Ghana

Demonstration Farm Initiative

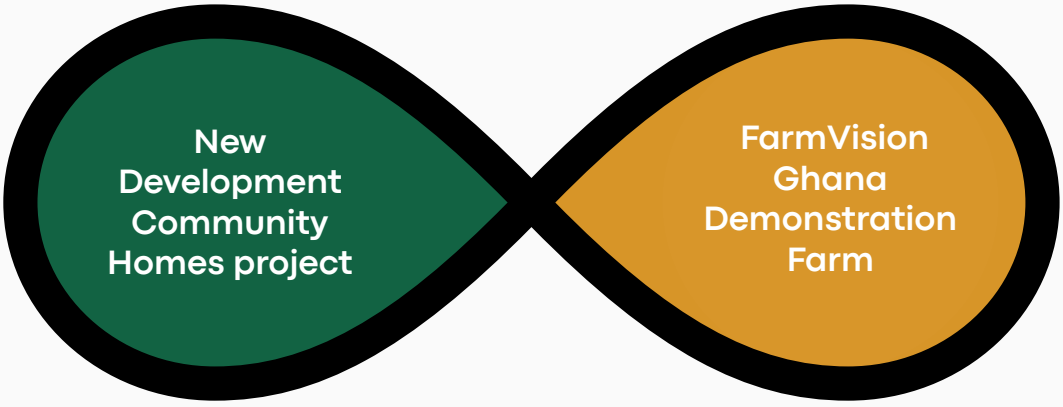
FarmVision GHANA

NDC HOMES

1 Introduction

FarmVision Ghana, in partnership with the New Development Community (NDC) Homes Project, will establish and operate the Ghana Demonstration Farms. This initiative will combine both crop and livestock production within a commercially managed framework aimed at strengthening local food systems, creating employment, and showcasing modern, sustainable farming techniques that can be replicated in other communities.

The demonstration farm will be developed on land provided by the Government or traditional authorities and will integrate production, training, mechanisation, input supply, and market access into one coordinated model. Through this approach, FarmVision will enable smallholder farmers to transition from subsistence farming to profitable, market-oriented agribusiness enterprises.



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2 Vision and strategic purpose

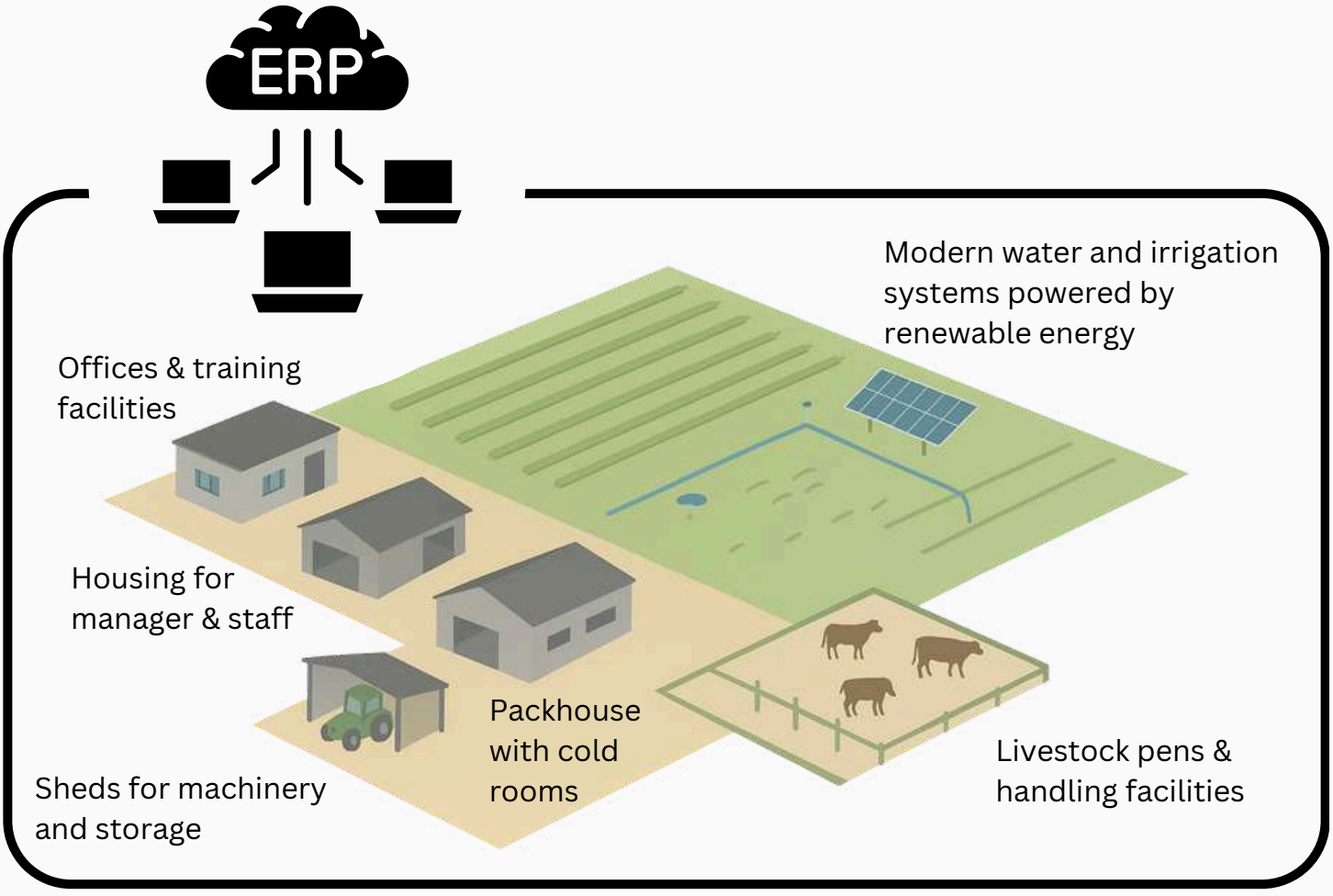
The vision is to transform participating communities into self-sufficient farming and agribusiness hubs that blend their traditional spirit of cooperation with modern management and smart farming technologies. This approach will strengthen local livelihoods and support members of the NDC Homes Housing Association by providing affordable, fresh produce and reliable links to both local and export markets.

The purpose of the demonstration farm is to produce high-quality vegetables and livestock products, provide continuous hands-on training for farmers, supply affordable services and inputs, and create stable and reliable market access under the unified FarmVision Ghana brand. In doing so, it offers a practical and scalable model for commercially sustainable smallholder farming and community development across Ghana.

3 Site, infrastructure, and operations

3.1 Site layout

Each demonstration farm will cover an area of 50 hectares in each community and will include offices and training facilities, housing for managers and staff, sheds for machinery and storage, a packhouse with cold rooms, livestock pens and handling areas, and modern water and irrigation systems powered by renewable energy.



3.2 Overall operational layout

All operations will be managed through a digital ERP system that connects planning, finances, stock control, mechanisation schedules, and product traceability. The farm will serve both as a productive commercial unit and as a practical training centre where farmers can learn, observe, and later apply the same systems on their own farms.

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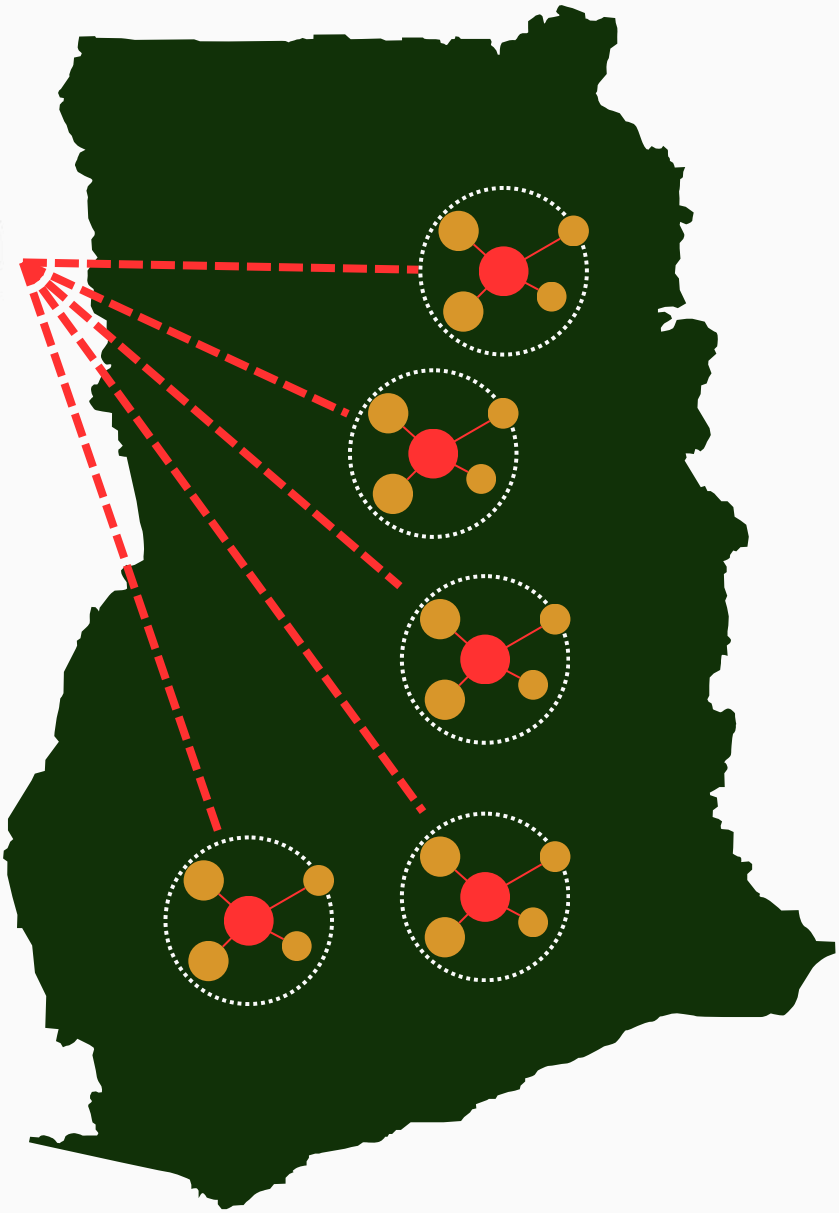
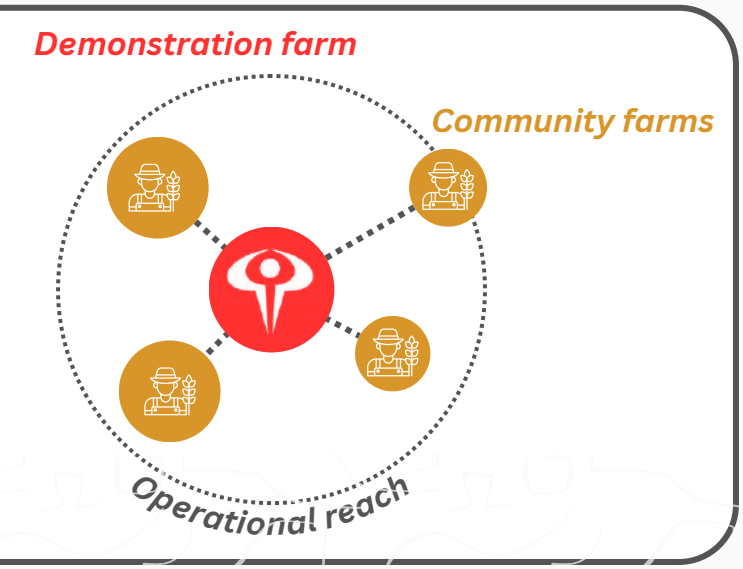
Demonstration farms concept





3.3 Enterprises

Vegetable

Vegetable production will include up to five hectares of greenhouses together with open-field areas to provide a steady supply of crops throughout the year and reduce production risks. Main crops will include tomatoes, peppers, cucumbers, leafy greens, onions, carrots, and chillies, chosen for their suitability to local conditions, market demand, and export opportunities. Greenhouses will use drip irrigation with automatic fertiliser application, while open fields will be watered with sprinklers or pivot systems powered by solar energy. After harvesting, vegetables will be quickly moved to the packhouse for washing, sorting, cooling, and packaging to keep them fresh and ready for local and export markets.

Livestock

The livestock section will include a small feedlot for beef production, a managed goat herd, and poultry units for both broiler meat and egg production. The beef enterprise will use crossbreeding to improve growth rates and meat quality, while also using crop residues and by-products as feed to reduce costs. Goats will be raised under better feeding, health, and breeding practices to increase productivity and farmer income. The poultry unit will operate under strict biosecurity, with regular vaccinations, clean water systems, and well-maintained housing to ensure healthy flocks and consistent income from meat and eggs. All animal manure will be turned into compost or used for biogas production, creating a sustainable link between the livestock and crop enterprises while protecting the environment.

4 Services provided

Mechanisation Services

Logistics & Transport

Bulk Input Procurement & Distribution

Financial Services & Credit

Extension, Training & Capacity Building

Marketing, Branding & Value Addition

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4.1 Financial services and credit provision

FarmVision will introduce a value-chain financing system that connects input loans directly to crop or livestock sales, with repayments automatically deducted when products are sold. This approach promotes financial discipline and improves cash flow. All loans will have clear agreements outlining the amount, interest rate, and repayment terms, while the ERP system will track every transaction in real time for full transparency.

To strengthen access to finance, FarmVision will partner with Ghanaian banks and development institutions to secure funding guarantees and affordable working capital. In addition, members will contribute a small annual equity amount to build a reserve fund that supports future investments in infrastructure, machinery, and processing facilities.

4.2 Bulk input procurement and distribution

FarmVision will run a central input hub that serves both crop and livestock farmers. This hub will buy all farming inputs in bulk directly from manufacturers and large suppliers to secure lower prices, ensure good quality, and guarantee a steady supply throughout the year. The hub will supply a wide range of products, including seeds, fertilisers, agrochemicals, animal feeds, veterinary medicines, vaccines, mineral and salt licks, ear tags, and other livestock identification materials.

For livestock farmers, the input hub will keep a steady stock of animal health products such as dewormers, disinfectants, dipping chemicals, and general veterinary drugs. It will also supply nutritional products like protein and mineral licks, feed concentrates, and vitamin supplements to improve animal growth and productivity. Identification tools such as ear tags, bolus systems, and record cards will be provided to help farmers keep proper animal records and improve disease control and traceability.

Warehousing facilities will be properly organised to store each category of input safely. Seeds and fertilisers will be kept in clean, dry spaces to avoid contamination. Agrochemicals and veterinary medicines will be kept in ventilated and secure rooms with limited access, while vaccines will be stored in cold rooms to maintain their quality. Fuel, lubricants, and irrigation equipment will be stored separately in areas that meet safety standards.

Distribution will be carefully planned according to crop planting seasons and livestock production schedules. Inputs will be delivered to farmers just in time for each planting or breeding cycle. All deliveries will be tracked and coordinated through the FarmVision ERP system and managed by the logistics team. By centralising the purchase, storage, and delivery of inputs, FarmVision will reduce costs, ensure consistent product quality, and improve both productivity and profitability for participating farmers.

4.3 Mechanisation and maintenance services

FarmVision will operate a mechanisation service that provides tractors, planters, sprayers, harvesters, and other specialised machinery suited to local crop types and field sizes. A fully equipped on-site workshop, managed by qualified mechanics, will handle servicing, repairs, and maintenance. Mobile repair units will also be available to assist farmers in the field and minimise downtime during busy planting or harvesting periods.

All bookings, fuel usage, and service intervals will be managed through the ERP system, ensuring fair access, good recordkeeping, and efficient use of equipment. Fees will be charged per hectare or per hour to cover operator wages, fuel, maintenance, and equipment replacement. This approach will make mechanisation affordable and reliable for all farmers.

4.4 Water, irrigation, and energy management

FarmVision will take full responsibility for managing water and energy systems. This includes operating and maintaining canals, pipelines, pumps, and reservoirs to ensure reliable water supply for crops and livestock. Preventive maintenance will be done regularly to prevent leaks and equipment damage, while flow meters will help monitor and manage water use efficiently.

Energy needs will be met through solar power systems supported by grid or generator backup to ensure continuous operation. The ERP system will be used to track energy and water usage, helping to reduce costs and improve sustainability. These integrated systems will ensure consistent production, compliance with food-safety standards, and long-term operational reliability.

4.5 Marketing, branding, and value addition

All farm products will be marketed under the FarmVision Ghana brand, which will stand for quality, safety, and traceability. The farm will collect and combine produce from its own operations and from out growers to form bulk supplies for wholesalers, supermarkets, processors, and exporters.

The packhouse will handle cleaning, grading, packaging, and light processing to extend shelf life and add value. FarmVision will also operate a digital marketplace linked to its ERP system, allowing buyers and sellers to connect directly, view prices, and make secure transactions. Each batch of produce will be traceable to its farmer, meeting the requirements of local and international food-safety standards such as HACCP and GlobalGap.

4.6 Transport and logistics

FarmVision will establish a dedicated logistics unit to handle both input deliveries and produce collection. This will help reduce transport costs, improve delivery times, and minimise post-harvest losses. Refrigerated trucks will be used where cold storage is required, and delivery routes will be planned efficiently to save fuel and time.

As the model expands to more communities, the logistics division will also manage inter-community deliveries and large-scale market transport, ensuring smooth operations and consistent service quality.

4.7 Training, extension, and capacity building

The demonstration farm will serve as a permanent centre for practical farmer training. It will provide hands-on lessons in irrigation scheduling, soil management, pest control, livestock breeding, animal health, recordkeeping, and food-safety practices. Seasonal farmer field schools will teach production techniques suited to each crop, while mentorship programmes will link experienced farmers with beginners.

Special focus will be placed on youth and women, who will benefit from internships, apprenticeships, and leadership development programmes to prepare them for future roles in the agricultural sector.

4.8 Digital ERP and data-driven management

A cloud-based ERP system will manage all major farm operations, including finances, stock control, mechanisation, irrigation, energy, marketing, and training records. The system will provide real-time information for better decision-making and transparency. It will also record all financial and operational activities to ensure accountability and support reporting to partners and financiers.

Digital dashboards will make it easy to monitor performance, schedule maintenance, and track farm outputs. This system will help improve efficiency, control costs, and support continuous improvement.

4.9 Community engagement and governance

FarmVision will promote transparent and inclusive management that involves farmers, women, and youth in decision-making. A Conflict Resolution Committee will be formed to handle disputes quickly and fairly.

To protect assets such as solar panels, pumps, and vehicles, FarmVision will run awareness campaigns, establish community watch groups, and formalise agreements with local leaders. Regular community meetings will help strengthen ownership, cooperation, and accountability.

4.10 Revenue model and financial sustainability

FarmVision's income will come from several sources to ensure long-term financial stability. These will include membership fees, small mark-ups on input sales, service charges for mechanisation and irrigation, electricity levies for maintaining solar systems, commissions from produce marketing, and income from training and consultancy services.

All fees will be based on cost recovery, with any surplus reinvested into operations, maintenance, and community development. This balanced approach will reduce financial risks and support sustainable growth.

4.11 Socio-economic impact

The demonstration farm will employ between 50 and 100 people directly in each community and support 200–300 smallholder out growers through access to inputs, equipment, and markets. Farmers will see higher yields and incomes, while women and youth will have increased opportunities in production, processing, and logistics.

Improved access to fresh produce and eggs will enhance food and nutrition security, and new economic activities in transport, packaging, and input sales will create additional jobs in surrounding areas.

4.12 Implementation roadmap

Implementation will start with land verification, environmental and water assessments, and formal agreements with local authorities. Site works will then begin for fencing, roads, boreholes, energy systems, and buildings. At the same time, greenhouses, irrigation equipment, packhouse machinery, and tractors will be procured.

Staff recruitment and training will start before the first production cycle, and the ERP system will be set up to manage daily operations. During the first 12–18 months, the focus will be on building a stable operation, training out growers, and signing long-term supply contracts. Expansion to other communities will follow once the model is fully operational and tested.

4.13 Risk management and safeguards

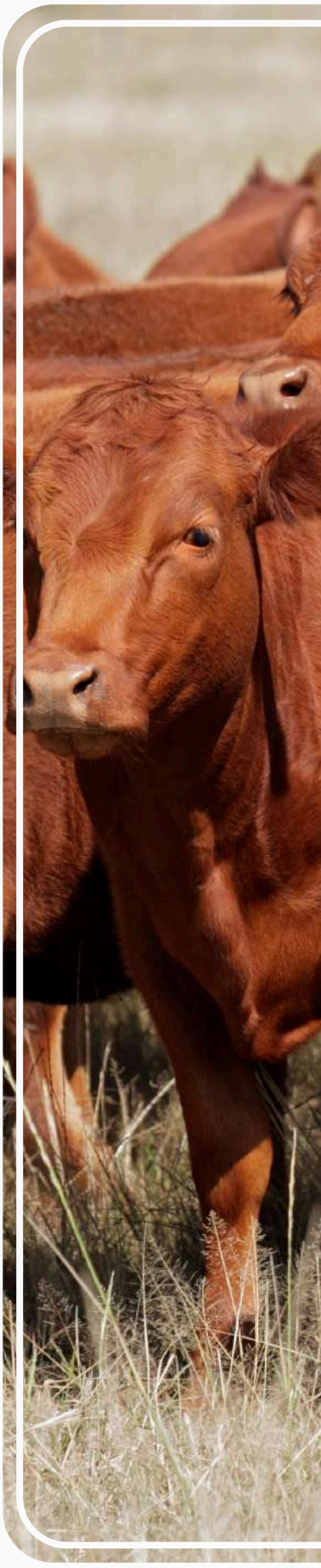
FarmVision will manage risks such as drought, pest outbreaks, input price increases, and market fluctuations by using greenhouse production, integrated pest management, and diversified crop and livestock systems. Financial risks will be reduced through careful monitoring in the ERP system, secure contracts, and credit guarantees from partner banks.

Environmental and social safeguards will include responsible water use, proper waste management, community engagement, and clear channels for feedback and complaints to maintain trust and compliance.

4.14 Sustainability and replication

Sustainability will be achieved through smart farming technologies, efficient water and energy systems, and recycling of livestock waste into compost or biogas. FarmVision will operate on a cost-recovery basis to maintain independence and long-term viability.

As the model proves successful, it will be replicated in other communities, adjusted to fit local conditions. A central coordination unit will oversee governance, procurement, quality control, and data management to ensure consistent standards and shared learning across all sites.



5 Conclusion

The FarmVision Demonstration Farm provides a clear and practical plan for transforming rural communities in Ghana through modern, inclusive, and profitable farming. By combining crop and livestock production, mechanisation, training, finance, and digital systems, it will build a strong foundation for job creation, food security, and sustainable growth.

Designed for replication, the FarmVision model will serve as a national example of how agriculture can drive community development and long-term economic progress.