



## ***The Red Maradi Goat (*Capra hircus*)***



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**S**mall ruminant farming occupies an important place in the economy of the household and this especially for those in the Sahelian zone. This husbandry focuses on two species including goats and sheep.

In Niger, goats are represented by two main breeds: the Sahel goat and the Red Maradi goat. This latter, is a target for technicians of livestock, tanners and leather crafters for its multiple qualities. Also, in the chapter of the symbols adopted by different regions of Niger, it is the Red goat which symbolizes the region of Maradi. Victim of her celebrity, successive droughts and crossbreeding with other goats (especially the Sahel goat), the often classified threatened Red Maradi goat is gradually gaining due attention through the intervention of the Government of Niger and its technical and financial partners.

### ***Origin and geographical distribution***

Classified in the goat population of the Fouta Djallon and belonging to the group of savanna goats, the Red Maradi goat would be a cross with the forest goats. But its well-marked individuality qualified the species as a fixed breed/variety.

The major herd populations are found in Niger, in the Maradi region. However, based to its origin, the highest concentration of pure individuals is found in the District of Tessaoua suggesting that the cradle of the breed would be in Niger, although the confine of breeding area in the Hausa lands lies between the Niger and Nigeria common borders.

The main geographical area of the Red Maradi goat covers the Department of Maradi, which is located in the Sudanian zone with precipitation of 600 to 800 mm per year and a large part in the Sahelian zone, where rainfall varies from 200 to 700 mm per year. The Red Maradi goat is also found in the South-West of Zinder in Niger, but also in the North-Western Nigeria, from the Niger border up to the city of Zaria (about 250 km) where it is named the “Red Sokoto goat”.

Through research programs, food security, poverty reduction programs as well as economic growth and livestock promotion programs, the range of dispersion of the Red Maradi goat is also extended to throughout the the sub region, either for crossbreeding or in pure breeding, in countries such as Burkina Faso, Mali, Senegal, Togo and Benin.

### **Some key improvement initiatives of the breed**

In the past the Red goat benefited from the protection of the colonial authority that took the efforts to fix the reddish-brown color within the Maradi goat breeds and the surrounding area. Thus, under threat of penalty of fine or imprisonment, it was mandatory to castrate the noncompliant goats and slaughter the spotted females. The slaughtering of the female Red Maradi goats of less than two years old and as well as pregnant goats was prohibited. This action was intended to improve access to the international market for the skins, and particularly the Red Maradi goat label, that were in high demand for luxury leathercraft due to its exceptional qualities. This selection, based on the sole criterion of color, was also meant to stop the infiltration of Sahel goat blood and to prepare the dispersion of the breed outside its area of origin.

The Red Maradi goat was therefore characterized and selected since the colonial era for the quality of its skin sought in the metropole, as well as for its prolificacy with 2-3 kids per litter and its milk production. Result of this research is that there are 2 varieties of Red goat (red coat and black coat) which have the same production performances. The Red goats were used to improve the local goat breeds after the independence of Niger.

As early as 1962, a goat breeding Center was created in Maradi, the cradle of the Red goat breed. This Centre aimed at selecting goats for dissemination in the rural sedentary areas. Unfortunately, the Center concentrated its efforts on the phenotypic selection based on the “coat color”, on the numerical growth of the herd and its territorial extension, in order to gain more interest from many breeders in the compatible areas considering the requirements of the Red goat. The selection program did not envisage taking into account the main production parameters.

In order to restock the herd decimated after the drought of the 1970s, the Government of the Niger has created Livestock Multiplication Centres (LMC) among which the one for the Red goat is referred as Secondary Goat Rearing Center of Maradi (SGRCM), with financial support from the Aid and Cooperation Fund (France). The objectives of the Center at the time of its establishment were: i) selection and dissemination and; ii) extension of adapted techniques and husbandry practices to breeders. This station was meant to be a key supportive structure/ institution of a breeding program. Initially it was used as a fitting ground for the breeding stocks selected from rural areas and which were intended for dissemination. The center was also responsible for the monitoring of animals distributed, the provision of practical advices to farmers and castration of non-conform males to the phenotype.



Female Red Maradi goats



Male Red Maradi goat

The Aid and Cooperation Fund decided in 1971 to fund a new phase for 6 years under “the Red goat development project in Niger”. The main objective of this project was for the Maradi goat station to play an effective role in the breed dissemination operations, as well as to gradually constitute its own breeding herd in order to produce all the required animals for dissemination.

From 1998 to 2008, the Government of the Niger in collaboration with the Belgium Kingdom, within the framework of the poverty reduction strategy, launched a project for the selection, promotion and dissemination of the Red Maradi goat. The project sought to improve the income generated by women through improved productivity performances of goats. The Goat Center has benefited from the project through the supply of quality breeding stock of bucks and thus became a Centre of excellence for the Red Maradi goat.

### **Physical characteristics**

The Red Maradi goat is distinguishable from other species by its much larger weight, conformation, prolificacy and especially its red colour from which it earned its name.

Phenotypically speaking, the animal is harmonious, fairly slender. The head is fine, the front rounded, covered in hair which is longer and darker in the male than in the female. The ears are long, horizontal or drooping. The chamfer is straight, sometimes sub-concave but moderately developed. The horns, slightly thick, are always present and flattened backward with very close insertion points, offering a slight twisting motion which diverges at their end. The neck is short, has wide chest, withers well wrapped, and a straight back.

The leg, shoulder and rump well fleshed are built on four rays thin joints, with a compact composure. The udder is always well developed and therefore becomes an additional obstacle to long distance walks. The tail, with more dense hair and often black, is short and elevated at the end. The horns are heavier in the male, who usually has a longer beard, denser and darker than the female. The adult goat has curls of hair which extend to the shoulders. The morphometric measurements in adults are as follows:-head length 18-20 cm, head width 8-9 cm, chest circumference 70-75 cm, height of the chest 22-25 cm, height (height at the withers) 62-67 cm, length pectoral-hip bone 60-62 cm, length pectoral-buttock 60-70 cm, with adult males weighting between 25 and 30 kg, the females between 23 and 28 kg.

The coat or wool is uniform, shiny, with mahogany tints. The hair is short, dense on a soft skin, and any extension goes with a lightening fur, with the appearance of faded shade and especially white hairs. This marks an unacceptable decline in the purity of the type. The male has consistently a darker shade up to the appearance of a black dorsal stripe.

### **Productive characteristics**

The Red Maradi goat is a particularly much sought after animal species. Several explanations can be given for the choice of this animal by farmers as well as by consumers. If reared in good conditions the Red goat multiplies faster. Twin and biannual kidding are common and sustained over 5 to 6 years for a good female. The frequency for double, triple or quadruple kidding increases from the first kidding (usually single) and continues until the end of career. This character is highly linked to the purity of the breed. Single pregnancies represent 60% of all births/kidding; 36% for double and 4% for triple.

The Red goat has good dairy production traits resulting from a pronounced developed udder. The annual milk production is 140 to 150 kg during 200 to 220 days of lactation (Robinet, 1967); i.e. a daily production of 0.6 litre of milk for two periods of 3 to 4 months. It is also an excellent meat producing animal with a carcass yield of young castrated males at 55% compared to carcass yield of the Red goat of 50% at national level (National restocking program, 1980).

The female reaches puberty at the age of 5-6 months. The gestation period is between 145 and 155 days. The first kidding occurs between 10 and 14 months with variations depending on the rearing conditions and the environment. Nearly 93% of first kidding occurs before the age of 12 months. The distribution of the heat seems quite irregular, from 15 to 30 days on average in the absence of detectable pathological cause.

The interval between two successive pregnancies is usually variable. The goat center of Maradi reported intervals of 5-6 months for 20%; 6-7 months for 25%; 7-8 months for 35%; 9-11 months for 15% and beyond 11 months for 5%.

### **Socio-economical characteristics**

Rearing the Red Maradi goat is an important source of wealth for farmers and for women in particular. It is an activity that can generate substantial income being the animal resource after poultry that can be developed. It is of undeniable importance in family budgets of many households. In most of the villages of Niger, the financial independence of women results from breeding this animal. In fact the Red goat rearing contributes substantially to the fight against poverty. In times of food crisis, which is quite common with bad crop years, money from the sales of goats helps to procure cereals.

Economically, it was reported in 1971 that on 80 billion CFA francs of GDP, livestock provided 16 billion of which, nearly a quarter (4 billion) came from goats. Also, between 1990 and 2000, goats accounted for the largest number of exported, slaughtered animals, and therefore a larger number of skins exported from the region of Maradi.

Indeed, the internationally acknowledged attribute of the Red Maradi goat is its thin, flexible and remarkable strength skin, which makes the skin much sought after in luxury leather goods. It is the quality of its skin that sets this animal apart and hence publicized the inherent potential of this animal

The Red Maradi goat farming also plays important sociocultural roles that are exhibited during numerous cultural events.

In conclusion, the Red Maradi goat, by its economic assets is an animal that could be suggested for dissemination and the restocking of family goats herds. However this dissemination unfortunately can only be done in pure agricultural zone, as pure breed cannot support long distance walks and requires extra feed supplementation to externalize its performance. It can in no way substitute either the Sahelian breed resistant to long distance walks, deprivation or the trypanotolerant breeds of tsetse-infested areas.

### **A resource to safeguard**

The Red Maradi goat is important capital that Niger is intent preserving and improving by creating the Secondary Goat Rearing Centre of Maradi since 1963. The Centre had ten years partnerships project, titled the "Red goat project" whose objective was to establish a sustainable genetic improvement program in rural areas, to be managed by women groups/associations in order to improve the productivity of the goat population and increase the incomes for women breeders. Bucks were purchased and placed with women's groups in the villages in Maradi region, for the purposes of crossbreeding. Since then, the Centre which has now only a few hundred heads is looking for support and partners to fulfil its mission. However on their side, women who appreciate the benefits of the Red goat continue to keep livestock in the villages, either alone or under the supervision of the livestock extension workers. These women who understand the economic importance of rearing the Red goat will be able to safeguard the asset. They have supplied projects and international NGOs tens of thousands of heads of Red goat that are redistributed at household level in the framework of livestock restocking operations.

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