

# Production traits of the Istrian goat in the function of creating added value through milk and dairy products

**Monica Darrer<sup>1</sup>, Gordan Šubara<sup>2</sup>, Darko Jurković<sup>3</sup>, Antun Kostelić<sup>1</sup>**

<sup>1</sup>University of Zagreb Faculty of Agriculture, 10 000 Zagreb

<sup>2</sup>Agency for Rural Development of Istria, 52 000 Pazin

<sup>3</sup>Croatian Agency for Agriculture and Food, 31 000 Osijek

[mdarrer@student.agr.hr](mailto:mdarrer@student.agr.hr)

**DANI  
DOKTORATA  
BIOTEHNIČKOG  
PODRUČJA**

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# Introduction

- highest number of **indigenous** domestic animal breeds
- Istrian cattle
- Istrian sheep
- Istrian donkey
- Istrian short-haired hounds
- Istrian wire-haired hounds
- **Istrian goat**





# The Istrian goat breed

- youngest indigenous goat breed in Croatia
- origin recognized and confirmed in **2013 year** after thorough genetic research
- estimated population size: **142 heads** (AZRRI, 2024.)
- FAO criteria: critically endangered breed



Source: M. Darrer





# Aim of the study



**determine the production traits (lactation, milk yield, chemical composition, cheese yield)**



**commercialize the breed, its milk and dairy products**



**purpose of making its breeding profitable**

**preserving and increasing the population**



# Materials and methodes

- estimated population size: **142 heads**
- goats: **88**
- doelings: **43**
- bucks: **11**
- collecting data from **6 goat herds** in Istria county
- average herd size **24 heads**
- semi-intensive system
- feed based on **pasture** with supplementary feeding of **hay** and **feed mixtures** during the winter months



Source: M. Darrer







# HRVATSKA AGENCIJA ZA POLJOPRIVREDU I HRANU

Centar za stočarstvo,  
Vinkovačka 63 c, 31000 Osijek  
www.hapih.hr, email: cs@hapih.hr

## MJESEČNI IZVJEŠTAJ KONTROLA MLJEČNOSTI U KOZARSTVU

| Datum uzrokovanja             | 1.7.2024.    | Ime i prezime uzgajivača |                  |             |                          |                              |                     |
|-------------------------------|--------------|--------------------------|------------------|-------------|--------------------------|------------------------------|---------------------|
| IKG posjednika                | 00275715     | Pošta i mjesto           |                  |             |                          | Pazin                        |                     |
| Kontrolor                     |              | Adresa                   |                  |             |                          | ZOVIČI 39,Brajkovići         |                     |
| Metoda kontrole<br>mlječnosti | AT           |                          |                  |             |                          |                              |                     |
| Životni broj                  | Količina(ml) | Mast (%)                 | Bjelančevine (%) | Laktoza (%) | Bezmasna<br>suha tvar(%) | Somatske stanice<br>(x 1000) | Urea (mg/100<br>ml) |
| HR 840297763                  | 2000         | 4.15                     | 2.73             | 4.35        | 8.20                     | 110                          | 45                  |
| HR 640297951                  | 3600         | 3.17                     | 2.94             | 4.16        | 8.27                     | 670                          | 42                  |
| HR 840297953                  | 2800         | 3.84                     | 3.14             | 4.52        | 8.75                     | 59                           | 40                  |
| HR 940297954                  | 2800         | 3.43                     | 2.72             | 4.22        | 8.09                     | 1239                         | 49                  |
| HR 540297959                  | 2000         | 3.19                     | 3.26             | 4.11        | 8.53                     | 2080                         | 46                  |
| HR 440297776                  | 2000         | 3.15                     | 3.04             | 4.17        | 8.27                     | 4233                         | 39                  |
| HR 740297952                  | 1800         | 3.62                     | 3.28             | 4.32        | 8.68                     | 179                          | 37                  |
| HR 440298048                  | 800          | 2.66                     | 3.12             | 4.61        | 8.82                     | 1202                         | 42                  |
| HR 540297777                  | 1200         | 2.81                     | 2.62             | 3.99        | 7.65                     | 15757                        | 36                  |

AT metoda kontrole mlječnosti: obavlja se jednom mjesečno, u uobičajno vrijeme mužnje najzriježnije po mjesecima kontrolira se ili jutarnja ili večernja mužnja  
B4 metoda kontrole mlječnosti: podrazumijeva kontrolu jednom mjesečno, u uobičajno vrijeme mužnje, kontroliranjem obje dnevne mužnje (jutro+večer). Kod B4 metode postupak kontrole koji se odnosi na utvrđivanje količine pomazanog mlijeka te postupak uzimanja uzorka mlijeka, ispisivanje obrasca, provodi sam uzgajivač, vlasnik stada

- since May 2024. milk yield control has been conducting
- AT method (once a month, either the morning or evening milking is deliberately controlled)
- preliminary results
- to date no unpublished data







Source: M. Darrer

- the fertility of the Istrian goat is high
- litter size of 1.8
- will be correlated with the total milk yield





- the **quality** of milk consists of the basic **chemical** composition and **hygienic** quality of milk
- dry matter, dry matter without fat, milk fat, milk proteins, lactose
- **milk fat** content – the gravimetric method
- profile of **fatty acids** – gas chromatography
- **milk proteins** content – Kjeldahl analysis
- the **primary structure** of milk proteins – chromatography or spectrometry

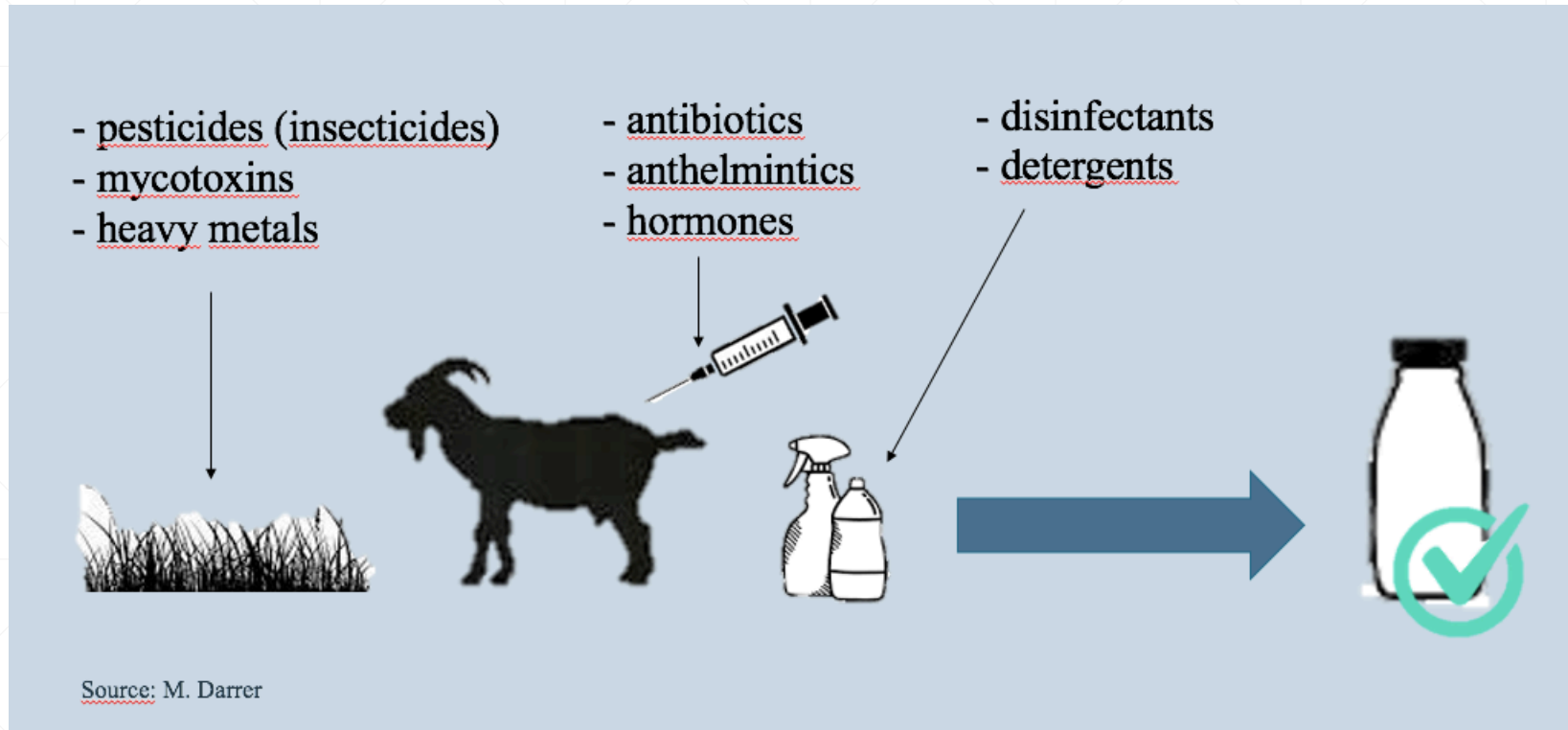


Source: A. Kostelić





- **hygienic quality** ensures health safety of the product
- total number of bacteria cfu/mL and total number of somatic cells bss/mL





- goat milk can be final product or raw material for processing dairy products
  - importance of the origin of the local breed products
  - advantage compared to the commercial breed products
- } researched by survey
- restaurants in Istria with tradition of **supply** local products which would make it easier **to market** Istrian goat breed products
  - profitability of breeding = motivation for breeders = preserving and increasing the population







**Thank you for your attention!**

