

Morphometric characterization of purebred Baoulé and their crosses with local Zebu cattle in Burkina Faso



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Aim

Show differences in morphometric characteristics between Baoulé and their crossbreds with Zebu cattle

Background

Baoulé cattle, also known as Lobi breed in Burkina Faso, belong to the group of trypanotolerant short-horned West African *Bos Taurus* cattle. The breed is insufficiently characterized and threatened by extinction due to uncontrolled crossbreeding with Sahelian Zebu and lack of breeding strategies.

Results

Traits	Bouroum-B. (Baoulé, sedentary)	Kampti (Crossbred, transhumant)	Loropéni (Crossbred, sedentary)
Head length	40.10 ^a	47.00 ^b	44.20 ^c
Cranial length	14.90 ^a	16.40 ^b	15.70 ^{ab}
Head width	16.30 ^a	17.60 ^b	16.00 ^a
Cranial width	14.90 ^a	16.40 ^b	15.70 ^{ab}
Facial length	20.40 ^a	23.50 ^b	23.60 ^b
Facial width	11.20 ^a	11.40 ^a	10.60 ^a
Muzzle Circumference	36.50	37.60 ^a	35.60 ^b
Horn length	14.00 ^a	28.0 ^b	24.20 ^c
Dist. between horn tips	31.10 ^a	41.60 ^b	40.80 ^b
Dist. between horn base	13.60	14.10 ^a	12.40 ^b
Ear length	14.70 ^a	18.00 ^b	16.90 ^b
Height at withers	96.20 ^a	112.80 ^b	111.40 ^a
Thoracic perimeter	132.00 ^a	145.00 ^b	135.00 ^c
Height at sacrum	96.20 ^a	121.80 ^b	111.40 ^c
Body length	77.30 ^a	90.10 ^b	84.90 ^c
Scapula ischium length	110.00 ^a	124.00 ^b	117.00 ^c
Hip width	28.80 ^a	32.40 ^b	30.80 ^c
Ischium width	11.70 ^a	14.00 ^b	11.50 ^a
Tail length	90.30 ^a	107.80 ^b	91.20 ^a
Chest depth	49.40 ^a	55.00 ^b	53.30 ^b
Shoulder width	24.90 ^a	29.00 ^b	25.40 ^a
Chest width	33.90 ^a	25.90 ^{ab}	14.80 ^b
Teat length	2.84 ^a	3.03 ^a	2.37 ^b
Weight	202.00 ^a	258.00 ^b	210.00 ^a

Table 1: Least square means for the 24 quantitative assessed traits

Conclusions

- An increase in body size of the crossbreds
- Differences for crossbred groups kept by breeders with sedentary and transhumant lifestyle
- The reasons for these differences between crossbreds could be due to the mode of livestock keeping in the transhumant Kampti and sedentary Loropéni populations
- Larger animals preferred by breeders in Burkina Faso, due to their use for plowing and greater economic value



Figure 1: Purbread Baoule and crossbreds measurement

Methods

- A total of **421 cattle** including 155 adult Baoulé and 266 crossbred from Kampti and Loropeni departments
- From 4 to 20 years of age
- Total of **24 quantitative** and **20 qualitative traits** was assessed following the FAO (2012) guidelines

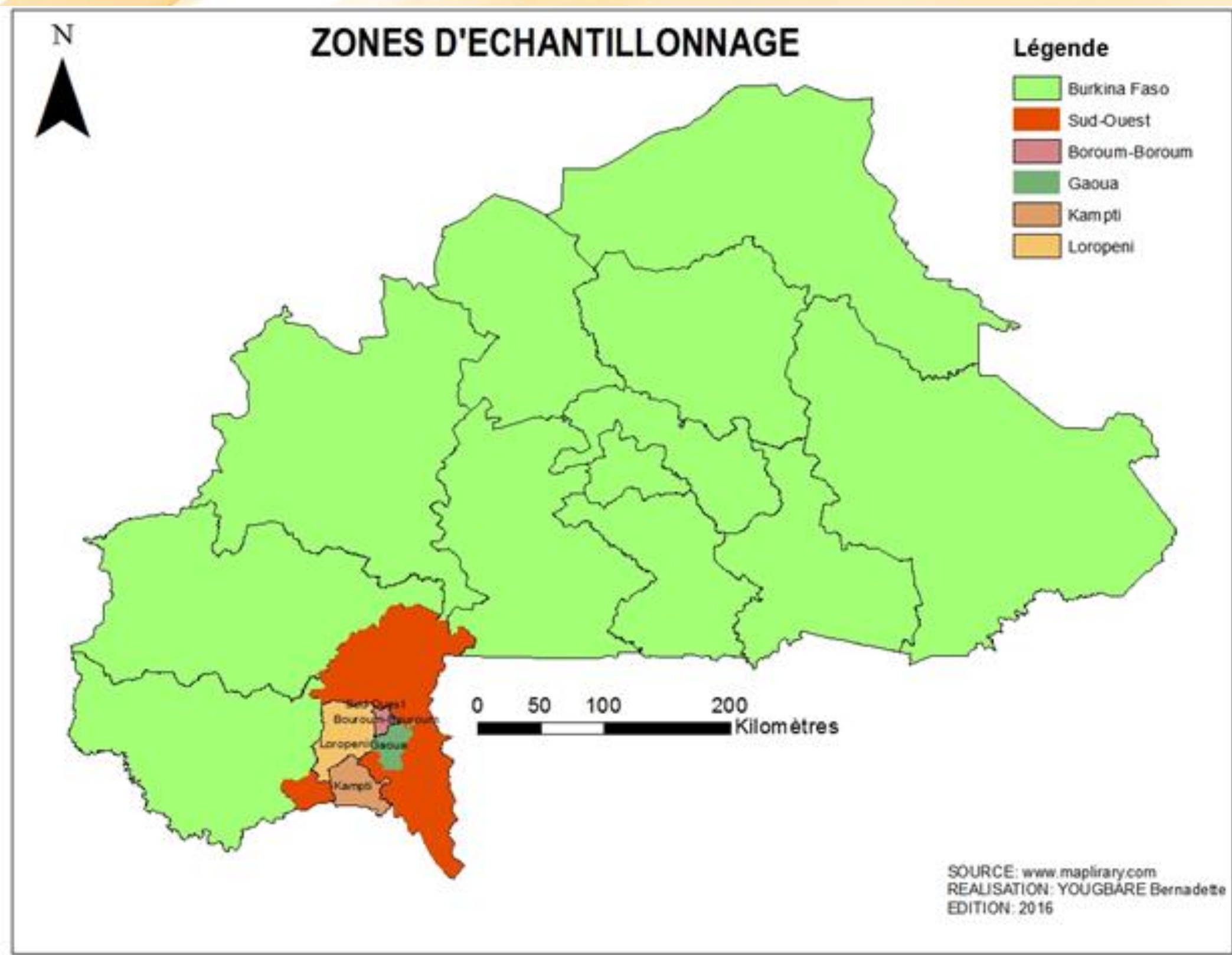


Figure 2: The location of the study area within Burkina Faso

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