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## Fact Sheet – Mangoes in Ghana

Mango in Ghana has some unique comparative advantages over cocoa, palm oil and citrus production. Statistics show that citrus has a break-even point of 7 years, cocoa 8 and palm oil 10, while mango has a break-even point of 5 years.

In the competitive EU market, mango and mango-based products are commercially the second largest tropical fruit. Mango producers have most potential by differentiating their products. Examples include high quality, reaching new market segments (ready-to-eat mangoes and further processed mango products) and marketing stories. The quantity of fresh mangoes coming from Ghana on international markets is comparatively moderate. Yet, the demand and the importance of fresh-cut mangoes from Ghana has developed over the last decade, thus contributing to the national economy by generating income and employment.<sup>1</sup>

### Market Data – production and export

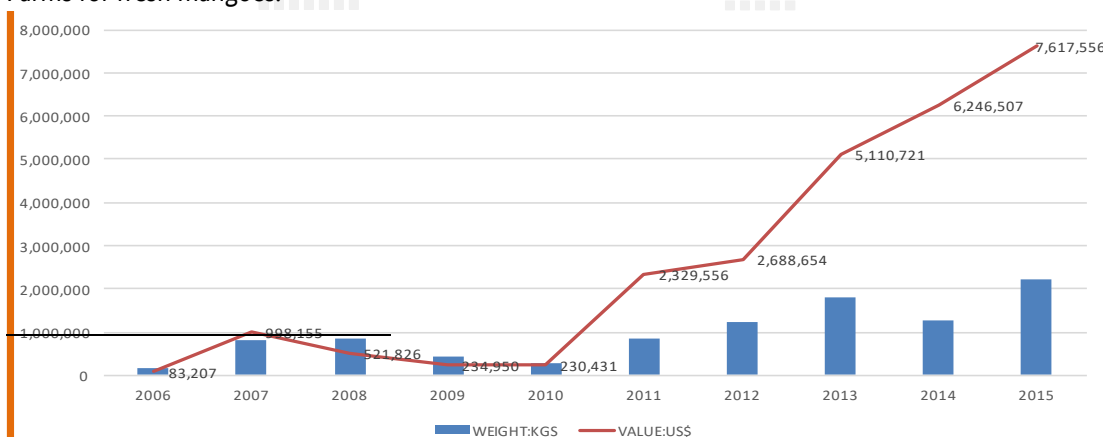
#### Global market

Between 2010 and 2013 world exports of mango experienced a continuous growth, witnessing a modest decline in 2014 and 2015. The leader in world exports in terms of quantity and value is Mexico, whereas in terms of volumes Thailand, India, Brazil and Peru are other important export countries. Regarding value, Netherland ranks second just after Concerning imports, the United States are the leading country ranked before the Netherlands (80% re-export to other EU countries) and China in terms of quantity. West African producers are particularly well positioned to supply the Netherlands and Chinese markets. Export opportunities for West African Countries are also found in the Middle East.<sup>2</sup>

#### Production and export in Ghana

Mango is a major and emerging non-traditional agricultural export commodity in Ghana and cultivation areas have increased notably over the past decades across the Southern and Northern Zones of the country.

The figure below illustrates the mango exports from 2006 to 2015 as captured by the Ghana Export Promotion Authority. The value of mango exports continues to rise owing to the growing export of dried and fresh cut mangoes being of higher value than fresh whole mango fruits. In 2015 major export markets for Ghanaian mangoes were the EU, Lebanon and South Africa and the leading export companies are HPW for processed (dried) mangoes and Evelyn Farms for fresh mangoes.<sup>3</sup>



<sup>1</sup> Zakari, A. K. (2012, p. 7). *Ghana – National Mango Study*. Ghana.

<sup>2</sup> Asante-Dartey, J. (2017, p. 30-34). *Value Chain Studies of the Mango Industry in Ghana*. GIZ

<sup>3</sup> Asante-Dartey, J. (2017, p. 12-34). *Value Chain Studies of the Mango Industry in Ghana*. GIZ



### **Quality – the prerequisite for sustainable success**

Quality is crucial and an indispensable condition for a successful value-chain. The International Organization for Standardization (ISO) defines quality as “the degree to which a set of inherent characteristics fulfills requirements.”<sup>4</sup> Applying this definition to mangoes and mango-based products being disease-free, having no defects and limited pesticide residue values are some criteria that may be used to define quality. Such requirements are usually defined in product and management standards, technical regulations, as well as formal and informal criteria of buyers.

### **Quality and food safety requirements**

Technical regulations are mandatory and ensure product safety, while the compliance with voluntary standards is often necessary to gain market access. For mango and mango-based products to be exported, both national and international standards as well as technical regulations are of relevance.

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<sup>4</sup> International Organization for Standardization (ISO). (2005). *ISO Standard 9000/2005: Quality management systems - Fundamentals and vocabulary*. Geneva.

**National standards**

<i>Ghana Standard</i>		<i>Description</i>
<b><u>GS 546: 2017</u></b>	Fresh Fruits and Vegetables - Specification for Mango	Specifies the requirements for mangoes of varieties grown from <i>Mangifera indica</i> L. of the Nacardaceae family, entering the domestic and international trade in the fresh natural state. It also specifies grading and sampling for fresh mangoes. Mangoes for industrial processing are excluded.
<b><u>GS 967: 2017</u></b>	Planting Materials - Specification for Mango Planting Materials	Specifies the requirements for mango planting materials for the cultivation of mango. It also specifies grading and methods of sampling of mango planting materials.
<b><u>GS 1037: 2013</u></b>	Fruits, Vegetables and Derived Products - Specification for Dried Mango	Specifies the requirements for dried mango and its methods of sampling and testing.
<b><u>GS 1125: 2016</u></b>	Fresh Fruits and Vegetables – Specification for Mango Processing	Specifies the requirements for mango of varieties grown from <i>Mangifera indica</i> L. meant for processing. It also specifies grading, sampling and methods of analysis for mango for processing.
<b><u>GS CODEX STAN 160: 2003Ψ</u></b>	(Published by CODEX in 1985) Specification for Mango Chutney	Applies to mango chutney as a product prepared from washed, clean, sound mango fruits ( <i>Mangifera indica</i> L.) which have been peeled and are sliced, chopped, shredded or comminuted, then heat processed with basic ingredients before or after being sealed in containers to prevent spoilage.
<b><u>GS IM 10: 2017</u></b>	Inspection Manual - Instructions for the Inspection of Mango Planting Material	This manual applies to planting material for the cultivation of mango. It defines a single minimum method for assessing the conformity of mango planting material against the Ghana Standard GS 967:2009.
<b><u>GS 1066:2016</u></b>	Code of hygienic practice for fresh fruits and vegetables	This code of practice covers general hygienic practices for the primary production and packing of fresh fruits and vegetables cultivated for human consumption to produce a safe and wholesome product, particularly for those intended to be consumed raw. Specifically, this code is applicable to fresh fruits and vegetables grown in the field (with or without cover) or in protected facilities (hydroponic systems, greenhouses). It concentrates on microbial hazards and addresses physical and chemical hazards only in so far as these relate to good agricultural and good manufacturing processes.

## National technical regulations

Relevant laws governing environmental pollution, plant protection, irrigation, and pest and pesticide management and control include:

- Biosafety Act, 2011
- Plants and Fertilizer Act, 2010, Act 803 (plant protection – pests and disease, seed inspection and certification)
- Codex Stan 53-2003 (Code of Hygiene Practice for Fresh Fruits and Vegetables. CAC/RCP 53-2003)
- Water Resources Commission Act, 1996, Act 522
- Environmental Protection Agency Act, 1994, Act 490 (Part II on pesticide control and management)
- Food and Drugs Act 1992, PNDCL 3058
- Irrigation Development Authority Act, 1977, SMCD 85 (water management, health and safety)

## International Standards

### Codex Alimentarius

The CODEX ALIMENTARIUS international food standards, guidelines and codes of practice contribute to the safety, quality and fairness of international food trade. The Mango Standards define a set of provisions in terms of quality, sizing, tolerances, presentation, marking or labeling, contaminants and hygiene.<sup>5</sup> Ghanaian mango suppliers are obliged to meet those minimum requirements, Class I products being destined for direct consumption while Class II mangoes are used for processing.

The Codex Standard 184, for example, applies to commercial varieties of mangoes grown from *Mangifera indica L.*, of the *Anacardiaceae* family, to be supplied to the consumer, after preparation and packaging. The standard contains clauses covering quality and sizing requirements and tolerances, requirements regarding presentation as well as provisions about marketing, labeling, contaminants and hygiene. An overview of all Codex Alimentarius standards relevant for mango and mango-based products can be found under the following link: <http://www.fao.org/fao-who-codexalimentarius/standards/list-standards/en/>

### Global GAP

G.A.P. stands for GOOD AGRICULTURAL PRACTICE – and GLOBALG.A.P. is the worldwide standard that assures it. The crucial objective underlying the organization is thereby a safe, sustainable agriculture worldwide by setting standards for the certification of agricultural products around the globe. GLOBAL GAP requirements are nowadays the minimum for mango and mango-based product exporters when supplying large retail chains in Europe<sup>6</sup>. Certification of producers/exporters (Option 1) or grouping of small producers (Option 2) have made significant inroads in Ghana, however the main challenge lies in maintaining these investments made by private operators.

### Additional buyer requirements

In addition to that, many international buyers define their own standards including quality and sustainability requirements for fruit and vegetables. Those may entail clauses about land, water and pesticide use, genetic engineering, packaging, as well as social standards in agriculture.

Furthermore, there are several international sustainability standards important to the mango sector, such as Fair Trade or BRC certified.

## International regulations

### Council Regulation (EC) No 834/2007 on organic production and labelling of organic products

Defines specific requirements for the production, processing, packaging, transport, storage and labelling of organic produce and processed products.



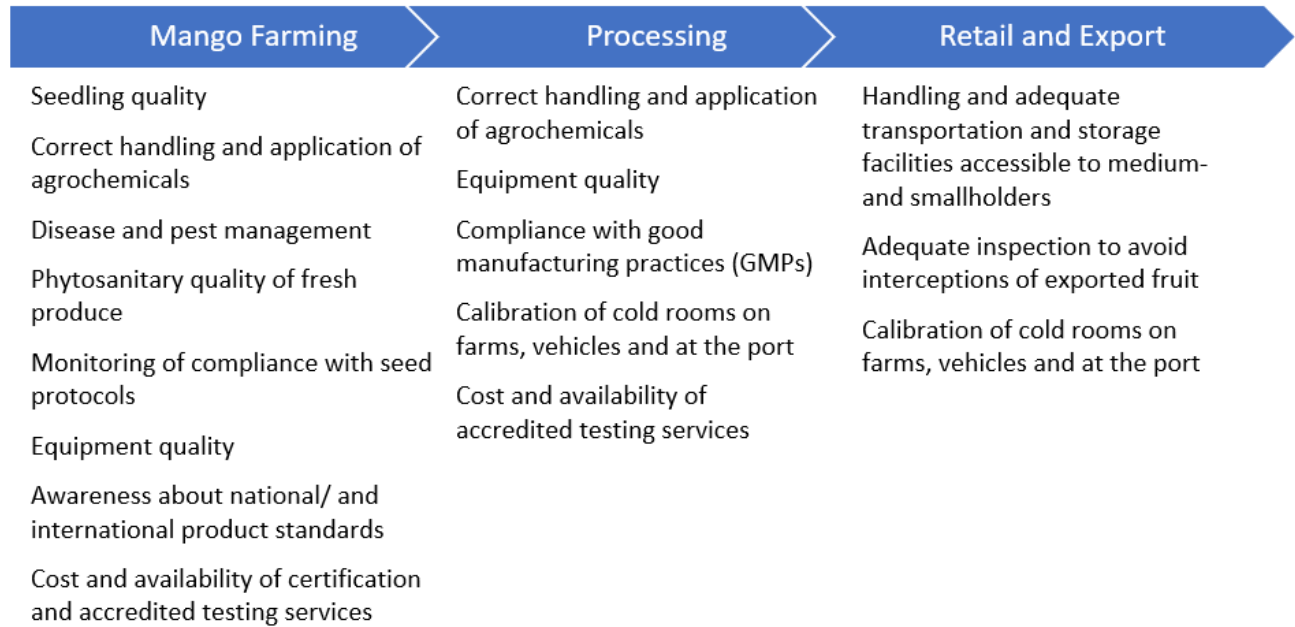
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<sup>5</sup> Codex Alimentarius. (2017). *What is the Codex Alimentarius*. Retrieved from <http://www.fao.org/fao-who-codexalimentarius/en/>

<sup>6</sup> GLOBAL G.A.P. (2017). *GLOBAL G.A.P. History*. Retrieved from [http://www.globalgap.org/uk\\_en/who-we-are/](http://www.globalgap.org/uk_en/who-we-are/)

## Quality challenges for the Ghanaian mango sector

The mango sector in Ghana is facing a variety of challenges related to quality, which affect different stages of the value chain.



### Challenges related to the national quality infrastructure include:

- Limited capacities of food laboratories with internationally recognized accreditation
- Limited capacities and quality assurance (or accredited testing services) in soil, fertilizer and seed laboratories
- Lacking metrological services in some areas (e.g. chemical metrology, i.e. pH)
- Unavailability of an accreditation body in Ghana

### Useful websites

Requirements for export to the EU: <http://trade.ec.europa.eu/tradehelp/>

Information about voluntary international standards: <http://sustainabilitymap.org/#!/home>

### Company websites:

HPW: <http://www.hpwag.ch/en/home/>

Blueskies: <http://www.blueskies.com/>

as of 2017