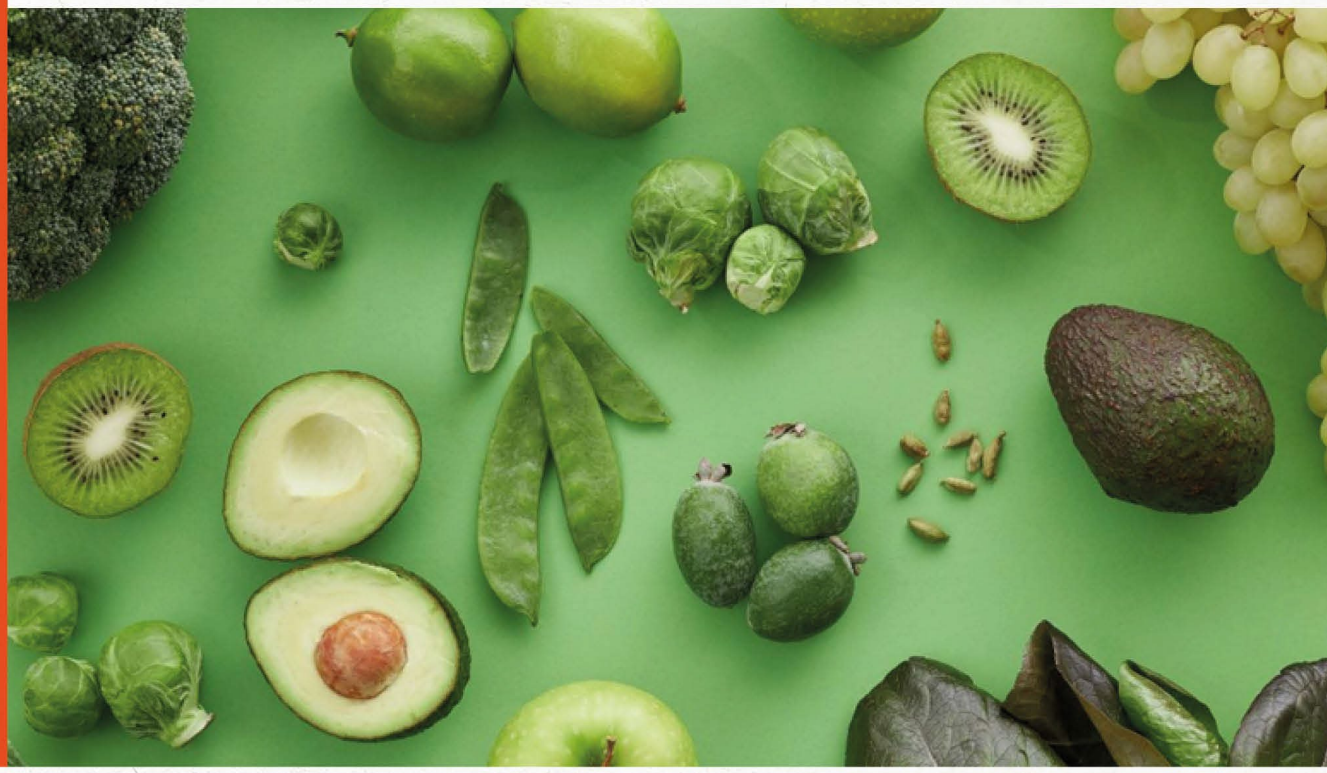
COLEAD

ORGANIC MARKET POTENTIAL

Study of the Rwandan Domestic Organic Fruit and Vegetable Market Potential through implementation of a Participatory Guarantee System (PGS)



FIT FOR MARKET+

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Executive summary

This report evaluates the market potential for organic agricultural products in Rwanda and the feasibility of implementing a **Participatory Guarantee System (PGS)** to enhance certification accessibility for smallholder farmers. The study, commissioned by **COLEAD** and conducted by **Q-Point with the support of ROAM**, aims to assess consumer and hotel demand, market conditions, and key challenges while providing strategic recommendations for the organic agriculture sector.

Objectives

- **Assess the domestic market** for organic fruits, vegetables, and other agricultural products.
- **Evaluate consumer and hotel demand**, including willingness to buy and pay for organic products.
- **Identify key challenges** faced by farmers, consumers, and businesses in the organic sector.
- **Determine the feasibility** of a PGS as an alternative to third-party organic certification.
- **Provide strategic recommendations** for strengthening Rwanda's organic agriculture sector.

Scope

The study focuses on **Rwanda's organic agricultural sector**, covering:

- Consumer demand for organic products.
- Organic product adoption in the hospitality industry.
- Supply chain limitations, including production, certification, and distribution.

Methodology

The study employed **three primary research methods**:

- **Desk research**: Identified key players and dynamics in the organic sector.
- **Consumer and Hotel Surveys**: conducted with 356 consumers and 31 hotels in Kigali, Musanze, and Rubavu districts.
- **Expert Interviews**: discussions with 13 stakeholders from government, research institutions, advocacy groups, and businesses.

Key Findings

- **Growing Consumer Demand**: 69% (n = 246) of surveyed consumers purchase organic products, mainly for health benefits (96%). However, price sensitivity and availability constraints remain barriers.
- **Hotel Industry Adoption**: 65% (n = 20) of hotels already source organic produce, but availability (94%) and certification (77%) challenges hinder further expansion. Higher-end hotels show a greater willingness to pay a premium.
- **Market Challenges**: Limited certification options, weak transportation infrastructure, and lack of consumer awareness restrict the growth of the organic sector.

- **Potential for PGS**: A PGS model can reduce certification costs, increase farmer participation, and build consumer trust in organic products.

Recommendations

- **Expand Availability & Market Access**: Strengthen partnerships with retailers, hotels, and farmers' markets.
- **Enhance Certification & Trust**: Implement a cost-effective **PGS certification system** to support smallholder farmers and gain consumer trust and awareness.
- **Improve Consumer Awareness**: Launch educational campaigns on organic product benefits.
- **Strengthen Logistics & Distribution**: Invest in cold storage and efficient supply chain solutions.
- **Develop Incentives for Organic Growth**: Advocate for government support, subsidies, and financial incentives for organic farmers.

By addressing these challenges and leveraging existing opportunities, Rwanda’s organic agriculture sector could have the potential to expand, benefiting consumers, farmers, and businesses while promoting sustainable food systems.

List of acronyms

ADAR	Agribusiness Development Assistance to Rwanda
BIOCOOR	Biodiversity Conservation Organization
EOA	Ecological Organic Agriculture
EAOPS	East African Organic Products Standards
FiBL	Research Institute of Organic Agriculture
HACCP	Hazard Analysis and Critical Control Points
IFOAM	International Federation of Organic Agriculture Movements
KCOA	Knowledge Centre for Organic Agriculture and Agroecology in Africa
KHEA	Knowledge Hub for organic Agriculture in Eastern Africa
MINAGRI	Ministry of Agriculture and Animal Resources
NGO	Non-Government Organization
NISR	National Institute of Statistics of Rwanda
PGS	Participatory Guarantee System
PSTA II	Strategic Plan for the Transformation of Agriculture in Rwanda – Phase II
ROAM	Rwanda Organic Agriculture Movement
RSB	Rwanda Standards Board
SMEs	Small and Medium Enterprises
USAID	United States Agency for International Development
YALTA	Youth in Agroecology business learning Track Africa

1. Introduction

Assignment

1.1.1 Context and background of the mission

COLEAD and FFM+ programme COLEAD is a not-for-profit inter-professional association established in 1973 whose main purpose is to support the development of a sustainable and competitive agriculture and agribusiness in African, Caribbean and Pacific Group of States (ACP). From an operational standpoint, COLEAD is a network and a technical assistance tool for the sustainable and inclusive development of the private sector (small and medium enterprises (SMEs)) based on expertise and an active training system in 50 countries. Since its creation, COLEAD has been managing development projects in the ACP agricultural and food industry, financed by international donors (mainly the European Union (EU)). Fit For Market Plus (FFM+) is a 5-year, €25 million programme financed by the European Union and the Organisation of the African Caribbean Pacific States (OACPS) via the 11 th EDF. In summary, the proposed intervention will be providing the necessary support to the horticultural sector in member countries of the OACPS to mitigate the negative economic implications of the COVID-19 pandemic while at the same time to seize new market opportunities by embracing green, low-carbon and climate resilient strategies through the development and adoption of relevant practices, skills and technologies. FFM+ support will be tailored to facilitate the transition of ACP horticulture towards more sustainable food systems, addressing some of the priority areas identified in the Farm to Fork strategy of the European Green Deal. The overall objective of the FFM+ programme is to contribute to poverty reduction and improved food security and nutrition, by supporting the building of a fairer, safer and sustainable agri-food sector in member countries of the OACPS. Despite a disruptive landscape, the first specific objective is to support smallholders, farmer groups and MSMEs to maintain and improve access to national, regional and international horticultural markets while adapting to changes in the operating environment due to the COVID-19 pandemic. Simultaneously, in a context of accelerated changes and paradigm shift, the second specific objective is to enable smallholders, farmer groups and MSMEs of the horticultural sector to seize new market opportunities through the development and adoption of safe and sustainable practices, skills and technologies. This assignment contributes to the programme's first and fourth objectives which are "to strengthen the capacities of smallholders, farmer groups and horticultural MSMEs to access domestic, regional, and international markets by complying with regulatory and market requirements in a sustainable framework while adapting to changes in their operating environment due to COVID-19." (R1); and "to Leverage market opportunities resulting from COVID-19 disruptions and monitor conditions for market access and competitiveness in the interest of the ACP horticultural sector." (R4)

1.1.2 Context of the assignment

To guarantee organic produces for local market, the International Federation of Organic Agricultural Movements (IFOAM) started in 2004 to promote Participatory Guarantee System (PGS) as a valuable alternative for organic products for local market. Although PGS in each country differs in methodology and approach based on local conditions (communities, geographies, politics and markets), all PGS systems share a common goal in providing a credible guarantee for consumers seeking organic produce, just like any other third-party certification. Direct participation of farmers, consumers and other stakeholders in the

certification process is greatly encouraged in PGS. This involvement reduces paperwork, cost of certification and thereby making it more accessible to small organic farmers. The fact that Participatory Guarantee Systems are used to certify groups in an affordable way is not only considered from a financial point of view, but also in the collective way of compiling products to meet the required quantities. It creates additional value, since ROAM already decided to use the existing organic label, “Kilimohai”, which is associated with new market opportunities and a visibility of organic products for consumers and market actors. With an open-door policy, a PGS offer the opportunity to build personal relationships and a high level of transparency that could strengthen trust in environmental integrity among different stakeholders in Rwanda.

Experiences in the neighbour countries suggest, that the idea of participating in a PGS did not come from the farmers themselves, and it didn’t come by itself, but it was an option actively introduced by KOAN in Kenya and SAT in Tanzania. Therefore, ROAM is also seen as the leading organisation for the establishment of a PGS in Rwanda.

1.1.3 Rwanda Organic Agriculture Movement (ROAM)

As a first step, a needs assessment was carried out by means of the organisation of a workshop in October 2022, supported by COLEAD’s FFM SPS programme. Indeed, the biggest challenge for the establishment of a PGS is getting started. It is important that the benefits of a PGS are clear for all stakeholders for them to fully commit to the idea of being part of a PGS initiative.

The main outcome of the workshop was an action plan for the pre-start phase, with ownership by all stakeholders, detailing the different steps towards the establishment of a PGS for the Rwandan organic sector. In the meantime, ROAM has assigned one person who is dedicated to coordinating the processes with all involved stakeholders. Furthermore, a committee was set up to develop the draft for a common vision, based on individual contributions. The following vision and main objectives were defined:

- Vision: Strengthened organic in domestic market for healthy and wealthy communities
- Main objectives:
    - To promote ecological organic agriculture practices and produce nutritive and guaranteed organic products for the welfare of consumers;
    - To align the agricultural production systems to organic principles;
    - To increase organic agricultural products certified under East African Organic Product Standards (EAOPS 456);
    - To increase the volume of organic products on domestic markets with fair prices for organic value chain actors.

To provide further support to the implementation process, COLEAD supported ROAM with technical assistance to implement a number of activities. The main objective was to support ROAM in its roll of coordinator/facilitator to complete all steps of the pre-start phase, in order to be able to take an informed decision whether or not to proceed with the effective implementation of PGS, based on a documented feasibility study and business plan which commonly accepted by all relevant stakeholders.

1.1.4 Objectives of the assignment

Survey design, survey implementation and analysis of the gathered data to conduct a preliminary market analysis to assess the market potential for operating a Participatory Guarantee System (PGS) in Rwanda and review of the ROAM business idea. A critical factor to

understand the feasibility of a PGS system in Rwanda, was to evaluate of market potential of PGS, by means of assessing the following factors:

- Key domestic market actors in the local supply chain;
- Type of products, varieties and packaging;
- Potential size of the market in terms of volume and value;
- Competitors;
- Distance to markets, and potential modes of transportation to reach them;
- Market demand: customer profile, requirements for key products, trends and their willingness to pay and surplus for respecting organic production principles;

Regarding the potential approaches to access and expand markets for PGS certified products, ROAM has already developed a business idea in a concept note of 2-3 pages. The outcome of the preliminary market analysis from this assignment will be used to challenge the business concept behind PGS in Rwanda.

- Q-Point provided technical assistance in the development of a strategy to conduct the market consultation and co-create and co-implement the surveys together with the ROAM staff.
- When all the data were collected, Q-Point analysed the data and drafted the market analysis report.
- Q-Point reviewed the business concept note and made recommendations for improvement based on the outcome of the market analysis.

1.2 Rwanda horticulture sector

The horticulture sector is a priority value chain in Rwanda, with an estimated one million rural households growing horticultural crops for both home consumption and sale. The sector encompasses four key categories of produce: vegetables, fruits, nuts, and flowers, which are widely cultivated across all 30 districts of Rwanda. In total, about 11,000 households are involved in smallholder vegetable production. Such households contribute significantly to the 376,200 tons of vegetables produced in Rwanda annually (CASA, 2023). There is a diversity of more than 20 different vegetables across the country. These include tomatoes, onion, white/red cabbage, carrot, eggplant, green/bell peppers, chili peppers, French beans, green peas, various leafy greens, cauliflower, broccoli, pumpkin, squash, garlic, leek, lettuce, beetroot, chayote, cucumber, okra, parsley, celery, snow peas, and zucchini. Some farmers also grow traditional/indigenous vegetables, such as bean leaves, amaranth species (dodo, imbwija and inyabutongo), isogi (spider plant), isogo (black nightshade), amakora (taro leaves) and intagarasoryo (black nightshade) (CASA, 2023). Compared to the vegetable production, the fruit production is smaller. In 2023, fruit production was estimated at 147,300 tons, according to the National Institute of Statistics of Rwanda (NISR). To increase this production, the Rwandan Ministry of Agriculture and Animal Resources (MINAGRI) launched the “Five Fruit Trees Per Household” initiative in 2024. Through the initiative, it is expected that six million trees will be planted over the next five years, with the main goal of improving both the food security and economic conditions of households (Mugisha, 2024). It has been decided that the main fruit trees to start with are avocado, mango, papaya, guava, and citrus.

In addition to its significance for domestic consumption, the horticulture sector has seen growth in exports, especially for fruits, where export values increased from a value of 40 thousand US Dollars in 2013 to 7,123 thousand US Dollars in 2022 (Table 1).

Table 1. Export of fruits and vegetables from Rwanda to the world between 2013-2022 indicated in values (US Dollar thousand). Based on the ITC Trade Map.

Product	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Vegetables[1]	4,359	3,186	6,842	3,967	12,140	23,468	16,646	8,317	17,023	7,448
Fruits[2]	40	127	203	551	1,189	2,707	3,227	4,010	5,605	7,123

[1] Based on product group 7: Edible vegetables and certain roots and tubers.
[2] Based on product group 8: Edible fruit and nuts; peel of citrus fruit or melons.

In recent years, there has been an increased focus on organic production within the horticulture sector. Organic farming has been promoted as a solution for producing healthy foods while reducing negative environmental impacts (Muhamadi & Boz, 2018). This is reflected in the growth of certified organic agricultural land. A survey by Research Institute of Organic Agriculture (FiBL) shows that the agricultural land in Rwanda in 2020 was estimated at 1,275 hectares, in 2021 at 4,494 hectares, and in 2022 at 5,058 hectares. While in 2020, this represented 0.1% of the country's total agricultural land, in 2022 this grew to 0.3% (FiBL & IFOAM, 2019; FiBL & IFOAM, 2024). In 2024, Rwanda consisted of 9,044 organic producers (FiBL & IFOAM, 2024).

The Rwandan government began exploring organic farming around 1999 and started promoting and developing it from 2001 onwards through government agencies, Non-Government Organizations (NGOs), and projects by the United States Agency for International Development (USAID) and the Chemonics Agribusiness Development Assistance to Rwanda (ADAR) project (Mukeshimana, 2021). In 2007, ROAM was established to promote the organic farming sector, driven by strong stakeholder support for the Ecological Organic Agriculture (EOA) initiative (Ozor & Nyambane, 2021). By 2018, Rwanda was operating under the East African Organic Product Standards, though without national legislation (Willer, Lernoud, Huber, & Sahota, 2019). The Strategic Plan for the Transformation of Agriculture in Rwanda Phase II (PSTA II) acknowledged that organic agriculture could play a critical role in agricultural development by contributing to a healthy environment, food security, and safe nutrition (Ministry of Agriculture and Animal Resources, 2009). Since then, various activities have been organised to raise consumer awareness of the benefits of organic products, promote Made in Rwanda organic products, and connect organic producers and processors with consumers. Such initiatives demonstrate that ensuring ecological organic agriculture is integrated into national agricultural systems, including policies, plans, and investments.

In 2020, an exhibition of organic products was held, organised by ROAM, the Youth in Agroecology Business Learning Track Africa (YALTA), and various stakeholders in the organic sector. This event, along with other initiatives such as the Knowledge Centre for Organic Agriculture and Agroecology in Africa (KCOA), the Knowledge Hub for Organic Agriculture in Eastern Africa (KHEA) project, the Ecological Organic Agriculture (EOA) National Platform launched in 2019, and the Greenpreneurs Program aimed to empower smallholder farmers to implement innovative technologies, approaches, and solutions. The overarching goal was to integrate ecological organic agriculture into the agricultural systems of various countries.

1.3 Market for organic products

Currently, Rwanda has several companies and markets where consumers can purchase organic produce in the domestic market (Table 2). However, while some businesses and markets do

offer organic products, most of these claims are self-declared without formal certification. This lack of certification creates uncertainty about the authenticity of the produce being truly organic. As a result, there is a significant opportunity to establish a PGS in Rwanda to enhance the credibility and trustworthiness of organic products in the domestic market.

Table 2. List of relevant organisations in the organic fruits and vegetables local market.

Organisations	Details	Location
Garden of Eden Produce Ltd	Agro based firm that supplies organic vegetables and fruits such as gooseberry, raspberry, tree tomatoes, passion fruits, baby spinach, mushroom, and parsley.	Gasabo District
Go Green Rwanda Company	Aimed at locally and organically producing fruits and vegetables to be sold on the Rwandan market.	Kigali
Garden Fresh Ltd	A horticulture company that grows French beans, passion fruit, chili, broccoli, baby corn, and avocado organically. GlobalG.A.P. certified	Nyagatare District
Aubin Produce International Ltd	Distinguished agribusiness that sells French beans, avocados in the varieties Hass and Fuerte, passion fruits and pineapples.	Kigali
Foodlinx	Creates a market for organic products that encourages farmers to produce organically and receive proper compensation.	Gasabo District
Vital Organic food	Selling organic onions.	Gasabo District
Pride farms	Selling organic vegetables.	Gasabo District
Muhondo organic farming centres	A Rwandan company that trains farmers in sustainable agriculture using organic farming practices.	Gakenke District
Biodiversity Conservation Organization (BIOCOOR)	Doing research and the production of organic vegetables	Huye District

1.4 Challenges

Despite positive developments in organic production and consumption in Rwanda, several challenges remain from both production and marketing perspectives, including limited farmer access to organic inputs and technical knowledge, inadequate government support, weak national promotion strategies, and difficulties in market access and competitiveness against conventional farming.

1.4.1 Policy and production challenges

Rwanda currently operates under the East African Organic Products Standards (EAOPS), a regional framework that establishes criteria for the production, handling, and certification of organic products (Willer et al., 2019). This framework has been essential in ensuring that organic produce meets recognized quality and safety benchmarks, thereby supporting consumer confidence and market access in the absence of a dedicated national organic farming policy (Willer et al., 2019).

Although Rwanda validated an organic policy framework in 2023, it has not yet enacted a standalone national organic policy, and organic agriculture remains largely integrated into broader agricultural and environmental strategies. While some Ecological Organic Agriculture (EOA)-linked policies exist, they have not yet driven the transformative change required for the organic sector's growth. Moreover, certain policies, such as agrochemical subsidies, continue to disincentivize organic production (Ozor & Nyambane, 2021).

Agricultural policies in Rwanda influence nearly every aspect of organic farming operations, including inputs and techniques. Several policies have been introduced by the government to support organic production, such as those promoting ecological and biodiversity protection and mandatory soil conservation (Ozor & Nyambane, 2021). Other initiatives supporting organic

agriculture include tree planting and banning the usage of polluting plastic bags (Mukeshimana, 2021).

However, these supportive measures are undermined by contradictory policies that favour conventional agriculture. For example, policies encouraging the use of chemical fertilisers promote inorganic farming practices and go against the principles of organic agriculture. The import of chemical fertilisers is subsidised, particularly under Rwanda's Crop Intensification Program, placing organic farming at a disadvantage compared to conventional practices (ARECO, 2020; Mukeshimana, 2021).

Rwanda relies on rich traditional farming knowledge, with agriculture primarily practised by smallholder farmers who often lack access to modern conventional inputs. This has led to many farmers being considered "organic by default." However, most use both organic and inorganic inputs, which disqualifies them from being recognized as purely organic farmers (Ozor & Nyambane, 2021).

In addition to policy-related barriers, several practical challenges limit the growth of the organic sector. These include inadequate access to information, particularly concerning high-value certified markets where consumers pay premium prices. There is also a lack of sufficient organic inputs, such as appropriate seeds and fertilisers. Furthermore, the adoption of suitable and efficient organic farming technologies is hindered by limited expertise, experience, and financial resources. Support from stakeholders and the government also remains inadequate (ROAM, 2021).

1.4.2 Marketing Challenges

The organic agriculture sector in Rwanda faces numerous marketing challenges, particularly in the domestic market, where organic produce remains largely undervalued and under-recognized. One of the central issues is that organic farming in Rwanda is predominantly conducted on a small scale. These smallholder farmers often struggle to find reliable local markets for their products, as they lack the resources, visibility, and infrastructure that larger producers or cooperatives might have access to.

A major constraint is the low consumer demand for organic products within Rwanda. This stems from several interrelated factors. First, consumer awareness about the benefits of organic food, such as its environmental sustainability or potential health advantages, is still limited. Many consumers do not clearly distinguish between organic and conventional products, especially since the labeling and branding of organic items in local markets are often inconsistent or absent (Muhamadi & Boz, 2018).

Second, price sensitivity remains a significant barrier. Organic products are typically more expensive to produce and may therefore command higher prices. However, in Rwanda, where many consumers prioritize affordability, higher prices can significantly limit the market for organic goods. Without strong branding, consumer education, or quality assurance systems, organic produce struggles to justify its added value in the eyes of most local buyers.

Another key issue is the lack of organised market structures specifically for organic products. Organic farmers often rely on informal markets, where their goods are sold alongside conventional produce without differentiation. There are few dedicated organic market spaces, and limited institutional support to help farmers link up with niche buyers, retailers, or

restaurants that might value organic sourcing. The absence of reliable market information, such as prices, trends, or consumer preferences, further complicates farmers' ability to position and sell their products effectively (Muhamadi & Boz, 2018).

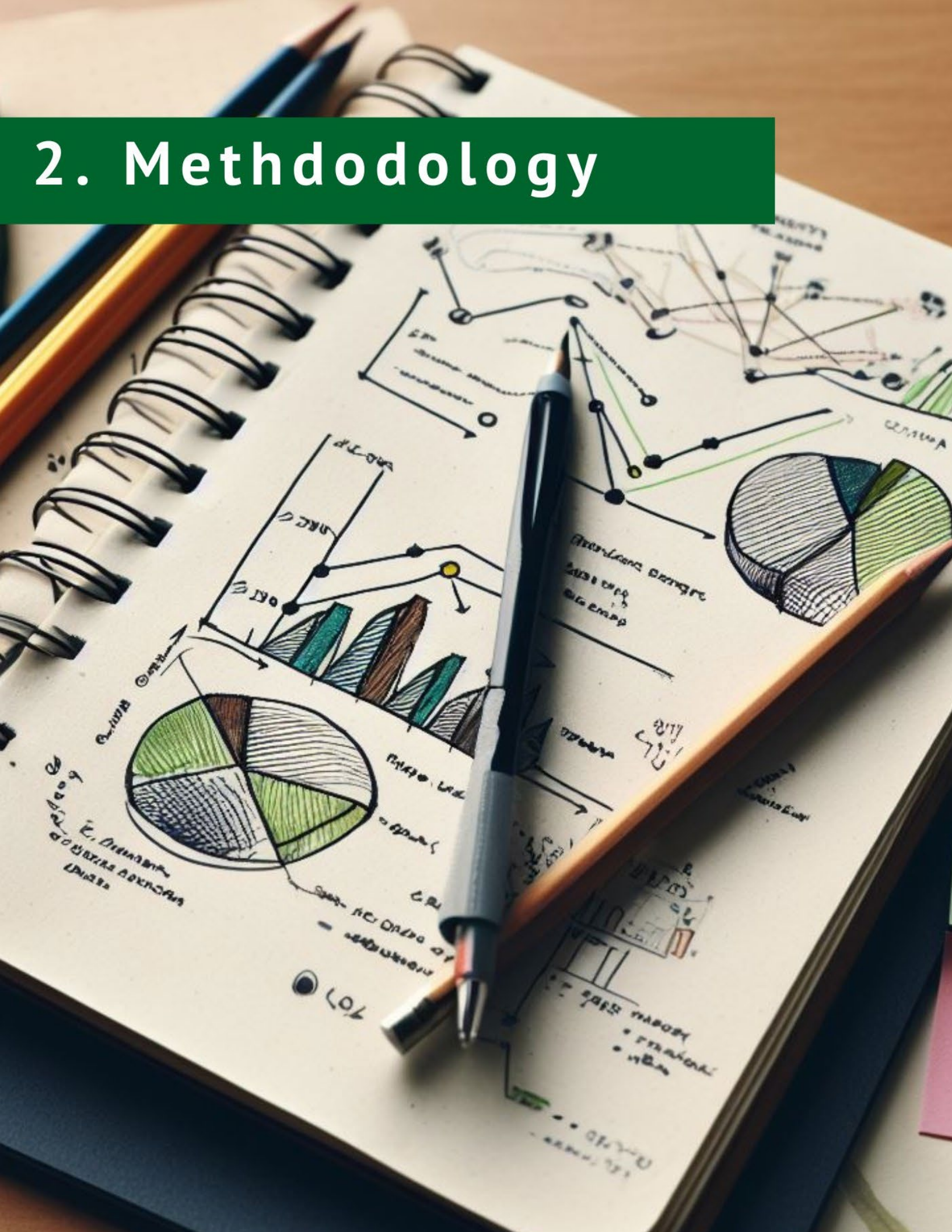
Additionally, organic farmers face competition from conventional producers, who benefit from higher-yielding crops and government subsidies for chemical inputs, particularly under the Crop Intensification Program. These advantages make it easier for conventional farmers to produce food more cheaply and in greater quantities, making them more appealing to the average consumer. In contrast, organic farmers operate with fewer inputs and less support, limiting their production scale and consistency (Mukeshimana, 2021).

The certification and validation processes pose another obstacle, even in domestic markets. While full certification is often required for export, even informal recognition as “organic” can be difficult to secure locally. The cost, complexity, and lack of institutional support for certification discourage smallholders from pursuing organic labels, which limits their ability to differentiate and promote their produce.

Lastly, a lack of marketing skills and exposure among organic producers prevents many from successfully navigating market systems or building customer relationships. Without targeted training, access to cooperatives, or support from marketing institutions, many organic farmers are unable to scale their operations or build loyal consumer bases.

In sum, the marketing challenges for domestic organic produce in Rwanda stem from low consumer awareness, price sensitivity, lack of structured market access, limited certification support, and competition from conventional agriculture. These issues continue to hinder the sector’s development and the wider adoption of organic farming practices.

2. Methdodology



2.1 Methodology

2.1.1. Consumer and hotel surveys

Consumer Survey

The consumer survey was designed to assess the market potential for organic agricultural products in Rwanda. It explored various topics, including demographics, consumption patterns, willingness to buy and pay for organic products, attitudes towards organic statements, and challenges in accessing these products. The full survey (in English) can be found in Annex I. Data collection was conducted in the districts of Musanze and Rubavu and the city of Kigali, resulting in a total of 356 respondents who were selected randomly. This was achieved through field visits and by leveraging networks such as ROAM and the consultants' connections.

Respondents participated in the survey either by completing the questions directly in the data collection tool Kobo Toolbox or through enumerator assistance on-site. To ensure inclusivity and comfort, the survey was available in both English and Kinyarwanda. Prior to deployment, the questionnaire underwent a thorough review by multiple stakeholders, including Rwandan citizens, to ensure clarity and cultural relevance.

To perform structured data analysis, a cross-table approach was used, linking specific questions to the key topics of the terms of reference (Table 3).

Table 3. Cross table linking the topics from the Terms of Reference to the questions of the consumer survey.

Topic	Questions	Details
Types of Organic Products	Q9, Q12, Q15, Q18, Q21, and Q24	Addressed the types of fruits, vegetables, roots and tubers, herbs and spices, wheats, seeds, nuts, and animal products typically purchased, identifying organic products in demand.
Market Potential (Volume and Value):	Q10, Q13, Q16, Q19, Q22 & Q25	Examined purchase frequencies, providing insights into market volumes.
	Q27, Q29, and Q30	Consumers' likelihood of buying organic products and switching from conventional options helps estimate market value.
Requirements for Key Products	Q28 and Q31	Explored preferred purchase locations and factors influencing willingness to pay more.
Trends	Q29	Tracked changes in the likelihood of purchasing organic products over the past year.
	Q31 and Q34	Examined attitudes toward organic products, such as health and environmental benefits.
Willingness to Pay	Q31 and Q32	Assessed how much extra consumers are willing to pay, providing insights into potential price premiums.
Surplus for Respecting Organic Production Principles	Q34	Evaluated respect for organic principles.
	Q27, Q29, Q30	Linking the insights from above to the willingness to buy.
	Q31, Q32	Linking the insights from above to the willingness to pay.

Challenges	Q33	Identified barriers consumers face when purchasing organic products, and informed potential interventions to improve access and uptake.
Consumer Profile	Q1–Q8	Demographic questions captured data on age, gender, education, residency, income, living environment, and household size.
	Q27, Q29, Q30	Linked the demographics to the willingness to buy to identify profiles most inclined towards organic products.
	Q31, Q32	Linked the demographics to the willingness to pay to identify profiles most inclined towards organic products.

Statistical analyses, including ANOVA and regression tests, were conducted to identify significant differences across demographics regarding willingness to buy and pay for organic agricultural products. Kindly note that a linear regression analysis was used for the demographics age and household size, even though the dependent variables were ordinal and not continuous variables. However, the results can still be used to determine the relationship between the two variables.

Hotel Survey

A similar approach was adopted for the hotel survey, which aimed to evaluate the market potential for organic agricultural products in Rwanda's hospitality sector. Key topics included demographics, consumption patterns, willingness to buy, and willingness to pay. The full survey can be found in Annex II. Data was collected through direct engagement with hotels in Musanze and Rubavu districts, and the city of Kigali, resulting in responses from 31 hotels. The survey questions were tailored to the hotel context while aligning with the consumer survey's framework for cross-analysis.

Given the smaller sample size, statistical tests were not performed for the hotel survey. Instead, the hotel profile and findings were derived by comparing averages across key demographics. The data collection process mirrored the consumer survey, with participants completing the survey via KoboToolbox, either independently or with assistance from enumerators. The survey was available in English and Kinyarwanda to ensure inclusivity and relevance.

2.1.2. Expert interviews

To complement the consumer and hotel surveys, expert interviews were conducted to gather in-depth insights on the feasibility and market potential of operating a Participatory Guarantee System (PGS) for organic agricultural products in Rwanda. These interviews targeted professionals with relevant expertise and knowledge of the organic agriculture sector, focusing on their experiences and perspectives on key topics.

The interviews addressed three main topics, each comprising multiple guiding questions:

- Organic Domestic Sector and Main Actors: Questions aimed to map the key players in the organic sector, including producers, traders, and certification bodies.
- Transportation: Discussions explored challenges and opportunities in transporting organic agricultural products, with attention to infrastructure and logistical efficiency.

- Markets: This topic examined the current state and future potential of organic product markets, including consumer preferences, accessibility, and pricing structures.

The full interview guide can be found in Annex III. Most questions contained triggering words which were only used in case the respondent did not answer the question, or when the question was perceived as unclear. Besides, multiple questions contained follow-up questions that were used by the interviewers. Since it was a semi-structured interview, the interviewer had the flexibility to ask different follow-up questions when something was unclear or when the interviewer wanted to dive deeper into the topic addressed by the respondent.

Interviews were conducted in person. To ensure clarity and consistency, all interview questions were pre-tested. Additionally, interviews were conducted in English or Kinyarwanda based on the respondent's preference, ensuring language was not a barrier to participation.

Thirteen interviews were conducted with stakeholders located in the districts of Gasabo, Nyarugenge, Muhanga, Huye, Rubavu, and Nyanza. For anonymity, each stakeholder was assigned an anonymized name, as outlined in Table 4. These stakeholders represented a diverse range of sectors, ensuring a comprehensive understanding of the organic agricultural value chain.

Table 4. Stakeholders were involved in the expert interviews.

Nr.	Stakeholder description
1	Consumer Advocacy Group
2	Consumer Advocacy Group
3	Research Institution
4	Educational Institution
5	Environmental Organization
6	District Office
7	Hotel
8	District Office
9	District Office
10	Food Industry
11	Centre of Excellence
12	Centre of Excellence
13	Consultancy

The qualitative data was analysed question by question, with summaries capturing the key themes of the responses. Relevant quotes were included to provide context and depth, illustrating the nuances of the respondents' perspectives and supporting the interpretation of the findings.

3. Results

3.1 Consumer results

In total, 356 respondents participated in the survey. Participants lived in different districts, with the majority living in Musanze, Rubavu, and the districts that are part of the capital Kigali (Figure 1).

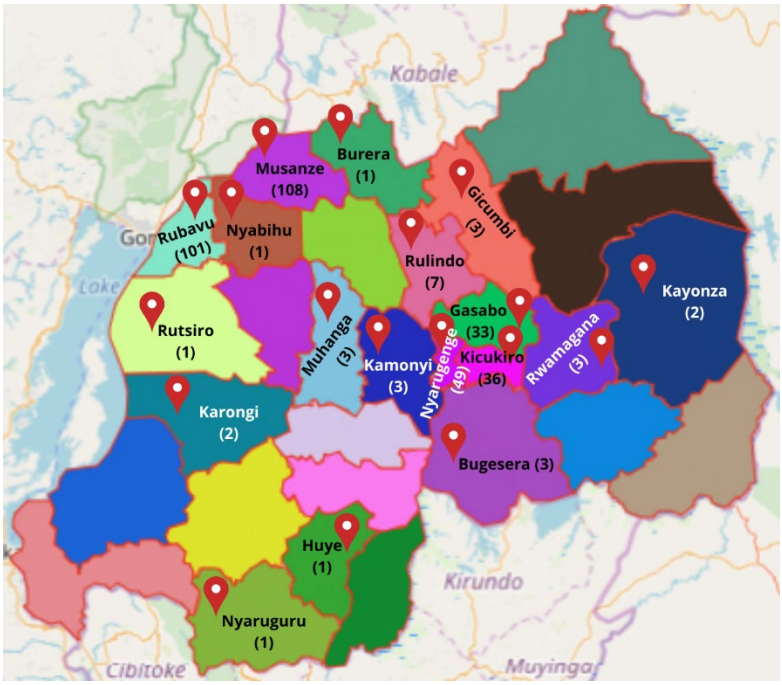


Figure 1. The number of respondents living in each of the districts of Rwanda.

The fact that most respondents lived in the districts that contain the biggest cities in Rwanda can also be seen in the most indicated (70%) type of living area, being an urban environment, densely populated (Table 5).

Table 5. Type of living area of respondents.

Living area	n	Percentage
Rural, not densely populated	28	8%
Suburban	80	22%
Urban, densely populated	248	70%
Total	356	100%

Most respondents (95%) indicated that to be Rwandan citizens, while there were only a few respondents who were residents, tourists, or visitors (Table 6).

Table 6. Current status of respondents.

Status	n	Percentage
Citizen	337	95%
Resident	14	4%
Tourist/visitor	5	1%
Total	356	100%

A slight majority of the respondents identified themselves as female (57%), while the second largest group of respondents identified themselves as male (42%), and a small portion preferred not to share their gender (1%) (Table 7).

Table 7. Gender division amongst respondents.

Gender	n	Percentage
Male	151	42%
Female	203	57%
Prefer not to say	2	1%
Total	356	100%

The youngest respondent was 18 years old, and the oldest was 75 years old. The most represented age groups were the respondents aged between 26-35 and between 36-45 (Table 8).

Table 8. Age division of the respondents.

Age	n	Percentage
18-25	46	13%
26-35	109	31%
36-45	118	33%
46-55	54	15%
56-65	22	6%
66-75	7	2%
Total	356	100%
Average age	38,3	

In terms of education, the highest level of education for most (43%) respondents was a high school education, with graduate level coming in second (30%) (Table 9).

Table 9. The highest level of education of the respondents.

Education	n	Percentage
Not finished elementary education	2	1%
Elementary education	60	17%
High school education	153	43%
Graduate level	108	30%
Post-graduate level and above	33	9%
Total	356	100%

Income levels of respondents varied, but the majority of respondents (53%) indicated having a monthly salary/income that is between 100,000 RWF and 300,000 RWF (Table 10).

Table 10. Income levels of respondents.

Income	n	Percentage
< 100,000 RWF	52	15%
100,000 RWF – 300,000 RWF	187	53%
300,000 RWF – 500,000 RWF	70	20%
500,000 RWF – 700,000 RWF	31	9%
> 700,000 RWF	16	4%
Total	356	100%

Finally, respondents indicated the size of their household, including themselves. The average number of household members was 5, which was also the most often mentioned household size (Table 11).

Table 11. Household size of respondents.

Household size	n	Percentage
1-2 members	26	7%
3-4 members	112	31%
5-6 members	130	37%
7-8 members	61	17%
9+ members	27	8%
Total	356	100%
Average & most common size		5

3.1.1 Organic product potential

On average, **more than two-thirds of respondents** (69%) indicated that they currently **purchase (part of) their produce as organic** (>0%), as shown in Table 12. Most respondents (71%) purchased (part of their) vegetables as organic, while the least respondents (67%) purchased (part of) their herbs and spices as organic. Although, it should be noted that the differences between the product groups are only small.

Table 12. The percentage of respondents purchasing (part of) their produce as organic.

How much of the XXX do you buy organically (on average)?				
Type of produce	**Organic**		**Non-organic**	
	n	**Percentage**	**n**	**Percentage**
Fruits	250	70%	105	30%
Vegetables	252	71%	104	29%
Roots and tubers	245	69%	110	31%
Herbs and spices	235	67%	114	33%
Wheats, seeds and nuts	242	69%	109	31%
Animal products	241	68%	114	32%
Average		69%		31%

Respondents who buy (part of their) produce as organic (>0%) indicated that, on average, more than **one-third** (36%) of the **products they buy are organic**, as seen in Table 13. Respondents were informed at the start of the survey (after answering demographical questions) that the term 'organic' is defined as: "products that are grown, processed and certified according to specific guidelines that prioritize environmental sustainability, biodiversity, and soil health." It can thus be assumed that respondents answered the questions with this information in mind.

It stands out that organic buyers purchase nearly half of all animal products (43%) as organic. For herbs and spices, this is, however approximately 31%. It should be noted that the standard deviation is relatively high, meaning the amount of organic produce bought varies between respondents.

Table 13. The average percentage of produce purchased as organic among organic buyers.

How much of the XXX do you buy organically (on average)?		
Type of produce	**Average bought organic**	
Fruits	34%	25%
Vegetables	36%	26%
Roots and tubers	38%	26%
Herbs and spices	31%	23%
Wheats, seeds and nuts	34%	25%
Animal products	43%	26%
Average	36%	25%

Respondents were also asked to indicate their average weekly purchase quantity for each type of product, as shown in Table 14. **Roots and tubers** (2551 g) and **vegetables** (2058 g) are the **most commonly purchased products by weight**. By combining this data with the percentage of produce purchased as organic (Table 12The average organic purchase per respondent could be calculated. In terms of weight, roots and tubers (661 g) and animal products (552 g) are mostly purchased in organic form, while herbs and spices (59 g) are the least purchased as organic.

Table 14. The average weekly purchase of organic produce among respondents.

On average, how much of each of these XXX do you purchase per week?		
Type of produce	**Purchased on average (g)**	**Organic purchase on average (g)**
Fruits	1782	432
Vegetables	2058	525
Roots and tubers	2551	661
Herbs and spices	284	59
Wheats, seeds and nuts	1573	369
Animal products	1912	552

Details per product group

Within the fruit product group, **bananas are the most popular** (98%), followed closely by avocados (93%), pineapples (86%), and mangoes (85%), all with high levels of preference (Figure 2). Passion fruit, oranges, and tree tomatoes also maintain strong popularity, with over 80% of respondents purchasing them. On the other hand, apples (5%), mandarins (3%), and raspberries (3%) are the least purchased.

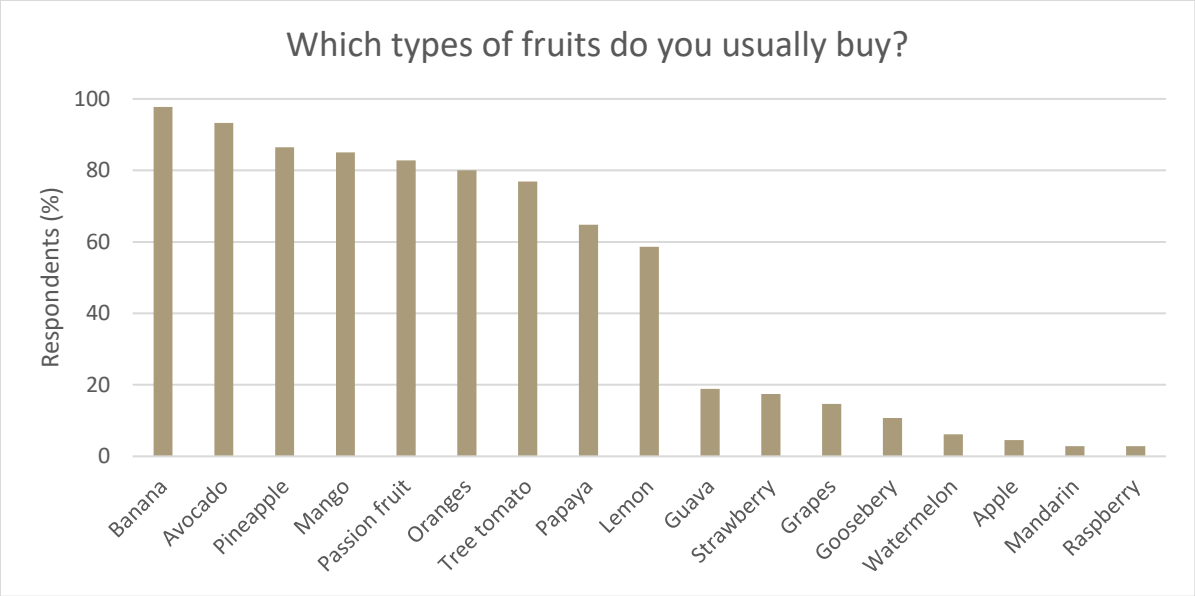


Figure 2. The purchasing behaviour among respondents for fruits

For the vegetables, **tomatoes**, onions, and carrots are the **most popular**, with 96%, 92%, and 90% of respondents buying these vegetables, respectively (Figure 3). Other widely purchased vegetables include cabbage, eggplant, and French beans, with over 80% of respondents indicating that to buy them. On the other hand, vegetables such as cauliflower, broccoli, and mushrooms show more moderate demand, purchased by 37%, 32%, and 24% of respondents, respectively. At the lower end of the spectrum, kale (6%), baby corn (3%), beetroot (2%), and

cassava leaves (2%) are the least purchased, with very low percentages of respondents buying them.

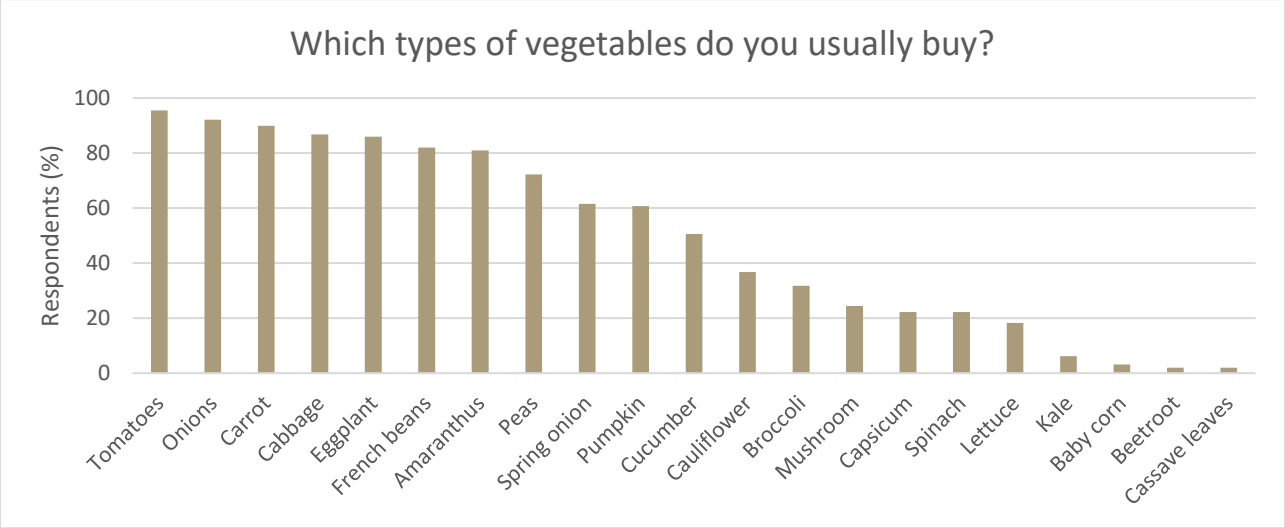


Figure 3. The purchasing behaviour among respondents for vegetables.

Regarding roots and tubers, **potatoes** (98%), sweet potatoes (90%), and cassava (89%) are by far the **most popular** choices among the respondents, as shown in Figure 4. In contrast, less common roots such as plantains (1%) and taro (1%) are rarely purchased.

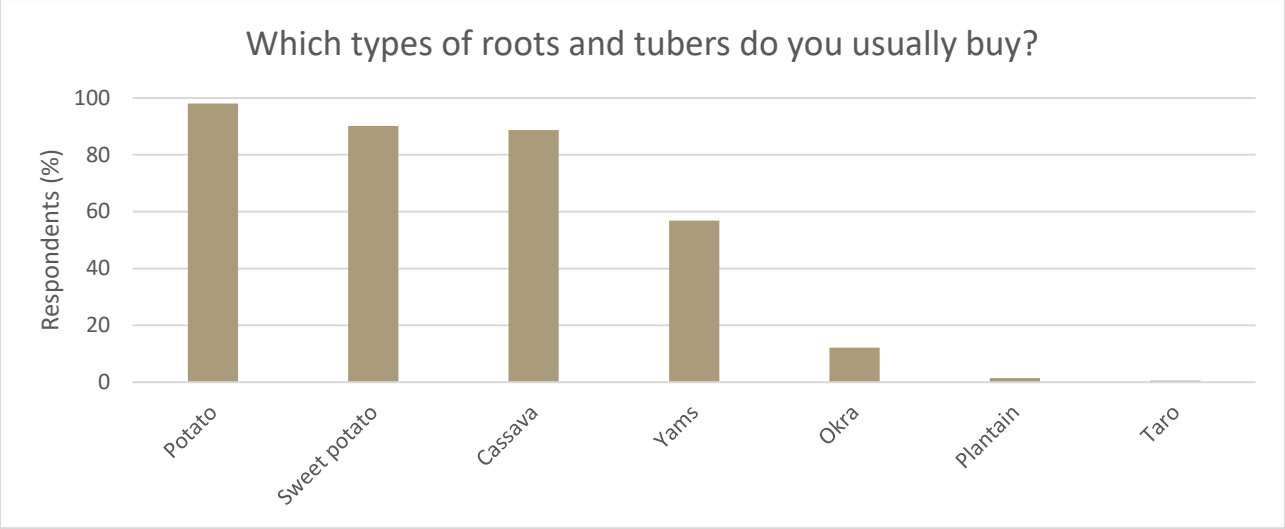


Figure 4. The purchasing behaviour among respondents for roots and tubers.

Among herbs and spices, **ginger** (92%) and garlic (89%) are purchased the **most commonly** as illustrated in Figure 5. Other commonly purchased herbs include mint (47%) and rosemary

(35%). Cardamom (1%) and cilantro (3%) are bought by only a small percentage of the respondents.

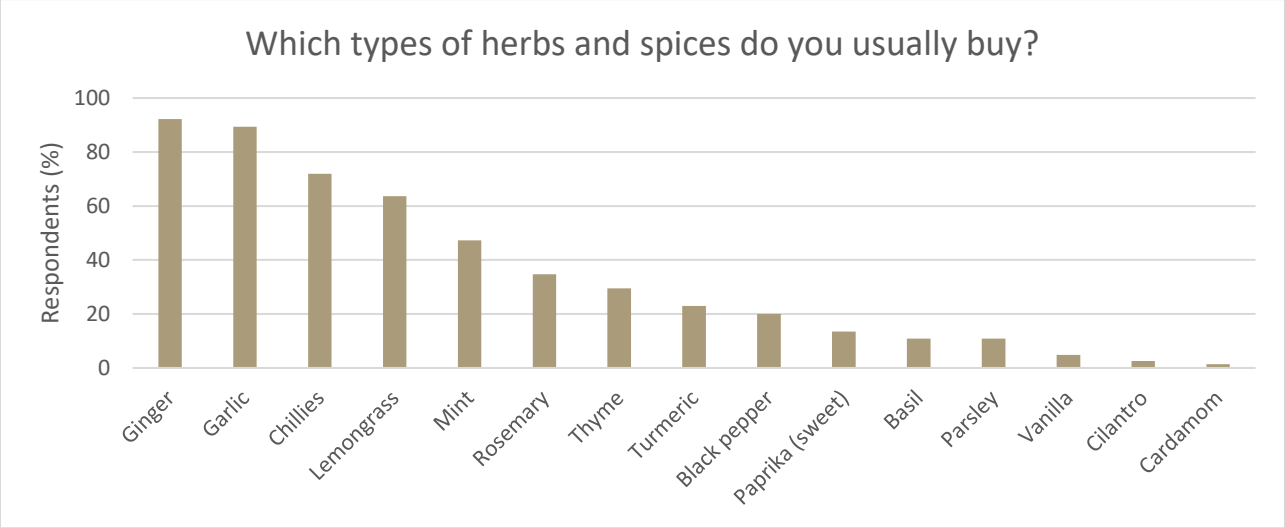


Figure 5. The purchasing behaviour among respondents for herbs and spices.

In the category of wheats, seeds, and nuts, **rice** (99%), peanuts (86%), and maize (86%) are the **most popular** among the respondents (Figure 6). Peanuts and maize are also highly favoured, with 86% of respondents buying them. The demand for more specialized grains and nuts such as macadamia, almonds, cashews, chia seeds, millet, quinoa, and walnuts is significantly lower, with purchase rates ranging from 5% to 0%.

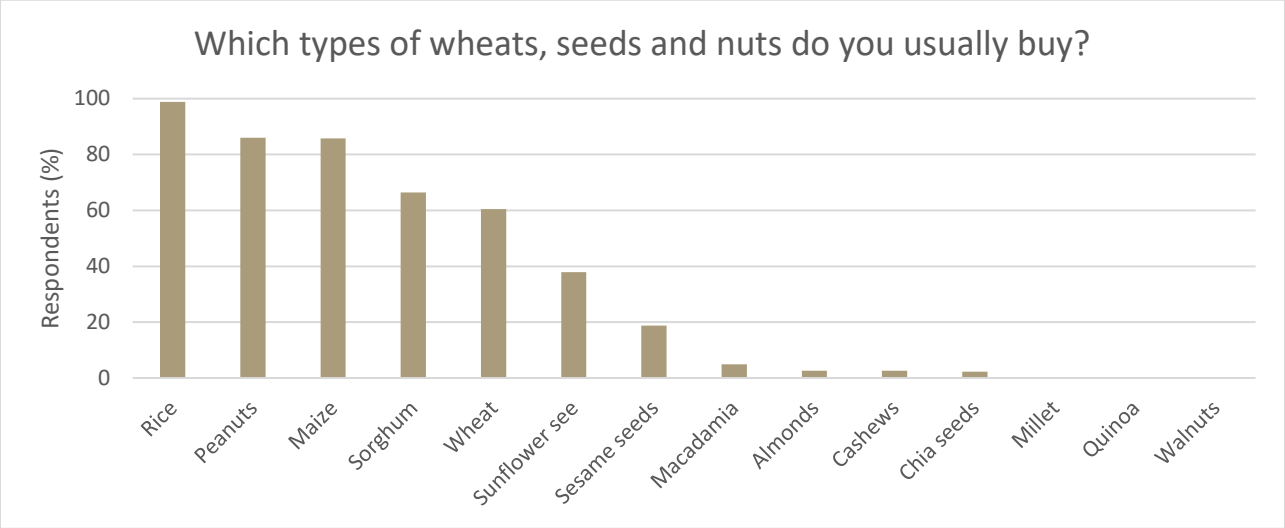


Figure 6. The purchasing behaviour among respondents for wheats, seeds and nuts.

The data on animal product purchasing preferences shows that **meat, milk**, and eggs are the **most commonly purchased** items, with 97%, 96%, and 94% of respondents indicating they buy these products, respectively (Figure 7). However, products like cheese, fish, butter, ice

cream, and mayonnaise have much lower demand, with only 7%, 3%, 1%, and 0% of respondents buying them.

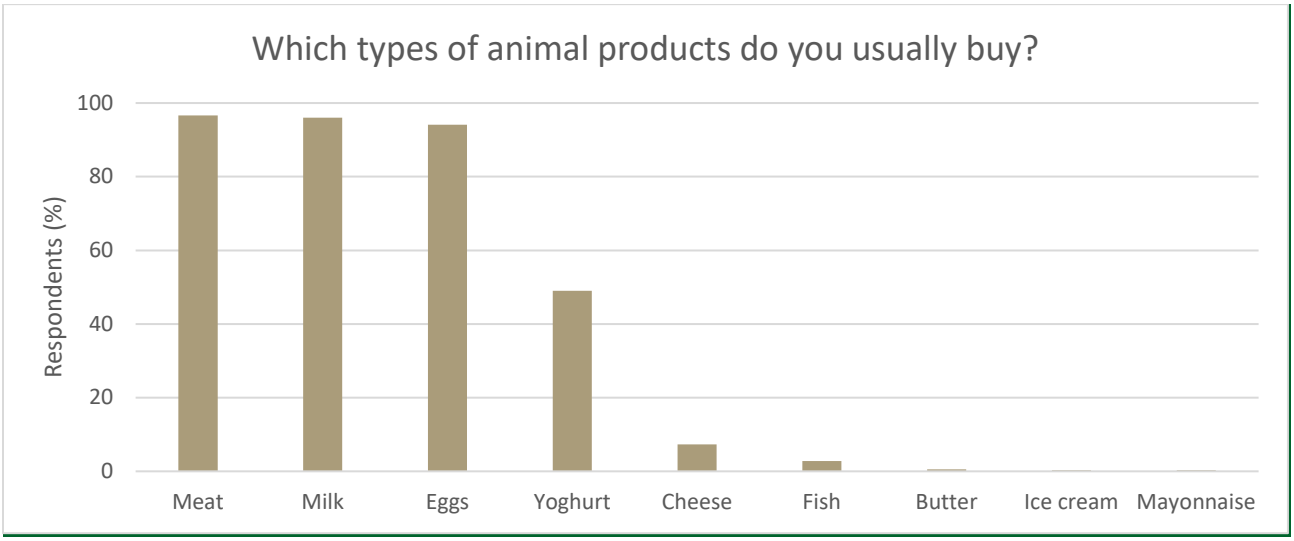


Figure 7. The purchasing behaviour among respondents for animal products.

3.1.2 Requirements and trends

Amongst the respondents, there was a **high likelihood to purchase organic** agricultural products in the next 6 months, with 86% being (very) likely to do so (Figure 8).

Figure 8. Likelihood of respondents to purchase organic agricultural products in the next 6 months.

For the willingness to switch to organic agricultural produce, 36% of the respondents are motivated to make a substantial switch (75-100%), a nearly equal portion (32.87%) would consider switching only a small fraction (0-25%) (Figure 9). Together, these groups constitute 69% of the sample, showcasing a **distinct split between consumers who are happily switching and those who are more hesitant**.

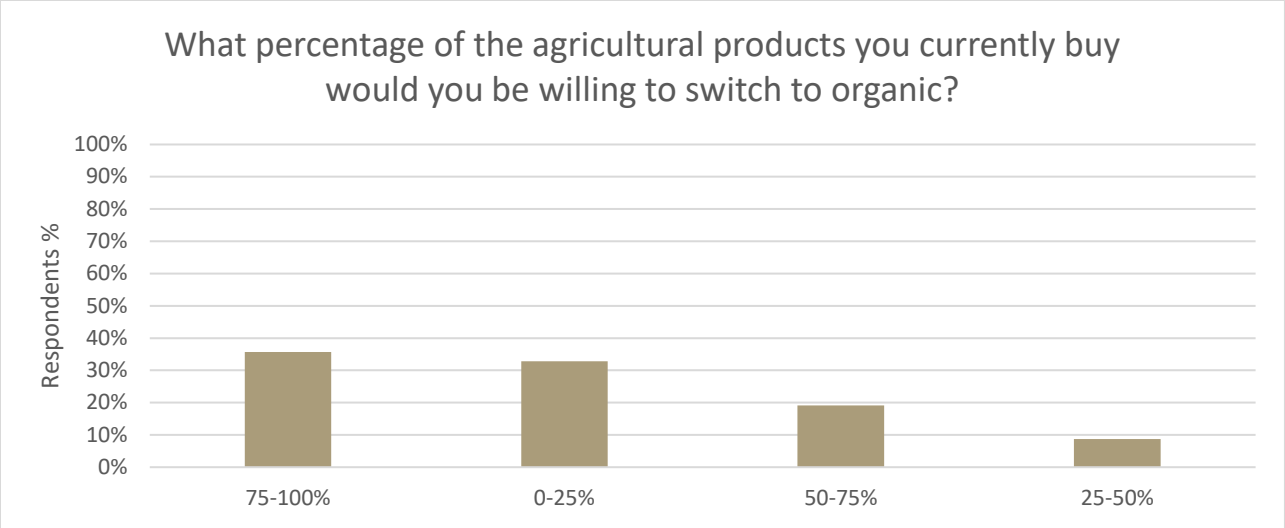


Figure 9. Willingness to switch to organic agricultural produce.

This hesitation of some respondents to switch to organic agricultural products can be explained by several challenges respondents face when trying to purchase organic agricultural products (Figure 10). The most significant issue is **limited availability**, cited by 80% of respondents. The second most mentioned (66%) challenge was a **lack of information** about organic products. However, taste and quality concerns are less prevalent, with only 10% and 2% mentioning them, respectively.

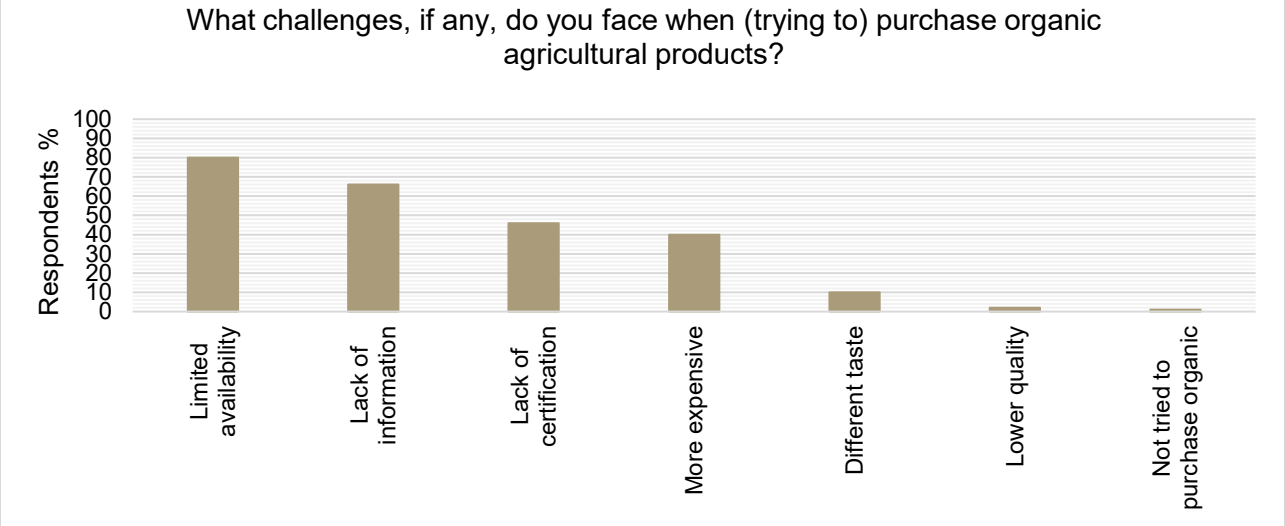


Figure 10. Challenges when (trying to) purchase organic agricultural produce.

The challenge of organic agricultural products being more expensive was found by 41% of the respondents. This relates to the findings that the majority of Rwandan consumers are only comfortable with a slight increase (1-20%) in the price of organic agricultural produce compared to conventional ones (Figure 11). **Most respondents** (58%) are **willing to pay** this **small premium**. The second most respondents (17%) are resistant to paying higher prices and prefer to pay the same price as for conventional products. Thirdly, 14% of the respondents is willing to

pay a moderate premium (21-40%). Very few respondents indicated to be willing to pay more than 40% extra for organic agricultural produce, compared to conventional ones.

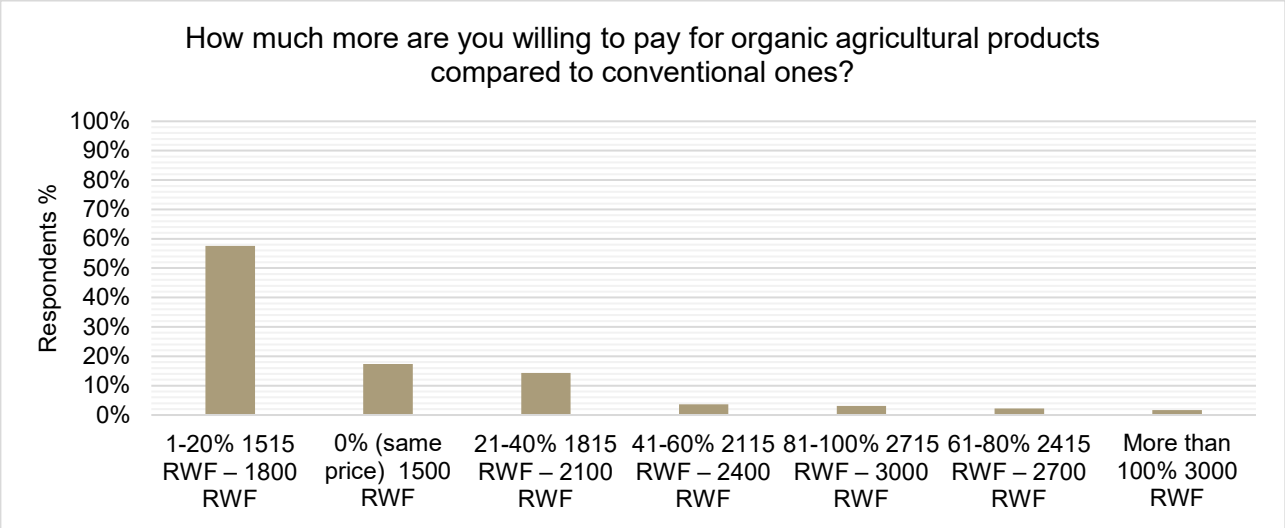


Figure 11. Willingness to pay more for organic agricultural produce compared to conventional produce.

There however also seems to be potential, as all reasons for being willing to pay more for organic agricultural produce, including health, quality, taste, environmental concerns, and supporting local farmers, were deemed valid by at least 75% of the respondents (Figure 12). A strong 96% of respondents cited **health benefits** as the **main motivator**, followed by 88% highlighting the higher quality and 85% emphasizing the better taste of organic products.

Figure 12. Reasons willing to pay more for organic agricultural produce.

Respondents were asked several statements related to organic agricultural produce to understand the extent to which they agreed with them (Table 15). Respondents **mostly agreed** with **organic products being healthier**, with 98% of the respondents answering positively. **Least respondents were willing to travel further** to buy organic products, with 79% of them answering positively, and 51% strongly agreeing. Interestingly, the majority of the respondents (90%) strongly agreed that the price of organic products is justified by their benefits. Although respondents indicated to understand this, the previous results have confirmed that consumers are only willing to pay a small premium (1-20%) (Figure 11).

Table 15. The extent to which respondents agreed with statements regarding organic agricultural produce.

Statement	Positive answer (strongly) agree	Strongly agreed	Agreed
I prefer organic products over conventional ones	96%	73%	23%
Organic products are healthier	98%	75%	23%
The price of organic products is justified by their benefits	90%	63%	27%
I am willing to travel further to buy organic products	79%	51%	28%
Organic farming is important for environmental sustainability	96%	64%	32%
Supporting organic farmers is important to me	79%	68%	29%

In terms of preferences where the respondents would like to buy organic agricultural products, 84% of respondents **favoured** to buy organic produce at **public markets** (Figure 13). Dedicated organic markets and supermarkets follow with 38% of respondents preferring these locations.

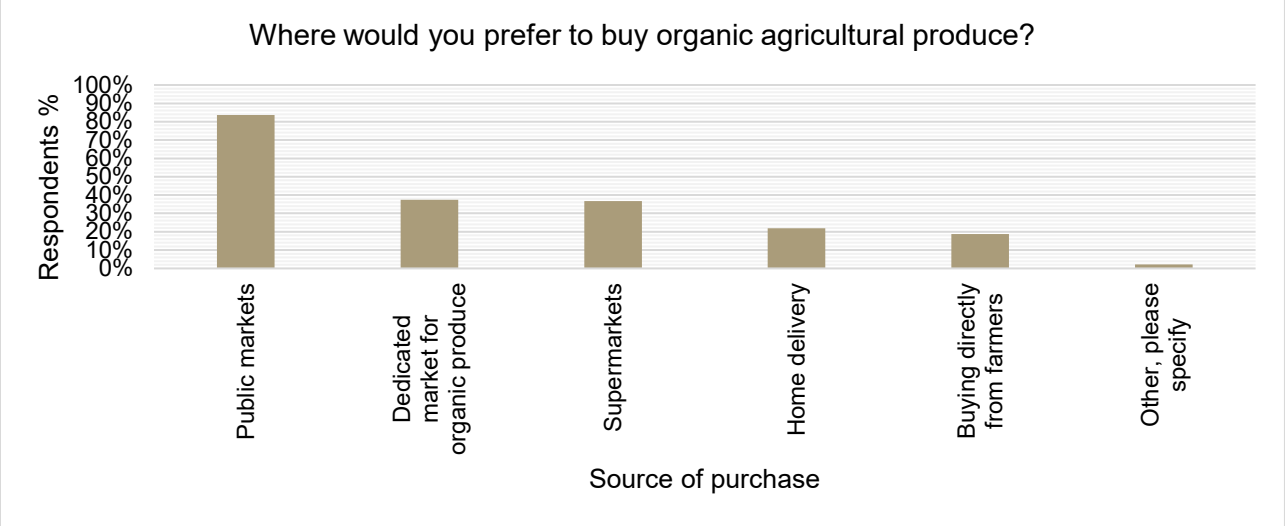


Figure 13. Preferences for locations to purchase organic agricultural produce.

3.1.3 Consumer profile

To determine whether a certain type of consumer would be more likely to purchase organic agricultural products or to pay more for organic agricultural products, several demographics (gender, age, education, status, type of living area, income, and household size) were linked to:

- The likelihood of purchasing organic produce in the next 6 months.

- Whether the likelihood of buying organic produce has changed in the past year.
- What percentage of agricultural produce was the respondent willing to switch to organic produce?
- The willingness to pay more for organic agricultural produce, compared to conventional ones.
- The attitude towards organic produce, measured by several statements asking to what extent the respondent agrees with that statement (e.g. I prefer organic products over conventional ones, Organic products are healthier).

All results that revealed a relation between certain consumer demographics and the above-indicated indicators for the likelihood of purchasing organic produce or willingness to pay more for organic produce are illustrated below. All results that revealed no relation and that are not reported below are illustrated in Annex IV.

Gender

For gender, there was a statistically significant difference found between the different gender groups for their willingness to pay more for organic agricultural products (Table 16). Male respondents were most willing to pay more for organic agricultural products (average of 2,50 on a scale from 1-7), while the 'prefer not to say' group was least willing to pay more for organic agricultural products (average of 1,5 on a scale from 1-7). It should however be noted that the most deviating group is the 'prefer not to say' group, which is a very small group that only contains two respondents. This is also the group that has likely caused the statistically significant differences between the groups. Therefore, it can not be stated that males are more willing, compared to females, to pay more for organic agricultural products.

Table 16. The willingness to pay more for organic agricultural products for the different gender groups.

How much more are you willing to pay for organic agricultural products compared to conventional ones?		
Gender	**n**	**Average[1]**
Male	151	2.50
Female	203	2.19
Prefer not to say	2	1.5
Conclusion: There were statistically significant differences between group means as determined by one-way ANOVA (F(2.353) = 3.20, p = .04).		
[1] 0% = 1, 1-20% = 2, 21-40% = 3, 41-60% = 4, 61-80% = 5, 81-100% = 6, > 100% = 7		

Age

There was a statistically significant relationship between age and the attitude towards organic products, as determined by linear regression (β = 0.0070, t(354) = -2.03, p = 0.04). These results suggest a very small negative relationship between age and attitude towards organic products, meaning that the **respondents that were older**, **tend to have a slightly less favourable attitude** towards organic products.

Education

The demographic education revealed no statistically significant differences between the groups with different education levels and any of the indicators for the likelihood of purchasing organic produce or willingness to pay more for organic produce.

However, the reasons why the respondents would be willing to pay more for organic agricultural products seemed to differ (Table 17). Especially a difference can be seen for the respondents with a post-graduate degree since they least often mentioned (67%) environmental benefits to be a reason for making them willing to pay more for organic agricultural products. It should however be noted that this group of respondents was relatively small, and conclusions should be drawn carefully.

Table 17. Percentage of respondents that agreed with a reason to be willing to pay more for organic agricultural products.

What reasons would make you willing to pay more for organic agricultural products?						
		The percentage of respondents who ticked the reason				
Education	**n**	**Health benefits**	**Environmental benefits**	**Better taste**	**Support local farmers**	**Higher quality**
Not finished elementary education	2	100%	100%	100%	50%	50%
Elementary education	60	97%	85%	87%	78%	90%
High school education	153	97%	84%	92%	80%	93%
Graduate level	108	96%	73%	76%	68%	85%
Post-graduate level and above	33	91%	67%	76%	70%	73%

Status

The results revealed a statistically significant difference between the different status groups and their willingness to pay more for organic agricultural products (Table 18). Tourists and visitors were most willing to pay more for organic agricultural products (average of 3,40 on a scale of 1-7) and citizens were least willing to pay more for organic agricultural products (average of 2,27 on a scale of 1-7). It should be noted that the groups of residents and tourists/visitors are relatively small. Furthermore, the variance in their scores is higher compared to that of the citizens (citizens: 1,35; residents: 3,46; tourist/visitors: 3,80). Conclusions regarding residents and tourists/visitors being more willing to pay for organic agricultural products should thus be carefully drawn, as it might not apply to all residents and tourists/visitors.

Table 18. The willingness to pay more for organic agricultural products for the different status groups.

How much more are you willing to pay for organic agricultural products compared to conventional ones?		
Status	**n**	**Average[1]**
Citizen	337	2.27
Resident	14	3.07
Tourist/visitor	5	3.40
Conclusion: There were statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 5.02, p = .007).		
[1] 0% = 1, 1-20% = 2, 21-40% = 3, 41-60% = 4, 61-80% = 5, 81-100% = 6, > 100% = 7		

Type of living area

Again, statistically significant differences are found regarding the willingness to pay more for organic agricultural products, this time about the respondent's type of living area (Table 19). Respondents living in rural areas were most willing to pay for organic agricultural products with an average of 2,89 on a scale of 1-7, which corresponds to a price increase of 21-40%. Respondents living in suburban and urban areas were found to be equally willing to pay more for organic agricultural products (resp. 2,28; 2,27, corresponding with a price increase of 1-20%). It should be noted that the group of respondents living in rural areas was relatively small and the variance in their scores was higher compared to the other groups (rural: 2,84; suburban: 1,29; urban: 1,37). Conclusions regarding consumers living in rural areas being more willing to pay for organic agricultural products should thus be carefully drawn, as it might not apply to all consumers in rural areas.

Table 19. The willingness to pay more for organic agricultural products for the different types of living areas.

How much more are you willing to pay for organic agricultural products compared to conventional ones?		
Living area	**n**	**Average[1]**
Rural	28	2.89
Suburban	80	2.28
Urban	248	2.27
Conclusion: There were statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 3.44, p = .03).		
[1] 0% = 1, 1-20% = 2, 21-40% = 3, 41-60% = 4, 61-80% = 5, 81-100% = 6, > 100% = 7		

Furthermore, no underlying reason could be found explaining why consumers living in rural areas would be willing to pay more for organic agricultural products, as indicated in Table 20. This table shows that respondents from rural areas did not tick certain reasons more, compared to the other living areas, making them willing to pay more for organic agricultural products.

Table 20. Percentage of respondents that agreed with a reason to be willing to pay more for organic agricultural products.

What reasons would make you willing to pay more for organic agricultural products?					
	Percentage of respondents that ticked the reason				
Rural	93%	68%	82%	61%	86%
Suburban	94%	75%	85%	78%	85%
Urban	98%	82%	85%	75%	90%

Another interesting result is the significant difference between the types of living areas in their attitude towards organic agricultural products (Table 21). Respondents living in urban areas were found to have the most positive attitude towards organic agricultural products (average of 4,73 on a scale of 1-5) and respondents from rural areas were found to have the least positive attitude towards organic agricultural products (average of 4,23 on a scale of 1-5). This result seems contrary to the previous results, where respondents from rural areas were found to be

willing to pay more for organic agricultural products, hence confirming that that statement should be made carefully.

Table 21. Attitude towards organic agricultural products for the different types of living areas.

Attitude towards organic agricultural products		
Living area	**n**	**Average[1]**
Rural	28	4.23
Suburban	80	4.54
Urban	248	4.73
Conclusion: There were no significant differences between group means as determined by one-way ANOVA (F(2,353) = 7.16, p = < .001).		
[1] strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5		

Looking more in detail at the attitude towards organic agricultural products (Table 22), **respondents from urban areas** had a more **positive attitude towards organic agricultural products** in all aspects, compared to respondents from rural areas.

Table 22. Attitude towards organic agricultural products for the different types of living areas.

Attitude towards organic agricultural products						
Living area	**Price justified by benefits[1]**	**Support organic farmers important[1]**	**I prefer organic products[1]**	**Organic products are healthier[1]**	**Willing to travel further for organic[1]**	**Organic important for sustainability[1]**
Rural	3.96	4.32	4.36	4.43	3.54	4.36
Suburban	4.44	4.45	4.54	4.65	4.05	4.50
Urban	4.54	4.70	4.73	4.76	4.35	4.63
Statistics	Significant F(2,353) = 6.43, p = .002	Significant F(2,353) = 6.57, p = .002	Significant F(2,353) = 5.38, p = .005	Significant F(2,353) = 4.52, p = .01	Significant F(2,353) = 10.6, p < .001	Significant F(2,353) = 3.06, p = .04
[1] strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5						

Household size

There was a statistically significant relationship between household size and the willingness to switch a percentage from non-organic to organic agricultural products, as determined by linear regression (β = 0.11, t(341) = 3.59, p < .001). These results suggest a small positive relationship between household size and willingness to switch a percentage from non-organic to organic agricultural products, meaning that the respondents that were **part of a larger household**, tend to be so**mewhat more inclined to switch a percentage from non-organic to organic agricultural products**.

However, there were no statistically significant relationships found between household size and:

- the likelihood of purchasing organic produce, as determined by linear regression (β = 0.031, t(354) = 1.49, p = 0.14).
- the reported change of likelihood to purchase organic agricultural products over the past year, as determined by linear regression (β = 0.022, t(354) = 1.84, p = 0.07).

- the attitude towards organic products, as determined by linear regression (β = 0.0245, t(354) = 0.17, p = 0.17).
- the willingness to pay more for organic agricultural products, as determined by linear regression (β = 0.0047, t(354) = 0.16, p = 0.87).

This, therefore, does not seem to explain the statistically significant relationship between household size and the willingness to switch a percentage from non-organic to organic agricultural products. A possible explanation can be found in the reasons that would make respondents from a larger household willing to pay more for organic agricultural products. Table 23 namely demonstrates that **respondents in a household larger than nine members consider every reason more important** compared to all other household size groups.

Table 23. Percentage of respondents that agreed with a reason to be willing to pay more for organic agricultural products.

What reasons would make you be willing to pay more for organic agricultural products?						
		Percentage of respondents that ticked the reason				
1-2 members	26	96%	77%	73%	58%	73%
3-4 members	112	95%	81%	81%	77%	88%
5-6 members	130	97%	78%	85%	74%	88%
7-8 members	61	97%	74%	90%	75%	92%
9+ members	27	100%	89%	96%	85%	93%

Income

A statistically significant difference was found between the different income groups and their likeliness to purchase organic agricultural produce in the next six months (Table 24). However, these differences do not show consistency, as the income group most likely to purchase organic agricultural produce is the group of 100,000 RWF – 300,000 RWF, scoring an average of 4,46. While the income group least likely to purchase organic agricultural produce is the group of 500,000 RWF – 700,000 RWF, scoring an average of 3,90.

Table 24. The likelihood of purchasing organic agricultural produce for the different income groups.

How likely are you to purchase organic agricultural produce in the next 6 months?		
Income	**n**	**Average[1]**
< 100,000 RWF	52	4.31
100,000 RWF – 300,000 RWF	187	4.46
300,000 RWF – 500,000 RWF	70	4.17
500,000 RWF – 700,000 RWF	31	3.90
> 700,000 RWF	16	4.13
Conclusion: There are statistically significant differences between group means as determined by one-way ANOVA (F(4,351) = 3.87, p = .004).		
[1] very unlikely = 1, unlikely = 2, neutral = 3, likely = 4, very likely = 5		

Another statistically significant difference was found between the different income groups and the percentage of agricultural products they would be willing to switch to organic (Table 25). Again, the results do not show full consistency, although in this case, the highest income group is also willing to switch the highest percentage of agricultural produce to organic, with a score of 3,33 falling in the range of 50-75%.

Table 25. Willingness to switch percentage of agricultural products currently bought to organic for the different income groups.

What percentage of the agricultural products you currently buy would you be willing to switch to organic?[1]		
Income	**n**	**Average[2]**
< 100,000 RWF	52	3.10
100,000 RWF – 300,000 RWF	183	2.45
300,000 RWF – 500,000 RWF	65	2.31
500,000 RWF – 700,000 RWF	28	2.93
> 700,000 RWF	15	3.33
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(4.338) = 5.30, p < .001).		
[1] This question was only answered if the answer to How likely are you to purchase organic agricultural produce in the next 6 months? Was not very unlikely or unlikely. [2] 0-25% = 1, 25-50% = 2, 50-75% = 3, 75-100% = 4		

Finally, statistically significant differences can be found between the different income groups and their willingness to pay more for organic agricultural produce (Table 26). In this case, the results show consistency as the **lowest income group** is also **willing to pay the least extra for organic** agricultural products, with a score of 2,17, matching the willingness to pay about 1-20% more. The **highest income group** is **willing to pay the most extra for organic** agricultural products, with a score of 3,56, matching the willingness to pay about 21-40% more.

Table 26. Willingness to pay more for organic agricultural produce for the different income groups.

How much more are you willing to pay for organic agricultural products compared to conventional ones?		
Income	**n**	**Average[1]**
< 100,000 RWF	52	2.17
100,000 RWF – 300,000 RWF	187	2.21
300,000 RWF – 500,000 RWF	70	2.20
500,000 RWF – 700,000 RWF	31	2.84
> 700,000 RWF	16	3.56
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(4,351) = 6.72, p < .001).		
[1] 0% = 1, 1-20% = 2, 21-40% = 3, 41-60% = 4, 61-80% = 5, 81-100% = 6, > 100% = 7		

3.2 Conclusion consumer results

3.2.1 Organic product potential

The results show that there is a significant demand for organic agricultural products in Rwanda. On average, 69% of respondents indicated that they currently purchase at least some of their produce as organic. Respondents were informed at the start of the survey (after answering demographical questions) that the term ‘organic’ is defined as: “products that are grown, processed and certified according to specific guidelines that prioritize environmental sustainability, biodiversity, and soil health.” It can thus be assumed that respondents answered the questions with this information in mind.

Among the respondents who purchase organic produce, an average of 36% of their produce is organic. This indicates a substantial portion of Rwandan consumers are incorporating organic produce into their shopping habits. However, amongst the consumers that purchase (part of) their products organic, there are quite some differences in the amounts they purchase organically. This could indicate two separate consumer groups: one that already purchases a lot of organic, and one group that is starting to purchase organic products.

While there is a general demand for organic produce across product categories, the most popular products are:

- Fruits: Bananas, avocados, pineapples, and mangoes.
- Vegetables: Tomatoes, onions, and carrots.
- Roots and Tubers: Potatoes, sweet potatoes, and cassava.
- Herbs and Spices: Ginger and garlic.
- Wheats, Seeds, and Nuts: Rice, peanuts, and maize.
- Animal Products: Meat, milk, and eggs.

Roots and tubers, at 661 grams, and animal products, at 552 grams, are the most purchased organic produce categories by weight per week, per household. Herbs and spices, at 59 grams, are the least.

3.2.2 Requirements and trends

The study highlights a positive trend in the demand for organic agricultural products in Rwanda, as 86% of the respondents indicated they were (very) likely to purchase organic agricultural products in the next half year. This rise in demand is supported by several studies performed by Kalra et al. (2020), Chandrakala (2024), and Kamboj et al. (2023). This positive trend is driven by:

- **Health Benefits**: A strong 96% of respondents cited health benefits as their main motivation for purchasing organic produce. This aligns with the global trend of consumers seeking healthier and more natural food options. Previous studies have also highlighted that health is a concern for consumption (Basha and Lal, 2019; Gundala and Cook, 2021; Kamboj et al., 2023; Tandon et al., 2020).
- **Higher Quality**: 88% of respondents believe that organic produce is of higher quality than conventional produce. This perception may be influenced by the belief that organic farming practices lead to better taste and nutritional value.

- **Better Taste**: 85% of respondents emphasized the better taste of organic products as a reason for purchasing them. This suggests that consumers are becoming more discerning about the flavour of their food and are willing to pay a premium for produce perceived to have a better taste.
- Previous studies have also highlighted that quality and taste are also motivating factors, which may enhance the value perception of organic foods. This implies that there is room for growth if affordability becomes a focus (Andrianto, 2019; Konuk, 2021).

While a significant portion of Rwandan consumers are open to buying organic, their willingness to fully switch from conventional products varies. A closer look at consumer willingness to switch to organic products reveals two primary profiles: one highly committed group willing to shift 75-100% of their agricultural purchases to organic and a hesitant group only willing to shift 0-25%. This suggests a possible divide between highly committed and hesitant consumers, potentially influenced by factors like price sensitivity, availability, and awareness of organic benefits.

Regarding price sensitivity, Rwandan consumers indicate various reasons to be willing to pay more for organic agricultural products, most are only comfortable with a price increase of 1-20% compared to conventional produce. This indicates a price sensitivity among consumers, highlighting the importance of affordability in driving wider adoption of organic products. These insights are confirmed by previous research, whereby it was indicated that although organic demand is growing, the price has a considerable influence on this demand (Smoluk-Sikorska et al., 2023).

The limiting factors of availability and awareness of organic products are confirmed by the challenges consumers face. The most significant challenge faced by consumers is the limited availability of organic products, cited by 80% of respondents. Many consumers are found to only buy organic products when they encounter them, rather than actively seeking them out. This indicates a supply-demand gap, requiring efforts to increase the production and distribution of organic produce, especially in areas where consumer demand is high. The second most common challenge (66%) is the lack of information about organic products. This highlights the need for comprehensive educational campaigns to raise consumer awareness about the benefits, sourcing, and certification of organic produce. Building consumer trust through transparency and accessible information is crucial for driving market growth.

Public markets emerge as the preferred venue for purchasing organic products. To support and capitalize on this demand, organic producers and retailers can focus on expanding distribution networks—particularly in local markets, where demand is high.

3.2.3 Consumer profile

Several demographic factors influence the likelihood of purchasing organic produce and the willingness to pay a premium for it:

- **Age:** Older consumers tend to have a slightly less favourable attitude towards organic products. This may be due to ingrained purchasing habits or a lower awareness of the benefits of organic produce.
- **Living Area**: Consumers in urban areas have a more positive attitude toward organic products compared to those in rural areas. This may reflect greater access to information in urban areas.
- **Household Size:** Consumers in larger households are somewhat more inclined to switch from non-organic to organic produce. This may be related to a greater need for

healthy food options for families or increased awareness of the environmental and social benefits of organic agriculture.

- **Income:** Higher-income groups are more willing to pay a premium for organic produce compared to lower-income groups. This suggests that affordability is a key factor in determining the adoption of organic products, particularly for lower-income consumers.

3.2.4 Overall conclusion

There is a clear opportunity to expand the organic market by focusing on:

- **Increasing Availability**: Addressing the limited availability of organic products, particularly in local markets, is crucial for wider adoption. This may involve supporting the growth of organic farming practices and improving distribution networks.
- **Educating Consumers**: Raising awareness about the benefits of organic produce, including health, environmental, and social benefits, can increase demand. This can be achieved through targeted marketing campaigns, educational programs, and collaborations with retailers.
- **Rethinking Affordability**: While reducing the price premium of organic products is a challenge, it is essential to explore ways to enhance accessibility without compromising the viability of organic farming. Given the higher costs associated with organic production, such as input availability and labour intensity, efforts could focus on communicating the true value of organic products rather than solely lowering prices. Strategies could include promoting cost transparency, highlighting the long-term benefits of organic farming, and advocating for policy support, such as subsidies or incentives, to make organic options more attainable while ensuring fair compensation for farmers.
- **Improving Certification**: Ensuring the authenticity and credibility of organic products through robust certification systems will build consumer trust. This can involve promoting transparent labelling, supporting the development of Participatory Guarantee Systems (PGS), and raising awareness about certification standards.

By addressing these challenges and capitalizing on the positive trends, the organic market in Rwanda has the potential to expand significantly, offering consumers healthier food options while contributing to the sustainable development of the agricultural sector.

3.3 Hotel results

In total, 31 hotels participated in the survey. Hotels were located in the districts of Rubavu, Musanze, and those districts that are part of the capital Kigali, see Figure 14. All of the hotels were located in an urban, densely populated area.

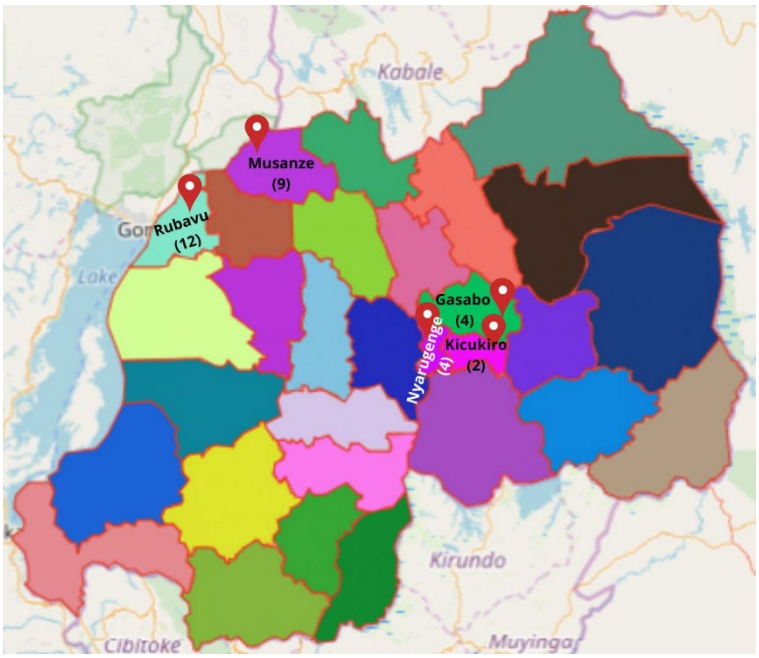


Figure 14. Amount of hotels located in each of the districts of Rwanda.

The hotel size indicated in the amount of rooms available at the hotels varied from 15 to 254 rooms, with an average of 51 rooms (Table 27).

Table 27. Hotel size indicated by the amount of rooms available at the hotels.

Amount of rooms	n
0-30	12
31-50	14
51-100	2
> 100	3
Total	31
Average: 51	

The price per night on average for the hotels is indicated in Table 28, which shows that most hotels had an average price between $50-$100 a night.

Table 28. The average price of a hotel room in the hotels for one night in USD.

Average price hotel room	n
< $50 a night	5
$50-$100 a night	17
$100-$150 a night	5
$150-$200 a night	1
$200-$300 a night	2
$300-$400 a night	0
> $400 a night	1
Total	31

3.3.1 Organic product potential

The questionnaire results reveal a consistent purchase behaviour for organic products across all categories (65%), as shown in Table 29. The 11 hotels not purchasing organic produce remain consistent across all categories, indicating that the same establishments consistently opt for non-organic options.

Table 29. The percentage of hotels purchasing (part of) their produce as organic.

How much of the XX does the hotel buy organically (on average)?				
	Organic		Non-organic	
Type of produce	**n**	**Percentage**	**n**	**Percentage**
Fruits	20	65%	11	35%
Vegetables	20	65%	11	35%
Roots and tubers	20	65%	11	35%
Herbs and spices	20	65%	11	35%
Wheats, seeds and nuts	20	65%	11	35%
Animal products	20	65%	11	35%
Average		65%		35%

Among the 20 **hotels purchasing organic**, **more than half of their produce is stated to be bought as organic** (54%), with slight variations depending on the type, see Table 30. Animal products (58%) and vegetables (56%) are the most commonly stated to be purchased organic items, while herbs and spices show the lowest percentage at 49%.

Table 30. The average percentage and standard deviation of produce purchased as organic among hotels purchasing organic produce.

How much of the XX does the hotel buy organically (on average)?		
Type of produce	**Average bought organic**	
	Percentage	**SD**
Fruits	53%	26%
Vegetables	56%	30%
Roots and tubers	54%	28%
Herbs and spices	49%	32%
Wheats, seeds and nuts	54%	27%
Animal products	58%	25%
Average	**54%**	**28%**

Table 31 outlines the average weekly purchases of produce by hotels across the various categories. Combining this data with the percentage of produce bought organic (Table 30) results in the average organic purchase per hotel. **Animal products** lead with **the highest average organic purchase** per week (4.64 kg) in terms of weight, followed by vegetables (4.37 kg) and roots and tubers (4.28 kg). Conversely, herbs and spices show the lowest organic purchase per week at just 0.75 kg, in terms of weight.

Table 31. The average weekly purchase of organic produce in hotels.

On average, how much of each of these XX does the hotel purchase per week?		
Type of produce	**Purchased on average (kg)**	**Organic purchase on average (kg)**
Fruits	11.85	4.02
Vegetables	12.18	4.37
Roots and tubers	12.34	4,28
Herbs and spices	2.37	0.75
Wheats, seeds and nuts	11.42	3.96
Animal products	12.50	4.64

The bar chart illustrates the types of fruits most commonly purchased by hotels (Figure 15). **Avocados, bananas, mangoes, lemons, passion fruit, and pineapples** are purchased by all 31 hotels, making them the most popular choices. Lemons, passion fruit, and pineapple also show high popularity, each purchased by over 90% of hotels. Conversely, kiwi (3%) and mandarin (6%) are the least purchased fruits, with very low preference.

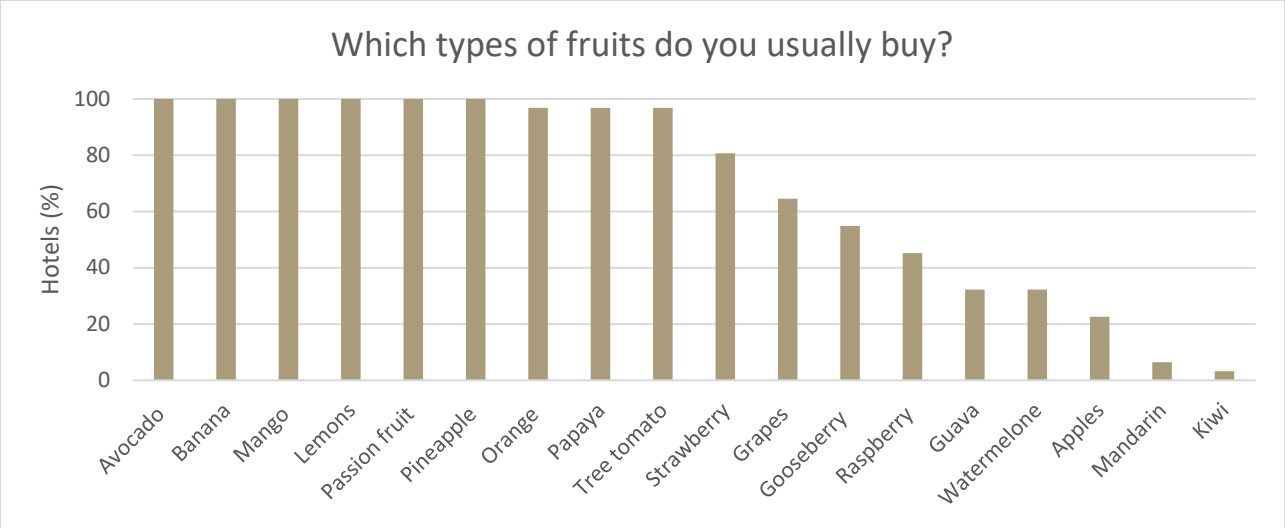


Figure 15. The purchasing behaviour among hotels for fruits.

The data on vegetable purchasing preferences shows a strong inclination toward common, widely consumed vegetables (Figure 16). **Carrots, cauliflower, onions, spring onions, and tomatoes** are the most popular, purchased by 100% of hotels. Broccoli, French beans, peas, pumpkin, and spinach follow closely, with 97% of hotels buying them. More niche vegetables like baby corn, zucchini, and beetroot are bought by only a small percentage of hotels, with 35% or fewer indicating they purchase these items.

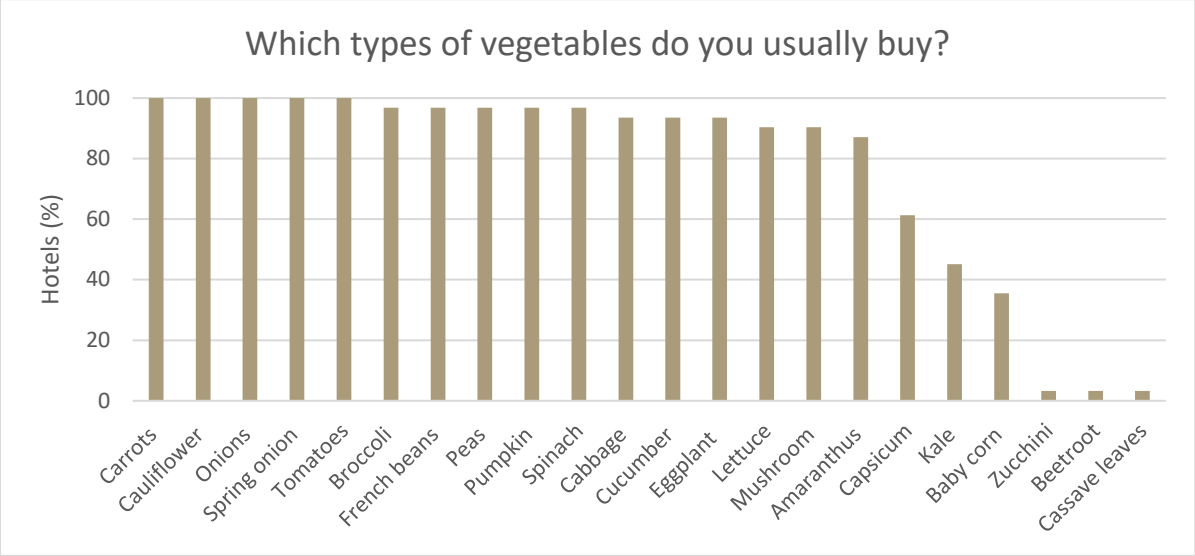


Figure 16. The purchasing behaviour among hotels for vegetables.

The data on root and tuber purchasing preferences shows that **potatoes are the most popular**, purchased by all 31 hotels (Figure 17). Cassava and sweet potatoes also have high purchase rates, with 97% of hotels buying them. The least purchased product in this product group is okra, with a purchase rate of 58%.

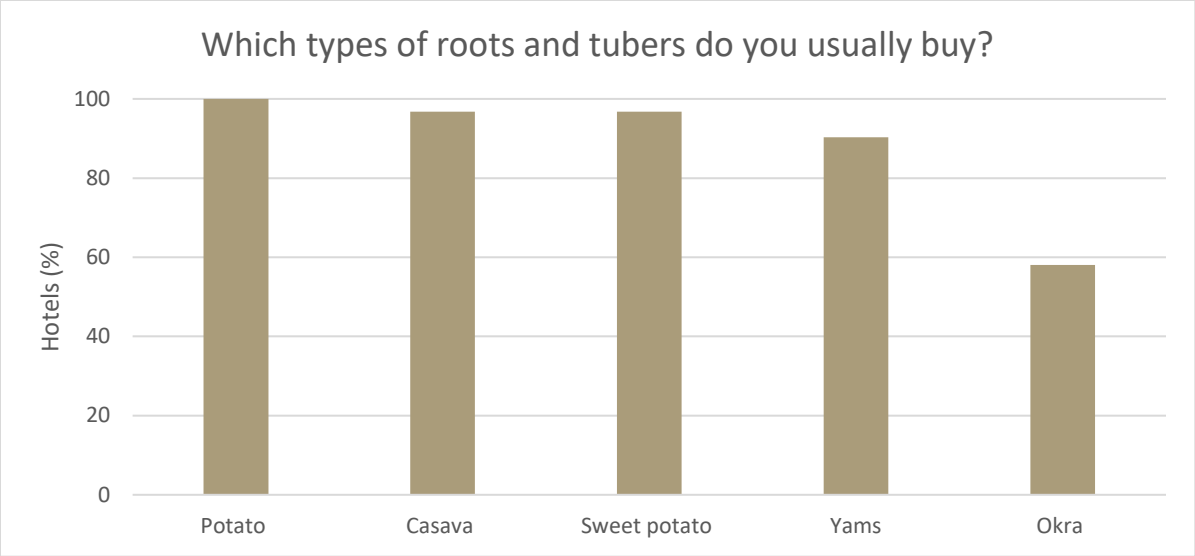


Figure 17. The purchasing behaviour among hotels for roots and tubers.

The data on herb and spice purchasing preferences shows that **chillies, ginger, and garlic** are the most commonly purchased, with all 31 hotels (100%) indicating to purchase them (Figure 18). Rosemary follows closely with 97% of hotels purchasing it, and black pepper is also popular, bought by 94% of respondents. The more niche herbs like cilantro, cardamom, and basil are less commonly bought, with 45%, 29%, and 26% of hotels purchasing them, respectively.

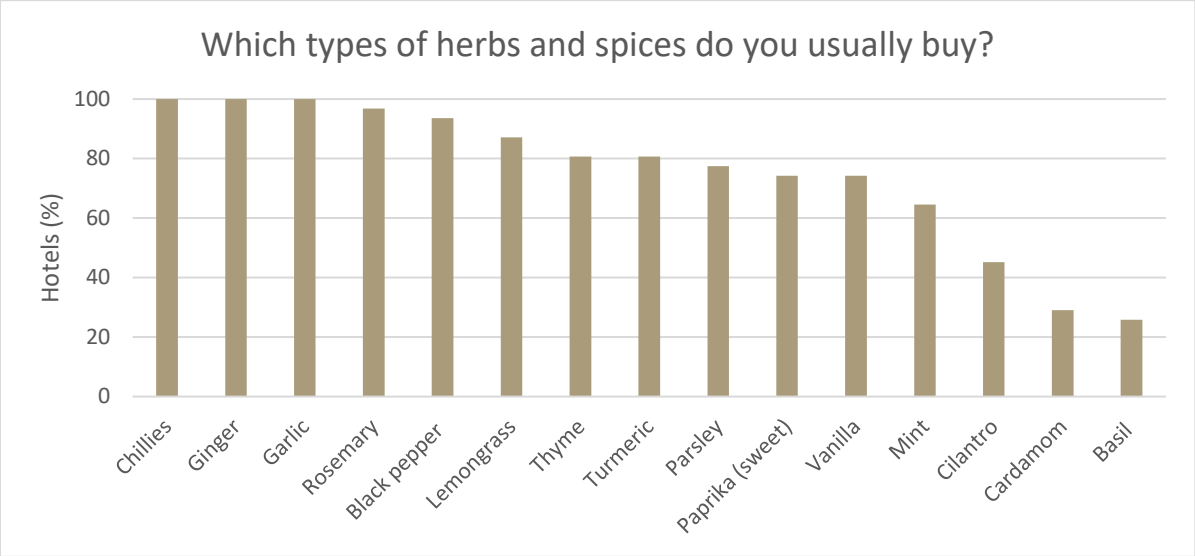


Figure 18. The purchasing behaviour among hotels for herbs and spices.

The data on wheats, seeds and nuts purchasing preferences shows that **peanuts and rice** are the **most commonly purchased**, with 100% of hotels indicating they buy them (Figure 19). Maize follows closely (94%), while sesame seeds, wheat, sunflower seeds, and sorghum are bought by 84% to 74% of hotels. Quinoa is the least popular, purchased by only 16% of hotels.

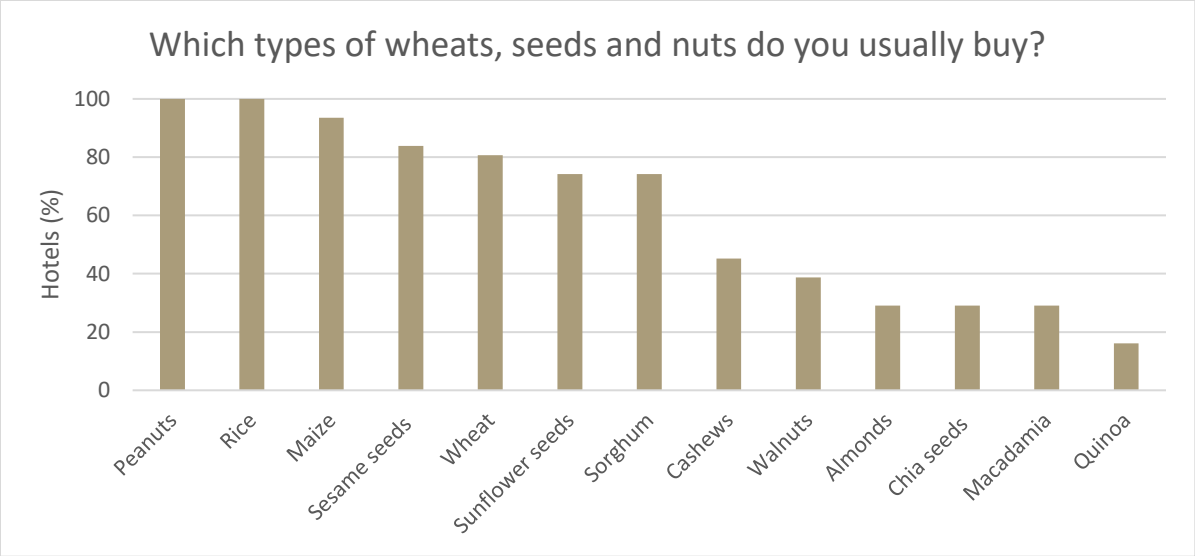


Figure 19. The purchasing behaviour among hotels for wheats, seeds and nuts.

The data on animal product purchasing preferences reveals that **milk and meat** are the **most commonly purchased**, with 100% of hotels indicating they buy these items (Figure 20). Eggs are also widely bought, with 97% of hotels purchasing them. Cheese, fish, and other speciality animal products, however, have much lower demand, with only 19%, 3%, and 3% of hotels purchasing them, respectively.

Figure 20. The purchasing behaviour among hotels for animal products.

3.3.2 Requirements and trends

A strong likelihood of the hotel respondents to adopt organic agricultural products was found, with the **majority** (81%) of the respondents **indicating to be (very) likely to purchase** them in the next 6 months. Of these respondents, 48% were very likely to purchase organic products and 32% were likely to purchase organic products. The least respondents were neutral (19%) and none of the respondents was (very) unlikely to purchase organic products.

Although this seems very positive, the data also reveals a **split** in the hotel respondent's **willingness to adopt organic agricultural products**. Over half of the respondents (52%) express a strong commitment to switching 75-100% of their purchases to organic. However, nearly 42% of hotels are hesitant and only willing to switch a smaller portion (0-25%) of their purchases. The remaining 6% (n = 2) of the respondents were split between willing to switch 25-50% and 50-75%.

Results indicate a generally positive trend in the guest demand for organic agricultural products, as indicated by hotel respondents. A **slight majority** of hotel respondents (58%) report an **increase in guest demand** for organic products, of which 39% of the respondents noticed more guests demanding organic products and 19% noticed a few more guests demanding organic products. On the other hand, 41% of the respondents indicated a higher guest demand for conventional products, with 35% mentioning that more guests demanded conventional and 6% mentioning that few more guests demanded conventional products.

Regarding challenges, several challenges were identified for the hotel respondents in purchasing organic agricultural products. These challenges likely contributes to the hesitation among some hotels to fully commit to organic products, as seen in the data where a portion of hotels expressed reluctance to switch a large percentage of their purchases to organic options.

The challenges were particularly centred around issues of availability, certification, and access to information. The most significant barrier, highlighted by 94% of hotel respondents, is the **limited availability** of organic products. Over three-quarters of hotel respondents (77%) also pointed to the **lack of certification** as a critical issue. In addition to availability and certification, **limited information** about organic products (61%) poses another significant barrier.

While **higher costs** (26%) were mentioned as a challenge by some respondents, it was not the most significant barrier. A few respondents (3%) also mentioned concerns about the different tastes or lower quality of organic products, but these sensory concerns were not seen as major deterrents compared to the logistical challenges related to sourcing and verification.

In terms of where hotel respondents preferred to source their organic agricultural products, most **respondents preferred public markets and hotel delivery** (both 71%). Fewer respondents liked to source their product by buying directly from farmers (45%), at dedicated organic markets (42%) or supermarkets (39%).

3.3.3 Hotel profile

The district in which the hotel was located, the hotel size, and the average room price were linked to indicators of the hotel's willingness to pay or buy organic agricultural produce. Only those results showing interesting differences are explained below, all other results are demonstrated in Annex V.

Districts

The hotels located in Musanze seemed to be most likely to purchase organic agricultural products in the next 6 months, while the hotels located in the Kigali districts seemed the be least likely to purchase organic agricultural products, as indicated in Table 32.

Table 32. Likelihood of hotels purchasing organic agricultural products in the next six months.

How likely is the hotel to purchase organic agricultural produce in the next 6 months?		
District	**n**	**Average[1]**
Musanze	9	4.56
Rubavu	12	4.33
Kigali districts	10	4.00
[1] very unlikely = 1, unlikely = 2, neutral = 3, likely = 4, very likely = 5		

The number of agricultural products currently bought that the hotels are willing to switch to organic indicated that hotels in Musanze were, on average, willing to switch the highest percentage, about 50-75% (Table 33).

Table 33. Willingness to switch a percentage of agricultural products currently bought to organic for the hotels in different districts.

What percentage of the agricultural products the hotel currently buys would the hotel be willing to switch to organic?		
District	**n**	**Average[1]**
Musanze	9	3.00
Rubavu	12	2.50
Kigali districts	10	2.50
[1] 0-25% = 1, 25-50% = 2, 50-75% = 3, 75-100% = 4		

Interestingly, hotel guests in Musanze did not show a higher demand for organic products, since the highest demand for organic products was perceived by hotel guests in Kigali (Table 34).

Table 34. Change in hotel guest demand for organic products experienced by the hotels in the different districts.

Have you seen a change in the past year in terms of demand for organic products from hotel guests?		
District	**n**	**Average[1]**
Musanze	9	2.78
Rubavu	12	2.92
Kigali districts	10	3.90
[1] more conventional = 1, few more conventional = 2, no change = 3, few more organic = 4, more organic = 5		

Hotels in Musanze indicated being willing to pay the most extra for organic agricultural products since on average they were willing to pay about 21-40% extra (Table 35).

Table 35. The willingness of hotels to pay more for organic agricultural products compared to conventional ones.

How much more is the hotel willing to pay for organic agricultural products compared to conventional ones?		
Districts	**n**	**Average[1]**
Musanze	9	3.33
Rubavu	12	2.50
Kigali districts	10	2.50
[1] 0% = 1, 1-20% = 2, 21-40% = 3, 41-60% = 4, 61-80% = 5, 81-100% = 6, > 100% = 7		

These results suggest that the willingness of hotels to buy organic agricultural products and to pay more for them is not fully influenced by the demand for organic products from their hotel guests. This statement can be partially confirmed by the results indicated in Table 36, since it shows that while the demand of guests is an important reason to make a hotel willing to pay more for organic agricultural products, it is not the only important driver. Hotels in Kigali indicated the demand of hotel guests to be the main reason to be willing to pay more for organic agricultural products, although these hotels were least likely to purchase organic products in the coming 6 months, even though guest demand in their hotels was highest.

Table 36. Percentage of hotels that agreed with a reason to be willing to pay more for organic agricultural products.

What reasons would make you willing to pay more for organic agricultural products?							
		Percentage of respondents that ticked the reason					
		Demand of guests	**Health benefits**	**Environmental benefits**	**Better taste**	**Support local farmers**	**Higher quality**
Musanze	9	78%	89%	100%	67%	100%	89%
Rubavu	12	83%	92%	67%	92%	75%	92%
Kigali districts	10	100%	80%	60%	60%	70%	80%

Hotel size

The larger hotels seem to be willing to switch a higher percentage of the agricultural products they buy to organic, compared to the smaller hotels (Table 37). Their percentage for switching even ranges between 50-100%. It should however be noted that conclusions should be drawn carefully, as there were relatively few large hotels included in the survey.

Table 37. Willingness to switch percentage of agricultural products currently bought to organic for the different-sized hotels.

What percentage of the agricultural products the hotel currently buys would the hotel be willing to switch to organic?		
Amount of rooms	**n**	**Average[1]**
0-30	12	2.67
31-50	14	2.29
51-100	2	4.00
> 100	3	3.33
[1] 0-25% = 1, 25-50% = 2, 50-75% = 3, 75-100% = 4		

The larger hotels also seemed to experience a higher demand of hotel guests for organic products (Table 38).

Table 38. Change in hotel guest demand for organic products experienced by the different sized hotels.

Have you seen a change in the past year in terms of demand for organic products from hotel guests?		
Amount of rooms	**n**	**Average[1]**
0-30	12	3.33
31-50	14	2.50
51-100	2	5.00
> 100	3	4.67
[1] more conventional = 1, few more conventional = 2, no change = 3, few more organic = 4, more organic = 5		

Hotel room prices

The most **premium hotels** seemed to be **most likely to purchase organic** agricultural products in the next 6 months, as all of them indicated to be very likely to purchase organic produce (Table 39).

Table 39. Likelihood of hotels purchasing organic agricultural products in the next six months.

How likely is the hotel to purchase organic agricultural produce in the next 6 months?		
Hotel room price	**n**	**Average[1]**
< $50 a night	5	4.20
$50-$100 a night	17	4.18
$100-$150 a night	5	4.20
> $150 a night	4	5.00
[1] very unlikely = 1, unlikely = 2, neutral = 3, likely = 4, very likely = 5		

This result is strengthened by the fact that most **premium hotels** were also **willing to switch the highest percentage** of agricultural products currently bought to organic, with a percentage of 75-100% (Table 40).

Table 40. Willingness to switch percentage of agricultural products currently bought to organic for the various hotel room prices.

What percentage of the agricultural products the hotel currently buys would the hotel be willing to switch to organic?		
Hotel room price	**n**	**Average[1]**
< $50 a night	5	2.80
$50-$100 a night	17	2.35
$100-$150 a night	5	2.40
> $150 a night	4	4.00
[1] 0-25% = 1, 25-50% = 2, 50-75% = 3, 75-100% = 4		

These **premium hotels** also indicated a **higher demand for organic products**, since all of them mentioned that more hotel guests request organic products (Table 41).

Table 41. Change in hotel guest demand for organic products experienced by the hotels with various hotel room prices.

Have you seen a change in the past year in terms of demand for organic products from hotel guests?		
Hotel room price	**n**	**Average[1]**
< $50 a night	5	4.40
$50-$100 a night	17	2.59
$100-$150 a night	5	2.60
> $150 a night	4	5.00
[1] more conventional = 1, few more conventional = 2, no change = 3, few more organic = 4, more organic = 5		

The most **premium hotels** were also **willing to pay the most extra for organic** agricultural products, with an average price increase of 81-100% (Table 42).

Table 42. The willingness of hotels to pay more for organic agricultural products compared to conventional ones.

How much more is the hotel willing to pay for organic agricultural products compared to conventional ones?		
Hotel room price	**n**	**Average[1]**
< $50 a night	5	2.40
$50-$100 a night	17	3.29
$100-$150 a night	5	2.20
> $150 a night	4	6.00
[1] 0% = 1, 1-20% = 2, 21-40% = 3, 41-60% = 4, 61-80% = 5, 81-100% = 6, > 100% = 7		

Hotels with the lowest prices seem to find **environmental benefits** and **supporting the local organic farmers less important** as **reasons** for them **to be willing to pay more** for organic agricultural products (Table 43).

Table 43. Percentage of hotels that agreed with a reason to be willing to pay more for organic agricultural products.

What reasons would make you willing to pay more for organic agricultural products?							
		Percentage of respondents that ticked the reason					
		Demand of guests	**Health benefits**	**Environmental benefits**	**Better taste**	**Support local farmers**	**Higher quality**
< $50	5	80%	80%	20%	60%	20%	80%
$50-$100	17	82%	88%	88%	71%	88%	82%
$100-$150	5	100%	80%	60%	80%	100%	100%
> $150	4	100%	100%	100%	100%	100%	100%

3.4 Conclusion hotel results

3.4.1 Organic product potential

A consistent trend is found in organic product purchases among Rwandan hotels. Roughly 65% of the surveyed hotels purchase at least a portion of their produce from organic sources. Of these hotels, more than half (an average of 54%) of their total produce purchases are organic, indicating a considerable commitment to incorporating organic options.

Interestingly, this purchasing behaviour is fairly consistent across all produce categories, suggesting no significant preference for specific organic product types. However, there's a notable difference in the average weekly quantities purchased. Animal products lead with 4.64 kg, followed by vegetables (4.37 kg), and roots and tubers (4.28 kg). Herbs and spices have the lowest weekly organic purchase at 0.75 kg. The most popular choices within each produce category are found to be:

- **Fruits**: avocados, bananas, mangoes, lemons, passion fruit, pineapples
- **Vegetables**: carrots, cauliflower, onions, spring onions, tomatoes
- **Roots & Tubers**: potatoes, cassava, sweet potatoes
- **Herbs & Spices**: chillies, ginger, garlic
- **Wheats, Seeds & Nuts**: peanuts, rice, maize
- **Animal Products**: milk, meat, eggs

3.4.2 Requirements and trends

The sources reveal a strong yet somewhat divided interest in organic agricultural products among Rwandan hotels. A significant majority (81%) expressed a likelihood of purchasing organic products in the next six months, with 48% indicating they were "very likely" to do so. This highlights a positive trend toward embracing organic produce.

While 58% of hotels report increased organic demand, 42% see higher interest in conventional options, indicating that a balanced offering is key. Increasing organic visibility could attract health-conscious guests while maintaining conventional options ensures broader appeal. This could explain the fact that the perceived increase in guest demand doesn't consistently correlate with hotels' actual willingness to purchase organic produce. The hotels in Kigali, which reported the highest perceived guest demand, were the least likely to purchase organic produce. This suggests that hotels understand the need for a balanced offering, meeting both the needs of guests preferring organic products and the guests preferring conventional products.

The willingness to switch to organic products varies, with 52% of hotels willing to switch 75-100% of their agricultural products, but 42% are hesitant and willing to switch only a small portion (0-25%). This division suggests potential barriers like cost concerns or limited availability.

Such barriers are indicated by the hotels, as their main challenges were limited availability, lack of certification, and limited information. The primary challenge for hotels is the limited availability of organic products, reported by 94% of respondents. This indicates a need for expanding organic production and distribution networks. The lack of certification (77%) also creates uncertainty about the authenticity of organic produce, highlighting the need for reliable

certification systems to build trust. Limited information about organic products (61%) poses a further barrier, emphasizing the need for awareness campaigns targeting the hospitality sector. While cost concerns were raised by 26% of respondents, it wasn't perceived as the primary obstacle. Concerns about different tastes or lower quality were also minimal (3%). These findings suggest that addressing the core issues of availability, certification, and information could significantly enhance the adoption of organic products within the Rwandan hotel industry.

Hotels prefer sourcing from public markets and direct hotel delivery, indicating convenience and freshness. This preference offers organic suppliers the opportunity to adopt hybrid distribution models, such as direct sourcing from local markets, to meet these needs.

3.4.3 Hotel profile

Specific trends related to the type of hotel and their inclination towards organic products were found, depending on:

- **Location:** Hotels located in Musanze district displayed a higher likelihood to purchase organic products and were willing to switch a larger percentage of their purchases to organic compared to hotels in Kigali districts, i.e. Gasabo, Kicukiro and Nyarugenge Districts. This regional difference could be due to an increased presence of tourists in Musanze district.
- **Hotel Size:** Larger hotels generally showed a greater willingness to switch to organic, potentially reflecting their capacity to absorb higher costs or access wider supply networks.
- **Room Prices:** Hotels with higher room prices (over $150 per night) exhibited a stronger commitment to organic purchases, demonstrating a full willingness to switch to organic (75-100%). They also reported a higher perceived guest demand for organic products and were prepared to pay a significant premium (81-100% price increase) for organic produce. This suggests that higher-end hotels are more inclined to align with organic values, catering to a potentially more health-conscious and environmentally aware clientele. In contrast, lower-priced hotels placed less emphasis on environmental benefits and supporting local organic farmers as reasons to pay a premium for organic produce. This difference may indicate varying levels of awareness or prioritization of sustainability among different segments of the hotel industry.

In summary, Rwandan hotels show a strong interest in organic products, with clear preferences for local sourcing and sustainability. By addressing barriers like limited availability and information, certification concerns, and varying levels of commitment across different hotel profiles, the full potential of the organic market can be unlocked.

By focusing on increasing organic production, strengthening certification systems, and raising awareness about the benefits of organic agriculture within the hospitality sector, Rwanda can foster a thriving organic market that benefits both consumers and businesses.

3.5 Experts results

Thirteen experts were interviewed, providing insights into key domestic market actors, main types of products, varieties, and packaging, potential size of the market, and transportation.

In terms of key domestic market actors, Figure 21 provides an overview of the stakeholders that are important to the organic sector in Rwanda. Experts (5/13) indicated that the farmers were the dominating actors in the market since they form the foundation of the sector. More experts (6/13) indicated that there are no dominant actors in the sector, as they all play a crucial role in the value chain.

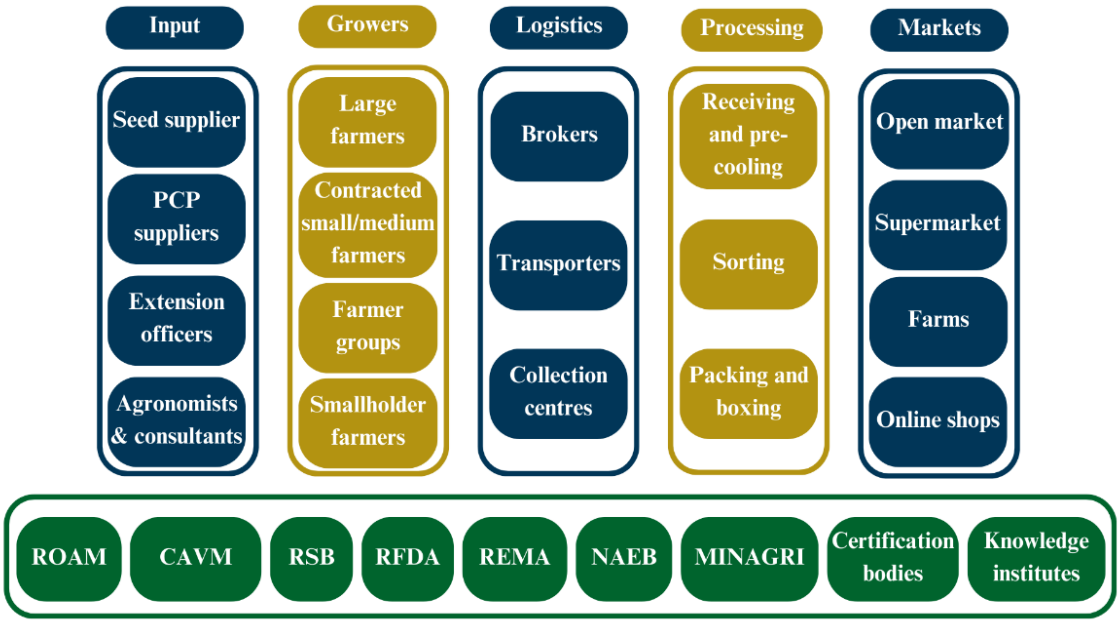


Figure 21. Main actors in the domestic organic sector in Rwanda.

3.5.1 Main types of products, varieties, and packaging

The interviews reveal that organic agriculture in Rwanda predominantly focuses on **vegetables, including tomatoes, collard greens, spinach, cabbage, and beans**. These products are widely consumed, forming a central part of the domestic market. In addition to vegetables, **fruits** such as bananas, avocados, mangoes, papayas, and passion fruits are commonly produced and consumed organically. **Root and tuber crops**, including sweet potatoes, cassava, and taro, also play a significant role in the organic sector.

Emerging products that are starting to gain interest in the organic market include **local eggs**, **local chickens**, **honey**, **cheese**, **yoghurt**, and **dairy products**. Organic honey and poultry, in particular, stand out as promising due to their health benefits and perceived premium quality. This trend suggests a growing diversification of consumer demand in the organic market.

Packaging practices, as described in the interviews, highlight the use of **crates and boxes** for transportation. These materials provide basic protection but are limited in their ability to maintain product quality, especially for perishable items. On the consumer end, **paper bags, envelopes**, **and tags** are commonly used for packaging organic products. However, respondents emphasized challenges in achieving consistent packaging quality and addressing the high costs associated with sustainable and professional packaging materials.

3.5.2 Potential size of the market

The domestic market for organic agricultural products in Rwanda appears to be relatively small, comprising an **estimated 5% of the total agricultural market**. Interviewees consistently indicated that the market is primarily **concentrated in urban areas**, especially Kigali, where demand is driven by middle- to upper-income consumers, expatriates, and professionals shopping at supermarkets and organic stores. This urban-focused demand highlights the unequal distribution of organic product consumption, with rural areas showing significantly lower engagement.

Over the past few years, interview findings suggest that the market has seen **modest but notable growth** in the recent years. Increased consumer awareness and advocacy efforts, combined with global trends toward health-conscious lifestyles, have contributed to this upward trajectory. Yet, the organic sector still faces significant barriers to expansion. These include **limited consumer education** on the benefits of organic products (e.g. potential health benefits of consuming organic food, such as reduced pesticide exposure, contribution of organic farming practices on soil health, biodiversity, and climate change resilience), **high certification costs**, and **competition from conventional** agricultural products.

Growth opportunities were identified in export markets, particularly in value chains such as coffee, tea, and honey. Respondents noted that export markets offer premium pricing, which could incentivize more farmers to adopt organic practices.

3.5.3 Logistics

Transportation of organic products emerged as a key theme in the interviews, with respondents highlighting significant challenges. **Distances between producers and markets vary widely**. Some interviewees suggested that producers located closer to urban areas may cover only a few kilometres to reach markets, while others might transport their products over distances of up to 100 kilometres. The variability in distances reflects the decentralized nature of organic farming in Rwanda.

Interviewees identified the most **common means of transport** as **motorbikes, cars, vans, and trucks**. While these methods suffice for basic logistics, the **absence of cold chain** infrastructure was repeatedly cited as a major limitation. Perishable organic products, such as fruits, vegetables, and dairy items, are often transported at room temperature, which leads to spoilage and quality degradation.

A **lack of direct market linkages** compounds these logistical challenges. Farmers often struggle to transport their products independently and rely on intermediaries, which reduces profitability. Respondents highlighted that there is no significant difference in the transport

mechanisms used for organic versus conventional products, underscoring the need for tailored solutions to improve organic supply chains.

Key logistical challenges identified include:

- Lack of cold chain vehicles.
- Poor infrastructure and road conditions, especially in rural areas.
- Limited direct connections between producers and markets.

Respondents suggested several improvements, such as investing in cold chain logistics, strengthening infrastructure, and creating direct market access for farmers. These measures, they argued, could enhance the quality and marketability of organic products while reducing transportation losses.

3.5.4 Additional insights

The interviews shed light on several systemic barriers that limit the growth of Rwanda's organic agricultural sector. Many respondents pointed to a **lack of consumer awareness, insufficient farming knowledge**, and **inadequate governmental support** as critical issues. Smallholder farmers, who dominate the organic sector, often **lack access to affordable organic inputs** such as bio-fertilisers and pesticides. These limitations hinder both productivity and market growth.

Another recurring theme in the interviews was the **high cost of organic certification**, particularly for Small and Medium Enterprises (SMEs). Currently, SMEs pay a minimum of FRW 230,000 for the certification of organic food products through the Rwanda Standards Board (RSB), with certification valid for two years. This fee does not include required product testing fees. In addition, system certification, such as HACCP, can cost around FRW 480,000. Respondents emphasised that these costs place certification beyond the reach of most smallholder farmers, effectively preventing them from marketing their produce as certified organic. As a result, many are excluded from more profitable markets that require formal certification. This highlights the need for a PGS system, posing a low-cost certification alternative, making it more accessible for smallholder farmers.

Export markets also emerged as an area of interest. Several respondents noted that organic products like coffee, tea, and honey are experiencing rising demand internationally, offering potential for premium pricing. However, tapping into these markets requires strengthening the domestic supply chain and addressing logistical challenges, particularly for perishable items.

In conclusion, the interviews underscore that while Rwanda's organic agricultural sector is still in its early stages, it shows significant potential for growth. Addressing barriers such as transportation infrastructure, certification costs, and consumer awareness will be crucial to unlocking this potential. At the same time, capitalizing on export opportunities and promoting initiatives like PGS could position Rwanda as a competitive player in the global and domestic organic market.

4. Conclusion

The conclusion will provide key takeaways based on the results from the consumer survey, hotel survey, and interviews. Following the takeaways will be an overall conclusion assessing the market potential for a PGS in Rwanda and concluding with recommendations regarding the business plan of ROAM.

4.1 Key takeaways consumers

The consumer survey results reveal a **strong demand for organic agricultural products** in Rwanda. About 69% of respondents currently purchase some organic produce, with an average of 36% of their total produce being organic. However, there is a distinction between two consumer groups—one that already buys a significant portion of organic products and another that is just starting to integrate them.

Organic products are in demand across various categories, with fruits (bananas, avocados, pineapples), vegetables (tomatoes, onions, carrots), roots and tubers (potatoes, cassava), and animal products (meat, milk, eggs) being the most popular.

Health benefits are the primary motivation, cited by 96% of consumers. Additionally, 88% believe organic products are of higher quality, while 85% say they taste better. The study also highlights a growing interest in organic products, with 86% of consumers likely to increase their organic purchases in the next six months.

Despite these positive results, **price sensitivity** is a major **barrier**, with most consumers only willing to pay 1-20% more for organic produce. **Limited availability** is another key challenge, as 80% of respondents struggle to find organic products consistently. Additionally, 66% of consumers report a **lack of information** about organic products, indicating the need for greater awareness and education.

Urban consumers are generally more open to organic products, likely due to better access to information and availability. **Income** also plays a role, with higher-income consumers more willing to pay a premium. **Larger households** show a greater inclination to adopt organic products, potentially due to increased awareness of health and environmental benefits.

Expanding the availability of organic products is crucial, particularly in **public markets** where demand is high. **Increased consumer education** through marketing campaigns and awareness programs can help bridge the knowledge gap. To address affordability concerns, strategies such as **government subsidies**, **cost-efficient production** methods, and **improved distribution** networks should be explored. **Strengthening certification processes** will also enhance trust in organic products by ensuring transparency and credibility.

4.2 Key takeaways for hotels

Rwandan hotels demonstrate a **strong but divided interest in organic products**. Currently, 65% of surveyed hotels purchase at least some organic produce, with an average of 54% of their total produce purchases being organic. Furthermore, 81% of hotels expressed a likelihood of increasing their organic purchases in the next six months, though 42% also see a continued demand for conventional products. This indicates that **while organic interest is growing**,

hotels recognize the **importance of maintaining a balance** between organic and conventional offerings to meet **diverse guest preferences**.

Popular **organic products** include avocados, bananas, mangoes, and pineapples among fruits; carrots, onions, and tomatoes among vegetables; and milk, meat, and eggs among animal products.

Despite the interest in organic produce, several **barriers** limit widespread adoption. The most significant challenge is **limited availability**, reported by 94% of hotels, underscoring the need for improved production and distribution networks. Additionally, a **lack of certification** (77%) raises concerns about the authenticity of organic produce, emphasizing the importance of a stronger certification system to build trust. **Limited information** (61%) also restricts adoption, highlighting the need for awareness campaigns targeted at the hospitality sector.

Hotels prefer to source produce from **public markets and direct hotel deliveries**, prioritizing convenience and freshness. This presents an opportunity for organic suppliers to adopt hybrid distribution models that integrate local market sourcing with structured hotel delivery services.

The likelihood of purchasing organic products varies based on hotel characteristics. **Location plays a role**, as hotels in Musanze show a stronger commitment to organic purchases compared to those in Kigali, possibly due to higher tourist demand. **Hotel size also matters**, with larger hotels showing a greater willingness to switch to organic, possibly because of their ability to absorb costs and access wider supplier networks. Additionally, **higher-end hotels (with room prices above $150 per night)** display the strongest commitment to organic purchases, with many willing to switch 75-100% of their produce and pay up to 100% more for organic products. In contrast, budget hotels place less emphasis on sustainability and are more hesitant to pay a premium for organic options.

4.3 Interview conclusion

The interviews reveal that Rwanda's organic sector primarily focuses on vegetables, fruits, and root crops, with an emerging interest in organic poultry, dairy, and honey. Packaging remains inconsistent, with cost and quality challenges.

The **domestic organic market is small** (about 5% of total agriculture), mainly concentrated in **urban areas** such as Kigali among **middle- to upper-income** consumers.

Transportation remains a major challenge, with **long distances**, **poor infrastructure**, and **no cold chain logistics** leading to spoilage. Farmers **struggle with market access**, often relying on intermediaries. Improvements in cold storage, road conditions, and direct market connections could enhance profitability.

Key barriers include **limited consumer awareness**, **limited farming knowledge**, **high certification costs**, and **competition from conventional products**. Smallholders lack affordable organic inputs, while high certification costs limit marketability. A Participatory Guarantee System (PGS) could make certification more accessible. Despite these challenges, Rwanda's organic sector has strong growth potential, especially with improved logistics and export market expansion.

4.4 Overall conclusion

The findings from the study indicate a **significant opportunity** for the establishment of a Participatory Guarantee System (PGS) in Rwanda. The demand for organic products among both consumers and hotels is evident, with 69% of surveyed consumers currently purchasing at least some organic produce and 86% of the consumers indicating a high likelihood of purchasing organic products in the next six months. Additionally, 65% of surveyed hotels already incorporate organic produce into their sourcing, with an increasing trend in guest demand for organic options.

Despite this positive market potential, **key barriers** persist. These include **limited product availabil**ity, a **lack of affordable certification options**, and **insufficient consumer awareness**. In general, certification systems in Rwanda, particularly those provided by the Rwanda Standards Board (RSB), are trusted by consumers. This is evidenced by the growing number of certified products and systems, which play a key role in boosting exports, enhancing consumer protection, increasing confidence in locally produced goods, and improving environmental standards (RSB, 2023). As of September 2022, 745 products held valid certification under the RSB “Standardization Mark (S-Mark),” and food manufacturers were also certified under HACCP (RS 184:2017) and ISO 22000:2015 systems (RSB, 2023).

Hotels, in particular, emphasized the need for a credible organic certification system to assure authenticity, while consumers highlighted affordability as a concern. The study underscores that the introduction of PGS could help bridge these gaps by providing a cost-effective and community-driven certification system that increases trust in organic products and enhances accessibility for smallholder farmers. While PGS may not yet carry the same perceived value as international certification in the value chain, it offers a promising step toward building localised trust and increasing the visibility and credibility of organic products within Rwanda.

Based on the consumer surveys and expert interviews, distinct consumer segments exhibit the highest potential for organic product adoption:

1. **Urban and Suburban consumers**. Consumers residing in urban areas, particularly Kigali, have demonstrated higher levels of awareness and demand for organic products. This group often includes professionals, expatriates, and health-conscious individuals who are willing to pay a premium for organic produce. Suburban consumers, while slightly less exposed to organic options, also show potential interest and could be targeted through improved distribution networks and awareness campaigns.
2. **Middle- to High-Income households**. Households with higher disposable income (above 300,000 RWF monthly) are more likely to pay extra for organic products. This segment values health benefits, product quality, and sustainability and is less price-sensitive compared to lower-income groups. These consumers can be reached through premium supermarkets, direct home delivery services, and organic farmers' markets.
3. **Health-conscious individuals and families**. Consumers who prioritize health benefits as their primary motivation for purchasing organic products represent a key segment. Marketing strategies should emphasize the nutritional benefits, absence of chemicals, and food safety aspects of organic products.
4. **Hotels with a premium offering**. Higher-end hotels have indicated a greater willingness to incorporate organic produce into their supply chain, particularly those with clientele

who value quality and sustainability. Engaging directly with hotel suppliers and food service providers can create stable demand channels for organic farmers.

5. **Environmentally conscious consumers**. A segment of consumers strongly associates organic agriculture with environmental sustainability and ethical food production. This group is more likely to support local farmers and advocate for eco-friendly practices. Sustainability should be an important element of branding organic produce, and collaborating with advocacy groups and environmental organisations could help to expand outreach.

4.4 Recommendations ROAM business plan

The strategic recommendations outlined provide a roadmap for ROAM's business plan, ensuring that ROAM is able to maximize its impact in the coming years. By taking a holistic approach that combines education, infrastructure improvements, and policy advocacy, ROAM can contribute significantly to the development of a stronger organic agricultural sector in Rwanda.

The following key strategic areas have been identified to successfully implement and scale PGS in Rwanda, next by the practical steps to establish a PGS:

1. **Expand the availability and accessibility of organic products.**

- Strengthen partnerships with local farmers and cooperatives to increase organic production.
- Enhance distribution networks to ensure a consistent supply of organic produce in urban and suburban markets.
- Develop innovative models such as direct-to-consumer channels, farmers' markets, and online platforms for organic produce sales.

2. **Enhance consumer awareness and demand**

- Launch targeted consumer education campaigns highlighting the health, environmental, and quality benefits of organic produce.
- Partner with supermarkets, restaurants, and hotels to promote organic certification and visibility.
- Leverage digital marketing, social media, and community engagement to spread awareness about PGS and its credibility.

3. **Improve logistics and infrastructure for organic supply chains**

- Address transportation challenges by supporting investments in cold chain logistics and efficient transport systems.
- Establish cooperative models that allow smallholder farmers to share resources for distribution.
- Strengthen farm-to-market linkages by facilitating direct connections between producers and buyers.

4. Develop incentive structures to enhance organic growth

- Advocate for government subsidies and policy support for organic farming and PGS certification.
- Explore financial models such as microfinance and grants to help smallholder farmers transition to organic farming.
- Foster collaborations with international buyers and export markets to position Rwanda's organic sector for global competitiveness.

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6. Annex

I. Consumer survey

Thank you for taking your time to fill out this survey. At the top right, you can change the language to Kinyarwanda if preferred.

This survey is part of a study commissioned by COLEAD and implemented by ROAM and Q-Point and aims to assess the market potential for organic agricultural products in Rwanda.

ROAM is the Rwanda Organic Agriculture Movement, which is a National Umbrella Organization for producers, farmers, processors, exporters and importers involved in organic agriculture. Q-Point is a Dutch consultancy with a regional office in Kenya, working in the fields of value chain management, food safety (standards), quality management, and gender and inclusion.

Kindly note that all answers given by you cannot be traced back to you directly and will only be used to understand the perception for all consumers, and not for individuals specifically.

Demographics

1. What is your age in years?

   ☐

2. What is your gender?
   - ○ Male
   - ○ Female
   - ○ Other
   - ○ Prefer not to say
3. What is the highest level of education that you have completed?
   - ○ Not finished elementary education
   - ○ Elementary education
   - ○ High school education
   - ○ Graduate level
   - ○ Post-graduate level and above
4. Which of the following best describes your current status in Rwanda?
   - ○ Citizen
   - ○ Resident
   - ○ Tourist/Visitor
   - ○ Other, please specify _____
5. In what district are you currently living?
   - ○ Bugesera
   - ○ Burera
   - ○ Gakenke
   - ○ Gasabo
   - ○ Kayonza
   - ○ Kicukiro
   - ○ Kirehe
   - ○ Muhanga
   - ○ Nyamasheke
   - ○ Nyanza
   - ○ Nyarugenge
   - ○ Nyaruguru

- Gatsibo
- Gicumbi
- Gisagara
- Huye
- Kamonyi
- Karongi
- Musanze
- Ngoma
- Ngororero
- Nyabihu
- Nyagatare
- Nyamagabe
- Rubavu
- Ruhango
- Rulindo
- Rusizi
- Rutsiro
- Rwamagana

6. What description fits best the place you are living in?
    - Rural, not densely populated
    - Suburban
    - Urban, densely populated
7. What is the size of your household, including yourself?

    [ ]

8. What is your average monthly salary/income in RWF?
    - < 100,000 RWF
    - 100,000 RWF – 300,000 RWF
    - 300,000 RWF – 500,000 RWF
    - 500,000 RWF – 700,000 RWF
    - > 700,000 RWF

Consumption

Please note that 'agricultural products' include fruits, vegetables, roots and tubers, herbs and spices, seeds, wheats, and nuts, and animal products.

Please note that 'organic' is defined as products that are grown, processed and certified according to specific guidelines that prioritize environmental sustainability, biodiversity, and soil health.

The following questions will be asked per product category, starting with fruits.

Fruits

9. Which types of fruits do you usually buy? Select all that apply.
    - □ Avocado
    - □ Banana
    - □ Gooseberry
    - □ Grapes
    - □ Guava
    - □ Mango
    - □ Lemons
    - □ Orange
    - □ Passion fruit
    - □ Papaya
    - □ Pineapple
    - □ Raspberry
    - □ Strawberry
    - □ Tree tomato/tamarillo
    - □ Other, please specify _____
    - □ None

➔ *Continue if not none, otherwise, skip to the next product category*

10. On average, how much of <u>each</u> of these fruits do you purchase per week?
    - ○ 0-500 grams
    - ○ 500 grams-1 kg
    - ○ 1-2 kg
    - ○ 2-3 kg
    - ○ > 3 kg
11. How much of the fruits do you buy organically (on average)?
    - ○ 0%
    - ○ 0-25%
    - ○ 25-50%
    - ○ 50-75%
    - ○ 75-100%
    - ○ 100%

Vegetables

12. Which types of vegetables do you <u>usually</u> buy? Select all that apply.
    - □ Amaranthus
    - □ Baby corn
    - □ Broccoli
    - □ Cabbage
    - □ Capsicum/sweet pepper
    - □ Carrot
    - □ Cauliflower
    - □ Cucumber
    - □ Eggplant
    - □ French beans
    - □ Kale
    - □ Lettuce
    - □ Mushroom
    - □ Onions
    - □ Peas
    - □ Pumpkin
    - □ Spinach
    - □ Spring onion
    - □ Tomatoes
    - □ Other, please specify _____
    - □ None

➔ *Continue if not none, otherwise, skip to the next product category*

13. On average, how much of <u>each</u> of these vegetables do you purchase per week?
    - ○ 0-500 grams
    - ○ 500 grams-1 kg
    - ○ 1-2 kg
    - ○ 2-3 kg
    - ○ > 3 kg
14. How much of the vegetables do you buy organically (on average)?
    - ○ 0%

- ○ 0-25%
- ○ 25-50%
- ○ 50-75%
- ○ 75-100%
- ○ 100%

Roots and tubers

15. Which types of roots and tubers do you <u>usually</u> buy? Select all that apply.
    - □ Casava
    - □ Okra
    - □ Potato
    - □ Sweet potato
    - □ Yams
    - □ Other, please specify _____
    - □ None

➔ *Continue if not none, otherwise, skip to the next product category*

16. On average, how much of <u>each</u> of these roots and tubers do you purchase per week?
    - ○ 0-500 grams
    - ○ 500 grams-1 kg
    - ○ 1-2 kg
    - ○ 2-3 kg
    - ○ > 3 kg
17. How much of the roots and tubers do you buy organically (on average)?
    - ○ 0%
    - ○ 0-25%
    - ○ 25-50%
    - ○ 50-75%
    - ○ 75-100%
    - ○ 100%

Herbs and spices

18. Which types of herbs and spices do you <u>usually</u> buy? Select all that apply.
    - □ Basil
    - □ Black pepper
    - □ Cardamom
    - □ Cilantro
    - □ Chillies
    - □ Ginger
    - □ Garlic
    - □ Lemongrass
    - □ Mint
    - □ Paprika (sweet)
    - □ Parsley
    - □ Rosemary
    - □ Thyme
    - □ Turmeric
    - □ Vanilla
    - □ Other, please specify _____

- □ None

➔ *Continue if not none, otherwise, skip to the next product category*

19. On average, how much of <u>each</u> of these herbs and spices do you purchase per week?
    - ○ 0-100 grams
    - ○ 100-250 grams
    - ○ 250-500 grams
    - ○ 500 grams – 1 kg
    - ○ > 1 kg
20. How much of the herbs and spices do you buy organically (on average)?
    - ○ 0%
    - ○ 0-25%
    - ○ 25-50%
    - ○ 50-75%
    - ○ 75-100%
    - ○ 100%

Wheats, seeds, and nuts

21. Which types of wheats, seeds, and nuts, do you <u>usually</u> buy? Select all that apply.
    - □ Almonds
    - □ Cashews
    - □ Chia seeds
    - □ Macadamia
    - □ Maize
    - □ Wheat
    - □ Quinoa
    - □ Peanuts
    - □ Rice
    - □ Sesame seeds
    - □ Sunflower seeds
    - □ Sorghum
    - □ Walnuts
    - □ Other, please specify _____
    - □ None

➔ *Continue if not none, otherwise, skip to the next product category*

22. On average, how much of <u>each</u> of these wheats, seeds, and nuts do you purchase per week?
    - ○ 0-250 grams
    - ○ 250-500 grams
    - ○ 500 grams – 1 kg
    - ○ 1-2 kg
    - ○ > 2 kg
23. How much of the wheats, seeds, and nuts do you buy organically (on average)?
    - ○ 0%
    - ○ 0-25%
    - ○ 25-50%
    - ○ 50-75%
    - ○ 75-100%

- ○ 100%

Animal products

24. Which types of animal products do you <u>usually</u> buy? Select all that apply.
    - □ Eggs
    - □ Milk
    - □ Meat
    - □ Yoghurt
    - □ Other, please specify _____
    - □ None

➔ *Continue if not none, otherwise, skip to the next product category*

25. On average, how much of <u>each</u> of these animal products do you purchase per week?
    - ○ 0-500 grams
    - ○ 500 grams-1 kg
    - ○ 1-2 kg
    - ○ 2-3 kg
    - ○ > 3 kg
26. How much of the animal products do you buy organically (on average)?
    - ○ 0%
    - ○ 0-25%
    - ○ 25-50%
    - ○ 50-75%
    - ○ 75-100%
    - ○ 100%

<u>Willingness to buy</u>

27. How likely are you to purchase organic agricultural products in the next 6 months?
    - ○ Very unlikely
    - ○ Unlikely
    - ○ Neutral
    - ○ Likely
    - ○ Very Likely
28. *Only ask this question if the response on Q27 was "very likely", "likely", or "neutral"* Where would you prefer to buy organic agricultural produce?
    - □ Supermarkets
    - □ Public markets
    - □ Buying directly from farmers
    - □ Home delivery
    - □ Dedicated market for organic produce
    - □ Other, please specify_____
29. Has your likelihood of purchasing organic agricultural products changed over the past year?
    - ○ Yes, it increased
    - ○ Yes, it decreased
    - ○ No, it has not changed
30. *Only ask this question if the response on Q27 was "very likely", "likely", or "neutral"* What percentage of the agricultural products you currently buy would you be willing to switch to organic?

- ○ 0-25%
- ○ 25-50%
- ○ 50-75%
- ○ 75-100%

Willingness to pay

31. What reasons would make you willing to pay more for organic agricultural products? Select all that apply.
    - □ Health benefits of organic products over conventional ones
    - □ Environmental benefits of organic products over conventional ones
    - □ Better taste of organic products over conventional ones
    - □ Supporting local organic farmers
    - □ Higher quality of organic products over conventional ones
    - □ Other, please specify _____
    - □ None
32. *Only ask the question if the response on Q30 was not "none"*
    How much more are you willing to pay for organic agricultural products compared to conventional ones?
    As a reference, consider that conventional mangoes cost about 1500 RWF per 1 kg.
    - ○ 0% (same price) - *Reference: 1500 RWF*
    - ○ 1-20% - *Reference: 1515 RWF – 1800 RWF*
    - ○ 21-40% - *Reference: 1815 RWF – 2100 RWF*
    - ○ 41-60% - *Reference: 2115 RWF – 2400 RWF*
    - ○ 61-80% - *Reference: 2415 RWF – 2700 RWF*
    - ○ 81-100% - *Reference: 2715 RWF – 3000 RWF*
    - ○ More than 100% - *Reference: > 3000 RWF*

Organic statements and challenges

33. What challenges, if any, do you face when (trying to) purchase organic agricultural products?
    - ○ More expensive
    - ○ Different taste
    - ○ Lower quality
    - ○ Not widely available
    - ○ Lack of certification proving they are organic
    - ○ Limited information about organic food
    - ○ Other, please specify _____
    - ○ No challenges
    - ○ I have not tried to purchase organic agricultural products
34. Please indicate to what extent you (dis)agree with the following statements

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I prefer organic products over conventional ones	○	○	○	○	○
Organic products are healthier	○	○	○	○	○
The price of organic products is justified by their benefits	○	○	○	○	○

I am willing to travel further to buy organic products	○	○	○	○	○
Organic farming is important for environmental sustainability	○	○	○	○	○
Supporting organic farmers is important to me	○	○	○	○	○

Closing

35. When you have any additional comments or suggestions, you can add them in the text box below.

To hand in your response, click on the blue button below. Thank you for participating in this survey. Your responses will help us better understand the potential market demand for organic agricultural products in Rwanda.

II. Hotel survey

Thank you for your time to fill out this survey. At the top right, you can change the language to Kinyarwanda if preferred.

This survey is part of a study commissioned by COLEAD and implemented by ROAM and Q-Point and aims to assess the market potential for organic agricultural products in Rwanda.

ROAM is the Rwanda Organic Agriculture Movement, which is a National Umbrella Organization for producers, farmers, processors, exporters and importers involved in organic agriculture. Q-Point is a Dutch consultancy with a regional office in Kenya, working in the fields of value chain management, food safety (standards), quality management, and gender and inclusion.

Kindly note that all answers given by you cannot be traced back to you directly and will only be used to understand the perception for all consumers, and not for individuals specifically.

Demographics

1. In what district is the hotel located?
   - Bugesera
   - Burera
   - Gakenke
   - Gasabo
   - Gatsibo
   - Gicumbi
   - Gisagara
   - Huye
   - Kamonyi
   - Karongi
   - Kayonza
   - Kicukiro
   - Kirehe
   - Muhanga
   - Musanze
   - Ngoma
   - Ngororero
   - Nyabihu
   - Nyagatare
   - Nyamagabe
   - Nyamasheke
   - Nyanza
   - Nyarugenge
   - Nyaruguru
   - Rubavu
   - Ruhango
   - Rulindo
   - Rusizi
   - Rutsiro
   - Rwamagana
2. What description fits best the place where the hotel is located?
   - Rural, not densely populated
   - Suburban
   - Urban, densely populated
3. How many hotel rooms are available at your hotel?

   ☐

4. What is the average price for a hotel room for one night at your hotel (in USD)?
   - < $50 a night
   - $50-$100 a night
   - $100-$150 a night
   - $150-$200 a night
   - $200-$300 a night
   - $300-$400 a night
   - > $400 a night

Consumption

Please note that the term 'agricultural products' refers to fruits, vegetables, roots and tubers, herbs and spices, seeds, wheats, and nuts, and animal products.

Please note that 'organic' is defined as products that are grown, processed and certified according to specific guidelines that prioritize environmental sustainability, biodiversity, and soil health.

The following questions will be asked per product category, starting with fruits.

Fruits

5. Which types of fruits does the hotel usually buy? Select all that apply.
    - □ Avocado
    - □ Banana
    - □ Gooseberry
    - □ Grapes
    - □ Guava
    - □ Mango
    - □ Lemons
    - □ Orange
    - □ Passion fruit
    - □ Papaya
    - □ Pineapple
    - □ Raspberry
    - □ Strawberry
    - □ Tree tomato/tamarillo
    - □ Other, please specify _____
    - □ None

➔ *Continue if not none, otherwise, skip to next product category*

6. On average, how much of <u>each</u> of these fruits does the hotel purchase per week?
    - ○ 0-1 kg
    - ○ 1-2 kg
    - ○ 2-5 kg
    - ○ 5-10 kg
    - ○ > 10 kg
7. How much of the fruits does the hotel buy organically (on average)?
    - ○ 0%
    - ○ 0-25%
    - ○ 25-50%
    - ○ 50-75%
    - ○ 75-100%
    - ○ 100%

Vegetables

8. Which types of vegetables does the hotel usually buy? Select all that apply.
    - ○ Amaranthus
    - ○ Baby corn

- ○ Broccoli
- ○ Cabbage
- ○ Capsicum/sweet pepper
- ○ Carrots
- ○ Cauliflower
- ○ Cucumber
- ○ Eggplant
- ○ French beans
- ○ Kale
- ○ Lettuce
- ○ Mushroom
- ○ Onions
- ○ Peas
- ○ Pumpkin
- ○ Spinach
- ○ Spring onion
- ○ Tomatoes
- ○ Other, please specify _____
- ○ None

➔ *Continue if not none, otherwise, skip to next product category*

9. On average, how much of <u>each</u> of these vegetables does the hotel purchase per week?
    - ○ 0-1 kg
    - ○ 1-2 kg
    - ○ 2-5 kg
    - ○ 5-10 kg
    - ○ > 10 kg
10. How much of the vegetables does the hotel buy organically (on average)?
    - ○ 0%
    - ○ 0-25%
    - ○ 25-50%
    - ○ 50-75%
    - ○ 75-100%
    - ○ 100%

Roots and tubers

11. Which types of roots and tubers does the hotel usually buy? Select all that apply.
    - □ Casava
    - □ Okra
    - □ Potato
    - □ Sweet potato
    - □ Yams
    - □ Other, please specify _____
    - □ None

➔ *Continue if not none, otherwise, skip to next product category*

12. On average, how much of <u>each</u> of these roots and tubers do you purchase per week?
    - ○ 0-1 kg
    - ○ 1-2 kg

- 2-5 kg
- 5-10 kg
- > 10 kg

13. How much of the roots and tubers do you buy organically (on average)?
    - 0%
    - 0-25%
    - 25-50%
    - 50-75%
    - 75-100%
    - 100%

Herbs and spices

14. Which types of herbs and spices does the hotel usually buy? Select all that apply.
    - Basil
    - Black pepper
    - Cardamom
    - Cilantro
    - Chillies
    - Ginger
    - Garlic
    - Lemongrass
    - Mint
    - Paprika (sweet)
    - Parsley
    - Rosemary
    - Thyme
    - Turmeric
    - Vanilla
    - Other, please specify _____
    - None

➔ *Continue if not none, otherwise, skip to next product category*

15. On average, how much of <u>each</u> of these herbs and spices does the hotel purchase per week?
    - 0-250 grams
    - 250-500 grams
    - 500 grams – 1 kg
    - 1-2 kg
    - > 2 kg
16. How much of the herbs and spices does the hotel buy organically (on average)?
    - 0%
    - 0-25%
    - 25-50%
    - 50-75%
    - 75-100%
    - 100%

Wheats, seeds, and nuts

17. Which types of wheats, seeds, and nuts, does the hotel usually buy? Select all that apply.
    - ○ Almonds
    - ○ Cashews
    - ○ Chia seeds
    - ○ Macadamia
    - ○ Maize
    - ○ Wheat
    - ○ Quinoa
    - ○ Peanuts
    - ○ Rice
    - ○ Sesame seeds
    - ○ Sunflower seeds
    - ○ Sorghum
    - ○ Walnuts
    - ○ Other, please specify _____
    - ○ None

➔ *Continue if not none, otherwise, skip to next product category*

18. On average, how much of <u>each</u> of these wheats, seeds, and nuts does the hotel purchase per week?
    - ○ 0-1 kg
    - ○ 1-3 kg
    - ○ 3-5 kg
    - ○ 5-10 kg
    - ○ > 10 kg
19. How much of the wheats, seeds, and nuts does the hotel buy organically (on average)?
    - ○ 0%
    - ○ 0-25%
    - ○ 25-50%
    - ○ 50-75%
    - ○ 75-100%
    - ○ 100%

Animal products

20. Which types of animal products does the hotel usually buy? Select all that apply.
    - □ Eggs
    - □ Milk
    - □ Meat
    - □ Yoghurt
    - □ Other, please specify _____
    - □ None

➔ *Continue if not none, otherwise, skip to next product category*

21. On average, how much of <u>each</u> of these animal products does the hotel purchase per week?
    - ○ 0-1 kg
    - ○ 1-2 kg
    - ○ 2-5 kg

- 5-10 kg
- > 10 kg

22. How much of the animal products does the hotel buy organically (on average)?
    - 0%
    - 0-25%
    - 25-50%
    - 50-75%
    - 75-100%
    - 100%

Willingness to buy

23. How likely is the hotel to purchase organic agricultural products in the next 6 months?
    - Very unlikely
    - Unlikely
    - Neutral
    - Likely
    - Very Likely
24. *Only ask this question if the response on Q23 was "very likely", "likely", or "neutral"* Where would you prefer to buy organic agricultural produce?
    - □ Supermarkets
    - □ Public markets
    - □ Buying directly from farmers
    - □ Hotel delivery
    - □ Dedicated market for organic produce
    - □ Other, please specify_____
25. Have you seen a change in the past year in terms of demand for organic products from hotel guests?
    - Yes, more guests demanded organic products
    - Yes, few more guests demanded organic products
    - No, the demand has not changed
    - Yes, more guests demanded conventional products
    - Yes, few more guests demanded conventional products
26. *Only ask this question if the response on Q23 was "very likely", "likely", or "neutral"* What percentage of the agricultural products the hotel currently buys would the hotel be willing to switch to organic?
    - 0-25%
    - 25-50%
    - 50-75%
    - 75-100%

Willingness to pay

27. What reasons would make the hotel willing to pay more for organic agricultural products? Select all that apply.
    - □ Demand from our hotel guests
    - □ Health benefits of organic products over conventional ones
    - □ Environmental benefits of organic products over conventional ones
    - □ Better taste of organic products over conventional ones
    - □ Supporting local organic farmers

- □ Higher quality of organic products over conventional ones
- □ Other, please specify _____
- □ None

28. *Only ask question if the response on Q26 was not "none"*
    How much more is the hotel willing to pay for organic agricultural products compared to conventional ones?
    As a reference, consider that conventional mangoes cost about 1500 RWF per 1 kg.
    - 0% (same price) - *Reference: 1500 RWF*
    - 1-20% - *Reference: 1515 RWF – 1800 RWF*
    - 21-40% - *Reference: 1815 RWF – 2100 RWF*
    - 41-60% - *Reference: 2115 RWF – 2400 RWF*
    - 61-80% - *Reference: 2415 RWF – 2700 RWF*
    - 81-100% - *Reference: 2715 RWF – 3000 RWF*
    - More than 100 - *Reference: > 3000 RWF*

Challenges

29. What challenges, if any, does the hotel face when (trying to) purchase organic agricultural products?
    - more expensive
    - different taste
    - lower quality
    - not widely available
    - lack of certification proving they are organic
    - limited information about organic food
    - Other, please specify _____
    - No challenges
    - We have not tried to purchase organic agricultural products

Closing

30. When you have any additional comments or suggestions, you can add them in the text box below.

To hand in your response, click on the blue button below. Thank you for participating in this survey. Your responses will help us better understand the potential market demand for organic agricultural products in Rwanda.

III. Expert interview

Topic 1. Introduction

1.1 Thank you for your time
1.2 Recording allowed?
- Mention confidentiality

1.3 Short introduction interviewees
1.4 Short introduction interviewers
1.5 Short introduction ROAM & Q-Point
- ROAM: Rwanda Organic Agriculture Movement, National Umbrella Organization for producers, farmers, processors, exporters and importers involved in organic agriculture
- Q-Point: Dutch consultancy with a regional office in Kenya, working in the fields of value chain management, food safety (standards), quality management, and gender and inclusion.

1.6 Introduction COLEAD project
- Study of the Rwandan Domestic Organic Agricultural Products Market Potential Through Implementation of a Participatory Guarantee System (PGS)
- PGS: assurance system based on direct involvement and contributions to the organic supply chain by responsible businesses, organizations, and individuals
- With a PGS system, there is no need for third-party certification which reduces the costs and paperwork needed for certification

1.7 Purpose of study
- Assess the market potential for operating a PGS for organic agricultural products in Rwanda

1.8 Scope of Interview
- Organic agricultural products: fruits, vegetables, roots, tubers, herbs, spices, wheats, seeds, nuts, and animal products
- Domestic market

1.9 The interview will take about an hour
1.10 Any questions before we start?

Topic 2. Organic domestic sector and main actors

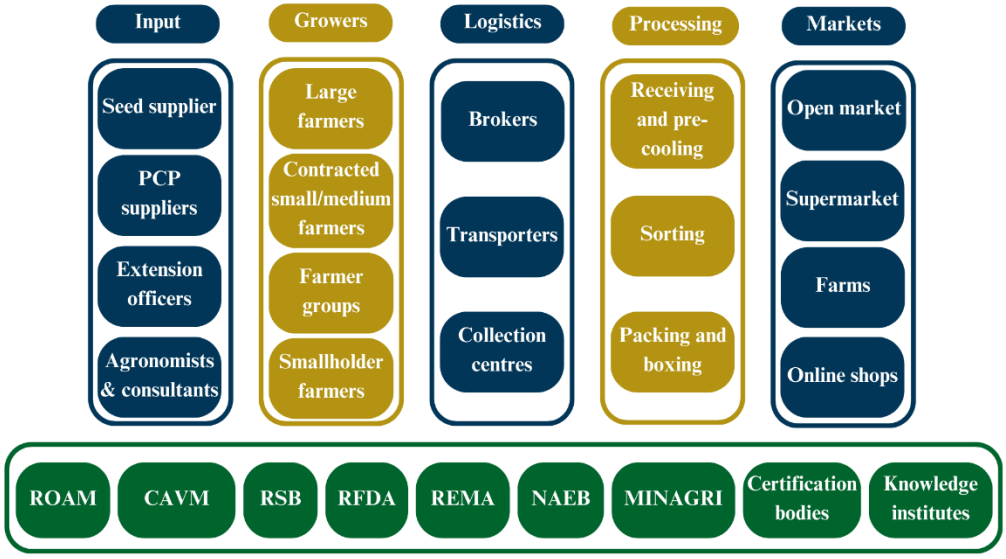
2.1 To what extent are you familiar with a Participatory Guarantee System (PGS)?
- If not much familiar explain the PGS in more detail: providing a credible guarantee for consumers seeking organic products, just like any other third-party certification. Direct participation of farmers, consumers and other stakeholders in the certification process is greatly encouraged in PGS. This involvement reduces paperwork, cost of certification and thereby making it more accessible to small organic farmers. With an open-door policy, a PGS offer the opportunity to build personal relationships and a high level of transparency that could strengthen trust in environmental integrity among the different stakeholders.

2.2 How would you define the term “organic agricultural products”?
- Check whether in line with this definition: Products grown by organic farming methods, a method of agricultural production that excludes the use of synthetic

substances, such as pesticides, synthetic medicines or fertilisers, and genetically modified organisms

2.3 Do you have any remarks or additions on the following general description of the organic domestic sector in Rwanda?

- What are the dominating actors in the market?
- Who are the main competitors in the organic agricultural products market in Rwanda?



2.4 What organic agricultural products are most commonly produced and consumed in Rwanda?

- *Specify in the groups: Fruits, vegetables, herbs, spices, roots, tubers, wheats, seeds, nuts, and animal products*
- Can you specify any particular varieties that are popular?
- Are there any products that are emerging and start gaining interest in the market?

2.5 To what extent do you think actors involved with conventional agricultural products are willing to fully or partly shift towards organic agricultural products?

- *Farmers, supermarkets, transporters, government*
- Why do you think that?
- What barriers hold actors back from shifting?
- What incentives or support would they need to make this transition?

Topic 3. Transportation

3.1 Where are most organic producers of agricultural products located in Rwanda?

- On the district level and preferably more specific

3.2 Where are the potential markets for organic agricultural products?

- If multiple: which of these markets do you consider the biggest?
- If multiple: which of these markets do you consider most promising?

3.3 What is the average distance between an organic agricultural producer and a suitable market for this organic products?

- *A general estimation is ok*

3.4 What is the most common means of transport to get organic agricultural products to the market?
- *Motorbike, car, truck, van, flight*
- *Fruits, vegetables, roots, tubers, herbs, spices, wheats, seeds, nuts, and animal products*
- Under what conditions is the products transported?
- *Cooled, room temperature, separation of organic and non-organic products*
- Are different means of transport used to get the products from the producers and to transport the products to the market?
- If yes, what is the difference?

3.5 What are the most prominent logistical challenges that affect the distribution of organic agricultural products?
- *Distance, infrastructure, planning, temperature, middlemen, lack of direct links with the market, mode of transport, access to markets*

3.6 What factors would improve the distribution of organic agricultural products?
- *Distance, infrastructure, planning, temperature, middlemen, links with the market, mode of transport, access to markets*

Topic 4. Markets

4.1 What types of packaging are commonly used for organic agricultural products during transport?
- *Plastic, boxes, crates*
- *Fruits, vegetables, herbs, spices, roots, tubers, wheats, seeds, nuts, and animal products*

4.2 What types of consumer packaging are commonly used for organic agricultural products?
- *Plastic, cartons, paper bags*
- *Fruits, vegetables, herbs, spices, roots, tubers, wheats, seeds, nuts, and animal products*

4.3 To what extent are there any challenges or opportunities related to the packaging of organic agricultural products?
- If any challenges, how could these be addressed to improve the marketability?

4.4 How can consumers currently differentiate between organic and conventional agricultural products?
- To what extent do you think this is sufficient?
- If not sufficient, what do you think would be a better way to differentiate between organic and conventional agricultural products?

4.5 To what extent do you think the products sold as organic, are in fact also organic?
- *Certification, trust, labelling*

4.6 What is the estimated current size of the domestic market for organic agricultural products in terms of volume and value?
- *A general estimation is ok, for example by giving a rough percentage*
- How has this market changed over the past few years?

4.7 To what extent do you think that consumers are aware of the benefits of organic agricultural products?
- How has this consumer awareness changed over the past few years?
- What types of consumer would you describe to be most and least aware?

4.8 What are the barriers that limit the growth potential for the market of organic agricultural products?

- *Consumer awareness, lack of knowledge for farmers, lack of skills for farmers, lack of (governmental) support, lack of suitable inputs, premium price, inadequate farming technologies, competition*

4.9 What factors would drive the growth potential for the market of organic agricultural products?

- *Consumer awareness, knowledge for farmers, skills for farmers, (governmental) support, suitable inputs, premium price, inadequate farming technologies, competition*

Topic 5. Closing

5.1 Is there any additional insight you would like to share regarding the domestic organic sector potential, through a PGS?
5.2 Do you have any questions for us?
5.3 Do you have suggestions for other people we should speak with?
5.4 Thank you for your time and valuable contributions to this study
5.5 Recap of confidentiality and use of the information gathered
5.6 Confirmation of any follow-up actions or contact information for further queries

- Inform participants of the possibility of receiving information on the study result

IV. Additional consumer results

Gender

How likely are you to purchase organic agricultural produce in the next 6 months?		
Gender	**n**	**Average[1]**
Male	151	4,25
Female	203	4,37
Prefer not to say	2	3,5
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 1.78, p = .17).		
[1] very unlikely = 1, unlikely = 2, neutral = 3, likely = 4, very likely = 5		

Has your likelihood of purchasing organic agricultural products changed over the past year?		
Gender	**n**	**Average[1]**
Male	151	2,68
Female	203	2,71
Prefer not to say	2	2,5
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 0.41, p = .66).		
[1] yes, it decreased = 1, no, it has not changed = 2, yes, it increased = 3		

What percentage of the agricultural products you currently buy would you be willing to switch to organic?[1]		
Gender	**n**	**Average[2]**
Male	143	2,45
Female	199	2,70
Prefer not to say	1	3
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,340) = 1.69, p = .18).		
[1] This question was only answered if answer to how likely are you to purchase organic agricultural produce in the next 6 months? Was not very unlikely or unlikely. [2] 0-25% = 1, 25-50% = 2, 50-75% = 3, 75-100% = 4		

Attitude towards organic products		
Gender	**n**	**Average[1]**
Male	151	4,58
Female	203	4,70
Prefer not to say	2	4,20
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 1.38, p = .25).		
[1] strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5		

Age

There was no statistically significant relationship between age and the likelihood to purchase organic produce, as determined by linear regression (β = -0.0037, t(354) = -0.91, p = 0.36).

There was no statistically significant relationship between age and the reported change of likelihood to purchase organic agricultural products over the past year, as determined by linear regression (β = -0.0073, t(354) = -0.31, p = 0.76).

There was no statistically significant relationship between age and the willingness to switch a percentage from non-organic to organic agricultural products, as determined by linear regression (β = -0.0024, t(341) = -0.04, p = 0.97).

There was no statistically significant relationship between age and the willingness to pay more for organic agricultural products, as determined by linear regression (β = 0.0085, t(354) = 1.45, p = 0.14).

Education

How likely are you to purchase organic agricultural produce in the next 6 months?		
Education	**n**	**Average[1]**
Not finished elementary education	2	5
Elementary education	60	4,20
High school education	153	4,38
Graduate level	108	4,31
Post graduate and above	33	4,24
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(4,351) = 0.85, p = .49).		
[1] very unlikely = 1, unlikely = 2, neutral = 3, likely = 4, very likely = 5		

Has your likelihood of purchasing organic agricultural products changed over the past year?		
Education	**n**	**Average[1]**
Not finished elementary education	2	2,5
Elementary education	60	2,72
High school education	153	2,73
Graduate level	108	2,65
Post graduate and above	33	2,76
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(4,351) = 0.61, p = .66).		
[1] yes, it decreased = 1, no, it has not changed = 2, yes, it increased = 3		

What percentage of the agricultural products you currently buy would you be willing to switch to organic?[1]		
Education	**n**	**Average[2]**
Not finished elementary education	2	1
Elementary education	56	2,70
High school education	150	2,71
Graduate level	102	2,48
Post graduate and above	33	2,39
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,338) = 1.54, p = .10).		
[1] This question was only answered if answer to how likely are you to purchase organic agricultural produce in the next 6 months? Was not very unlikely or unlikely. [2] 0-25% = 1, 25-50% = 2, 50-75% = 3, 75-100% = 4		

How much more are you willing to pay for organic agricultural products compared to conventional ones?		
Education	**n**	**Average[1]**
Not finished elementary education	2	2,0
Elementary education	60	2,3
High school education	153	2,12
Graduate level	108	2,56
Post graduate and above	33	2,45
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(4,351) = 2.25, p = .06).		
[1] 0% = 1, 1-20% = 2, 21-40% = 3, 41-60% = 4, 61-80% = 5, 81-100% = 6, > 100% = 7		

Attitude towards organic products		
Education	**n**	**Average[1]**
Not finished elementary education	2	5,0
Elementary education	60	4,62
High school education	153	4,73
Graduate level	108	4,54
Post graduate and above	33	4,59
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(4,351) = 1.25, p = .29).		
[1] strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5		

Status

How likely are you to purchase organic agricultural produce in the next 6 months?		
Status	**n**	**Average[1]**
Citizen	337	4,32
Resident	14	4,21
Tourist/visitor	5	4,6
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 0.37, p = .69).		
[1] very unlikely = 1, unlikely = 2, neutral = 3, likely = 4, very likely = 5		

Has your likelihood of purchasing organic agricultural products changed over the past year?		
Status	**n**	**Average[1]**
Citizen	337	2,71
Resident	14	2,57
Tourist/visitor	5	2,80
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 0.60, p = .55).		
[1] yes, it decreased = 1, no, it has not changed = 2, yes, it increased = 3		

What percentage of the agricultural products you currently buy would you be willing to switch to organic?[1]		
Status	**n**	**Average[2]**
Citizen	326	2,60
Resident	12	2,83
Tourist/visitor	5	1,60
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,340) = 1.70, p = .18).		
[1] This question was only answered if answer to how likely are you to purchase organic agricultural produce in the next 6 months? Was not very unlikely or unlikely. [2] 0-25% = 1, 25-50% = 2, 50-75% = 3, 75-100% = 4		

Attitude towards organic products		
Status	**n**	**Average[1]**
Citizen	337	4,64
Resident	14	4,63
Tourist/visitor	5	5,0
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 0.59, p = .55).		
[1] strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5		

Living area

How likely are you to purchase organic agricultural produce in the next 6 months?		
Living area	**n**	**Average[1]**
Rural	28	4,14
Suburban	80	4,38
Urban	248	4,32
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 0.75, p = .47).		
[1] very unlikely = 1, unlikely = 2, neutral = 3, likely = 4, very likely = 5		

Has your likelihood of purchasing organic agricultural products changed over the past year?		
Living area	**n**	**Average[1]**
Rural	28	2,61
Suburban	80	2,66
Urban	248	2,73
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,353) = 1.06, p = .35).		
[1] yes, it decreased = 1, no, it has not changed = 2, yes, it increased = 3		

What percentage of the agricultural products you currently buy would you be willing to switch to organic?[1]		
Living area	**n**	**Average[2]**
Rural	27	2,85
Suburban	79	2,35
Urban	238	2,65
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(2,341) = 2.12, p = .12).		
[1] This question was only answered if answer to how likely are you to purchase organic agricultural produce in the next 6 months? Was not very unlikely or unlikely. [2] 0-25% = 1, 25-50% = 2, 50-75% = 3, 75-100% = 4		

Income

Has your likelihood of purchasing organic agricultural products changed over the past year?		
Income	**n**	**Average[1]**
< 100,000 RWF	52	2,62
100,000 RWF – 300,000 RWF	187	2,71
300,000 RWF – 500,000 RWF	70	2,70
500,000 RWF – 700,000 RWF	31	2,71
> 700,000 RWF	16	2,94
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(4,351) = 1.32, p = .26).		
[1] yes, it decreased = 1, no, it has not changed = 2, yes, it increased = 3		

Attitude towards organic products		
Income	**n**	**Average**[1]
< 100,000 RWF	52	4,47
100,000 RWF – 300,000 RWF	187	4,67
300,000 RWF – 500,000 RWF	70	4,61
500,000 RWF – 700,000 RWF	31	4,85
> 700,000 RWF	16	4,70
Conclusion: There were no statistically significant differences between group means as determined by one-way ANOVA (F(4,351) = 1.49, p = .21).		
[1] strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5		

V. Additional hotel results

Hotel size

There are little difference between the hotel sizes and their likelihood to purchase organic agricultural products in the next six months.

How likely is the hotel to purchase organic agricultural produce in the next 6 months?		
Amount of rooms	**n**	**Average[1]**
0-30	12	4,25
31-50	14	4,29
51-100	2	4,50
> 100	3	4,33
[1] very unlikely = 1, unlikely = 2, neutral = 3, likely = 4, very likely = 5		

The size of the hotel does not seem to link to their willingness to pay more for organic agricultural products, as no consistent results can be shown.

How much more is the hotel willing to pay for organic agricultural products compared to conventional ones?		
Amount of rooms	**n**	**Average[1]**
0-30	12	3,00
31-50	14	3,00
51-100	2	7,00
> 100	3	3,33
[1] 0% = 1, 1-20% = 2, 21-40% = 3, 41-60% = 4, 61-80% = 5, 81-100% = 6, > 100% = 7		

The hotel size does not seem to correlate with the reasons why hotels would be willing to pay more for organic agricultural products. Especially since only a few larger hotels were part of the survey.

What reasons would make you willing to pay more for organic agricultural products?							
		Percentage of respondents that ticked the reason					
Amount of rooms	**n**	**Demand of guests**	**Health benefits**	**Environmental benefits**	**Better taste**	**Support local farmers**	**Higher quality**
0-30	12	83%	92%	100%	75%	67%	83%
31-50	14	86%	86%	86%	71%	93%	86%
51-100	2	100%	100%	100%	100%	100%	100%
> 100	3	100%	67%	33%	67%	67%	100%

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