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GEAVET DIGI-BASED COACHING MODULE FOR WOMEN IN SUSTAINABLE AGRI-BUSINESS AND ENTREPRENEURSHIP

DELIVERABLE 4.2

GEAVET PROJECT N° 101129027

"INCLUSIVE GREENING EXCELLENCE IN THE AFRICAN EDUCATION AND TRAINING ECOSYSTEM"

SECTION 1.4.0: Real-world case studies and interactive tools

1.4.1: Success Stories from Sub-Saharan Africa

This subsection presents inspiring success stories from women farmers across Sub-Saharan Africa (SSA), highlighting practical examples of innovation, leadership, and effective climate-smart agricultural practices. By examining these real-world experiences, learners can identify good practices that can be adapted to their own contexts.

a.Women's Shea Cooperatives in Northern Ghana: Women leadership and environmental sustainability.

The story demonstrates how community-based women's associations combine economic empowerment with environmental conservation and ensure value chain development. The Ghanaian women's shea cooperatives comprise a network of 40 shea nut collectors and shea butter processing groups, with more than 750 women members. Unlike other shea butter producers, the cooperative is democratically managed by the women themselves, instituted and agreed upon by all. Profits generated from the sale of products are shared equally among all members. A notable example among them is the Sunkpa Shea Women's Cooperative, an Indigenous-women-led shea butter cooperative in the savannah region of Northern Ghana, which has adopted a community-led and inclusive approach to establishing a sustainable shea butter value chain, which has created economic opportunity for over 400 women within the cooperative.

The Sunkpa Shea Women's Cooperative, born out of the Community Resource Management Area (CREMA), has led local initiatives that contribute to ecosystem restoration with indigenous economic trees and traditional fire management practices. These interventions help reduce wildlife risks in the drought-prone region of Ghana. Practices such as the collection of shea in designated production areas, the establishment of no-take zones, and the implementation of limited-use areas contribute to biodiversity conservation and enhance landscape characteristics.

b. Women-Led Micro-Irrigation Schemes in Kano & Jigawa States of Nigeria: Climate-smart agriculture and economic empowerment.

In the semi-arid regions of Kano and Jigawa States of Nigeria, women farmers are increasingly adopting micro-irrigation systems, particularly drip irrigation, treadle pumps, and low-pressure sprinklers to boost agricultural productivity, enhance climate resilience, and secure year-round food supply. These regions are highly vulnerable to drought and erratic rainfall, making climate-smart irrigation a powerful innovation for women-led agribusiness.

These micro-irrigation schemes are tailored to deliver water directly to plant roots thereby reducing water wastage, improving fertiliser efficiency, and supporting

high-value crops such as tomatoes, peppers, onions, spinach, and okra. These schemes are particularly impactful in water-scarce communities of Dawakin Kudu (Kano) and Guri (Jigawa). With these micro-irrigations, women grow vegetables all year round and ensure a steady supply to local markets, schools, and restaurants while earning a consistent income even when male farmers rely on seasonal rains. Women in these communities reported income increase of 30–70% within two seasons.

1.4.2: CASE STUDIES FROM EU and SSA countries

To translate theory into practice, this section presents selected case studies of women leaders who have transformed the agribusiness landscape through sustainability, innovation, and community empowerment.

a. Francesca Sarti (Italy/Africa): Regenerative Agriculture and Community Building

Profile: An Italian agronomist who chose to transfer European expertise to international cooperation contexts, working across Italy, Zambia, and Senegal. Francesca acted as both a technical and human "bridge." In Italy, she collaborated with the Rete Semi Rurali (Rural Seed Network), focusing on agricultural biodiversity. In Africa, she spearheaded international cooperation projects (often supported by Oxfam Italia) in challenging environments. Her work focused on empowering local farmers to move away from a dependence on imported chemical fertilizers.

Key Action: Implementation of Permaculture and Regenerative Agriculture models to restore degraded land, transforming arid terrains into productive "Food Forests."

- Multilayered Ecosystems: She transformed "dead" soil into complex, multilayered systems. By co-planting fruit trees, shrubs, and vegetables, she created a microclimate that retains moisture.
- Soil Health: The 30% increase in organic matter is a crucial milestone; it indicates the soil has begun to "breathe" again and is actively sequestering carbon.

Key Results:

- Soil Recovery: Recorded a 30% increase in organic soil matter in just three years.
- Empowerment through Training: Established "Field Schools" (*Scuole in Campo*), training over 200 local women in sustainable techniques that eliminate the need for expensive, imported chemical fertilizers.

Challenges & Solutions:

- Challenge: Initial skepticism from the local community regarding "non-traditional" methods, specifically No-Till farming (cultivation without plowing).
- Solution: She established a personal demonstration plot. Once the community witnessed her tomatoes outlasting others during droughts, they began to adopt her techniques.

Lessons Learned

This case study highlights a vital lesson for agricultural coaches: "seeing is believing." In many SSA communities, traditional plowing is deeply rooted; however, Francesca's success with No-Till farming proves that sustainability can be the best insurance against climate shocks. Coaches should guide female entrepreneurs to start with a small Demonstration Plot, a "safe space" to experiment with permaculture without risking their entire livelihood. By showing a 30% increase in soil organic matter, women can drastically reduce their dependence on expensive, volatile chemical fertilizers, turning "dead" land into a profitable, self-sustaining "Food Forest" that generates income even during droughts.

b. Isabella Mottura (Italy): Hydroponics, Aquaponics, and Vertical Farming Technology

Profile: An entrepreneur who transformed a traditional farm into a cutting-edge technological model: The Circle. Isabella Mottura is an active member of Coldiretti Giovani Impresa, Italy's leading network for agricultural entrepreneurs under 35. Her project, The Circle, was a standout winner at the Oscar Green awards, a prestigious prize for agricultural innovation promoted by Coldiretti. Operating in the Lazio region (Rome), she successfully integrated hi-tech startup expertise into a sector historically rooted in traditional land use. She was a pioneer in proving that "soilless" innovation (Aquaponics) could achieve full institutional legitimacy and commercial success within the Italian agricultural landscape.

Key Action: Development of a closed-loop Aquaponics system that integrates fish farming with vegetable cultivation. In this symbiotic environment, fish provide natural fertilizer for the plants, which in turn filter and purify the water for the fish.

Key Results

- Water Efficiency: Achieved a 90% water saving compared to traditional soil-based agriculture.
- Environmental Sustainability: Zero chemical residue emissions into the environment and 100% natural production.
- Scalability: The company has become a premier supplier for European Michelin-starred restaurants, proving the high-quality output of the system.

Challenges & Solutions:

- Challenge: High energy consumption and operational costs required to maintain the continuous water pumping systems.
- Solution: Integration of solar panels and AI algorithms to monitor and optimise water flow, ensuring energy is used only when strictly necessary.

Lessons Learned

Isabella's model is highly relevant for regions facing water scarcity or soil degradation. While high-end AI might be a future step, the core principle of Aquaponics offers a powerful solution for urban and peri-urban female entrepreneurs in Sub-Saharan Africa.

It allows for high-density food production (fish and vegetables) in small spaces with minimal water usage. By adopting simplified "low-tech" versions of this closed-loop system powered by solar energy, African women can bypass poor soil quality and create a resilient, year-round income stream that is independent of unpredictable rainfall patterns.

c. Anne-Sophie Pic (France): Biodiversity and the "Seed to Plate" Supply Chain

Profile: Beyond her renown as a multi-Michelin-starred chef, Anne-Sophie Pic acts as a visionary Agricultural Key Leader. She directly oversees the selection and cultivation of heirloom and forgotten plant varieties. Operating primarily in Valence (Drôme, France), her influence extends through a vast network of suppliers across France and Switzerland. Rather than being a mere buyer, she establishes direct "Cultivation Contracts" with small-scale local farmers, serving as both an agronomic consultant and a strategic business partner (Ponant, n.d).

Key Action: She established a native seed network in collaboration with local farmers, enforcing strict cultivation protocols that reject industrial standardisation. Instead of storing seeds in sterile labs, she empowered farmers to sow them in open fields. This approach allowed near-extinct varieties of tomatoes, carrots, and citrus to adapt to current climate shifts, ensuring the long-term genetic survival of these species.

Key Results:

- Successfully recovered and reintroduced over 50 varieties of rare vegetables that were vanishing from the European market.
- Created a premium model where farmers receive 300% above wholesale market rates, rewarding quality and heritage over mass production.
- Her model became the benchmark for the Michelin Green Star (sustainability category). This has inspired hundreds of chefs across Europe to follow suit, generating a significant market demand for biodiverse agricultural products.

Challenges & Solutions:

- Challenge: The lower yield and productivity of ancient seeds compared to high-yield industrial hybrids.
- Solution: Value-Driven Storytelling. She educated consumers on the superior nutritional profile and unique flavours of these products, justifying the higher price point by highlighting their cultural and environmental value.

Lessons Learned

The "Seed to Plate" model is a powerful strategy for African women entrepreneurs to reclaim their agricultural heritage. Many indigenous African crops (such as fonio, amaranth, or local varieties of millet and cowpea) are naturally resilient to droughts but have been sidelined by industrial hybrids. By following Anne-Sophie Pic’s approach, African cooperatives can move from being "commodity producers" to "heritage guardians." Instead of competing on volume and low prices, they can use Value-Driven

Storytelling to target the growing urban middle class and export markets that seek nutritious, "superfood" indigenous crops. This strategy protects local biodiversity while ensuring that farmers are compensated for the unique quality and cultural history of their products.

d. Rose-Mary Owino (Kenya/EAC): Leadership in International Standards and Food Safety

Profile: A prominent manager and leader in the East African agricultural development sector. Rose-Mary serves as a strategic point of reference for the implementation of projects funded by the European Union (EU) and global organisations. Her work focuses on enhancing the quality and safety of African agricultural exports to meet international requirements.

Key Action: Coordination of large-scale programmes aimed at reducing Aflatoxins (natural toxins found in cereals) and improving phytosanitary standards. She led the development of specialised protocols enabling Kenyan smallholder farmers to access strict and highly regulated European markets.

Key Results:

- Market Access: Enabled over 50 cooperatives to obtain the necessary certifications for exporting to the EU, leading to a 40% increase in community income.
- Policy Change: Successfully influenced regional food safety regulations within the East African Community (EAC), harmonising standards to facilitate safer cross-border trade.

Challenges & Solutions:

- Challenge: A critical lack of certified testing laboratories in remote rural areas, making it difficult for farmers to verify the safety of their crops.
- Solution: Implementation of "Mobile Laboratories" and low-cost rapid testing kits. These tools are managed directly by local communities, providing immediate results and ensuring compliance at the source.

Lessons Learned

Rose-Mary Owino's work demonstrates that compliance with international standards is not just a technical requirement but a powerful marketing strategy. For female entrepreneurs in Sub-Saharan Africa, mastering food safety (e.g., controlling aflatoxins) means moving from volatile local markets to stable and profitable export contracts. During coaching sessions, it is essential to emphasise that adopting "Mobile Labs" or rapid testing kits managed by cooperatives not only reduces post-harvest losses but also increases women's bargaining power, allowing them to certify their own quality without relying on predatory intermediaries.

e. Youth Centre Kiwanga (Uganda): Savings and Credit Cooperatives

Profile: In the slums of Kiganda/Banda, where the adult population is 51% women, a project for sustainable economic development has been launched, which involves the creation of solidarity groups based on the principles of savings and credit cooperatives.
The Kiganda/Banda slums have a population of about 30,000 people, of whom 57% are children and youth under 17. The adult population is 51% women and 49% men. Most of the children in the area show signs of rickets caused by malnutrition or poor nutrition. As in many slums or poor communities in Uganda, people in the project area are affected by HIV / AIDS.

Key actions: The project for the sustainable economic development of the slums aims to improve the security and quality of life by developing productive knowledge and skills, and common solidarity groups based on the concepts and **principles of savings and credit cooperatives**. To guarantee safe and hygienic spaces for play and coexistence, premises have been renovated and expanded (remaking walls and flooring, electrical and hygienic systems, kitchens, doors and gates, gardens and courtyards) to welcome not only children and young people but also the wider community.
Financing and cooperation have allowed for the setting up of the structures as per the project, and the reception and training of groups engaged in sustainable development activities.

Key results

Through education and training on financial education, business management, savings and technical skills, access to small loans, and support, women learn to manage micro-enterprises, transforming their family and social life.

Lessons Learned

The savings and credit groups demonstrate that collective action builds resilience and access to pooled resources fuels entrepreneurship. Financial literacy empowers group members while membership of a group not only provides economic benefits but also strengthens trust and group cohesion and sense of leadership.

f. Yemisi Iranloye : Innovation, Leadership and Value Addition.

Profile: Yemisi Iranloye is a Nigerian biochemist and agribusiness entrepreneur, founder and CEO of Psaltry International Limited- a cassava processing company based in Oyo State, Nigeria. She transformed cassava from a subsistence crop to a high-value industrial product. Her company started small but grew into a multi-million-dollar enterprise supplying food-grade starch and sorbitol to global brands such as Nestle and Unilever.

Key Action

- Founded Psaltry International, which is the first cassava-based sorbitol factory in Africa to promote cassava for industrial use.
- Built processing plants in rural Oyo State, creating jobs and empowering women.

- Established Africa's first cassava-based sorbitol factory, used in toothpaste and sweeteners.
- Partnered with over 5,000 smallholder farmers, offering training and guaranteed markets.

Key results

- Annual turnover of $12 million from cassava products.
- Over 10,000 tonnes of starch are produced annually.
- Created jobs for rural youth and women, reducing migration to cities.
- Improved livelihoods of farmers through fair pricing and consistent demand.
- Positioned Nigeria as a global player in cassava-based industrial products.

Challenges

- Rejected by banks four times when seeking startup loans.
- Faced poor infrastructure: lack of electricity, water scarcity, and bad roads.
- COVID-19 disruptions delayed equipment delivery and exports.
- Port congestion affected the supply chain and logistics.
- Competition from multinationals with more capital and influence.

Solutions

- Self-funded initial operations and reinvested profits.
- Built local partnerships with farmers and cooperatives.
- Used solar power and boreholes to overcome infrastructure gaps.
- Focused on niche products like sorbitol to avoid direct competition.
- Leveraged innovation and quality to attract global clients.

Lessons Learned

- She started small with modest capital and scaled up.
- Persistent and partnered with smallholder farmers.
- Innovate locally by turning cassava into high-value industrial products.
- Her record-keeping and traceability attracted global buyers.

1.4.3: Interactive case studies: How digital tools have empowered women in agriculture

Digital tools, particularly SMS platforms and mobile apps, are empowering women farmers in Sub-Saharan Africa by overcoming barriers in agriculture. These digital solutions provide timely information, market access, training, and financial services directly to their phones, enabling informed decision-making and better price negotiation, while reducing reliance on exploitative middlemen.

a. Jamila Abass (Kenya): Market Transparency and Agricultural Digitalization

Profile: Jamila is Co-founder of 'M-Farm' who created a mobile platform designed to connect small-scale female farmers directly with markets, effectively bypassing

intermediaries (middlemen) who frequently underpaid producers (Ashoka, n.d; Forbes, 2023).

The Best Practice: "Market Real-Time Data": Through a simple SMS service, farmers receive up-to-date market prices. This information empowers them to negotiate better deals or engage in collective selling.

The model of "Human-Assisted Digitalisation" (using young agents to help elderly farmers) is currently being studied in European rural areas (such as in Italy, Greece, and Spain) to bridge the digital divide. By ensuring fair pay for farmers, M-Farm aligns with the EU Corporate Sustainability Due Diligence Directive, which requires European companies to prove their international suppliers are treated fairly (World Economic Forum, 2025).

Key Results:

- Bargaining Power: She transformed thousands of isolated female farmers into a purchasing collective. By buying seeds and fertilizers in bulk together, they secured discounts of 30–40%.
- Market Transparency: She dismantled the monopoly of intermediaries who manipulated market price data to exploit female producers.

Challenges

- Technological Illiteracy: Many older farmers were unfamiliar with SMS technology or shared a single mobile phone with their husbands, limiting their individual access.
- Retaliation from Middlemen: Local intermediaries attempted to boycott the platform and threatened the women who utilized the service.

Solution: To overcome these barriers, she simplified the interface using low-tech USSD codes and icons, while creating a network of "M-Farm Agents"— younger, tech-savvy women who assisted older farmers in the fields.

Lessons Learned: She proved women can lead innovation in agriculture and digital tools can close the gap between farmers and buyers, eliminating exploitative middlemen.

b. iCow Strengthening Women's Livestock Management in Kenya - Digital innovation

Background: iCow is a pioneering mobile application conceptualised by Su Kahumbu, an organic farmer, in 2010 for smallholder dairy farmers including women to solve lack of access to expert knowledge, breeding records and agricultural services.

Key Action: The livestock-focused platform **iCow**, delivers SMS-based reminders on vaccination schedules, feeding routines, breeding cycles and record keeping (iCow, 2021). Women farmers registered their cows and received tailored guidance throughout the animal's lifecycle. It also included market information to connect farmers with buyers and input suppliers.

Key Results: Women report improvements in milk production, animal survival, and income stability. GSMA's Mobile for Development research highlights iCow as a strong

example of how simple SMS reminders can dramatically enhance women's livestock management skills.

Challenges and Solutions:

- Challenges: Many rural African farmers lacked smartphones and limited internet connectivity. Most women farmers had a literacy barrier.
- Solution: iCow developed a text-based, voice-driven platform that works on non-smartphones. **T**he app was designed to function in English and other local languages to ensure accessibility.

Lessons Learned:

Digital innovation can empower women and strengthen food security and women's livelihood. Women farmers benefit most when solutions are tailored to their roles in livestock management.

c. WOFAN-Digital Extension Tools for Women Rice and Groundnut Farmers in Nigeria.

Background

In Nigeria, one of the strongest examples of digital empowerment comes from the Women Farmers Advancement Network (WOFAN), founded by Hajia Salamatu Garba The project targeted 675,000 smallholder farmers, with 80% women (WOFAN ICON-2 Project - Farm Innovation Nigeria Ltd).

Key Actions

- Introduction of digital tools to rural women (smartphones, weather apps, e-wallet platforms, and digital bookkeeping tools) for real-time agronomic advice.
- Focused on rice and groundnut value chains and training of women farmers in modern practices, financial literacy and record keeping. Women were linked to markets and financial services through digital platforms.

Results

- Women were able to track rainfall, access extension advice, and document their production costs and profits.
- Better planting decisions and reduce losses from unpredictable weather.
- Enhanced financial inclusion and use of digital record-keeping apps, Improving transparency and easy access to loans by women groups.

Challenges and Solutions

- Digital literacy gaps among rural women. Training programmes organised to build digital literacy and women's confidence.

Lessons learned.

- Empowering women yield multiple benefits for households and communities.

1.4.4: Video Links: Real-life stories and interviews with successful women

Documentary interview **SHE BUILT THE FIRST SORBITOL FACTORY IN AFRICA**
Documentary iCow app unlocking Kenya's farmers potential **iCow**
Transforming irrigation in Nigeria: Empowering farmers and boosting food security. Irrigation
Documentary on Cultivating the Future: Women Farmers in Ghana

1.4.5: Class Activity

Adapting case studies in the local context.

Step 1: Group Formation (5minutes)

Break participants into small groups 4–6 women. Assign each group one case study previously studied in the module.

Step 2: Group Discussion (15 minutes)

Share a case study per group. Request each group to discuss what fits their local context from the case study. Guiding questions include:

- What strategies from the case study could work in your local context?
- What resources do you think are available to make it work?
- What are the barriers that can prevent you and how do you overcome them?
- What lessons do you think can be applied to your own agribusiness?

Step 3: Reporting (10minutes)

Each group shares ideas on a flipchart for feedback.

1.4.6: Reflection Questions

1. Personal Learning and Experience

- What is one new idea or tool you learned today that you believe could improve your farming or cooperative activities?
- Which part of the lesson felt most relatable to your own experience as a woman farmer or leader?

2. Access and Awareness of Digital Tools

- What digital tools are available in your local community?
- How do you currently receive information regarding your agribusiness and how could digital tools improve the process?

3. Collaboration and Leadership

- How can women in your community support each other in adopting new farming technologies?
- What leadership qualities did you notice in the success stories, and how can you adopt them?

4. Problem-Solving and Adaptation

- Which digital solutions from the case studies would best address challenges in your agribusiness?
- What barriers might you face when trying to apply these solutions, and how could you overcome them?
- What steps can you take to start using digital tools in your agribusiness?