# On-Farm Phenotypic Characterization of Indigenous Chicken

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*Full Length Research*

## On-farm phenotypic characterization of indigenous cattle populations of Awi, East and West Gojjam Zones of Amhara Region, Ethiopia

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**This exploratory survey of indigenou cattle populations was conducted in Awi, East and West Gojjam Zones of Amhara region, Ethiopia, to identify and phenotpically describe the indigenous cattle populations. Four focus group discussions with key informants were held and quantitative and qualitative phenotypic data were generated from 730 animals (299 males and 501 females). Outcomes of focus group discussions revealed that one cattle type has been threatened by increasing preference of farmers for smaller body sized animals. Results from analysis of variance (ANOVA) on quantitative variables showed significant differences between sites. The Chi-square test indicated that the level of association of site with most categorical variables was medium except for a few cases where it was found higher. The Mahalanobis distances between sites were highly significant (*P*<0.0001). The maximum and minimum distances were observed respectively between Ankasha and Enemay both for female and male sample populations. Discriminant analysis was run to classify sample cattle populations from all sites into their respective sites with an overall matching rate of 80.9 % and 79.9% for females and males, respectively. The information obtained from focus group discussions and results of univariate and multivariate analysis on phenotypic variations led to identification of two cattle populations that deemed to be distinct breed types (Gojjam Highland Zebu and the Fogera).While the indigenous cattle population of the study area was not homogenous, the identified breeds are significantly different morphologically and subsequent molecular investigations need to be made to confirm their genetic distinctiveness and measure the level of genetic introgression especially on the Fogera.**

**Key words:** Phenotypic characterization, Indigenous cattle populations, Awi, East and West Gojjam Zones

### INTRODUCTION

Ethiopia is generally believed to have the largest population of livestock in Africa. The total number of cattle in all regions of the country except the non-sedentary population of three zones of Afar and six zones of Somali region was estimated to be 53.99 million (CSA, 2013). The majority of these cattle (98.95 percent) are indigenous breeds which are kept under extensive management. Hybrid and exotic breeds accounted for about 0.94 percent and 0.11 percent, respectively (CSA, 2013). If we include the value of ploughing services, livestock provided 45% of agricultural GDP in 2008-09 (Behnke, 2010).

The Domestic Animal Genetic Resources Information System (DAGRIS) database (DAGRIS, 2007) sum-marized that there are 32 recognized indigenous cattle breeds in Ethiopia. Breeds incorporated into the database in recent years include Gamo highland and Gamo lowland in southern Ethiopia (Chebo, Ayalew and Wuletaw, 2013), Wegera, Dembia and Mahibere-silassie breeds in the

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On-farm Phenotypic Characterization of Indigenous Chicken and their Production System in Bench Maji Zone, South Western Ethiopia.Phenotypic characterization of indigenous chicken resources wereundertaken in Guji zone of Oromia region. Data were collected from 48 randomly selected.On-Farm Phenotypic Characterization of Indigenous Chicken, 9, , , Genetics, Despite the important roles of local.PDF Phenotypic characterization of indigenous chicken ecotypes in two Statistical report on farm management practices, livestock and farm managements.Full-Text Paper (PDF): On-farm Phenotypic Characterization of Indigenous Chicken and their Production System in Bench Maji Zone, South.Phenotypic characterization of indigenous chicken ecotypes in two .. Statistical report on farm management practices, livestock and farm.Phenotypic Characterization and Consumer Preference Traits of Indigenous cattle, sheep, goat, chicken, horse, donkey and mule of , ,Phenotypic variation of indigenous chicken populations. knowledge on characterization of farm animal genetic resources in Ethiopia. In. Proceedings .Buy On-Farm Phenotypic Characterization of Indigenous Chicken by Getachew Fereja, Kefelegn Kebede, Negasi Ameha (ISBN: ) from.Key words: indigenous chicken, characterization, Uganda. 1. SUMMARY Throughout the country, the chickens exhibited a wide phenotypic variability in all the.Ethiopia has an estimated of million with indigenous chicken of Phenotypic and Genetic Characterization of Indigenous Chicken Populations in.On-farm reproductive performance of some indigenous goats in Ethiopian. .. Phenotypic characterization of Woyto-Guji and Central Highland goat types. 2. .. Cattle, small ruminants (sheep and goat), equines, apiculture and poultry. The aims of this study were to phenotypically characterize and to describe the production system of Thai indigenous chicken reared by hill tribe people living in .Phenotypic Characterization and Farm Management of Indigenous. Chicken Reared in Highland Region of Northern Thailand. Watchara Laenoia*, Weerapong.On-farm phenotypic characterization of indigenous cattle .. goats, equines, 1 chickens and 60 beehives.