MINISTRY OF
FOOD & AGRICULTURE
REPUBLIC OF GHANA

Overview of Tomato Value Chain in Ghana

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Introduction to HDU

- The **Horticulture Development Unit** (HDU) is one of the five(5) technical entities under the Directorate of Crop Services (DCS) a technical Directorate of MoFA.
- HDU is ***lead technical agency and focal point*** of DCS, ***responsible for developing and executing policies and strategies for the Horticulture Sub-sector*** within the context of a coordinated national socio-economic growth and development agenda.

Areas of Focus of HDU

1. Vegetables (*Tomato*)
2. Fruits
3. Ecological Organic Agriculture Development

Brief on Ghana's Vegetable Sector

- Vegetable cultivation in Ghana provides an excellent source of employment for both rural and urban dwellers as it is grown in many rural areas as well as in the outskirts of towns and cities to be supplied fresh to the urban markets and for exports (*Ghanaveg reports,2014*).
- The industry comprise of three(3) distinct components namely,
  - Commercial/market gardening,
  - medium scale production for contractors/middlemen and
  - small-scale domestic / backyard gardening.
- the most important vegetables are tomatoes, peppers (both sweet and hot chilies), onions, okra and garden eggs.

Table 1. *Production of key vegetables in Ghana, 1986-2011*

Production (t)	1986	1991	1996	2001	2006	2011
Chillies & peppers, dry	23.000	24.684	44.539	45.000	78.000	88.000
Chillies & peppers, green	137.000	140.000	265.000	191.049	277.000	270.000
Eggplants (aubergines)	7.500	6.900	11.160	13.098	5.630	4.800
Okra	146.000	135.000	208.376	122.956	105.000	80.000
Onions, dry	28.000	20.189	29.500	44.322	42.500	48.000
Tomatoes	38.900	91.700	182.000	175.076	176.264	340.000

Source: FaoStat, 2013

Total cropped area under Tomato is 44.1 sq km (SRID, 2009).

Tomato in Ghana

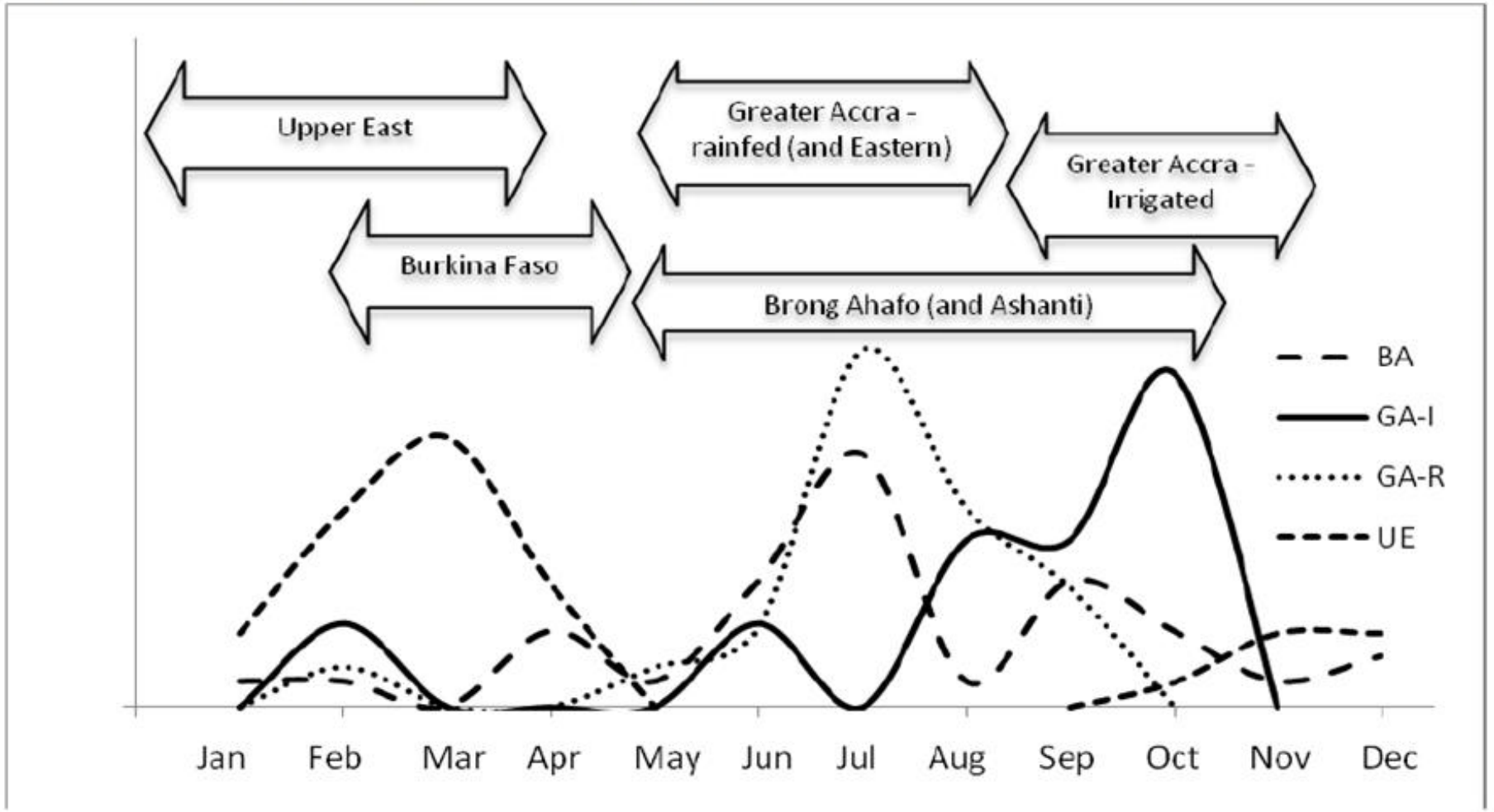
- In Ghana, it is almost an ***indispensable ingredient*** in the daily diet of people across all regions. Tomato alone **accounts for 38% of total vegetable expenditure** in Ghana.
- An **exclusive rural-based smallholder production predominate the sub-sector** as such their participation in commercial market holds considerable potential for unlocking suitable opportunity sets necessary for providing better incomes and sustainable livelihoods.
- Commercial production is intense in the **Upper East, Brong Ahafo, Northern and Greater Accra** Regions of Ghana which supply the market at various times of the year.

Production level:

- Production is largely carried out on family land and/or rented land of relatively small sizes (1-3acres) (*Monney et al., 2009*)
- Farmers occupy the same piece of land for several years and leave when the realize decrease in yields.
- Varieties grown include Roma VF, Laurano, Raki, Chocó TP, Power Reno, Rasta, Italy Heinz and Petomech
- **Tomato production in Ghana is highly seasonal, reflecting differences in access to water and rainfall patterns** (*Robinson and Kolavali,2010)*

Seasonal Calendar of Tomato

Figure 2. Seasonality among tomato farming – peak harvest seasons



Source: Robinson and Kolavali,2010)

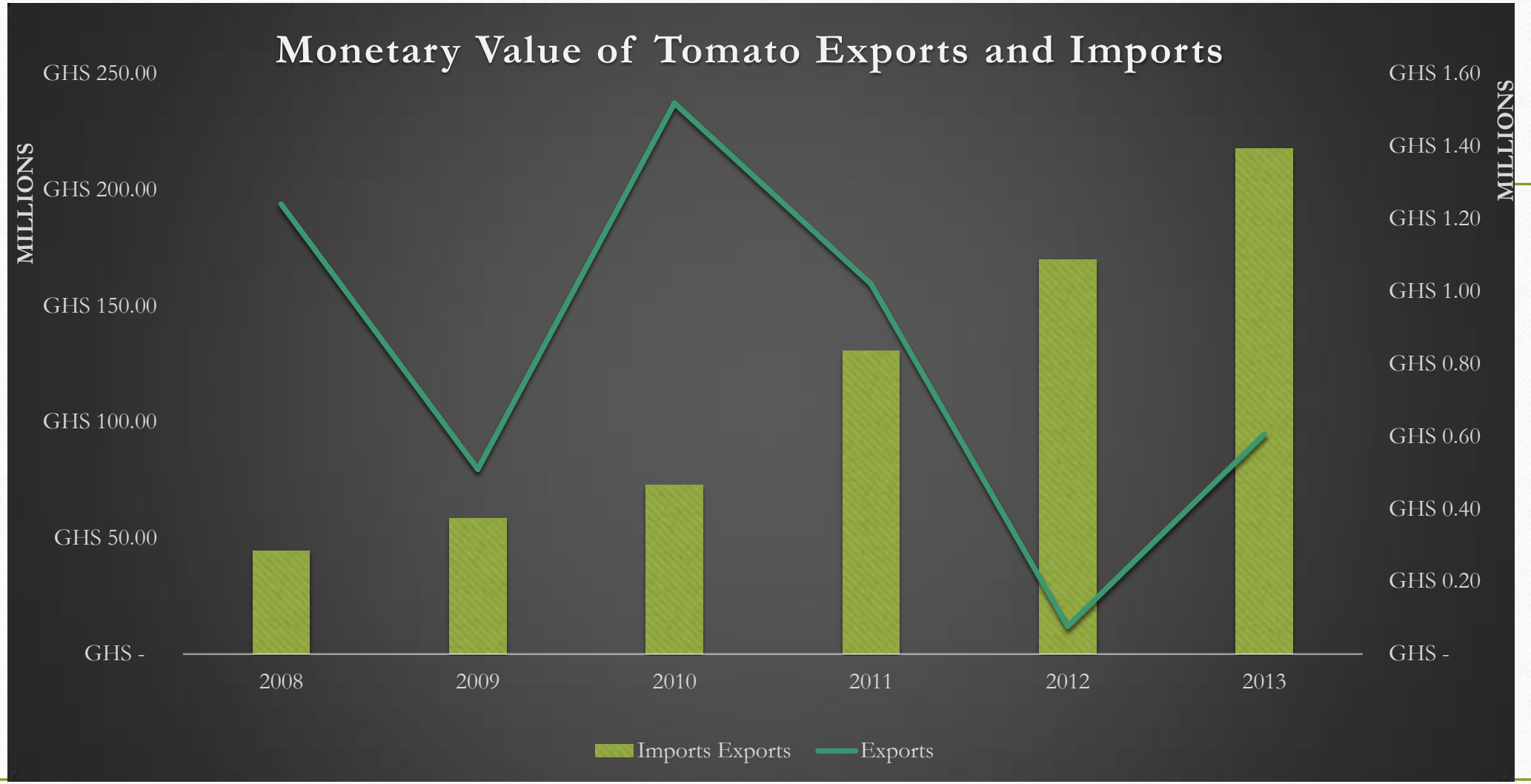
Situational Analysis

- Fresh tomato consumed in Ghana is produced locally however; there is a considerable cross-border trade between Ghana and her neighbours, especially Burkina Faso for fresh tomatoes while processed forms as puree and pastes are imported from EU, China *FAO, 1995; MONNEY ET AL.2009; NORMAN 1992; OECD 2010).*
- It is estimated that Ghana produces over 300,000 MT of tomatoes and 90% of the production is consumed locally

Meeting Consumption Demands

- Ghana depends largely on regional imports for vegetables during the off season, with imports between 70,000 –80,000 tons of fresh tomatoes from neighboring countries such as Burkina Faso.
- It also imports over 78,000 tons of tomato paste and puree per year, of which 12,000 tons is exported after being repackaged (FAOSTAT).

The challenge of rising tomato imports



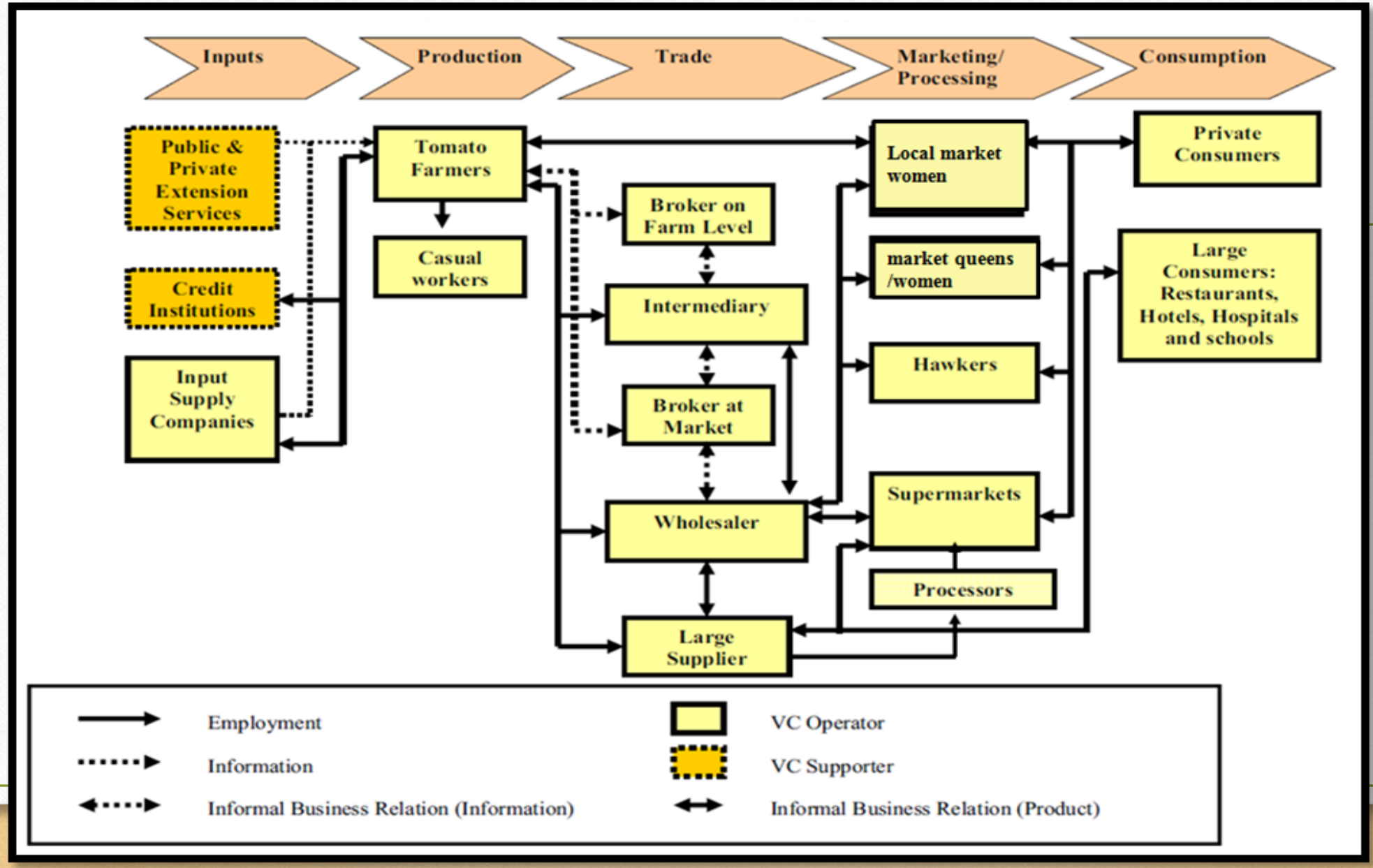
Source: SRID, MOFA

Tomato Value Chain Actors

- Tomato from 'farm to folk' is handled by a number of actors which include the ***farmers*** who produce, ***market queens*** , ***middlemen***, '***loading boys***'(when loading on farm and when off loading at the market centres), ***drivers/transport operators***, the ***wholesalers*** and ***retailers*** before it reaches the consumer.

- Over 90,000 farmers are involved in tomato production and more than 300,000 individuals in retail and wholesale areas of the subsector.
- 25 people are involved in getting Tomato from farm to plate (Robinson and Kolavali, 2010).

Tomato Value Chain



Marketing Level

Fresh Market

- Characterized by a "two level" system in which itinerant traders—***the market queens***—are the direct link between rural farm producers and urban consumption*(Robinson and Kolavalli,2010)*.
- This reduces delays allowing rapid movement of the produce from producer to consumer, important for highly perishable agricultural products such as tomato, but fragments price signals resulting in poor spatial price adjustments (Bell et al.1999; Orchard and Suglo 1999).
- Farmers are distanced from market signals: most wait for the market queens to come to their fields and if these traders do not come, farmers leave the tomatoes to rot in the field in the absence of a local market.

Fresh Market ct'd

- Traders allocate a certain number of crates, which determines how much farmers can sell on that particular day and there is little if any room for price-quantity or price-quality negotiations.
- Signals from consumers with respect to quality, price, and quantities demanded, are not transmitted back along the value chain to the farmers. Though packers may remove the poorest quality fruits, tomatoes of different qualities and even different varieties are not graded but rather simply piled them into over-sized crates.
- key feature of the tomato sector in Ghana is the organization and strength of the market queens, who effectively control distribution networks and the number of trucks of tomatoes that can enter the larger wholesale markets on any particular day.

Tomato Processing

- Ghana has a total processing capacity of 1400 tons of fresh tomato per day (500 tons at Trusty Foods and Northern Star, 200 tons at Afrique Link Ltd in Wenchi and TEPCO in Techiman).
- If three processors were operational, they would be able to process 438,000 tons of fresh tomato, equivalent to 54,750 tons of tomato paste each year (assuming a paste of 36-38% brix, requiring 8 tons of fresh tomato per ton of paste).
- Tomato paste imports currently amount to over 78,000 tons of paste per year of which 12,000 tons are exported after being repackaged, suggesting a domestic tomato paste consumption in Ghana of around 66,000 tons (FaoSTAT).

SWOT analysis of Ghana's Tomato Industry

Strength

- Diverse agro-climatic for year round production and supply(bi-modal rainfall)
- Short harvesting period compared with other crops
- increasing demand
- irrigation facilities for off-season production
- Existence of some established farmers, organization, cooperative societies, and
- Technical support from MOFA , private extension and NGOs
- Inputs availability
- Traders/market queens provide support to farmers by providing inputs
- Available processing factories

Weakness

- Climate Dependent
- Inadequate volumes to meet both fresh and processed demands
- High post-harvest losses(20-50%)
- Limited access to inputs
- Low adoption of Good Agricultural Practices leading to low productivity at farm level
- Excessive use of pesticide
- Questionable quality of some inputs esp. Fertilizer, pesticide.
- High pest and disease attacks
- Weak market lingages along the value chains
- Dominance of Smallholder farmers, scattered small farms *(lack of collective action*)

Weakness ct'd

- Insufficient infrastructure: roads, irrigation, etc
- Shortage of skilled labor during major production season
- Inputs price is very high and difficult to compete with imported products (eg. Some companies prefer to import paste due to cheaper price as compared to smallholder farmers produce
- High seasonal prices variation
- Lack of cold chain facilities
- Poor and inefficient supply chain
- Poor grading and standardization system

OPPORTUNITY

- Area under production can be expanded by more than 2-3 times
- Large scale demand from fresh and processing markets
- High demand for processed products such as paste, puree, ketchup, etc.
- Highly attractive price in during off-season
- **priority crop under FASDEP II as a high value crop (*agribusiness value chain*)**
- Private Sector and NGOs also provide support to farmers
- employ large number of people
- increase rural incomes (due to its labor requirement at each stage of production and post-harvest)
- Higher yield through adoption of GAPs

THREAT

- Increasing price of inputs
- Intense competition from highly subsidized countries
- Large scale commercial production and import from Burkina Faso, China, south Africa
- High consumer preference for imported commodities that have local substitutes

MOFA Interventions

Training and Capacity Building

- 18 Production guides for various fruits and vegetables reviewed/ developed and circulated to regions and stakeholders, soft copies submitted to the ICT unit for uploading onto MOFA website
- Production manuals and protocols for selected vegetables developed and shared
- Training in GAPs conducted for farmers
- Backstopping farmers and extension staff(public and private)
- Strengthening the capacity of Tomato Farmer Based Organizations

- **Sector interventions**

- Enhancing the adoption of improved varieties and production technologies(GAPs, GHPs)
- Baseline survey of tomato production in 12 of twelve production districts in 4 regions conducted
- Preliminary discussions held with MOTI to evaluate impact of quota system on local producers.
- Introduction of the Ghana Green Label Scheme for GAPs and quality assurance

Green Label Scheme

Support Land Development and Irrigation

- KOICA Dawenya and Akumadan irrigation project
- Centers of excellence earmarked are Dawhenya Irrigation Scheme, Vakpo Horticultural Center, Akumadan Irrigation Scheme and Vea Irrigation Scheme

Strengthening Tomato R&D in collaboration with Research

- **PPP Varietal trials for**
  - open-field and greenhouse production, identifying adaptable pest and disease tolerant/resistant varieties to meet the needs of both fresh and processed markets
  - Pest and disease control
  - Soil fertility management

Strengthening Tomato R&D in collaboration with Research

Promotion of Protected Cultivation

Greenhouse under WAAPP

- One Hundred and fifty (150) Greenhouses are to be procured to augment year round vegetable production in Ghana.
- The development objective is to attract 40% youth and women into Agriculture. In all 300 youth and women are expected to benefit under this intervention
- Beneficiaries will receive a complete package of the structure together with seeds, water for irrigation (mechanized boreholes will be sunk for areas without water), and training on greenhouse production management
- Cost of project 1.3 million dollars

Regional Distribution of Greenhouses under WAAPP

Region	Quantity
Central Region	13
Ashanti	13
Brong Ahafo	17
Volta Region	10
Western Region	14
Greater Accra	18
Eastern Region	16
Upper West Region	15
Upper East	18
Northern Region	16
TOTAL	**150**

CONCLUSION: WHAT ARE THE CHALLENGES?

- BUDGET CONSTRAINTS
- LATE RELEASE OF FUNDS
- **Inadequate and inconsistent reliable data base in respect of Tomato production and marketing:** CROP WISE DATA (**Area, production, productivity)**

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THANK YOU

FOR YOUR ATTENTION