

**Section I:
Production and marketing**

Chilli Information Sheet



Chilli export from Ghana is growing significantly through the sales to Asian stores in European countries. In order for the industry to move to the next level, however, the mainstream European markets should be targeted where GLOBALGAP certification is required. Increasing the export volume through all-year-round irrigated production is key to meeting the increased demand of those markets.

Major varieties and their attributes

- Legon 18**  High yield
10-12cm length
- Bird's eye**  Shorter fruits
- Delhi hot chillis**  High yield
10-12cm length
Disease resistance

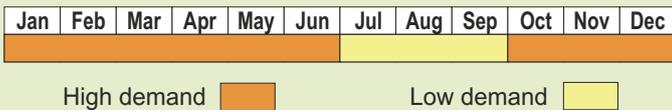
Forms of sale

Fresh whole fruits  packaged in 5kg boxes

Principle export markets

EU countries

Market demand calendar



Marketing requirements

- Dark green color
- Free from insects, blemish and dirt
- At least one week of shelf life after harvest
- On-farm pre-cooling facility and refrigerated van would make you internationally competitive

Certification requirements

GLOBALGAP certification required for export to the mainstream supermarkets in Europe

Climatic and soil requirements

- Well drained soil at least 30cm deep
- 20°C required for germination
- Soil pH 5.5-7

Major production areas



- Central region
- Eastern region
- Greater Accra region
- Volta region

Seed availability

- Agriseeds, Aglow, Agrimat, Meridian Seeds, Research institutions and other input dealers
- Tozer Seeds in UK and others for imported seeds 

Crop budget

Activity/Item	Rainfed	Furrow Irrig.	Drip Irrig.
	Cost/ acre (GH¢)		
Land	50	50	50
Seeds (100g/acre)	12	12	12
Nursery	16	16	16
Land preparation	110	110	125
Transplanting	30	30	40
Chemical Inputs			
Fertilizer	688	763	765
Herbicide	20	20	20
Insecticide and Fungicides	61	61	61
Irrigation	0	1,348	3,133
Labour	700	2,580	2,920
Other Inputs	165	385	275
Total	1,852	5,375	7,417

Key for high productivity and quality

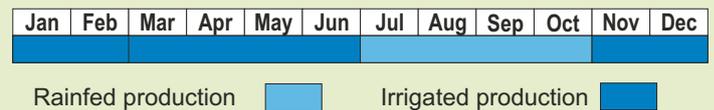
- Irrigation for all-year-round production
- High yielding seeds
- On-farm pre-cooling
- Refrigerated vans
- Reliable cargo airplanes



Production cycle

4-5 months

Production calendar



Estimated yield

- High input: 10 tons/acre
- Low input: 4 tons/acre
- Break even estimate: 3.1 tons/ acre



Historical prices

GH¢ 0.8 - 1.0/kg (= US\$ 0.53-0.67)

Estimated revenue and profit

	Rainfed (Low Input)	Furrow Irrigation (Semi-high Input)	Drip Irrigation (High Input)
Revenue (GH¢)	3,475	7,950	11,500
Gross Profit (GH¢)	1,624	2,575	4,083
Gross Margin (%)	47%	32%	36%
Break-even point	2.4 tons/acre	2.9 tons/acre	4.5 tons/acre

Minimum acreage for viable business

1 acre

Chilli Information Sheet



Use of low quality seeds, lack of IPM practices and lack of irrigation all contributed to the low yields of chilli in Ghana. TIPCEE and its partners have introduced improved varieties, improved nursery practices and a low pressure drip irrigation system through demonstration sites. Sourcing of quality seeds remains a challenge, and further training should be conducted on GAPs and GLOBALGAP. The establishment of pre-cooling facilities and increasing irrigated production are critical to make the industry more internationally competitive.

State of the industry at the start of the project

Opportunities:

- High international demand for chilli
- Ghana's proximity to the EU → Advantage on freight charge

Challenges:

- Unavailability of true to type seeds
- Lack of IPM practices
- Lack of irrigation facilities
→ Inability to produce all year round
- Lack of logistics to keep the cool chain (e.g. pre-cooling facilities on farm and at the airport)



TIPCEE intervention

- Introduction of improved chilli varieties
- Training on GAPs of vegetable production
- Introduction of low pressure drip irrigation system



TIPCEE tools

- "Good Life of Chilli" poster



- Demonstration sites



TIPCEE achievements

- 25 demonstration sites established (10 with drip systems).
- 60 MoFA staff and selected farmers trained to be trainers
- More than 20,373 farmers trained on GAPs



Lessons learned

- Irrigation is crucial to ensure all-year-round supply for export. When a drip irrigation system is too technical or expensive for a farmer, furrow irrigation should be explored as an alternative.
- Lack of availability of quality seeds and lack of access to credit are the key bottlenecks faced by farmers in the industry.

Next steps

- Promoting IPM practices (rotation, field hygiene, nursery management etc.)
- Promoting GLOBALGAP certifications as a way to enter into the mainstream markets in Europe
- Strengthening linkages between the exporters and smallholder groups
- Establishing pre-cooling facilities and refrigerated vans
- Establishing centralized nursery within farmers groups to provide quality seedlings



Collaborating partners

GAVEX



- GAVEX (Ghana Association of Vegetable Exporters)
- MoFA
- ARC (Agricultural Research Centre) - Kade
- SARI (Savanna Agricultural Research Institute)
- CRI (Crop Research Institute)