



## A COMPARATIVE STUDY OF THE VARIETIES OF ȚURCANĂ SHEEP BREED RAISED IN THE BANAT MOUNTAINS

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**Abstract:** This paper revisits one of Romania's most widespread sheep breeds prized for its adaptability and mixed productivity (meat, milk, and wool) – Țurcană and its varieties (Albă, Brează / Brezată, Bucălăi, Mărcușe, Oacheșe). The authors present the features of the Țurcana breed, as well as its productivity and adaptability traits. Its five varieties are analysed from the perspective of their regional adaptations and traits. The authors also propose a selection matrix for the improvement of the Țurcană breed, a breeding decision tree, a few guidelines for the choice of the proper variety of Țurcană breed, and suggestions for the alignment of variety and production line in this breed.

### • Introduction

This sheep breed is generally characterised by the following:

- **Distribution:** it is predominantly found in Romania, where over 6,000,000 individuals are spread particularly in mountainous regions of the Alba, Caraș-Severin, Hunedoara, Sibiu, and Vâlcea counties;

- **Nickname:** it is often called "Regina Munților" (Queen of the Mountains) due to its cultural significance and hardiness;

- **Origin:** it is indigenous to Carpathian Mountains, with roots that possibly go to wild *Ovis vignei arkar*.

The Țurcană sheep breed has the following morphological traits :

- **Body:** long limbs, medium height, narrow, straight head, and robust constitution;

- **Colour varieties:** black (Oacheșe variety); gray (Bucălăi variety); pied (Brează / Brezată variety); spotted / striped (Mărcușe variety); white (Albă variety) with often dark patches around eyes, limbs, and lips, the most common and selectively bred;

- **Horns:** in rams, well developed; in ewes, either hornless or with small, forward-curving semicircular horns;

- **Weight:** in rams, up to 80 kg; in ewes, 35-55 kg.

In addition :

- Milk is characterised by good fat content and moderate yield, which makes it suited for local cheese production;
- Udder, globular in shape and well-developed, is adapted for milking;
- Wool, coarse and long (20-30 cm), is suited for insulation and traditional textiles.

As far as productivity is concerned, the Țurcană sheep breed is valued for its mixed production type (meat, milk, and wool), with highly-appreciated meat especially in Arab markets.

Concerning adaptability and behaviour, the Țurcană sheep breed has the following characteristics :

- **Feeding:** it can survive winters on pasture alone in mild climates;

- **Resilience:** it has excellent resistance to disease and harsh weather with low maintenance costs;

- **Temperament:** it is alert, mobile, and quick to forage.

### • Material and method

The material used in this scientific paper consists in references (articles and books in both printed and online formats) on the Țurcană sheep breed. The research method used is the comparative one.

### • Results and discussion

We have identified five main colour-based varieties of the Țurcană sheep breed, varieties emerged through insular breeding systems and transhumance shaped by cultural selection and geography. Each of them reflects regional adaptations and traits:

- The Țurcană Albă variety (white), the most widespread and selectively bred variety, has coarse, long, white fibres and can be found in ecotypes like those in Alba, Argeș, Hunedoara, Sibiu, Vâlcea, and Vrancea counties;

- The Țurcană Brează / Brezată variety (pied, i.e., mixed black and white patches) is often seen in transitional zones between ecotypes;

- The Țurcană Bucălăi variety (gray with darker head and limbs) is adapted to harsher climates and higher altitudes;

- The Țurcană Mărcușe (possible brownish / reddish tones) is less documented because it is rare;

- The Țurcană Oacheșe variety (black or with dark patches on white body) is culturally significant though less common.



Figure 1. Varieties of Țurcană sheep breed: a – Albă; b – Brează / Brezată; c – Bucălăi; d – Mărcușe; e – Oacheșe.

### • Conclusions

The Țurcana sheep breed (including its varieties – Albă, Brează / Brezată, Bucălăi, Mărcușe, Oacheșe) is one of Romania's most widespread sheep breeds prized for its extraordinary adaptability and mixed productivity (meat, milk, and wool).

Its five varieties, identified by the colour of their wool, have specific regional adaptations and traits which determine their productivity. Guiding breed improvement decisions across these five varieties of Țurcană (i.e., visualising strategic breeding priorities, strengths, and trade-offs) needs a selection matrix evaluating key productivity traits showing which variety excels in what. This is necessary before making a breeding decision based on a breeding-decision tree which, in its turn, depends on the farmer's choice. Aligning Țurcană variety and production line is also paramount.