Module 4

Motivation of Farmers, Students, and Others in Rural Populations

INTRODUCTION

Farmers and rural populations are increasingly required to become more innovative and productive to improve their livelihoods and contribute to the sustainable development goals. Multifunctional agriculture, a farm-level combination of production-oriented agriculture (e.g., food, feed, fibre, biofuel) and non-farming business activities (e.g., agrotourism, farm shops/cafés, social/care farming, nature and landscape management, etc.) is one of the viable regeneration strategies that can contribute to both the productivity and sustainability of farms, including rural development and vitality.

OVERVIEW

This module details the motivation of farmers, students, and others in rural populations in Multifunctional Agriculture as an opportunity for generating multiple streams of income, contributing to environmental sustainability and social responsibilities, consciously linked to rural development and vitality.

LEARNING OBJECTIVES

Knowledge

The learner will be able to:

- Recognise the forms of motivation for MA activities
- Outline farm resources and rural prospects
- Identify and describe the relevance of lifelong learning and competencies in digital technology, green practices, and entrepreneurship in supporting MA activities

Skills

Learners will be able to:

- Specify the factors driving MA activities and demonstrate the role of farms and rural resources
- Measure the benefits of lifelong learning in MA
- Gain an in-depth competence in digital technologies, green practices, and entrepreneurship that can contribute to the success of MA business

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Attitudes Acquired

The learner will:

- Acknowledge the motivating factors behind MA activities based on farm and rural resources
- Value the role of lifelong learning in initiating MA activities
- Defend the need for developing digital, green, and entrepreneurial competencies

Abbreviations/Acronyms

GSM	Guidance Service Model
GSP	Guidance Service Provider
MA	Multifunctional Agriculture
OECD	Organisation for Economic Co-operation and Development
IES	Information Exchanging Spot

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1. Forms of Motivations in Multifunctional Agriculture

1.1. Introduction

''Agriculture is our wisest pursuit because it will, in the end, contribute to real wealth, good morals, and happiness.''
~Thomas Jefferson

Motivations for engaging in Multifunctional Agriculture can be diverse and multifaceted, including economic, environmental, social, cultural, etc. The various forms of motivation for Multifunctional Agriculture depend on the specific goals and objectives of farmers, rural communities, and stakeholders involved. Moreover, farmers, rural communities, and stakeholders may have primary and secondary motivations for engaging in Multifunctional Agriculture activities. Therefore, it is necessary to understand the driving factors behind Multifunctional Agriculture (Ref. 1,2,3).

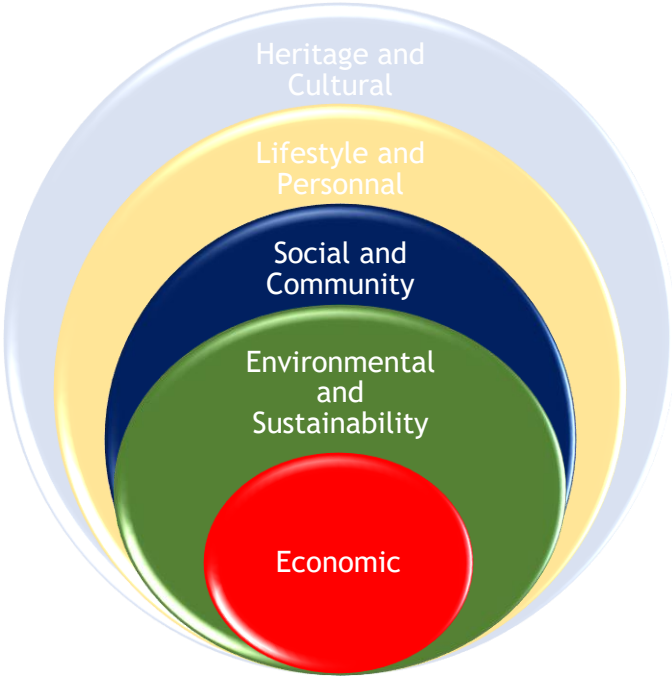

Figure 1. Forms of motivations influencing Multifunctional Agriculture activities.

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1.2. Key Forms of Motivation

In the realm of multifunctional agriculture activities, various forms of motivation intricately shape and drive the endeavours of individuals and communities. These motivations form a dynamic tapestry that influences and guides Multifunctional Agriculture activities, reflecting a holistic approach that encompasses economic, ecological, social, personal, and cultural dimensions.

- **Economic Motivation**
  One of the primary motivations for Multifunctional Agriculture is the opportunity to generate multiple income streams (Ref. 1). Farmers may engage in various agricultural activities to reduce financial risks and increase overall income, such as producing value-added products like cheeses or jams, responding to market demand for locally sourced, organic products, and promoting agritourism and recreational activities like farm tours and camping.

- **Environmental and Sustainability Motivation**
  Many farmers are motivated by a commitment to responsible land use and sustainability. They have motivation for adopting green practices, such as organic farming and agroecological approaches, as well as motivation for soil and biodiversity preservation to protect natural resources and adapt to the effects of climate change (Ref. 4).

- **Social and Community Motivation**
  Multifunctional Agriculture can promote community development by nurturing social connections, creating jobs, and providing educational platforms for teaching sustainable practices, health and wellness, and environmental awareness (Ref. 4).

- **Lifestyle and Personal Motivation**
  A deep love for farming and agriculture often motivates individuals to engage in Multifunctional Agriculture, combining work with personal interests. Multifunctional farming can offer more flexibility and a better work-life balance, allowing for a lifestyle that aligns with personal values. It allows entrepreneurs to diversify their businesses and explore new opportunities (Ref. 2).

- **Heritage and Cultural Motivation**
  Farmers may be motivated to preserve certain traditional farming practices and heritage (Ref. 2) to promote cultural traditions (Ref. 4).

CASE STUDIES:

Case 1. Drivers and motivations of farm diversification from Northern Ireland showed that the primary motivator in pursuing farm-level diversification is to generate additional income (Ref.1).

Case 2. In Thailand, the primary motivating factors for engaging in Multifunctional Agriculture is that it allows them to work from their own homes (Ref. 2).

Case 3. In the Netherlands, the economic impact of Multifunctional Agriculture showed that the employment (job creation) per unit of output was high, especially when compared with the employment/production rate in conventional agriculture (Ref. 3).

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2. Farm and Rural Resources

2.1. Introduction

''Living in rural settings exposes you to so many marvellous things - the natural world and the particular texture of small-town, and the exhilarating experience of open space.''
~Susan Orlean

Figure 2. Cloughjordan Community Farm, Ireland. © Eoin Campbell

Farm and rural resources are important factors that can motivate and support Multifunctional Agriculture. These resources encompass the physical, natural, and human assets abundant in rural areas, which provide the means to diversify agricultural activities and generate multiple income streams. The scenic beauty and aesthetic appeal of rural landscapes can motivate the development of multifunctional-oriented activities (Ref. 4). Thus, Multifunctional Agriculture can promote opportunities for rural prosperity and vitality and support rural generational renewal. Some authors have suggested how Multifunctional Agriculture can contribute to rural regeneration and development (Ref. 5,6).

2.2. How Farm and Rural Resources Can Motivate Multifunctional Agriculture

There are a number of farm and rural resources that can be the driving force to motivate a farmer to become involved in Multifunctional Agriculture. Various natural elements, such as the land,

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soil, water, biodiversity and nature, as well as human aspects of the local community, culture, and heritage can serve as powerful motivators that shape Multifunctional Agriculture activities.

- **Land and Soil Resources**

Access to land plays a significant role in driving MA activities. The availability of diverse land types and soil conditions can motivate farmers to engage in Multifunctional Agriculture. Different landforms and soil characteristics within the land area can support both agricultural and non-agricultural activities.

- **Biodiversity and Natural Habitats**

Farm and rural areas often host valuable biodiversity and natural habitats. Farmers may engage in Multifunctional Agriculture to protect and enhance these resources, promoting wildlife conservation and ecological balance. Biodiversity-rich areas can attract eco-tourism, providing an additional income source for farmers and local communities.

- **Water Resources**

Abundant water resources in rural areas, such as rivers, lakes, and ponds can support multifunctional-oriented activities, including agriculture activities such as aquaculture and non-agriculture activities like kayaking, canoeing, and surfing that can attract visitors to agritourism ventures.

- **Rural Communities and Human Capital**

Robust rural communities provide the social motivation for Multifunctional Agriculture. Farmers may diversify their activities to strengthen local ties and contribute to community development. Rural residents often possess valuable skills and traditional knowledge related to diverse agricultural practices, which can motivate them to engage in Multifunctional Agriculture.

- **Cultural and Heritage Resources**

Rural areas are often rich in cultural heritage. Multifunctional Agriculture activities like heritage crop cultivation or traditional crafts can help preserve and promote local culture and traditions.

- **Landscape and Aesthetics**

The scenic beauty of rural landscapes can motivate the development of agritourism ventures. The aesthetic appeal of the countryside attracts visitors seeking natural beauty and tranquillity. Scenic locations in rural places can serve as venues for photography, art, and cultural events, providing additional income sources.

CASE STUDY:

The Brookfield farm in Ireland is set within the beautiful landscape of Tipperary, running down to the shores of Lough Derg. The farm operates multifunctional-oriented activities, including animal and crop husbandry, beekeeping, a farm shop, agritourism, farm tours, nature, and landscape management. The beauty of the farm landscape and activities attracts tourists. You can view the short video "Brookfield Farm visit us in Irelands Hidden Heartlands" (Ref. 4).

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3. Motivation for Lifelong Learning in Multifunctional Agriculture

3.1. Introduction

''Continuous learning is the minimum requirement for success in any field.''

~Brian Tracy

Lifelong learning is integral to Multifunctional Agriculture as it empowers individuals to embrace the complexity and diversity of these systems, respond to changing circumstances, and contribute to sustainable, resilient, and prosperous rural communities. It empowers individuals to adapt and thrive in the evolving demands of Multifunctional Agricultural settings while contributing to the well-being of rural communities and the environment. The Cloughjordan farm, Ireland's pioneering living lab, is an innovative example of a co-learning workspace for individuals to gain insights into Multifunctional Agriculture (Ref. 7,8).

Figure 3. Blended (online and in person) Multifunctional Agriculture learning event at Cloughjordan farm, Ireland © Matteo Metta

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3.2. Key Motivations to Engage in Lifelong Learning in the Context of Multifunctional Agriculture

In the dynamic landscape of Multifunctional Agriculture, individuals may be encouraged to engage in lifelong learning, motivated to stay innovative and up-to-date with current farming practices. This section examines the diverse factors that may drive individuals within the agricultural domain to engage in continuous learning.

- **Innovation and Adaptation**
  Lifelong learning is essential for staying up to date with innovations and adapting to the changing circumstances of Multifunctional Agriculture activities.

- **Diversification and Income Generation**
  Lifelong learning helps farmers identify new opportunities and effectively manage diverse activities such as agritourism, value-added products, and direct-to-consumer sales.

- **Market Demand**
  Responding to consumer preferences for locally produced and organic products requires continuous learning to meet market demands and maintain a competitive edge.

- **Sustainable Practices**
  Farmers strive to implement eco-friendly practices, reduce chemical inputs, and promote biodiversity, which requires ongoing education and adaptation.

- **Technological Advancements**
  Staying informed about the latest digital technologies and precision farming tools to improve farm management and resource optimisation.

- **Improved Efficiency**
  Education and training can lead to more efficient farming operations by optimising resource use, reducing waste, and increasing productivity.

- **Risk Mitigation**
  Learning about new pest and disease management techniques and adopting resilient farming practices can mitigate the risks associated with crop and livestock production.

- **Compliance and Certification**
  Lifelong learning is necessary to ensure adherence to specific environmental and agricultural certifications or comply with regulations.

- **Personal Fulfilment**
  For many farmers, learning is personally fulfilling. It allows them to continually expand their knowledge and skills, contributing to a sense of achievement and well-being.

- **Community Development**
  Lifelong learning enhances a farmer's ability to contribute to the development of the local community by creating jobs, fostering agritourism, and supporting the local economy.

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3.3. Strategies for Lifelong Learning in Multifunctional Agriculture

To effectively engage in Multifunctional Agriculture, individuals must continuously update their knowledge and expertise. Strategies for lifelong learning in Multifunctional Agriculture are essential to equip individuals with the competencies needed to excel in multifunctional-oriented agriculture. Effective strategies for lifelong learning include:

- **Education Programs**
  Participation in formal education programs, such as workshops, seminars, and courses, can help users acquire and gain new knowledge and skills related to Multifunctional Agriculture.

- **Online Courses and E-Learning**
  Utilise online platforms and e-learning resources to access courses and materials related to multifunctional agriculture (Ref. 9).

- **Farm Visits and Field Trips**
  Organise and participate in field trips to visit successful multifunctional farms and learn from experienced practitioners (Ref. 4,8).

- **On-Farm Demonstrations**
  Attend on-farm demonstrations where experts showcase multifunctional practices and provide guidance on their implementation (Ref. 4,8).

- **Collaboration and Networking**
  Collaborate and network with fellow farmers, experts, and agricultural organisations to share knowledge and experiences, fostering a culture of learning and innovation.

- **Mentorship and Apprenticeship**
  Mentorship from experienced farmers or agricultural professionals with expertise in Multifunctional Agriculture provides personalised guidance and support (Ref. 4,8).

- **Reading and Research**
  Stay informed by reading agricultural literature, research papers, and books related to multifunctional agriculture.

- **Local Agricultural Extension Services**
  Local agricultural extension services provided by government agencies or agricultural universities offer information, training, and support tailored to specific regions.

- **Joining Agricultural Associations**
  Become a member of agricultural associations and organisations that focus on multifunctional agriculture.

- **Community-Based Learning and Peer Learning Groups**
  Collaborate with the local community to establish community-based learning initiatives. These can include workshops, educational events, and resource-sharing programmes (Ref.8). Join peer learning groups where farmers discuss challenges, share experiences, and learn from one another (Ref.7).

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CASE STUDY:

Diversify Diversification[1], a hybrid learning workshop blended between online and in-person participants, examined farm diversification (Multifunctional Agriculture) in rural Ireland. The workshop focused on co-learning in furthering understanding in farm diversification/ multifunctional agriculture for income generation, biodiversity preservation, climate adaptation and mitigation, and rural revitalisation (Ref. 10).

1 https://www.arc2020.eu/wp-content/uploads/2022/05/Rural-Ireland-on-Move_Diversify-Diversification_Webinar-Report_28042022_OM.pdf

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4. Motivation for Digital and Green Competencies in Multifunctional Agriculture

4.1. Introduction

''You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.''

~Buckminster Fuller

Digital and green competencies are increasingly important in the agriculture space, due to environmental challenges such as climate change, resource depletion, and biodiversity loss. The motivation for digital and green competencies in Multifunctional Agriculture can contribute to efficiency, profitability, and sustainability. The Cloughjordan Community, Ireland's first Eco-Village, promotes green competencies in their multifunctional farm, contributing to a more sustainable and ecologically responsible agricultural sector (Ref. 8).

Figure 4. Carbon farming at Cloughjordan Community Farm ©Jess Schoening

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4.2. Key Motivators for Digital and Green Competencies in Multifunctional Agriculture

In the realm of Multifunctional Agriculture, the integration of digital and green competencies has become increasingly important. Here we look at some of the fundamental motivators driving the adoption of these competencies, recognizing their transformative impact on Multifunctional Agricultural practices.

- **Economic Viability**
  Digital tools and green practices can lead to more efficient resource use and reduced production costs. By embracing digital and green competencies, farmers can enhance these income sources.

- **Environmental Stewardship**
  Farmers concerned about environmental responsibility adopt digital and green competencies to minimise their ecological footprint and protect natural resources. Green practices, such as organic farming promote biodiversity and contribute to ecosystem health (Ref. 8).

- **Consumer and Market Trends**
  Consumers are becoming more environmentally conscious and are willing to pay a premium for products produced using green practices. Having digital and green competencies can provide a competitive edge in the market, allowing farmers to stand out in a crowded industry.

- **Environmental Regulations and Incentives**
  Farmers now adopt green practices due to regulatory requirements and incentives provided by government programs or certification bodies.

- **Community and Stakeholder Engagement**
  Farmers may adopt green and digital competencies to meet the expectations of their local community or other stakeholders, such as consumers and neighbours.

- **Ethical Considerations**
  Farmers are motivated by ethical considerations, embracing digital and green competencies to implement responsible and ethical farming.

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4.3. Recognising Digital and Green Competencies in Multifunctional Agriculture

Digital Competencies refer to leveraging digital platforms to connect with stakeholders, customers, and partners across different agricultural functions, facilitating collaboration and information sharing (Ref 11, 14). For example, precision agriculture tools such as drones, satellite imagery, robotics, and remote sensors for collecting and analysing data to optimise resource allocation, can improve productivity and ensure sustainability across Multifunctional Agriculture activities (Ref. 12,13). Also, digital marketing and e-commerce competencies to promote and sell multifunctional agricultural products and services online, help to reach a broader customer base.

Green Competencies refer to implementing regenerative agriculture practices such as creating wildlife habitats, managing native vegetation and hedgerows, and promoting pollinator-friendly practices to preserve biodiversity and ecosystem sustainability. Additionally, agroecological practices such as organic farming guarantee chemical-free products, meeting the growing demand for organic and sustainable goods and services across Multifunctional Agriculture enterprises (Ref. 8).

CASE STUDIES:

Case 1. *Creating a Green Culture-Cloughjordan Eco-village* is a community farm in Ireland, demonstrating green competencies in Multifunctional Agriculture (Ref. 8).

Case 2. *The digitalisation of social farming i*n Italy - Raccolti di Comunitá (Community Harvests) - Umbrian Social Agriculture created an online website and app to promote and sell their social farming products and services (Ref. 11).

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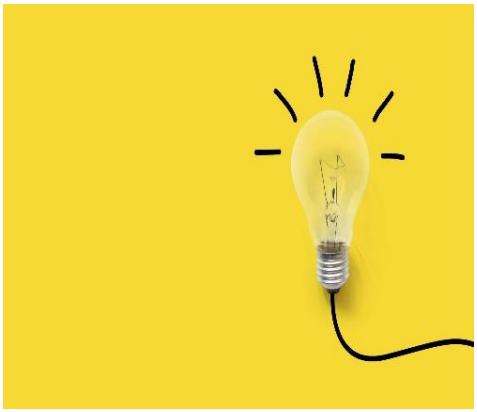
5. Motivation for Entrepreneurship Competencies in Multifunctional Agriculture

5.1. Introduction



"The entrepreneur always searches for change, responds to it, and exploits it as an opportunity."

~Peter Drucker

Motivation for entrepreneurship competencies in Multifunctional Agriculture stems from a desire to create and manage a successful and diversified agricultural business. It is primarily driven by a combination of economic, environmental, and personal factors. Developing entrepreneurship competencies allows farmers to create unique, value-added offerings that set their farm apart from competitors. Entrepreneurship competencies in Multifunctional Agriculture involve innovative thinking, taking calculated risks, and creating value. Motivations for entrepreneurship competencies can enable higher productivity and contribute to the long-term sustainability of the multifunctional farm and rural economy. A paradigm shift in agricultural educational institutions as an enabler of developing entrepreneurial competencies is desired for Multifunctional Agriculture (Ref. 15,16).

5.2. Key Motivators for Cultivating Entrepreneurship Competencies

Having entrepreneurship competencies can be an asset in various domains, including agriculture. Below we look at some of the core motivators that drive individuals and communities to develop their entrepreneurship competencies, highlighting the transformative role these skills play in fostering innovation, resilience, and sustainable and economic growth within multifunctional agricultural contexts.

- **Economic Opportunities**
  Multifunctional Agriculture offers the potential for multiple income streams. Entrepreneurship competencies enable farmers to identify business innovations and capitalise on these to generate multiple streams of income. Entrepreneurial skills are necessary to meet consumer preferences and access premium markets.

- **Innovation and Creativity**

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Developing entrepreneurship competencies allows farmers to create unique, value-added offerings that set their farm apart from competitors. This could include exclusive agritourism experiences, specialty products, or customised services.

- **Sustainability and Environmental Responsibility**
  Entrepreneurial farmers are often motivated by the desire to incorporate sustainable practices into their multifunctional farms. Developing entrepreneurship competencies enables farmers to reduce the environmental impact of their operations by promoting sustainable farming practices, such as organic farming and agroecological approaches.

- **Resilience and Risk Management**
  Entrepreneurship competencies are motivated by the need to manage risks such as market fluctuations and extreme weather events. Diverse income streams from Multifunctional Agricultural activities can enhance financial resilience.

5.3. Entrepreneurship Competencies in Multifunctional Agriculture

Entrepreneurship competencies in Multifunctional Agriculture encompass a wide range of skills and qualities, reflecting the multifaceted nature of this field. To succeed, individuals need to be adaptable, innovative, community-oriented, and committed to sustainability, while also possessing strong business acumen and financial management skills. These competencies enable Multifunctional Agriculture entrepreneurs to navigate challenges, seize opportunities, and create a thriving and sustainable MA business. Teagasc, Ireland's national agency for food and rural development, encourages entrepreneurship competencies in multifunctional agriculture (Ref. 17,18).

To thrive in this diverse and dynamic sector, entrepreneurs should possess the following competencies:

Innovation and Creativity

- The capacity to innovate and create new products or services, such as value-added products or unique agritourism experiences.
- Skills to identify and address challenges, adapt to changing circumstances, and find creative solutions.

Business Management and Market Analysis

- The ability to set clear goals, develop long-term strategies, and make informed decisions for the farm's growth and sustainability.
- The ability to assess the competitive landscape and identify opportunities for differentiation.
- Stay informed about emerging market trends, consumer preferences, and industry innovations.

Branding, Digital and Technology Proficiency

- The ability to establish and promote a strong brand identity that reflects the farm's values and unique offerings.
- Skills in using digital tools for marketing, data analysis, and communication.
- Knowledge of technology applications for precision farming and farm management.

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Community Engagement

- The capacity to foster positive relationships with the local community, customers, and partners.
- The ability to engage the community through educational programs, agritourism, and events.

Communication and Networking

- Strong communication skills to convey the farm's values, offerings, and goals.

CASE STUDY:

Multifunctional agriculture in Iran: a model for entrepreneurship development of agricultural sector

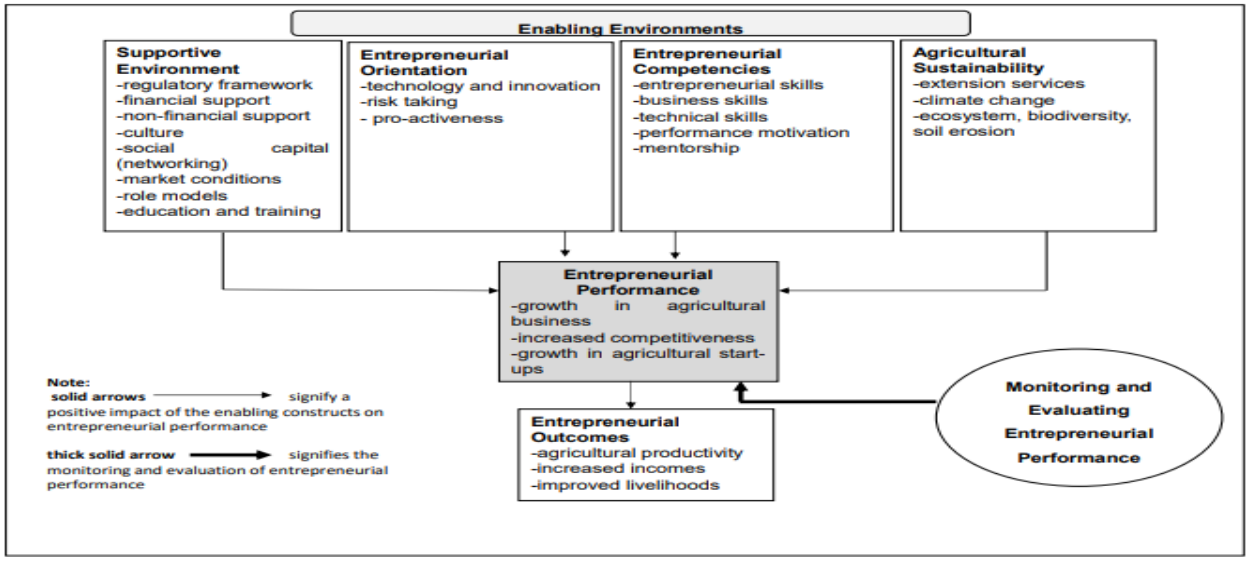

Figure 5. A conceptual model on agricultural-entrepreneurial development (Kavari, 2016)

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6. References/Links

Ref.1 Jack, C., Adenuga, A. H., Ashfield, A., & Mullan, C. (2021). Understanding the drivers and motivations of farm diversification: Evidence from Northern Ireland using a mixed methods approach. *The International Journal of Entrepreneurship and Innovation*. 22(3), 161-176.

Ref.2 Jansuwan, P., & Zander, K.K. (2022). Multifunctional farming as successful pathway for the next generation of Thai farmers. *PLoS ONE* 17(4): e0267351. https://doi.org/10.1371/journal.pone.0267351

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Ref.4 Brookfield Farm visit us in Irelands Hidden Heartlands. https://youtu.be/BaEgX7PhKok

Ref.5 Sivini, S., Vitale, A. (2023) Multifunctional and Agroecological Agriculture as Pathways of Generational Renewal in Italian Rural Areas. *Sustainability*, *15*, 5990. Sustainability | Free Full-Text | Multifunctional and Agroecological Agriculture as Pathways of Generational Renewal in Italian Rural Areas (mdpi.com)

Ref.6 Arru, B., Furesi, R., Madau, F.A., & Pietro Pulina (2021). Economic performance of agritourism: an analysis of farms located in a less favoured area in Italy. *Agricultural and Food Economics,* 9 (27). https://doi.org/10.1186/s40100-021-00199-z

Ref.7 WeCreate Enterprise Centre, Irish Living Lab WeCreate Enterprise Centre | Irish (IE) Living Lab - YouTube

Ref.8 Creating a Culture of Sustainability - Tales of Ireland First Eco-Village Creating a Culture of Sustainability - Tales of Ireland Present Ep 2 (youtube.com)

Ref.9. Farm Diversification. Diversification - Teagasc | Agriculture and Food Development Authority

Ref.10 Rural Ireland on the move: Diversify Diversification Webinar Report, 2022. https://www.thevillage.ie/wp-content/uploads/2022/03/Rural-Ireland-on-Move-Just-Transition-Webinar-Report-April-2022.pdf

Ref.11 The brand of Community Harvests, Umbrian social agriculture https://raccoltidicomunita.it/il-brand

Ref.12 Matteo, M., (2023). Strengthening Multifunctional Agriculture through Digitalisation: Insights from Europe and Japan. *Journal of Rural Problems* 59(1), 45-52 https://doi.org/10.7310/arfe.59.45

Ref.13 Agroecology, Diversification and Digitalisation on Hashimoto Family Farm https://www.arc2020.eu/rural-japan-agroecology-diversification-and-digitalisation-on-hashimoto-family-farm/

Ref.14 Diversified Farmers' Guide to Social Media https://www.teagasc.ie/media/website/rural-economy/rural-development/diversification/Diversification-Social-Media.pdf

Ref.15 Tohidyan, F.S., & Rezaei-Moghaddam, K. (2019) Multifunctional agriculture: an approach for entrepreneurship development of agricultural sector. *Journal of Global Entrepreneurship Research* 9(23). https://doi.org/10.1186/s40497-019-0148-4

Ref.16 Kavari, U. J. (2016). Modelling an agricultural- entrepreneurial development resolution. University of Pretoria: Ph.D. thesis. https://repository.up.ac.za/bitstream/handle/2263/57158/Kavari_Modelling_2016.pdf?sequence=1&isAllowed=y

Ref.17 Rural Development Factsheets https://www.teagasc.ie/rural-economy/rural-development/diversification/rural-development-factsheets/

Ref.18 Farm Business Options Webinar Series Farm Business Options Webinars - Teagasc | Agriculture and Food Development Authority

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7. Conclusion

Understanding farmers' motivations in setting up on-farm multifunctional-oriented activities provides an opportunity for encouraging business innovation and entrepreneurship in rural areas. Encouraging lifelong learning and competencies in digital and green practices among farmers and other stakeholders will ensure animal welfare, food safety, soil health, climate protection, and biodiversity conservation.

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