

# DAIRY WELFARE IN HUNGARY AND IN THE UNITED KINGDOM VS. NATIONAL AND EUROPEAN UNION LEGISLATION

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**Abstract :** Dairy industries in Eastern and Western Europe have different history, heritage, but the same aim to produce cheap, high quantity of good quality milk with the care of dairy welfare. Member countries of European Union had choice to either implement minimum standards provided by the European Commission, like in Hungary, or to create their own legislation also covering minimum standards, like in the Great Britain. British, Hungarian and European Union legislation was compared with dairy welfare measures taken on 53 farms in the UK and on 27 farms in Hungary. Among 13 welfare measures observed 8 were found to be statistically different ( $p < 0.05$ ,  $p < 0.01$  or  $p < 0.001$ ) between countries. Fewer cows were reported with dirty hind limbs, hock hair losses, non hock injuries, being dull or with greater flight distance on Hungarian farms than in the UK. There were fewer cows with dirty udders, being fat or lame in the UK in comparison to Hungarian farms. Cheaper bedding materials in Hungary are thought to be the major factors cows are found cleaner. More farm workers per one animal make more attention is paid for providing cattle with suitable conditions for resting what also might impact shorter flight distance. In the Great Britain cleaner udders might be related to modern husbandry systems providing cleaner conditions. Education is also thought to be playing a great role in lower proportion of cows being lame, with digestion problems and mastitis in the UK in comparison to Hungary.

**Key words:** dairy welfare, dairy welfare assessment protocol, welfare standard, herd health

## Introduction

As intensive systems allow obtaining animal products at relatively low prices there is a growing interest and concern about the welfare of housed dairy cattle (Verhoog *et al.*, 2004). Over the past 40 years as herd size has increased, cowshed housing, in which cows are tied by the neck for prolonged periods during the winter months, has been replaced by straw-yards and cubicles. Modern dairy production is facing disadvantages of indoor production. In other words, cows need to cope with facilities, which are not giving them enough freedom in every day activities (Trevisi, *et al.*, 2006). Dairy cow farms are often considered unsuitable to guarantee the required level of welfare to the animals. In particular, among the reasons more often quoted, there is the so-called unnatural milk productivity of cows, requiring a specific diet which is markedly different in comparison to pasture (Rollin, 2001). Short life span, lameness, mastitis and reproductive disorders are the main topics which farmers are trying to cope with. In conclusion, by keeping welfare standards milk production can be easily run, because healthier animals will cause fewer outbreaks. What is more, welfare of dairy cows is giving a positive image of dairy industry.

## Public opinion

The Community Action Plan in European Union on the protection and welfare of animals found that there has been a ‘*clear shift of public attitudes towards animals over recent decades*’. Consumers in EU countries are becoming increasingly more concerned about the implications of farming for the health and welfare of animals involved. This is reflected in the results of survey: ‘Attitudes of EU citizens towards Animal Welfare’ with European Union citizens clearly of the view that this is a highly important issue (European Commission, 2007). For consumers from western countries, price is not the only determinant behind animal-food purchases as they are acquiring an increasing interest in farming practices and the related animal welfare standards (Blokhuis *et al.*, 2003). Napolitano *et al.* (2008) believe consumers do not seek the cheapest food but the best value for money.

## EU Legislation

European Union prepared Directives (recommendations) which every member state can follow. The Treaty of Amsterdam in June 1997 contains a legally binding Protocol recognising that animals are sentient beings and requires full regard to be paid to their welfare when policies relating to agriculture, transport, research and the internal market are formulated or implemented. There are

directives covering calves, pigs, laying hens and chickens kept for meat production. However, there is still no directive laying minimum standards for dairy cattle. Every country is given a choice to create specific rules to be included in national legislation, if needed. Several Member States have national legislation for groups of farm animals that are not covered by specific EU legislation. The two animal groups for which this has occurred most are fur animals (DE, IT, NL, DK) and dairy cows (DE, SE, UK, DK, under discussion in NL).

A Council of Europe Recommendation attached to the European Convention for the protection of animals kept for farming purposes was adopted in 1988 and was never implemented in EU law. It contains special provisions for cows and heifers. In 2009 EFSA (European Food Safety Authority) published five reports concerning the impact of current farming systems on the welfare of dairy cows, which highlight the fact that the European dairy production is based mainly on specialized intensive farming which is in itself a major factor determining the health problems of dairy cattle and other aspects of their welfare, partly through housing and equipment and partly through management and handling practices.

*Eurogroup for Animals* (2011) believes that the Commission should urgently present proposals to establish minimum standards for the welfare of dairy cows, taking into account EFSA's conclusions. So far there is only Council Directive 98/58/EC of 20 July 1998 concerning the protection of animals kept for farming purposes which lays down the general framework for farm animal welfare and applies to all animals kept for food, skin, fur and other farming purposes in European Union Countries (*EUR-Lex*, 1998).

## UK Legislation

The Animal Welfare Act 2006 contains the general laws relating to animal welfare. The Act also contains a duty of care to animals – anyone responsible for an animal must take reasonable steps to make sure the animal's welfare needs are met (*DEFRA(a)*, 2011). The welfare of farmed animals is additionally protected by the Welfare of Farmed Animals (England) Regulations 2007, which are made under the Animal Welfare Act. Regulations are included in Codes of Recommendations (e.g. Dairy Cattle) (*DEFRA(b)*, 2011).

The welfare of cattle is considered within a framework that was developed by the Farm Animal Welfare Council and known as the 'Five Freedoms':

1. freedom from hunger and thirst: by ready access to fresh water and a diet to maintain full health and vigour;
2. freedom from discomfort: by providing an appropriate environment including shelter and a comfortable resting area;
3. freedom from pain, injury or disease: by prevention or rapid diagnosis and treatment;

4. freedom to express normal behaviour: by providing sufficient space, proper facilities and company of the animals' own kind;
5. freedom from fear and distress: by ensuring conditions and treatment which avoid mental suffering

## **Hungarian Legislation**

Welfare of dairy cows in Hungary is included in Act on the protection and humane treatment of animals 32/1999. (III. 31.) about keeping animals for farming purposes and their minimal requirements about wellbeing. The directive is following Council Directive 98/58/EC where special minimum standards for keeping calves, pigs and hens were established (*Complex*, 2011).

## **The aim of the paper**

History of modern Hungarian dairy enterprises is starting by collectivization process after The Second World War. Small peasant farms were grouped into conglomerates including hundreds and sometimes thousands of hectares. The same system was applied to dairy production where small family farms were swapped into big industrial state farms. Post-socialism transformation in early 1990s' made some farms to be privatised and some stayed as cooperative enterprises. The heritage of facilities, equipment, labour, mentality and market challenges gives a great opportunity for research about its impact on welfare of dairy cattle.

The following paper aims to evaluate Hungarian dairy farms according to welfare standards and to assess how animals are coping with environment and management. Another aim is to compare welfare measures from the United Kingdom (the country is a leader in animal welfare issues) and from Hungary in relation to national and European Union's legislation. Publication of *Whay et al.* (2003): 'Assessment of the welfare of dairy cattle using animal-based measurements: direct observations and investigation of farm records' was combined as a background to the project and confronted with current situation in Hungary.

## **Materials and Methods**

The project presumed dairy farm monitoring in East and East South Hungary. 27 Holstein Friesian farms were selected and visited between June and December 2010. The selection was firstly created on a principle of searching for as different farms as possible. The criteria for farm selection included the maintenance of accurate records and a willingness to commit to the trial. No aspect of herd

management was changed for the purpose of the study. Among farms chosen are farms which are different in:

- ownership (private, state, cooperative)
- size (from 56 to 850 milking cows)
- husbandry systems (free stall, straw yard)
- access to the pasture (yes, no)
- scraping system (automatic, tractor)
- age (modern, old ones)

Due to fact the research was run by one person and organisation limitations visits took place in different parts of the year on different farms. The aim was to make all the measures to be run in the same way as it was done by *Whay et al.* (2003). Each of the visits were arranged to begin at the beginning of morning milking. Every cow leaving milking parlour was checked for lameness. Solid, concrete, flat, clean 5-10m surface was found to make sure cows are able to show as undisturbed paste as possible. For lameness description method of *Sprecher et al.* (1997) was used. This system has understandable objective descriptions of posture and gait for scoring. This also includes subdivisions between sound and clinically lame cows. The system contains 5 categories of increasing severity. The first (1) describes a normal locomotion and only considers the back position (flat while walking and standing). Another one (2) describes a mild abnormality only visible when the animal walks when the back is arched. The last 3 scores (3, 4 and 5) classify a bovine as lame and the animals are arching of the back while standing and walking. In the original paper of *Whay et al.* (2003) a four-point scale (0 sound, 1 abnormal locomotion/perhaps tender footed, 2 lame, 3 severely lame) has been used. This had no difference on the scoring scale as 1 (current study) or 0 (*Whay et al.*, 2003) were always the best scores and 2-5 (current study) or 2-4 (*Whay et al.*, 2003) were always the worst scores.

In both studies twenty % of the cows in each herd (every fifth animal approached by the observer) were then selected for a series of detailed observations. In Hungarian study percentage of dirty flanks, dirty hindlimbs and dirty udder was recognised as dirtiness bigger than 3 hands spread on each part of the body. In a British study this was defined as visible or not visible. Hock hair losses generally result from inadequate body space on stall bed, hard stall surface, and/or inadequate bedding (*McFarland*, 2007). All visible lack of hair and nonhock injuries, found on corpus of the body caused by other facilities, were qualified as poor welfare. Thin cows were distinguished from those which were in Body Condition Score 1 and 2. Fat cows were those found with Body Condition Score 4 and 5 respectively. Another condition cows were examined was a bloated (overdistension of the rumen and reticulum with gases derived from fermentation) or hollow rumen due to feeding disorders. Cows were judged from the left hand side by putting a hand to the rumen area. The overall appearance of each animal

was assessed for evidence of a dull demeanour or signs of sickness. Perching, standing or sitting in the alleys and other not normal behaviours were described as follows:

Cow kept in straw yards:

Proportion of cows performing no activity, perching, standing in dung, and not eating, drinking, ruminating, walking or lying, failed attempts at lying.

Cow kept in cubicles:

Animal lies or stands with part of the body outside the cubicle.

Cow is standing in dung, not eating, drinking, ruminating, walking or lying. An animal lies backwards in the cubicle with head at the position where the hind quarter is supposed to be.

Diagonal laying or standing is observed, it means corner-to-corner position.

Stereotypic behaviour.

Dog sitting position.

Another measure considered was flight distance assessed by the observer walking at an angle of 90 degrees towards an unrestrained cows and estimating how close to the animal's shoulder it was possible to get before it retreated (*Purcell et al.*, 1988). All the observations were made while the animals were unrestrained.

In the British study other observations were classified as either none, mild, medium or severe; they were the dirtiness of the hind limbs, udder and flank, conditions of the coat, such as baldness, dullness and hairness, and the state of the rumen (bloated or hollow). Only some welfare measures were considered from the original paper *Whay et al.* (2003) which were recognised among animals on Hungarian farms with confidence. Results of the measures from both studies were put together into SPSS 13.0 for Windows. Percentages were converted into numbers of cows known before (averages: 496 and 108) and Chi<sup>2</sup> test was run for checking if there was any significant difference between particular measures in Hungary and in the UK.

## Results and Discussion

The median herd size of the 27 farms was 496 cows (lower quartile 288, upper quartile 560), and a mean (sd) of 480.74 (259.89). The observations and measures taken on 27 farms were collected on WORKABOUT PRO rugged handheld computer and entered into Excel (Microsoft). Similarly like in the British study the data have been divided into five quintiles (Table 1). That is, 20% bands; for example, 40% of the herds (bands A and B) were observed to have less than 20% of thin cows, 60% (bands A, B and C) reported less than 10% of cows with

non-hock injuries, and 80% (bands B, C, D and E) had more than 11% of cows with dirty udders, with the prevalence in the worst quintile (E) being 41 to 95%.

**Table 1. Welfare of dairy cattle: Each band (A to E) represents the results from 20 %of the farms, with the highest and lowest result in each quintile being displayed; A shows the top results for each measure and E the bottom; the results for each measure are independent of all the other measures.**

Measure	♣) HU vs. UK	Welfare of dairy cattle on 27 Hungarian dairy farms					Welfare of dairy cattle on 53 UK dairy farms				
		Score categories					Score categories				
	A	B	C	D	E	A	B	C	D	E	
Dirty flanks (%)	-	0-7.2	8-13	16-18	19-45	53-95	0-0	2.5-6.9	8.3-11.8	14.3-25.0	25.6-77.8
Dirty hind limbs (%)***	HU	4-9	11-34.6	43.6-68	76-81	81.2-94	65-85	90-96.4	96.7-100	100-100	100-100
Dirty udder (%)*	UK	2.3-7	7.1-11	12-15	18-32	41.6-95.5	0-8.3	10.0-17.7	17.9-23.8	24.1-33.3	35.9-70.0
Hock hair loss (%)*	HU	0-5.7	6-7.5	8-18	10.7-18.3	21.3-58	0-0	4.2-7.1	7.7-13.8	14.8-30.8	32.6-88.2
Nonhock injuries (%)***	HU	0-5	6-8.2	8.3-9	11-19	21-71.6	6.3-42.9	45.8-58.6	59.3-65.6	66.7-79.2	80-100
Thin cows (1+2) (%)	-	1.6-11.5	15.7-21.5	22.9-27.4	28-44.6	46.7-61.3	0-5.6	6.3-11.1	13.3-21.4	21.7-31.3	33.3-61.1
Fat cows (4+5) (%)**	UK	3.4-5.1	5.8-10	12.6-14.4	17.8-19.6	23.1-43.4	0-0	0-0	0-0	1.4-5	5.1-27.6
Bloated rumen (%)	-	0-1	1.8-2	2.5-3	4-8	9-16	0-0	2.6-6.5	6.7-16.7	17.5-24.1	25.0-46.7
Hollow rumen (%)	-	0-2	2.1-5	6-12	12.9-17	20.2-49	0-6.3	7.4-13.8	14.3-20.0	20.8-31.3	32.1-82.4
Lame2+3+4+5 (%)*	UK	5.4-5.5	16.0-19.5	24.0-33.0	38.8-41.1	42.2-50.1	0-13.6	13.8-18.0	19.5-23.5	23.6-29.6	29.8-50.0
Dull/obviously sick (%)*	HU	0-1	2-3	4-4.5	5-8	8.1-9	0-0	0-0	2.2-3.3	3.6-6.3	6.7-20.0
Perch/ /Not norm (%)	-	1.9-4.2	6-7	8-12	13-16	18-26	0-2.6	2.8-3.7	4.7-5.1	5.6-8.3	8.5-25.0
Average flight distance(cm)**	HU	35-52	55-70	76-85	90-130	135-220	60-110	120-150	150-165	170-190	210-340

Levels of significance: \* 0.05  
 \*\* 0.01  
 \*\*\* 0.001

♣) Comparison in which country the measure was found on lower level

Out of 13 observations 8 measures were found to differ significantly between British and Hungarian study. Hungarian cows were found to have cleaner hind limbs in comparison to study of Whay *et al.* (2003). Only on 40% of farms there were more than 65% of cows with dirty hind limbs in comparison to British

farms where on all farms there were more than 65% of cows with dirty hind limbs. There was a highly significant difference in percentage of cows with dirty hind limbs between current study and the British one with  $X^2$  (4, N = 1830) = 147.008 and  $p < 0.001$ .

20% of the worst Hungarian farms had between 40 to almost 100% of cows with dirty udders. In the same time, the worst 20% among British farms were observed with 36 to 70% of cows with dirty udders. There was a significant difference in percentage of cows with dirty udders between current study and the British one with  $X^2$  (4, N = 917) = 12.17 and  $p < 0.05$ .

Fewer animals were found in Hungary with hock hair losses. 20% of the worst farms had between 20 to 60% of cows with hair loss. However, in the UK there were between 30 to 88% of cows suffering because of hocks in the same category of farms. There was a significant difference in percentage of cows with hock hair loss between current study and the British one with  $X^2$  (4, N = 650) = 13.613 and  $p < 0.05$ .

Up to 20% of animals with non-hock injuries were found in 80% of farms in Hungary in comparison to more than 80% of farms where cows had more than 20% of non-hock injuries. There was a highly significant difference in percentage of cows with non-hock injuries between current study and the British one with  $X^2$  (4, N = 866) = 106.372 and  $p < 0.001$ .

Much better conditions of cows were found in the UK regarding cows being fat. On 80% of farms less than 5% of cows were recognised with BCS 4 and 5. On the other hand in Hungary on 80% of farms from 5 to 43.4% of cows were monitored to be in BCS 4 and 5. There was very significant difference in percentage of cows with Body Condition Score 4 and 5 between current study and the British one with  $X^2$  (4, N = 479) = 18.307 and  $p < 0.01$ .

Proportions of lame cows were found to be on significantly lower level  $X^2$  (4, N = 846) = 12.756 and  $p < 0.05$  on British farms (mean 21.7%) in comparison to Hungarian farms (mean 27.9%).

There was significantly lower number (from 0% to 10%) of dull and obviously sick animals found in Hungary on all farms in comparison to the UK with from 0% to 20% of dull cows reported on all farms with  $X^2$  (4, N = 151) = 11.854 and  $p < 0.05$ .

The last measure which was found to be statistically important between two studies was average flight distance. Flight zone of cows observed in the UK was very significantly bigger in comparison to cows monitored in Hungary with  $X^2$  (4, N = 624) = 16.081 and  $p < 0.01$ .

Among other measures taken there was no significant difference between proportions of cows in Hungary and in the UK regarding dirty flanks, thin cows, bloated rumen, hollow rumen and perching behaviour.

All the measures might slightly differ because variation of observers. Dirtiness of cows is closely related to use of straw, animal friendly facilities and



access to pastures. Among 3 parts of the body checked cows with more dirty hind limbs were found in the UK and those with dirty udders in Hungary. This could be explained by the fact that cows on Hungarian farms are rarely provided access to pastures or paddocks. When cows are kept in straw yards it is very likely more udder contamination is possible in comparison to pastures or paddocks in the UK, where cows avoiding lying in muck or dung only accidentally lie in the manure touching it by hind limbs. Another explanation might be that more cows were kept in cubicles in the UK and cows were more likely to rest in passageways, because boxes were not comfortable enough. Another reason for that might be the fact that British research was run during the winter time and Hungarian one in the summer and autumn. Summer in Hungary is hotter and it is very possible that a lot of cows were trying to cool down lying in the cold manure close to the stomach which is very hot, because of fermentation. Council Directive 98/58/EC does not mention about cleanness of farm animals (*EUR-Lex*, 1998). British Codes of Recommendations include full explanation and awareness about keeping animals clean: *'Ideally, for dairy herds you should completely clean out straw yards every four to six weeks. This is so that the cows do not get too dirty and to reduce the risk of mastitis from bacteria in the bedding (i.e. environmental mastitis). If you use straw yards, you should top them up with clean, dry straw every day. You should make sure that there is enough clean and dry straw available for as long as the animals are housed. You should clean the cubicle base each day and replace the bedding as necessary, to keep the lying area clear of manure'* (*DEFRA(b)*, 2011). Hungarian act explains that animals should be provided environment suitable for their biological needs. All the equipment should be ergonomic and friendly for animals (*Complex*, 2011).

There were fewer cows with hock hair losses and non-hock injuries in Hungary than in the UK (Table 1). This is possible that cubicles in Hungary were filled with more straw. It is also possible that rubber matrices are more popular in the UK. *Cook et al.* (2004) reported that this kind of surface in the cubicles is very competitive to straw, however more lesions are observed. Another factor might be that there are fewer people working per one animal on farms in the UK and activities like spreading a straw or making sure animals have good bedding provided are neglected. Straw is also more expensive in the UK. Farmers which are buying straw in the UK are definitely looking for cheaper solutions, like old papers, wood shavings, etc. which might affect cows' legs and joints. Council Directive 98/58/EC includes a note that: *'Materials to be used for the construction of accommodation, and in particular for the construction of pens an equipment with which the animals may come into contact, must not be harmful to the animals'* (*EUR-Lex*, 1998). There is also a sentence about obstructions for animals: *'Accommodation and fittings for securing animals shall be constructed and maintained so that there are no sharp edges or protrusions likely to cause injury to the animals.'* Codes of Recommendations from the UK are more precise about any

harm areas for animals: *Cubicles should be designed to encourage cows to lie down and stand up easily without injuring themselves. You need to have enough bedding to:* • keep the cows comfortable; • prevent them from getting contact or pressure sores (from always lying in the same or cramped positions); and • keep the cows' teats, udders and flanks clean. You must never use a bare, solid base in the cubicles. The kerb should not be so high that it strains the cows' legs as they enter or leave the cubicle, neither should the bed be so low that it becomes contaminated with slurry. In cowsheds, the lying area should be big enough to help keep the cows clean and comfortable and to avoid them damaging their joints' (DEFRA(b), 2011). Hungarian act states that animals should be provided adequate building or shedding and enough walking area which would not make animals harm and provide comfortable resting place (Complex, 2011).

There was higher number of farms and cows being with Body Condition Score 4 and 5 on Hungarian dairy farms. In both countries great proportion of cows was found to be thin and there was no significant difference between two studies. In both cases this might be a signal of energy inefficiency in the diet. EU legislation is not responding to Body Condition Score of dairy cows. British legislation is fully explaining how condition of dairy cows is influencing milk production: *You should dry lactating cows off quickly and put them on an appetising forage diet, which will maintain their body condition. Body-condition scoring can contribute greatly to good husbandry and help to avoid costly welfare problems. Condition scoring is an easy technique to learn. Basically, it means that you can quickly assess the body reserves (i.e. fat) of individual animals. The technique will be of benefit if you use it as a routine management tool to check that cattle are in the target condition for each stage of the production cycle. This will be particularly useful at:* • drying off or weaning; • calving; • peak yield; and • early lactation. *You should adjust feeding as necessary for animals that are too fat or too thin' (DEFRA(b), 2011). Hungarian act asserts only that animals should be provided feeding stuff adequate to the role there are kept for and living needs should be a priority. Another aspect covered by Hungarian legislation and related to feeding is that animals should not be provided feed stuff in the way promoting competition. Feed stuff given to animals should not make them ill or feel uncomfortable (if low or high Body Condition Score can be defined as being not pleasant for cows) (Complex, 2011).*

Differences in lameness cases observed are due to many complicated factors. First of all, knowledge and consciousness of British farmers seems to be much greater than Hungarian ones. One of the first cases of lameness were found and investigated in the United States and in the United Kingdom in early 1980s' von (Keyserlingk et al., 2009). Intensive genetic selection for higher milk production and focus on other traits than locomotion made that lameness problems are more visible nowadays than ever before. What is more, education and industrial lobby for decreasing lameness is making farmers more aware of that illness.

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Finally, more British farmers are letting cows to graze. Cows have more access to natural and soft surface than cows in Hungary which in most of the cases are kept indoor. Another aspect might be that British farms are providing better quality surfaces, cubicles or passageways. Only British Recommendations are giving full description about lameness: *‘Every lame cows should be taken off concrete and housed in a suitably bedded pen. If a significant percentage of your cattle has severe lameness, this can be a sign of poor overall welfare standards within the herd. If lame cows do not respond to treatment, you need to call a veterinary surgeon immediately. You should keep all concrete yards and passageways in good condition. They should not be too rough as this can graze or even cut the soles of the animals’ feet. On the other hand, the yards and passageways must not be worn smooth, as the animals are then likely to slip and possibly cause leg and other damage. You should not let slurry build up on concrete floors and passageways, as this will also make the floor slippery. It is important that you keep slurry to a minimum, either by scraping out the passageways at least twice a day or by using slatted passageways. You should minimize the amount of time cows have to wait to be milked. The standings should be large enough for the size of cattle being milked and for cows to enter and leave the milking parlour easily, with a minimum of stress. The entrance and exit areas of the milking parlour, where animals will tend to collect, should be wide enough for the animals to move easily on non-slip floors’* (DEFRA(b), 2011). In relation to lameness Hungarian legislation suggests that surface animals are kept should be easily cleaned and free of slippery (Complex, 2011).

Another interesting relation can be observed with dull or obviously sick cows. Twice as many of them in Hungary were found in the UK, what is giving an impression that less attention is given to observe animals on an island. The reason for that might be because of fewer stockmen per one animal. The same can be also applied to the fact that cows in the UK were more frightened of the human being than those in Hungary. Animals which see rarely a stockman do not have occasions to get used to the human presence. European directive states that: *‘Animals shall be cared for by a sufficient number of staff’* (EUR-Lex, 1998). There is a short message in British Codes that: *‘It is important that cattle, especially young stock come into regular contact with a stock keeper so that they will not be too frightened if they need to be gathered or treated’* (DEFRA(b), 2011). Hungarian act communicates that there should be appropriate number of animals per worker without describing exactly the number per animals. What is more people working with animals should be trained how to assess changes in animals’ behaviour and health status, especially dullness and general body condition (Complex, 2011).

## Conclusions

The results of dairy welfare status are covering only some aspects of wellbeing of cows on commercial farms. Originally two papers are covering two different topics. The British one aimed to create a feasible dairy welfare assessment and results were examined by 50 experts who indicated at what level they considered that improvement was required. The Hungarian one is a part of dairy welfare project and new causes of lameness and improvements in dairy welfare are studied.

Out of 8 measures being statistically different ( $p < 0.05$ ,  $p < 0.01$  or  $p < 0.001$ ) Hungarian farms seem to cope slightly better with dairy welfare in 5 of them (Table 1.). The first conclusion is that Hungarian farms even lacking new resources have an advantage of relatively cheap bedding materials (husbandry resources) and workforce which is contributing in every day tasks. This can be interpreted that people spending more time among animals are making them less stressful what is confirmed by smaller average flight distance observed. Older or simply different cubicles and buildings are making that more job needs to be done by people in a physical manner. In those cases e.g. bedding, mucking or cleaning is done more precisely.

Hungarian and European legislation seems to be vague regarding recommendations and rules which farmers should follow to keep animal welfare standards. On the other hand, British legislation is giving examples, explanations and suggestions, but wellbeing of cows is still compromised. Reason for that might be high price of bedding materials what is confirmed by cows being dirtier. Labour is also more expensive and less people are working per one animal. Less attention can be paid to every single animal on the farm. Another important fact is that more care is paid by British farmers to cleanliness of udder, proper Body Condition Score and lameness. This proves that those producers are better coping with 2 out of 3 the most expensive diseases in dairy production, like mastitis, reproduction disorders and lameness (Green, 2009).

## Dobrobit mlečnih goveda u Madjarskoj i Velikoj Britaniji nasuprot nacionalnom i zakonodavstvu Evropske Unije

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### Rezime

Mlekarske industrije u istočnoj i zapadnoj Evropi imaju različitu istoriju, nasledje, ali isti cilj – proizvodnja velike količine mleka, po povoljnim cenama, uz

poštovanje dobrobiti životinja. Zemlje članice EU imaju izbor bilo da primenjuju minimum standarda koje određuje Evropska Komisija, kao što je slučaj u Madjarskoj, ili da stvore svoje sopstvene zakone i propise kojima će se takođe zadovoljiti minimalni standardi, kao što je slučaj u Velikoj Britaniji. U radu se poredi zakoni i propisi koji važe u Velikoj Britaniji, Madjarskoj i EU, a u vezi sa merama koje se odnose na dobrobit mlečnih grla, na 53 farme u Velikoj Britaniji i 27 u Madjarskoj. Od 13 mera koje se odnose na dobrobit, kod 8 su utvrđene statistički značajne razlike ( $p < 0.05$ ,  $p < 0.01$  or  $p < 0.001$ ) među navedenim zemljama. Manje krava sa prljavim udovima, gubitkom dlake na skočnim zglobovima, povredama skočnih zglobova, koje se dosađuju ili beže na većim rastojanjima, su registrovane na madjarskim farmama nego u Velikoj Britaniji. Bilo je manje krava sa prljavim vimenom, debele ili šepave u Velikoj Britaniji u poredjenju sa Madjarskom. Jeftiniji materijal koji se koristi za prostirku u Madjarskoj se smatra glavnim faktorom bolje čistoće krava. Više radnika na farmi po jednom grlu znači da se više pažnje poklanja obezbeđivanju adekvatnih uslova za odmaranje životinja što takođe može imati uticaj na kraće rastojanje čovek-životinja. U Velikoj Britaniji, čistije vime kod mlečnih grla može biti u vezi sa modernim, savremenim sistemima držanja goveda koji obezbeđuju čistije uslove. Obuka, obrazovanje, se smatra da ima veliku ulogu u smanjenju pojave šepavosti kod grla, problema sa varenjem i mastitisa u Velikoj Briataniji u poredjenju sa Madjarskom.

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