BEAN UTILIZATION AND COMMERCIALIZATION IN GREAT LAKES REGION OF CENTRAL AFRICA: THE CASE OF SMALLHOLDER FARMERS IN BURUNDI

J. Ochieng[1&5], E. Birachi[2], D. Wozemba[3], C. Ruraduma[4], M.C. Niyuhire[4], and E. Ouma[5]

[1]University of Kassel, Germany
[2]International Center for Tropical Agriculture (CIAT) - Pan Africa Bean Research Alliance (PABRA), Kigali, Rwanda
[3]International Center for Tropical Agriculture (CIAT) - Pan Africa Bean Research Alliance (PABRA), Kawanda, Uganda
[4]Institut des Sciences Agronomiques du Burundi (ISABU), Bujumbura, Burundi
[5]International Institute of Tropical Agriculture (IITA), Bujumbura, Burundi.

Abstract

This paper evaluates production and commercialization constraints that prevent smallholder farmers from effectively utilizing beans with regard to household food and income security. The study was conducted in six provinces of Burundi in 2010 using a multi-stage stratified sampling procedure to select a sample of 380 smallholder bean farmers. Linear regression models were used to estimate factors influencing the quantity of beans marketed by smallholder farmers. Different ways in which beans are utilized include household consumption, selling, gifts and as seeds. Both improved and local seeds are used, with over 65% of farmers in Muyinga planting local varieties. Results showed that highly educated farmers were more likely to increase commercialization by 10%. However storage of beans for food was more likely to reduce commercialization by 23% while those who gave out beans as gifts had a higher (12%) chance of commercialization. Transport losses were likely to reduce commercialization by 15%, but knowledge of bean networks and access to information from traders was likely to increase bean commercialization by about 10%. Emphasis on interventions (information and extension services) that increase farm level productivity and market led approaches between potential buyers of beans and rural communities will help to reduce poverty and address food insecurity in rural areas.

Materials and Method

- The study areas were the Northern and Central regions of Burundi covering six provinces (Muyinga, Rutana, Ngozi, Bubanza, Gitega and Makamba).
- A multi-stage stratified sampling procedure was used to select bean producers in 2010. i.e. purposive sampling of 2 districts and 2 markets in each province covering the major bean producing areas; then Simple random sampling of a sample of 380 smallholder farmers.
- Structured interview schedules were used and data captured bean production and marketing and farmers' social-economic status.
- In the analysis, linear regression models were used to estimate factors influencing the quantity of beans marketed. And quantity marketed was used as a proxy of level of commercialization of beans at farm level.

Key results: Bean Utilization Patterns in Burundi

Fig. 2: One of the common bean varieties

Fig 1 : Bean grains at an open market

Empirical results indicate that commercialization was significantly influenced by the educational level, off farm income, quantity of beans stored for food and quantity given as gift, information accessed through traders and information obtained from government, quantity lost during transportation and knowledge of bean network.
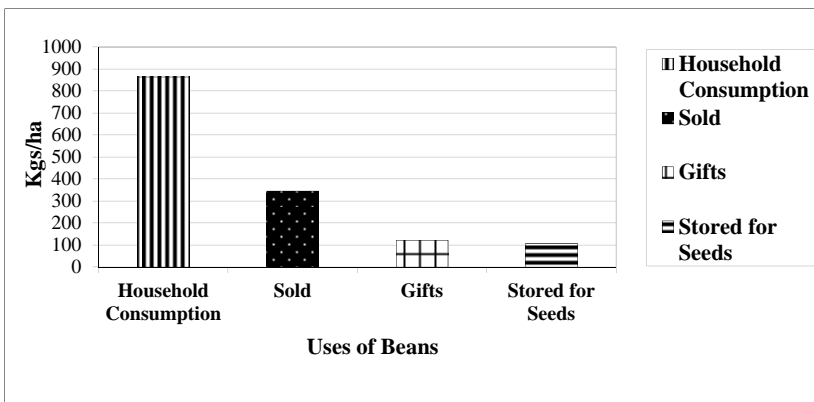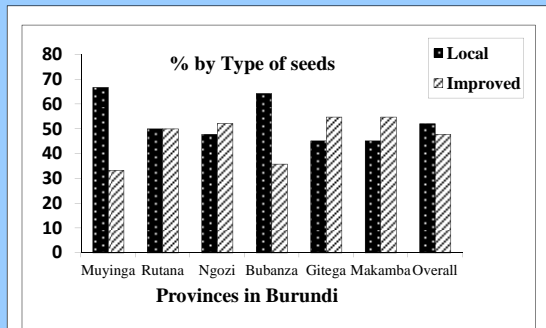
Regression results for factors influencing commercialization of beans

Details	Standardized Coefficient	t-value
Constant	324.38	3.870***
Age (years)	-0.004	-0.083
Gender (1 if female)	0.015	0.286
Education level(years)	0.097	1.886*
Household size (#)	-0.037	-0.755
Farm size (allocated to bean-hectares)	0.009	0.172
Off-farm income (BIF)	0.004	0.074*
Group membership (1 if yes)	-0.037	-0.735
Average market price (BIF)	0.037	0.151
Quantity consumed at home (kg)	-0.051	-0.209
Quantity stored for food (kg)	-0.229	-4.440***
Quantity given out as gift (kg)	0.119	2.371**
Quantity of beans stored for seeds (kg)	-0.055	-1.095
Distance to nearest output market (km)	-0.035	-0.697
Access to info. through SMS(1 if yes)	-0.076	-1.542
Access to info. through traders(1 if yes)	0.088	1.747*
Access to info. through other farmers (1 if yes)	0.081	1.463
Access to info. through government(1 if yes)	-0.036	-0.739*
Access to info. through group(1 if yes)	-0.019	-0.371
Quantity lost due to storage losses (kg)	0.036	0.703
Quantity of lost due transport losses (kg)	-.154	-2.858***
Knowledge of bean network (1 if yes)	0.119	2.301**

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For more information contact: e.birachi@cgiar.org