

HOMOLOGATION OF SHEEP BREEDS - EUROPEAN AND NATIONAL LEGISLATION

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Abstract

Homologation of a new sheep breed represents the appreciation of the genetic potential of an animal population obtained from the application of the amelioration process. Homologation aims to recognize new populations as breeds, or populations that are already existing and are non-homologated, in order to increase the biological diversity of animal breeds and to adapt the animal breeding directions to market requirements. The homologation process involves research and testing of animals of high production value, and approval is done by the national competent authority in animal breeding that certifies the performance of the population under investigation. The study was conducted with the main objective to describe the procedures and conditions for the homologation of sheep breeds, as well as the presentation of existing legislation at national and European level, the regulations and directives repealed so far on the homologation of new sheep breeds. Regulation (EU) 1012/2016 is to be applied in national legislation by amending it in accordance with the updated European provisions which entered into force on 1 November 2018. In this context, with regard to recognition of breed societies and breeding operations, the competent authority must ensure that they update the breeding programs of breeds in accordance with Regulation 1012/2016 and that the breeding programs already submitted will be checked in accordance with the requirements of the legislation and the established principles of breeding so that all breeding programs of sheep breeds must to comply the conditions, criteria and rules contained in the updated European Regulation.

Key words: sheep, breeding program, homologation, legislation, testing of performances.

INTRODUCTION

Sheep breeding, along with other livestock-specific sectors, has notably contributed to the development of the economy and the living standard of people in growing areas. Due to the diversity of products resulting from sheep breeding and their special biological value, sheep breeds continue to enjoy a special appreciation and attention from breeders (Pascal, 2007).

The biological potential for all sheep livestock production and exploitation can be increased by paying greater attention to the selection and amelioration, as well as the use of the existing genetic fund, while taking into account the diversity of the structure of indigenous and imported breeds (Mochnacs et al., 1978).

Amelioration of sheep represents the modification of the genetic structure of a population by improving its morpho-productive and reproductive attributes. It aims to influence the evolution of these populations from one generation to the next in order to quantify the

effects of the improvement process (Ivancia, 2005). The genetic structure of an animal population is the set of genotypes and specific genes of the individuals that make up this population. Being dynamic, the genetic structure can be changed at every change in the population by eliminating or adding an individual in the population, since each individual has its own genetic configuration that can affect the characteristics of the population (Mochnacs et al., 1978). By developing clear, accurate and effective programs of genetic amelioration, for each morpho-productive type, by applying the science of amelioration, remarkable results are achieved in zootechnical interest species. On the other hand, the methods of breeding applied to sheep have remained traditional, and are currently very little changed compared to the past.

As a result of amelioration processes, it is intended to obtain morpho-productive and reproductive performance of sheep populations with superior characteristics to their ascendants. By applying the processes of

improvement and selection of sheep populations, the genetic structure of this population changes and higher animal productions are obtained (Pascal, 1998). Following these developments, it is intended to recognize and approve new sheep populations. The purpose of homologation is to recognize populations as breeds in the direction of increasing the biological diversity of animal breeds and adapting the growth directions to market requirements (Taftă et al., 1997).

The homologation process is regulated by legislation, both at national and European level. Thus, homologation is done under the authority of the national competent authority in animal breeding that certifies the morpho-productive and reproductive performance of the population under investigation.

In the presented context, the aim of this paper is to describe the procedures and conditions for the homologation of sheep breeds, in order to have a thorough knowledge of them. Also, research on existing national and European legislation, regulations and directives repealed so far, as well as their modification, will seek to obtain a complete picture of legislation on the homologation of new sheep populations.

MATERIALS AND METHODS

The main objectives of this paper are theoretical and aim at acquiring specific knowledge on the subject discussed, namely notions regarding the homologation of sheep breeds. It also seeks to highlight the basic legislation on the amelioration process, performance testing, homologation process and other reference procedures in this area.

The aim is to project an overview of the current legislation, both at national and European level, on working methods and how sheep breeds can be homologated.

The methodology used in this research is a qualitative one by analyzing some documents of interest. Thus, detailed legislative documents, regulations and operational procedures of the competent authorities implementing the legislation were analyzed. Among the legislative documents used, the most important will be mentioned below.

European Legislation: (1) *Regulation (EU) 2016/1012 of the European Parliament and of*

the Council of 8 June 2016 on zootechnical and genealogical conditions for the breeding, trade in and entry into the Union of purebred breeding animals, hybrid breeding pigs and the germinal products thereof and amending Regulation (EU) No 652/2014, Council Directives 89/608/EEC and 90/425/EEC and repealing certain acts in the area of animal breeding ('Animal Breeding Regulation'); (2) *Commission Implementing Regulation (EU) 2017/717 of 10 April 2017 laying down rules for the application of Regulation (EU) 2016/1012 of the European Parliament and of the Council with regard to the model forms of zootechnical certificates for breeding animals and their germinal products;* (3) *Commission Implementing Regulation (EU) 2017/716 of 10 April 2017 laying down rules for the application of Regulation (EU) 2016/1012 of the European Parliament and of the Council with regard to the model forms to be used for the information to be included in the lists of recognised breed societies and breeding operations.*

National legislation: (1) *Law no. 32 of 16 Januaru 2019 for animal breeding;* (2) *Government Decision no. 1188/2014 on the organisation and functioning of the National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu;* (3) *Government Decision no. 77/2019 for modifying and completing the Government Decision no. 1188/2014 on the organisation and functioning of the National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu;* (4) *Order no. 383/2009 on the approval of technical regulations for the homologation of breeds, lines, hybrids and new biological creations for domestic animals;* (5) *Order no. 22 of 20 January 2006 for approving the appreciation norms for reproduction sheep and goats.* (6) *Order no. 1045 of 14 May 2018 for modifying and completing the appreciation norms for reproduction sheep and goats, approved through the Ministry of agriculture, forests and rural development Order no. 22/2006;* (7) *Order no. 332 of 16 October 2017 for modifying and completing the the appreciation norms for reproduction sheep and goats, approved through the Ministry of agriculture, forests and rural development Order no. 22/2006;* (8) *Law no. 191 of 30 October 2012 for approving the Government*

Emergency Ordinance no. 23/2010 regarding the identification and registration of swine, sheep and goats, as well as for the modification and completion of some normative acts.

RESULTS AND DISCUSSIONS

Homologation of sheep breeds – general principles. Homologation of a new sheep breed represents the appreciation of the genetic potential of an animal population obtained from the application of the amelioration process.

Homologation aims at recognizing new populations as breeds or populations that are already existing and non-homologated, in order to increase the biological diversity of animal breeds and to adapt the growth directions to market requirements.

In order to homologate a sheep population, it is necessary to apply an official control of performances, which involves developing and recording some measurements and establishing the productive performances, including the quality of the animal products obtained.

The process of homologation of sheep populations, to the same extent as other species of animals that can be homologated (sheep, goats, etc.), is a procedural one, which is done through a competent authority. In order to have official character, performance control must be evaluated by a neutral and impartial state institution, or an organization empowered for that purpose.

At national level, according to *Government Decision no. 1188/2014*, in Romania the competent authority responsible for supervising the homologation processes is the National Agency for Animal Breeding (ANZ). The powers of the competent authority for animal husbandry are stipulated in *GD no. 1188/2014*, in accordance with the *Law no. 32/16 January 2019* of animal breeding, regulating the breeding and exploitation, amelioration, reproduction and feeding, the conservation of the genetic resources in animal species of interest (GD no.1188/2014). According to the mentioned law, the Ministry of Agriculture and Rural Development elaborates, promotes and coordinates the policies for the whole activity in the animal breeding field through the competent authority (Law no. 32, 2019).

Homologated sheep breeds. In the last 10 years, in Romania were homologated 4 sheep

breeds, recognized according to *Order no. 383/2009*. In 2010, the *Palas Milk Breed* (Homologation Certificate no. 2/22.03.2010), the *Blackhead Sheep of Teleorman* (Homologation Certificate no. 3/11.03.2010), and the *Brown Karakul Line* (Homologation Certificate no. 4/24.11.2010) were approved, followed by *Palas Meat Breed* (Homologation Certificate no. 6/20.08.2012) in 2012. These breeds have been homologated by the Research and Development Institute for Sheep and Goat Breeding Palas - Constanta (*Palas Milk Breed, Palas Meat Breed*), the Research and Development Station for sheep Popauti - Rachiti (*Brown Karakul Line*) and the Teleorman Sheep and Goat Breeding Association (*Teleorman Blackhead Sheep*).

Homologation process. In order to establish the homologation process and the standards to be complied with, the Animal Breeding Competent Authority has drawn up the *Operational Procedure regarding the homologation of breeds, lines, hybrids and new biological creations for domestic animals/31.01.2012*, according to the regulations stipulated in *Order no. 383/2009*.

The purpose of this procedure is to establish the steps in the homologation process to be followed by the competent authority specialists, both at central and territorial level (Order no. 383/2009).

Recognition of a breed for homologation can be done at the initiative of organizations, associations and sheep farms, which ask the competent authority to test the new breeds. The association/breeders' organization is any legally constituted associative form whose members have animals or other breeding species of interest registered in the National Farm Register, in the Agricultural Register and / or in another national database recognized by the competent authority. In order for the initiation of the homologation process to be approved, it is necessary to have an amelioration plan for the animals tested (Law no. 32, 2019).

According to *Article 8 of Regulation (EU) 1012/2016*, the amelioration program must be evaluated and approved by the competent authority. Breeding programs for pure-bred breeding animals shall be carried out by amelioration societies recognized by the competent authority or, in the absence of any

breeding company carrying out a breeding program with pure-bred breeding animals, the competent authority may decide to carry out an amelioration program for the breed concerned if the conditions laid down in the Regulation are met (Regulation (EU) 2016/1012).

The amelioration society is any breeders' association, amelioration organization or public body recognized by the competent authority, for the purpose of carrying out an amelioration program with pure-bred breeding animals entered in the breeding book established or maintained by it, including species of zootechnical interest (Law no. 32, 2019).

Annex 1 to Regulation (EU) 1012/2016 (Part 1 and Part 2) contains information on the conditions for recognition of breeding societies, as well as the criteria for approval of amelioration programs.

Regulation (EU) 1012/2016 specifies that breeding animals included in the breeding program must be entered in a breeding book containing livestock information, that is administered by an amelioration society.

In order to be approved, the amelioration program must

For approval, the breeding program must pursue one or more of the following goals: breed improvement, breed conservation, breed creation, breed reconstitution (Regulation (EU) 2016/1012).

Also, in pursuit of the breeding program's objectives, the animals are subjected to performance testing or any other assessment and data on the characteristics in relation to the objectives of the breeding program in question are recorded in the breeding book. *Annex 2 to Regulation (EU) 1012/2016* provides the main criteria for the registration of breeding animals in the breeding book.

Regarding the initiation of the homologation process, and given the above, the organizations and associations involved require to the competent authority accreditation to establish and administer the breeding book of the newly created breed or of the already existing and non-homologated breeds (Law no. 32, 2019).

Testing of performances. The genetic potential of the breeds is assessed by testing the performance in the growing area of the tested sheep population.

In the *Operational Procedure regarding the homologation of breeds, lines, hybrids and new biological creations for domestic animals/31.01.2012* it is stipulated that the testing is based on an experimental plan and the processing of the obtained statistical data. The experimental plan includes the characters on which the population value is established, the methods of recording and primary testing of the control data, the duration of the test, the size of the sample, the number of generations, the standard exploitation conditions for each type of exploitation and production (ANZ, 2019).

The breed testing is based on a request and a preliminary study of the breeds to be tested, drawn up in accordance with *Annex 1* and *Annex 2* of *Order no. 383/2009*.

Performance testing is performed in test stations and farms approved by the competent authority. According to its operational procedure, the competent authority draws up a technical guidance on the testing methodology, and the testing organization is the one that establishes the testing methodology together with the Research and Development Institute, which is subsequently approved by the competent authority. Resorts and farms for breeds performance testing have the obligation to provide the material basis and the means of production to achieve a level of growth and exploitation that allows highlighting the productive genetic potential (Order no. 383/2009). *Article 27 (1) of Regulation (EU) 1012/2016* provides that breeders or breeding societies conduct performance testing or designate third parties to carry out the testing (Regulation (EU) 2016/1012).

In accordance with the *Law 32/2019*, animal breeding principles are used to test performance and take into account the rules and standards established by the European Union reference centers or the principles agreed by the International Committee for Animal Recording (ICAR). ICAR is the world organization for standardizing animal registration and productivity assessment. Its purpose is to promote improved animal registration and assessment by formulating guides, standards and certificates worldwide. ICAR Guidelines provides general principles that are updated regularly, the last update of Section 1 - General

Instructions being made in October 2018(ICAR Guidelines, 2018).

According to *Article 25* and *Annex 3 of Regulation (EU) 1012/2016*, performance testing shall be performed on the basis of one or more of the following performance testing systems: (a) individual performance testing of breeding animals themselves or of breeding animals based on their progeny, siblings or collaterals at test stations; (b) individual performance testing of breeding animals themselves or of breeding animals based on their progeny, siblings, collaterals and other relatives on farms; (c) performance testing through survey data collected by farms, points of sale, points of slaughter or other operators; (d) performance testing of contemporary groups of breeding animals(Regulation (EU) 2016/1012).

The competent authority operational procedure specifies the conditions for introducing new breeds for testing in order to be homologated: the minimum number of animals will be calculated with a view to ensuring the evolution of the breed or line after approval; the level of productive attributes must significantly exceed the production of existing breeds or have other special morphological or physiological attributes.

Zootechnical certificate. *Law no. 32/2019* of animal breeding describes the zootechnical certificate as being *a breeding certificate, attestation or commercial documentation issued on paper or in electronic format for breeding animals and biological material thereof, which provides information on pedigree, identification and, if available, the results of performance testing or genetic evaluation.* For breeding animals to be introduced into an improvement program and to be subsequently tested for approval, they must have a zootechnical certificate (Law no. 32, 2019).

Animal breeders participating in an improvement program require zootechnical certificates for their breeding animals. Zootechnical certificates are issued by the breeding company or breeding farm carrying out the breeding program for each breeding animal, containing mainly the identification data of the animal, according to the *Law no. 191 of October 30, 2012 for the approval of*

GEO no. 23/2010, as well as information about the company and the breeding book to which it belongs (Law no. 191, 2012).

The zootechnical certificate must be issued by each racial register in accordance with the model provided for in *Regulation (EU) 717/2017*.

Homologation certificate. After testing the performances of breeding animals included in a breeding process, it is intended to obtain the homologation certificate for the recognized breed.

According to *Operational Procedure regarding the homologation of breeds, lines, hybrids and new biological creations for domestic animals/31.01.2012*, in order to obtain the homologation certificate, the initiator of the homologation shall draw up a documentation containing the morphological characters, production attributes, data on the exploitation technology and the livestock breeding area.

In the documentation submitted, the initiator of the homologation process must describe the reasons for the approval of these new breeds, specifying the scope and geographical area for which it is intended, the problem that led to the creation of the new breed, the objectives considered in the breeding plan, the presentation of the solution and an indication of differentiation elements from other existing breeds (ANZ, 2019).

According to the regulations stipulated in *Order no. 383/2009*, the documentation for approval will be analyzed by the Technical-Scientific Council of the National Agency for Animal Breeding „Prof. Dr. G. K. Constantinescu”. Following the verification of the documentation submitted for approval, the board draws up a homologation certificate under which ANZ issues the approval certificate for the new recognized breed (Order no. 383/2009).

CONCLUSIONS

Homologation of sheep breeds is a subject of great zootechnical interest, as sheep breeding represents a branch with great economic potential in Romania. The sheep breeding sector has seen a positive trade balance in recent years, therefore the proper capitalization of sheep breeds would lead to the development of the livestock sector.

Homologation of sheep breeds requires in-depth studies and performance tests that can be conducted over extended periods of time. Thus, in the last 10 years, in Romania were approved 4 breeds of sheep, recognized according to *Order no. 383/2009*.

Recognition of a breed for homologation is carried out in accordance with national and European legislation, the regulations being implemented by the competent authority in animal breeding, respectively the National Agency for Animal Breeding.

National legislation on animal breeding and approval is the *Law no. 32 on animal breeding*, updated in January 2019, in accordance with *Regulation (EU) 1012/2016*. However, following the analysis made in this study on national legislation in this field, it has been observed that most of the regulations and procedures for animal breeding and approval have not been updated according to the latest regulations, and changes will be implemented in the next period.

Thus, in view of these limitations, the present study was carried out taking into account the updated European provisions, which entered into force on 1st of November 2018. At national level, *Order no. 383/2009 on the approval of technical regulations for the homologation of breeds, lines, hybrids and new biological creations for domestic animals* will also be updated in line with the new European provisions.

Regarding recognized breeding societies, the competent authorities must ensure that they update the breeding programs in accordance with *Regulation (EU) 1012/2016*.

Also, the leading associations of breeding books in Romania, recognized as breeding societies under *Regulation (EU) 1012/2016*, have submitted to the National Agency for Animal Breeding updated programs before 1st of November 2018. They will be evaluated by the competent authority, in accordance with the requirements of the legislation and the established breeding principles, so that all breeding programs for sheep breeds meet the selection and amelioration objectives, in compliance with the conditions, criteria and rules stipulated by *Regulation (EU) 1012/2016*. Therefore, the information presented in this study can be considered as guidance to the

main legislation on breeding and sheep breeding processes. However, it can be improved and supplemented according to legislative changes both at European and national level.

REFERENCES

- ANZ (2019). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- GD no. 77/2019, (2019). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- GD no.1188/2014, (2014). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- Homologation Certificate no. 2/22.03.2010, (2010). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- Homologation Certificate no. 3/11.03.2010, (2010). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- Homologation Certificate no. 4/24.11.2010, (2010). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- Homologation Certificate no. 6/20.08.2012,(2012). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- ICAR Guidelines, (2018). Retrieved from International Committee for Animal Recording: <https://www.icar.org>.
- Ivancia, M. (2005). *Ameliorarea animalelor*. Iași, RO: Alfa Publishing House.
- Law no. 191, (2012). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- Law no. 32, (2019). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- Mochnacs, M., Taftă, V., Vintilă, I., (1978). *Genetica și ameliorarea ovinelor*. Bucharest, RO: Ceres Publishing House.
- Order no. 1045, (2018). Retrieved from Ministry of Agriculture and Rural Development: <http://www.madr.ro>.
- Order no. 22, (2006). Retrieved from Ministry of Agriculture and Rural Development: <http://madr.ro>
- Order no. 332, (2017). Retrieved from Ministry of Agriculture and Rural Development: <http://www.madr.ro>.
- Order no. 383/2009, (2009). Retrieved from The National Agency for Animal Breeding "Prof. dr. G. K. Constantinescu": <http://www.anarz.eu>.
- Pascal, C. (1998). *Tehnologia creșterii ovinelor*. Iași, RO: Corson Publishing House.

- Pascal, C. (2007). *Creșterea ovinelor și caprinelor*. Iași, RO: PIM Publishing House.
- Regulation (EU) 2016/1012, (2016). Retrieved from The Official Journal of the European Union: <https://eur-lex.europa.eu>.
- Regulation (EU) 2017/716, (2017). Retrieved from The Official Journal of the European Union: <https://eur-lex.europa.eu>.
- Regulation (EU) 2017/717, (2017). Retrieved from The Official Journal of the European Union: <https://eur-lex.europa.eu>.
- Taftă, V., Vintilă, I., Zamfirescu, S. (1997). *Producția, ameliorarea și reproducția ovinelor*. Bucharest, RO: Ceres Publishing House.