

## The first full morphological description of the Cluj Rabbit (*Oryctolagus cuniculus*)

Miklos BOTHA<sup>1</sup>, Ioan Valentin PETRESCU-MAG<sup>1,2,\*</sup> and Andrea HETTIG<sup>1</sup>

1. Bioflux SRL, 54 Ceahlău street, Cluj-Napoca, 400488, Romania.

2. University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca,  
3-5 Calea Mănăştur street, Cluj-Napoca 400372, Romania.

\*Corresponding author, I.V. Petrescu-Mag, E-mail: zoobiomag2004@yahoo.com

Received: 15. February 2013 / Accepted: 02. April 2013 / Available online: 02. June 2013 / Printed: December 2013

**Abstract.** A new rabbit breed is forming in Cluj-Napoca (Romania), besides the Giant of Transylvania. The new breed is named Cluj Rabbit (RC), derived from a spontaneous mutation from the New Zealand White (NZW). The phenotype of the new breed seems a slightly finer NZW (with finer bone structure and extremities) carrying a chinchilla color gene (ch). It is a medium-sized rabbit, with weight varying from 3.5 kg to 5.5 kg.

**Key words:** rabbit, new breed, spontaneous mutation, chinchilla color gene.

A spontaneous mutation occurred in a New Zealand White (NZW; show type) rabbit nest in a private rabbitry in Cluj-Napoca (Romania) in 2005, resulting in a colored individual (carrying a chinchilla gene) from two albino genitors (NZW). As the albinism occurred only in homozygous state, there is no doubt about the parent's purity. The colored male has been mated with several Chinchilla (ch) and NZW females in order to obtain a wide range of different lines. Further, it was resorted to a well-planned and controlled cross between the lines, resulting in a unique population, with distinctive appearance and genetic background (Fig. 1). The resulted infraspecific taxon, which is under genetic consolidation and homologation process, was named Rabbit of Cluj (RC) after the region where the breed was formed. This is the second Romanian native breed (Botha et al. 2011), besides the Giant of Transylvania (Petrescu-Mag et al. 2009, 2011, 2012). The following description of the developing breed (RC) will also serve as standard description for evaluating animals in rabbit exhibitions.

**Type and body shape.** A large body (40-50cm), yet not typically large. The body is barrel shaped and flat backed, but well muscled and rounded. The legs are slightly fine and have a medium length. A small well-formed dewlap is permissible in does.

**Weight.** See Table 2 for index for weight evaluation.

**Fur.** The fur is of medium length (3 cm), dense in undercoat with well-developed, but not too harsh or coarse, guard hairs.



Figure 1. Rabbit of Cluj (original).

Table 1. Distribution of maximum points according to European standard.

Type and shape of the body	20
Body weight (kg)	10
Fur	20
Head and ears	15
Top color and shading	15
Under and intermediate color	15
Care and health	5

Table 2. Index for the weight evaluation.

Kg	3.50	4.00	4.50	5.00-5.50	Maximum
Score	7	8	9	10	

**Head and ears.** The head is well developed with a distinctive, broad forehead and full cheeks. Head shape shows sexual dimorphism: bucks have a stronger and wider head, contrarily to does, whose head is significantly finer. The ears are of

medium strong structure and usually do not exceed 11.5 cm in length. They are also finer in does than in bucks.

**Top color and shading.** The top color appears very shiny, light ash-grey with bluish toning and a flaky black shading, which is emphasized by black hair stuffs which are close together. The black shading is more noticeable on the back. The top color should reach quite far down the sides if possible and the chest and legs should be in accordance with the overall color. The ear edges are seamed in black. The neck part is small, grey-white. The tail is black and dotted with grey-white hairs, the underside however to be as white as the belly color. The eyes are brown, nails are dark.

**Under and intermediate color.** The undercolor on the whole body is dark blue. A white to whitish grey intermediate band is about 8 mm, which causes a sharp demarcation between the top and undercolor.

**Condition.** Only animals in a faultless condition and health can engage in competitions. Clean legs, ears, and sexual organs, well manicured nails, shiny, well-carried fur, and liveliness mark a high-quality animal. Identification is essential for a complete evaluation. A uniform tattoo is being prepared. During the transmission, one should refer to the valid requirements of individual countries. The possibility of identification is important.

**Minor faults:** slight hutch soiling; slightly dirty ears and sexual organs; long nails; slightly weeping eyes.

**Major faults:** non-legible identification; heavy hutch soiling; insects; blindness or blind in one eye; absence of recognition marking.

**Final Remarks.** Human preferences for meat consumption evolved from high quantity to high quality in the last decades. A special attention is given to game, rustic breeds, organic farming, small animals as delicacies, native species, local

breeds, low fat content, and medium-sized animals (Dalle Zotte 2002, Resurreccion 2003, Reka et al. 2005, Covaciu-Marcov et al. 2009, Daszkiewicz et al. 2012, García-Abad et al. 2012). This second Romanian breed is one step towards customers needs. Apart from meat consumption, the Cluj rabbit is a wonderful pet for "children" of all ages.

#### References

- Botha, M., Hettig, A., Petrescu-Mag, I.V. (2011): The Rabbit of Cluj: a new phenotype obtained, maintained and improved in Cluj-Napoca (Transylvania), Romania. *ABAH Bioflux* 3(1):42-47.
- Covaciu-Marcov, S.D., Cicort-Lucaciu, A.S., Dobre, F., Ferenfi, S., Birceanu, M., Mihaş, R., Strugariu, A. (2009): The herpetofauna of the Jiului Gorge National Park, Romania. *North-Western Journal of Zoology* 5(Suppl.1): S01-S78.
- Dalle Zotte, A. (2002): Perception of rabbit meat quality and major factors influencing the rabbit carcass and meat quality. *Livestock Production Science* 75(1): 11-32.
- Daszkiewicz, T., Gugolek, A., Janiszewski, P., Kubiak, D., Czoik, M., (2012): The effect of intensive and extensive production systems on carcass quality in New Zealand White rabbits. *World Rabbit Science* 20(1): 13-23.
- García-Abad, C.S., Alonso de la Varga, M.E., Diez Valle, C., Gaudioso Lacasa, V.R. (2012) An approach to the statistics of wild lagomorph captive rearing for releasing purposes in Spain. *World Rabbit Science* 20(1): 49-56.
- Petrescu-Mag, I.V., Petrescu-Mag, R.M., Botha, M., Oroian I. (2009): Transylvanian giant rabbit originates from Arieş and Someş areas (Transylvania, Romania). *Transylvanian Review of Systematical and Ecological Research* 7: 187-192.
- Petrescu-Mag, I.V., Petrescu-Mag, R.M., Păsărin, B., Pop, D., Botha, M., Gilcă, V., Bud, I., Hoha, G., Creangă, Ş. (2011): Proposal of standard for the judgement of the exhibition Transylvanian Giant Rabbit. *ABAH Bioflux* 3(1): 39-41.
- Petrescu-Mag, I.V., Petrescu-Mag, R.M., Viman, O., Botha, M., Hoha, G., Grun, E., Creangă, Ş. (2012): The Giant of Transylvania: Standard for arbitration in rabbit exhibitions. *Rabbit Genetics* 2: 1-4.
- Reka, T., Bud, I., Mag, I.V. (2005): Analysis of game's physico-chemical features compared to meat of domesticated animals. *Bulletin of the University of Agricultural Science and Veterinary Medicine, Animal Husbandry and Biotechnology* 61: 284-289.
- Resurreccion, A.V.A. (2003): Sensory aspects of consumer choices for meat and meat products. *Meat Science* 66(1): 11-20.