A G R I F U S I O N

A Stakeholder Outreach and Research Report



by **The Veg Box Malta**

*with the support of **Weave Consulting***

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MESSAGE FROM THE AUTHOR



When I started The Veg Box, it was never just about growing food. It was about something bigger—a way to connect people with the land, with farmers, and with the food on their plates. Over the years, I've seen firsthand how challenging it can be for small-scale farmers to survive in an industry dominated by large-scale imports, unpredictable policies, and the ever-changing demands of the market. But I've also seen the power of collaboration, innovation, and community-driven change.

This is why Agrifusion is so close to my heart. It's more than a research project—it's a call to action. It's about giving farmers the tools, knowledge, and opportunities to thrive in a changing world. It's about bringing urban consumers closer to the people who grow their food. And it's about rethinking the way we approach agriculture—not as something stuck in the past, but as an industry that is ripe for transformation.

This report is the result of months of listening, learning, and engaging with farmers, policymakers, entrepreneurs, and consumers. It highlights the challenges we face—digital gaps, policy barriers, sustainability struggles—but it also presents real, workable solutions. We've drawn inspiration from global success stories, and we now have a clear roadmap for how we can move forward here in Malta.

The future of agriculture isn't just about technology or policy—**it's about people.** It's about the farmers who work the land, the families who rely on them, and the communities that shape our food system. If we get this right, we won't just be creating a more sustainable agriculture sector—we'll be building a food culture that values quality, fairness, and connection.

I hope this report inspires action. Whether you're a farmer, policymaker, business owner, or simply someone who cares about food, there's a role for you in shaping the future of agriculture in Malta. Let's make it a future we can all be proud of.

Emanuela de Giorgio
Founder, The Veg Box Malta

EXECUTIVE SUMMARY

The Agrifusion Project, Malta's pilot within the PoliRural Plus initiative, seeks to transform the country's agricultural landscape by integrating digital innovation, policy reform, and stakeholder collaboration. This research report provides a comprehensive analysis of agricultural challenges, consumer trends, SME perspectives, and expert insights, offering strategic recommendations for sustainability, digital transformation, and rural-urban connectivity.

Key Findings

- Consumer demand for local and sustainable food is strong but hindered by limited availability, high costs, and distribution challenges. While most consumers are willing to pay more for sustainably produced goods, better accessibility and incentives are needed.
- SMEs in agriculture recognize the importance of sustainability, yet high operational costs, limited access to technology, and financial constraints prevent full adoption. Market access challenges and ineffective government policies further hinder growth.
- Technology adoption in agriculture remains low, particularly among older farmers, due to digital literacy gaps and infrastructure barriers. However, global case studies on AI, IoT, and blockchain demonstrate the potential for yield optimization, cost reduction, and improved market access.
- Young farmers face discouragement from entering the sector, citing financial instability, outdated perceptions of farming, and a lack of support structures. Education, mentorship, and digital entrepreneurship programs are essential to reversing this trend.
- Collaboration between rural producers and urban consumers is weak, with limited direct marketing opportunities. Models such as Community-Supported Agriculture (CSA) programs and digital market places have the potential to bridge this gap.

- Policy and financial support are insufficient, with many SMEs reporting difficulty accessing grants or incentives. More targeted policies for sustainability, technology adoption, and cooperative development are required.

Recommendations & Actionable Roadmap

1. **Policy Alignment & Support** – Advocate for smart agriculture incentives, cooperative strengthening, and digital infrastructure investments. Policies should support smallholder farmers, simplify financial aid access, and integrate sustainability into agricultural subsidies.
2. **Technology Integration & Training** – Implement pilot programs for AI, IoT, and blockchain, offering training and support to increase adoption. Improve rural internet connectivity and create digital advisory platforms.
3. **Consumer Engagement & Market Expansion** – Develop direct-to-consumer models like CSAs, farm-to-table initiatives, and digital marketplaces to enhance consumer access to local food. Support regional branding to highlight the value of Maltese agricultural products.
4. **Financial Support & SME Development** – Expand access to grants, low-interest loans, and subsidies for sustainable agriculture. Facilitate regional networks for resource-sharing among farmers.
5. **Bridging Rural-Urban Divides** – Strengthen rural-urban linkages through education, agritourism, and local food awareness campaigns. Encourage urban stakeholders to support regional agricultural initiatives.
6. Multi-Stakeholder Collaboration – Establish a national coalition bringing together farmers, policymakers, researchers, and business leaders to drive agricultural modernization.

conclusion

The Agrifusion Project presents a unique opportunity to modernize Malta's agricultural sector while enhancing sustainability and economic resilience. By implementing the proposed policy reforms, technological innovations, and community-driven strategies, Malta can create a more sustainable, competitive, and inclusive food system.

This report provides a roadmap for action, positioning Agrifusion as a model for forward-thinking, technology-driven agricultural transformation. The time for change is now—through collaboration, investment, and innovation, Malta can secure a thriving, sustainable agricultural future.

ABOUT THE POLIRURAL PLUS PROJECT

PoliRuralPlus extends and enriches the achievements of its predecessor, the PoliRural, by delving deeper into the complexities of rural and urban interconnectivity. It deploys a sophisticated suite of digital tools, including Artificial Intelligence, Geographic Information Systems, Internet of Things, and advanced data analytics. The project's core mission is to tackle prevalent issues such as administrative fragmentation, inequality, and inefficiencies in public service coordination, fostering an environment of enhanced cooperation and equal opportunities across rural and urban divides. Central to PoliRuralPlus are 9 pilot projects that serve as proving grounds for an EU-wide integrated approach to territorial planning and action foresight. PoliRuralPlus ambitiously expands its scope to include the urban dimension, thus embracing a broader perspective on development.

Overall objective

The PoliRuralPlus builds on the successful results PoliRural provided for rural regions. In this project, the project partners aim to address the research agenda established by PoliRural and broaden their foresight, planning and development scope to regions that include both urban and rural areas, and anything in between.

POLIRURALPLUS SPECIFIC OBJECTIVES

O1 To develop and implement a foresight-based framework for interregional cooperation and coordination, aimed at overcoming policy barriers and improving governance arrangements to foster integrated and smart rural-urban development strategies

O2 To develop and implement integrated strategies and action plans that enhance the availability of business and innovation opportunities in rural areas, while promoting a more proximate, circular, and green economy and revitalising rural places through better connectivity, improved valorization of cultural and natural heritage, and stronger innovation ecosystems.

O3 To enhance mutual access to services and social connectivity between rural and urban areas, as well as build resilience and capacity for innovation through the implementation of regional action plans and pilot initiatives.

O4 Contribute to the implementation of the European Green Deal, with a specific focus on the farm-to-fork and biodiversity strategies, the organic action plan, the common agricultural policy (CAP), the long-term vision for the EU's rural areas, the flagship initiative "Research and innovation for rural communities," and the EU territorial agenda for 2030.

O5 To enhance cross-disciplinary collaboration and leverage the full potential of European Research Infrastructures, EOSC, EU Data spaces, INSPIRE, Copernicus, DIAS, Eurostat, FAO, and other relevant data sources for integrated rural-urban development.

O6 To facilitate mission-oriented experimentation and innovation by leveraging data-driven decision-making, collaborative analysis, and system dynamics to advance the development of a well-being economy based on proximity, circularity, green economy/society, services, culture, landscape and heritage, and mobility.

O7 To create synergies with the New European Bauhaus (NEB) and other EU-funded projects, facilitating ideas flows from urban to rural settings and vice versa.

ABOUT AGRIFUSION

The ‘Agrifusion’project is the Malta pilot within the Polirural Plus Project. It is a stakeholder outreach initiative that emphasizes collaboration across relevant sectors in Malta as a step to transform regions into vibrant, resilient communities.

“AgriFusion”aims to contribute to the PoliRural Project and inter alia enhance sustainable agricultural practices and improve food security in Malta by conducting comprehensive stakeholder outreach and research. Our primary goal is to gather insights into the needs and challenges faced by local farmers and consumers, promote sustainable farming practices, and foster stronger connections between rural and urban communities. Through this research-driven approach, we seek to support local agriculture and promote sustainable consumption practices.

Our project aligns seamlessly with the objectives of the Malta regional pilot, which focuses on digital transformation and entrepreneurial capacity building in rural areas. The pilot aims to level up agricultural sectors through digitization, youth empowerment, and fostering collaboration between rural and urban stakeholders to bridge societal divides and promote circularity.

THE AGRIFUSION METHODOLOGY

“AgriFusion”directly addressed these goals through the following:

1. Digital Transformation and Entrepreneurial Capacity Building

While our primary focus was on stakeholder outreach and research, we explored opportunities for integrating digital tools and technologies to enhance agricultural practices and market access. By understanding the digital needs and capacities of local farmers, we have provided recommendations for future digitization efforts that align with the regional pilot’s objectives.

2. Levelling Up Agricultural Sectors

Our research identified key challenges and opportunities within the agricultural sector, particularly in terms of sustainable practices and market access. By engaging with farmers, we gathered data on current practices and potential areas for improvement, which will inform strategies to enhance the agricultural sector's productivity and Sustainability.

3. Empowerment of Youth

Engaging with young farmers and agricultural entrepreneurs was a crucial aspect of our stakeholder outreach. By understanding their needs, aspirations, and challenges, we have developed recommendations to empower youth in agriculture, promoting innovative practices and entrepreneurial ventures that align with the goals of the Malta regional pilot.

4. Bridging Societal Divides

Our project fostered collaboration between rural and urban stakeholders through inclusive outreach activities. By facilitating dialogues and workshops, we aimed to bridge the gap between producers and consumers, ensuring that urban residents are more connected to and supportive of local agriculture. This approach has helped reduce societal divides and promote a more integrated community.

5. Promoting Circularity

Through our research, we explored ways to promote circular economy practices within the agricultural sector. These included understanding how farmers can adopt sustainable methods that reduce waste, recycle resources, and create a closed-loop system. Our findings have contributed to strategies that align with the circularity goals of the Malta regional pilot.

By addressing these focus areas, **“AgriFusion”** aligned perfectly with the objectives of the Malta regional pilot. Our project not only enhanced rural-urban interactions but also contributed to the broader goals of sustainable rural development, youth empowerment, and community resilience in Malta.

To comprehensively understand and address the needs of our stakeholders, we employed a combination of qualitative and quantitative methodologies. Our approach has ensured inclusivity and thoroughness, capturing a wide range of perspectives from farmers, consumers, policymakers, and other relevant stakeholders.

Specific techniques and tools deployed throughout this project included the following

1. Surveys

o Online Surveys: We distributed structured online surveys using Google forms. These surveys were designed to gather quantitative data on stakeholder needs, preferences, and challenges.

o In-Person Surveys: To reach stakeholders with limited internet access, we conducted in-person surveys during community meetings and events.

2. Interviews

o Semi-Structured Interviews: We conducted one-on-one interviews with key stakeholders, including farmers, local government officials, and technology providers. These interviews provided in-depth insights into individual needs and experiences.

o Online Interviews: For stakeholders who could not participate in face-to-face interviews, we conducted interviews over Zoom to ensure their perspectives were included.

3. Focus Groups

o Targeted Focus Groups: We organized focus group discussions with specific

stakeholder groups (e.g., young farmers, consumer representatives) to facilitate detailed discussions and gather qualitative data.

o Mixed-Group Focus Groups: we brought together diverse stakeholders in a mixed-group setting, and this helped us identify common themes and areas of divergence, promoting a holistic understanding of user needs.

4. Workshops

o Interactive Workshops: We hosted workshops that included participatory activities such as brainstorming sessions, role-playing, and scenario planning. These workshops engaged stakeholders in identifying needs and co-creating solutions.

o Thematic Workshops: Focusing on specific topics (e.g., sustainable farming practices, market access), these workshops delved deeper into particular areas of interest.

Ensuring a Comprehensive and Inclusive Approach

• Diverse Representation: We ensured that our data collection methods reach a diverse range of stakeholders across different demographics, geographic locations, and socio-economic backgrounds. Special efforts were made to include underrepresented groups such as small-scale farmers and low-income households.

• Accessibility: All our data collection tools were designed to be accessible and user-friendly. Workshops were held in accessible locations at convenient times.

• Continuous Feedback Loop: We established* a continuous feedback loop by regularly updating stakeholders on the progress of the project and incorporating their feedback into our ongoing activities.

Data Analysis and Synthesis

• Qualitative Data Analysis: We analyzed qualitative data from interviews, focus groups, and workshops to identify key themes, patterns, and insights. Artificial

Intelligence was used for systematic analysis.

• Quantitative Data Analysis: Survey data was analyzed using software to identify trends, correlations, and significant findings.

• Integrated Reporting: The results from qualitative and quantitative analyses are being synthesized into this comprehensive report, highlighting key user needs and actionable insights.

Challenges and Mitigation Strategies

• Resistance to Participation: To address potential resistance, we clearly communicated the benefits of participation and ensured confidentiality and data security.

• Digital Literacy Barriers: For stakeholders with limited digital literacy, we provided support and alternative methods of participation..

• Time & Logistical Constraints: We carefully planned and scheduled our data collection activities to maximize participation and minimize disruptions to stakeholders' daily activities, whilst ensuring best outcomes in the limited timeframe available.

By employing these robust methods for collecting user needs, **“AgriFusion”** aimed to ensure that our project responded to the real challenges and opportunities faced by the community, leading to more effective and sustainable outcomes.

Consumer survey, Focus Groups, Workshops and Interviews

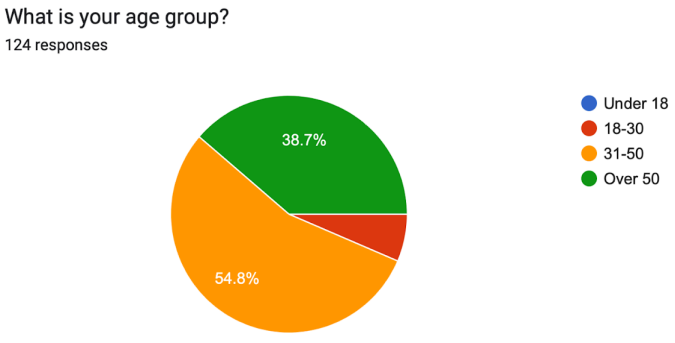
Introduction

This chapter presents an analysis of consumer attitudes and behaviours related to sustainable agriculture, local food sourcing, and the role of technology in accessing agricultural products. The survey aimed to assess consumer familiarity with sustainable agriculture, their purchasing habits, preferences, and their willingness to engage in initiatives that support local farmers and rural communities.

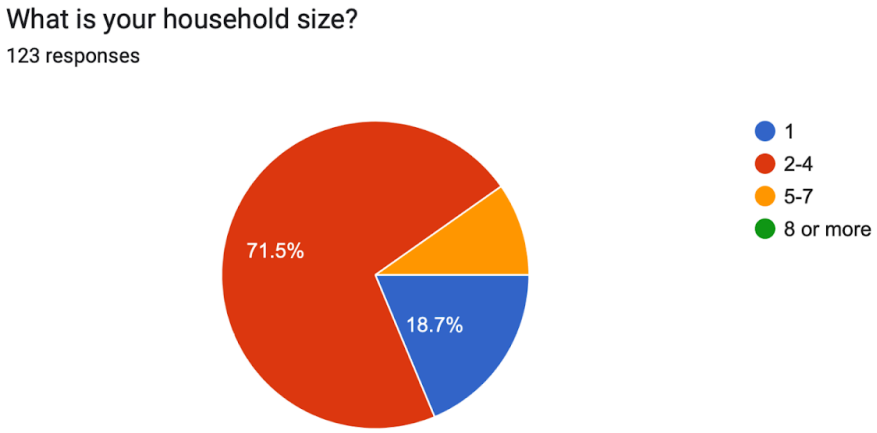
Demographic Profile of Respondents

The survey collected responses from individuals across different age groups, household sizes, and locations.

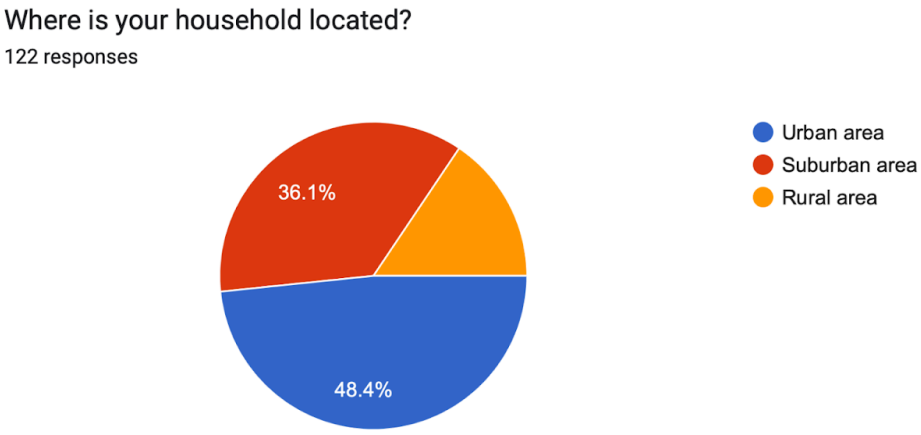
- **Age Group Distribution**:
    - The majority of respondents fell into the **31-50 age group (68 respondents)**.
    - **18-30 age group** accounted for 8 respondents.
    - **Over 50** respondents were fewer in comparison.



- **Household Size**:
    - Most respondents (88) reported having a household size of **2-4 members**.
    - **12 respondents** lived in households of **5-7 members**.
    - **23 respondents** reported living alone.

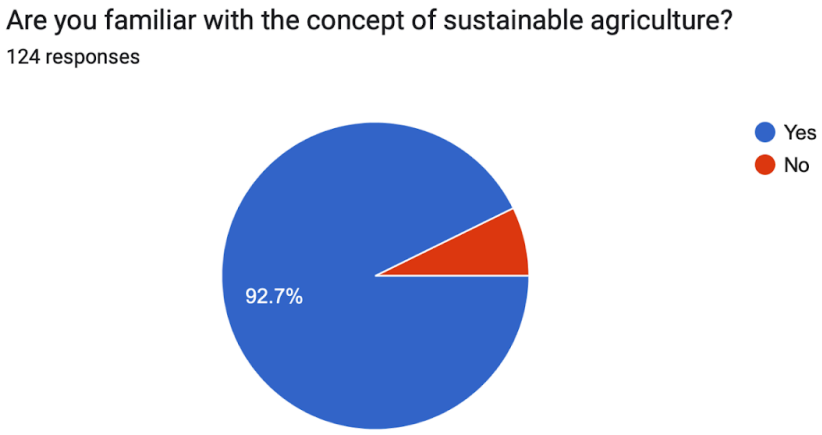


- **Household Location**:
    - The dataset suggests a mix of **urban, suburban, and rural** dwellers, with urban respondents being the most represented.

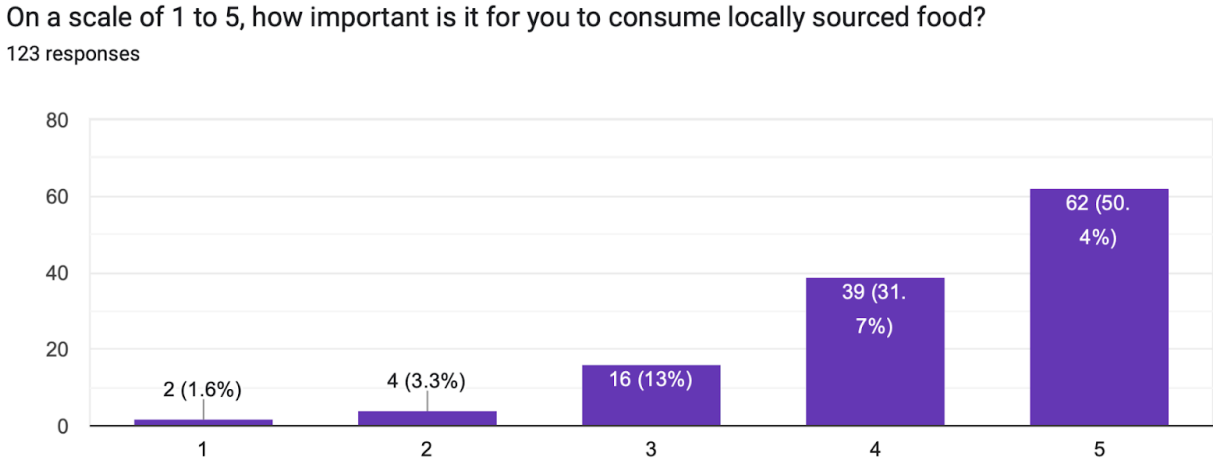


Awareness and Attitudes Toward Sustainable Agriculture

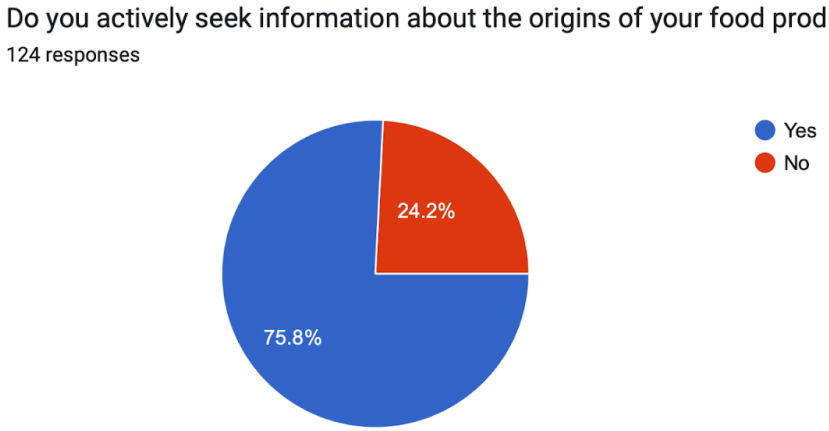
- **Familiarity with Sustainable Agriculture**:
    - A vast majority of respondents reported being **familiar** with the concept of sustainable agriculture, indicating a high level of awareness.



- **Importance of Consuming Locally Sourced Food**:
    - On a scale of **1 to 5**, the average rating was **high (around 4.5)**, indicating strong consumer preference for locally sourced food.

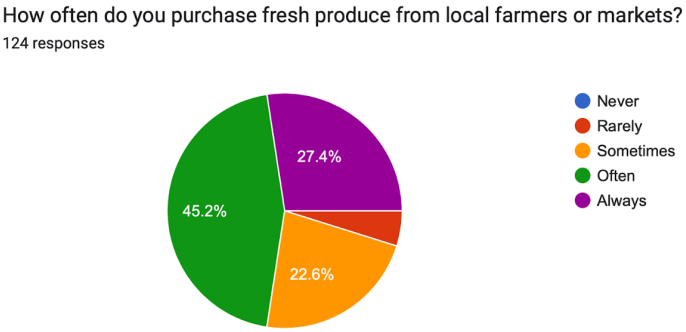


- **Information-Seeking Behaviour**:
    - Most respondents **actively seek information** about the origins of their food products, reflecting an informed consumer base.

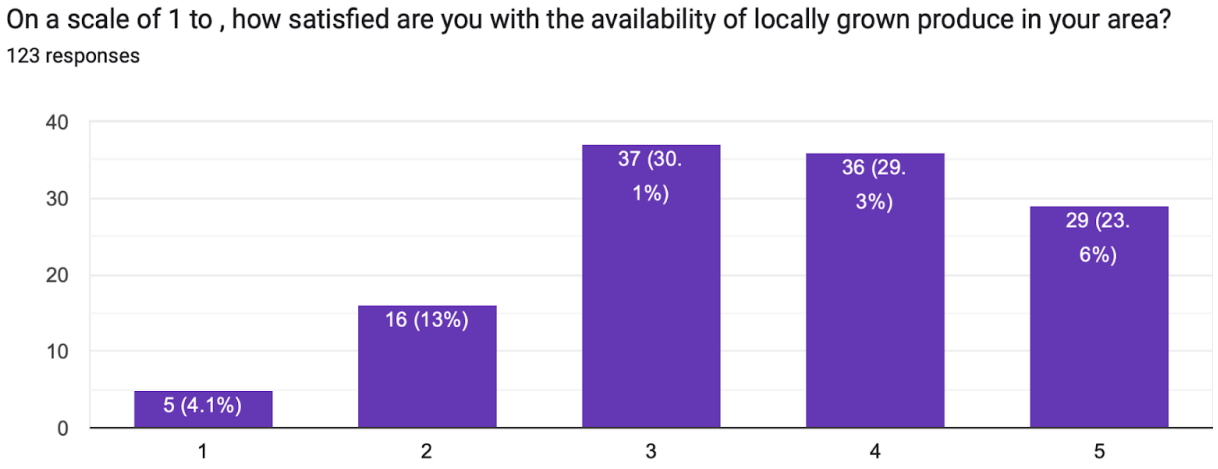


Consumer Purchasing Behaviour

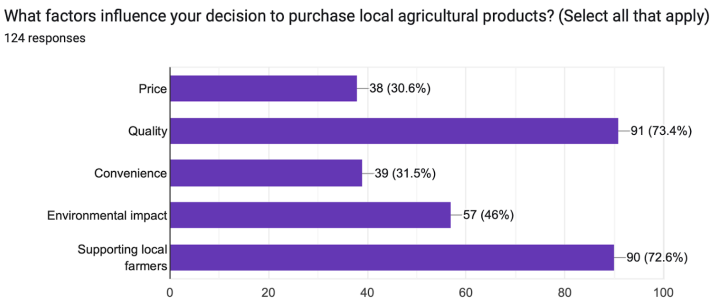
- **Frequency of Purchasing Fresh Produce from Local Farmers or Markets**:
    - A significant portion of respondents reported purchasing from **local farmers or markets regularly**, with many indicating they do so **"often" or "always"**.
    - A smaller subset reported **"sometimes"**, suggesting room for increased engagement with local food sources.



- **Satisfaction with the Availability of Locally Grown Produce**:
    - Satisfaction levels varied, with some respondents rating it **high (4-5)** while others indicated lower satisfaction levels (**2-3**), suggesting potential gaps in local food accessibility.

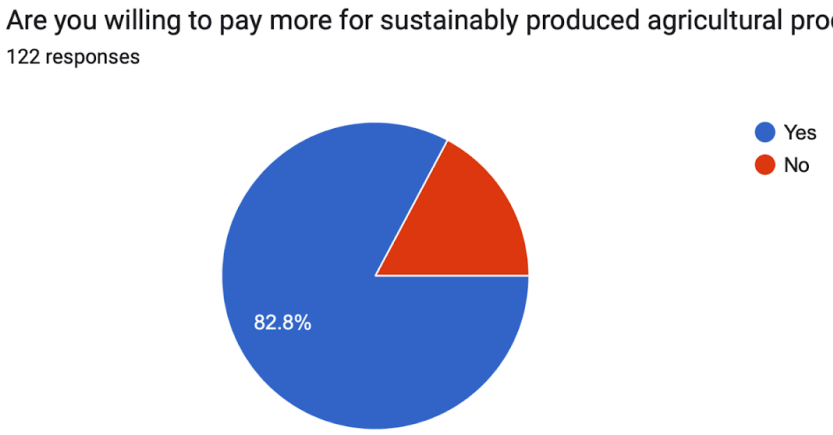


- **Factors Influencing the Purchase of Local Agricultural Products**:
    - The most common factors influencing purchases included:
        - **Quality of products**
        - **Environmental impact**
        - **Supporting local farmers**
        - **Price considerations**



***Willingness to Pay More for Sustainably Produced Agricultural Products**:*

- The majority of respondents indicated they were **willing to pay a premium** for sustainably produced products.
- However, some consumers expressed reluctance, possibly due to price sensitivity.

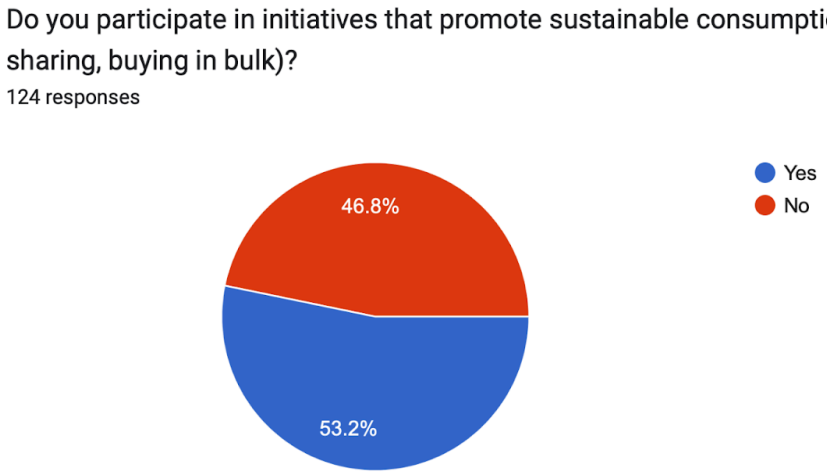


Sustainability and Consumption Practices

- **Reducing Food Waste**:
  - On a scale of **1 to 5**, most respondents rated the importance of reducing food waste at **5**, highlighting strong environmental consciousness.

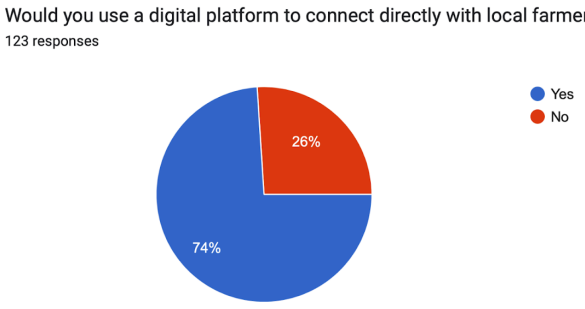


- **Participation in Sustainable Consumption Initiatives**:
    - Engagement in sustainable practices such as **composting, food sharing, and bulk buying** was mixed.
    - Some respondents **actively participate**, while others **do not engage** in these initiatives.

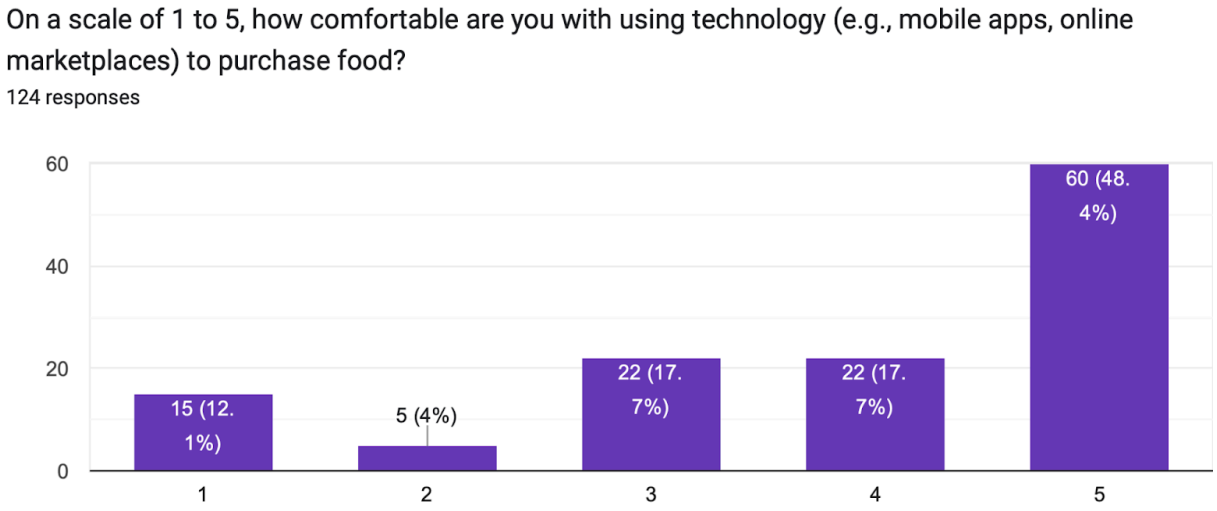


Role of Technology in Sustainable Agriculture

- **Willingness to Use Digital Platforms to Connect with Local Farmers**:
    - A **majority of respondents were open** to using digital platforms to connect with farmers, suggesting a market for online agricultural platforms.

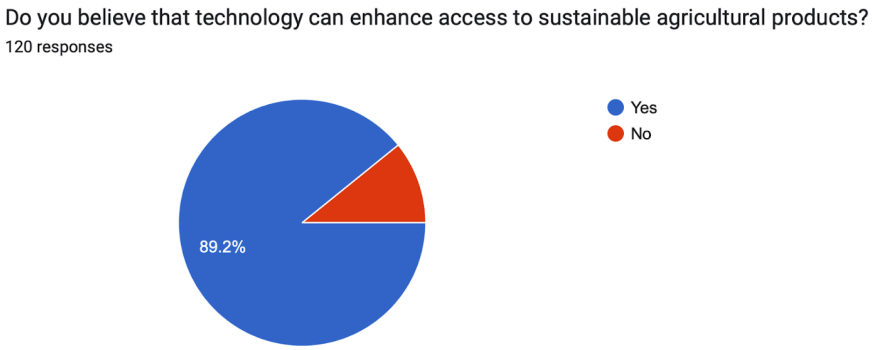


- **Comfort with Technology in Food Purchases**:
    - Responses on a scale of **1 to 5** revealed **high comfort levels (4-5) for most respondents**, although some reported **lower comfort levels**, indicating a potential digital literacy barrier.



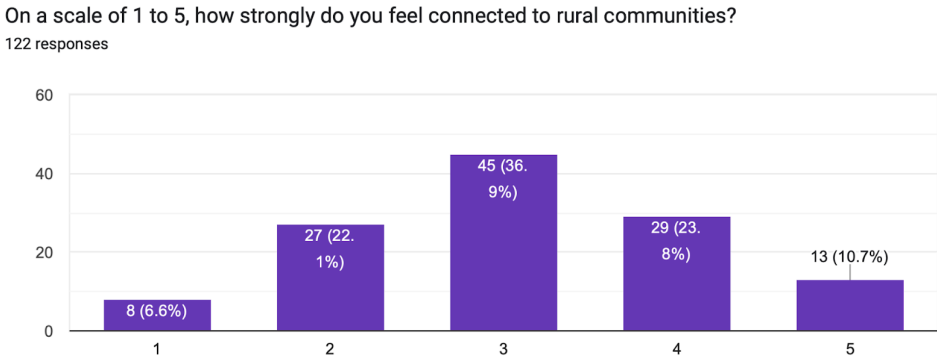
Belief in Technology's Role in Enhancing Access to Sustainable Agricultural Products:

- Almost all respondents **believe that technology can improve access** to sustainable food options, reinforcing the importance of digital solutions in agriculture.

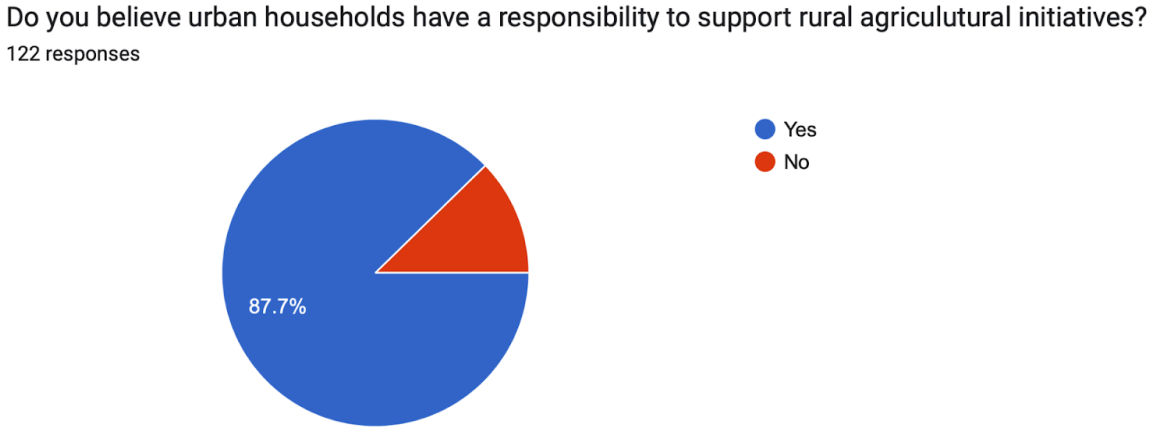


Connection to Rural Communities and Willingness to Support

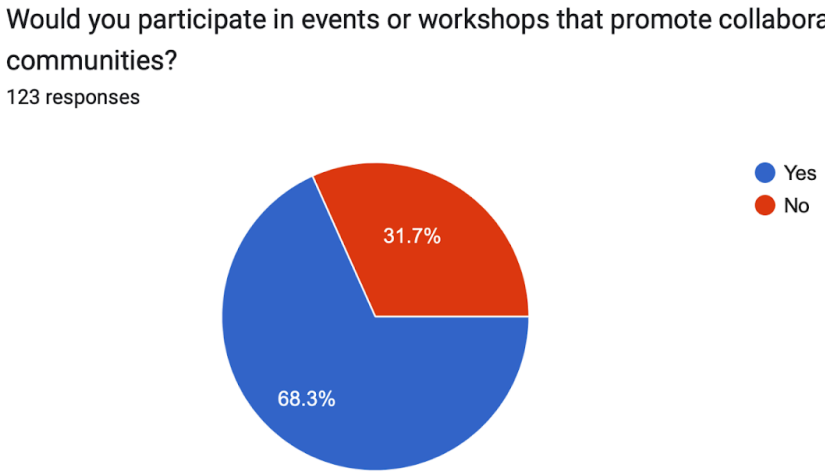
- **Connection to Rural Communities**:
    - Respondents rated their sense of connection to rural areas at an average level of **3-4 on a scale of 5**, indicating some engagement but with room for improvement.



- **Responsibility of Urban Households in Supporting Rural Agriculture**:
    - The majority **agreed that urban households have a role to play** in supporting rural agriculture.



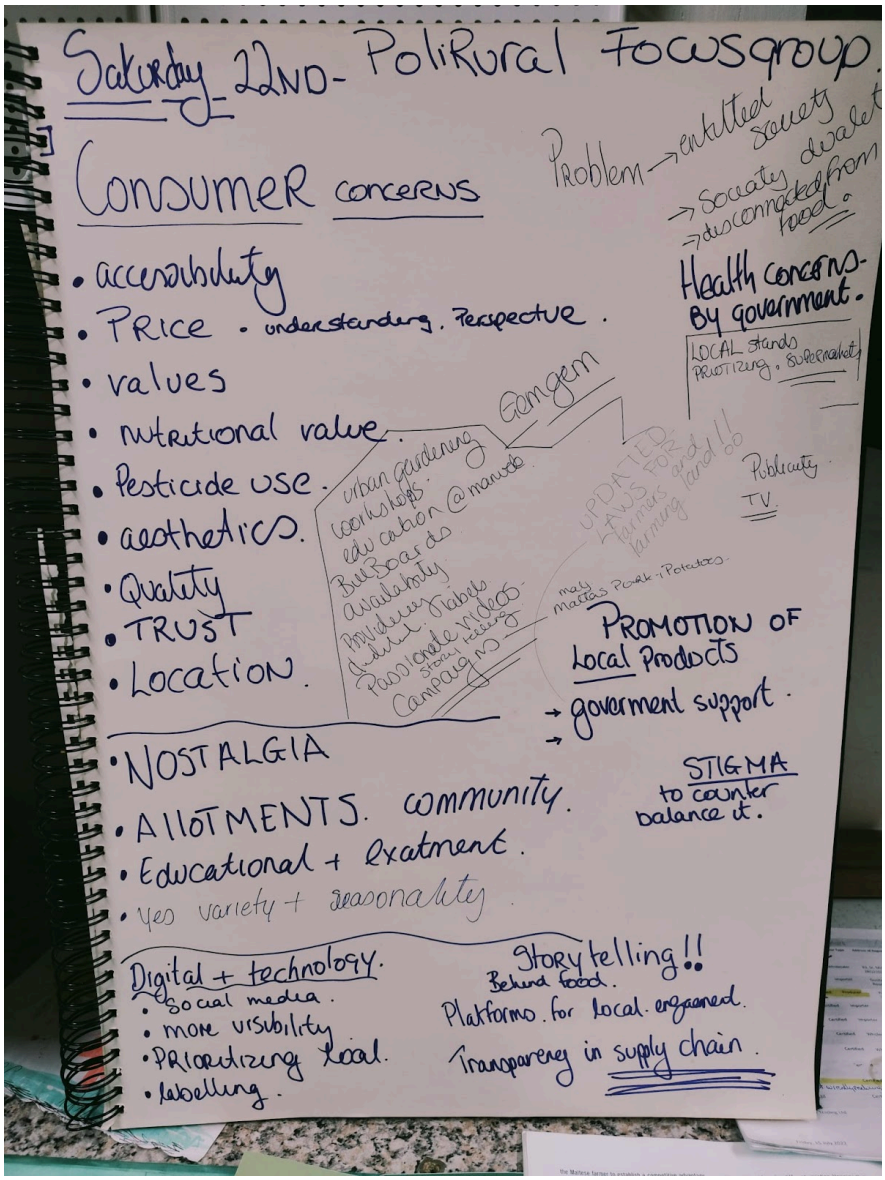
- **Willingness to Participate in Events or Workshops Bridging Rural-Urban Gaps**:
    - Most respondents **expressed interest in participating in events** that foster collaboration between urban and rural communities, though some remained hesitant.



Further in-depth data was obtained through focus groups and interviews exploring consumer preferences and attitudes. These provided the insights outlined below.

CONCLUSION AND RECOMMENDATIONS

The research results indicate that **consumers are highly aware of and interested in sustainable agriculture**, with strong preferences for locally sourced food. However, **availability and price considerations** remain key factors affecting their purchasing *decisions.*



Key Takeaways:

1. **Consumers are aware and engaged**: Many respondents actively seek information and prioritize sustainable consumption.
2. **Demand for local food is strong but needs support**: While people prefer locally sourced food, accessibility and affordability need improvement.
3. **Technology is a potential enabler**: Many respondents are willing to use digital tools to enhance their access to sustainable food.
4. **Sustainability initiatives have mixed participation**: While many consumers value sustainability, not all actively participate in related initiatives.
5. **Urban-rural collaboration opportunities exist**: Many respondents support rural agriculture and are open to engagement opportunities.

Recommendations:

- **Enhance Local Food Accessibility**: Address challenges in local food availability by strengthening local distribution networks.
- **Increase Consumer Awareness**: Launch initiatives to encourage consumers to participate in sustainable consumption practices.
- **Leverage Digital Platforms**: Develop and promote digital marketplaces connecting consumers with local farmers.
- **Promote Price Incentives**: Encourage subsidies or incentives for sustainable products to make them more affordable.
- **Encourage Rural-Urban Collaboration**: Organize workshops and events that foster urban support for rural farming communities.

Final Thoughts

The survey highlights a positive attitude toward sustainable agriculture, but challenges in **availability, affordability, and participation in sustainability initiatives** remain. By addressing these gaps through **policy interventions, technology, and community engagement**, sustainable consumption can be further promoted.

This analysis provides valuable insights for policymakers, local food producers, and technology developers looking to foster a **more sustainable and consumer-friendly agricultural ecosystem**.



SME Survey

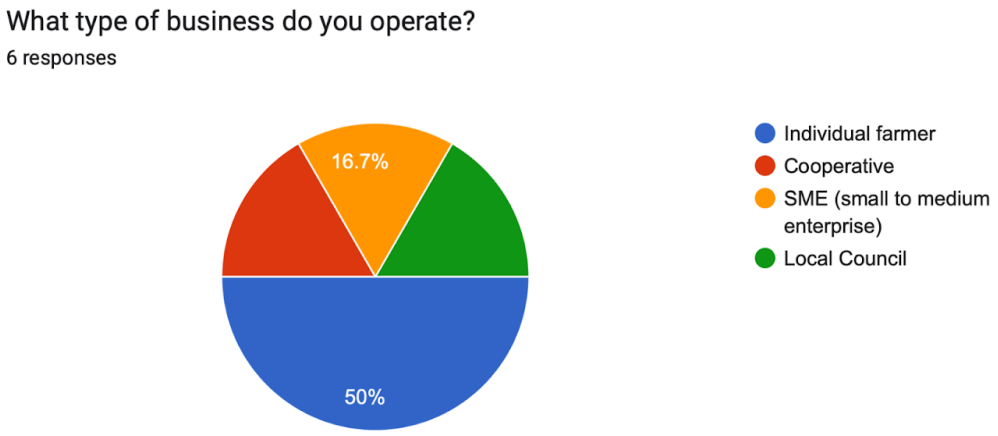
Introduction

This chapter presents an analysis of the survey conducted with Small and Medium Enterprises (SMEs) in the agricultural sector. The survey aimed to explore the challenges, opportunities, and perspectives of SMEs regarding sustainable agriculture, market access, financial support, and technological adoption.

1. Business Profile of Respondents

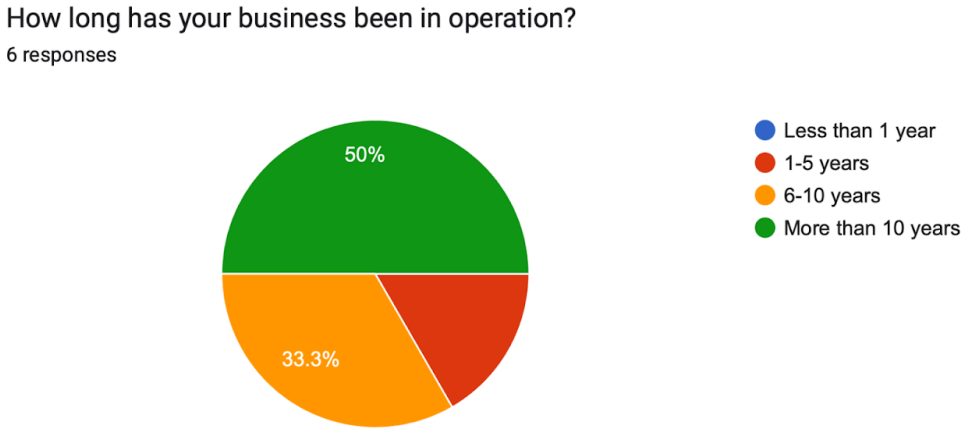
The survey included responses from a variety of businesses/organisations within the agricultural sector.

- **Business Types**:
    - **Individual farmers (majority)**
    - **Cooperatives**
    - **Small to Medium Enterprises (SMEs)**
    - **Local Councils**

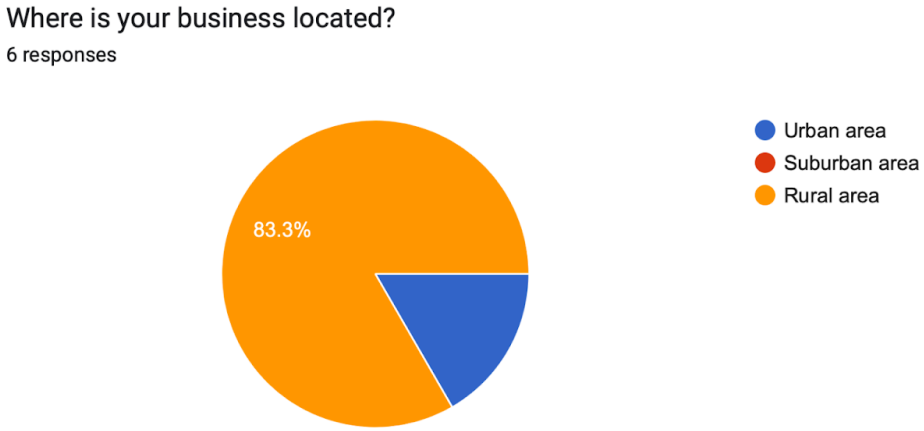


- **Duration of Business Operations**:
    - **Most businesses have been operating for over 10 years**.

- Some businesses reported being in operation for **6-10 years**.
- A few respondents had businesses running for **1-5 years**, indicating a mix of experience levels.

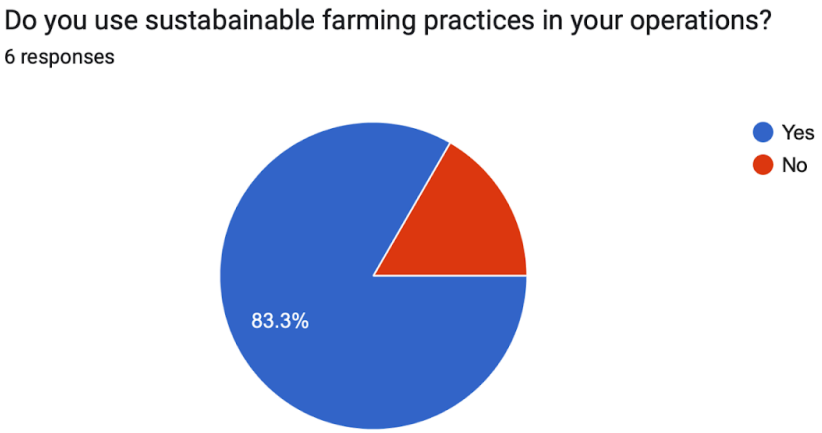


- **Business Location**:
  - The majority of respondents are based in **rural areas**.
  - Some businesses operate in **urban areas**, likely involved in food distribution or policymaking.

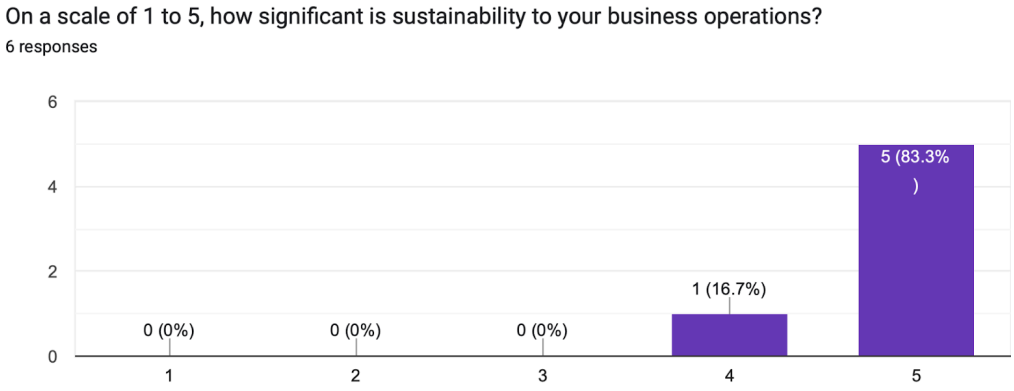


2. Sustainable Agricultural Practices

- **Adoption of Sustainable Farming Practices**:
    - **Most SMEs use sustainable farming practices**, showing a commitment to environmental sustainability.
    - However, a few businesses **do not practice sustainability**, suggesting barriers to adoption.



- **Significance of Sustainability to Business Operations**:
    - On a scale of **1 to 5**, sustainability was rated **5 by most respondents**, emphasizing its importance.



- **Challenges in Adopting Sustainable Practices**:
    - **High costs** were the most frequently cited challenge.
    - Other challenges include:
        - **Limited access to technology**
        - **Lack of knowledge and training**
        - **Market demand constraints**
    - Some businesses also cited **"other" challenges**, possibly related to regulatory hurdles or labor shortages.

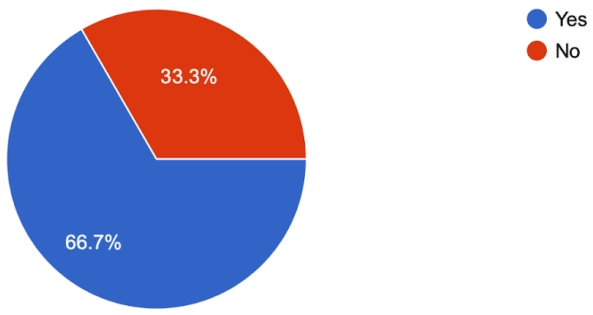


3. Market Access and Business Growth

- **Direct Sales to Consumers**:
    - **Most SMEs sell directly to consumers**, which helps them maintain profit margins.
    - Some businesses rely on **intermediaries or wholesale markets**, reducing direct control over pricing.

Do you sell your products directly to consumers?

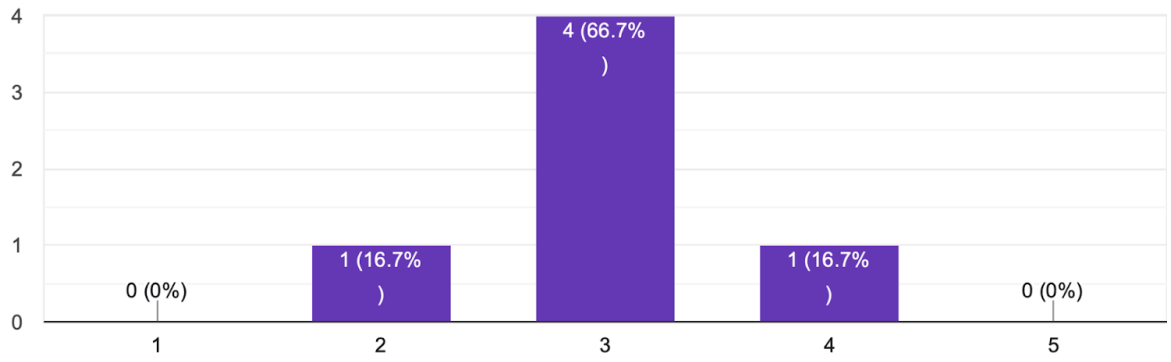
6 responses



- **Satisfaction with Current Market**:
    - Market satisfaction was **moderate (rated around 3 out of 5)**.
    - This suggests that businesses are **not fully content with their current market conditions**, possibly due to price fluctuations, competition, or consumer demand issues.

On a scale of 1 to 5, how satisfied are you with your current market?

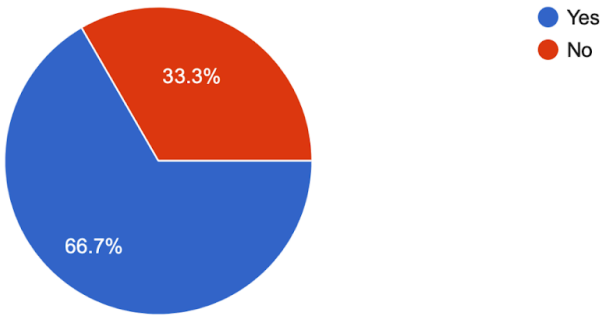
6 responses



- **Challenges in Accessing Local or International Markets**:
    - A significant number of businesses **struggle with market access**, especially at the international level and with pricing competition.
    - Some businesses, however, do not report difficulties, suggesting **varying experiences depending on the product type and location**.

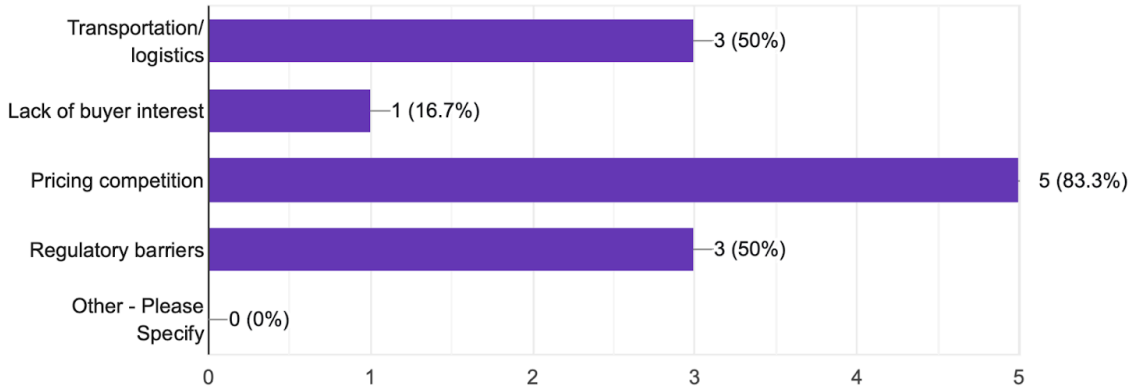
Do you face challenges in accessing local or international markets?

6 responses



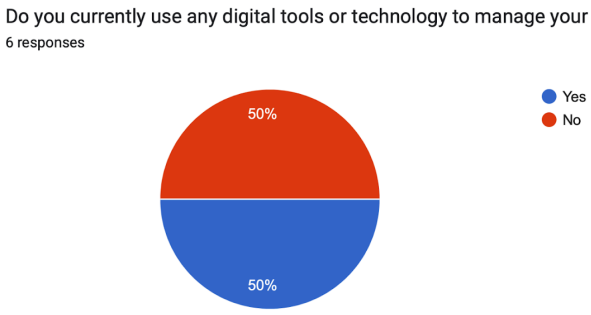
If yes, what are the key challenges? (Select all that apply)

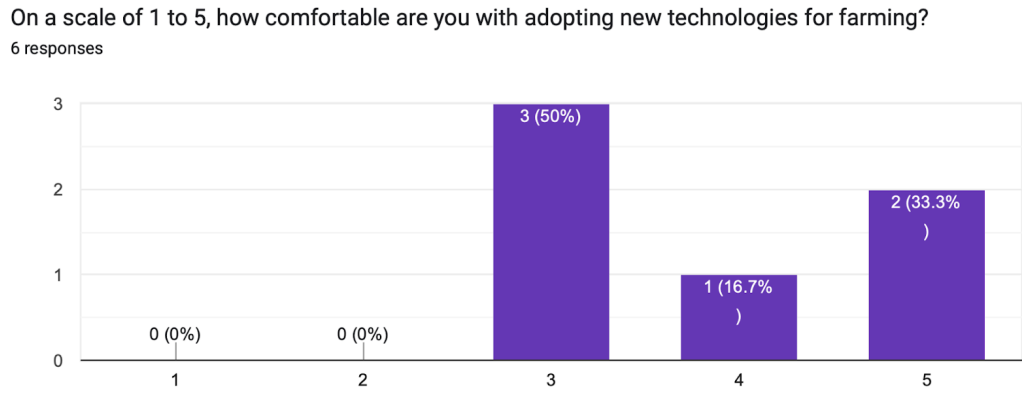
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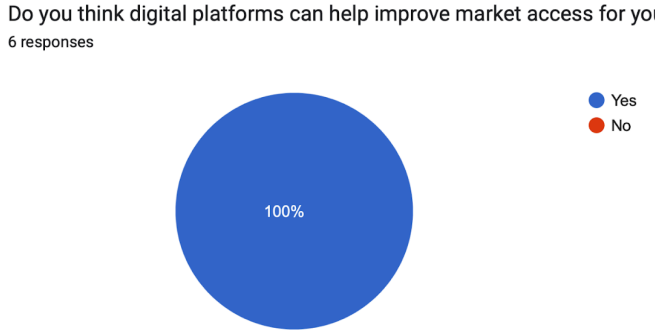


4. Use of Digital Tools

- Half the respondents reported using digital tools
- Respondents also seemed hesitant in their openness to adopt digital tools
- However all agreed that technology could help with market access





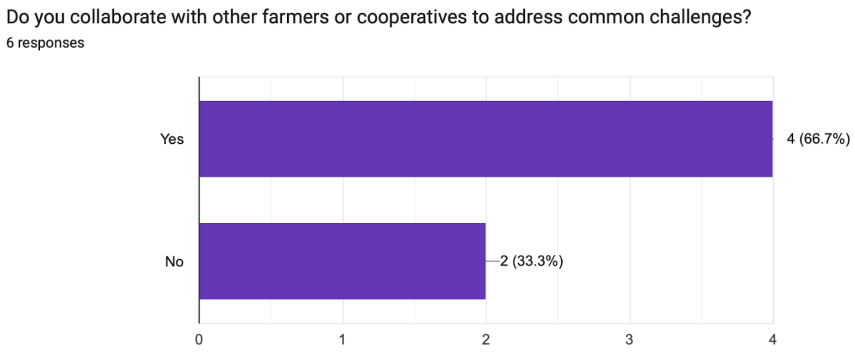


5. Training, Collaboration, and Networking

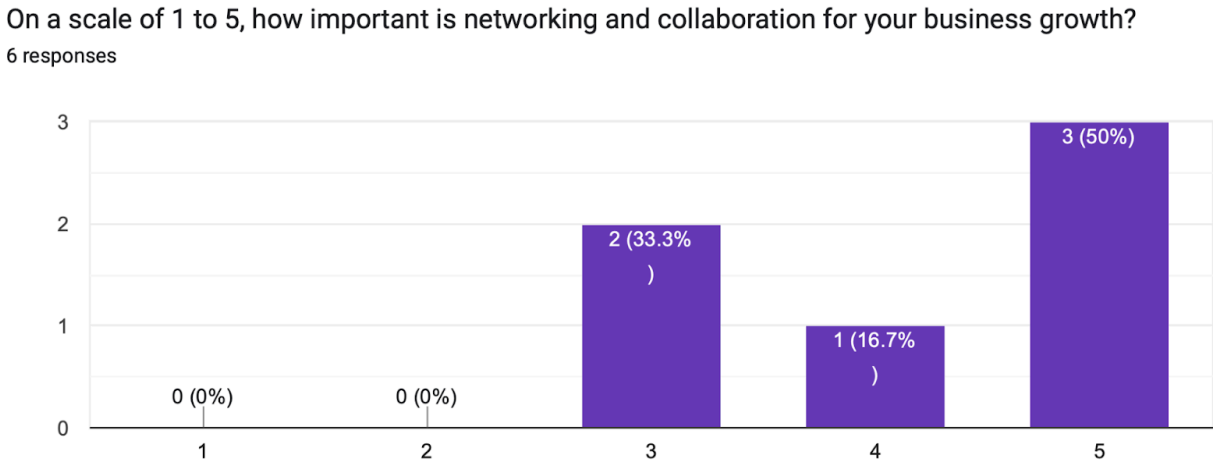
- **Interest in Training Programs on Agricultural Technology**:
    - **A majority of SMEs are interested** in training programs related to agricultural technology.
    - This reflects a need for knowledge-sharing initiatives to improve efficiency and sustainability.



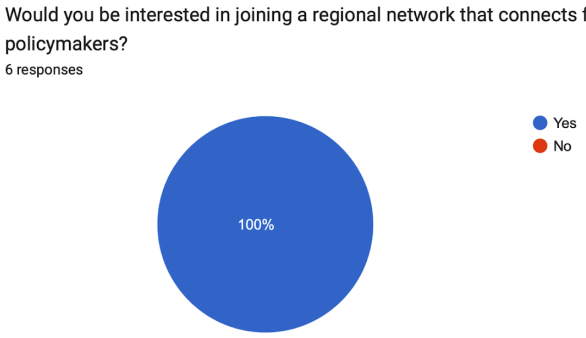
- **Collaboration with Other Farmers or Cooperatives**:
    - **Some SMEs collaborate with other farmers**, while others operate independently.
    - The lack of collaboration in some cases could be due to **competition, lack of trust, or logistical difficulties**.



- **Importance of Networking and Collaboration**:
    - On a scale of **1 to 5**, networking was rated **5 by many respondents**, signifying its critical role in business growth.
    - Some businesses rated it lower, possibly due to a **lack of opportunities or skepticism about its benefits**.

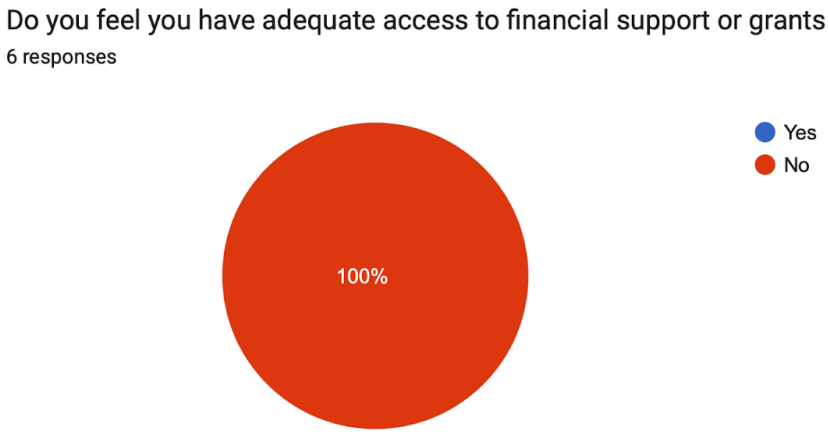


- **Interest in Regional Networks Connecting Farmers, Consumers, and Policymakers**:
    - **Almost all SMEs expressed interest** in joining such networks.
    - This presents an opportunity to establish **regional collaborations to improve information exchange, market access, and policy influence**.



5. Financial Support and Policy Effectiveness

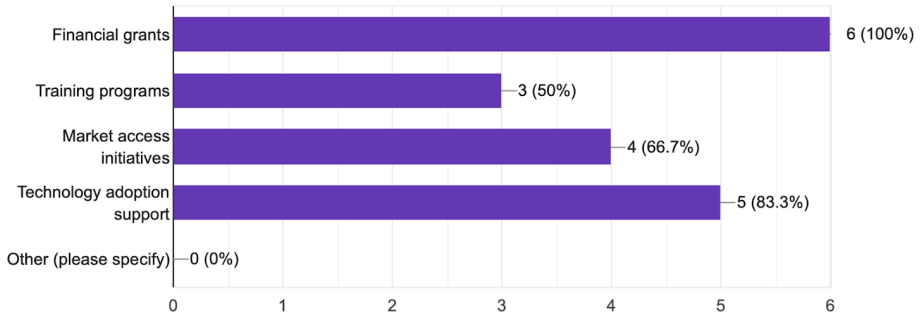
- **Access to Financial Support or Grants**:
    - **A majority of SMEs reported inadequate access to financial support**.
    - This indicates a **significant funding gap** for agricultural businesses.



- **Types of Support That Would Benefit Businesses Most**:
    - The most commonly cited needs include:
        - **Financial grants**
        - **Market access initiatives**
        - **Training programs**
        - **Technology adoption support**
    - This suggests that SMEs require **a combination of financial aid and capacity-building initiatives**.

What types of support would benefit your business the most? (Select all that apply)

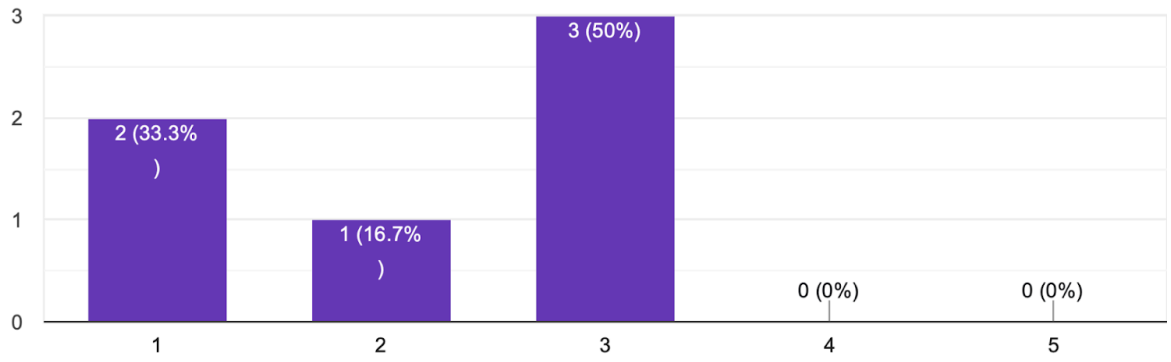
6 responses



- **Effectiveness of Government Policies Supporting Agricultural SMEs**:
  - Government policies were rated **poorly (mostly 1 to 3 out of 5)**.
  - This suggests that current policies are **not adequately addressing the needs of SMEs**, potentially due to **bureaucratic hurdles, lack of funding, or insufficient incentives**.

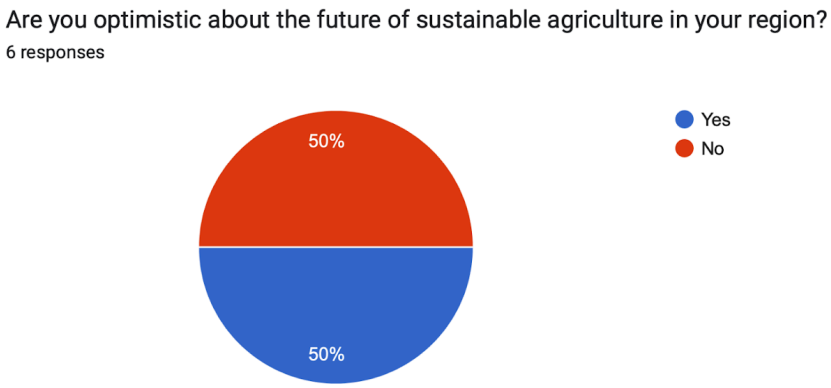
On a scale of 1 to 5, how effective are current government policies in supporting agricultural SMEs?

6 responses

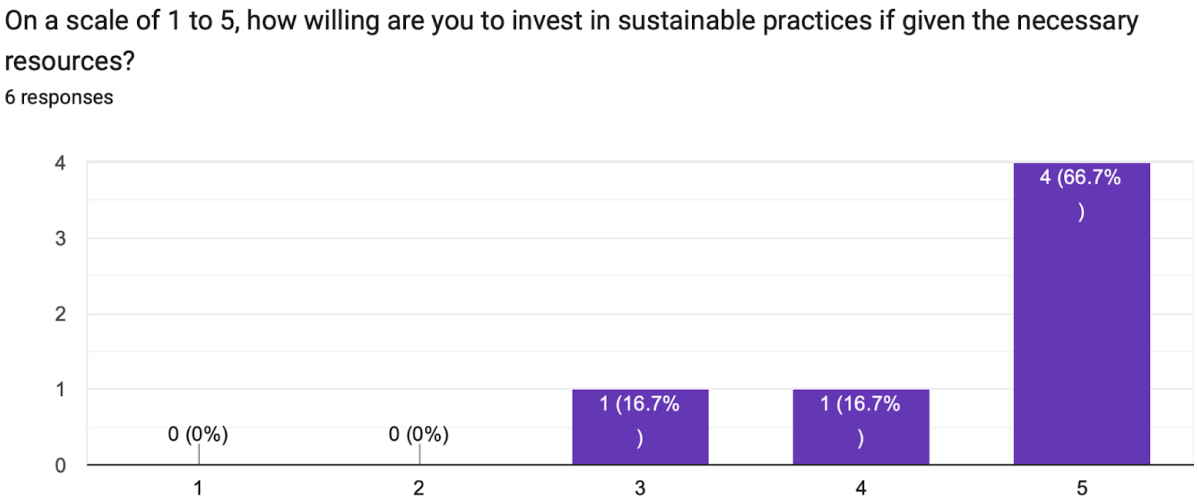


6. Future Outlook and Investment in Sustainability

- **Optimism About the Future of Sustainable Agriculture**:
  - The responses were mixed:
    - **Some SMEs are optimistic** about the future.
    - **Others are pessimistic**, likely due to financial and market challenges.

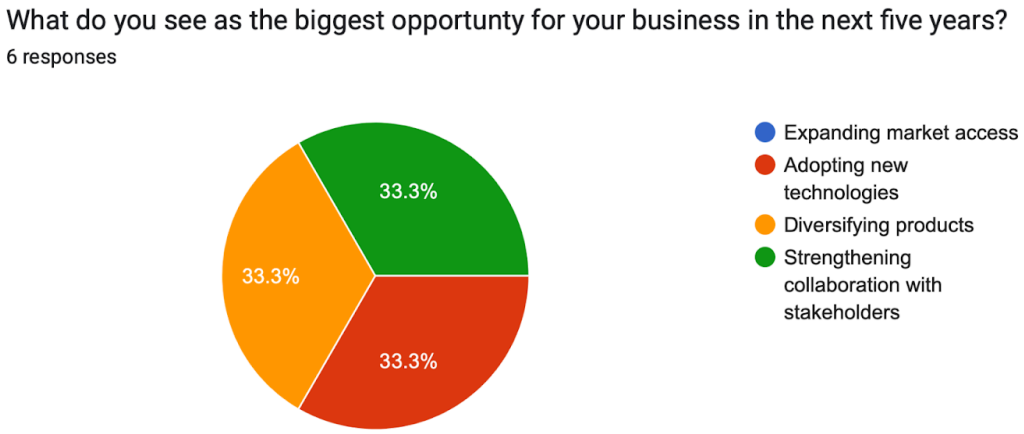


- **Willingness to Invest in Sustainability If Resources Were Available**:
  - On a scale of **1 to 5**, most respondents rated **5**, indicating **a strong willingness to invest in sustainability** if financial or technological resources were accessible.



  -

- **Biggest Business Opportunities in the Next Five Years**:
    - Respondents identified key opportunities such as:
        - **Strengthening collaboration with stakeholders**
        - **Diversifying products**
        - **Adopting new technologies**
    - These insights suggest that SMEs see **growth potential in innovation, partnerships, and market expansion**.



Conclusions and Recommendations

The SMEs survey reveals that **sustainability is a top priority** for many agricultural businesses, but financial constraints, market access challenges, and policy inefficiencies hinder their progress.

Key Takeaways:

1. **Sustainability is valued, but financial barriers exist** – Most SMEs are committed to sustainable practices but struggle with high costs.
2. **Market access remains a challenge** – SMEs find it difficult to access larger markets, both locally and internationally.
3. **Training and technology adoption are crucial** – Many businesses are interested in learning about new technologies to improve operations.

4. **Collaboration and networking opportunities are needed** – SMEs recognize the importance of working together but need structured platforms to facilitate this.
5. **Financial support is lacking** – Most businesses do not have adequate access to grants or financial aid.
6. **Government policies need improvement** – Policies aimed at supporting agricultural SMEs are perceived as ineffective.

Recommendations:

- **Expand Financial Support Programs**:
    - Introduce **grants, low-interest loans, and subsidies** for sustainable farming initiatives.
    - Simplify the **application process for financial aid** to improve accessibility.
- **Enhance Market Access Initiatives**:
    - Develop **regional marketplaces and online platforms** to connect farmers with consumers.
    - Provide **export support** for SMEs looking to enter international markets.
- **Strengthen Training and Knowledge-Sharing Programs**:
    - Implement **agricultural technology workshops**.
    - Offer training in **business management, digital marketing, and sustainable practices**.
- **Encourage Collaboration Through Regional Networks**:
    - Establish **regional networks** connecting farmers, consumers, and policymakers.
    - Promote **cooperatives and farmer alliances** to help SMEs share resources.
- **Advocate for Policy Reforms**:
    - Engage with **government agencies** to improve agricultural policies.
    - Push for **tax incentives or subsidies** for sustainable agriculture.

Final Thoughts

The survey highlights both the **potential and challenges** of SMEs in the agricultural sector. By addressing **financial constraints, improving market access, and fostering collaboration**, policymakers and stakeholders can create **a more sustainable and profitable environment for agricultural SMEs**.

This report provides valuable insights for **governments, agricultural organizations, and SMEs themselves** to build a **resilient and future-ready agricultural sector**.

Analysis of Multi-Stakeholder Focus Groups and Workshop

The AgriFusion workshop and focus group, held on the 24th of February 2025, provided further valuable qualitative insights into the current status, challenges, and opportunities faced by the agricultural sector in Malta, particularly regarding sustainable agricultural practices and technology adoption.

Participants of the workshop stressed several critical challenges affecting the adoption of sustainable agricultural practices. High costs emerged as a significant barrier, with farmers highlighting financial constraints in shifting to more sustainable practices. Additionally, market demand for sustainably grown products remains unclear or limited, making farmers hesitant to invest without guaranteed returns.



The complexity of farming technologies, including innovative solutions like farm robots, drones, and AI-driven technologies, was discussed in detail. Participants expressed skepticism regarding the practicality and applicability of such technologies within the Maltese agricultural context. While recognizing their potential, many indicated these technologies might not suit Malta's diverse and fragmented agricultural landscape. Concerns were raised about affordability, availability, and the necessary technical skills required for their operation and maintenance.

Another prominent issue discussed was related to market access. Farmers pointed out the challenging dynamics in the local and international markets, characterized by strong competition, regulatory barriers, and logistical constraints, particularly transport issues and limited market channels. Participants highlighted the difficulty in accessing local

markets due to pricing competition from imported products and insufficient local consumer awareness about the advantages of locally grown sustainable produce.

The focus group further identified significant regulatory hurdles. A recurring theme was the complexity and rigidity of policies related to farmland management, especially for farmers leasing rather than owning their land. Participants voiced frustrations over overly complicated processes related to obtaining permits, accessing seeds, and compliance with bureaucratic demands that often stifle rather than support agricultural innovation.

Financial support was highlighted as a critical need by participants, who suggested simplified and more direct access to grants and subsidies specifically tailored towards promoting sustainability and technology adoption. Participants emphasized the necessity of a more flexible policy framework and a stronger role by government bodies in supporting agricultural SMEs through simplified procedures, targeted funding schemes, and capacity-building initiatives.

Networking and collaboration were discussed as essential components for growth and sustainability. Farmers recognized the value of collective action, such as cooperatives or regional farmer networks, in overcoming shared challenges. Participants suggested structured platforms or mechanisms to enhance collaboration between farmers, NGOs, policymakers, consumers, and technology providers to ensure coordinated action and better dissemination of knowledge and resources.

In conclusion, the workshop and focus group provided clear evidence of the need for targeted interventions focused on simplifying regulatory frameworks, enhancing financial and technical support, improving market access, and facilitating collaborative networks. Participants demonstrated strong enthusiasm for innovation and sustainability, provided they receive tailored and accessible support. Addressing these concerns can significantly contribute to the sustainable growth and resilience of Malta's agricultural sector.

Analysis of Expert Interviews in the Context of the Agrifusion Project Objectives

The modernization of agriculture is increasingly dependent on digital transformation and entrepreneurial capacity building. However, the sector faces considerable challenges, particularly in the resistance to digital adoption among older farmers and rural stakeholders. Many are unfamiliar with social media and digital marketing tools, limiting their ability to connect with consumers and access wider markets. As Expert 1 observed, "The elder generation might not be so proactive on this [digital adoption]," while Expert 2 similarly noted, "Resistance to change and lack of familiarity with social media are major issues in the sector." Despite these barriers, there are significant opportunities for leveraging AI and digital tools. AI is not only useful in optimizing agricultural production but also in enhancing promotional strategies and communication. Expert 2 highlighted, "AI can be used not just to aid production, but also for promotion." MCAST plays a crucial role in equipping young farmers with technological knowledge, as Expert 3 explained, "We teach students about water quality, how to set up an irrigation system, and how technology can be used to help farmers make more efficient use of water."

The cooperative model has the potential to strengthen entrepreneurship within the agricultural sector. However, bureaucratic obstacles continue to hinder its adoption. Expert 2 emphasized the importance of grassroots involvement, stating, "If we really believe that something needs to happen, it needs to happen at the grassroots level, where the Federation and its members work together more." There is also a significant gap between research and practical implementation, as highlighted by Expert 1: "Many stakeholders are working in their own bubble. Networking needs to be encouraged at all levels." Without stronger communication and collaboration, many of the innovations in agriculture will remain underutilized.

Addressing structural weaknesses in agricultural policy and research is essential for leveling up the sector. Research on agriculture in Malta remains limited, affecting policymakers' ability to develop effective strategies. Additionally, knowledge-sharing is

often restricted to isolated groups, preventing broader sector-wide improvements. "We still lack proper research on agriculture in Malta, and this limits the development of informed policies," Expert 2 stated. The lack of collaboration between policymakers, researchers, and agricultural stakeholders further exacerbates the situation. A more inclusive approach is necessary to ensure that rural entrepreneurs and cooperatives have better access to funding and regulatory support. Expert 2 recommended, "There needs to be more communication vertically and horizontally in the system."

The empowerment of youth in agriculture is another pressing concern. Many farming families dissuade younger generations from pursuing agricultural careers due to financial uncertainties and outdated perceptions of the industry. Expert 3 pointed out, "Most farmers try to convince their children not to pursue careers in agriculture," and added, "Some farmers tell their children that going to school is a waste of time; they say 'come with me in the field and I will show you everything.'" While hands-on experience is invaluable, structured education can provide young farmers with essential business and technological skills. MCAST offers vocational placements and practical training to bridge this gap. Expert 2 elaborated, "Students participate in practical training from tree pruning to harvesting, and higher-level students do work placements in organic farms, wineries, and nurseries." Encouraging the younger generation to embrace agriculture as a viable career option requires targeted initiatives that blend traditional knowledge with modern business practices.

Bridging societal divides in agriculture is another critical issue. Farmers and small rural organizations struggle to form unified cooperatives, reducing their negotiating power in the market. Additionally, legal barriers prevent diverse groups, including immigrant workers, from fully participating in cooperative models. Expert 5 remarked, "The Board of Cooperatives takes a very conservative stance and does not truly support innovation," further noting that, "Instead of a cooperative being an enabling structure, the legal culture makes it seem like a burden." Without changes in policy and governance, these restrictions will continue to exclude key contributors from agricultural development. Digital platforms and targeted advocacy efforts can play a role in increasing transparency and inclusivity within the cooperative sector. "Providing an

opportunity for the agricultural sector to be more present in the media, especially social media, will allow communication between the sector and the consumer," Expert 2 suggested.

Circular economy practices are essential for sustainable agricultural growth, yet they face numerous financial and regulatory hurdles. Many farmers operate within a short-term economic framework, prioritizing immediate financial survival over long-term sustainability investments. Policy misalignment has further hindered the implementation of regenerative agricultural practices. Expert 4 critiqued the current system, stating, "We are strengthening real estate at the cost of tourism and agriculture. We need long-term planning," and added, "Some policy frameworks do not cater for circular practices, making it harder for farmers to adopt sustainable methods." Despite these challenges, there are emerging opportunities for integrating circular economy principles into agriculture. Research institutions such as MCAST are beginning to explore sustainable water management and waste reduction strategies. Expert 1 emphasized, "We focus on water technologies and climate mitigation options." These initiatives, if scaled effectively, could help farmers reduce waste and improve resource efficiency.

Several strategic actions must be undertaken to align agricultural development with the objectives of the Agrifusion project. Digital literacy programs should be developed to equip farmers with the necessary skills to leverage technology for business growth. AI-driven marketing initiatives can also help small farmers expand their reach. Policy reforms are needed to make cooperative models more accessible and to create a regulatory environment that fosters entrepreneurship in agriculture. Supporting young farmers through mentorship and funding opportunities will encourage more youth participation in the sector. Additionally, targeted campaigns should increase awareness of circular economy principles and promote regenerative agricultural practices. Strengthening collaboration between researchers, policymakers, and agricultural stakeholders is essential to ensuring that innovative solutions are effectively implemented.

This report provides a comprehensive analysis of the challenges and opportunities in modern agriculture, offering strategic recommendations to drive forward the Agrifusion project's mission. By addressing digital transformation, entrepreneurial support, policy engagement, youth empowerment, and sustainability, the agricultural sector can be modernized to create a more inclusive and resilient future.

Chapter 5 - Successful Policy Models and Technological Innovations in Agriculture

Policy Recommendations: Global Best Practices

- **Digital Transformation Strategies:** Many countries are integrating digital technology into agricultural policy to drive efficiency and inclusivity. For example, China's government launched a national digital agriculture plan with specific targets (aiming for ~15% of agricultural output to be from the digital economy by 2025) and initiatives to digitize farming operations (Frontiers | Does government policy matter in the digital transformation of farmers' cooperatives?—A tripartite evolutionary game analysis). Similarly, the EU promotes farm digitalization to boost competitiveness and sustainability, emphasizing data-driven farming and rural internet connectivity (Digitalisation - European Commission). Governments can support this by investing in rural broadband, digital skills training, and open data platforms for agriculture, enabling farmers to adopt precision tools and access markets online.
- **Sustainability and Climate-Smart Policies:** Effective policies align agriculture with environmental goals. The EU's Common Agricultural Policy (CAP) reforms, for instance, require higher green ambitions and dedicate at least 25% of farm support to eco-schemes that reward climate-friendly practices like organic farming and agroecology (CAP 2023-27 - European Commission). Such measures incentivize farmers to adopt sustainable methods, conserve biodiversity, and build climate resilience. Other best practices include redirecting

subsidies from purely yield-focused inputs toward regenerative practices (e.g. cover cropping, water conservation) and funding research and extension for climate-smart agriculture. By tying financial support to environmental performance (as the EU does under the Green Deal) and implementing clear sustainability standards, policymakers encourage farms to modernize **and** become stewards of the land.

- **Support for Cooperative and Smallholder Farming:** Global success stories show that empowering farmer cooperatives and smallholders leads to stronger rural economies. Policies that promote cooperatives have enabled small producers to scale up, improve their productivity, and gain better negotiating power in markets (The successful agricultural cooperative model shows that there are alternatives to the prevailing model – Foro Rural Mundial). For example, numerous countries (from India to Spain) have used legal frameworks and grants to foster agricultural cooperatives, which help farmers pool resources, market collectively, and share in profits. Providing targeted support (e.g. credit access, technical assistance) to small farms and farmer alliances is also crucial. Ensuring that agricultural policies (and subsidies) reach smallholders – not just large agribusiness – creates a more equitable system. A proven approach is to facilitate **cooperative marketing** and **resource-sharing networks**: when farmers unite, they can access technology and financing that would be out of reach individually, leading to better incomes and resilience for the farming community (The successful agricultural cooperative model shows that there are alternatives to the prevailing model – Foro Rural Mundial).

Technological Innovations: Integrating AI, IoT, and Blockchain in Agriculture

- **AI-Powered Farming:** Artificial intelligence is being used for crop monitoring, predictive analytics, and decision support in agriculture. In India, an AI-driven advisory program (part of the “AI for Agriculture Innovation” initiative) helped chili farmers achieve a 21% increase in yields and reduced pesticide and fertilizer use by 9% and 5%, respectively (Farmers in India are using AI for agriculture | World Economic Forum). This pilot also **doubled farmers’ net income** within one

season, prompting the regional government to expand it to 500,000 farmers (Farmers in India are using AI for agriculture | World Economic Forum). Such case studies show how AI (e.g. machine-learning apps that give sowing recommendations or detect plant diseases from photos) can boost productivity and sustainability. AI can also optimize supply chains – for example, algorithms that predict market demand help farmers plan crops to reduce gluts and shortages. The key is making these AI tools accessible to farmers (through smartphones or local advisory services) so that even smallholders can benefit from data-driven farming.

- **Internet of Things (IoT) and Precision Agriculture:** IoT sensors and smart devices are enabling precision farming practices worldwide. By using networks of soil moisture sensors, weather stations, and GPS-enabled equipment, farmers can optimize resource use in real time. A global study found farms using IoT-based precision agriculture saw average **yield gains of about 15%** while reducing water usage by around 20% (How IoT Sensors Help Farmers Save Water & Fertilizer). In Vietnam, for example, IoT deployments allow farmers to monitor soil and climate conditions remotely, leading to timely interventions that improve yields and lower labor costs (IoT Applications in Agriculture: Enhancing Crop Yield in Vietnam | Asian Journal of Computing and Engineering Technology). These technologies make agriculture more efficient and climate-smart by minimizing waste (e.g. preventing over-irrigation or over-fertilization) and maximizing each hectare's output. Importantly, IoT data platforms also give farmers better control – they receive alerts on their phones about field conditions and can act immediately, which is especially valuable in regions facing water scarcity or variable climates.
- **Blockchain for Traceability and Market Access:** Blockchain technology is improving transparency in food supply chains and helping farmers secure better market terms. One successful pilot is in Haiti, where a blockchain-based traceability system enabled small mango farmers to export directly to buyers in the US, cutting out intermediaries. This distributed ledger approach made each transaction (from farm to port to retail) transparent and tamper-proof, so farmers

retained ownership of their produce until sale. The result was a drastic increase in income – participating farmers earned **7.5 times** more by selling through the blockchain system instead of through local middlemen (Agriledger uses DLT / blockchain to help small farmers sell to big markets — Atlas of the Future). Similarly, blockchain trials in organic and fair-trade chains have shown benefits like easy verification of certifications, improved accountability, and faster product recalls if needed (Frontiers | Blockchain for Organic Food Traceability: Case Studies on Drivers and Challenges) (Frontiers | Blockchain for Organic Food Traceability: Case Studies on Drivers and Challenges). For farmers, the ability to prove their product's origin and quality (via a blockchain record accessible to consumers) can open up premium markets and build trust with buyers. While blockchain alone isn't a silver bullet, when combined with training and infrastructure, it can greatly enhance small producers' market access and reduce transaction costs in the long run.

Community Engagement Strategies: Bridging Rural and Urban Stakeholders

- **Community-Supported Agriculture (CSA) and Direct Marketing:** CSA programs and farmers' markets are proven models that connect urban consumers directly with rural producers. In a typical CSA, consumers subscribe to a farm's harvest in advance and receive regular shares of fresh produce throughout the season. This arrangement guarantees market access and upfront capital for farmers while giving consumers fresh, local food (Farmers & Chefs: Partners in Fresh Food). By eliminating intermediaries, farmers obtain fair prices and build relationships with their customer base, and consumers gain trust and awareness of how their food is produced. Such models have improved sustainability by encouraging diversified, organic farming (since CSA customers often value sustainable practices) and reducing food miles. Farm-to-table initiatives similarly encourage restaurants and retailers to source directly from local farms, creating stable outlets for farmers' products (Farmers & Chefs: Partners in Fresh Food). These direct marketing channels not only improve

farmers' incomes but also educate urban stakeholders about seasonal eating and the realities of farming, fostering a deeper rural-urban connection.

- **Digital Marketplaces and Rural-Urban Value Chains:** Technology can facilitate collaboration between rural farmers and urban markets. For example, in Kenya the startup Twiga Foods created a mobile-based B2B marketplace linking small farmers with produce vendors in cities. This platform coordinates logistics and uses mobile payments, so produce is aggregated from farms and delivered to urban retailers efficiently. Farmers using Twiga reported improved finances and more consistent demand for their crops (). At the same time, urban consumers benefit from lower produce prices (10–15% cheaper than traditional markets) due to reduced supply chain waste and fewer intermediaries (). Such rural-urban partnerships leverage digital tools to improve market access, reduce post-harvest losses, and ensure a steady supply of affordable, fresh food in cities. Similar initiatives include e-commerce platforms where urban customers can order directly from rural farms (with the platform handling delivery), and SMS-based networks that connect farmers to wholesale buyers. The success of these models lies in building trust (often via transparent pricing and reliable service) and mutual benefit – farmers get a better cut of the final price while urban businesses and consumers get freshness and value.
- **Collaborative Networks and Education:** Successful initiatives often involve multi-stakeholder networks that include farmers, consumers, policymakers, and educators working together. For instance, some regions have formed food policy councils or regional cooperatives that link rural producers with urban consumers and institutions (schools, hospitals) to create sustainable local food systems. These collaborations provide education on sustainable practices to both producers and consumers, organize farm visits or urban gardening workshops, and align urban demand with rural supply. Engaging urban stakeholders in understanding agriculture (through agritourism, farm-to-school programs, etc.) builds support for local farmers and encourages consumption of sustainably produced food. Such community engagement improves mutual understanding and creates a supportive ecosystem for agriculture. Notably, the importance of

broad collaboration is highlighted in global projects – for example, a digital agriculture initiative in India attributed its success to cooperation among government, industry, start-ups, and farmer groups working towards common goals (Farmers in India are using AI for agriculture | World Economic Forum). By creating avenues for continuous dialogue (e.g. annual forums, exchange programs), rural and urban communities can co-create solutions that improve sustainability and market resilience for all.

Chapter 6 - The Agrifusion Actionable Roadmap

Based on these findings, the Agrifusion project can propose a multi-pronged implementation roadmap:

1. **Policy Alignment and Advocacy:** Work with government and local authorities to align the project with best-practice policies. This could include advocating for digital agriculture strategies (such as improving rural broadband and data services) and sustainability incentives (such as grants or tax breaks for organic and climate-smart farming). Support the formation of farmer cooperatives or associations if they do not exist, and lobby for policies that provide small farmers easier access to funding and training (The successful agricultural cooperative model shows that there are alternatives to the prevailing model – Foro Rural Mundial). For example, encouraging a local “smart farming” subsidy or inclusion of Agrifusion as a pilot in national programs can create an enabling environment. Engaging policymakers early will ensure that Agrifusion’s innovations (apps, sensors, etc.) are backed by institutional support rather than operating in a vacuum.
2. **Pilot Digital Innovations on Farms:** Implement small-scale pilot projects integrating AI, IoT, or blockchain solutions with willing local farmers. For instance, Agrifusion could partner with a tech provider to deploy a precision irrigation system on a few farms to demonstrate water savings and yield gains, or introduce an AI-powered mobile advisory for pest management on selected plots.

Start with a manageable number of farmers and measure key outcomes. Document the impacts (e.g. yield increases or cost savings similar to the 21% yield jump seen in India's AI pilot ** (Farmers in India are using AI for agriculture | World Economic Forum)**) and gather feedback. Use these results to refine the technology and build trust among other farmers. Once the pilots show positive results, prepare to scale up: seek additional funding or government support to expand these tools to more farms across the region.

3. **Capacity Building and Knowledge Sharing:** Invest in training and knowledge exchange to ensure long-term adoption of innovations. This includes organizing workshops and demo days for farmers to learn how to use new devices or platforms, and training "digital farmer champions" who can mentor peers. Provide hands-on guidance for cooperative leaders to manage digital record-keeping, or for young farmers to become local tech support. Additionally, address generational and educational gaps – for example, offer tailored training for older farmers who may be less tech-savvy, and engage youth (perhaps through local agricultural colleges) to participate in Agrifusion's digital initiatives. Creating a knowledge hub (even a simple WhatsApp group or Facebook community) where participants can ask questions and share experiences will help sustain momentum. This step also involves educating urban consumers: hosting farm visits, tasting events, or webinars about sustainable agriculture can galvanize consumer support. Building digital literacy and agricultural skills in tandem will ensure that the community can take full advantage of tools and practices (crucial given that lack of skilled "agri-tech" talent can otherwise be a barrier (Frontiers | Does government policy matter in the digital transformation of farmers' cooperatives?—A tripartite evolutionary game analysis)).
4. **Establish Rural-Urban Linkages:** Facilitate platforms that directly connect producers with consumers, as a core component of Agrifusion. Depending on the local context, this could mean setting up a **community-supported agriculture** scheme where city residents subscribe to Agrifusion farmers' produce, or creating an online marketplace for local farm products. If logistics are a challenge, collaborate with existing delivery services or cooperatives to

aggregate and transport goods. Start with a pilot farmers' market or delivery CSA in a nearby town to test demand. Leverage social media and urban community groups to promote the "buy local" concept, highlighting how it supports rural livelihoods and offers fresher, sustainable food. In parallel, work on traceability – for instance, use simple blockchain or QR-code tracking for Agrifusion products so urban buyers can see the origin (learning from the Haitian example, where transparency built consumer confidence and gave farmers a larger share of the revenue (Agriledger uses DLT / blockchain to help small farmers sell to big markets — Atlas of the Future)). By gradually strengthening these rural-urban links – perhaps beginning with one product line (e.g. a weekly vegetable box or a farm-direct dairy product) – Agrifusion can improve market access for farmers and build a loyal customer base that values the project's mission.

5. **Foster Multi-Stakeholder Collaboration:** Create a coalition or working group that brings together rural farmers, urban consumer representatives, technology experts, local business partners, and government officials to guide the project. Regular meetings or roundtables (monthly or quarterly) can be held to discuss progress, address challenges, and align efforts. This multi-stakeholder approach ensures that different perspectives are considered – for example, farmers can voice practical needs, tech partners can suggest solutions, and consumers can indicate market preferences. Such collaboration was key in other successful initiatives (e.g. India's AI4AI program brought together government, industry, startups, and farmer cooperatives from the start (Farmers in India are using AI for agriculture | World Economic Forum) (Farmers in India are using AI for agriculture | World Economic Forum)). Agrifusion should emulate this by establishing formal partnerships or MOUs: perhaps with a local university for research support, a telecom provider for connectivity, or an NGO for community mobilization. A steering committee drawn from these stakeholders can also help monitor that the project stays on track to meet its social, economic, and environmental goals. Importantly, this group can champion Agrifusion's successes to a wider audience, attracting more resources or policy support as the project grows.

6. **Monitoring, Scaling, and Policy Feedback:** As interventions roll out, Agrifusion should continuously monitor key metrics and capture lessons. Set up simple data collection: yield records from pilot farms, income changes for participating farmers, number of urban consumers engaged, etc. Use this data to publish brief **case studies or reports** that demonstrate outcomes. Success stories (e.g. a farmer who adopted IoT sensors and saw water usage drop 20% while maintaining yields (How IoT Sensors Help Farmers Save Water & Fertilizer)) are powerful for persuading more farmers and for securing funding. Regularly evaluate which initiatives are most effective and cost-efficient, then allocate resources to scale those up. For example, if the digital marketplace gains traction, invest in expanding it to more products or neighboring communities; if AI advisories show clear benefits, train more farmers to use them. Conversely, be prepared to iterate or discontinue approaches that aren't delivering results. Finally, close the loop by feeding insights back to policymakers and stakeholders. Share Agrifusion's data with government agencies to inform larger policy adjustments – for instance, evidence of improved farmer incomes could support broader cooperative programs, or data on sustainable practices could influence environmental regulations. This ensures that Agrifusion not only implements best practices on the ground but also contributes to long-term structural change in the agricultural sector.

By following this roadmap, the Agrifusion project can leverage global best practices – from smart policy frameworks to cutting-edge tech tools and grassroots engagement models – and adapt them to its local context. The outcome will be a digitally empowered, sustainable farming community that is closely connected with its urban markets, mirroring the successes seen elsewhere while addressing local needs. This integrated approach will help Agrifusion deliver both improved agricultural productivity and stronger rural-urban collaboration, laying the foundation for long-term resilience and prosperity in the region.

CONCLUSION

The **Agrifusion Project**, as part of **PoliRural Plus**, represents a vital step toward enhancing **sustainable agriculture, digital transformation, and rural-urban connectivity** in Malta. Through extensive stakeholder engagement, surveys, interviews, and case study analyses, this report has identified **key challenges and opportunities** within the local agricultural sector.

Findings indicate that **digital adoption remains low** among farmers, largely due to **limited digital literacy and infrastructure**, but global case studies demonstrate how **AI, IoT, and blockchain** can revolutionize farming by **optimizing yields, reducing waste, and improving market access**. Similarly, **policy interventions**—such as **financial incentives for sustainable practices, cooperative support, and technology-driven agriculture policies**—have proven successful in other regions and can serve as models for Malta's agricultural landscape.

Empowering young farmers and bridging the gap between **rural producers and urban consumers** will require **strategic community engagement initiatives**, including **direct-to-consumer models like CSA programs, rural e-commerce platforms, and cooperative-led marketing efforts**. Building **multi-stakeholder collaborations** that include **farmers, policymakers, researchers, and tech providers** will ensure long-term resilience and economic sustainability.

Moving forward, **the actionable roadmap outlined in this report provides a structured approach** to implementing **policy reforms, technology integration, and community-driven solutions**. By leveraging the insights gained, **Agrifusion can serve as a model for modern, technology-driven, and socially inclusive agricultural development in Malta**, contributing to the broader goals of the **EU Green Deal, Farm-to-Fork Strategy, and climate-smart agriculture initiatives**.

With the right **policy alignment, investment in innovation, and commitment to collaboration**, Malta's agricultural sector can **become more competitive, sustainable, and resilient**, ultimately benefiting both **rural communities and urban consumers** while fostering a **stronger, more circular food system**.

Annex A. SURVEY _ CONSUMERS

Section 1: Demographic Information

1. What is your age group?
    - (a) Under 18
    - (b) 18–30
    - (c) 31–50
    - (d) Over 50
2. What is your household size?
    - (a) 1
    - (b) 2–4
    - (c) 5–7
    - (d) 8 or more
3. Where is your household located?
    - (a) Urban area
    - (b) Suburban area
    - (c) Rural area

Section 2: Awareness and Attitudes Toward Local Agriculture

4. Are you familiar with the concept of sustainable agriculture?
    - (a) Yes
    - (b) No
5. On a scale of 1 to 5, how important is it for you to consume locally sourced food?
    - 1: Not important at all
    - 5: Extremely important
6. Do you actively seek information about the origins of your food products?
    - (a) Yes
    - (b) No

Section 3: Food Consumption and Preferences

7. How often do you purchase fresh produce from local farmers or markets?
    - (a) Never
    - (b) Rarely
    - (c) Sometimes
    - (d) Often
    - (e) Always
8. On a scale of 1 to 5, how satisfied are you with the availability of locally grown produce in your area?
    - 1: Very dissatisfied

    - 5: Very satisfied
9. What factors influence your decision to purchase local agricultural products? (Select all that apply)
    - (a) Price
    - (b) Quality
    - (c) Convenience
    - (d) Environmental impact
    - (e) Supporting local farmers

Section 4: Sustainable Practices

10. Are you willing to pay more for sustainably produced agricultural products?
    - (a) Yes
    - (b) No
11. On a scale of 1 to 5, how important is reducing food waste in your household?
    - 1: Not important at all
    - 5: Extremely important
12. Do you participate in initiatives that promote sustainable consumption (e.g., composting, food sharing, buying in bulk)?
    - (a) Yes
    - (b) No

Section 5: Technology and Innovation

13. Would you use a digital platform to connect directly with local farmers?
    - (a) Yes
    - (b) No
14. On a scale of 1 to 5, how comfortable are you with using technology (e.g., mobile apps, online marketplaces) to purchase food?
    - 1: Not comfortable at all
    - 5: Extremely comfortable
15. Do you believe technology can enhance access to sustainable agricultural products?
    - (a) Yes
    - (b) No

Section 6: Rural and Urban Connection

16. On a scale of 1 to 5, how strongly do you feel connected to rural communities?
    - 1: Not connected at all
    - 5: Very connected
17. Do you believe urban households have a responsibility to support rural agricultural initiatives?

- (a) Yes
- (b) No

18. Would you participate in events or workshops that promote collaboration between rural and urban communities?
    - (a) Yes
    - (b) No

Annex B. SURVEY _ SMEs

Section 1: General Information

1. What type of business do you operate?
    - (a) Individual farmer
    - (b) Cooperative
    - (c) SME (small to medium enterprise)
    - (d) Other (please specify)
2. How long has your business been in operation?
    - (a) Less than 1 year
    - (b) 1–5 years
    - (c) 6–10 years
    - (d) More than 10 years
3. Where is your business located?
    - (a) Urban area
    - (b) Suburban area
    - (c) Rural area

Section 2: Current Practices

4. Do you use sustainable farming practices in your operations?
    - (a) Yes
    - (b) No
5. On a scale of 1 to 5, how significant is sustainability to your business operations?
    - 1: Not significant at all
    - 5: Extremely significant
6. What are the main challenges you face in adopting sustainable practices? (Select all that apply)
    - (a) High costs
    - (b) Lack of knowledge/training
    - (c) Limited access to technology
    - (d) Market demand
    - (e) Other (please specify)

Section 3: Market Access

7. Do you sell your products directly to consumers?
    - (a) Yes
    - (b) No
8. On a scale of 1 to 5, how satisfied are you with your current market access?
    - 1: Very dissatisfied

    - 5: Very satisfied
9. Do you face challenges in accessing local or international markets?
    - (a) Yes
    - (b) No
10. If yes, what are the key challenges? (Select all that apply)
    - (a) Transportation/logistics
    - (b) Lack of buyer interest
    - (c) Pricing competition
    - (d) Regulatory barriers
    - (e) Other (please specify)

Section 4: Technology and Innovation

11. Do you currently use any digital tools or technology to manage your farming operations?
    - (a) Yes
    - (b) No
12. On a scale of 1 to 5, how comfortable are you with adopting new technologies for farming?
    - 1: Not comfortable at all
    - 5: Very comfortable
13. Do you think digital platforms can help improve market access for your products?
    - (a) Yes
    - (b) No
14. Would you consider participating in training programs focused on agricultural technology?
    - (a) Yes
    - (b) No

Section 5: Collaboration and Networking

15. Do you collaborate with other farmers or cooperatives to address common challenges?
    - (a) Yes
    - (b) No
16. On a scale of 1 to 5, how important is networking and collaboration for your business growth?
    - 1: Not important at all
    - 5: Very important
17. Would you be interested in joining a regional network that connects farmers, consumers, and policymakers?
    - (a) Yes
    - (b) No

Section 6: Support and Resources

18. Do you feel you have adequate access to financial support or grants for your business?
    - (a) Yes
    - (b) No
19. What types of support would benefit your business the most? (Select all that apply)
    - (a) Financial grants
    - (b) Training programs
    - (c) Market access initiatives
    - (d) Technology adoption support
    - (e) Other (please specify)
20. On a scale of 1 to 5, how effective are current government policies in supporting agricultural SMEs?
    - 1: Not effective at all
    - 5: Very effective

Section 7: Future Outlook

21. Are you optimistic about the future of sustainable agriculture in your region?
    - (a) Yes
    - (b) No
22. On a scale of 1 to 5, how willing are you to invest in sustainable practices if given the necessary resources?
    - 1: Not willing at all
    - 5: Very willing
23. What do you see as the biggest opportunity for your business in the next 5 years?
    - (a) Expanding market access
    - (b) Adopting new technologies
    - (c) Diversifying products
    - (d) Strengthening collaboration with stakeholders

Annex C. Focus Group Questions for Consumer Representatives

These questions are designed to facilitate a productive discussion with consumer representatives, focusing on their insights, experiences, and expectations related to sustainable agriculture, rural development, and local food systems. The questions are organized by themes to ensure a comprehensive discussion.

1. Introduction (Icebreaker)

- Can you briefly introduce yourself and the group or organization you represent?
- What is your role in representing consumer interests?
- What are the primary concerns of the consumers you represent regarding food and agriculture?

2. Awareness and Attitudes Toward Local Agriculture

- How aware do you think consumers are about the origins of their food and the challenges faced by local farmers?
- Do you believe consumers prioritize buying locally produced agricultural goods? Why or why not?
- What role do you see local agriculture playing in addressing sustainability concerns?

3. Consumer Preferences and Demand

- What factors do you believe most influence consumers' purchasing decisions (e.g., price, quality, sustainability, convenience)?
- Have you noticed a growing demand for sustainably produced or organic products?
- What challenges do consumers face in accessing locally produced food?

4. Barriers to Supporting Local Agriculture

- What prevents consumers from supporting local farmers or purchasing local products?
- Do you think there is sufficient availability and variety of local products to meet consumer needs?

- How can these barriers be addressed, and who should take the lead in resolving them (e.g., policymakers, farmers, retailers)?

5. Technology and Consumer Engagement

- Do you think digital tools (e.g., apps, online marketplaces) can help connect consumers with local farmers?
- How comfortable do you think consumers are with using technology to learn about or purchase local agricultural products?
- What features would consumers want in a digital platform promoting local food systems?

6. Sustainability and Ethical Considerations

- How important is sustainability (e.g., reducing food waste, minimizing carbon footprint) to the consumers you represent?
- Are consumers willing to pay a premium for products that are sustainably or ethically produced?
- What role do you think consumer education plays in encouraging sustainable purchasing behaviors?

7. Collaboration and Policy Support

- How can farmers, retailers, and consumer organizations work together to better support local food systems?
- What policies or incentives would encourage consumers to buy more locally produced food?
- Are there any successful examples of initiatives or campaigns that have effectively engaged consumers to support local agriculture?

8. Future Outlook

- What trends do you think will shape consumer preferences for agricultural products in the next 5–10 years?
- How can rural-urban connections be strengthened to create more sustainable food systems?
- What role do you think consumer representatives should play in shaping future agricultural policies?

9. Closing Questions

- What is one key change you think would have the biggest impact on connecting consumers with local agricultural products?
- Is there anything else you'd like to share about consumer perspectives on agriculture or food systems?

Facilitation Tips

- Create a welcoming environment to encourage open and honest dialogue.
- Use probing questions like "Why do you think that is?" or "Can you provide an example?" to deepen the discussion.
- Balance the discussion to ensure all participants have an opportunity to share their views.
- Summarize key points at the end and thank participants for their time and valuable input

Annex D. Focus Group Questions for Farmers

The following questions are designed to guide a focus group discussion with farmers, aiming to understand their challenges, opportunities, and perspectives regarding agriculture and rural development in the context of the **PoliRural project**. These questions are grouped into thematic sections to ensure a structured and productive discussion.

1. Introduction (Icebreaker)

- Can you tell us a little about your farming operations (e.g., type of crops/livestock, farm size, years in operation)?
- What inspired you to become a farmer or continue your family's farming legacy?

2. Challenges in Farming

- What are the biggest challenges you face in your daily farming operations?
- Have climate change or environmental factors affected your farm? If so, how?
- Are there specific policies or regulations that you find particularly helpful or restrictive?

3. Market Access and Consumer Demand

- How do you currently sell your products (e.g., local markets, cooperatives, direct to consumers)?
- Do you feel there is enough demand for locally produced agricultural goods?
- What barriers, if any, do you face in accessing new markets or expanding your customer base?

4. Technology and Innovation

- Do you use any technology to help with your farming operations? If yes, what type (e.g., irrigation systems, data management tools, mobile apps)?
- Are you interested in adopting new technologies? What factors influence your decision (e.g., cost, ease of use)?
- What kind of training or support would help you feel more comfortable using new technology?

5. Collaboration and Community Engagement

- Do you collaborate with other farmers, cooperatives, or local organizations? How has this helped or hindered your work?
- How can local or national organizations better support you in building a sense of community among farmers?
- Are there opportunities for stronger collaboration between farmers and urban consumers?

6. Sustainability and Environmental Practices

- Are you currently using any sustainable farming practices (e.g., organic farming, crop rotation, waste reduction)?
- What motivates you to adopt or avoid sustainable practices (e.g., cost, market demand, regulations)?
- What role should policymakers and organizations play in promoting sustainable agriculture?

7. Financial and Governmental Support

- Have you accessed any grants, subsidies, or financial support for your farm? If yes, how was your experience?
- What additional financial support or resources would make the biggest difference for your farming operations?
- Do you feel existing government policies adequately address the needs of farmers? If not, what changes would you recommend?

8. Future Outlook

- What are your hopes or plans for the future of your farm?
- How do you see the future of agriculture in Malta and rural communities more broadly?
- What steps can be taken to encourage younger generations to pursue farming?

9. Closing Questions

- If you could change one thing about how farming is supported or perceived in your community, what would it be?

- Is there anything else you'd like to share that we haven't discussed?

Facilitation Tips

- Start with warm-up questions to create a comfortable environment.
- Encourage open dialogue and ensure everyone has a chance to contribute.
- Use follow-up or probing questions like, "Can you explain further?" or "What do you mean by that?" to delve deeper into participants' responses.
- Summarize key points at the end and thank participants for their time and insights.

Annex E. Focus Group Questions for Mixed Stakeholders

This set of questions is designed to facilitate a balanced and insightful discussion among a diverse group of stakeholders, including farmers, policymakers, consumer representatives, technology providers, and researchers. The aim is to explore shared challenges, opportunities, and collaborative strategies for promoting sustainable agriculture and rural development.

1. Introduction (Icebreaker)

- Can you briefly introduce yourself and your role in agriculture, rural development, or the food system?
- What do you see as the biggest challenge or opportunity in your area of expertise?

2. Perspectives on Current Challenges

- What do you think are the main challenges facing rural communities and agriculture today?
- How do these challenges differ between stakeholders (e.g., farmers vs. consumers, policymakers vs. technology providers)?
- What are the shared challenges that affect everyone involved in agriculture and rural development?

3. Collaboration and Partnerships

- How well do stakeholders currently collaborate to address agricultural and rural challenges?
- What are examples of successful partnerships between different groups (e.g., farmers and policymakers, researchers and technology providers)?
- What barriers exist to better collaboration, and how can these be addressed?

4. Technology and Innovation

- How can technology providers better address the needs of farmers and consumers?
- What role should researchers and educational institutions play in driving innovation in agriculture?
- Are there any emerging technologies or practices that you believe could significantly benefit rural communities?

5. Policy and Support Mechanisms

- Do current agricultural policies adequately address the needs of stakeholders? If not, what changes are needed?
- How can policymakers better engage with stakeholders to create effective and inclusive policies?
- What role should incentives (e.g., grants, tax breaks, subsidies) play in supporting sustainable agriculture and rural development?

6. Consumer and Market Dynamics

- How can rural producers better connect with urban consumers to promote local agricultural products?
- What do you think are the most important factors for consumers when choosing agricultural products (e.g., price, sustainability, quality)?
- How can consumer preferences be better integrated into the planning and strategies of farmers and policymakers?

7. Sustainability and Environmental Practices

- What sustainable practices are currently being implemented, and which ones are proving most effective?
- How can stakeholders work together to promote and adopt sustainability across the food system?
- What role should education and awareness play in fostering sustainable behaviors among all stakeholders?

8. Vision for the Future

- What does a successful rural community or sustainable agricultural system look like to you in 10 years?
- What steps need to be taken collectively to achieve this vision?
- How can projects like PoliRural support stakeholders in reaching these goals?

9. Closing Questions

- If you could recommend one action that all stakeholders could take together to improve agriculture and rural development, what would it be?
- Is there anything else you would like to share that hasn't been discussed today?

Facilitation Tips

- Encourage participants to listen to and build on each other's responses, emphasizing mutual respect.
- Use follow-up questions like, "Does anyone else have a different perspective?" to invite diverse viewpoints.
- Balance the discussion to ensure that no single stakeholder group dominates the conversation.
- Summarize key takeaways at the end of the session and thank participants for their time and contributions.

Annex F. Consumer Interview Guide

Introduction (5 minutes)

- **Purpose:** Explain that this interview is part of a project aimed at understanding **consumer attitudes, behaviors, and preferences** related to sustainable agriculture, rural development, and ESG-driven purchasing decisions.
- **Confidentiality:** Assure the participant that their responses will be **confidential** and used solely for research purposes.
- **Structure:** Outline the **duration and key themes** of the interview.

Section 1: Background Information (5–10 minutes)

1. Can you tell us a little about yourself? (e.g., age group, occupation, household size)
2. How often do you purchase products from **local or rural producers**?
3. What factors influence your food and household purchasing decisions? (e.g., price, quality, sustainability, brand reputation)

Section 2: Consumer Awareness & Purchasing Behaviour (10–15 minutes)

4. Are you familiar with terms such as **sustainable agriculture, fair trade, or ESG (Environmental, Social, Governance) standards** in food production?
5. Do you actively look for **eco-friendly or ethically produced** products when shopping? If yes, what specific labels or certifications do you trust?
6. Have you noticed any **changes in availability, pricing, or marketing of sustainable products** in recent years?

Section 3: Barriers to Sustainable Purchasing (10–15 minutes)

7. What are the biggest **challenges or barriers** that prevent you from buying more **sustainable or locally-produced goods**? (e.g., price, lack of availability, convenience)
8. Would you be willing to pay a **higher price** for products that support local farmers and rural communities? If yes, what percentage more would you be comfortable paying?
9. What kind of **information or incentives** would encourage you to make more sustainable purchases?

Section 4: Consumer Trust & Brand Engagement (10–15 minutes)

10. Do you trust brands or businesses that claim to be **sustainable and environmentally friendly**? Why or why not?
11. How important is **transparency and traceability** in the products you buy? (e.g., knowing where food is sourced, ethical production practices)
12. Would you be more likely to support businesses that are **actively involved in rural development projects**?

Section 5: Future Consumer Trends & Digital Tools (10–15 minutes)

13. How do you **learn about sustainable products**? (e.g., social media, news, product labels, word of mouth)
14. Would you use **digital platforms or apps** to connect directly with local farmers or cooperatives for purchasing products?
15. Do you think there should be **more education or public awareness campaigns** on sustainable consumption?

Section 6: Recommendations & Feedback (10 minutes)

16. What changes would you like to see in supermarkets, farmers' markets, or online platforms to help consumers make more **sustainable and ethical choices**?
17. If businesses or policymakers were to encourage sustainable consumer habits, what strategies do you think would be **most effective**? (e.g., discounts, rewards, better labeling)

Section 7: Closing & Follow-Up (5 minutes)

- Thank the participant for their insights and time.
- Explain how their input will **help shape strategies** that support sustainable consumer behavior.
- Offer contact details for **further engagement or follow-up**.

Annex G. Interview Guide for Educational Institutions

This interview guide is designed to gather insights from representatives of educational institutions about their roles, challenges, and contributions to sustainable agriculture and rural development in alignment with the objectives of the PoliRural project.

Introduction (5 minutes)

- **Purpose**: Explain the goals of the PoliRural project and the importance of their input in fostering education and innovation in agriculture and rural development.
- **Confidentiality**: Assure the interviewee that their responses will be confidential and used solely for research purposes.
- **Structure**: Outline the structure of the interview (e.g., duration, key themes).

Section 1: Background Information (5–10 minutes)

1. Can you briefly describe your institution and its role in agriculture or rural development education?
2. What levels of education does your institution provide (e.g., secondary, tertiary, vocational training)?
3. How long has your institution been involved in promoting agricultural or rural education?

Section 2: Current Educational Programs and Initiatives (10–15 minutes)

4. What specific programs or courses does your institution offer related to agriculture or rural development?
5. How do these programs address current challenges such as sustainability, digital transformation, and youth engagement in agriculture?
6. Do you provide hands-on training or practical experiences for students (e.g., internships, field visits, research projects)?

Section 3: Collaboration with Stakeholders (10–15 minutes)

7. Does your institution collaborate with other stakeholders (e.g., farmers, cooperatives, policymakers, technology providers) in delivering education or training?
    - If yes, what form does this collaboration take (e.g., guest lectures, joint projects, research partnerships)?
8. How do you engage with local communities to promote agricultural education and awareness?
9. Are there any challenges in fostering partnerships between your institution and external stakeholders?

Section 4: Challenges in Agricultural Education (10–15 minutes)

10. What challenges does your institution face in developing or delivering agricultural education programs?
    - (e.g., funding, curriculum development, attracting students)
11. Are there gaps in the current educational offerings that need to be addressed to meet industry and societal demands?
12. How do you address the issue of declining interest among youth in pursuing agricultural careers?

Section 5: Future Directions and Innovations (10–15 minutes)

13. What emerging trends or technologies do you think will shape the future of agricultural education?
14. How can educational institutions better prepare students for the challenges and opportunities in agriculture and rural development?
15. Do you see a role for interdisciplinary approaches in tackling complex agricultural and rural development issues?

Section 6: Recommendations for Policy and Projects (10–15 minutes)

16. What role can policymakers play in supporting agricultural education and training?
17. How can projects like PoliRural support educational institutions in achieving their objectives?
18. Are there specific resources, tools, or initiatives that would enhance your institution's ability to deliver impactful agricultural education?

Section 7: Closing and Feedback (5 minutes)

19. What recommendations would you give to ensure that educational institutions are integral to rural and agricultural development strategies?
20. Is there anything else you would like to share that hasn't been covered?

Next Steps

- Thank the interviewee for their valuable input.
- Explain how their insights will contribute to the PoliRural project's findings and strategies.
- Provide contact information for further communication or clarifications

Interview Guide for Policymakers

This interview guide aims to gather insights from policymakers about their perspectives on agricultural policies, rural development, and the integration of technology and sustainability in agriculture, aligning with the objectives of the PoliRural project.

Introduction (5 minutes)

- **Purpose**: Explain the goals of the PoliRural project and the importance of their input in shaping sustainable agricultural policies and rural development strategies.
- **Confidentiality**: Assure the interviewee that their responses will be confidential and used solely for research purposes.
- **Structure**: Outline the structure of the interview (e.g., duration, key themes).

Section 1: Background Information (5–10 minutes)

1. Can you briefly describe your role and responsibilities in relation to agriculture and rural development?
2. How long have you been involved in policymaking or related fields?
3. What are the main priorities of your organization or department regarding agricultural policies?

Section 2: Current Policies and Strategies (10–15 minutes)

4. What are the key policies currently in place to support sustainable agriculture in Malta?
5. How do these policies address the challenges faced by small-scale farmers, cooperatives, and agricultural SMEs?
6. Are there specific programs or incentives to promote digital transformation in the agricultural sector?
7. How are policies ensuring alignment with EU frameworks like the European Green Deal and Common Agricultural Policy (CAP)?

Section 3: Challenges in Policy Implementation (10–15 minutes)

8. What challenges do you face in implementing agricultural policies effectively?
    - (e.g., budget constraints, stakeholder resistance, lack of coordination)
9. How do you engage with stakeholders (e.g., farmers, cooperatives, technology providers) to ensure policies are inclusive and effective?
10. Are there gaps in existing policies that need to be addressed to better support sustainable and resilient agricultural practices?

Section 4: Collaboration and Stakeholder Engagement (10–15 minutes)

11. How do you collaborate with rural communities and agricultural enterprises to ensure their voices are heard in policymaking?
12. Are there mechanisms in place to encourage public-private partnerships for agricultural innovation?
13. What role do you see for educational institutions and research projects like PoliRural in shaping future policies?

Section 5: Future Policy Directions (10–15 minutes)

14. What emerging trends do you think will influence agricultural policymaking in the next 5–10 years?
15. How can policies better promote sustainability and circular economy practices in agriculture?
16. What additional support or incentives would you recommend to encourage technology adoption and innovation in rural areas?
17. How can policies foster stronger connections between rural producers and urban consumers?

Section 6: Closing and Feedback (5 minutes)

18. What recommendations do you have for projects like PoliRural to effectively contribute to policymaking?
19. Are there any policy areas or initiatives you feel are underexplored and deserve more attention?
20. Is there anything else you would like to share that we haven't discussed?

Next Steps

- Thank the interviewee for their valuable input.
- Share how their responses will contribute to the project's findings and outcomes.
- Provide contact information for any follow-up discussions or clarifications.

Annex H. Interview Guide for Researchers

This interview guide is designed to gather insights from researchers specializing in agriculture, sustainability, and rural development to better understand their perspectives, experiences, and recommendations for the PoliRural project.

Introduction (5 minutes)

- **Purpose**: Explain the goals of the PoliRural project and the importance of their research expertise in contributing to sustainable agriculture and rural development strategies.
- **Confidentiality**: Assure the interviewee that their responses will be confidential and used solely for research purposes.
- **Structure**: Outline the structure of the interview (e.g., duration, key themes).

Section 1: Background Information (5–10 minutes)

1. Can you briefly describe your research area and its relevance to agriculture or rural development?
2. How long have you been conducting research in this field?
3. What inspired you to focus on this area of study?

Section 2: Current Research and Priorities (10–15 minutes)

4. What are the key focus areas of your current research?
5. How does your work contribute to addressing the challenges faced by rural communities and agricultural stakeholders?
6. Have you collaborated with policymakers, farmers, or technology providers in your research?
    - If yes, what was the nature of the collaboration?

Section 3: Challenges in Research and Application (10–15 minutes)

7. What challenges do you face in conducting research on sustainable agriculture or rural development?
    - (e.g., funding, access to data, stakeholder engagement)
8. Do you encounter gaps between academic research and its practical application in rural or agricultural contexts?

9. How can these challenges be addressed to ensure that research findings are effectively translated into practice?

Section 4: Collaboration and Stakeholder Engagement (10–15 minutes)

10. How do you engage with other stakeholders (e.g., farmers, cooperatives, policymakers) in your research?
11. Are there specific examples where your research influenced agricultural or rural policies or practices?
12. How can projects like PoliRural facilitate better collaboration between researchers and rural stakeholders?

Section 5: Future Research Directions (10–15 minutes)

13. What emerging trends or technologies do you believe will shape agricultural research in the next 5–10 years?
14. Are there underexplored areas of research in agriculture or rural development that need more attention?
15. How can interdisciplinary research contribute to solving complex challenges in sustainable agriculture?
16. What role do you see for digital tools and technologies in advancing agricultural research and practices?

Section 6: Recommendations and Feedback (10 minutes)

17. What policies or initiatives would you recommend to support research that addresses the needs of rural communities and agricultural stakeholders?
18. How can research projects better align with regional and EU-level objectives, such as the European Green Deal or the Common Agricultural Policy?
19. Are there any barriers to collaboration between researchers, policymakers, and agricultural stakeholders that you feel need to be addressed?

Section 7: Closing and Follow-Up (5 minutes)

20. Do you have any specific recommendations for the PoliRural project to maximize its impact?
21. Is there anything else you would like to share that hasn't been covered?

Annex I. Interview Guide for Technology Providers

This interview guide is designed to gather insights from technology providers about their role, challenges, and opportunities in supporting sustainable agricultural practices and rural development, in alignment with the PoliRural project objectives.

Introduction (5 minutes)

- **Purpose**: Explain the context and goals of the PoliRural project and why their input is valuable.
- **Confidentiality**: Assure the interviewee that their responses will be confidential and used solely for research purposes.
- **Structure**: Outline the structure of the interview (e.g., duration, key themes).

Section 1: Background Information (5–10 minutes)

1. Can you briefly describe your organization and the type of technologies or services you provide?
2. How long has your organization been operating in this field?
3. What specific sectors or industries do you focus on, and how does agriculture fit into your portfolio?

Section 2: Current Engagement with Agriculture (10–15 minutes)

4. What types of agricultural technologies do you offer (e.g., precision farming, irrigation systems, supply chain management)?
5. Have you worked with small-scale farmers, cooperatives, or agricultural SMEs in the past?
    - If yes, what were the key challenges and successes?
6. How do you ensure that your technology solutions are accessible and user-friendly for rural stakeholders?
7. Do you see a demand for digital tools and technologies in agriculture in Malta or the EU?
    - Which specific technologies are most sought after?

Section 3: Challenges in Technology Adoption (10–15 minutes)

8. What barriers do you encounter when introducing technology to agricultural enterprises?

    - (e.g., costs, digital literacy, resistance to change, infrastructure issues)
9. What strategies have you found effective in overcoming these barriers?
10. In your opinion, what role does the government or policymakers play in facilitating technology adoption in agriculture?

Section 4: Collaboration and Innovation (10–15 minutes)

11. Do you collaborate with other stakeholders (e.g., farmers, cooperatives, educational institutions, policymakers) in developing or deploying technology?
12. Are there opportunities for co-innovation with local farmers or agricultural organizations to tailor solutions to their needs?
13. How can technology providers like yourself contribute to promoting sustainability and circular economy practices in agriculture?
14. Have you implemented any projects or pilots focused on bridging rural-urban divides?

Section 5: Future Opportunities (10–15 minutes)

15. What emerging trends or technologies do you believe will have the greatest impact on agriculture in the next 5–10 years?
16. How can technology providers play a role in empowering youth and encouraging innovation in agriculture?
17. What policies or incentives would encourage you to expand your offerings for the agricultural sector?

Section 6: Closing and Feedback (5 minutes)

18. Do you have any recommendations for how the PoliRural project can better engage with technology providers?
19. Is there anything else you would like to share that we haven't covered?

Next Steps

- Thank the interviewee for their time and input.
- Inform them about the next steps (e.g., how their input will be used, opportunities for follow-up).
- Share contact information for any further questions or follow-up.

Annex J. Proposed Outline for the Workshop on Sustainable Farming Practices

Workshop Title:

"Sustainable Farming Practices: Building Resilience for the Future"

Duration:

Half-day or Full-day (flexible based on participants' availability)

Workshop Objectives:

1. Introduce sustainable farming concepts and their benefits for the environment, society, and economy.
2. Share practical, scalable techniques for implementing sustainable farming practices.
3. Facilitate peer learning through case studies and group discussions.
4. Explore resources, policies, and technologies that support sustainable farming.

Workshop Agenda

1. Registration and Welcome (15–30 minutes)

- **Registration**: Participants sign in and receive workshop materials.
- **Welcome Remarks**: Introduction by workshop organizer or facilitator.
- **Icebreaker Activity**: Brief interactive activity to foster engagement and networking.

2. Session 1: Introduction to Sustainable Farming (45 minutes)

- **Presentation:**
    - Overview of sustainable farming practices.
    - Key principles: soil health, water conservation, biodiversity, crop rotation, organic methods, and agroforestry.
    - Global and local trends in sustainable agriculture.
- **Interactive Q&A:** Address participant questions and clarify concepts.

3. Session 2: Practical Techniques and Tools (1 hour)Demonstrations or Presentations:

    - Low-cost techniques for soil improvement and pest management.
    - Efficient irrigation systems (e.g., drip irrigation).
    - Composting and waste management.
- **Hands-On Activities (Optional):**
    - Build a compost bin or test soil health (if facilities permit).
- **Q&A and Discussion:** Participants share their challenges and seek advice.

4. Break (15–30 minutes)

- Refreshments and networking opportunity.

5. Session 3: Case Studies and Best Practices (1 hour)

- **Presentation:**
    - Local and global case studies of successful sustainable farming.
    - Highlight challenges, solutions, and outcomes.
- **Group Activity:**
    - Participants discuss how these practices can be adapted to their farms.

6. Session 4: Policy, Technology, and Resources (1 hour)

- **Presentation:**
    - Overview of policies and incentives supporting sustainable agriculture (e.g., grants, subsidies).
    - Introduction to relevant technologies (e.g., mobile apps for farm management, IoT for monitoring).
    - Access to training, funding, and peer support networks.
- **Group Discussion:**
    - Participants identify what resources they need to adopt sustainable practices.

7. Session 5: Action Planning and Next Steps (45 minutes)

- **Activity:**
    - Participants create individual or group action plans to implement sustainable practices on their farms.
    - Facilitator provides guidance on setting realistic goals and accessing support.
- **Feedback Session:**
    - Participants share their plans and discuss potential collaborations.

8. Closing and Wrap-Up (30 minutes)

- **Summary of Key Takeaways:** Facilitator reviews highlights of the workshop.
- **Feedback Survey:** Participants provide feedback to improve future workshops.
- **Thank You and Closing Remarks:** Organizer expresses gratitude and shares next steps for continued engagement.

Workshop Materials:

- Handouts: Sustainable farming guides, policy information, and contact lists for support organizations.
- Presentation slides.
- Case study summaries.
- Links to online resources and tools.

Target Audience:

- Farmers, cooperatives, agricultural SMEs.
- Researchers and educators in agriculture.
- Policymakers and community organizers.

Annex K. Proposed Outline for the Workshop on Market Access for Agricultural Producers

Workshop Title:

"Unlocking Opportunities: Strategies for Agricultural Market Access"

Duration:

Half-day or Full-day (flexible based on participants' availability)

Workshop Objectives:

1. Equip participants with knowledge of market dynamics and consumer preferences.
2. Provide practical strategies for accessing local, regional, and international markets.
3. Explore the role of digital tools and partnerships in improving market access.
4. Facilitate networking and collaboration between producers, buyers, and other stakeholders.

Workshop Agenda

1. Registration and Welcome (15–30 minutes)

- **Registration**: Participants sign in and receive workshop materials.
- **Welcome Remarks**: Introduction by the workshop organizer or facilitator.
- **Icebreaker Activity**: Brief networking activity to build rapport among participants.

2. Session 1: Understanding Market Dynamics (45 minutes)

- **Presentation:**
    - Overview of market trends in agriculture (local, regional, global).
    - Consumer behavior and preferences (e.g., demand for organic and sustainable products).
    - Key challenges in market access (e.g., pricing, competition, logistics).
- **Interactive Q&A:** Address participant questions about specific market challenges.

3. Session 2: Strategies for Market Access (1 hour)

- **Presentation:**
    - Practical approaches to selling directly to consumers (e.g., farmers' markets, farm-to-table models).
    - Building relationships with wholesalers, retailers, and cooperatives.
    - Leveraging certifications (e.g., organic, fair trade) to increase product appeal.
- **Group Activity:**
    - Participants discuss their current market strategies and identify opportunities for improvement.

4. Break (15–30 minutes)

- Refreshments and informal networking.

5. Session 3: The Role of Technology in Market Access (1 hour)

- **Presentation:**
    - Overview of digital platforms and tools (e.g., online marketplaces, mobile apps).
    - Using social media for branding and direct marketing.
    - Examples of successful digital adoption by farmers and cooperatives.
- **Demonstration:**
    - Walkthrough of a popular agricultural e-commerce platform or app.
- **Discussion:**
    - Participants share their experiences with digital tools and explore how they can integrate them into their operations.

6. Session 4: Case Studies and Success Stories (1 hour)

- **Presentation:**
    - Real-life examples of farmers or cooperatives successfully accessing new markets.
    - Lessons learned from overcoming barriers such as logistics and pricing challenges.
- **Group Activity:**
    - Participants analyze a case study and discuss how its strategies can be applied to their context.

7. Session 5: Building Partnerships and Networks (45 minutes)

- **Presentation:**
    - Importance of partnerships with buyers, policymakers, and community organizations.
    - How cooperatives and producer associations can improve market access.
- **Networking Activity:**
    - Participants brainstorm potential collaborations and share contact information.

8. Session 6: Action Planning and Next Steps (45 minutes)

- **Activity:**
    - Participants create actionable market access plans tailored to their operations.
    - Facilitator provides guidance on setting realistic goals and leveraging resources.
- **Feedback Session:**
    - Participants share their plans and discuss potential support or partnerships.

9. Closing and Wrap-Up (30 minutes)

- **Summary of Key Takeaways:** Facilitator reviews the workshop highlights.
- **Feedback Survey:** Participants provide feedback to improve future workshops.
- **Thank You and Closing Remarks:** Organizer expresses gratitude and shares next steps for continued engagement.

Workshop Materials:

- Handouts: Market access guides, case studies, and resource directories.
- Presentation slides.
- Links to online platforms and e-commerce tools.
- Contact list for potential partners and support organizations.

Target Audience:

- Farmers, cooperatives, agricultural SMEs.
- Buyers, wholesalers, and retailers.
- Policymakers and community organizers.