



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.



RESULTS

- 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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