

## Meat and milk from dual-purpose water buffalo production systems in Greece



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## INTRODUCTION

Over the last decade, Buffalo (Bubalus bubalis) production in Greece has doubled in both number of animals and productivity; from 3,563 animals in 2014 there are now 6,740 animals raised semi-extensively in 38 farms. The majority of farms are located in Kerkini Lake in Central Macedonia and focus on meat production.

## **OBJECTIVE**

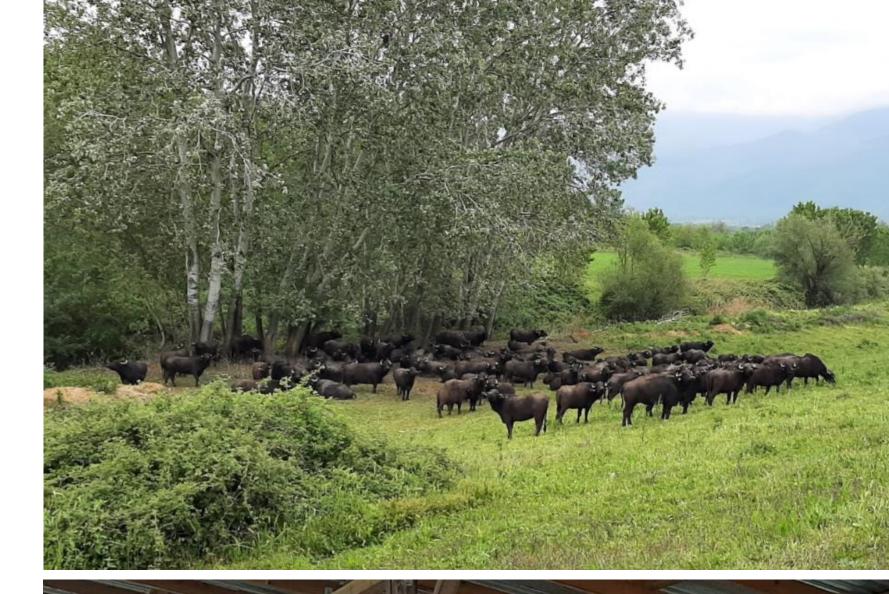
The main objective was to assess the characteristics and the potential of dual-purpose water buffalo farms in Greece towards production of high-quality meat and milk. A secondary objective was to develop solutions to ensure farm sustainability emphasizing on animal health, welfare, and product marketability.

## **MATERIALS AND METHODS**

- Animals and Farms:
  - 6,740 buffalos in 38 farms
- Data collection
  - Phenotypic data collected from a representative number of animals.
  - Meat quality: pH, moisture, fat and protein content, fatty acid profile, color, water holding capacity, and morphometric analysis of skeletal muscles.



- Herd structure and composition:
  - 589 females and 436 males <6 months
    979 females and 831 males between 6-24 months
    3,367 females and 538 males >24 months old.
- Focus of farms is meat production.
  - Age at slaughter: 18-24 months
  - Average carcass weight of 220-250 Kgs
  - 18% of farms produce milk sold to local dairies or used for homemade dairy products.
  - Average lactation period is 150±10 days.





Meat quality	N	Mean	SD
Hardness 1 (g)	23	1305.8	1062.82
Hardness 2 (g)	23	1055.8	850.57
Chewiness (g)	23	674.8	810.5
Lightness - L*	23	39.3	4.24
Redness - a*	23	18.8	2.32
Yellowness - b*	23	9.8	2.02

Chemical composition	N	Mean	SD
Moisture (%)	22	74.5	1.72
Fat (%)	22	3.2	2.34
Protein (%)	22	21.2	1.73
Collagen (%)	22	1.9	0.23
Salt (%)	22	0.6	0.32
Ash (%)	22	1.1	0.67

**CONCLUSIONS:** Results provide useful insights of meat and milk quality produced by existing buffalo farms in Greece.

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