

**Scientific comments about**  
the draft report  
**on minimum standard for protection of farm rabbits**  
(2016/20177/(INI)) dated 18.7.2016  
**Produced by the committee on Agriculture and Rural development**  
**of the European parliament**  
**Rapporteur Stefan ECK**

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*For convenience of presentation of this scientific analysis, in the text below this report managed by Stefan Eck would be designed as "Eck report".*

### **Initial and general remarks :**

**Point 1** . In the Eck report all the attention is turned on the rabbit itself, but breeders and consumers are quite or completely absent. **In any case any legislative proposal must be the best possible compromise between 3 parts : animal's welfare, breeder's own welfare and financial situation, and consumer's health and demands** (if based on a correct analysis of the situation). Thus a rule should not be adopted without taking in account the 2 other parts. Unfortunately the Eck report try to make a completely biased demonstration with recommendations taking in account exclusively the (supposed) advantages for only one part out of three.

**Point 2** . **Any rule adopted to protect farm animals, rabbits in the present case, must be effectively efficient for all animals of the species** (rabbits). More important, **any rule should not induce a deterioration of one of the 12 generally accepted criteria of welfare** (gathered into four groups: feeding, housing, health and optimised emotional states <sup>1</sup>) **to maximise an other**. It will be seen in the present analysis that in the Eck report different proposals made to maximise a criteria clearly deteriorate some others.

**These points 1 and 2 are already reasons for which it is absolutely necessary to postpone any legislative decision until new proposed minimum recommendations would by able to take in account all parts involved in the production process and propose the best possible compromise between all animal welfare criteria and not only some of them.**

## **Scientific comments**

From a scientific point of view the Eck report is a collection of attested points, of unwarranted assertions (that may be true or not, but up to now not demonstrated), of points still under discussion between scientists and of affirmations that are clearly erroneous. For example the author of the Eck report *«strongly believes that a transition from cage farming to pen systems would reduce the need to use antibiotics and thereby reduce public health risks»*. All beliefs are respectable, but in the present case, housing rabbits in large pens increases, significantly

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<sup>1</sup> Botreau, R., Veissier, I., Butterworth, A., Bracke, M.B.M., Keeling, L.J., 2007. Definition of criteria for overall assessment of animal welfare. *Animal welfare* **16**, 225-228.

or not significantly according to the study, but never decreases the probability of infection (diseases, mortality) of growing rabbits<sup>2</sup>. As consequence housing rabbits in large pens increases the potential use of antibiotics by breeders to control the sanitary situation of rabbits. A belief is not a proof and may be completely erroneous from a scientific point of view.

Critical analysis of each point, true, false or under discussion is not the object of the present group of comments, but such scientific analysis can be done on request of the Committee on Agriculture and Rural Development of the European Parliament. Only 2 main points would be focused : **rabbit feeding conditions** (use of complete pelleted feed or of complementary feeds + forage) and **rabbit housing** (cages, pens, individually, in groups,...) .

## Rabbit feeding

The only known way to provide all nutrients necessary to a rabbit (energy, proteins, fibre, minerals, vitamins,...) is to gather different raw materials, to grind and mix the resulting meals and finally to agglomerate this mixing into pellets (pure mechanical compression). The agglomeration is necessary: indeed rabbits don't like the rations finely ground because this more or less dusty powder presentation provokes respiratory diseases (rabbit's nose is very close to the mouth). If grinding is coarse, rabbits select only some raw materials out of the total, the most palatable ones, a situation invariably inducing digestive troubles, mortal for some of them. Thus the use of pelleted feeds for rabbit is the condition to have animals in good health and to produce rabbit meat with the minimum of nutriment expenditures, *i.e.* without waste of feed resources used for this production. Naturally, the proportion of the different raw materials varies according with the nutritional needs of each type of rabbit (age, physiological status). With this technique, all rabbits housed individually or in group receive a balanced ration, one of the first points of the animal welfare.

In presence of a choice between different raw materials offered *ad libitum*, rabbits are not able to make a wise choice, and a majority selects only the most concentrated material and has digestive disorders, an often life-threatening situation.

Similarly, distribution of forage (hay or straw) in addition to a balanced pelleted diet is not an acceptable nutritional situation. Some rabbits eat a noticeable quantity of the forage, basically with a low nutritive value, and not enough of the balanced diet. As an immediate consequence, a deficiency appears for some nutrients, a situation which impairs the performances of these rabbits but above all deteriorates also their health status and their resistance to opportunistic diseases. This is particularly true for the breeding does during the period of lactation.

As conclusion only the use of complete pelleted rabbit feeds should be encouraged. Any other solution induces a deterioration of the nutritional welfare of rabbits.

## Rabbit housing

### ***Point 1 : Rabbit is not a social animal, only a group ± tolerant animal***

A great part of the Eck report devoted to rabbit's housing is based on the so-called "highly social behaviour" of this species. Unfortunately for the European honourable deputy, this assertion, even if very commonly accepted, is a scientific error in interpretation of correct

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<sup>2</sup> Szendrő Zs. 2012. New perspectives of housing reproducing and growing rabbits. *Proceedings 10th World Rabbit Congress, September 3 - 6, 2012 - Sharm El-Sheikh -Egypt, 979- 996.*

observations. In fact in the wild, it's well known that rabbits effectively live in groups with a social organisation. This observation is correct. But this compartment is only the best answer of this prey-species, adopted to minimize the risks in presence of predators; and for the Rabbit the list of potential predators is long.

The demonstration of the non-intrinsic social behaviour of Rabbit was made at the occasion of recent works<sup>2</sup> in which wild rabbits compartments were observed during more than one year in very large enclosures in absence of predators. In these studies, all predators were effectively suppressed, terrestrial predators as bird of prey. Some of the adults rabbit does leave the group and live alone with their young (no other adult, except sometimes a male) . The litter size of these "individualist" rabbit does was greater and their life expectancy was longer than that of does remained in the group. The same for their young thanks to the absence of aggressions by other adults and to a reduction of contamination by diseases. These experiments clearly demonstrate that for the Rabbit, to live in groups is an expensive option, but absolutely not a necessity. The cost-benefit is positive in the classical wild conditions with predators pressure, but negative as soon as the predators are absent.

For domestic rabbits raised in a building there is no risk or fear associated with the presence of predators. Thus the social organisation of defence is without object and becomes a constraint. The social acceptance of the "others" becomes unnecessary. In addition, in the wild, individuals that don't accept the social constraints leave  $\pm$  voluntarily the group and were no more observed, generally thanks to the predators action. In housing conditions of domestic rabbits, whatever the dimension or the structure of the cage, pen or enclosure, no animal has the possibility to leave the group, a situation source of unmissable conflicts.

An indirect demonstration of the circumstantial status of the social behaviour of rabbits is the increase of the aggressiveness of rabbits with the age. As long as the young rabbits are in the nest (from birth until 18-20 days of age) they need to be grouped to reduce heat loss. The cost-benefit is in favour of the group gathered in the nest box. From about 3 weeks of age, up to beginning of puberty (10-12 weeks of age depending of the breed and of feeding conditions) rabbits readily accept to live in group. The cost-benefit balance is about neutral. In practice the balance leans to one side or the other depending on the circumstances. From puberty and during all adult life, rabbits are easily aggressive against some sexually active congeners while in the same time they can search the company of other adult congeners. The average cost-benefit balance is clearly negative except in presence of predators.

The domestication has reduced the basic aggressiveness of the rabbits but not completely and large differences are observed between breeds or lines. In addition, almost all studies conducted on the social compartment of breeding rabbits were made with the New Zealand White breed, or with strains largely related with this breed known for its calm. Too few is known about the other breeds or strains, so that it is not possible to provide the adoption by the law, for all European rabbits (about hundred breeds and strains) of techniques for which the main problem is the wounding of numerous rabbits as a direct consequence of fighting and aggressions between rabbits.

## ***Point 2 : Housing of rabbits from weaning to slaughter time***

*Type of housing : cages, pens, parks, ...*

The Eck report stigmatize the housing of growing rabbits in "cages" and propose to replace them by "pens". But unfortunately he failed to define what is a cage and what is a pen. The commonly accepted idea is that pens are larger than cages, but in some experiments the dimension of the largest cages studied is bigger than that of the smallest pens studied in some

other experiments. The distinction between cages and pens is more semantic (and commercial) than scientific.

In fact the problem is not to promote a name of housing or to prohibit an other, but to know the acceptable number of rabbits obliged to live together and the surface available for each rabbit in a fixed environment. This number and the surface available depend of the final type of rabbit ready to slaughter : age and weight. The later parameters depend of the consumer's demand which is not homogenous in the different European countries : rabbits of about 2.0 kg alive in Spain or in the south of Italy, rabbits of 2.4-2.5 kg alive in the main part of France or rabbit of 2.7-2.8 kg alive in the north of Italy and one part of Germany or east part of France. With the most common commercial strains or breed used to produce meat rabbits in Europe, the puberty, and the associated strong increase of aggressiveness appears when rabbits weight about 2.5 kg.

For this reason, if it is really necessary, rules may be set only locally in a country or a region, but in no way at European level for all types of rabbits, because of the multiplicity of these types.

With groups up to 8-10 kits corresponding to the litter size at weaning, there is no variation of the stress indicators (glucocorticoids) with the increase of the size of the group. The most favourable group is that corresponding to rabbits of the same litter who know each other since birth.

With greater numbers of rabbits housed together, it is necessary to mix different litters *i.e.* different sanitary status, a situation which necessary increases the health risk. More important the short term and long term stress indicators increase systematically with the size of the group. On the other hand with the increase of size of the group, for a similar density, the total surface available for a rabbit increases too (each rabbit can use the totality of the surface) allowing a greater variety of behaviours.

For behaviourists, a frequent reference of the Eck report, any increase of the number of "natural" behaviours is considered positively, without consideration of the origin of this behaviour. Rabbits as all other animals, don't develop a specific behaviour without reason. Standing on hind legs or running are classified as "normal" behaviours in the Eck report, since they are observed in the wild rabbits. But the reason of these behaviours is first a tentative of visual identification of a potential risk (predator,...) after rabbit had heard a suspicious noise or seen a suspicious movement. The running is quite always the solution used by a rabbit to escape a real or supposed dangerous situation, in order to reach as rapidly as possible a more safety area . These 2 behaviours that, according to the Eck report, should be encouraged or at minimum permitted by the type of housing, are in fact only the consequence of fears in an environment considered as aggressive by the rabbits. The suppression of the sources of fears from the environment is a common objective of all breeders. If rabbit have not the possibility to stand up or to run they are not particularly stressed in a rabbitry without fears sources. But the possibilities of aggressive situations inside of the group increase rapidly with the size of the group.

The cost-benefit balance for rabbits of group housing was summarized in a table published 4 years ago by Szendrő<sup>2</sup>

Benefits and costs of group-housing of growing rabbit.	
Benefits	Cost
<ul style="list-style-type: none"> <li>- larger place for movement</li> <li>- wider behavioural repertoire</li> <li>- social contact</li> </ul>	<ul style="list-style-type: none"> <li>- higher rate of aggressiveness (injuries)</li> <li>- lower productivity</li> <li>- higher probability of infection (diseases, mortality)</li> </ul>

The partial conclusion of this part is that more knowledge is necessary to well understand the comportment of the rabbits raised in group during the fattening period before any legislative decision. As demonstrated by the great number of publications on this subject presented

during the last World Rabbit Congress (June 2016) numerous research staffs are working worldwide on the subject. The time has not yet come for definitive conclusions and to translate them into laws or recommendations.

### *Enrichment*

The enrichment of the simple (barren said the Eck report) environment of classical cages or pens (only feeder and watering system) induces sometime an improvement of the well-being indicators (reduction of circulating or faecal glucocorticoids) but in some others the well-being is clearly reduced and associated with an health alteration. It depends of the type of enrichment studied and of the experiment, some results being contradictory for the same type of enrichment from one experiment to the other. Frequently, but not always, the enrichments studied alter the hygienic situation of rabbits. It's for example the case of the platforms use : rabbits on the above level urinate on the back of the other rabbits taking refuge under the platform. In many experiments "efficient" enrichments, such as the presence of gnawing sticks for example, reduce the aggressive behaviour of rabbits housed in pens; but for rabbits housed in cages (smaller number of rabbits housed together) the same enrichments have no influence on aggressive behaviours because these behaviours are very scarce or absent.

Once again, if search on the possibilities offered by an enrichment of rabbits environment to improve their welfare should be encouraged, it's too early to have conclusions, because of the too many contradictory observations made in different studies. In addition all possibilities of enrichment were certainly not explored.

### ***Point 3: Housing of breeding adults***

Because adult rabbit males are too aggressive towards other males and some times toward some females, they must be housed individually. There is a good international agreement for this housing technique, even in the Eck report. Privation of social contacts does not seems a problem for males, why it becomes an important problem for the females ? This contradiction is completely skipped in the Eck report.

Since the 1970's, for different reasons, producers, breeders and researchers try to house domestic breeding rabbit does in groups or colonies. This long search is explained by the erroneous belief that rabbits are social animals (see above in this paper of comments).

Different improvements of the method were obtained with more and more complicated pens, with more and more sophisticated enrichments of pens. The most recent consist in a individual housing of does with suckled young (70 to 85% of the time) followed by housing of the same does in groups of 4 females during the rest of the time before preparation of the following parturition (15 to 30% of the time).

But one problem has never be solved : in all cases, rabbit does raised in groups are aggressive towards other females, and the consequences are numerous moderate to severe wounds. In this type of housing a significant increased of rabbit does activity is effectively observed as wished by behaviourists. However, it needs to be remarked that such increased activity does not necessarily imply improved welfare, as observations of behaviour showed that much activity was due to agonistic interactions (fighting, chasing, fleeing, withdrawing).

According to current knowledge, up to now, group housing of rabbit breeding does could not be reasonably proposed as a method able to improve rabbit's welfare. Some research staffs continue to try to improve the group housing of rabbit does, particularly the consequences of

their aggressiveness, we only can expect than they succeed. But currently it is scientifically unthinkable to propose group housing of rabbit does as long as the problem of aggressiveness has not be solved.

If in a region or a European country group housing of rabbit breeding does is promoted as mentioned in the Eck report, the corresponding European citizens must be simultaneously informed that this technique clearly deteriorate the health and welfare of the does. As scientists we don't have to qualify consumers which prefer the meat of rabbit produced by rabbit females raised in groups, but they must be informed, that this system impairs widely health and welfare of these females.

### **General conclusion**

Contrary to the conclusions of the Eck report based on insufficient or erroneous information, it is necessary to largely postpone any legislative decision or rule adoption trying to improve rabbit welfare. Current scientific knowledge on this subject is insufficient to propose general methods or techniques particularly in the field of rabbit housing. A positive action in direction of an improvement of welfare of rabbits produced in Europe might be to encourage public and private research in this area of rabbit science, but in no case it could be obtained through a freezing by the law of an unsatisfactory situation, whatever it is.

Corronsac (France) August 20th, 2016

*Signed*

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