a nose ring, the culprit is obliged to pay 1/3 of the price of the cattle, for a pierced eye 1/2 of the price of the animal, for a broken horn 1/4 of the price and for damage to the tail 1/4 of the price of the cattle.**
- **Legislative work of King Hammurapi, ruler of Babylon in the years 1792 - 1750 BC - price of animals, protection of their owner, mandatory care of animals.**
- **Ruth Harrison - Animal Machines (1964)**
- **Technical Committee (1965)**

# Animal protection - Czech land

- Regulation No. 31/1855 Coll. (of 15 February 1855), issuing a legal regulation against animal cruelty,
- decree of the regional president in Silesia No. 8/1899 slez. z. z. (dated 7/1/1899) containing a legal regulation against cruelty to animals, as regards the usual ill-treatment of animals during business operations, as amended by the order of the president of the regional political administration for Silesia No. 18/1926 slez. z. z. (from 24.7.1926),
- decree of the governor of Moravia No. 61/1901 mor. z. z. (of November 5, 1902), which promulgates regulations against animal cruelty, as amended by Decree No. 51/1914 plague. z. z. (from July 3, 1914),
- Decree of the Vice-Governor for Bohemia No. 45/1902 Czech. z. z. (from 31.5. 1902), on the prevention of cruelty to animals.
- - Government Regulation (Government of the Protectorate of Bohemia and Moravia) No. 106/1939 Coll., on the protection of animals against cruelty.
- Administrative Criminal Act No. 88/1950 Coll., included penalties for animal cruelty.
- Act (of the Czech National Council) No. 246/1992 Coll., (of 15 April 1992) on the protection of animals against cruelty

**No. 246/1992 Coll. (law)**, on the protection of animals against cruelty, as amended by Act No. 162/1993 Coll., Act No. 193/1994 Coll., No. 243/1997 Coll., decision of the ÚS No. 30/1998 Coll., no. 77/2004 Coll., full version 149/2004 Coll., No. 413/2005 Coll., No. 77/2006 Coll., No. 312/2008 Coll., full text No. 409/2008 Coll., no. 291/2009 Coll. (part), No. 291/2009 Coll. (1.1.10), No. 291/2009 Coll. (30.6.10)

**No. 411/2008 Coll. (decree)**, on determining species of animals requiring special care

**No. 382/2004 Coll. (decree)**, on the protection of farm animals during slaughter, culling or other killing, as amended by Decree No. 424/2005 Coll.

**No. 207/2004 Coll. (decree)**, on the protection, breeding and use of experimental animals, as amended by Decree No. 39/2009 Coll.

**No. 3/2009 Coll. (decree)**, on professional competence to exercise supervision in the area of animal protection against cruelty

**No. 4/2009 Coll. (decree)**, on the protection of animals during transport

**No. 5/2009 Coll. (decree)**, on the protection of animals during public appearances and breeding

**No. 208/2004 Coll. (decree)**, on minimum standards for the protection of farm animals, as amended by Decree No. 425/2005 Coll., No. 464/2009 Coll.

**No. 346/2006 Coll. (decree)**, on establishing closer conditions for animal breeding and training

**No. 27/2002 Coll. (Government Regulation)** establishing the method of work organization and work procedures that the employer is obliged to ensure in work related to animal husbandry

**No. 162/2003 Coll. (Act)**, on the conditions for operating zoos and on the amendment of certain laws (Act on Zoos), as amended by Acts No. 124/2008 Coll., No. 141/2008 Coll.,

**No. 166/1999 Coll.** (law), on veterinary care and on the amendment of some related laws (veterinary law), as amended by Act No. 29/2000 Coll., No. 154/2000 Coll., No. 102/2001 Coll., No. 76/2002 Coll. ., No. 120/2002 Coll., **309/2002 Coll. (1.1.12)**, 320/2002 Coll., No. 131/2003 Coll., full text No. 286/2003 Coll., No. 316/2004 Coll., No. 444/2005 Coll., No. 48/ 2006 Coll., full version No. 147/2006 Coll., No. 186/2006 Coll., No. 124/2008 Coll., No. 182/2008 Coll., full version No. 332/2008 Coll., **no. 223/2009 Coll. (28.12.09)**, No. **227/2009 Coll. (1.7.10)**, No. **281/2009 Coll. (1.1.11)**, No. 291/2009 Coll., No. 298/2009 Coll.

# DEFINITION OF WELFARE

- BROUČEK et al. (1993) - a dynamic, diverse, complex state serving to ensure natural species behavior adapted to the course of life processes.
- DOLEŽAL and BÍLEK (1996) - a state where the animal remains in good health (objective point of view) and, according to external signs, feels sufficiently comfortable in the given environment (subjective point of view).
- LORZ (1973) - a state of physical and psychological harmony with the environment
- HUGHES (1976) - a state of complete mental and physical health when an animal is in harmony with its environment

# DEFINITION OF WELFARE

- PAŠKA(1997) - summary of environmental conditions adequate to their biological requirements during rearing.
- BROOM (1986) - a state in which it is an animal's effort to cope with the environment.
- MEYER (1984) - the state of satisfying species and individual physical and mental requirements.
- VEČEREK and VEČERKOVÁ (2000) - the individual animal's experience of life at the level of satisfaction in a certain time interval.
- ONDRAŠOVIČ and SOKOL (1995) - these are breeding conditions where the animals are comfortable, i.e. the breeding environment meets their physiological requirements and during breeding they are not abused by inappropriately used technological devices or inappropriate procedures during feeding, care and other actions related to breeding .



# DEFINITION OF WELFARE

**Webster (1999) - the theory of the five freedoms** - recommends using it for "systematic and comprehensive evaluation of animal welfare".

**Freedom from thirst, hunger, and malnutrition:** can be ensured by unhindered access to fresh water and food sufficient to maintain full health and strength

**Freedom from discomfort:** by providing a suitable environment - incl. shelter and a suitable place to rest

**Freedom from pain, injury and disease:** by ensuring prevention or prompt diagnosis and treatment

**Freedom to carry out normal behaviour:** can be ensured by providing sufficient space, suitable equipment and companionship of animals of the same species

**Freedom from fear and anxiety:** by providing conditions that exclude mental distress.

# SELECTED WELFARE INDICATORS

- Physiological parameters expressed by biochemical or physical indicators
- Pathological data documenting the causes of morbidity and mortality
- Environmental indicators expressed in the form of the area intended for use, the quality of the air and lighting, the cooling value of the environment
- Utility (growth, production, reproduction)
- Ethological studies related to normal and abnormal behavior

- Based on all these observable and measurable characteristics, an assessment of the overall level of well-being can be made, expressing the **condition of the animal in three basic areas: physical health, biological functions and behavior.**
- **Approach based on biological functions /Functioning-based approach/** - traditional - determining the level of welfare depending on normal or satisfactory biological functioning. Some authors evaluate indicators as a whole (e.g. Broom's theory), other authors use hierarchical structures for evaluation (basic physiological needs, need for safety, other behavioral needs).
- **An approach based on feelings /Feelings-based approach/** using a qualitative methodology defining welfare by the subjective experiences of animals; achieving a high level of welfare consists in reducing the animal's negative subjective states (pain, suffering, frustration) and increasing positive states.
- **Approach based on nature /Nature of the species/** - determining the similarity of the environment in which the animal is kept and the environment that is natural to the animal. The assessment of welfare is, for example, a certain "freedom" of an animal to display behavior natural to its species. E.g. Webster's approach.

- **In practice, it is always necessary to interpret the results of welfare studies very carefully, because various variables can influence it. E.g. when animals are placed in bad climatic conditions, there are stimuli that cause negative immunological reactions and the animals then do not cope well with pathogens. Different types of treatment leading to worse welfare lead to greater adrenal activity with a negative effect down to the level of cellular response (BROOM, 2000).**

**Animal protection can basically be distinguished at the level of:**

- **- required by animals**
- **- moral**
- **- legal**
- **- economic**
- **- to preserve life.**

# THE QUESTION OF CONSCIOUSNESS OF ANIMALS

- **Currently, most experts and the lay public are convinced that animals also have their own mental life, which is manifested by the ability of a certain abstraction, self-awareness and also an obvious will to future activity. Based on these findings, the requirement to grant the right to live in an environment suitable not only for physical but also for mental health arises. The side of possible mental hardship is thus underlined, in addition to obvious physical abuse when the threshold of adaptation abilities is exceeded (SAMEK and JÍLEK, 1994, 1997; RIST, 1994; ČERMÁK and ŠOCH, 1997). However, it alludes to the knowability of animals' feelings, or the detectability of the degree of their suffering.**
- **DAWKINSOVÁ (1993) - it is possible to attribute thinking to animals, consciousness in animals should become part of biology.**
- **ŠPINKA (1997) - the problem of thinking in animals will become one of the great unifying themes of behavioral research in the coming years.**

# MOTIVATION MEASUREMENT

## Motivational priorities

- Preference tests - short term
- long term

**Strength of motivation** – what the animal is willing to sacrifice to achieve something

## Consequences of deprivation

- short-term, e.g. skipping behavior
- long-term, e.g. compensatory behavior
- stereotypical behavior
- changes in mood, eg “learned apathy

## The need for stress

## Anthropomorphism



# **Selected current legislation**

- **Act on the Protection of Animals against Cruelty No. 246/1992 Coll. as amended**
- **Decree of the Ministry of the Czech Republic of April 14, 2004 on minimum standards for the protection of farm animals - Coll. No. 208/2004**
- **Decree of the Ministry of the Czech Republic of May 7, 2002 on technical requirements for constructions in agriculture - Coll. No. 191/2002**
- **Decree of the Ministry of the Czech Republic of April 13, 2004 on the protection of animals during transport - Coll. No. 193/2004**
- **Act No. 242/2000 Coll. On organic farming with the following decrees No. 53/2001 Coll. A No. 263/2003 Coll. etc.**
- **Our regulations, in accordance with the "European Agreement for the Protection of Farm Animals" determine the conditions of breeding and breeding, housing including technological systems, environmental conditions, proper nutrition and veterinary care.**



**MASLOV (1970) theorized that the needs of animals in general are in a hierarchy according to their relative strength:**

- 1. Physiological needs**
- 2. Protection needs**
- 3. Behavioral needs**

**By ph y s i o l o g i c needs we mean:**

- a) nutrition - above all, it should be appropriate and sufficient,**
- b) suitable environment,**
- c) health.**

**Protection needs include protection from adverse weather and predation of one's own and other biological species.**

**Behavioral needs include requirements for an individual's external behavior. Negative human care can cause (in addition to direct abuse and neglect - active cruelty) passive cruelty and stress effects, e.g. on the basis of insufficient nutrition and watering.**

## **Optimal microclimate**

- temperature
- humidity
- flow rate etc.

## **Dimensional parameters**

(area and volume)

- hallway
- beds
- standing
- barrier
- floor etc.

## **Optimizing technology**

- stables
- feeding
- power supply
- ventilation
- excrement removal

## **Optimization of non-building factors**

- animal density
- ratio of feeding places at the trough
- stability of groups
- shift operation
- black and white system

**Research on the belief of new  
breeding technological procedures**

**Increasing the theoretical and practical knowledge  
of breeders**

**To create the animal's well-being, all of the above-mentioned needs should be fulfilled all the time, but even in life, a certain amount of stress is the rule, not the exception (CHARVÁT, 1970). So to understand the animal's well-being, we should know where the sometimes unavoidable mild stress ends and where the anxiety begins. Temporary stressors are sometimes excusable because they lead to long-term welfare. Continuously achieving the highest possible level of animal well-being is practically impossible (BROUČEK et al., 1994).**

**In fact, the absence of stress usually leads to boredom, not comfort. The goal should be the middle ground. The ideal pattern of care has not yet been determined for any species or category of animals. Some needs of animals are understood more than others and therefore can be fulfilled, some others are not even known yet (NOVÁK, P. et al., 1999, 2001; ŠOCH et al., 2000, 2005). It is necessary to establish boundaries between stress leading to stimulation of the organism and stress resulting in anxiety and even collapse of the organism.**

# BREEDING CONTROLS

**Primarily:**

- stables,
- nutrition,
- treatment,
- freedom  
of movement





**Pigs - are not kept under the following floor area requirements: 0.15 m<sup>2</sup> per pig with an average weight of 10 kg and less; 0.20 m<sup>2</sup> per pig with an average weight of 10.1 kg to 20 kg, 0.30 m<sup>2</sup> per pig with an average weight of 20.1 kg to 30 kg; 0.40 m<sup>2</sup> per pig with an average weight of 30.1 kg to 50 kg; 0.55 m<sup>2</sup> per pig with an average weight of 50.1 kg to 85 kg; 0.65 m<sup>2</sup> per pig with an average weight of 85.1 kg to 110 kg, 1.00 m<sup>2</sup> per pig with an average weight of more than 110 kg**



**Laying hens in cages are not kept under the following conditions (99/74/EEC): - min. area 550 cm<sup>2</sup>/1 pc, floor slope no greater than 14° or 8%; minimum height 40 cm on at least 65% of the area; feeder at least 10 cm per 1 pc.; availability for 2 drinking fountains or 100 mm trough-shaped drinking fountains**



The performance of regular checks at least 1 time per 24 hours (calves at least 2 times a day) and the removal of detected defects is not documented; increased care for pregnant females **is not ensured**



**Access by outsiders** is not excluded for objects;  
animals are not secured against escape; there is a  
lack of facilities for performing procedures on  
animals




**Calves** in boxes or pens are not kept under the following conditions: area 1.5 m<sup>2</sup>/ 1 calf up to 150 kg; area 1.7 m<sup>2</sup>/ 1 calf from 150 kg to 220 kg; area 1.7 m<sup>2</sup>/ 1 young cattle over 220 kg; minimum box width 90 cm ± 10%



- **As part of animal hygiene**, the level of: ventilation is assessed; temperature; relative humidity; check records of zoohyg. parameters; lighting
- **Nutrition and feeding** - the health hazard of feed is not guaranteed; the supply water quality is not checked; insufficient maintenance and cleaning of feeding and feeding equipment
- **As part of prevention**: the health status of animals is not checked; veterinary certificate is missing
- **Basic zootechnical records** are insufficient or not kept.

# PRINCIPLES OF WELFARE CREATION

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- Respecting the living requirements of farmed animals and, in connection with that, creating such an environment that provides the prerequisites for achieving high productivity.
  - Creating an optimal environment for animals is an important prerequisite for their feeling of well-being,
  - The usefulness, fertility, health and behavior of the animals is evidence of the extent to which the given breeding conditions meet the requirements of the animals.
  - It is therefore necessary to adapt breeding technology to the needs of the animals, not to select animals for technologies that are not completely suitable.



**Respecting the principles of environmental protection and welfare are relatively new factors that the breeder will have to even in our conditions fully accept in concrete implementation plans, projects and during the modernization**



## REFERENCES

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