

Policy Brief

Harnessing the potential of Tanzania's exports competitiveness for spices and seasonings, with special focus on high-value markets such as the EU Market

Key messages

- While Tanzania is endowed with the natural ecological and climatic conditions for cultivation/development of spices production and exports, its global market share for spices has declined from 0.5% to 0.12% between 2012 and 2016. This is against the background of substantial increase in global demand for spices and seasonings over the same period.
- Spices value chain remains over-dependent on subsistence agriculture and methods resulting in constraints to competitiveness and diversification which in turn hamper efforts to increase exports and utilise advantages presented by trade arrangements including into the EU market. The sector is also plagued by weak capacity of production and weak trade support institutions and their fragmentation.
- To unlock growth and export competitiveness of the spices and seasoning sector, it is critical to: reform the loosely coordinated and fragmented spices value chains into highly organised structures utilising economies of scale; enhance production capacities throughout the spices value chain; upscale organic certification of spices and develop product quality standards to meet export market requirements in high-value markets; and strengthen institutional capacities and address policy weaknesses.
- As a point of departure, it is paramount to implement the sector's development strategies namely the 2014 Tanzania Spices Sub-Sector Strategy. This brief emphasises two elements from the 2014 Strategy: (i) the establishment of a spices sector association to drive the development of the sector; and (ii) the implementation policy outlined in the strategy document.

"The truth is that Zanzibar is now just a 'spice island' in name only"

Interview with Zanzibar Organic Spice Growers (May 2017)

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Overview

This policy brief explores key constraints facing the spices and seasonings sector in Tanzania and ways to readdress these constraints in order to harness this sector's export competitiveness to take advantage of existing trade arrangements including those with the EU. It is based on both desk research and field visits to Zanzibar and Northern Tanzania undertaken between May and July 2017.

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Findings

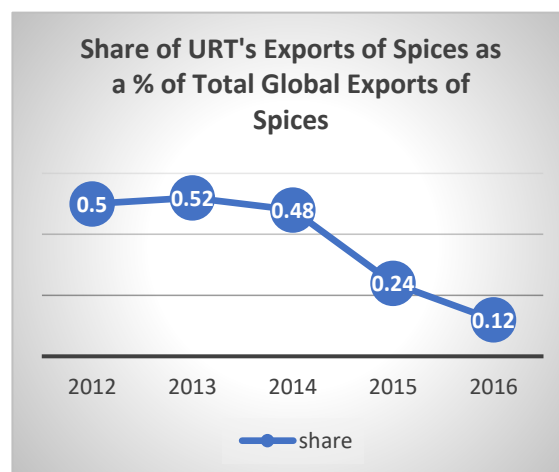
Growing disposable incomes, changes in demographics, tastes and food habits, including the rising popularity of organic and exotic foods with 'authentic flavours' especially in Europe, the Middle East and Asia are the key drivers behind the sustained surge in global spices and seasonings demand. This is coupled with a growing interest in healthy nutrition and natural remedies found in spices. Organic foods including spices, seasonings and herbs are becoming a critical component of the daily diets of increasingly health conscious consumers particularly in Europe.

The global seasonings and spices industry has enjoyed steady growth in recent years and it is forecast to experience a compound annual growth rate of 5% from 2015 to reach up to US\$16.6 billion by 2020 compared to US\$12.7 billion in 2012.ⁱ Global spice trade is dominated by pepper chillies (46%) ginger, saffron, turmeric "curcuma", thyme, bay leaves, curry (22%). Major spices and seasoning producers include India, Bangladesh, China, Pakistan, Turkey and Vietnam.ⁱⁱ

It is estimated that some 70–80% of global production is consumed in the country of origin (captive use), limiting the ability of global production chains to respond to the rising demand in non-producing areas. The variance between available global supply and demand for spices drives up prices.ⁱⁱⁱ This situation presents huge potential for net suppliers of spices such as Tanzania. The geographical market for spices and seasonings in descending order comprises Europe, Asia–Pacific, North America and the Rest of the World.^{iv} Europe enjoys the greatest market share in terms of value (35%), followed by Asia–Pacific (31%). These two regions are forecast to continue to dominate the global spices market with Asia–Pacific forecast to reach 69% of global spices

market by 2019 (Transparency Market Research, 2017).

Figure 1



A distinct feature of the EU market for spices and seasonings is its high prices (that are forecast to continue to rise)^v compared to those prevalent in other major markets making the EU attractive to Tanzanian exporters. According to the Centre for Promotion of Imports, there is rising demand for organic and healthy spices and herbs in the EU. EU buyers are increasingly utilising sustainable sourcing policies and they are increasingly willing to buy from smaller suppliers – creating opportunities for Tanzania.

Africa accounts for 12% of global spice production but just 6% of EU spice imports. Major African exporters include Nigeria, Madagascar, Ethiopia and Tanzania, while key regional export markets for spices and seasoning include Kenya, North Africa, Sudan and Uganda.

Yet despite rising global demand for spices and seasonings, Tanzania's global market share for spices (pepper, vanilla, cinnamon, cloves, nutmeg, seeds of anis, badian and ginger) has declined from 0.5% (US\$38 million) to 0.12% (US\$12.4 million) between 2012 and 2016 (see figure 1), largely explained by production and trade capacity constraints, participation in low value processing, and failure to meet product quality standards. Major markets for Tanzania exports of spices and seasoning are India, China and EU.

Over 90% of Tanzania global spices exports comprise cloves, whole fruit and stems (HS 0907 – US\$10million) followed by pepper (HS 0904 – US\$ 1.2 million) and ginger (HS 0910). The same pattern applies with regard to its exports to the EU: while Tanzania's global exports of spices have been on a constant downward trend, its exports to the EU have somehow stagnated but been erratic (see table 1). Sporadic episodes of surges and bumps in exports

occur from time to time. For example, between 2015 and 2016 there was a more than tenfold increase in pepper exports to EU. Tanzania's share of spices exports to EU as a percentage of its total spices exports increased from 0.25% in 2012 to 8.28% in 2016, which is largely explained by the decline in Tanzania's global spices exports (see table 1). At the same time, Tanzania has not been able to take advantage of the growing EU spices market. The average share of Tanzania spices exports to EU as percentage of total EU spices imports has remained below 0.05% for the past five years.

Competitiveness of the spices value chain (production, processing, packaging transportation and marketing) is marred by several constraints namely, weak capacity for production and trade capacity, loosely coordinated and fragmented spices value chains

dominated by smallholder growers with limited economies of scale, weak support institutions, and low product quality standards to meet export market requirements.

Tanzania produces over 30 spice crops.^{vi} Major spices cultivated for both local and export markets include clove, pepper, chillies, cinnamon, cardamom, ginger, coriander, vanilla, garlic, lemongrass and red onions. Production data paints a picture of uneven development and output across the different spices sub-sectors in Tanzania. There are declines in some sub-sectors where Tanzania used to be a leading producer. For example, Tanzania was the world's third largest producer (after India and Guatemala) of cardamom in the 1970s, but current production levels remain stagnant at around 756 tonnes compounded by deforestation, warmer temperatures and longer dry seasons.

Table 1: Dynamics of Tanzania's Spices Exports with the World and EU28 for the period 2012–16 in US\$'000

HS 4	Type of spices	Tanzania's total exports of spices to EU 28 (US\$'000)					Tanzania's total exports of spices to the world (US\$'000)				
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
0904	Pepper capsicum	55	0	126	61	770	733	165	14,812	598	1,201
0905	Vanilla	0	4	0	0	0	0	10	0	14	37
0906	Cinnamon	31	1	0	0	12	31	34	7	0	31
0907	Cloves, and stems	0	976	2,075	25	245	37,361	43,061	30,781	2,915	10,337
0908	Nutmeg, cardamoms	0	0	0	0	0	0	0	128	0	0
0909	Anis, badian, fennel, coriander caraway;	0	0	0	0	1	0	1	75	57	77
0910	Ginger, saffron, turmeric.	8	19	25	83	2	44	34	59	20,857	761
	Total	94	1,000	2,226	169	1,030	38,169	43,305	45,862	24,441	12,444
	Share of Tanzania spices exports to EU as % of its total spices exports						0.25	2.31	4.85	0.69	8.28
	Share of Tanzania spices exports to EU as % of total EU spices imports						0.00	0.04	0.08	0.01	0.03

Source: https://www.trademap.org/Product_SelCountry_TS.aspx?nvpm (accessed 21 Jan 2018)

Cardamom yields in the East Usambaras area averaged 80 kg/ha, but with improved agricultural practices could be as high as 300 kg/ha.

Cloves are the main export product for Zanzibar and Pemba accounting for over 90% of the Islands total spices exports. Cultivation of spices takes place in Zanzibar–Pemba and along the mainland mountainous regions whose forested highlands and lowlands offer distinct local microclimates. In the mainland, regions producing spices include Manyara, Kagera, Mbeya, Kigoro, Morogoro, Kilimanjaro, Tanga, Iringa, Arusha, Ruvuma and the coast. Regions like Kilimanjaro, Morogoro, Tanga, the areas around the Arc and Usambara

mountains are ideal for expansion of spice production.

Spices production and value chain is characterised by the predominance of smallholder farmers in rural and peri-urban areas overly reliant on subsistence methods of production that restrain productivity and competitiveness. Production of spices is often not mechanised, with farms under spices production being relatively small ranging from one to two hectares and up to 3.5 hectares in some instances. However, medium-sized plantations are a relatively recent phenomenon and can be found in regions such as Morogoro for vanilla and pepper, intercropped with coffee and banana for shade. Long-

established clove plantations can be found in Pemba and Unguja. Cultivation of spices also has to compete with other crops including food and horticulture – as well as human settlements.

Weaknesses in the land policy, namely access to agricultural land for women and youth, continue to be a challenge while the decline in soil fertility and the impact of changing climatic conditions negatively affect productivity. Peri-urban farmers in areas such as Zanzibar face threats of encroachment from expanding urban settlements.

The type of processing varies depending on the spice crop and market requirements. In general, processing aims at prolonging shelf-life and imparting additional quality or changing the harvested produce into a form that is more desirable in utilisation or further keeping. Several farmer associations collaborate to support members in cultivating, harvesting, processing and marketing of spices including group certification for organic spices (in Unguja and Pemba), which they export to Europe. Some associations work with medium-scale farmers and have their own collecting and processing centres with basic infrastructure, for example, a shared solar dryer. In some instances, harvesting of spices like cardamom is coordinated by intermediary traders that purchase crops in advance. Farmers associations in areas (e.g. Muheza (JUWAKIHUMA), Same (AMCOS), Bukoba (MAYAWA and MAVICO) and Morogoro) support members with harvesting and organising collection, processing, storage and marketing centres.

Failure to observe good agricultural practices during harvesting, processing and marketing is one of the key challenges affecting the competitiveness of the spices sub-sector, especially in relation to high-value markets such as the EU. Cardamom, for example, is harvested by stripping whole plant panicles, (instead of picking leaves) which affects quality. In some cases, spices like black pepper are harvested before maturity or dried on mats placed on the ground in the sun at the farms, creating potential for contamination from dust or livestock. Value addition is generally limited to grading, cleaning or packaging. For exports to Europe or the USA, processors are required to have dedicated equipment and separate storage facilities. However, for SMEs, generic milling machines (not stainless steel) are used for grinding. In some cases, milling houses also serve as storage facilities, which exposes to risks of cross-contamination.

The marketing of spices is dominated by a complex and informal network of brokers and traders (intermediaries). Some are agents for overseas and regional importers like Zanzi Spices. Buyers purchase spices in advance or at the farmgate when supply is tight. This leads to high transaction costs and lower prices for farmers as some value is captured by intermediaries, who typically purchase unprocessed products. Farmers and small businesses generally earn less than 10% of the final price of primary goods, as the largest margins are captured by importers and retailers.^{vii} In terms of gender, men dominate spices production and trade, particularly older men.

There are several sophisticated medium-sized exporters of organic spices operating from Tanzania mainland. They include Golden Food Products (GFP) and Kimango Farm Enterprises Ltd., certified by the Swiss Institute for Market Ecology (IMO). They operate certified organic farms in Morogoro producing about 25 tonnes of herbal tea and spices exported to Europe. Lemongrass and hibiscus products are sold to the local and regional market under the brand "African Infusions". Other mid-sized organic producers include Tanzania Organic Products Ltd. in Zanzibar, Tanga and Kigoma; (TAZOP), Zanz-Germ Enterprises Ltd. in Zanzibar, Tanga and Kigoma which produces ginger, pepper, turmeric, chillies and lemongrass; Clove Stem Oil Distillery (CSOD) in Pemba which produces essential oils, lemon grass oil, cinnamon leaf oil, eucalyptus oil and sweet basil oil; Evasa T in Arusha which exports paprika to Spain, Tanzania Spices Ltd. in Iringa which exports paprika.

Figure 1. Hand processing of spices in Zanzibar



The growing demand for organic products in Europe provides huge opportunities for maximising value through organic certification of spices.^{viii} This is all the more important given pronounced price differences between conventional spices whose average price is US\$5.60/kg of cloves

compared to US\$6.80/kg for organic certified cloves.^{ix} According to the Tanzania Organic Agriculture Movement (TOAM), in 2015 Tanzania was ranked 4th in Africa in terms of the number of certified organic farmers (148,610 certified farmers with 186,537 ha under organic management).^x Some organic certified small-scale farmers operate as contract-farmers for medium-scale organic farmers or buyers who assist them with their certification. The ITC reports increasing levels of certified organic cultivation practised by farmers in Arusha, the East Usambaras, Morogoro and Zanzibar with production, processing and exports of organic chillies and lemongrass. Farmers have been trained and certified on organic production with support from organisations such as TOAM, the Organic Farmers Association, and the Participatory Agricultural Development and Empowerment Project (PADEP). Organic certification is conducted by the Swiss Institute of Market Ecology (IMO) and LACON Institute (Germany), which also certifies two farmers' associations in Pemba and one in Unguja.

However, there are constraints to organic agriculture. These include high certification costs (US\$3,000–5,000 for certification) and poor regulation; for example, preventing conventional spice producers from marketing their products fraudulently as 'organic'. TOAM proposes that the policy commitments to support the organic should be incorporated into the Tanzania's Agricultural Sector Development Strategy II (2015/16–2024/25) as well as the Agriculture Sector Development Programme Phase II (ASDP2, 2016). Decentralisation has also exposed the weak capacity of local government authorities to provide adequate support such as extension services (including specialised know how for spices).

Food safety and quality management for spices is a major issue in Tanzania.^{xi} As natural products, spices and herbs should be free of contaminants and extraneous matter which can affect food quality. The collection and manipulation of spices is not always performed under rigorous hygienic conditions. This can result in unacceptably high microbial counts including pathogenic bacteria, mould and yeast. To reduce the risk of pathogen growth, spices and foods with spices must be subjected to complete thermal treatment. To minimise the risk of contamination as spices pass from farm to the export market there are a number of Good Agricultural and Manufacturing Practices and Guidelines for handling, processing and storage of spices.^{xii} These guidelines recommend best practices for

pest control, maintenance of plants and grounds, processing, design and construction of facilities etc. The application of Hazard Analysis Critical Control Points (HACCP) which is a critical analytical tool used to identifying and preventing physical, chemical and microbial risks to food safety is a major constraint in spices value chain.

Food safety issues for spices, herbs and seasonings in the European market are much more stringent than in other markets.^{xiii} The European spices and herbs market applies rigorous requirements on food safety and quality. In addition to food safety regulations, there are also non-legal requirements or industry standards related to sustainability. Dried spices are subject to greater scrutiny due to continuing problems with excessive levels of aflatoxins, pesticides and salmonella contamination. Suppliers from the Tanzania need to collaborate closely with their EU buyers to ensure compliance with EU standards.

The European Spice Association's Quality Minima Document (2015),^{xiv} is the leading guidance used by European buyers.^{xv} It sets out the legal and non-legal requirements for importing spices e.g. quality, food safety, labelling requirements etc. According to the Centre for the Promotion of Imports (CBI), European buyers will frequently ask suppliers to implement a food safety management system based on HACCP principles. Common forms of contamination that are targeted in the EU include pesticide residue levels, requirement of steam-sterilisation, mycotoxins and maximum levels of aflatoxin, polycyclic aromatic hydrocarbons (chemical contaminants), food additives etc.

Recommendations

To unlock growth and export competitiveness of the spices and seasoning sector it is critical to address the loosely coordinated and fragmented spices value chains into highly organised structures utilising economies of scale, enhance production capacities, develop product quality standards to meet export market requirements, upscale organic certification of spices, strengthened institutional capacities and address policy weaknesses.

As a starting point, Tanzania should review and operationalise the recommendations of the Tanzania Spices Sub-Sector Strategy (2014). The immediate priority is to establish a sector association that will coordinate and champion development of the spices sector. Another priority is to strengthen the production segment of the value chain, improving agricultural practices and certification to meet export market requirements. It is recommended that initial focus should be on a cluster of high-growth/high-demand

products such as black pepper, chillies, sweet paprika, cardamom, cloves, essential oils and ginger. The other recommendations set out below are intended to complement the 2014 Spices Sub-Sector Strategy:

- A spices sub-sector body/association along the lines of TAHA with the mandate to coordinate support to the sector, improve and expand production, enhance the capacity of producers and exporters to meet technical requirements of the market, improve extension services, improve organic certification, processing, marketing, is required as a matter of urgency. Development of the sector will largely fall on the shoulders of the sector association than to wait for government support.
- There must be a unified vision to develop the sector in the mainland and Zanzibar, promoting conventional and organic spices, and participation of women and youth in the sector.
- The lack of standards and quality control should be addressed with the aim of adopting regional standards such as the East Africa Organic Product Standard (the Kilimo hai Mark) should be developed.

- The establishment of quality infrastructure including testing, drying, collection centres, etc. which would help to reduce poor handling of spices should be supported.
- Promote branding of spices to capture greater value is critical. Differentiating products through branding allows the balance to shift in favour of growers and small businesses to capture more value. By contrast, selling unbranded dried spices like chillies allows middlemen to mark up prices by 300–400% before re-sale.
- There is a need to establish, support and expand local certification capacity with international accreditation.
- Tanzania needs targeted investments to expand spice production, processing and marketing infrastructure.
- Research and development capacity (nursery, seedlings, new varieties, pests, etc.), possibly at HORTI Tengeru, Arusha, should be established.
- Targeted and relevant training programmes on spices value chains at agriculture training institutions should be developed and improved.

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