

Abstract

The proposed thesis – “Research on the Morphophysiology of the Structures Involved in Feeding and Reproductive Behavior in the Wild Boar (*Sus scrofa ferus*)” – aims to systematically analyze the connections between the anatomy of the digestive and reproductive systems and the corresponding behaviors. Such an interdisciplinary approach (morphology, physiology, ethology, and ecology) provides the key to explaining the adaptive success of the wild boar, identifying the mechanisms through which diet influences reproduction, and suggesting applied solutions for population management and the genetic improvement of domestic pigs.

The proposed research falls within an interdisciplinary field that links anatomy, physiology, ethology, and ecology to explain the feeding and reproductive behaviors of wild boar. Morphological rigor (through anatomical measurements, histomorphometry, and blood analyses) combined with the physiological approach (hormones, pheromones, seasonality) will provide essential data for understanding the species’ adaptations.

The results can support both the sustainable management of wild boar populations in Romania and comparative analyses with domestic pigs within genetic improvement and disease prevention programs. At a time when climate change and human pressures affect wildlife, such research contributes to biodiversity conservation and the mitigation of human–wildlife conflicts.

The selection of the hunting grounds 31 Strunga and 55 Dagâta in Iași County for the study of wild boar morphophysiology is motivated by their complementary geographic and ecological features. The Strunga commune lies in a contact zone between the Moldavian Plain and the Central Moldavian Plateau, resulting in a transitional relief toward lowlands. The area is predominantly agricultural but also includes a forested surface of approximately 720 ha (over 10% of non-agricultural land) managed by the Podu Iloaiei Forestry District. This combination of plains and forest patches ensures high availability of agricultural crops and herbaceous plants. Wild boars frequently use these crops, which may affect their diet and body condition. Therefore, the 31 Strunga hunting ground, located mainly in a lowland area, provides a suitable framework for observing the morphology and physiology of individuals exploiting an agricultural environment with predictable and accessible resources.

In contrast, the Dagâta commune is characterized by a strongly fragmented relief, with altitudes exceeding 450 m (Cetatea Peak, 467 m), and slopes affected by erosion and landslides. The soils vary from leached chernozems to argillic soils, while alluvial soils occur on lower grounds. This hilly landscape, representative of the Central Moldavian Plateau, is largely covered by deciduous forests, thickets, and orchards. Wild boars in this hunting ground primarily feed on forest resources (acorns, beech nuts, berries) and must travel long distances on rugged terrain to obtain food, which can influence morphological and physiological adaptations (energy reserve accumulation, seasonal variations in body mass). Thus, the 55 Dagâta hunting ground represents an ideal model for the hilly regions of Iași County and allows comparisons with lowland populations.

By including both hunting grounds, this study analyzes how topography, vegetation type, and different levels of anthropogenic pressure (intensive agriculture in Strunga versus forestry and pastureland in Dagâta) influence dental morphology, digestive system structure, reproductive status, and wild boar behavior. This spatial comparison provides an integrated view of intraspecific variability and supports the formulation of adaptive management recommendations tailored to different regions of Romania.