

Price quality relationships in fodder trading in Niger with special regards to comparison of cowpea & groundnut haulms with concentrates, collected shrubs and grasses

Sapna Jarial¹, Michael Blümmel², Idrissa Soumana³, KVS Prasad⁴, Salissou Issa³ and Ravi D⁴

Affiliations: ¹Resilient Dryland Systems, International Crop Research Institute for Semi-Arid Tropics (ICRISAT), Niamey, Niger, ²Animal Science for Sustainable Productivity (ASSP), International Livestock Research Institute (ILRI) Addis Ababa, Ethiopia., ³Department of Animal Sciences, Institut National de la Recherche Agronomique du Niger (INRAN) Niamey, Niger, ⁴ILRI Patancheru, Telangana, India. Funding partners: Dryland Systems, Dryland Cereals, Gender component Grain Legumes and Africa Rising.

Introduction

Investigations of price-quality relationships in feed and fodder marketing can yield crucial information about economic benefits from livestock production, specific feed demand and supply, opportunities for engaging in feed and fodder production and transaction and least cost diet designs.

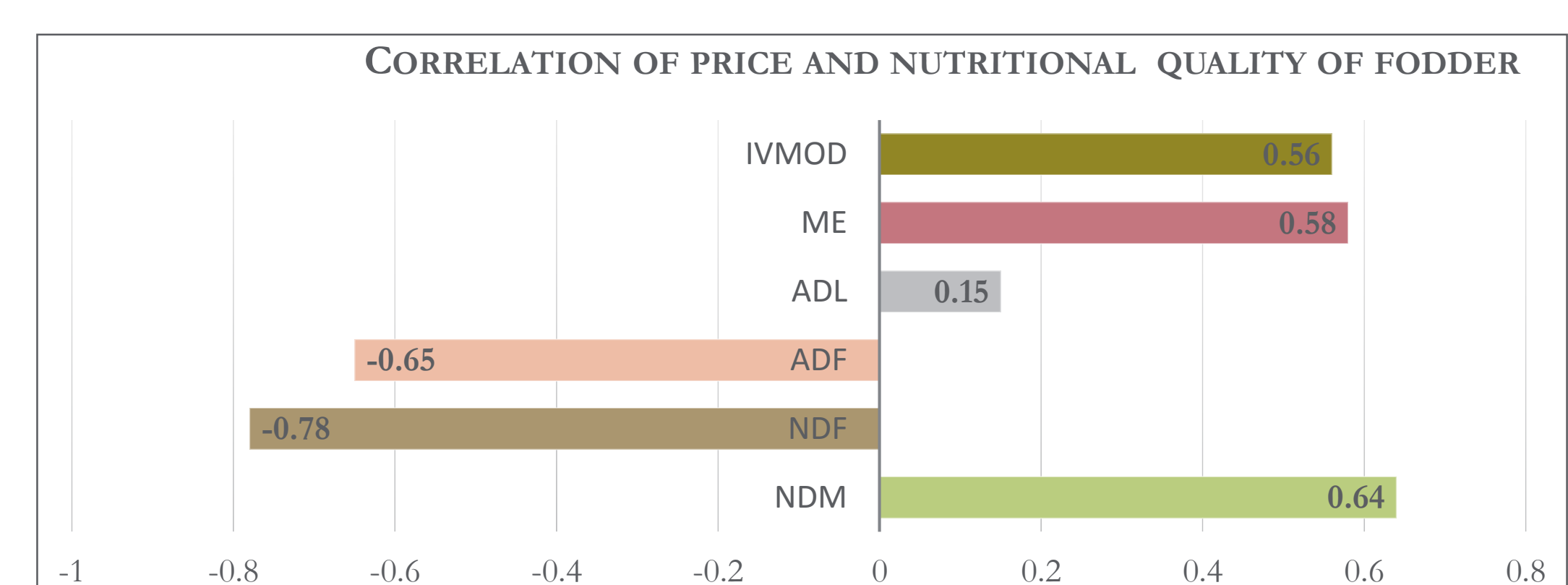
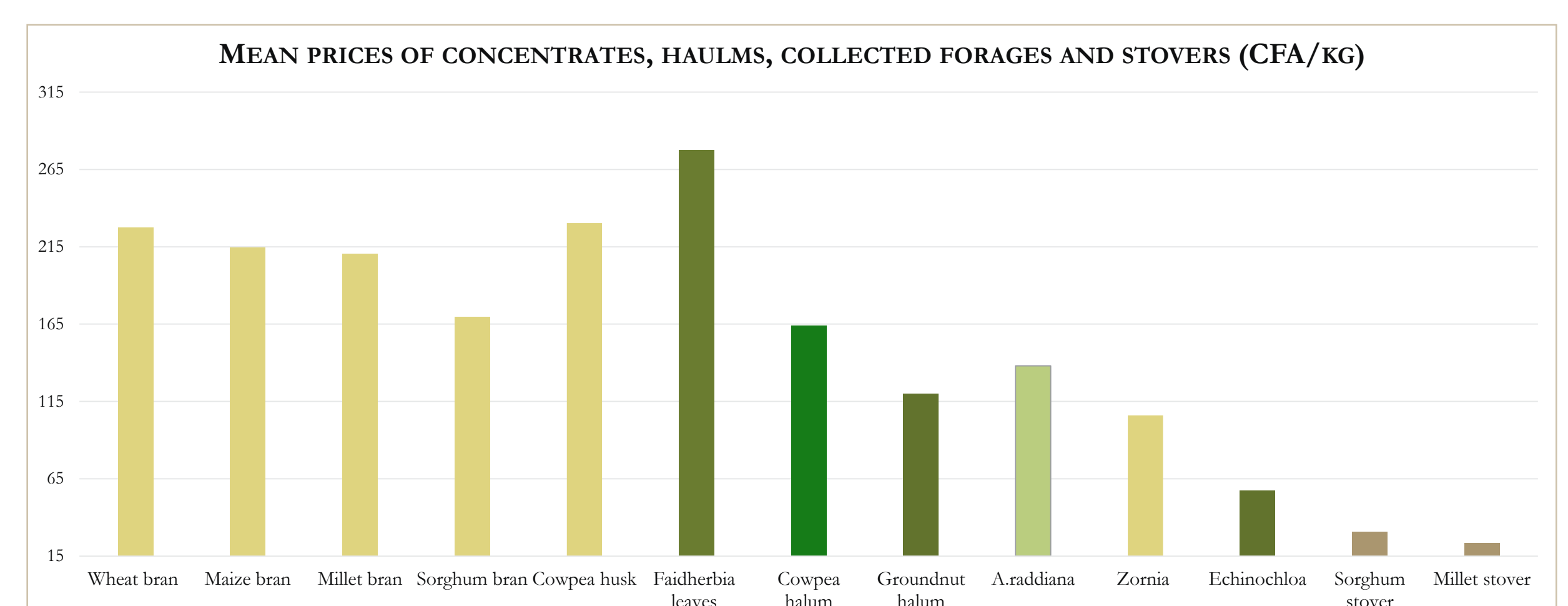
Methods

- A total of 635 fodder samples were collected bi-monthly from 2014 to 2015 from two rural (Gazaoua, Kollo) and two urban (Niamey, Maradi) fodder markets in Niger.
- Five traders were selected randomly from each market for focus group discussions. Collected feed and fodder samples were analysed by Near Infrared Spectroscopy for nitrogen (N), neutral (NDF) and acid (ADF) detergent fiber, acid detergent lignin (ADL), *in vitro* organic matter digestibility (IVOMD) and metabolizable energy (ME) content.
- Data were statistically analyzed by ANOVA and regression analysis.



Results

- Feed and fodder were grouped into concentrates (mostly but not exclusively brans), legume haulms (cowpea and groundnut), collected green forages from bushland (grasses, trees leaves) and stovers (sorghum and pearl millet).
- Price-wise, cowpea and groundnut haulms came right after the concentrates and commanded about 78% (cowpea haulm) and 57% (groundnut haulm) of the average price of concentrates, generally confirming the high monetary value of legume haulms.
- Feed and fodder prices were significantly ($P < 0.05$) correlated with key laboratory fodder quality traits such as nitrogen ($r = 0.64$), NDF ($r = -0.78$), ME ($r = 0.58$) and IVOMD ($r = 0.56$).
- Market location had a strong influence ($P < 0.05$) on feed costs with average prices at the rural markets of Gazaoua and Kollo being 112.43 CFA/kg and 130.13 CFA/kg, respectively. At the urban markets of Niamey and Maradi average feed prices were 208.24 CFA/kg and 149.43 CFA/kg.



Conclusions

- As feed and fodder pricing was not entirely satisfactorily explained by laboratory fodder quality traits and other factors for such as perceptions of farmers, traders and livestock keepers seem to play an important role.
- More work is required on least cost fattening diets to be tested and validated with rural, peri-urban and urban sheep producers.

Contact:

s.jarial@cgiar.org, Scientist Crop-livestock, Niger
m.blummel@cgiar.org, Team leader, Feed and Forages, Ethiopia
smaiga15@yahoo.fr, Assistant Professor Niger
k.v.prasad@cgiar.org, Senior Technical officer, India
salissouissa@yahoo.fr, Scientific Director, Niger
ravid@cgiar.org, Scientific Officer, India



Produced for the
Pan-African Grain Legume
& World Cowpea Conference



27 February – 4 March 2016