Limiting factors in the development of vegetable value chains in southeastern Madagascar

Narilanda Randrianarisonarison, Hermihamina Andrimazao, Sofolo Sambatra Tolofanyaharo

Tropentag, September 20-22, 2017, Bonn, Germany

Intervention areas

- Fokontany of Ankarimbeho
  23°07'38",8" south latitude and 47°44'11",8" east longitude
  Medium altitude : 35 m

- Fokontany of Analamokola
  23°03'32",5" south latitude and 47°43'27",7" east longitude
  Medium altitude : 50 m

Common characteristics of landscapes
Succession of small hills, slopes and low land
Villages located on hills, surrounded by home gardens
Human pressure on biodiversity
- Ombrotrophic climate
Hot and humid (hot and humid austral summer, winter less rainy and softer)
Annual average temperature: 23,18°C / Monthly average rainfall: 165,50
Perihem period from July to December (P: 2T and P > 100 mm per month)
Cyclonic period from January to March

Methodology

Investigations carried out in two stages at the main actors level in the value chain
1st stage: Establishment of an inventory of the current situations in the production, marketing and consumption of vegetables
- Sampling: 100 farmers, 40 traders, 60 urban consumers
- Objective: To identify the factors limiting the development of the value chain related to the current situations of the production, marketing and consumption of vegetables

2nd Stage: Identification of the preferences of the various categories of actors in the vegetables value chain, based on the selection criteria, and using a scoring method (1st choice: 1 point, 2nd choice: 0.75, 3rd choice: 0.5 points, 4th choice: 0.25 points)
- Sampling: 134 farmers, 30 traders, 60 urban consumers
- Objective: To determine the factors limiting the development of the value chain by considering the selection criteria of the various categories of actors, and the corresponding vegetables.

Most of the population (79%) grows vegetable crops but on very limited surfaces, between 5 and 80 m².
- priority is given to the more remunerative non-agricultural activities (basketry, coal-making) in the allocation of factors and capital
- he attack of crop pests (caterpillars, crickets ...), in particular for certain vegetables such as tomato
There is no obvious correspondence between vegetables grown in one hand, and vegetables marketed and consumed by urban consumers in the other hand.

Table 1: Grown vegetables, commercialized and consumed by the main actors of the value chain

Markets objectively, the main objectives of the market are:
- consumers (15%)
- farmers (10%) and
- traders (75%)

Locally produced vegetables are mainly intended for self-consumption:
- Vegetables mainly for self-consumption (66% of farmers)
- Vegetables mainly for commercialization (27% of farmers)
- Vegetables 50% intended for self-consumption, 50% for marketing (7% of farmers)

Poorly developed marketing logic among vegetable growers:
- 41% of producers not selling their tomato production
- 59% of the producers partially selling their tomato production, with an average quantity of 2 to 3 kg per week during the harvest period (weekly market)

Market weakly developed:
- Vegetables sold mainly on a weekly communal market

There is no obvious link between local producers and traders in the urban market:
- 45% of the traders in the urban market refusing to collect tomatoes produced locally considered perishable

The most frequent marketing problem raised by urban traders is the high perishability of vegetables due to the hot and humid climate of Farafangana

Recommendations

Stimulate and improve the consumption of vegetables at the producer level (this is the current approach of the NutriHAF project by carrying out experiments and demonstrations of vegetable preparations in rural areas)
Strengthen links between the main actors in the value chain by developing vegetables whose characteristics meet the needs of the various categories of actors (e.g., vegetable varieties that are not perishable for traders)

Table 2: Modes and frequency of tomato consumption

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st stage</td>
<td>weekly</td>
<td>80%</td>
</tr>
<tr>
<td>2nd stage</td>
<td>per day</td>
<td>70%</td>
</tr>
<tr>
<td>3rd stage</td>
<td>per week</td>
<td>30%</td>
</tr>
</tbody>
</table>

The preferences of the various categories of actors in the value chain
Towards a marketing logic of vegetables among producers

Table 3: Producer selection criteria and corresponding vegetables

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st stage</td>
<td>tomatoes</td>
<td>80%</td>
</tr>
<tr>
<td>2nd stage</td>
<td>onions</td>
<td>50%</td>
</tr>
<tr>
<td>3rd stage</td>
<td>potatoes</td>
<td>30%</td>
</tr>
</tbody>
</table>

Table 4: Traders' criteria of choice and corresponding vegetables

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st stage</td>
<td>tomatoes</td>
<td>60%</td>
</tr>
<tr>
<td>2nd stage</td>
<td>onions</td>
<td>40%</td>
</tr>
<tr>
<td>3rd stage</td>
<td>potatoes</td>
<td>20%</td>
</tr>
</tbody>
</table>

Table 5: Selection criteria of urban consumers and corresponding vegetables

<table>
<thead>
<tr>
<th>Category</th>
<th>Criteria</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st stage</td>
<td>tomatoes</td>
<td>80%</td>
</tr>
<tr>
<td>2nd stage</td>
<td>onions</td>
<td>50%</td>
</tr>
<tr>
<td>3rd stage</td>
<td>potatoes</td>
<td>30%</td>
</tr>
</tbody>
</table>

Contacts:
Dr. Narilanda RANDRIANARISONARISON, ESFA / FOFFA narilanda@yahoo.fr
Me. Hermihamina ANDRIMAZAO, FOFFA her@randimazao@gmail.com