

# INTRODUCTION TO ANIMAL BREEDING

## Case study Nr 2

The *Aubrac* region and the *Aubrac* beef cattle breed

Evolution of a local breed and of livestock production  
in a mountain region in France

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**Introduction: beef french cattle breeds**

**Environment and people**

**Farming systems**

**Current status of the Aubrac breed**

**Summary**



# Main French beef cattle breeds

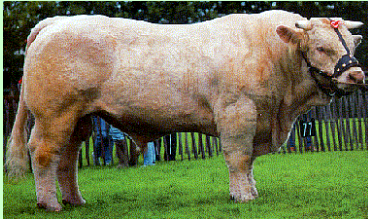
## Specialised breeds

## Mountain breeds

Map: IGN

Statistics: RGA, 2000

Photos: SOPEXA, UPRAs



**Charolaise**

1 835 000 cows



**Salers**

205 000 cows



**Limousine**

907 000 cows



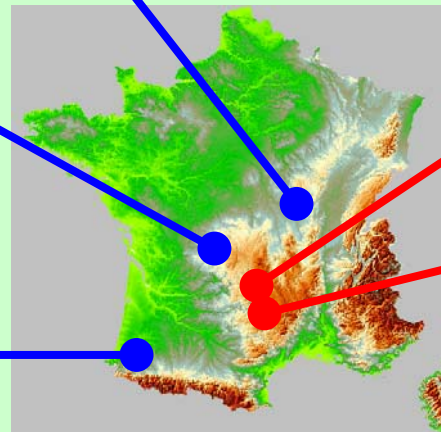
**Aubrac**

105 000 cows



**Blonde d'Aquitaine**

483 000 cows



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# Environment



Photo: E. Verrier

- Plateau of volcanic origin
- Altitude = 900-1400 m
- Permanent grassland



Photo: O. & E. Malherbe  
[www.aubrac2000.com](http://www.aubrac2000.com)

- Long and harsh Winter period



# People

In 2000, about 8 inhabitants per km<sup>2</sup> (average Fr  $\approx$  100)

- From the early XXth century: large rural depopulation
- From 1954 to 1990: Change in total population = - 25%
- From 1990: the total population is rather stable

Source: INSEE



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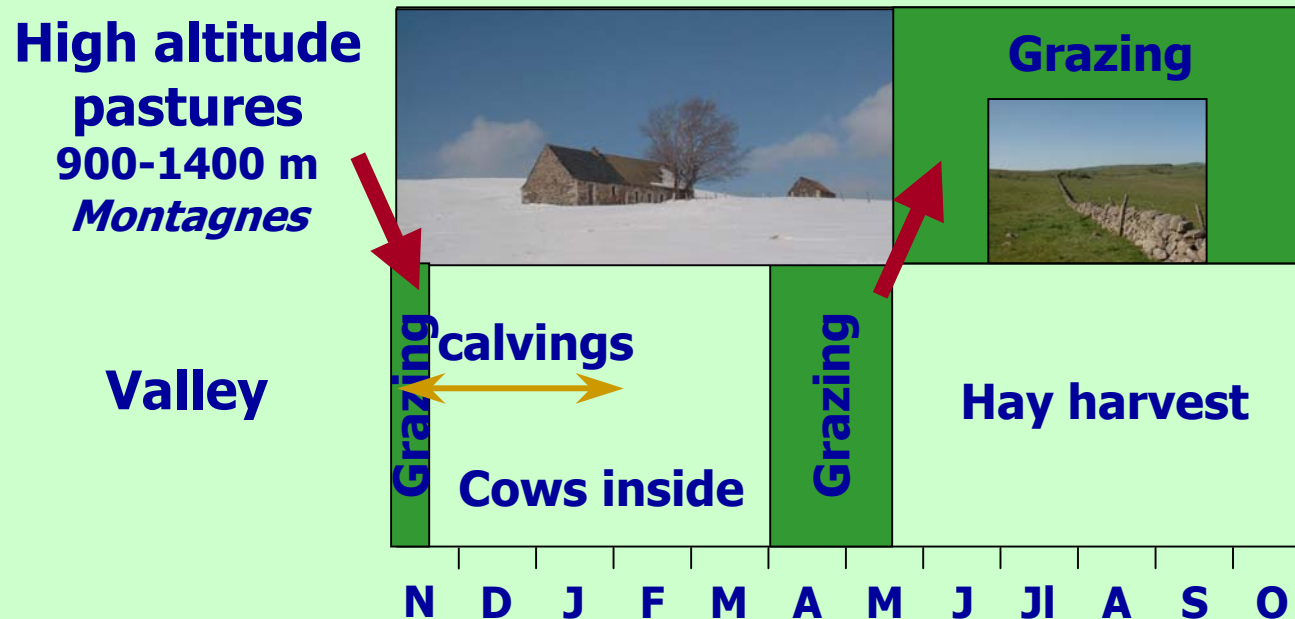
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# Transhumance in Aubrac



Photos: O. & E. Malherbe  
[www.aubrac2000.com](http://www.aubrac2000.com)





# Crisis in the traditional farming system

## Traditional system

- Multiple purpose breed Aubrac: draught, milk, meat
- During the Summer period, cheese processing in "*Burons*"



Photo: O. & E. Malherbe  
[www.aubrac2000.com](http://www.aubrac2000.com)

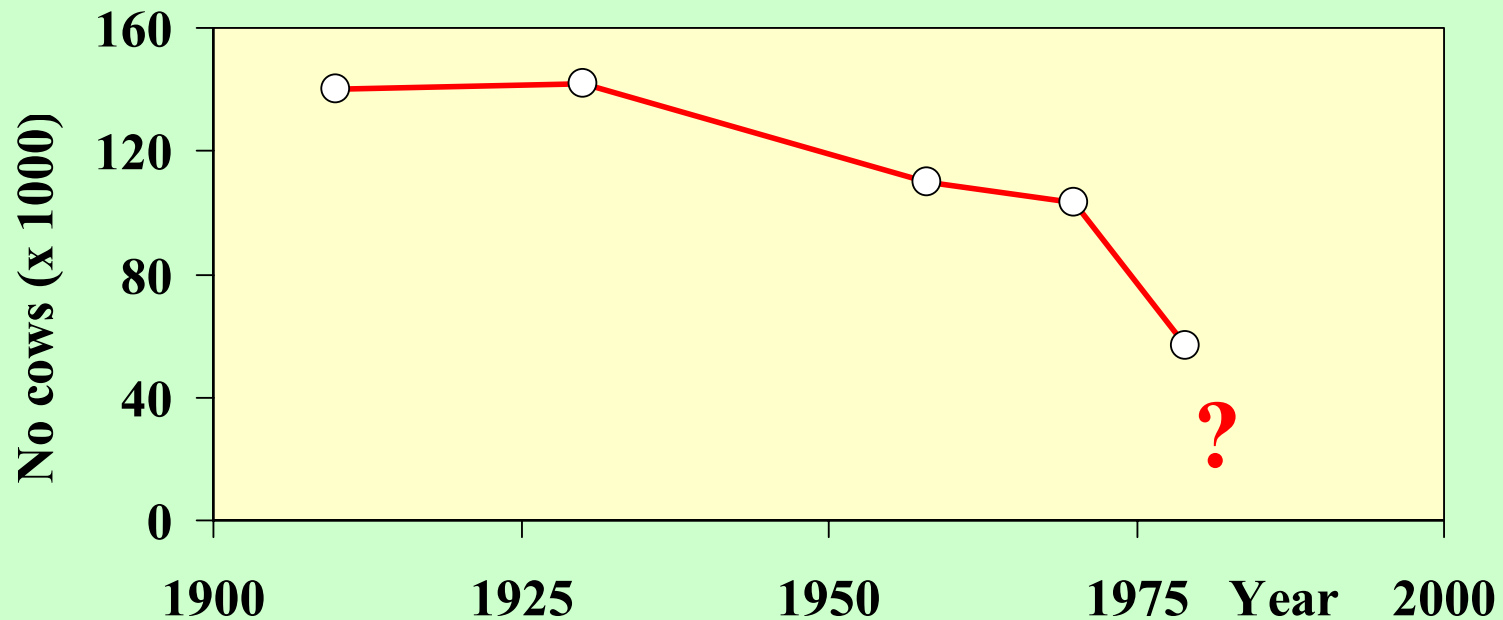
## Crisis in the early 60s'

- Motorisation → No more need of draught oxes
- Rural depopulation, changes in the way of life  
→ No more people to spend the Summer period in altitude



# What future for livestock production and for the Aubrac breed?

## Evolution of the number of Aubrac cows



Source: French Ministry of Agriculture



# Change in the farming system

60s'-70s': specialisation of herds - Milk production

Milk production in the lowest altitude area

Use of a breed with a better milking production:  
Swiss Simmental / German Fleckvieh



Photo: SOPEXA

Milk processing in a single cooperative factory,  
with traditional techniques

- *Laguiole* cheese, with a Protected Designation of Origin (AOC)
- Milk price 30% higher than the average national price



# Change in the farming system

60s'-70s': specialisation of herds - Beef production

Conservation and development programme for the Aubrac breed

Maintenance of the transhumance system

Use of a the Aubrac cows  
as suckling cows



Crossbreeding  
with the Charolais breed



Photos: E. Verrier

Development of a large market for young suckled veals (9 months old)

→ up to 1 Million veals imported from France to Italy in a given year,  
all breeds considered

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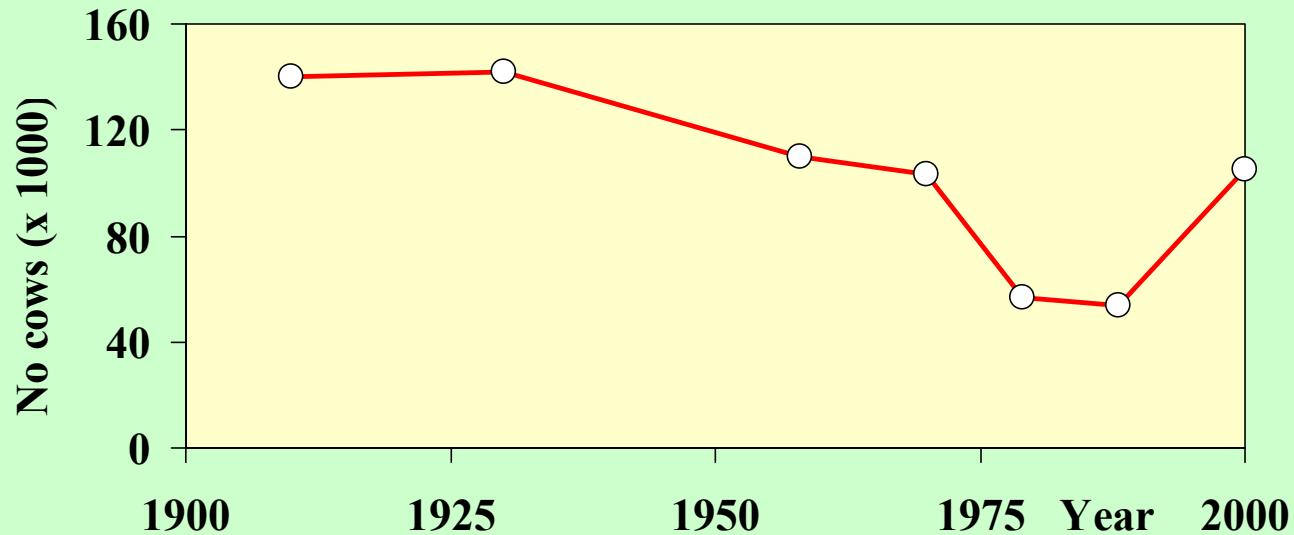
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# Evolution of the population size

## Evolution of the number of Aubrac cows



**Expansion in other regions  
(Massif central, Languedoc-Roussillon)**

Source: French Ministry of Agriculture



# The value of the Aubrac breed



Photo:  
UPRA Aubrac

- Robustness
- Fertility and easy calving (even with a crossbred calf)
- Longevity
- Maternal behavior and milk production

# Breeding programme

Performance recording:  
efficiency of reproduction and growth measurements

Total No of recorded cows (in 2002) = 35 500 (= 34%)

Management of crossbreeding:

Proportion of cows mated to a Charolais bull = 67%

Proportion of cows mated to an Aubrac bull = 33%

Proportion of adult cows culled each year < 15%





# Summary

Need to make evolve the farming systems and the breeding goals according to the environmental and social context

Value of a local breed to support a sustainable production and interest of crossbreeding with a more specialised breed

Importance of the dynamics and the organisation of farmers

