



SCIENCE AZERBAIJAN

INTERNATIONAL CONGRESS

3. INTERNATIONAL BAKU SCIENTIFIC RESEARCH CONGRESS

October 15-16, 2021

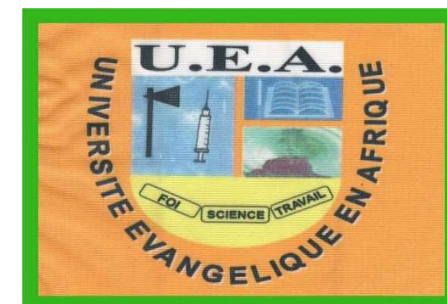
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CHALLENGES TO THE DEVELOPMENT OF FAMILY FARMS IN MOUNTAINOUS SOUTH KIVU, DEMOCRATIC REPUBLIC OF CONGO



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1. Introduction

- Family farms constitute over 85% of all farms worldwide.
- Family farming is still an important mode of agricultural production (food production, food and nutrition security, environment protection, employment opportunities, poverty reduction).
- In Africa, the agricultural sector, largely dominated by family farms, is the primary source of employment and wealth.

1. Introduction

- The family farms face huge constraints. In mountainous South Kivu, main constraints include:
 - *low profitability, lack of agricultural financing, less remunerating prices,*
 - *degradation and absence of feeder roads, limited access to land, etc.*
- Such a situation makes family farmers in the region to operate in uncertain environment.

1. Introduction

The purpose of this article is to identify and analyse the major constraints that compromise the development of family farming in mountainous South Kivu, Democratic Republic of Congo.

2. Materials and methods

- Semi-structured interviews were conducted to collect qualitative and quantitative data
- 150 family farmers were interviewed
- They were selected and distributed equally among the three sampled zones (**Mbinga South; Bugorhe and Irhambi**).

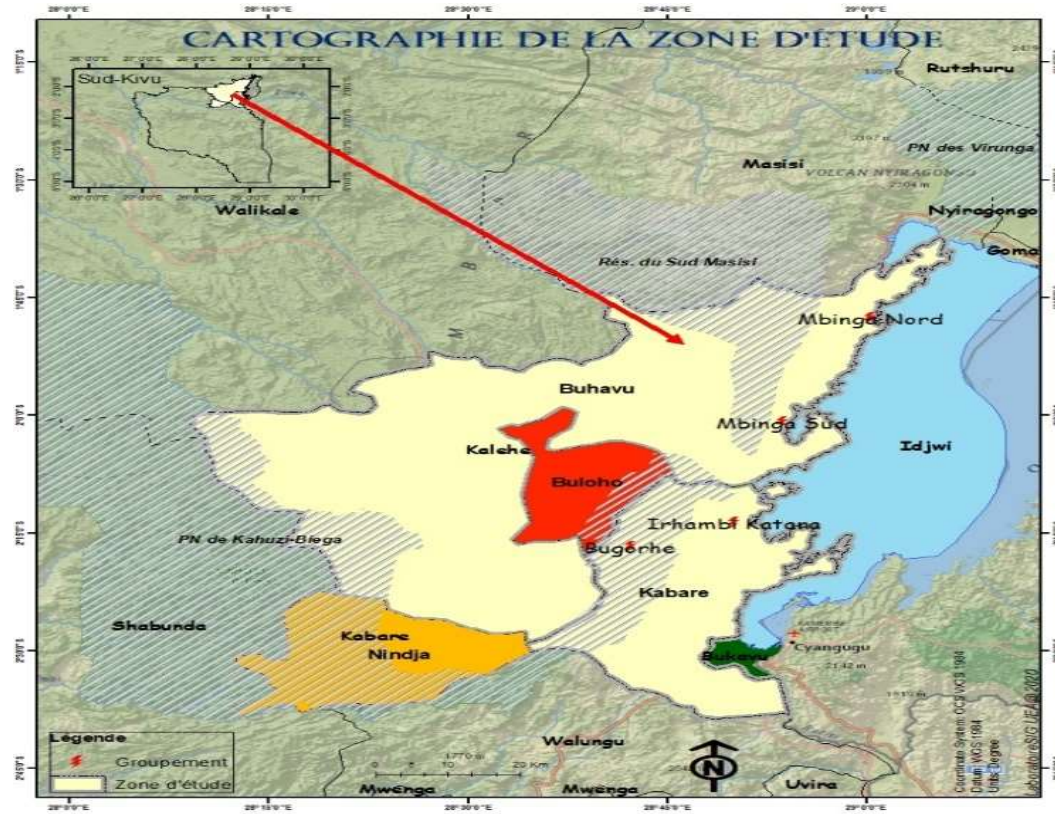


Figure 1. Location of the region of Mountainous South Kivu
Source: Evangelical University in Africa, GIS Laboratory (2020)

2. Materials and methods

- Descriptive statistics and Z-test were used in data analysis.
- *Z-test* was conducted to examine differences or no differences in proportions between the zones.
- Choice of mountainous South Kivu as the study area is motivated by :
 - *predominance of small-scale agriculture : ≤ 1 ha on average in the area, compared to the national average that ranges from 1 to 1.5 ha*
 - *proximity to major consumption centers (Bukavu city in the south, Goma city in the north).*

3. Results *Table 1. Profile of farmers and characteristics of family farms (n=150)*

| Variables | Features | Localities | | | Overall result | |
|---------------------------|------------------------|---------------------|-------------------|-------------------|----------------|------------|
| | | Bugorhe | Irhambi | Mbinga South | Frequencies | Percentage |
| Sex | Male | 24 _{a*} | 22.7 _a | 23.3 _a | 105 | 70 |
| | Female | 9.3 _a | 10.7 _a | 10 _a | 45 | 30 |
| Age* | 20-59 | 26 _a | 30.7 _a | 28 _a | 127 | 84.7 |
| | >59 | 7.3 _a | 2.3 _a | 5.4 _a | 23 | 15.3 |
| Level of study | Illiterate | 2.7 _{a,b*} | 0.7 _b | 5.3 _a | 13 | 8.7 |
| | Primary | 13.3 _a | 11.3 _a | 14.7 _a | 59 | 39.3 |
| | Secondary | 14.6 _a | 17.3 _a | 12 _a | 66 | 44.1 |
| | University | 2.7 _a | 2.7 _a | 1.3 _a | 10 | 6.7 |
| | Other | 0 _a | 1.3 _a | 0 _a | 2 | 1.3 |
| Civil status | Single | 0 _a | 0.7 _a | 1.3 _a | 3 | 2 |
| | Married | 31.3 _a | 31.3 _a | 30 _a | 139 | 92.7 |
| | Widows | 2 _a | 1.3 _a | 2 _a | 8 | 5.3 |
| Land area | <0,5 | 4 _a | 2.7 _a | 0.7 _a | 11 | 7.3 |
| | 0.5-4.01 | 19.3 _a | 22 _a | 22.7 _a | 96 | 64 |
| | 4.01-10.01 | 7.3 _a | 4.7 _a | 8 _a | 19 | 20 |
| | >10.01 | 2.7 _a | 4 _a | 2 _a | 13 | 8.7 |
| Methods of access to land | Legacy | 14.7 _a | 22.7 _b | 22.7 _b | 90 | 60 |
| | Buy | 29.3 _a | 25.3 _a | 25.3 _a | 120 | 80 |
| | Renting | 20.7 _a | 14 _a | 20.7 _a | 83 | 55.3 |
| Labor use | Much more family labor | 2 _a | 2 _a | 4 _a | 12 | 8 |
| | Much more payed labor | 28 _a | 26.7 _a | 25.3 _a | 120 | 80 |

*The subscripts "a" and "b" indicate the results of the z-test. Values with the same letter show no significant statistical difference between the three study areas at the 0.05 level. *The average age being 48*

3. Results *Table 2. Analysis of constraints to family farming in mountainous South Kivu (n=150)*

| Constraints | | Bugorhe | | Irhambi | | Mbinga South | | Total % |
|---|--|---------|--------------------|---------|-------------------|--------------|-------------------|---------|
| | | Freq. | Percent. | Freq. | Percent. | Freq. | Percent. | |
| <i>Access to land</i> | <i>Poverty</i> | 44 | 29.3 _{a*} | 45 | 30 _a | 45 | 30 _a | 89.3 |
| | <i>Land is held by large concessionaries</i> | 17 | 11.3 _a | 21 | 14 _a | 20 | 13.3 _a | 38.7 |
| | <i>Other</i> | 9 | 6 _a | 10 | 6.7 _a | 9 | 6 _a | 18.6 |
| <i>Acquisition of land titles</i> | | | | | | | | |
| | <i>Very high cost of land titles</i> | 37 | 24.7 _a | 34 | 22.7 _a | 31 | 20.7 _a | 68 |
| | <i>Lack of information on land titles</i> | 10 | 6.7 _a | 13 | 8.7 _a | 15 | 10 _a | 25.3 |
| <i>Access to financing</i> | <i>Financing farm activities through borrowing</i> | 16 | 10.7 _a | 15 | 10 _a | 15 | 10 _a | 30.7 |
| | <i>Farmers accessed to formal credit (numbers)</i> | 15 | 10 _a | 6 | 4 _a | 0 | 0 _{b*} | 14 |
| | <i>Lack of specialized financial institutions</i> | 41 | 27.3 _a | 45 | 30 _a | 46 | 30.7 _a | 88 |
| | <i>Collaterals requirements for access to credit</i> | 17 | 11.3 _a | 11 | 7.3 _a | 8 | 5.3 _a | 24 |
| <i>Marketing of agricultural products</i> | <i>Less remunerating prices for producers</i> | 45 | 30 _a | 42 | 28 _a | 38 | 25.4 _a | 83.3 |
| | <i>On-farm sale of agricultural products</i> | 33 | 22 _a | 28 | 18.7 _a | 38 | 25.3 _a | 66 |
| | <i>Access to price information</i> | 40 | 26.7 _a | 38 | 25.3 _a | 24 | 16 _b | 68 |
| | <i>Transport and storage problems</i> | 21 | 21 _a | 11 | 11 _a | 26 | 26 _a | 58 |
| | <i>Exchange rate instability</i> | 9 | 6 _a | 12 | 8 _a | 18 | 12 _a | 26 |

* "a" and "b" indicate the results of the z-test. Values with the same letter show no significant statistical difference between the three study areas at the 0.05 level.

4. Conclusion and recommendations

- ***Access to land*** was reported as one of primary challenges, which could be partly explained as the consequence of poverty among farmers (89.3%);
- 88 % of interviewed farmers reported ***limited access to agricultural financing*** as a big challenge. This could be due to low profitability of agricultural activities, poverty among farmers, as well as lack of collaterals (guarantees).

4. Conclusion and recommendations

- ***Less remunerating prices for producers*** was reported as one of the challenges by 83.3% of interviewees, coupled with ***limited access to price information*** (68%), and **on-farm sale of products** (66%) due to the problem of ***transport*** and the ***lack of storage facilities*** for agricultural products.
- ***Land tenure security*** is also a big challenge: 68 % of interviewed farmers reported that land registration and access to land titles are very expensive (costful).

4. Conclusion and recommendations

In order to enable the access to finance and guarantee remunerating prices to family farmers

- *Storage facilities* for agricultural products and *feeder roads* could be set up
- Innovative financing systems could be put in place:
 - ✓ *inventory credit model*
 - ✓ *contract farming*
 - ✓ *value chain financing*
- *Cooperatives' activities could be dynamic and revitalized.*

Thank you!