

CURRENT STAGE OF HOMOLOGATION OF THE FIRST ROMANIAN RABBIT BREED – TRANSYLVANIAN GIANT RABBIT

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Abstract

The paper presents the current state of the homologation process of the first Romanian rabbit breed. Animal production very often takes into account aspects such as conservation of national genetic resources, but also an improved productivity. These two issues are the main reasons for creating the first rabbit breed in Romania: Transylvanian Giant Rabbit Breed. We point out here our latest scientific achievements – accomplished during 2011.

Key words: Transylvanian Giant Rabbit, homologation, breed, genetic improvement.

1. Introduction.

Rabbit rearing could represent an answer that agriculture needs in the context of fragmented land, aging population, lack of financial resources for investments and the need to provide a source of quality meat protein. In Romania, domestic rabbit

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has the potential to become one of the most exploited species for meat production. At the same time, the domestic rabbit is one of the animal species that could found a productive niche in the suburban agriculture of Romania (Petrescu-Mag et al. 2011 b, c). Economic efficiency of production of rabbit meat is high. Rabbit meat production for self-consumption or for sale is a solution both for the protein needs of families in rural and peri-urban areas, and for increasing their incomes. It is also a solution for providing large quantities of a healthier type of meat (compared to others now preponderantly consumed) by developing businesses for rabbit breeding and meat production, either in intensive system, or traditional, or even organic (Petrescu 2011).

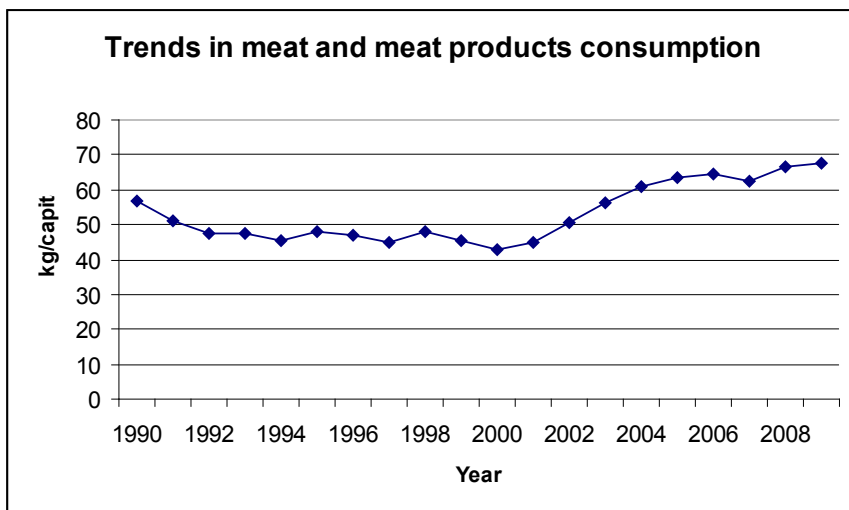
The average meat consumption per capita in Romania decreased from 50.2 kg in 1989 to 44.8 kg in 2001, then the trend reversed and by 2005 reached 63.3 kg; this was lower than EU average – 96 kg (D12-4 Fourth 6-monthly report), and than other EU countries: Bulgaria – 45, Hungary – 80, France, Germany – 88, Italy - 92 (<http://chartsbin.com/view/bhy>). In 2009, the average meat and meat products reached 67.5 kg/capita (<http://statistici.insse.ro/shop/>). As the trend in meat consumption is now an increasing one (see Table 1, Figure 1) and the need for healthier type of meat is also rising, the rabbit meat is an appealing option.

Table 1: Meat and meat products consumption in Romania during 1990-2009

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
56.9	50.9	47.5	47.7	45.5	47.8	47.2	45.1	48	45.2
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
42.9	44.8	50.7	56.3	61	63.3	64.7	62.7	66.6	67.5

(Source: Data from INSSE)

Figure 1: Trends in meat and meat products consumption in Romania during 1990-2009



(Source: Own elaboration, Data from INSSE)

Animal production very often takes into account aspects such as conservation of national genetic resources, but also a better and better productivity. These two issues are the main reasons for creating the first rabbit breed in Romania: Transylvanian Giant Rabbit Breed (Petrescu-Mag et al 2011, b). We are also working to another local rabbit breed: Cluj Rabbit Breed (Botha et al 2011). The two new breeds are still being statistically analyzed for homologation.

2. First Romanian rabbit breed

In 2009, it was published for the first time our intention to create a first Romanian rabbit breed based on Transylvanian rustic genes (Petrescu-Mag et al 2009). At the beginning of this year (2011), the members of homologation team published the standard proposal for Transylvanian Giant Rabbit to be used as a judgment standard in exhibitions (before the breed homologation). We followed the general rules presented by European Association of Poultry Pigeon and Rabbit Breeders (2003) and fit them to the specific characteristics of our breed in formation, Transylvanian Giant. For example, regarding *admission in competition/exhibition*: animals which are exclusively suitable for breeding and are healthy will be admitted; regarding *conditions of exclusion*: castrates, hermaphrodites and rabbits without testes are to be excluded from evaluation, animals which are obviously sick or infested with insects of any kind are to be immediately removed from the show management or by instruction by the judge; regarding *points distribution*: 1. Type and the body shape -20 points, 2. Weight-10 points, 3. Fur-20 points, 4. Head and ears -15 points, 5. Color- 15 points, 6. Markings-15 points, 7. Condition- 5 points (PETRESCU-MAG ET AL 2011, a).

Transylvanian Giant rabbit (Fig. 1) has been created as described in PETRESCU-MAG ET AL (2009), using mostly the native Romanian population (extremely heterogenic, but rustic and hardy) and also: Californian breed (for body constitution and growth rate), Giant Papillon (for size and background black color) and Agouti German Giant (for body size). After a complex breeding program (see PETRESCU-MAG ET AL 2009) resulted a relatively uniform population from almost all phenotypic points of view (Fig.2): Himalaya color pattern (white, pointed black pattern; red or pink eyed), black background color, medium sized and thick ears, average weight of 6 kg (at adult stage; see the growth dynamics in Table 2), 6-8 kits in a litter (6-8 pui la o fatare), good lactation, very good tolerance to pasteurellosis (due to artificial selection made for that trait). However, there were obtained also several individuals weighing under 5.5 kg, value which was considered the inferior limit of weight of Transylvanian Giant at adult age. Thus, we considered appropriate a correction of body size and weight, and we appealed to the infusion with Giant White (during 2010-2011). This infusion with Giant White in Transylvanian Giant population diluted the pointed black trait in the next generation, resulting many agouti-Himalaya and agouti-Himalaya-like individuals (PETRESCU-MAG ET AL 2011, b). A second step will be necessary during 2011 to correct the color trait of the population. This stage is ongoing and it will be completed at the end of 2011. In this respect, we have mated heterozygous males ($c^h c$) with heterozygous females ($c^h c$) as regards the Himalaya locus.

Figure 2: Transylvanian Giant rabbit, 2010.



(Source: Bioflux, Cluj-Napoca, original picture)

Table 2: Average growth dynamics of Transylvanian Giant in evidence from 2010

Age (months)	1	2	3	4	5	6	7
Weight (kg)	0.6	1.5	2.6	3.7	4.6	5.5	6.0

We estimate the new rabbit breed will be ready for homologation in less than one year, but the process of homologation will take several years. The first level is the homologation in Romania, evaluated and monitored by ANARZ (Bucharest), that is the authority that approves the new data for homologation of biological creations (breeds, lines and hybrids of animals and birds). A tour of exhibitions abroad will follow in view to prepare the international homologation. Homologation of a breed means not only working on genetic improvement of a population but also a good management, economic studies and a wide legislation survey (Petrescu-Mag et al 2011 b, c).

CONCLUSIONS

Within the homologation process, the next steps will be the submission of breed homologation documentation at ANARZ, the presentation of the breed at the Rabbit National Championship of December 2011 and at the Cuniculture European Championship in 2012. When the homologation process will be completed and successful, the new breed – the Transylvanian Giant rabbit – will represent an important achievement and it will bring not only notoriety on this Romanian breed and rabbit breeders, but also economical, social and environmental benefits.

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