Assessment of Horticultural Seedling Business Opportunities in Ghana

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Background - Ghana’s Vegetable Sector Context

- Ghana’s vegetable subsector contributes significantly to rural employment and nutrition security.
- Rapid urbanization and rising consumer demand are increasing the need for consistent vegetable supply (Tuffour et al., 2024).
- Productivity remains low due to poor-quality seeds, limited access to irrigation, and weak nursery systems (Osei et al., 2021).
- Only 30–40% of smallholders currently access improved planting materials (Bonnand et al., 2024).
- The seed sector in Ghana comprises the formal and informal systems (Ayamga, 2018).

Background - Why Focus on Seedlings?

- Professional seedling production ensures uniform germination, high survival, and higher yields (15 - 30% gains) (Bannor et al., 2020).
- Farmers often self-raise seedlings under suboptimal conditions, leading to disease and poor field establishment.
- A fragmented, informal nursery system limits access to high-quality transplants.
- Strengthening the seedling system aligns with Dutch – Ghana cooperation on Seed Sector Development and MoFA's PFJ 2.0/Feed Ghana priorities.

Study Objectives

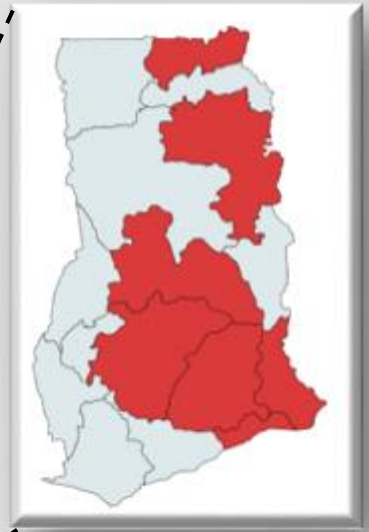
Identify and characterize key vegetable production regions across Ghana.

Collect agronomic and market data in each region.

Assess seedling market potential by analyzing production practices, gaps, constraints, demand, willingness to pay, and nursery availability.

Assess enabling-environment factors that influence the feasibility of establishing commercial seedling enterprises

Study Coverage and Methodology



Regions: Upper East, Northern, Bono East, Ashanti, Eastern, Volta, Greater Accra.

126 surveys, 42 KIIs, 42 FGDs.

Analysis: Descriptive and Comparative Analysis, Thematic and SWOT Analysis.

District Distribution by Region

REGION	DISTRICTS
Ashanti	Offinso North, Ejisu, Ahafo Ano South-West
Bono East	Techiman South, Nkoranza South and Techiman North
Eastern	Fanteakwa North, Atiwa East and Kwahu East
Greater Accra	Ga South, Kpone Katamanso and Ada East
Volta	Anloga, Akatsi North and Agortime Ziope
Northern	Tolon, Kumbugu and Savelugu
Upper East	Kassena Nankana, Bongo and Talensi

Key Stakeholders Consulted

Farmers and cooperatives.

Agro-dealers and aggregators.

Seed companies.

MoFA, CSIR officers and Sector Experts.

Financial institutions and fintechs.

Market Demand and Adoption

- About 82% of farmers value professionally raised seedlings.
- Also, 58% willing to pay GHS 0.80 - 1.00 per seedling.
- There is a 15 - 30% yield gain from professionally raised seedlings.

Quote

"When you buy healthy seedlings, you are sure all of them will grow; the ones we raise ourselves die a lot because of disease and heat." - FGD with Vegetable Farmers in the Bono East Region .

Enabling Environment

- **Irrigation and road constraints in the north.**
- **Better infrastructure in Ashanti, Bono East, and Accra.**
- **No nursery policy or certification framework.**

<u>Quote</u>

"There is no policy specifically about commercial vegetable seedling nurseries." **-** Crop Official, Bono East Region

Financing and Investment Gaps

- Banks finance vegetable farmers but not nurseries.
- Lack of insurance coverage.
- Financial institutions are willing to create seedling credit lines.

<u>Quote</u>

“We will consider designing the product… to sponsor those in seedling production.” - Bank Credit Officer, NAARA Rural Bank, Upper East Region

SWOT Summary – Strengths

📈 **Rising domestic and export demand** for vegetables, driven by urban consumers and commercial traders

👥 **Strong interest in nursery ownership** from farmer cooperatives and women/youth groups across seven regions

🧑‍🌾 **Existing technical support** through MoFA extension officers and CSIR–SARI/CRI researchers for agronomic training

🤝 **Private seed companies** (East-West Seed) open to partnerships in nursery development

🌱 **Growing awareness of seedling quality** as key to productivity - 82% of farmers value professionally raised seedlings

SWOT Summary – Weaknesses

- 🚱 **Inadequate irrigation infrastructure**; many boreholes and canals are non-functional, limiting dry-season seedling production
- 📋 **No nursery-specific policies**, licensing, or certification systems - resulting in weak quality control
- 💸 **Limited access to financing**, with few short-cycle credit or insurance options suited to horticulture
- 🚚 **Poor logistics and feeder roads** hinder safe transport of fragile seedlings
- 🧠 **Skill gaps in technical knowledge** and entrepreneurship among small-scale nursery operators

SWOT Summary – Opportunities

- 💰 **Farmers show strong willingness** to pay GHS 0.80–1.00 per seedling
- 🤝 **Opportunity for Public–Private Partnerships** (PPPs) involving MoFA, seed companies, and financial institutions
- 🌱 **PFJ 2.0/Feed Ghana and West Africa Food System Resilience Program** (FSRP) programs offer platforms for training and demonstration hubs
- 📲 **Digital and fintech tools** can support credit access, savings, and traceability in nursery operations
- 🌿 **Rising youth interest** in agri-preneurship and greenhouse farming

SWOT Summary – Threats

🌧️ **Climate variability** - droughts and erratic rainfall heighten production risks

🏙️ **Urban encroachment and land-use competition** reduce space for peri-urban vegetable farming

💲 **High input costs** and currency fluctuations undermine profitability

🐛 **Pests and diseases** (e.g., damping-off, nematodes) compromise seedling quality

🏛️ **Fragmented policies and weak coordination** among MoFA, local authorities, and private sector actors

Business Models

Individual Commercial Nurseries: private, small-scale.

Cooperative/Community Nurseries: shared ownership, inclusive.

PPP Nurseries: MoFA, research, and private sector partnerships.

Business Model

Value Proposition: Quality, reliability, yield gains.

Partners: MoFA, CSIR, Seed Companies, Banks, Universities.

Customers: Farmers, Cooperatives, Agro-dealers.

Revenue: Seedling sales, contracts, training services.

PPP and Investment Opportunities

Technology transfer with multinational seed firms.

Cooperative co-ownership with blended finance.

Fintech-enabled credit and insurance.

Quote: ***"We work with outgrowers... we provide their seedlings... we gain and they gain."*** **-** Maphlix Trust, Sector expert, Volta Region

Key Challenges

- Water scarcity and poor irrigation maintenance.
- No nursery regulation or certification.
- Limited technical skills.
- Weak coordination across actors.

Lessons Learned

- Local ownership ensures sustainability.
- Demonstrations drive adoption.
- Inclusive PPPs reduce risk.

Quote

"The most effective way... is for us to actually see the end results through demonstrations." **- Farmer, Northern Region**

Strategic Recommendations

Policy: Develop certification standards; integrate with Feed Ghana initiative.

Investment: Multisource finance, youth and cooperative nurseries.

Research: Hybrid trials, extension training.

Implementation Roadmap

Short-term (0 - 1 yr): Demonstration and Trial Fields, Pilot nurseries, ToT, Design a suitable financial package.

Medium-term (1 - 3 yrs): PPP strengthening and scale-up, certification.

Long-term (3 - 5 yrs): Development of a National Seedling Framework.

Closing and Call to Action

- Align policy, finance, and capacity building.
- Strengthen Dutch - Ghana partnerships.
- Build a sustainable seedling ecosystem.

*“**From seeds to seedlings**, **from partnerships to prosperity**, this is the journey we envision. A journey where **farmer cooperatives**, **youth entrepreneurs**, **private seed companies**, and **public institutions** converge to **build a robust, climate-smart nursery ecosystem**. One that delivers quality, traceability, and opportunity at scale.”*

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Pictures From the Field

THANK YOU

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