# PrimeVeg GHANA Project (PVG)

www.primevegghana.com

Ghana, Western Region

2026

# Market Opportunity

- Ghana faces a structural vegetable supply gap driven by fragmented smallholder production
- Tomato demand estimated ~800K MT/year with continued import dependence
- Premium year-round vegetable supply remains limited
- Chili exports create access to UK/EU, Middle East and Central Asian markets
- PVG opportunity: build an integrated production, processing and export platform

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# PVG Solution

## From Traditional Farming → Integrated Agribusiness Platform

- Scale proven pilot operations into a 100+ acre agribusiness hub
- Controlled farming improves quality, reliability and yields
- Processing increases margins and export potential
- Outgrower network enables asset-light expansion

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# Project purpose and aim

- Establish a **high-margin, vertically integrated agribusiness hub** starting with a **100+ acre farm** focused on high-value vegetables in Ghana's Western Region
- Become Ghana's leading branded platform for **vegetable production, processing, and exports**
- Operate two core business lines: **tomatoes for the local market and chili production & processing for export**
- Develop a regional sourcing network by scaling farming operations through an **outgrower model**
- Build a strong brand focused on **premium-quality vegetable products**
- Create well-paid local jobs and launch a charitable initiative supporting **children's education through profit contributions**

- **TOTAL INVESTMENT - $4.7mil**

# PVG Founders

**Dr. Liudmila Sheremeteva**

- Over **25 years of experience** leading a UK-based international business management consultancy, working with clients across the UK, Eastern and Central Europe, Central Asia, and the Middle East
- Managed a **pilot vegetable farm in Sekondi, Western Region of Ghana (April 2025)**
- Reached **monthly operating cash-positive status in Month 4 and cumulative breakeven in Month 5 months**
- Holds a **PhD in Chemical Engineering (Ukraine)** and **MBA in Finance (UK)**

**Asefuah Samuel**

- Experienced agronomist, agricultural expert, and successful commercial farmer with an accounting background
- Awarded **"Best Vegetable Farmer", Sekondi-Takoradi Metropolitan (MoFA National Farmers' Day, 2020)**
- Operates an **8-acre vegetable farm** and has strong partnerships with international seed and agrichemical suppliers
- Conducts vegetable trials, introduces innovative farming techniques, and provides training to local farmers

# PVG Business Model

## Agriculture + Processing + Infrastructure + Technology + ESG

**Controlled Environment Precision Farming**

- Net house farming systems
- Drip irrigation technology
- Data-driven digital farm monitoring
- Product traceability systems
- Partially powered by solar energy

**Integrated Supply Chain**

- Production, processing, and export managed under one platform
- Centralized quality control and management
- Reliable supply and fulfillment capability

**Scalable Farmer Network**

- Asset-light expansion through an outgrower model
- Inclusive rural income generation
- Rapid production scaling without owning all farmland

**Export Model – Based on Proven Kenyan and Indian Practices**

- Compliance-focused operating model
- Food safety and certification systems established from inception
- PVG will adapt smallholder aggregation and export practices from Kenya's Bird's Eye exporters and net-house practices from Indian growers

# Why Ghana? Why now?

- **Ghana is one of Africa's most politically stable investment destinations**, with improving sovereign ratings and stronger macroeconomic stability
- **Strategic location** — access to ECOWAS markets and competitive shipping times to Europe & the Middle East
- **Favourable growing conditions** — year-round production with multiple harvests annually
- **Low-cost agricultural workforce**
- **Ghana is** an emerging **vegetable export hub**
- Agribusiness aligns with government priorities: **food security, import substitution, rural employment & export growth**

# Why tomatoes and chilies? Why in Western Region?

- Ghana faces a structural tomato deficit: **~370K MT production vs. ~800K MT demand**
- Burkina Faso supplies **70–80% of Ghana's fresh tomatoes**, worth **~US$400M a year**
- Tomatoes are Ghana's most consumed vegetable, accounting for **up to 40% of household vegetable spending**
- Chili is a high-value export crop with strong international demand, long harvesting cycles and significant upside from processing.
- Western Region's climate is challenging for vegetable farming, driving higher prices than Accra and Kumasi; **nethouses minimize climate risks**
- Close proximity to **Takoradi Port** provides export logistics advantages
- Government offers **additional incentives** for agribusinesses outside Accra

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# Production Capacity vs Existing Market Demand

## PVG targets a small share of existing demand — validated markets, not market creation

| Market | Annual Demand / Opportunity | PVG Year-5 Capacity | PVG Required Share |
|---|---|---|---|
| Ghana tomatoes | ~800K MT annual demand | 2,160–2,400 MT premium tomatoes | <0.3% |
| Western Region tomatoes | ~25–30K MT demand (unverified estimate) | 2,160–2,400 MT premium tomatoes | ~7–10% |
| Processed chili export market | Growing demand for dried chili, flakes & powder | 280–336 MT dried product | Small niche supplier |
| PVG outgrower expansion | 250–500 acres contract farming programme | US$5.76–10.41M revenue platform | Scalable asset-light growth |

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# PVG – 5-YEAR PHASED INVESTMENT PLAN

DISCIPLINED INVESTMENT. REDUCED RISK. MAXIMIZED RETURNS.

## ITEMISED PHASED INVESTMENTS BY YEAR (USD)

| INVESTMENT CATEGORY | YEAR 1 (USD) | YEAR 2 (USD) | YEAR 3 (USD) | YEAR 4 (USD) | YEAR 5 (USD) | TOTAL (USD) | % OF TOTAL INVESTMENT |
|---|---|---|---|---|---|---|---|
| Land Preparation & Development | $0.16M | $0.09M | $0.03M | $0.01M | $0.01M | **$0.30M** | 6.4% |
| Nethouses (80 acres total) | $0.15M | $0.70M | $0.45M | $0.15M | $0.10M | **$1.55M** | 33.0% |
| Irrigation & Water Systems | $0.12M | $0.08M | $0.05M | $0.02M | $0.01M | **$0.28M** | 6.0% |
| Infrastructure, Buildings & Facilities | $0.25M | $0.40M | $0.30M | $0.15M | $0.05M | **$1.15M** | 24.5% |
| Machinery, Equipment & Vehicles | $0.18M | $0.14M | $0.06M | $0.03M | $0.01M | **$0.42M** | 8.9% |
| Solar Farm (2 acres – Backup System) | $0.00M | $0.22M | $0.00M | $0.00M | $0.00M | **$0.22M** | 4.7% |
| Pre-Operational & Working Capital | $0.32M | $0.22M | $0.14M | $0.07M | $0.03M | **$0.78M** | 16.5% |
| **TOTAL INVESTMENT (USD)** | **$1.18M** | **$1.85M** | **$1.03M** | **$0.43M** | **$0.21M** | **$4.70M** | **100.0%** |

## ADVANTAGES OF THE PHASED INVESTMENT APPROACH FOR INVESTORS

1. **REDUCED INVESTMENT RISK**
   Capital is deployed in phases, minimizing early exposure and allowing validation of operations before large-scale expansion.
2. **CAPITAL EFFICIENCY**
   Investments are aligned with operational needs and revenue generation, improving cash flow management and return on invested capital.
3. **PERFORMANCE-BASED GROWTH**
   Each phase is triggered by performance milestones, market demand, and operational readiness, ensuring sustainable growth.
4. **IMPROVED LIQUIDITY & CASH FLOW**
   Spreading CAPEX over 5 years preserves liquidity and ensures the business can fund operations and expansions comfortably.
5. **FLEXIBILITY TO ADAPT**
   Phased deployment allows the business to adapt to market conditions, commodity prices, regulations, and emerging opportunities.
6. **ENHANCED RETURN POTENTIAL**
   Lower upfront capital with scalable expansion increases potential IRR and overall return to investors.
7. **STRONGER RISK MITIGATION**
   Challenges in early stages can be addressed before further capital commitments, protecting investor capital.
8. **ESG & SUSTAINABILITY ALIGNMENT**
   Phased installation of solar, efficient systems, and climate-smart infrastructure enhances long-term sustainability and investor confidence.

**RESULT:** A SMART, STAGED INVESTMENT TODAY BUILDS A SCALABLE, PROFITABLE & SUSTAINABLE AGRIBUSINESS LEADER TOMORROW.

LOWER RISK • STRONGER RETURNS • LONG-TERM VALUE CREATION

# Revenue Model & Financial Growth Drivers

| Revenue Stream | Year 5 Production Potential | Revenue Potential | Strategic Role | Investment Justification |
|---|---|---|---|---|
| Tomatoes (24 acres) | 2,160–2,400 MT/year | US$4.32–5.04M | Most stable revenue contributor | Provides strong domestic cash flow, supports early profitability and reduces market risk. |
| Processed Bird's Eye Chilies (56 acres) | 280–336 MT/year dried product | US$3.36–5.04M | Primary export and margin driver | Generates hard-currency revenues, export relationships and supports premium valuation multiples. |
| Outgrower Platform (250–500 acres) | Scalable contract farming network | US$5.76–10.41M | Principal driver of platform expansion | Delivers asset-light growth without significant additional CAPEX requirements. |
| TOTAL PLATFORM | | US$13.44M–20.49M | Integrated agribusiness platform | Tomatoes = Cash Flow \| Chilies = Margins & Exports \| Outgrowers = Scale. |

# PVG – Year 5 Revenue Generation Scenarios

## Land Allocation (80 acres net house): 56 Acres Bird's Eye Chilies | 24 Acres Tomatoes

| Revenue Source | Year 5 Assumptions | Realistic Case (US$M) | Upscaled Platform Case (US$M) |
|---|---|---|---|
| Processed Bird's Eye Chilies (56 acres) | 5.0 t dried/acre; 280 t total; US$12,000/t export price | 3.36 | - |
| | 6.0 t dried/acre; 336 t total; US$15,000/t export price | - | 5.04 |
| Tomatoes (24 acres) | 90 t fresh/acre; 2,160 t total; US$2,000/t | 4.32 | - |
| | 100 t fresh/acre; 2,400 t total; US$2,100/t | - | 5.04 |
| Outgrower Platform | 250 acres; average revenue US$23,040/acre | 5.76 | - |
| | 500 acres; average revenue US$20,820/acre | - | 10.41 |
| TOTAL REVENUE | | 13.44 | 20.49 |

# PVG VALUE CREATION MILESTONES

| | Operational Milestones | Investor Value Creation |
|---|---|---|
| Year 1 | • Commercial open field farming operations on 30+ acres<br>• Pilot 5 acres net-house cultivation — first real chili dried-yield data against the 5 t/acre target<br>• Secure buyer agreements & export LOIs<br>• Target positive EBITDA (all three scenarios modelled positive, but thin) | • Commercial validation; first evidence on chili yield, the single largest unvalidated assumption<br>• Reduced execution risk<br>• Proof of scalable model |
| Year 2 | • Build net-house farming capacity<br>• Commission processing & cold-chain facilities<br>• Installation of solar panels<br>• Begin GAP/HACCP/Organic & GFSI certification<br>• Implement quality systems | • Higher yields<br>• Improved margins<br>• Export readiness |
| Year 3 | • Launch regular chili exports<br>• Complete GAP, HACCP, Organic & GFSI certification<br>• Expand international customer base | • USD revenue growth<br>• Export validation<br>• Higher valuation potential |
| Year 4 | • Scale contracted outgrower network<br>• Increase processing volumes<br>• Build PVG brand | • Asset-light growth<br>• Larger supply platform<br>• Strategic buyer attractiveness |
| Year 5 | • Reach integrated platform scale<br>• Revenue target: US$13.44–20.49M3<br>• Prepare exit options | • Exit readiness<br>• Acquisition potential<br>• Investor liquidity event |

# 5-Year Investor Exit Scenarios

| Metric | Downside Case | Base Case | Upside Platform Case |
|---|---|---|---|
| Year 5 Revenue | US$7.88M | US$13.44M | US$20.49M |
| Year 5 EBITDA | US$1.73M | US$4.37M | US$8.71M |
| EBITDA Margin | 22.0% | 32.5% | 42.5% |
| Revenue Drivers | Own production + 150-acre outgrowers | Own production + 250-acre outgrowers | Own production + 500-acre outgrowers |
| Exit EBITDA Multiple | 6.5× | 7× | 8× |
| Enterprise Value (Year 5) | US$11.27M | US$30.58M | US$69.67M |
| Investor equity (US$4.70M invested) | 42.3% | 42.3% | 42.3% |
| Equity value at exit | US$4.77M | US$12.93M | US$29.47M |
| MOIC | 1.01× | 2.75× | 6.27× |
| 5-year IRR | 0.3% | 22.4% | 44.4% |

# 5-Year INVESTOR EXIT STRATEGY

| Exit Route | Potential Buyer / Mechanism | Why PVG Becomes Attractive |
|---|---|---|
| Strategic Acquisition | International agribusiness companies, food processors, vegetable exporters | Established Ghana production base, processing assets, export channels and farmer network |
| Sale to Global Fresh Produce Company | Large fruit & vegetable groups expanding African sourcing | Reliable year-round supply platform close to Europe & Middle East markets |
| Food Ingredient / Spice Industry Acquisition | Chili processors, seasoning companies, spice exporters | Controlled chili supply chain with traceability and processing capability |
| **Founder / Company Buyback (PRIORITY — near-term focus)** | **PVG repurchases investor shares through cash flow or refinancing — subject to a contractual right negotiated into the investment agreement** | **Provides investor liquidity while founders increase ownership** |
| Secondary Sale to Impact / Growth Investor | ESG funds, agriculture funds, African growth investors | New investor enters after operational risk reduction and proven scale |
| Dividend Yield Model | Investor keeps ownership in mature platform | Recurring cash distributions from farming, processing and exports |

# Funding Structure & Investment Terms

| Metric | Terms |
|---|---|
| **Total capital requirement** | US$4.70M |
| **Pre-money valuation** | US$6.4M |
| **Lead investor contribution** | US$4.70M |
| **Post-money valuation** | US$11.1M |
| **Lead investor equity** | 42.3% |
| **Founders retain** | 57.7% |
| **Co-funding required** | None — investor funds the full amount; round closes on signature |
| **Base case 5-year IRR (cash retained)** | 22.4%  (44.4% Upside case) |
| **Downside protection** | Approximately capital-preserving — 1.01× MOIC at the Downside case (6.5× exit multiple); sensitive to Bird’s Eye yield |
| **Capital deployment** | Phased, milestone-gated |
| **Governance** | Board seat + information rights |

# Risk Management & Mitigation Strategy

- **Climate risk** → net houses (expected 70–100% pesticide reduction, Benin/Kenya field data), drip irrigation + rainwater reservoir; hot-humid vs. hot-dry structure design being confirmed with Indian technical partner
- **Crop risk** → agronomist leadership + phased monitoring (IoT, yield analytics by Year 3); 5-acre Year 1 trial to validate nethouse chili yield before 75% of capital is committed
- **Market risk** → diversified crops and export channels; Western Region's 10–15% cost advantage is structural, not assumed; Ghana currently clear of EU's elevated pepper-inspection list
- **Infrastructure risk** → solar backup in Year 2, and water security; land tenure confirmation with counsel in progress
- **Scaling risk** → phased CAPEX linked to milestones (per deck's 5-Year Investment Plan); Base Case self-funding from Year 4 onward
- **Sales risk** → buyer LOI targets screened and verified; certification (GAP/HACCP/Organic + GFSI) begins Year 2 and completes Year 3, unlocking serious buyer conversations
- **Currency risk** → 7%/year cedi depreciation modelled with 3–15% sensitivity range
- **Key-person risk** → Year 1–2 founder-led; Years 3–5 systematised into trained-staff SOPs, reducing dependency as PVG scales

# ESG & Community Impact

- **Pesticide reduction** → net houses expected to cut applications 70–100% (Benin/Kenya field research); IPM for residual small-insect pressure
- **Water stewardship** → 2-acre rainwater reservoir from Year 1; drip fertigation expected to save 40–80% vs conventional irrigation
- **Clean energy** → 2-acre solar installed Year 2
- **Jobs and livelihoods** → 53–54 direct roles in Year 1, scaling to approximately 270+ at full Year 5 operations, in a country with 21.9% youth unemployment (GSS 2026)
- **Smallholder inclusion** → contracted outgrower platform providing inputs, technical extension and guaranteed offtake
- **Education** → target of 2% of profit (after debt service and investor distributions) to local children's education, rising toward 5% at maturity

# Why Invest in PVG

## Agriculture + Processing + Infrastructure + Technology + ESG

- **Staged investment —** only US$1.18M of US$4.70M deploys before the Year 1 yield trial reports; each phase milestone-gated
- **Target positive EBITDA in Year 1** across all three scenarios; pilot reached monthly operating cash-positive status in Month 4, cumulative breakeven in Month 5
- **Hard asset backing (total depreciable Capex)**— US$3.92M of the raise is tangible: net houses, irrigation, buildings, machinery and solar
- **USD export revenue —** chili sold in hard currency, hedging cedi exposure on GHS-denominated costs
- **Three revenue streams —** Three revenue streams — chili, tomato and outgrowers; outgrowers contribute ~43% of Base Case Year 5 revenue.
- **Processing lifts value —** value-added chili is 38.4% of global chili market revenue, up from 29% in 2019
- **Impact-capital ready —** expected 70–100% pesticide reduction, 40–80% water saving, 2-acre solar installed Year 2
- **No major grower in-region —** Fresh Logistics, MoFA-FarmMate and GB Foods have no growing operations in Western Region; produce trucked in from Burkina Faso or Accra costs an estimated 10–15% more on arrival, in lower quality

# Appendix

# PVG – 5-Year Operational Development Plan

## Building the PVG brand — powered by data, precision farming & IoT

| Year | Year 1<br>Foundation & Start | Year 2<br>Expansion Phase 1 | Year 3<br>Expansion Phase 2 | Year 4<br>Optimization & Scale | Year 5<br>Stabilization & Growth |
|---|---|---|---|---|---|
| **Focus** | Establish foundation, start production, test systems | Scale net houses, increase production | Full-scale expansion of net houses | Operational excellence, double harvests, maximize yields | Consolidate, grow exports, maximize profitability & brand |
| **Farm structure** | • 30 acres open field (irrigated)<br>• 5-acre net-house pilot (2 acres tomato, 3 acres chili) | • 30 acres open field (irrigated)<br>• 40 acres net house total (5 existing + 35 added, ~5 acres every 2 months) | • 80 acres net house (40 existing + 40 new)<br>• Open field phased out | • 80 acres net house (70% chilies, 30% tomatoes)<br>• 20 acres support facilities (nursery, storage, roads, etc.) | • 80 acres net house optimized<br>• 20 acres support facilities<br>• Focus on productivity, exports & brand growth |
| **Key tasks & activities** | • Land preparation & irrigation setup<br>• Plant 30 acres open field (tomatoes, chilies, bell pepper)<br>• Install 5-acre net house in first 2 months<br>• Run first net-house harvest as a replicated tomato & chili variety trial — first real chili yield data<br>• Install chili drying facility (pilot)<br>• Build admin office, storage, workers' accommodation<br>• Purchase tractor & 2 vehicles<br>• Establish farm management systems & SOPs<br>• Develop local market channels | • Add ~5 acres net house every 2 months (total 40 acres)<br>• Continue 30 acres open-field production<br>• Grow 70% chilies, 30% tomatoes in net houses<br>• Optimize irrigation & fertigation systems<br>• Expand drying & start chili powder production<br>• Evaluate & install tomato processing facility (Q4)<br>• Expand local & export markets<br>• Build operational team capacity | • Install additional 40 acres net house (total 80 acres)<br>• Run 80 acres net house (70% chilies, 30% tomatoes)<br>• Improve yields & quality<br>• Strengthen post-harvest handling & processing<br>• Grow export market share (50% export target)<br>• Enhance cold storage & packhouse operations<br>• Implement farm digital systems & traceability | • Optimize 80 acres net-house operations<br>• Achieve 2 harvests of chilies per year<br>• Achieve 3 harvests of tomatoes per year<br>• Improve efficiency & reduce costs per unit<br>• Expand chili powder & tomato processing<br>• Strengthen export contracts<br>• Invest in staff training & leadership development | • Stabilize high yields across 80 acres net house<br>• Increase export volume & product range<br>• Strengthen brand & packaging<br>• Explore value-added products (sauces, pastes, dehydrated)<br>• Evaluate strategic partnerships or exit opportunities<br>• Achieve strong profitability & investor returns |
| **Data, precision farming & IoT** | • Basic weather station<br>• Soil testing & mapping<br>• Manual data recording<br>• IoT irrigation timers | • Install soil moisture sensors<br>• Fertigation monitoring<br>• Digital field records<br>• Drone mapping & crop scouting | • IoT climate sensors in net houses<br>• Real-time monitoring (temp, RH, $CO_2$, light)<br>• Yield mapping & analytics<br>• Pest & disease forecasting | • AI-driven crop advisory<br>• Automated fertigation<br>• Predictive analytics for yield optimization<br>• Resource-use efficiency dashboards | • Full farm digital twin<br>• Machine learning for demand & production planning<br>• Traceability from farm to export market<br>• Continuous improvement analytics |
| **Solar farm** | — | Install 2-acre solar farm (panels, inverters, batteries) to power farm operations & reduce energy cost | • Optimize solar usage & storage capacity<br>• Integrate with farm energy management | Expand battery capacity (if needed) for higher energy independence | • Fixed 2-acre backup system — covers an estimated 25-40% of power needs at full Year 5 operations, not 100% (Slide 24)<br>• Evaluate further capacity as demand grows |
| **PVG brand building** | • Create PVG brand identity<br>• Local market presence<br>• Basic packaging & labelling | • Build brand awareness (local & regional)<br>• Quality & consistency focus<br>• Begin GAP, HACCP, Organic & GFSI certification | • Strengthen PVG brand nationally<br>• Export market branding<br>• Complete GAP, HACCP, Organic & GFSI certification<br>• Digital marketing & website | • Expand brand to international markets<br>• Premium packaging<br>• Build customer loyalty programs | • PVG as a trusted global brand<br>• Diversify product portfolio<br>• Strategic partnerships<br>• Brand valuation growth |
| **Outcome** | Foundation built, systems tested, first harvest achieved | Scaled production, strong operational base, processing started | Full-scale production, export growth, digital transformation | Maximized productivity, higher profitability, strong market position | Sustainable growth, strong PVG brand, high investor returns |

# PVG – Land Allocation Plan (100 acres)

## Phased development: Year 1 → Year 2 → Year 5

| Land use | Year 1<br>Foundation & open-field farming | Year 2<br>Expansion + solar installation | Year 5<br>Full expansion completed |
|---|---|---|---|
| Open field (chilies & tomatoes) | 30 | 30 | 0 |
| Net houses | 5<br>(pilot: 2 acres tomato + 3 acres chili) | 40<br>(35 new + 5 pilot) | 80<br>(56 acres chili + 24 acres tomato) |
| Facilities & infrastructure (processing, storage, office, roads) | 16 | 16 | 16 |
| Solar farm (backup system) | 0 | 2 | 2 |
| Rainwater collection reservoir | 2 | 2 | 2 |
| Undeveloped / reserve land | 47 | 10 | 0 |
| **TOTAL** | **100** | **100** | **100** |

*Facilities & infrastructure are a fixed 16 acres in every year. Year 5 net-house split follows the 70% chili / 30% tomato plan.*

# Chili Market Demand vs PVG Production Capacity

## PVG targets a small share of established export markets — not creation of new demand

| Market Segment | Existing Demand / Opportunity | PVG Year-5 Capacity | Investor Conclusion |
|---|---|---|---|
| European Fresh Chili Market | 64,000+ MT/year fresh chili imports from non-European suppliers. | 280–336 MT dried = ~840–1,010 MT fresh equiv. (~3:1) | PVG represents ~1.3–1.6% of the addressable market. |
| Middle East / GCC Market | ~393,000 MT/year chilli and pepper consumption (2024), forecast ~520,000 MT by 2035. | 280–336 MT dried = ~840–1,010 MT fresh equiv. (~3:1) | PVG represents ~0.2–0.3% of regional consumption. |
| Processed Chili Opportunity | Growing demand for dried chili, flakes and powder from food manufacturers. | 280–336 MT/year dried product plus outgrower expansion | Processing improves margins, shelf life and export flexibility. |

# PVG — 2 Acre Solar Farm Backup System

## Energy Resilience, ESG Value & Operating Cost Reduction

### STRATEGICAL RENEWBLE INVESTMENT

- **A 2-acre solar farm will support PVG's 100-acre development plan**
- Provides reliable backup power for critical farm operations
- Reduces electricity costs and improves operational stability

### Solar System Capacity

- 500 kWp solar installation generating approximately:
- 1,800–2,300 kWh/day
- 650,000–850,000 kWh/year
- Designed to support greenhouse and processing energy requirements

### Operational Benefits

- Covers estimated electricity demand (planning target):
- **Year 2 (40 acres net houses): 50–70% of power needs**
- **Year 5 full operations: 25–40% of power needs**
- Protection against grid instability and power interruptions
- Greater energy-cost resilience
- Renewable power for critical farm and processing operations
- Contribution to PVG's long-term ESG and sustainability objectives

**CAPITAL INVESTMENT** Current budget allowance**: US$220,000**

### Potential Funding options:

- **Green / climate finance:** concessional loans or climate-focused financing for renewable-energy infrastructure
- **Solar asset financing / leasing:** third-party financing of the solar system, with PVG repaying through a fixed lease or energy-service agreement
- **Vendor financing:** deferred payment or instalment financing negotiated with the solar EPC provider
- **Blended finance / grants:** renewable-energy and agricultural infrastructure programmes that can contribute part of the capital cost
- **Impact-investor funding:** inclusion of the solar system within the overall PVG impact-investment package
- **Dedicated energy partner:** a third party finances, owns and operates the solar installation under a long-term power-purchase or energy-service agreement

# What we are going to grow in the first 12 months
## (30 acres open field)

| N | VEGETABLE | NUMBER OF PLANTS PER ACRE | CULTIVATION PERIOD BEFORE HARVESTING | HARVEST TIME | NUMBER OF POSSIBLE HARVESTS PER YEAR | PROS | CONS |
|---|---|---|---|---|---|---|---|
| 1 | CABBAGE (Oxylus) | 10,000 | 2.5 months | 2 weeks | 4 | - Low production cost<br>- Quick land turnover<br>- Consistent demand<br>- Easy to harvest and store | -Can't stay long on the field after maturing<br>- Low price negotiating power<br>- |
| 2 | TOMATOES (Diva, Cobra) | 6,000 | 2 months | 2 months | 3 | - Quick land turnover<br>- Big volumes and high revenues | - Labour consuming<br>- Costly supporting system<br>- Fragile to store and transport<br>- Volatile price<br>- Costly seeds |
| 3 | BELL PEPPERS (Sinbad) | 9,000 | 2 months | 4-6 months | 2 | - Long harvesting period<br>- High and constant demand<br>- Stable price | - Need for a careful pathogen control<br>- costly seeds |
| 4 | HABANERO (Piquante red, Piquante yellow) | 10,000 | 2 months | 5-12 months | 1-2 | - Long harvesting period<br>- High and constant demand,<br>- High price | - Need for a careful pathogen control |
| 5 | CHILIS (Demon) | 14,000 | 3 months | 5- 12 months | 1-2 | - Long harvesting period<br>- High demand<br>- High price<br>- High export potential | - Need for a careful pathogen control |

*Note: per-acre income and cost figures from the earlier 12-month forecast have been removed. The Financial Model builds Year 1 open-field revenue from the pilot's actual sales per acre (at 1.5x the pilot rate), not from these crop-by-crop estimates.*

# Farming Integrated Ecosystem models

## European/Israeli model

Works best for:

- high-value greenhouse vegetables,
- very high capital investment,
- advanced automation,
- premium supermarket supply chains.

**Challenges for Ghana**:

- expensive,
- energy intensive,
- hard to scale nationally,
- less suited to millions of smallholders

## Indian model

Works best for:

- tropical climate,
- fragmented and decentralized farming,
- contract farming,
- low-cost labour,
- rapid scaling,
- export chilies,
- drying crops,
- informal-to-formal market transitions
- massive farmer aggregation

PVG

NOURISHING GROWTH.
INSPIRING TRUST.

Republic of Ghana

MINISTRY OF FOOD AND AGRICULTURE

36TH NATIONAL FARMERS' DAY

Metropolitan / Municipal / District Award

Certificate of Merit

Awarded to

MR. SAMUEL ASEFUAH ( Best Vegetable Farmer )

of Takoradi (Air Force)

in recognition of the outstanding contribution towards

THE DEVELOPMENT OF AGRICULTURE IN GHANA

Given this day Friday, 6th November, 2020 at Diabenekrom

in the Sekondi Takorddi Metropolitan / Municipal / District in the

Western Region.

HON. DR. OWUSU AFRIYIE AKOTO
MINISTER FOR FOOD AND AGRICULTURE

# Ministry of Food and Agriculture support

**Strong Government Support**

- MoFA actively promotes commercial agriculture, food security, and import substitution
- Vegetable farming is aligned with Ghana's agricultural development priorities

**Tax Holidays & Location Incentives**

- **5-year corporate tax holiday** available for qualifying agricultural projects
- Reduced corporate tax rates after the holiday period based on project location
- Additional incentives for foreign investments meeting capital requirements

**Import Duty & VAT Benefits**

- **0% import duty** on qualifying agricultural machinery and equipment
- Exemptions for agro-processing equipment and value-added production facilities
- Reduced upfront CAPEX through lower import costs

**Investor Protection & Financial Benefits**

- Legal protection framework for foreign investments
- Ability to repatriate dividends and profits under investment regulations
- Supportive environment for long-term agribusiness growth

# Climate conditions of Western Region, Ghana

**Stable Tropical Climate Supporting Year-Round Agricultural Production**

**Climate Overview**

- South-western equatorial climate with consistently warm temperatures and high humidity
- Stable year-round conditions with two distinct rainy seasons

**Temperature**

- Consistently warm throughout the year with limited seasonal variation
- Average daytime temperatures range from **27–31°C daytime highs year-round**

**Rainfall**

- One of Ghana's wettest regions — bi-modal rainfall of 1,324–1,380mm annually
- **Major rainy season:** March–July, with peak rainfall in May–June
- **Minor rainy season:** August–November
- Shorter dry period mainly during December–January

**Humidity & Sunlight**

- High relative humidity, averaging **~76–89% throughout the year**
- Around **5–7 hours of daily sunshine** supporting crop production

**Greenhouse Advantage**

- Controlled farming systems reduce climate risks from heavy rainfall and humidity
- Enables consistent yields, better quality control, and reliable year-round production

# Contact us


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