

PRESENT SITUATION OF THE HUNGARIAN ANIMAL PRODUCTION CONSIDERING THE ECOLOGICAL AND ETHICAL STANDARDS

József STEFLER ^{a)}, Ferenc BOGENFÜRST ^{a)}, László CSATÓ ^{b)}, Sándor MAKRAY ^{c)}, Zoltán SÜTŐ ^{c)}, Zsolt SZENDRŐ ^{a)} and Gyula TOLDI ^{c)}

^{a)} Univ. of Kaposvár, Fac. of Animal Science, Guba S. u. 40, H-7400 Kaposvár, Hungary, Prof., Ph.D.

^{b)} Same address, Assoc.Prof., Ph.D., M.Sc.

^{c)} Same address, Assoc.Prof., Ph.D.

ABSTRACT

In the Hungarian animal production application of the EU standards for animal and environment protection, ethical regulations need dramatic changes. In the derogation period (2007–2010) deep and costly changes have to happen first of all in concentrate consuming species (poultry, pig). In case of ruminants the situation is not so severe, therefore adjustment is possible before the deadline. As part of regulations (protection against cage keeping, alternative, yard keeping, etc.) can be discussed professionally, since these increase costs, and quality of products, criteria of food safety are questionable. Because of it further scientific investigations and analyze of these experiences will be needed to make rational decisions.

Key words: animal production / environment protection / animal protection / ethics / Hungary / EU

STANJE V ŽIVINOREJSKI PROIZVODNJI NA MADŽARSKEM V LUČI EKOLOŠKIH IN ETIČNIH NORM

IZVLEČEK

Uvajanje evropskih norm na področju varovanja živali in zaščite okolja je na Madžarskem povzročilo dramatično spreminjanje etičnih norm. V času prilagajanja (2007–2010) bo prišlo do globokih in dragih sprememb predvsem pri tistih vrstah domačih živali, ki so odvisne od močne krme (perutnina, prašiči). Pri prežvekovalcih stanje ni tako slabo in obstajajo dobre možnosti za spremembe pred iztekom roka. O delu predpisov (zaščita živali pred rejo v kletkah, alternativna reja, reja na prostem in podobno) lahko poteka strokovna razprava, ker le ti povečujejo stroške reje, vplivajo na kakovost proizvodov in postavljajo pod vprašaj varnost hrane. Zato bodo potrebne nadaljnje znanstvene raziskave in analize za sprejemanje racionalnih odločitev.

Ključne besede: živinoreja / varstvo okolja / zaščita živali / etika / Madžarska / EU

INTRODUCTION

After the II. World war in most of the European countries the major goal was to increase the quantity of the food – within it animal- products. For the last decade of the 20-th century the World has changed. Most of the countries became self-suppliers even exporters. There was overproduction on the world market. In the new situation new ideas were created. Firstly the “quality” became the keyword, later on the “animal welfare” has appeared, recently requirements of “food safety” is quoted often.

There is an other reason of appearance of new type of requirements: A great part of the society has become far from the natural life, and has no direct connection with the farm animal keeping. The outsiders of economical life are people, living in big cities have started to create

new ideas what is good for animals, and what is not. Very many times they forget, that what the environment was, in which the animals lived before the domestication, and first of all about that, how much their traits have changed due to selection.

By change in the genetic ability of the animals new breeds and genotypes have arisen. The nature of them and their claim for the environmental conditions has modified, too. Consideration of animal product consumers has split. There are pragmatics, who focus on endproduct, and handle animals as “production instruments”; and there are idealists, whose mind is ruled by empathy for animals, and not able to conceive, that farm animals kept on wide-scale are not the same as in our mind remained from old ages. Their claim and toleration has changed significantly. Between these two alternatives open mind wants to compromise, and that is what legislation should do.

First of all those events were disliked, when draft animals were hurt by inhuman instruments to force for performance, which they were not able to achieve, and pedestrians were watching them. Later on protection against overcrowded transportation was the topic, where the animals were suffering, because they had no food and drinking water. Latest, the nerve sounds from slaughterhouses and animals forced into stables and cages, narrow fields unnatural conditions caused contra-feelings. Actions of organizations and associations for animal protection have motivated authorities and finally series of suggestions, prescriptions, regulations and laws are for establish the needed possible situation.

The Committee of European Community (regarding to the Fundamental Contract, supported to the suggestion of the Committee, according to the establishment of the Economical and Social Committee of the EU Parliament has scaled the instinct for protections of transporting, mass keeping and slaughtering of animals. According to these there were results for cattle in 1988. For fur animals in 1990, for transporting every kind of animal according to animal protection principles and determinations.

Hungary was ready to consider the EU principles and rules coinciding with domestic legislation, but in case of such arrangements which need greater investment (e.g. increase of laying hen cages or exercise field of individual animals) derogation was asked. This kind of regulations, as it will be seen later on, are not always suitable, sometimes extreme, without improving welfare of animals (e.g. laying hens), performance is poorer, costs are higher.

POSITION OF CATTLE PRODUCTION

In the technology of beef cattle production and rearing grazing is determinant still nowadays, so keeping conditions have got slightly far from original environment (steppe, savanna). That is the reason why conflicts are rare, society consider grazing animal keeping favorable in aspect of animal and environment protection, and sometimes calls it “bio”. Some debates arise around winter keeping.

It is obvious at the same time that in loose keeping dry cold can be tolerated well by cattle, in case of abundant litter, dry rest place (resting hill) they can be kept without building at Hungarian climate. No legislation or protection has arisen in this field. For animal keepers actually problem is that they have fulfil conditions of “mass keeping”, so called farm size, beyond 50 heads of cattle. This means: fenced farm, black and white dressing room, liquid proof manure storage, carcass store, etc. These are not realistic among beef cattle keeping conditions, to build them means financial burden in an extensive, cost-saving branch. Hungary has asked and got derogation to fulfil these rules till 2007.

In dairy cattle production regarding to loose keeping (80%) and high animal concentration (300 cows in average) requirements for animal keeping farms are mostly fulfilled. Problems

arise additional build of manure stores. In cow sheds deep litter handling is spreading, because of simplicity of it and that straw is available abundantly.

Strategically important that in cattle production instead of without or litter saving system, the use of straw is increasing, so there is greater chance for sustainable farming (Table 1).

Table 1. Connection of cattle- and plant production at present livestock number

Denomination	Territory	Seed product	Straw/seed production	Organic manure claim/ yield
	Million ha	Million t		
Ploughland	4.5			45
Grain	1.6	6.6	6	
Corn	1.2	7.8	25	
Grass	1.1			
Litter straw claim of ruminants			1.5	
Claim for corn-stalk			0.03	
Requirement of ruminants for grass	0.45			
Yield of organic manure				6

The most critical age group, considering animal protection and ethical aspects is calf rearing. At milk-drinking period individual placement is dominating, and average milk-feeding is 70–90 days. At the same time effective EU regulations declare to keep calves in cages during max. 8 weeks. Because of it building common calf cages have to be done additionally during derogation (till 2007). In veal production rules cannot be achieved practically, since neglect of roughage and providing sufficient iron content (4.5 mmol l^{-1} in plasma) is compulsory. It can be predicted, that veal production will be ceased in Hungary and get into countries out of EU.

POSITION OF SHEEP PRODUCTION

Among species utilizing pasture sheep is kept most naturally. Human intervention serves their welfare usually. Their claim for space (Table 2.) can be provided, especially now, when utilization of buildings equipped for sheep is only 50–55% and it seems will be in the future. In pens they are on deep litter.

Table 2. Claim of space of sheep by age group

Denomination	Requirement (m^2/animal)	Bank length (m/animal)	Optimum number of group
Ewe without lamb	0.8–1.0	0.4	50–300
Ewe with lamb	1.2–1.6	0.6	1–50
Fattening lamb	0.4–0.6	0.2	25–50
Yearling	0.5–0.7	0.3	200–1000
Ram in individual box	3.0–4.0	0.5	
Ram in common box	1.5–2.0	0.5	8–10
Suckling lamb	0.25	0.2	10–100

This time effective removing of ammonium steam is necessary, because it is not only harmful for wool, but also sheep's lung. At planning of exit it has to be considered, that gates can be opened wide enough. At this species we have to take special care for transporting. Annual

number of progenies over 900 thousand and about 90% of it is exported alive. In crowded trucks transport lasts sometimes several days, without food and drinking water. Since the terminal country is often Italy, there will be no two customs in the future, so there will be no obstacle to arrive within 8 hours traveling. Special problem is loading and unloading of lambs. This case plateau and ramp have to be at the same level. This is especially important at unloading, because it is fearing for animals to walk down on slope, and forcing may cause injure. It must be solved that animals can go horizontally and they open view from the transporting vehicle.

To decrease burden at loading and unloading the modern animal transporters are equipped with feeders and drinkers. With this kind of technical background transporting time could be increased, possibly up to 12 hours maximum. These kind of suggestions can be experienced in the EU countries.

POSITION OF PIG PRODUCTION

Keeping system of concentrate consuming animals is the farthest from natural one. This group utilizes intensive feeding well and really became meat and egg producing instruments in the 20th century. In consequence of selection and hybridization they went through such a change, which resulted that without conditions, provided by human beings they probably cannot survive.

In Hungary, where grain, and especially corn is available abundantly, primary pig was the animal, in which corn could be sold better than in sack or in bulk. At that time when live and slaughtered pig could be sold almost unlimited, the goal was that in the least room and least concentrate the most quantity of slaughtering pig can be produced. Pig limited in movement, mostly at limited illumination has transformed the feed better, but the limited exercise room, too early weaning, keeping without light has ignored biological claim of animals, which resulted higher loss of piglets, shorter lifetime of sows, poorer quality of pork. Meanwhile market had saturated with pork (our pig population was 10 million in the '80-s, than has shrunk to half, two-third) role of quality became dominant, and parallel instinct of animal welfare has realized, too.

This reflects also in legislation, which is compulsory in the EU for farms, keeping more than 5 sows. This means first of all for to provide size of space and surface of resting space. From 2004 May 1 the "basic area normative" appears (Table 3), which –among others- rules number of piglets on one battery, decrease by more than 40%.

If we go on this way-actually we will have to do it- then it is not possible to preserve the 5.5 million number of pigs even less to increase it without new investments. Legislation contains further limitations, which can be postponed.

Table 3. Minimal requirement of space in pig breeding*

Liveweight category	Age group	Space/1 animal (m ²)
< 10 kg	Piglet	0.15
10–20 kg	Piglet	0.2
20–30 kg	Growing pig	0.3
30–50 kg	Growing pig	0.4
50–85 kg	Fattening pig	0.55
85–110 kg	Fattening pig	0.65
> 110 kg	Fattening pig	1

* Compulsory from 2004 May 1.

According to these tied keeping of sow and gilt will not be allowed after 2006 January. Individual keeping will not be legitimate from 2013. They can be kept separately only for 4

weeks after service. There are prescriptions also for establishments of hogs. Liquid-manure store capacity has to be established by adequate size and isolation to contain the matter for 4 months, and solid manure gathered during 8 months. Altogether these have to be realized till 2010 January. Derogation for Hungary will be lasted at 2013. January 1. for realization of territory for /sow, create of surface of floor, width of grill.

Till same time sow and gilt have to be available to those matter or objects, manipulation of which entertain them. These days it is prohibited keeping hogs under dark conditions permanently. (Actually there were not too many pig farms were situated for dark keeping. Regulations are existed for light pig-stables to illuminate by 40 lux during 8 hours. Otherwise there are standards for the length of feed bonks /animal, size of self-feeders, availability and placement of them.

POSITION OF POULTRY PRODUCTION

The other concentrate consuming group is poultry. Natural keeping was neglecting at these specialized farms in the second half of the last century.

This is true firstly for laying hens (egg and broiler chicken production).

Hybridization has reached significant results in this field. Degradation of animals as pure production instruments became obvious.

All over the World eggs for human consumption are produced in cages.

The laying hen group which is squeezed in narrow cages, during almost 13 month term production lays around 300 eggs, that means that they lay 7.68 eggs within ten days. This 10 day performance the hybrids will be able to produce also outside, but laying length of hens kept in cages is longer by 17.4%, specific food consumption is less, need less human labor, consequently production cost for one egg is lower, and these circumstances have brought the decision for the "slave keeping" technology. Production cost of egg in the cage lower by 22% than that of the egg outside and by 52% less than that of produced under "bio condition" (Table 4.). In Hungary annually about 2.8 billion eggs are produced (2.8% of the EU egg production) half of it at small holders. For keeping conditions there are not strict regulations in this sector, true only for those farms, which have more than 350 laying hens, and for keeping in cage. For bigger farms derogation of rules lasts till 2008. After it we have to change the size of cages, may be decrease number of hens kept in one cage. Same time it is debated, that keeping of hybrid, genetically greatly modified hybrid hens under "happy keeping conditions" is really more advantageous. Comparing cage keeping with outdoor keeping, in Germany it was realized, that on farms having more thousands of hens in outdoor keeping loss of hens were beyond 30%, meanwhile this ratio in cage keeping was between 4.8 and 12.6%. Danish experiences have shown similar results: losses outdoor were 20.3, in cage 6.2%. The Italian Marini group has reported on experiences on improved keeping. According to these: running in improved cages hygienic conditions of production have spoiled because of powder and gas development, cannibalism is more frequent, loss is higher by 5%, eggs are more dirty, consumers' risk is higher.

There is a paradox situation, because, while consumer requirements are for decrease of therapy treatments, keeping of laying hens has forced to change to such direction, which increase the chance of illness appearance (parasitism, bacterial infection).

Consequently opinion has formed, that applying modified cages beyond the fact it increase costs, additionally hygienic security decreases, deterioration of labor safety, arise of pathology problems. Beyond this deteriorate health condition of laying hens. Resulting profitability egg production will be lower, number of laying hens will decrease and autarchy level in the EU can decrease from the recent 103–105% to even 90%, which lead to force importing 10 billion eggs.

Comparatively the only hope that hens become happier. In reflect of serious special reports it cannot be exclude, that keeping cage has to be thought over.

Table 4. Effect of keeping method on production results and costs*

Production traits	Keeping methods		
	Cage-keeping	Outside keeping	Bio keeping
Lenght of laying period, day	384	327	325
Loss during	4.6	12.2	10.0
Egg production, piece/hen	295	259	259
Average egg weight, g	63.1	63.2	62.2
Non standard egg, %	6.1	11.2	10.9
Feed consumption / hen/day, g	112.6	122.2	127.0
Liveweight of hen at slaughter, kg	1.98	1.89	1.85
Production costs, EUR/hen	13.62	17.42	28.60

* Permanent - + variable + labour cost

Regarding to broiler production the situation is more simple. Outdoor picking chick will not fulfill to requirements of store-chains and their clients. Realized large-scale technology meets with claims of animal protection fighters, but meanwhile we have to take care of sufficient illumination, during relevant time and correct ventilation of rooms. Exercise space of limited groups was increased according to their growth.

POSITION OF WATER FOWL PRODUCTION

Even today extensive keeping is the trait export orientated water fowl branches in Hungary. Keeping of these species is natural-like in some phases of production., but are far from West-European yield average. Though genetic ability of them is identical.

Broiler duck, broiler goose end meat type goose populations regarding their extensive keeping, manure production of them is extremely high on used field. This is not accepted in the EU, though it is presumably not harmful for their welfare. Beyond this, geese ruin plant population of their grassland, change them extremely. Change of pasture is obviously needed.

Regarding to last observations on duck keeping farms situation of buildings and utilized basic area were found appropriate in most cases, relevant to EU regulations.

In goose keeping the situation is worse, where the comfort of buildings was only in 17%, utilized area in 14% was appropriate.

An other question is force feeding of water fowls, production of fattened liver. Production of fattened liver of the World is originating from Hungary. Debate on question if it force feeding is ethical or non ethical has not finished. Animal protectors are against of force feeding, saying it cause stress and painful , causes aversion in animals. Judge of EU Animal Health And Animal protection Committee was negative in their report in 1988. Though from French side, where this branch is a huge business, Series of "scientific investments" contradicted to these accuses. They state, that force feeding does not cause aversion at geese, does not cause pain, nor stress. Geese, which are originally migratory birds take much more food than in common before migration and store it in liver as fat. The debate has not ended, but the best solution is probably if the selection happens towards to create such breeds or hybrids, which will take great quantity of corn voluntary.

POSITION OF RABBIT PRODUCTION

Till now there are no regulations for rabbit production in the EU, but these can be expected. First of all special knowledge, experience and correct handling are the requirements from rabbit producers. Safe space, moving area have to be provided for rabbits, which is needed for natural behavior. There are suggests for minimal cage size and equipment for breeding and fattening rabbits. Fattening animals have to be reared in groups, provided appropriate size of cages. For kindling boxes with litter are needed in appropriate time.

Early weaning is not supported. Chewing feeds have to be provided, hay, straw, wooden branch. Illumination has to set to rabbit's requirements. At transporting and slaughtering expectations of animal welfare have to be considered.

At production of "bio" rabbit only colored rabbit can be considered. These cannot be kept in cage and not allowed to inseminate artificially. In case of "label rouge" traded products mothers can be hybrids and inseminated artificially, but only with semen of colored male. Slaughtering weight can be reached only at 13 weeks of age. In feeding, antibiotics have to be replaced, and at proliferation biostimulation systems have to be used instead of hormonal treatment.