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Inherited Traits Supporting the Possibility for Genetic Improvement of Local Chicken in Burkina Faso

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Around 44 million poultry are thought to be present in Burkina Faso, with 76.3% of them being chickens, 19.2% guinea fowl, 3.7% pigeons, 0.7% ducks, and 0.1% turkeys. Poultry farming is significant in Burkina Faso's rural populations' socioeconomic and cultural life. The public prefers domestic poultry products over those from alien breeds. Such data are necessary for the preservation of genetic variation and could show the Konde ecotype's potential in a suitable genetic improvement program. The current study fits within this priority and advances our understanding of Burkinabe chickens. The study's main goal was to identify the morpho-biometric characteristics of the local chicken ecotypes in four Burkinabe regions.

The study took place in the communes of Dori, Bani, Gorgadji and Seytenga. About 270 farmers altogether were included in this investigation (at least 50 farmers per region). A total of 1179 adult birds, both sexes, that were at least 6 months old were used in total.

The Besbes-recommended animal species were employed to characterize the phenotypic traits of the hens. External traits, particularly the distinguishing qualities between males and females, were used to determine sex. Statistical evaluation was done utilizingthe R software tool (R.5.3.3).

For the quantitative measures assessed, Konde hens displayed considerably higher values (p 0.05) than those of the birds in the other three regions. Compared to chickens from the Centre-North, Sahel, and South-West regions, Konde chickens were heavier and larger. Males were noticeably heavier than females, as one might assume. The other parameters obtained also supported the strong sexual dimorphism observed in the four locations. Between the four locations, there found considerable diversity in plumage colour, feather type, and distribution that might be due to genetic variance. Genetic variability is probably to blame for the enormous variation in eye, comb, beak, and appendage colours between the four regions. Round barbels are less common than oval ones. Regional differences in beak colouring.

All the birds in the four study regions had flat tarsi. The introduction of commercial strains can be used to explain the existence of yellow-legged birds. The skin of this tint is typically filthy white. These findings support some earlier research from Cameroon and Benin. The variety of hues found in

feathers, tarsi, skin, the portions of heads and appendages, and the type and placement of feathers on the body are all examples of phenotypic diversity. Comparing local chickens in the other three regions to Konde Chicken, the measured quantitative metrics showed significantly higher values for Konde Chicken. the Central-North and South-West regions of chicken made up the intermediate subpopulation.

JOURNAL REFERENCE

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KEYWORDS

Body weight, chicken Konde, morpho-biometrics, Burkina Faso