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Growth performances and carcass characteristics of black goats in the rural commune of Aït Bazza, Morocco

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Contexte

Project

**Le caprin un produit de terroir vecteur de
développement communautaire**

**Goat production as vector of local
community development**

Case study: Commune rural of Ait Bazza
(the eastern part of the Middle Atlas)

1. Characterization of goat production systems

2. Market study

3. Performances of adults and kids

4. Carcass characteristics

5. Fatty acid profiles

6. Bacteriological analysis

7. Meat sensory evaluation

Introduction

In Morocco, goats, especially meat goats are reared in harsh environments and marginal areas of the Atlas and Rif mountains,

Over 60% of the country's goat populations estimated at more than **five millions heads are found in the High and Middle Atlas mountains,**

The natural constraints to goat production systems are represented by the lack of and limited public and private development opportunities benefiting goat production compared to those in favor of cattle, sheep and even poultry,

With the exception of argan tree based production systems, there is little research on goats and less organization among goat keepers than in other livestock sectors,

The national goat meat production does not exceed 8%

All goat projects are based on the imported milky goats

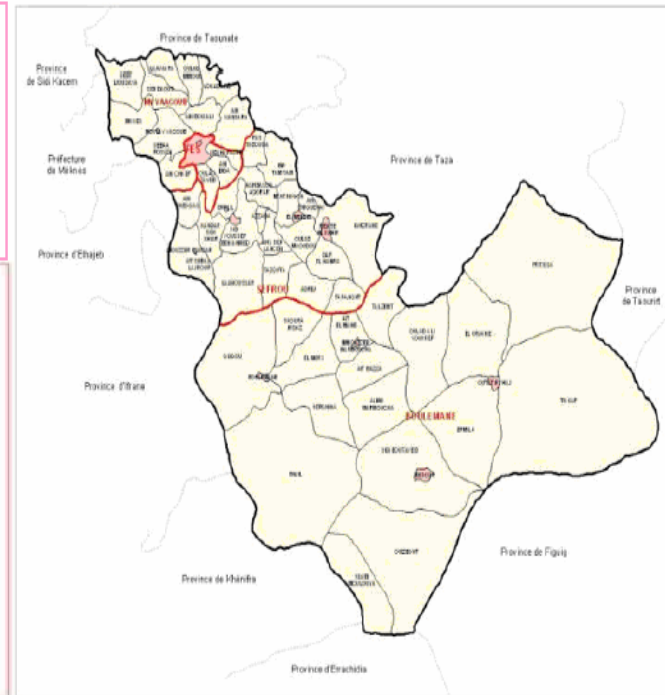
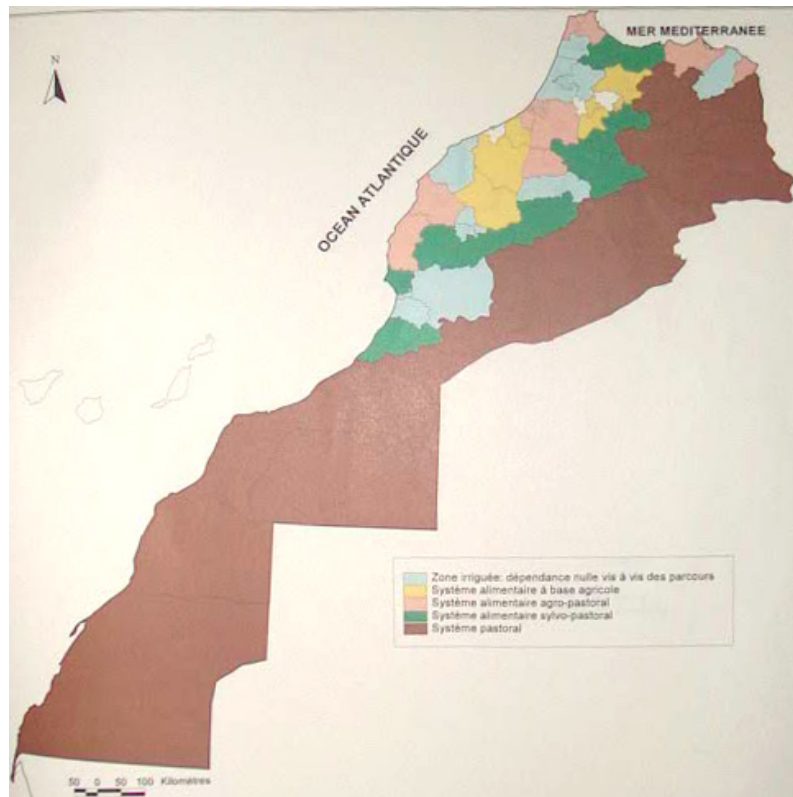
Objectives

to investigate :

- **Production systems**
- **Growth performances**
- **Carcass characteristics**

of black goats under traditional raising systems in Aït Bazza,

Materiel and methods



The rural commune of Ait Bazza is located in the mountainous part of Boulenane province,

The altitude in this area varies from 1400 m to over 2000 m and the annual average rainfall is estimated at 450 mm

The annual mean temperature is 12°C with an average minimum temperature below zero during January and average maximum of 30,9°C in July,

Goat production systems

A survey with 70 goat keepers

Growth performances

The monitoring of growth performances under extensive management,

Two farms were chose randomly and a flock of 20 adult animals were monitored,

Additionally a flock of 18 *Barcha* (from Moulay Bouaazaa) population was introduced as a control,

Measures the live weight each month

Interview about sales, mortality, diseases, birth,...

Carcass characteristics

Carried out in the small slaughterhouse of Aït Bazza (Marmusha) from July 2007 to July 2009,

Goats are slaughtered over a wide range of body weights and ages, from kids to old bucks and does,

A total of 168 carcasses were studied, Hot carcass and non carcass components were weighed immediately

Carcass measurements (carcass length, breast width, long leg length and long leg width) were recorded,

Then, ratios such as carcass compactness, dressing percentage were calculated

Results



Goat production systems at Ait Bazza

Goat keeper's characteristics reveal an average age of 48 years with 41% of respondents being less than 40 years old,

The level of goat keeps education is rather low with 73% of goat keepers never been to school,

30% (within 70 goat keeps) are members of organizations

67% of respondents earn 100% of their income from their small ruminant's production,

Ten local goat populations are kept by respondents with the black local goat breed as the predominant type

Feeding system

The most common feeding regime practiced by respondents is the shift between forests of *Quercus ilex* L, and *Juniperus oxycedrus* L, during the fall and winter and Adrar mountains with *Bupleurum spinosum* L, and *Alyssum spinosum* L,

Reproduction parameters

The age at first pregnancy varies between 6 and 24 months with 12 months being the most cited,

Bucks are changed every 6 to 7 years, not a general practice though,

The average age to get rid of does is situated between 6 and 10 years with an average of 8,

Free mating is generally practiced,

The sex ratio of does per buck is 18 on average,

**Bucks come from the herd,
One kid per pregnancy is the norm declared,**

Twins do happen very rarely,

**Abortion and post natal mortality rates are variable
with an average percentage of 25%,**

**Some respondents declared very low to zero losses
while others declared rates varying between 10 and
50%,**

Growth performances

	Males	Females
WB	2,4 ±0,36	2,28±0,4
W-10 days	2,93±0,11	2,46±0,36
W-50 days	5,87±1,4	5,03±1,23
W-90 days	9,96±1,48	8,31±2,17
W-150 days	15,20±0,40	11,5±0,13

Reproduction parameters

Prolificacy very low in both herds (101 Vs 102%)

Mortality rate: 12,5% Vs 25%

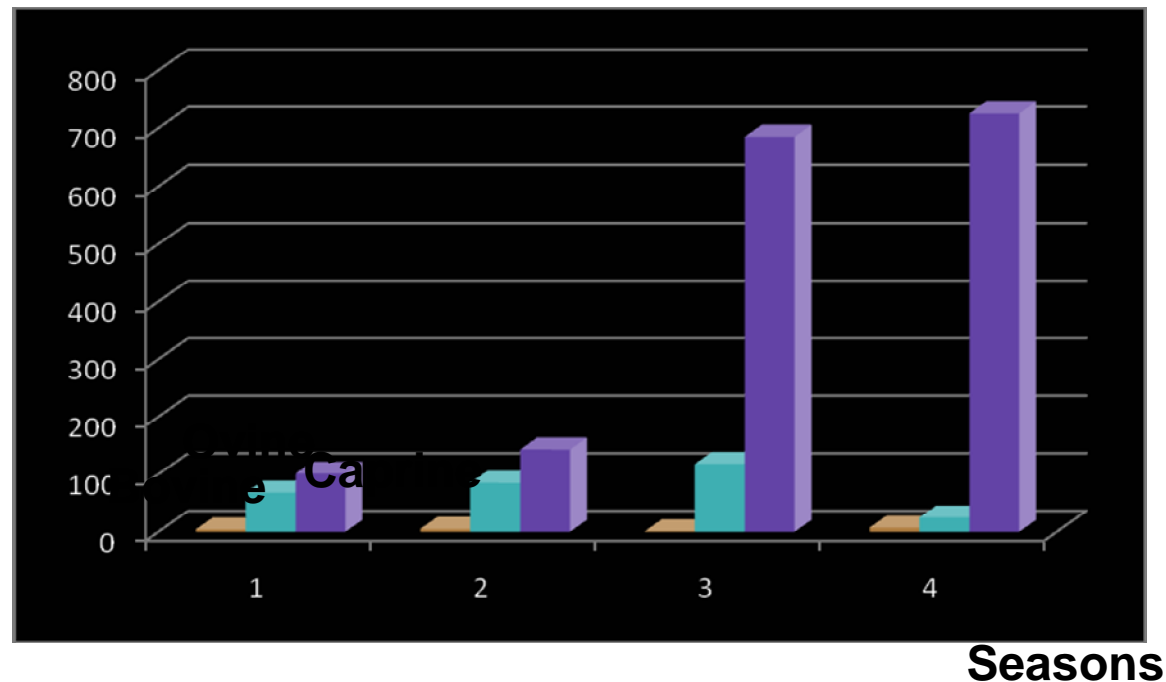
Weight evolution of adult animals

	Goat origine	Spring	winter	Fall	Summer
Herd 1	Introduced	27,18 ±3,74	32,8 ±6,44	27,10 ±3,87	27,94 ±3,88
	Local	28 ± 1,47	29 ± 2,02	27,02 ±1,71	28,58 ±3,32
Herd 2	Introduced	32 ±3,64	33,04 ± 4,2	32,65 ±6,12	31,54 ±5,60
	Local	28,12 ±3,03	33 ±2	28 ±2,06	28,9 ±2,4

Carcass

The data of Imouzzer Marmoucha municipality on the number and species of slaughtered animals in the municipal slaughter house during 2007-2008 period indicate that the number of slaughtered goats is by far higher than that of slaughtered sheep or cattle ((1536 goat heads against 184 sheep heads and 12 cattle),

Heads



- 1: Fall
- 2: Winter
- 3: Spring
- 4: Summer

The dressing percentage of 192 slaughtered goats varies from 45,5 to 50% with higher values in the case of adult animals,

Carcass weight is very low:

Doe :9,3 kg (7,5 to 13,2 kg)

Buck : 9,5 kg (7 to 13kg)

Male kids : 8, 7 kg (6 to 11,5 kg)

Female kids: 7,9 kg (6,8 to 9 kg)

The compactness index shows a similar trend varying from 0,15 to 0,2

Conclusion

- **Growth performances of young animals and the evolution of adult weights are relatively correct in Moroccan context,**
- **Reproduction performances necessitate more attention in term of abortion, mortality, prolificacy**
- **The slaughtered animals showed very low weights and characteristics.**
- **Focus on different levels (farm, market and butcheries)**

Thank you for your attention

