

Scientific-based opinion on WORKING DOCUMENT

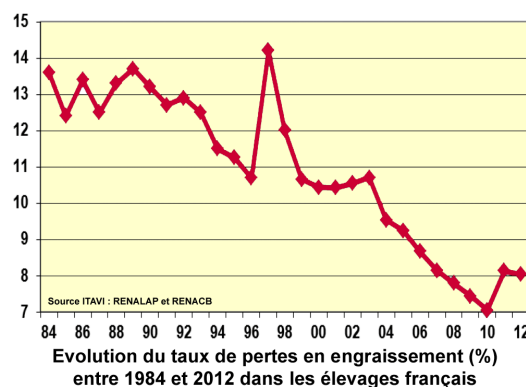
on minimum standards for the protection of farm rabbits
Committee on Agriculture and Rural Development
Rapporteur: Stefan Eck

The original text is written with black and the **comments with red**.

The need for minimum standards for the protection of farm rabbits

Introduction

Compared to other species, the domestication of rabbits took place relatively late (about 300 BC). Hence the needs of domestic and wild rabbits do not really differ; therefore rabbit breeding is extremely problematic in terms of animal welfare. Since rabbits are very sensitive to poor housing conditions, the mortality rate of rabbits in agricultural use is higher than in any other livestock species. **Comment: Lifespan varies strongly with body size such that large species tend to live longer than smaller species (Healy K et al. 2014 Ecology and mode-of-life explain lifespan variation in birds and mammals. Proc. R. Soc. B 281, 1-7.). Based on this general context, the mortality of rabbits is higher than that of horses, cows, etc. Comparing the domesticated and the wild rabbit, the mortality among wild rabbits is 80-90% till one years of age (Moreno et al. 2007., Long-term decline of the European wild rabbit (*Oryctolagus cuniculus*) in south-western Spain. Wildlife Research, 34, 652–658.). Because of the research work and better management, the mortality on farms declined (Coutlet 2013. Performances moyennes des élevages cunicoles en France pour l'année 2012. Résultats de RENALAP et RENACEB, Cuniculture Magazine, 40, 15-18.):**



Despite this mortality rate, rabbits are the fourth most farmed animal in the world and the second most farmed species in the EU with over 326 million slaughtered for meat every year.

More than three quarters of all rabbit farming in the EU takes place in Italy, Spain and France. In terms of volume compared to total European meat production, rabbit meat is a niche product. The per capita consumption of rabbit meat in comparison to meat products from other animal species is relatively low. In Germany, the annual per capita consumption is estimated at half a kilogram. In Italy, where consumption is the highest in the EU, it is about 5.5 kilogram per person per year.

According to today's scientific evidence, rabbits are systemically kept under horrible conditions in breeding and fattening farms, **Comment: This statement is not true. Several experiments were carried out and numerous scientific papers were published about the behaviour, housing and welfare of rabbit does and growing rabbits. The results and the main conclusion of these papers were reviewed (Trocino and Xiccato 2006, *Animal welfare in reared rabbits: a review with emphasis on housing systems. World Rabbit Science, 14, 77-93.*; Szendrő és Dalle Zotte, 2011, *Effect of housing conditions on production and behaviour of growing meat rabbits: A review. Livestock Science 137, 296–303.*; Szendrő és McNitt, 2012, *Housing of rabbit does: Group and individual systems: A review. Livestock Science, 150, 1–10.*; Szendrő et al., 2016, *Alternative and enriched housing systems for breeding does: A review. World Rabbit Science, 24, 1-14.*). On the website of cage manufacturing companies all traded cages can be found (e.g. Italy: <http://www.meneghin.it/eng/>, France: <http://www.chabeauti.com>). One of them is shown on the photo:**



despite the existence of European legal safeguards such as the Council Directive concerning the Protection of Animals kept for Farming Purposes (1998/58/EC) and Article 13 of the Treaty on the Functioning of the European Union (TFEU), which states that "the Union and the Member States shall, since animals are sentient beings, pay full regard to the welfare requirements of animals".

Most Member States of the Union lack specific legislation for the keeping, breeding and fattening of rabbits. However, some exceptions exist: Austria (2012, prohibition of battery cages); Belgium (2014, phasing out of cages and introduction of park systems in 2025); Germany (2014, improving animal welfare legislation specifically for rabbit farming) and the United Kingdom (2007, Welfare of Farmed Animals Regulations, which has species specific requirements for rabbit farming). In the new legislative proposal for organic production currently under discussion, rabbits are to be kept in group pens, with at least 0.4 m² of space per rabbit, and access to an outside area of pasture at the base of the pen.

There is already Union legislation in force which established minimum requirements for the protection of calves, pigs, broiler chickens and laying hens - the latter even led to a Europe-wide ban on battery cages for laying hens. Nevertheless, regulations or policies on minimum standards for the protection of farm rabbits have so far not been drafted or adopted. **Comment: Yes, there is no Union legislation, but there is a publication by EFSA (*The Impact of the current housing and husbandry systems on the health and welfare of farmed domestic rabbits. The EFSA Journal (2005) 267, 1-140.*), and a book written by the participants of COST Action 848 „Multi-faced research in rabbits: a model to develop a healthy and safe production in respect with animal welfare” (*Recent advances in rabbit sciences, 2006. ed. by Maertens L. and Coudert P ILVO, Melle*) and several scientific papers were published in high level**

journals. Scientists, farmers and cage manufacturing companies follow the proposals, moreover, the housing systems develop continuously.

Goal

Through this initiative report on minimum standards for the protection of farm rabbits, the European Commission should be encouraged to present an ambitious draft legislative proposal on animal welfare in rabbit farming taking on board the recommendation of the European Parliament. The proposal should aim at closing the existing loopholes that lead to serious animal welfare abuses in the keeping, breeding, husbandry, transportation and slaughtering of rabbits.

Rabbit meat farming

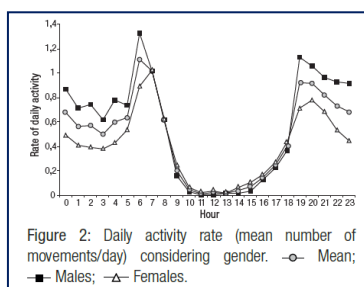
Most rabbits kept for meat consumption are held in so-called 'battery cages'. In a period of three to four months they reach their slaughter weight, which ranges from 1.3 to 3.3 kg. They have not even reached 1/40 of their natural life expectancy. The World Rabbit Science Association has stated that a cage floor area of 0.2 to 0.4 m², and a cage height of 30 to 40 centimeters, should be sufficient. However in practice, rabbit farmers keep three to six rabbits inside a cage, leaving each animal only an area of maximum 0.08 m² (this is a little bit more than one A4 piece of paper). **Comment: In the EFSA document there are proposals by the European leader scientists and the products of cage manufacturing companies are not in conflict with them.**

The small space provided per rabbit makes it impossible for the animals to satisfy their species-specific needs such as foraging, jumping, digging, running or straightening up. **Comments: In farms rabbits receive feed generally *ad libitum*, they do not need foraging. Farmed rabbits live in houses, in cages/pens equipped with nest box, they do not need to dig a safety warren and hole for kindling. In the building there are no predators, so rabbits do not have to escape or run away from them. It is a mistake to believe that wild or domesticated rabbits like moving a lot. Wild rabbits stay close to the safety warren in order to escape quickly when a predator appears. The distance depends on the vegetation. According to the observations of Monclus és De Miguel (2003. *Distribución espacial de las letrinas de conejo (Oryctolagus cuniculus) en el Monte de Valdelatas, Madrid. Galemys 15, 157-165.*) 60% of rabbits moved to maximum 10 m and 33% of rabbits to 20 m distance from the warren. In another study (Dekker, 2007. *Rabbits, refuges and resources. How foraging of herbivores is affected by living in burrows? Thesis, Wageningen University*) the distances were only 5 m (52%) or 10 m (28%). So when the vegetation is reach, the rabbits move shorter distance from the warren. In farms there is always feed in the feeders. Examining the behaviour of rowing rabbits, the resting time was 60-70% of the day, and the moving was only 10% in pens (Princz et al. 2008. *Behaviour of growing rabbits under various housing conditions. Applied Animal Behaviour Science 111, 342–356.*). The animals cannot get a proper rest, because of the limited space and the nature of the surface (metal grids). **Comment: All new cages are equipped with foot rest and some of them with plastic-mesh elevated platforms (see the website of cage manufacturing companies); most of the old ones are also equipped with foot rest (Rosell, J.M., and de la Fuente L.F. 2013. *Assessing ulcerative pododermatitis of breeding rabbits. Anim. 3:318-326.*). In some countries (e.g. in Hungary) it is forbidden to keep rabbit does and bucks in cages without foot rest. Enrichment material such as straw and hay is not provided in battery cages, which are usually equipped with sharp edged metal grids that frequently lead to postural injuries (Pododermatitis colitis = festering wounds and bleeding on the legs). **Comments: This statement is also false. When the location preference******

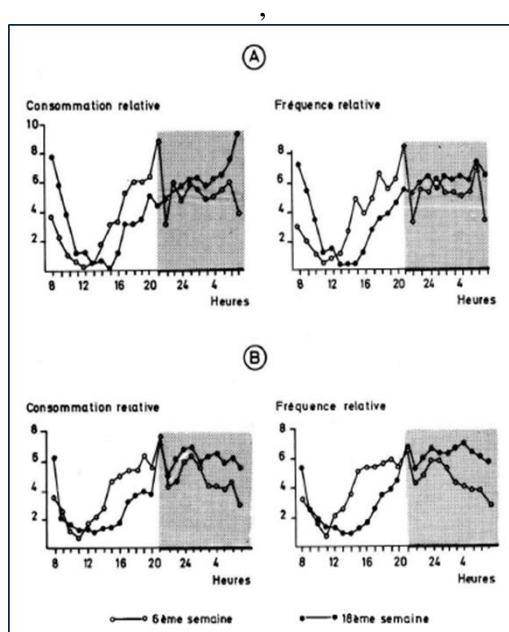
of growing rabbits was observed depending on the floor types (wire-mesh and deep litter at normal temperature) 85-85% of rabbits stayed on wire-mesh floor (Orova et al., 2004. *Free choice of growing rabbits between deep litter and wire net floor in pens. In: Proceedings of the 8th World Rabbit Congress. Puebla, Mexico, pp. 1263–1265.*), or when it was studied on plastic-mesh, wire-mesh and deep-litter at low, medium and high temperature, the rabbits showed the lowest preference for deep litter floor, irrespective of temperature, age and part of the day, the choice of plastic-mesh or wire-mesh depended on the temperature and age of rabbits (at higher temperature and older age more rabbits stayed on wire-mesh than on plastic-mesh floor (Gerencsér et al. 2014. *Effect of floor type on behavior and productive performance of growing rabbits. Livestock Science, 165, 114–119.*). Animals choose among different environmental conditions to find the most comfortable housing system. At low temperature in order to avoid loss of heat, they prefer staying on plastic-mesh floor. At medium and high temperature the decision between the plastic-mesh and wire-mesh floor depends on the age of rabbits. The optimal environmental temperature for a young rabbit is higher than for an older growing rabbit. Digestion produces heat which increases the heat load of rabbits. Since rabbits have few sweat glands and it is difficult for them to eliminate excess body heat under high temperature, they prefer staying on a cooler floor. The deep litter floor is too warm, and it is rejected in each case. The productive performance of rabbits housed in pens on deep-litter is lower than that of the rabbits in wire-mesh cage. The lower feed intake and weight gain are related to the consumption of the litter material. Consuming litter material mixed with manure increases the risk of coccidiosis and mortality (Dal Bosco et al., 2002. *Rearing rabbits on a wire net floor or straw litter: behaviour, growth and meat quality traits. Livestock Production Science. 75, 149–156.*; Lambertini et al., 2001. *Alternative pen housing system for fattening rabbits: effect of density and litter. World Rabbit Science. 9, 141–147.*). The low height of the cages prevents rabbits from straightening up to full height, which leads to spine curvature disorders. **Comment:** The safety place for wild rabbits is staying under the bush or being in the warren. The open field grazing field is dangerous because of the risk of predation. When rabbit could freely choose among cages with a height of 20, 30 and 40 cm or open top, 27-30% of rabbits preferred staying in one of the topped cages and only 15% stayed in the open top cage (Princz et al., 2008. *Effect of cage height on the welfare of growing rabbits. Applied Animal Behaviour Science 114, 284–295.*). Similar observation was made with rabbit does when they could choose between cages with different height (30, 40 and 50 cm) or open top. They chose most frequently the 40 and 50 cm height cages and less frequently the open top cage. In cages with elevated platforms rabbits preferred staying under the platform (Szendrő et al., 2012. *Use of different areas of pen by growing rabbits depending on the elevated platforms' floor-type. Animal, 6:4, pp 650–655.*). The cramped space and the lack of escape routes in these cages lead to enormous mental stress for the animals. This stress leads to injuries from biting, and contusions and abrasions caused by the urge to move around. Insufficient ventilation concentrates ammonia vapors from their excrements, leading to eye inflammations and respiratory diseases. **Comment:** Farmers are interested in heaving healthy animals with high productive level. If the ventilation is not good it could be against the economical production. In rabbit farms ventilation, cooling and heating systems work depending on the season. These same problems occur with Angora rabbits, which are kept for their wool.

Moreover, due to the lack of stimulus, behavioral disorders often appear such as stereotyped movements, self-mutilation and even cannibalism. Loud noise that results from the stereotyped jumping of rabbits in their cages is an additional disturbance, as rabbits are inherently noise-sensitive animals. **Comment:** Mr. Eck wrote earlier that rabbits cannot jump in the cage. If rabbits cannot jump how that could be noisy?

In the wild, rabbits are very active. This is in stark contrast to the cramped cages that offer no distraction or stimulation. The barren and cramped environment leads to an increase in the monotonous food intake, which can have metabolic disorders and intestinal diseases as a result. Furthermore, in order to stimulate food intake, they are often subjected to prolonged illumination. **Comment: Wild and domesticated rabbits are active during night/dark (Diez *et al.* 2013. *Activity patterns of wild rabbit (Oryctolagus Cuniculus, L.1758), under semi-freedom conditions, during autumn and winter. Wildl. Biol. Pract., 1, 41-46.*):**



So if somebody increases the length of light period the feed intake declines because rabbits consume more feed and water during the dark period (Prud'hon *et al.*, 1975. *Évolution, au cours de la croissance, des caractéristiques de la consommation d'aliments solide et liquide du lapin domestique nourri ad libitum. Ann. Zootech., 24, 289-298.*):



The effect of lighting on wild and domestic rabbits is summarized in a paper (Szendrő *et al.* 2016. *Effect of lighting on rabbits and its role in rabbit production: A review. Livestock Science, 183, 12–18.*). Because of species-specific diseases (coccidiosis, RHD, myxomatosis, etc.), the high mortality rate inherent to rabbit farming and inadequate farming practices, antibiotics are used routinely in high doses. **Comment: Antibiotic treatments are not effective against RHD and myxomatosis, but some good vaccines are available.**

Rabbit breeding

At the age of three to four months, female rabbits reach sexual maturity. With intensive reproduction management, they are able to give birth to up to nine kits every 33-45 days. In order to achieve such a high reproductive performance, the does are artificially inseminated shortly after giving birth. This form of reproduction management exploits the does to the extreme, resulting in slaughter after twelve months due to different disorders, but mostly due to decline in birth power. **Comment: Wild rabbit bucks mate the does immediately after kindling and females can be fertilized immediately after giving birth (von Holst et al. 2002. Social rank, fecundity and lifetime reproductive success in wild European rabbits (*Oryctolagus cuniculus*). *Behav. Ecol. Sociobiol.* 51, 245-254.; Tablado Z., Revilla E., Palomares F. 2009. Breeding like rabbits: global patterns of variability and determinants of European wild rabbit reproduction. *Ecography*, 32, 310-320.), however intensive reproduction management is not against the biology of rabbits, but this system is not used on rabbit farms.**

In breeding farms, does are kept in individual cages with a nesting cavity attached to it. A typical cage for a breeding doe is between 60 to 65 centimeters long, 40 to 48 centimeters wide and 30 to 35 centimeters high. The floors of the cages are similar to the ones used in the farming of meat rabbits, which lead to the abovementioned typical injuries on the legs. **Comment: See previous comments.**

Enrichment material such as straw and hay is not provided. The small cage surface area and low height preclude the mother and her kits from engaging in their species-specific needs. **Comment: See previous comments.**

In the wild the doe can avoid constant pressure from her kits, by retreating to other areas. **Comment: Wild rabbit does leave new-born kits in their nests, close and disguise the burrow entrance with soil, grass and leaves, and return to nurse them only once-a-day to avoid drawing the attention of predators (Rödel et al. 2012. Diurnal nursing pattern of wild-type European rabbits under natural breeding conditions. *Mammalian Biology*, 77, 441–446.), but they stay, graze and feed close to their warren to save the kits (<https://www.youtube.com/watch?v=8MHUIVIJy94>). However, such a retreat like an elevated floor or platform usually is lacking in these intensive rearing facilities. The constant pressure causes enormous stress to the doe and the constant suckling leads to inflammation of the teats. After three to four weeks the kits are separated from the mother and after a short time the doe will give birth again. Comment: progenies of wild rabbits could be completely weaned at 23-24 days of age (Hudson et al., 2000: Mother-young relations in the European rabbit: physiological and behavioral locks and keys. *World Rabbit Science*, 8, 85-90.), therefore, early weaning cannot be contrary to the rabbit's biology. Some benefits of early weaning for both kits and does were established (reduced transmission of pathogens due to the restricted contact of does with their offspring, lower incidence of digestive disorders (Gidenne and Fortun-Lamothe, 2002. Feeding strategy for young rabbits around weaning: a review of digestive capacity and nutritional needs. *J. Animal Science*, 75, 169-184.), the special starter formulas are better fit to meet the dietary needs (Gutierrez et al., 2002. Effect of levels of starch, fiber, and lactose on digestion and growth performance of early weaned rabbits. *J. Animal Science*, 80, 1029-1037.), improvement of the condition of does and their health (Xiccato et al., 2000. Early weaning rabbits: effect of age and diet on weaning and post weaning performance. *Proceedings of the 7th World Rabbit Congress, Valencia, Spain*, 483-490.). Nonetheless, at rabbit farms the most frequent weaning ages is between 4 and 5 weeks of age.**

The standard nutrition in rabbit farming is composed of industrially manufactured pellets. However, a varied diet with lots of raw fibers such as hay, straw, fresh vegetables and fruit

would enhance the immune system and reduce the mortality rate significantly. Unfortunately this is not provided due to financial reasons. **Comment: The composition of diets for rabbit does and growing rabbits are based on several experimental results (*Nutrition of the rabbit, 2nd edition, 2010. ed. by de Blas C. Wiseman J., CAB International, Oxfordshire*) and completely meet the needs of rabbits. There are a number of risks of feeding rabbits with fresh vegetables and fruits in large farms, and practically impossible.**

Transport and slaughter

The surface area and height of the containers for the transport of fattening rabbits to other farms or slaughterhouses are generally insufficient. There are reports of rabbits being transported in cages that are only 35 cm high and have a stocking density of 15 rabbits/ 480 cm². However, since there is currently no legal limit on the number of animals per container, it often happens that rabbits are cramped together so much that they have less than the area of an A4 page each. Often, these journeys have durations of up to twelve hours, and there are reports that rabbits are not even fed before and during transport. **Comment: The scientific opinion on animal transport was published by EFSA (*Scientific opinion concerning the welfare of animals during transport. EFSA Journal, 9. 1. 1-125.*), and these regulations are respected by the companies. Based on experimental results it is suggested not to feed and drink the rabbits 8-12 hours prior to slaughtering (*Cavanni and Petracci, 2004. Rabbit meat processing and traceability. Proc. 8th World Rabbit Congress, Puebla, Mexico, 1318-1336.*).**

In the EU, pre-slaughter stunning methods range from bolt shots to bullet shots to stunning by gas (carbon dioxide). Scientific studies have shown that the anesthetic effects of these methods are often insufficient. More than 10 percent of the rabbits are not fully stunned, having to experience their own slaughter whilst being conscious. In many slaughterhouses, rabbits have to watch other rabbits being slaughtered, causing additional stress and anxiety. **Comment: There is no any published data that 10% of rabbits are not fully stunned. There is an EU regulation for slaughtering the animals (*European Union, regulation 1099/2009 of the Council of September 24th, 2009 on the animal protection at slaughterhouse. JO European Union 303:1-30.*), and these regulations are respected by the slaughterhouses. Several experiments were carried out about slaughtering the rabbits (e.g. *Bignon et al., 2016. Definition of indicators to evaluate consciousness of rabbits at the time of slaughter and optimisation of parameters for animal protection. Proc. 11th World Rabbit Congress, Qingdao, China.*).**

Conclusion and state of play

Rabbits are the species where animal welfare and species-specific needs are the most overlooked in the European Union. In the majority of Member States, there is no specific legislation for mandatory minimum requirements for the protection of rabbits in agriculture. The application and enforcement of European and national general animal welfare laws are insufficient. The facilities commonly used in the EU for breeding and fattening of rabbits for meat production, as well as the practices in transportation and slaughter clearly go against Council Directive concerning the Protection of Animals Kept for Farming Purposes (1998/58/EC) and Article 13 of the Treaty on the Functioning of the European Union (TFEU). However Austria, Belgium, Germany and the United Kingdom do have specific legislation in place concerning rabbit farming. In this context, EU legislation would ensure uniform interpretation, create a level playing field and would meet the increasing demand from consumers for better animal welfare in farming. In recent years, major European animal

welfare organizations and NGOs are increasingly highlighting the subject of rabbit farming and launching campaigns for the abolition of battery cages. One can expect public pressure on this issue to increase in the near future.

An important additional consideration is that, as the use of antibiotics is a necessity in rabbit farming, there is an increase in the development of antimicrobial resistance of bacteria. Therefore abolishing battery cages in rabbit farming is a prudent option considering the protection of public health.

Recommendations

From an animal welfare perspective, the abovementioned facts lead to the conclusion that there is a need in the EU to phase out the use of cages in rabbit farming. We should move forward and instead introduce the park system as a method of farming that respects animal health and welfare, thereby ensuring also a decent minimum standard of protection during the transport and slaughtering of rabbits. Therefore I can make the following recommendations:

- Phasing out of cages in rabbit farming, moving to park systems that provide for sufficient space per rabbit and where rabbits can be kept in groups; **Remarks: Semi-group or park system housing means that a pen system is used which allows temporarily group housing of does. The does are alternately housed during three weeks individually (from some days prior to kindling) and then in a group for three weeks (from about 18 days of lactation) to eliminate disadvantages like lower kindling rate, higher suckling mortality caused by multiple kindling in the same nest box and lower weaning weights with higher standard deviation in continuous group housing systems. In some semi-group housing systems the overall performance level was good enough (Maertens et al. 2011. *Le logement des lapins en parcs, une alternative pour les cages classiques dans un système "duo"?* In: *Proc. 14èmes Journées de la Recherche Cunicole*, 22-23 November 2011, Le Mans, France, 85-88.; Maertens, L., Buijs, S. 2013. *Performances de femelles logées temporairement en groupe dans des parcs polyvalents et en système tout plein tout vide.* In: *Proc. 15èmes Journées de la Recherche Cunicole*, 19-20 novembre 2013, Le Mans, France, 35-38.), but after each regrouping high level of aggressiveness and serious injuries could be seen (Szendrő et al. 2016. *Alternative housing systems for breeding does: a review.* *World Rabbit Science*, 24, 1-14.). Some experiments were carried out to decrease the negative effect of regrouping on aggressiveness and the ratio of injured does. Examining the effect of group stability (original groups or two new rabbits in the groups) the percentage of injured rabbits (55%) only slightly decreased (Andrist et al., 2012. *Effects of group stability on aggression, stress and injuries in breeding rabbits.* *Appl. Anim. Behav. Sci.*, 142, 182-188.). Using different odours (they were sprayed with either alcohol or vinegar to mask the pre-existing group odours) hardly decreased the aggressiveness and the rate of injured does was 60% (Andrist et al., 2014. *Masking odour when regrouping rabbit does: Effect on aggression, stress and lesions.* *Livest. Sci.*, 170, 150-157.). When using enrichment in the cages (hiding places, straw, territory), the rate of injured does was 52% (Rommers et al., 2014. *Effect of hiding places, straw and territory on aggression in group-housed rabbit does.* *Appl. Anim. Beh. Sci.*, 157: 117-126.). Group housing systems are contrary to four points of Five Freedoms (2. Freedom from discomfort, 3. Freedom from pain, injury and disease, 4. Freedom to behave normally, 5. Freedom from fear and distress)! The main goal of group-housing of rabbit does is to provide near-to-nature environmental conditions, similar to those of the European wild rabbits. Aggressive behaviour has been well known for a long time in European wild rabbits (Southern H.N. 1948. *Sexual and aggressive behaviour of the wild rabbit.* *Behaviour* 1, 173-194.). At the beginning of reproductive**

season, the fights are very intense (*von Holst et al. 1999. Social rank, stress, and life expectancy in wild rabbits. Naturwissenschaften 86, 388-393.*). Dominance order is established and maintained through chase rituals and aggressive interactions (*Mykutowycz, R. 1958. Social behaviour of an experimental colony of wild rabbits. CSIRO Wildlife Research, 3, 7-25.*). The main benefit of living in groups for rabbits (and some other prey animals) is the higher chance of surviving predation.

- Housing systems for rabbits should have platforms or similar elevated terrain and sufficient enrichment materials;
- Housing systems for rabbits should allow eye and scent contact between rabbits **Comment: The walls of cages in rabbits farms are made of wire-mesh which allows the visual and scent contact among them**, and have as low a sound level as possible. There should be species specific lighting systems;
- There should be adequate food and drink for all rabbits, so that rabbits can eat and drink at the same time; **Comment: In rabbits farms the ad libitum feeding (most cases automatized feeders) and watering systems are used.**
- The groups should be not too large, with sufficient surface area for each rabbit.
- If the rabbits are sick or suffering, immediate treatment is required, followed by separation from group until they are well. Unnecessary suffering or stress should to be avoided.
- Rabbits should be fed before transport and given access to adequate food and water during transport. Transport times should be as limited as possible, due to the sensitivity of the species. Transport cages should allow for normal posturing. **Comment: See previous comments.**
- Rabbits should be fully stunned before slaughter, ensuring that there is no suffering, pain or stress. Slaughter should be without risk of the stunned animal regaining consciousness. **Comment: See previous comments.**

It is crucial to accept any regulation which is based on scientific results. Reading Eck's working document, it is far from this expectation, and moreover several points are contrary to the animal welfare.