



*L'Excellence au Service
du Développement*

BLOOD GROUPS AND PROTEINS POLYMORPHISM IN SENEGALESE SHEEP

R.S. SOW*, A. MISSOHOUI et A. GUEYE2

*University Gaston Berger BP 234 Saint Louis, Senegal

1 EISMV BP 5077 Dakar Senegal

2 Private Veterinary, Dahra Djoloff, Senegal

ICAR 2012 (CORKE, IRELAND)

INTRODUCTION

Livestock in Senegal involve 350 000 families. FAO statistic indicate 3 millions cattle, 4,8 millions sheep and 4,1 millions goats. Small ruminants produce milk, meat and cash for small holders.

Three (3) breeds are described in Senegal : the Fulani, the Toubire and the Djallonke (West African Dwarf).

Morphological description and zootechnical comparison have been used since today to assess diversity in small ruminants breeds.

The present study aimed to analyse blood polymorphism in Senegalese sheep.

MATERIALS AND METHODS

Animals and environnement

Peul and Touabire sheeps are sahelian races living in the northern part of Senegalese semi-arid zone, Djallonke sheeps are from the southern part in subhumid zone where trypanosomiasis is endemical found.

Methods '

Blood samples are taken from 100 individuals for each breed. Five (5) ml of blood are taken into tube containing sodium citrate.

Blood groups were determined by agglutination and hemolysis. Blood proteins were typed by electrophoresis.

RESULTS AND DISCUSSION

Blood groups systems

Six (6) blood systems (A, B, C, D, M and R) have been found in the three breeds. These systems show polymorphism with many alleles (phenogroups). The polymorphism is more significant in sahelian breeds. The significant difference from the Djallonke and Peul or Touabire are on alleles aB, Ca, Da, Ma, and R. Between Peul and Touabire. Difference is only on allele aB.

Blood proteins

Transferrin types

Alleles found in Senegalese sheeps are: TfA, TfB, TfG, TfC and TfD.

TfG is not found in Djallonke sheeps. TfD allele is more frequent in Djallonke than in Peul and Touabire.

It seems that D allele have a selective advantage in infested areas because we find it in trypanotolerant cattle.

Haemoglobin types

Peul and Djallonke sheeps show only a type B haemoglobine (fixed allele), but the Touabire sheep shows residual variation in this locus (A frequency = 0.015).