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Minimum comfort requirements on Industrial Rabbit Breeding

Recommendations to be addressed to the European Union.

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SUMMARY ***Key Words**: (Animal Comfort, rabbits, cages)*

Through all the years of animal domestication, in all species, a constant trend is shown: the better animal are kept and catered for, the more they produce.

Ecologist lobbies are putting pressure on the E.U legislative bodies arguing that changes on rabbit breeding should be made, specially raising them on the ground, or on bigger cages, in a wrong and antropomorphic tainted version of rabbit behaviour.

Breeding directly on the ground would be counter-productive, increase death tolls and stress. Bigger cages would mean higher production costs. Besides it has never been proved excessive additional space would mean higher rabbit comfort levels, moreover the contrary can be said.

Rabbit breeders are professionals who perfectly know they have to keep adequate animal comfort levels to reach good productivity levels, and that is what they do.

There are 30 million rabbits cages on meat production just in Spain, France and Italy that confirm and endorse this view.

Hobby breeding point of view must be separated from functional meat production cages, or needs..

On this paper I put forward the following points:

1) The **WRSA** (World Rabbit Science Association) as the body with a deeper rabbit breeding knowledge, in collaboration with National Rabbit Associations and Inter-professional Associations, **must be the only organisation proposing comfort levels before the E.U.**
Against idealistic frames of mind, rational FACTS !.

2) We should put forward **scientific evidence to demonstrate that production levels are on line with comfort levels**. Showing with facts comfort levels depending on rabbits weight and cages measures, if need arises this can be complemented with suprarenal size comparisons. Proposing minimum sizes and measures that, from my point of view, will not greatly differ from the present day situation.

Introduction Theme

(From J.Camps:
I have, and feel, a "rational" protectionism love for all animals. As teenager, 55 years ago, I had cure of a group of does, some at the floor and some in rural hutches, with my grandmother.
As professional, I worked the last 40 years in research and in animal production & promotion, 25 of it, exclusively in rabbit husbandry, ethology, management programs, nutrition, rabbit meat quality, etc.. And I, ever, insisted about the appliance of an optimal animal welfare to the rabbits).

All rabbit breeders, and people closely related with the sector, know the impending need of an improvement on meat productivity levels and on economic results. Everybody knows rabbit breeding, as the rest of animal meat production sectors, is a highly competitive activity.

The more rational way to improve results is by getting the rabbits on better production levels. Even if it seems too obvious **they only can get on maximum production levels if rabbits are kept with an optimal comfort,** sparing them all or at least the majority of stress factors.

Comfort is not just the environment, temperature, humidity levels, air flows, floor, nest, feeder and drinker space… but also nutrition, pathology and something we normally do not take into account: "Ethology", intraspecies behaviour, a really complex issue on the Leporidae family, and the interspecies relationship with other animals on their environment, including humans.

Wild rabbits (Oryctolagus cuniculus) of the same species than the domestic ones, being highly gregarious animals have a series of very important ethological "worries" such as internal group behaviour. As an example one as essential as looking for couple to procreate. Also how they can avoid predators, keep healthy or the problematic of finding food, fundamental duties on every living being. A good part of these activities are live or die options and can lead to the survival or disappearance of the species.

Domestic rabbits reaction against these stress factors can be similar to wild rabbits reaction but has the small advantage it has been softened by time but also has the no-so-small inconvenient of the "pressure" to which the animal is subjected through everyday handling and of keeping comfortable cages an adequate environment, and good nutrition. Something achieved thanks to long years' research and after thorough testing in millions and millions of cages, nests, feeders, drinkers, and so on.

The more developed countries on rabbit culture, Spain, France and Italy, gather more than 30 million rabbit cages functioning on farms, apart from the ones used on research, hobby or other activities different from meat production.

Ethological principles related to productivity

As earlier as 1975 the eminent professor Dr Carlos Luis de Cuenca encompassed Ethology and Handling (or Management) as a whole. He underlined the important relation existing between instinct and how can we handle it to get the maximum production levels, keeping at the same time adequate animal comfort levels. These two factors are completely related and, if we are to get any improvement, they have to be studied together.

Biology signals "Comfort" or "Welfare" as any animal "normal" or productive state, "Stress" can be said to be the contrary. A stress situation means the activity of pituitary and adrenaline glands show behaviour alterations, a fact that reduces physiological capacity and consequently production levels.

Wild rabbits are highly sensitive to the changes of their environment, among others, the researchers Drs. Myers and Mykytowicz have demonstrated the big weight differences on rabbits adrenal glands depending on the aggression or stress levels they have suffered, the ones of "stressed" animals being heavier.

The exposed facts already demonstrate the importance of keeping an adequate handling to get an positive ethological state.

These reasoning made us conclude rabbits produce more when their comfort is optimal, when we are able to reduce their stress levels, that is to say we can tell rabbits **comfort level** by checking their **production levels**.

Consequently: **Higher production means higher comfort !!.**

These statements are based on numerous ethologic studies conclusions, identical basis for every animal, and on the important contribution of rabbit breeders being them the ones who decide the environment on which cages are to be placed, size, shape and material characteristics. Cages manufacturers only produce what breeders demand. What mainly interest breeders, apart from cost and easy handling, is to get maximum production.

Reasons for minimum comfort requirements

The E.U. in its welcomed need to regulate every social aspect shows an interest in regulating on the comfort standards rabbits are going to have on farms, especially on cages measures, nests, heights, feeders, drinkers, flooring…sometimes even “over” searching in its need.

A lot of media pressure is put both on the Committee that has to decide and present the law proposition and on the authorities that are going to draft the laws to be implemented on the Union countries. This pressure comes from a social environment highly sensitive to any issue related to animal welfare. Protection that sometimes is misunderstood, saying this as a committed protectionist, but a protectionism based on "rationalism" and not only "sentimentality".

Against the referred idealism excesses of certain ecologists and animal welfare groups representing a lobby media pressure group we need a common and joined action. **Against opinions and suppositions, hard facts, numbers and results**.

The best way to know animal comfort levels is by checking their production levels, that is an increase in these levels means better comfort levels.

The rabbits feeling of being packed in cages, prisoners longing for liberty is the non-valid reasoning presented by those so called ecologists. This point of view is based on the mistaken antropomorphic idea of rabbits feeling sad on cages, or longing for a happy life on the wild.

Rabbits being lodged on ground, no matter how spacious these grounds are, produce much less than those kept on standard cages. Kept “free” they suffer serious pathological and handling problems that makes this kind of meat production non viable due to the high death and illnesses toll. **Besides I do not consider a logical aim of welfare groups the rabbits to sicken and die**. Breeding on the ground would amount to higher production costs, not the 20 % consumers perhaps could admit, but of a staggering 1.000 %.

Not even rabbits would feel happier! Due to the social competition within the group, there is always a social scale, there is only one animal “happy” and that animal is the male or female "alfa", or the group leader, the rest are under its rule. Not being protected by a cage predators hazards is something not to be forgotten, neither the stress to which the animals would be subjected every time the breeder would get inside the precinct either for feeding or for picking up rabbits.

Notwithstanding my previous comments is absolutely needed to state and recommend, as I have been doing through all these years, the importance of a good handling and animal care so that rabbits are always kept on optimal welfare conditions. A target already common among rabbit breeders, good professionals, always looking for ways to increase productivity, keeping rabbits well fed on a healthy environment means less stress and thus higher production levels.

Besides and according to Graham Perry **“Due to the compelling need there are more ethics on producing feed, shelter or other services to mankind, than non exaggeratedly idealising animal welfare, supposing animal posses human feelings, when certainly that is not the case”**

Ethological reasonings.

Rabbits are one of the animals most sensitive to stress and ethological unbalance, among them specially domestic rabbits, causes are numerous: their gregarious nature and territoriality, recent domestication, long runs, low intensity light level life, with no abrupt humidity changes, their tendency to adrenaline outbursts etc. Consequently there is a need for their environment and handling to fit their ethological instincts and well being. Their having too much space or leaving in groups would had fatal consequences.

A recent Maasters & Van Herck study (2000) has shown that compared to those raised on cages, "ground" rabbits have worst death tolls, higher feed conversion, and slower daily growth. Van der Horst (1999) demonstrated that "ground" rabbits on a straw bedding, at 8 / square meter (20Kg total at end), had slower growth rates, worst meat output, less kidneys fat (a sign of worst health), than 16 fattening rabbits put per square meter (40 Kg), (double). There is more scientific evidence, only to quote another experience: Margarit (1999) putting some rabbits in a standard cage and some others in a grass cage and moving them every day, the result on this free moving, grass eating rabbits (precisely what some groups advise) was much worst than in the former standard kept rabbits.

Rabbits are more affected by changes in feed texture and composition (smell) than other animals. This reaction against feed ingestion is highly related to the frequency and hazard of diarrhoea on farms. Very difficult, if not impossible, to hold when rabbits are on the ground surrounded by manure, droppings and wet straw.

These reactions are possibly marked by the very specific rabbits digestive physiology and by the cecotrophic process requiring minimal changes (almost closed and constant feed composition) to keep a healthy feed and digestive microflora.

Rabbits show a marked territoriality and the same time have a gregarious nature, a characteristic even more stressed on wild rabbits "marking" their territory. Males on the wild mark their territory, and violently expelling other male competitors.

Male on coupling with the female marks her on the back with the pheromones from sexual, and from jaw glands, Should this female be covered by other males, this second male on smelling his rival will refuse the female, reducing litter numbers, in some cases they even can fight and injure her. Not being an ever-happening pattern is frequent enough to take it into account in a ground breeding handling.

A new nest situation or a change in its shape can cause certain females to react, some will not even make the nest, or will not pull their hair, or even abandon the litter.

Rabbits in open wild big space are much more aggressive than their mellow aspect suggest. Males and even females have frequent fights. Males, knowing the influence parent characters transmission have on those big litters, can even emasculate their rivals, as Mykytowycz demonstrated.

Their fighting system based on big jumps and pushes is very frequent in groups and open spaces, even in females, but is something it cannot be done if they are all alone in a cage, at least on the adult stages.

Cages measures determining factors

The same can be said, on a practical level, about cages space. It is a mistake based on an anthropomorphic vision: to think bigger space means more comfort. There certainly must be minimum levels, already shown by many years every day handling, and strictly followed by breeders. **Principles such as a maximal 44 Kg total weight per square meter in fattening cages, or the 3.500 square centimetres minimum flooring for does, even with litter and up to weaning, the 35 cm all cages minimum height and width; considering most rabbits used on farms are medium size breeds.**

Every rabbit breeder knows the link between comfort and productivity and is not going to overlook the advised fattening rabbits density per cage, they know in doing so they would have health problem, slower growing rates, worst feed conversion rates, worst meat quality and thus worst economical results.

Not a single professional rabbit breeder would buy rabbit cages with a space lower than the normal standards in height, and in flooring length and width, knowing rabbits would have a lower rabbits output, cannibalism, illnesses… From the 1.975 all industrial cages are in flat deck, much better than batteries.

Who can suspect that a breeder interested on the best productivity on meat rabbits needing to have the best possible, hassle free feed access, would advocate for his rabbits having less feeder and drinker space?

All "World Rabbit Congresses" and "National Symposiums" have always studies of different authors on research on cages size and layout, nests arrangement and size, feeders access or even on cages with two decks, nest under ground… Writings and Expositions I have tried to follow since the first 1976 WRSA World Rabbit Congress, to my knowledge **there never has been definitive conclusions on an increase on production levels and accordingly on comfort, due to wider cages to the ones normally used by breeders. Measures and sizes based on the cages market regulations. Not either with fewer rabbits per group…Not a single one!!!**

Precisely the contrary can be said. For example: in a Xiccato 1999 study no improvement was shown putting 12 rabbits (up to 30 Kg) per square meter, instead of the standard 16 (40 Kg.) The latter even had a better meat quality and a higher endurance on transportation, than those kept in half quantity. And better kept six in a group, than kept one rabbit single. The same facts related to the 40 - 44 Kg maximum weight at the end of fattening, per square meter, had been previously stated by the studies of Maertens and De Groote (1984) and Morisse and Maurice (1996)

The WRSA indicated that 44 Kg per square meter of cage floor, should be de maximum.

Recommendations to the E.U.

The **WRSA** (World Rabbit Science Association) is the body with a deeper knowledge in rabbit breeding and rabbit needs and behaviour, and consequently **should be the one co-ordinating all the proceedings on recommendations** to be addressed to the U.E. legislative body concerning **minimum comfort levels**. Exclusively!!. Even though the collaborations of **WRSA national branches** (such as ASESCU in Spain, and others) and **rabbit breeders inter-professional bodies** (such as INTERCUN in Spain) should be required.

There already exist published tests on comfort, and they can even be done on purpose, since testing duration on fattening, the area subjected to more critics for its “overcrowding”, last in between 5 and 6 weeks

Other studies could be done on adrenals size comparisons to check if there are differences on the average dissection gland weights. That is putting a "Test group" with 7 rabbits to reach 2,2 Kg in a 3.600 square centimetres cage (40 x 90 cm) (for a maximal 44 Kg/m2) and a "Proof group" with four or perhaps two young rabbits. If Proof rabbits would be more comfortable with that wider space, suprarenal glands should be lighter. Something that according to previous experiences will not happen.

The compelling urgent need to address these recommendations is obvious since every legislation change could be fatal for rabbit breeding, affecting not only breeders but everybody related to the sector and, on a great deal, consumers who should pay much more for rabbit meat, and would lower the consumption of a **highly dietetic meat.**

The "European Union" State Governments should advise the increase on rabbit meat consumption, for its benefits, not the contrary !.

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