



Kingdom of the Netherlands

HORTICULTURE STUDY

Phase 1: Mapping of production of fruits and Vegetables in Tanzania



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Acronyms

BDS	Business Development Services
BRC	British Retail Consortium
CSF	Critical Success Factors
EAC	East African Community
EC	European Commission
EKN	The Embassy of the Kingdom of the Netherlands
EU	European Union
EWURA	Energy and Water Regulatory Authority
HACCP	Hazard analysis and critical control points
HODECT	Horticultural Development Council of Tanzania
ISSHSP	Institutional Strengthening and Support to Horticultural Sector Program
ITC	The International Trade Centre
JKIA	Jomo Kenyatta International Airport Nairobi Kenya
JNIA	Julius Nyerere International Airport
KIA	Kilimanjaro International Airport
LGA	Local Government Authorities
MALF	Ministry of Agriculture, Livestock and Fisheries
MIT	Ministry of Industry and Trade
MMA	Match Maker Associates Limited
MOU	Memorandum of Understanding
OFSP	Orange Flesh Sweet Potatoes
SADC	Southern Africa Coordination Council
SEVIA	Seeds of Expertise for the Vegetable Sector of Africa
SHF	Smallholder Farmers
SME	Small and Medium Enterprises
SPS	Sanitary and Phytosanitary
TAA	Tanzania Airports Authority
TAHA	Tanzania Horticultural Association
TCAA	Tanzania Civil Aviation Authority
TAZARA	Tanzania Zambia Railways Authority
TCAA	Tanzania Civil Aviation Authority
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TPA	Tanzania Ports Authority
TPRA	Tanzania Pesticide Regulatory Authorities
TRA	Tanzania Revenue Authority
TSB	Tender Stem Broccoli
UK	United Kingdom
URT	United Republic of Tanzania
USA	United States of America
VAT	Value Added Tax
ZSTC	Zanzibar State Trading Corporation

1. Abstract

Horticulture industry in Tanzania is the fastest growing subsector within the agricultural sector with an annual average growth of about 9 - 12 per cent per annum. This record of growth is more than double the overall annual growth rate of the agricultural sector. In 2015, horticulture contributed 38% of the foreign income earned from the agriculture sector. The exports value in 2015 reached US \$ 545 million, compared to US \$ 64 million in 2005. Horticulture sub sector employs about 2.5 million people, which makes the industry a major employer within the agricultural sector.

Wide ranges of fruits are cultivated albeit in different degrees of intensity. These include tropical fruits like citrus, mangoes, pineapples, avocado, jackfruit and guavas, but also fruits suitable to more temperate climates (the highlands) such as apples, pears, peaches, plums, blackberries and strawberries. Varieties of vegetables produced in Tanzania include Asian vegetables, baby corn, baby marrow, beetroots, beans, cabbage, carrots and baby carrots, cauliflower, eggplant, kale, leeks, onions and shallots, okra, peas, potatoes, spinach and tomatoes to name a few. Tanzania is among world top 20 producers of fresh vegetables according to FAOSTAT data, although it has an insignificant position in the export of vegetables, mainly due to the current business arrangements whereby Tanzanian exporting companies are subsidiaries of large aggregation companies often based in Kenya, and these kinds of exports are not fully captured in Tanzania data.

The horticulture industry is dominated by small-scale farmers with less than 2 hectares, especially in vegetables production whereby they account for about 70% of vegetable producers. Majority of these small-scale farmers are not connected to the regional and international markets and therefore have limited chance to conduct export business themselves. Some producers have formed groups to produce as contract farmers or out growers to large scale export firms. Currently, Tanzania's horticulture industry has less than 40 large-scale growers/exporters (off takers), majority of them located in the northern Tanzania (Arusha and Manyara).

Less than 10% of the horticultural products produced in Tanzania are exported to European Union, regional markets (i.e. East African Community – EAC, Southern African Development Community – SADC) and Middle East. This implies that the local market consumes most of the horticultural produce, predominantly in fresh form and a very small proportion is processed. A significant proportion of horticultural produce also go to waste due to basic and inadequate post-harvest facilities and perishable nature of horticultural crops.

A good number of producers, exporters and other stakeholders have been interviewed during this scoping exercise (refer to annex 1). These producers are engaged in the production and marketing of horticultural crops, mainly targeting export markets. Their experiences and challenges, as well as areas they identified that require additional investments are highlighted in this report. In a nutshell, the following are the main findings from the interviews and secondary data assessment:

- (i) Vegetable accounts for the largest percentage of horticulture exports in Tanzania. For instance, in 2013 and 2014 vegetable exports accounted for 61% and 48% respectively of total horticulture exports value. There is no clear-cut analysis made of the fluctuations in the percentage, however further analysis of 2015 data from TRA confirms that vegetables contribution fluctuates between 50%-60% of horticultural exports value which is significant.
- (ii) Fresh French Beans and different types of peas are currently the main exports in the (traditional) vegetables product group, accounting for about 50% in quantity and value.

- (iii) Companies dealing with export (by air) of French beans combines with a basket of other high value vegetables such as Sugar Snaps, Peas, Baby Corn, Broccoli (TSB), Soy Beans, Okra etc. although the volumes are not significant to attract cargo planes directly from Tanzania. Apart from the traditional vegetable group, Tanzania is also exporting new leafy crops usually in ready packed form including spinach, lettuce and swiss chart. In general, the main export market for Tanzania for all these products is mainly UK and EU.
- (iv) In the fruits group, avocado is coming up as a main export opportunity in terms of volume although Tanzania's contribution to the export from EAC is still negligible (12%). Mango comes second but also the volumes are negligible (10 tones year and mainly to Middle East.
- (v) Niche production and export of herbs such as Mint and Chives is available under commercial production from one farm in Arusha with less than 200 tons per year. Dried Ginger is also another niche herbal product for local and export market and currently small quantities are exported to India & China.
- (vi) The following opportunity window for different horticultural crops to EU/UK has been established based on the market scan done as part of this study and is summarised below:

Product	Peak demand months – EU/NL	Remarks for Tanzania
Avocado	February- September	Good match only missing out in Mar-April.
Mango	October – Mid November & May - July	The only window is one month in November.
Sweet Onions	End December - March	Good match only missing out in March.
Fresh Garlic	November - February	Total mismatch
Soft Fruits (strawberry, berries, raspberry, black berry)	October - May	Perfect Match
Fine Beans	All Year Round (AYR)	Perfect Match only missing out in the May-Sept window.
Sugar Snaps, Mangetout	April - May & October- November	Perfect match and great opportunity to expand

- (vii) The imports of fruits and vegetables to Tanzania have been rather flat over the last 10 years according to records from TRA. Annually about USD 10 million worth of imports seems to be recorded which is not so significant. Typical imports include vegetable seeds, fruits such as apple, dates, guava etc. and processed products.
- (viii) There is insignificant processing of horticultural products for export market. Canned French Beans is coming up and so far, only one company is involved in the canning business. Plans are underway with other investors to come in this industry.
- (ix) There are at most 40 SME companies involved in the export of horticultural products in Tanzania. About 50% of these companies are members of TAHA. Also, a good number of these off takers are working with outgrowers. TAHA trained over 28,500 SHFs and linked about 1,500 SHFs to different exporters between 2012-2015 (TAHA USAID – ISSHSP Project Final Report)
- (x) Most of the companies in Tanzania handling horticultural exports are subsidiaries of companies based in Kenya or other countries. Hence exports from Tanzania are mainly aggregated in Kenya for the export market. Direct exports from KIA are growing but still insignificant mainly due to the fact that Tanzania so far utilizes KLM passenger plane and its capacity is difficult to determine beforehand. TAHA Fresh Logistics – a subsidiary

company of TAHA is in discussions with various airlines about the possibility of starting up airfreight cargo that could aggregate from the different horticultural clusters in Tanzania.

Main investment opportunities in the horticultural industry in Tanzania include:

- Investing in increased production and productivity for most crops (avocado, beans, herbs), in new farms or in strategic collaboration with existing entrepreneurs with land.
- Investing as an off taker with requisite logistics infrastructure (storage, transport, etc). Southern Tanzania has room for more off-takers and it may be feasible to invest in containerisation along the TAZARA railway that could connect with Dar es salaam port.
NB: Currently the governments of Zambia and Tanzania have resolved to upgrade the TAZARA railway line.
- Investment in airfreight Cargo with necessary facilities and services. One critical service is insurance for export cargo. TAHA Fresh is working on the issue.
- Investment in value addition in particular for Canning of Fine French beans (currently only 1 company has invested in caning); Also for Gurkin and Asparagus (although there is no investment made yet in the country).
- Investment in the state of the art canning & packaging materials (promising prospects especially if VAT exemption could be negotiated with TRA, which is currently being pursued by TAHA.)
- Investment in Marketing and Distribution in the source markets (UK & EU).
- Investment in technologies & simple equipment supply e.g. for seed cleaning, storage, packing, cold chain transportation etc.)
- Irish potatoes – processed in chips mainly for local market (3 varieties already registered, and Netherlands government has signed MOU with Tanzanian government to supply technologies for storage of seed materials.
- Investment in the value chain of Orange Flesh Sweet Potatoes (OFSP) that have appropriate growing conditions in Southern Tanzania and has a growing local and regional market demand, with potential small niche markets in EU. The investment should include relevant logistics for storage, transport and export via containers by Sea freight.
- Investment in Banana production based on appropriate conditions for local and export market (this opportunity require more market demand confirmation)

2. Tanzania - Mapping of Horticultural Products

2.1 Mapping of horticultural products in Tanzania

Data on the quantities of fruits and vegetables produced in the United Republic of Tanzania (URT) is incomplete, old and in some cases, unreliable. This is largely due to the absence of official government authority or a unit at the Ministry, that is dedicated to the coordination of the production and marketing of horticultural crops, which should be collating data. The Horticultural Development Council (HODECT) once initiated in the early 2010 has remained inactive.

Available data is a result of segmented information collected from different places, at different levels by different agencies and for different purposes. Production is generally characterized by low volumes, produced from different areas, which are hardly sufficient to match local demand and airtight supply chains for pre-defined export markets such as EU. In Table 1 an extensive list of potential horticultural crops and agro ecological suitable production regions in Tanzania is provided.

Table 1: Potential Horticultural Production areas in Tanzania

Horticultural products		
	Crops	Main production regions
Fruits	Oranges	Tanga, Coast, Morogoro, Dar es Salaam, Lindi and Mbeya (i.e. Kyela District) regions.
	Mangoes	Tabora, Shinyanga, Coast, Tanga, Morogoro, Lindi, Dar es Salaam, Mwanza and Mtwara regions
	Pawpaw	Coast, Morogoro and Tanga regions
	Pineapple	Dar es Salaam, Coast, Morogoro, Mwanza, Geita, Iringa, Njombe, Tanga and Kagera regions
	Banana	Kagera, Morogoro, Kilimanjaro, Tanga, Mbeya, Kigoma, Mwanza, Arusha, Ruvuma, Iringa and Mara (i.e. Tarime) regions
	Passion	Tanga, Coast and Morogoro regions
	Berries	Arusha and Tanga regions
	Avocado	Njombe, Iringa, Mbeya and Kilimanjaro regions
	Peaches	Tanga, Iringa, Njombe, Morogoro, Arusha, Ruvuma, Kilimanjaro and Mbeya regions
	Plums	Njombe, Iringa, Tanga, Arusha, Kilimanjaro, Morogoro and Mbeya regions
	Pears	Njombe, Iringa, Tanga, Arusha, Morogoro, Kilimanjaro, Ruvuma and Mbeya regions
	Apples	Njombe, Iringa, Tanga, Ruvuma, Morogoro, Arusha, Kilimanjaro and Mbeya regions
	Lime	Dar es Salaam, Coast, Mtwara, Lindi and Tanga regions
	Tangerine	Mtwara and Lindi regions
Grapes	Dodoma region	
Vegetables	Tomatoes	Iringa, Morogoro, Mwanza, Mbeya, Kilimanjaro, Tanga and Arusha regions
	Cabbage	Tanga, Morogoro, Njombe, Kilimanjaro, Arusha, Iringa, Kigoma, Mwanza, Geita, Mara and Mbeya regions
	Onions	Singida, Arusha, Iringa, Manyara, Morogoro, Mbeya, Kilimanjaro, Dodoma and Tanga regions
	Spinach,	Coast, Kilimanjaro, Iringa, Tanga, Arusha, Mwanza and Geita regions
	Amaranths	Kilimanjaro, Tanga, Iringa, Arusha, Morogoro, Mbeya, Mara and Mwanza regions
	Chives	Arusha

	Mint	Arusha
	Kale	Mwanza and Mara regions
	Chinese cabbage	Mara, Geita and Mwanza regions
	Okra	Kilimanjaro, Arusha, Tanga, Iringa, Morogoro, Mwanza, Mara and Geita regions
	Carrot	Morogoro, Tanga, Mbeya, Songwe, Mwanza, Mara, Geita, Arusha, Kilimanjaro and Iringa regions
	Green peas	Tanga region
	Swiss chard	Mara region
	Eggplant	Arusha, Kilimanjaro, Tanga, Iringa, Mwanza, Geita and Morogoro regions
	Sweet pepper	Morogoro, Tanga, Dar es Salaam, Coast, Mwanza, Geita, Mbeya, Iringa, Kigoma, Ruvuma, Arusha, Manyara, Kilimanjaro and Ruvuma regions
	Green beans	Arusha and Kilimanjaro regions
	Cauliflower	Morogoro region
	Potatoes	Njombe, Mbeya, Morogoro, Tanga Kilimanjaro, Arusha and Mara (i.e. Tarime) regions

Source: MMA interviews, November 2016

Spices in Tanzania

Apart from vegetables and fruits, a recent study (2014) on the road map for Tanzanian spices, indicated a huge potential for production of spices in Tanzania. Table 2 below is a summary of information about the types of spices, production areas and volumes produced in 2013 – 2015.

Table 2: Spices in Tanzania

Spice	Cultivation/cropping	Volumes (MT)	Growth opportunities
Clove	Zanzibar (Unguja) and Pemba, well established plantations. Export is controlled by Zanzibar State Trading Corporation (ZSTC)	2013: 5,500 2014: 2,800 2015: 3,500	New plantations in Tanga & Morogoro, where ZSTC does not control
Pepper	Isolated plants trained on large trees. Small plantations scarce	2010: 2,000 2014: 3,000	Plantation growing could increase volumes
Ginger	Cultivated in mono culture, 80% is used fresh on the local market	2005: 6,000 2014: 7,000	Slicing before drying
White cardamom	Traditionally grown in forests, Recently also in plantations	2010: 500 2014: 1,000	Increased planting
Cinnamon (zeylanicum)	Mixed cropping system. Today in Morogoro small plantations	2010: 600 2014: 1,500	Strong increase in acreage thanks to plantations
Chillies	Grown in monoculture under rain fed & irrigated conditions	2010: 7,000 2014: 9,000	Increasing acreage under organic production
Coriander	Grown in monoculture under rain fed condition in the semi-arid areas	2010: 1,000 2014: 800	Declining production due to competition for land with chick pea
Lemon Grass	Perennial grass, planted by using splits.	2010: 10 2014: 15	Monoculture system
Nutmeg	Some isolated trees	Very small	There is potential for production on the Mainland
Vanilla	Conventionally intercropped with banana or coffee	2010: 103 2014: 40	Increase in production is linked to World market price

Source: Tanzania Spices Road Map Report

2.1.1 Horticultural Clusters

Different horticultural studies have classified Tanzania to have five different clusters of horticultural development opportunities, each with different characteristics and at different

Southern Highlands: The climatic conditions in the southern highlands makes the regions hold the highest long-term potential for horticulture growth in Tanzania. Further development of existing infrastructure e.g. Mbeya airport, trunk roads, railway line and containers, and more investment in logistics such as cold chains (storage facilities, trucks, pack house, etc.) are required to make this zone a viable source for horticulture exports.

Central & Lake Zone:

The central and lake zone clusters are emerging as production areas for horticultural crops for the local and regional markets. With the expansion of Mwanza and Dodoma airports, and the road network that connects with all EAC countries, these zones can become a major horticulture export cluster as well.

2.2 Current export status of different clusters

TAHA, in its 2015 annual report has shown that export of horticultural products has increased over ten folds in the last ten years. This increase in export is considered as a signal of improvements in Tanzania’s comparative and competitive advantage, that has enabled the country to increase its share in the export market. The current status of export-oriented activities in the different clusters is summarized in Figure 2 below.

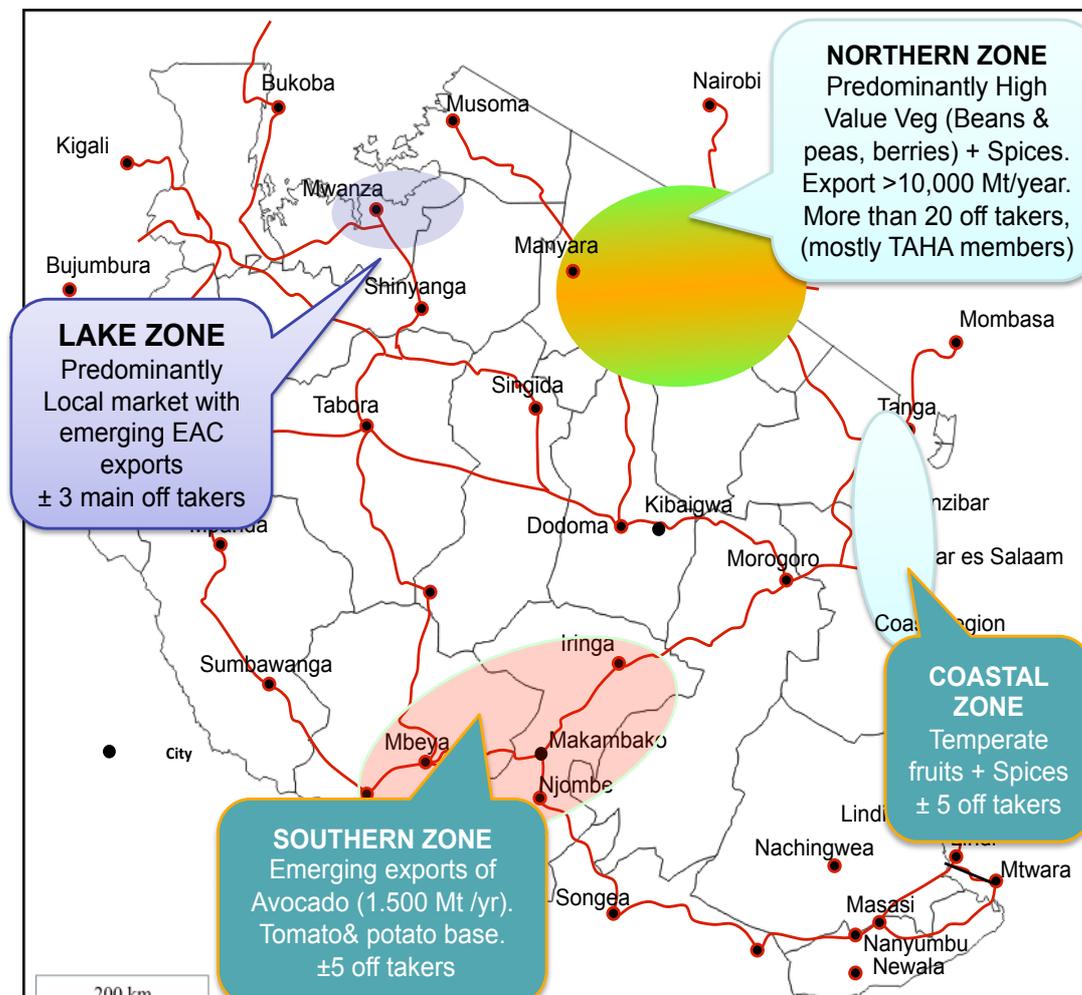


Figure 2: Current export status from different clusters

2.3 Production Calendar of main horticultural crops

Tanzania horticultural production calendar, which shows the peak availability of fruits and vegetables is summarised in Figure 3 below.

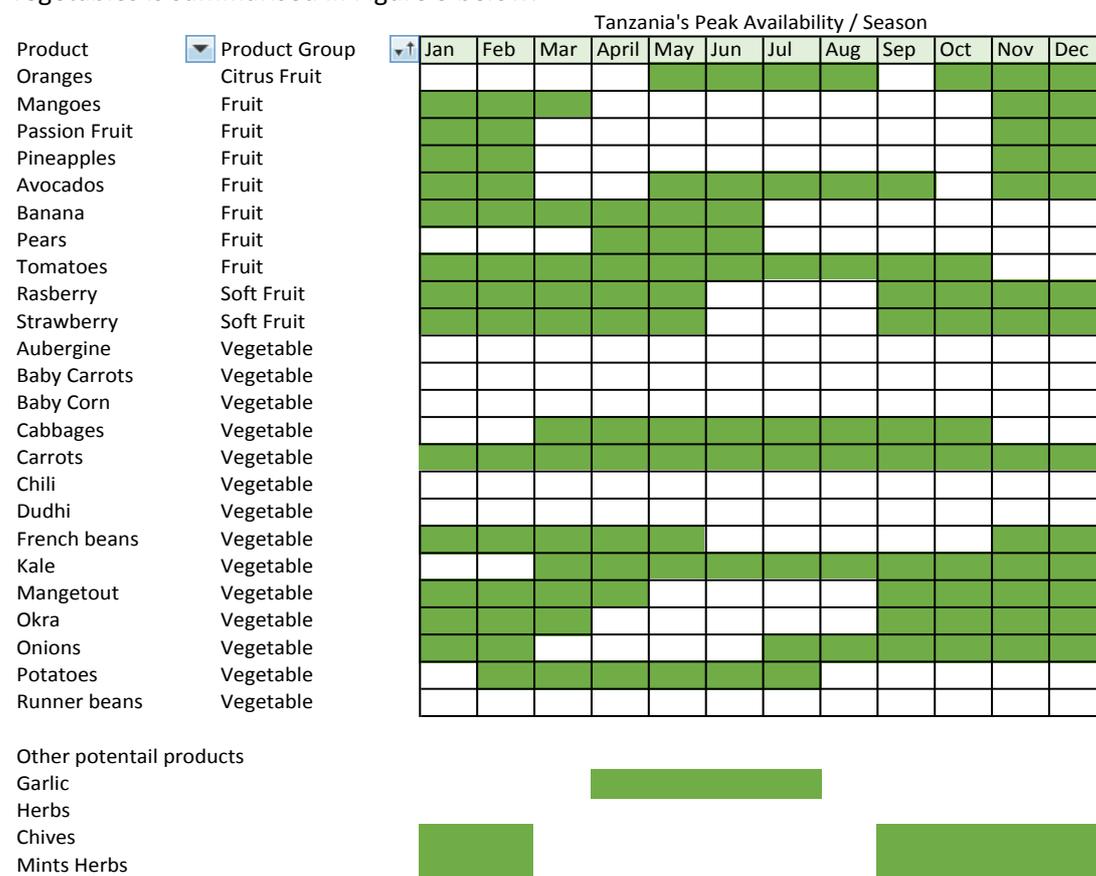


Figure 3: Horticultural crop calendar showing peak availability of fruits and vegetables

Production calendar for Spices is shown in Figure 4 below.

Spice crop	District	Harvesting season (Months)											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CLOVE	Morogoro Rural												
	Muheza												
	Zanzibar												
PEPPER	Morogoro R												
	Muheza												
CINNAMON	Morogoro R												
	Muheza												
CARDAMOM	Muheza												
	Mvomero												
VANILLA	Bukoba												
	Hai & Moshi												
GINGER	Same												
	Songea												
CORIANDER	Singida Rural												
LEMON GRASS	Mvomero												

Figure 4: Peak harvesting months for spices in Tanzania

These calendars have to be matched with the demand calendar in the importing countries and based on this calendar, one can establish if there are windows that show clear comparative and competitive advantage for Tanzania. A demand scoping study which was done in the EU / Netherlands as an extension of this study revealed that production seasons for most horticultural crops produced in Tanzania and Kenya has a good match with peak demand seasons in EU and the Netherlands. This implies that there are opportunities for Tanzania to match production with demand in the EU markets. Market window of opportunity for Tanzania is presented in table 3 below.

Table 3: Market window of opportunity for Tanzania

Product	Peak demand months – EU/NL	Remarks for Tanzania
Avocado	February- September	Good match only missing out in Mar-April.
Mango	October – Mid November & May – July	The only window is one month in November.
Sweet Onions	End December – March	Good match only missing out in March.
Fresh Garlic	November – February	Total mismatch
Soft Fruits (strawberry, berries, raspberry, black berry)	October – May	Perfect Match
Fine Beans	All Year Round	Perfect Match only missing out in the May-Sept window.
Sugar Snaps, Mangetout	April - May & October- November	Perfect match and great opportunity to expand

In general discussions with key exporters have pointed out that **January – April** (towards end of winter season in Europe) is the best window for exporting vegetables to Europe. It would seem that there are possibilities to take advantage of off-season production and hence supply some vegetables, which can be grown in a greenhouse. These vegetables include: fine beans, mangetout and berries. The challenge is to have a critical mass and this is why it is important to also assess past production trends. Assessment of production trends is presented in the next section.

2.4 Production, Export and import trends for main horticultural products

2.4.1 Production trends

Available data on production trend of fruits and vegetables for the last 10 years is summarised in table 4 and 5 respectively.

Table 4: Tanzania Fruits Production trends 2005/6 - 2012/13 (KGS)

Year	Oranges	Mangoes	Pawpaw	Pineapple	Banana	Guava	Lemon	Passion	Tangerines	Avocado	Sour sop	Peaches	Plums	Peas	Apples	Loquat	Jackfruit
2005/6	177,881	309,174	4,930	207,284	717,204	2,282	9,331	3,849	2,636	6,124	238	5,347	19,193	3,000	5,751	1,348	1,781
2006/7	181,550	334,986	5,032	211,560	823,305	2,329	9,500	4,259	2,690	6,250	243	5,458	19,589	3,200	6,066	1,558	2,066
2007/8	210,000	300,000	6,038	245,600	987,966	2,795	10,500	5,111	271,000	7,500	292	6,200	20,800	3,840	7,279	1,870	2,479
2008/9	217,362	371,525	6,425	225,121	1,008,390	3,253	13,002	5,491	137,422	7,241	319	6,540	20,995	4,056	7,255	2,102	2,813
2009/10	221,299	401,252	6,880	229,049	1,104,308	3,565	14,534	6,057	160,016	7,539	344	6,913	21,576	4,387	7,727	2,375	3,187
2010/11	230,746	430,979	7,335	232,977	3,878??	3,878	16,066	6,624	182,611	7,836	7,286	7,286	22,158	8,198	8,198	2,647	3,560
2011/12	240,194	460,707	7,790	236,905	4,191??	4,191	17,598	7,190	205,206	8,134	7,659	7,659	22,739	6,315	8,670	2,919	3,934
2012/13	249,641	490,434	8,244	240,832	617,008	4,504	19,130	7,757	227,800	8,431	4,832	8,031	23,321	9,141	9,154	3,191	4,307
2013/14										3,000 ¹							
2014/15										4,500							
2015/16																	

Source: MALF, 2016

Ministry of Agriculture has provided production data shown in table 4 above. Notably, the data is not up to-date. It seems that over the last 3 years, data was not aggregated. Mango and Avocado are the only fruits that are usually exported and data for Mango suggest that production have been increasing yearly. Avocado production increased up to 2012/13 and thereafter, export data is not available, implying that perhaps there were no significant exports. The avocado production data we have included in 2013-2015 is from two prominent production and exporting companies namely Africado and Rungwe Avocados, based in the Northern and Southern Tanzania respectively. The rest of the fruits are mainly produced and marketed locally with some of them finding their markets in the juice processing companies.

¹ Refers only to the production of avocados for export purposes from 2 key exporting companies

Table 5: Vegetables Production trends 2005/6 - 2015/16 (KGS)

Year	Tomatoes	Cabbage	Onions	Amaranths	Chinese cabbage	Okra	Carrot	Green peas	Swiss chard	Eggplant	Sweet pepper	Green beans
2005/6	451,750	294,515	143,948	22,619	5,408	678	3,408	3,050	657	4,276	5,286	4,809
2006/7	506,595	314,273	147,601	24,669	5,962	736	3,762	3,128	674	4,714	5,694	5,488
2007/8	607,914	377,128	177,121	29,603	7,154	883	4,514	3,754	809	4,900	6,833	6,586
2008/9	664,773	367,009	150,718	29,769	8,172	995	4,679	4,513	767	5,576	6,937	6,984
2009/10	739,251	389,544	150,600	32,132	9,129	1102	5,109	4,990	795	6,086	7,473	7,755
2010/11	813,729	412,080	150,484	34,495	10,085	1210	5,538	5,467	824	6,595	8,010	8,526
2011/12	888,207	434,616	150,367	36,858	11,042	1318	5,967	5,944	852	7,105	8,547	9,297
2012/13	962,684	457,151	150,249	39,220	11,999	1425	6,397	6,421	880	7,615	9,083	10,068

Source: MALF, 2016

The vegetable production trend shows a gradual, yearly increase of almost all vegetables. Green beans show a sharper growth in 2012/13, which confirms the fact that it is one of the main export product.

2.4.2 Export trends for main fruits and vegetables

Data for analysing export trends have been gathered from TAHA, ESRF, TRA and from individual exporters. Available data shows that in the past ten years, the horticulture industry has achieved rapid growth. According to TAHA (2016) horticulture exports from Tanzania hit a record of USD 546 million in 2015, up from USD 46 million per annum in 2006 (**Figure 5**). The main horticultural export crops were partly from the northern zone of Tanzania (Arusha and Kilimanjaro regions) but also from other regions such as Coast, Morogoro, Iringa, Mbeya, Manyara and Tanga. It has been projected by TAHA that by year 2020, horticultural export value would have grown to USD 1,850 million due to increasing investments in the sector. Figure 5 shows the export growth trend based on export value for the last 10 years. In subsequent tables, the researchers used TRA data to analyse the top 20 commodities that were exported and the main export destinations.



Figure 5: Tanzania Horticulture Export Value 2006 - 2015

Source: ESRF, 2013; Ikupa, 2015 and TAHA, 2016

Vegetable accounts for the largest percentage of horticulture exports in Tanzania. For instance, in 2014 vegetable exports accounted for 48% of total horticulture export value, while in 2013, it accounted for 61%. Below is an analysis of export data for 20 top exported products in the years 2012, 2014 and 2015 which indeed confirms that the exports of fruits and vegetables contributes above 50 – 60%. The rest is accounted for by floriculture.

Table 6: Top 20 exports products in 2012 (fruits & vegetables) in terms value

Description of Goods	Destination Country	Values in TZS
Peas (Pisum sativum)	IN,OM,TW,KE,AE,IN,PK,UG,BE,SG,CD	169,099,751,630
Beans	AE,AO,AU,BE,BH,BI,GB,CA,CD,CN,DE,ES,FR,HK,ID,IL,ZA,ZM,VN,US,UG,TR,TZ,SG,SR,RW,QA,PK,MY,LK,KE,IN	38,358,463,316
Seed: Potatoes	IN,KM,KE,NL,DE,NL,NO,HR,RW	19,058,989,667
Oranges	KE,KM,RW	10,040,373,080
Mixture of vegetables	RW,CO,NL,PK,OM,IN,DE,AE	4,184,683,479
Onions and shallots	DE,KE,KM,RW,BI,CD,UG,CG	3,994,325,487
Tomatoes, fresh or chilled.	KM,KE,RW,CD,RW,NL	670,762,767
Avocados	BE,FR,GB,KE,NL	646,087,481

Other vegetables	NL,GB,MZ,KM,RW,OM,DE,FR,ZM,CA,CH,IL	463,092,375
Other:Potatoes	DE,KM,RW, KE,FR	334,667,620
Strawberries	NL	199,603,379
Pineapples	KE,GM,DE,DC,CD	148,268,088
Potatoes	KM,KE	90,000,000
Guavas, mangoes and mangosteens	AE,CD,FR,OM,RW	68,917,010
Leeks and other vegetables	KE,NL,SE	54,885,257
Other:Citrus fruit	GB,KE,NL,OM,RW	36,250,150
Pears and quinces	KE	29,432,800
Plums and sloes	KE,RW,ZM	23,482,813
Apples	CD,KE,RW,UG	14,409,000
Dates	DE,GB,RW,ZM	9,286,103
Papaws (papayas)	DE,GE,GM	8,086,770
TOTAL(TZS)		247,533,818,272
TOTAL(USD \$) 1583		156,370,068

Source: TRA Extracts 2016

Table 7: Top 20 exports products in 2014 (fruits & vegetables) in terms value

Description of Goods	Destination Country	Values in TZS
Beans	AE,AO,AU,BE,BH,BI,GB,CA,CD,CN,DE,ES,FR,HK,ID,IL,ZA,ZM,VN,US,UG,TR,TZ,SG,SR,RW,QA,PK,MY,LK,KE,IN	100,412,312,480
Other vegetables	NL,GB,MZ,KM,RW,OM,DE,FR,ZM,CA,CH,IL	89,359,596,624
Peas (Pisum sativum)	IN,OM,TW,KE,AE,IN,PK,UG,BE,SG,CD	29,992,356,708
Mixture of vegetables	RW,CO,NL,PK,OM,IN,DE,AE	9,714,614,893
Avocados	BE,FR,GB,KE,NL	1,440,143,356
Onions and shallots	DE,KE,KM,RW,BI,CD,UG,CG	1,002,363,304
Oranges	KE,KM,RW	393,512,186

Pineapples	KE,GM,DE,DC,CD	193,991,528
Tomatoes, fresh or chilled.	KM,KE,RW,CD,RW,NL	95,177,925
Strawberries	NL	36,278,407
Pears and quinces	KE	25,959,360
Papaws (papayas)	DE,GE,GM	25,377,416
Pumpkin seeds	YE	18,720,000
Other:Potatoes	DE,KM,RW, KE,FR	10,003,304
Aubergines (egg-plants)	YE	7,500,000
Guavas, mangoes and mangosteens	AE,CD,FR,OM,RW	5,900,000
Cauliflowers and headed broccoli	BI,RW	5,150,000
Seed: Potatoes	IN,KM,KE,NL,DE,NL,NO,HR,RW	4,062,336
Cabbage lettuce (head lettuce)	KM	4,000,000
Plums and sloes	KE,RW,ZM	3,500,000
Potatoes	KM,KE	3,000,000
TOTAL (TZS)		232,753,519,827
TOTAL (USD \$) (TZS 1654/\$)		140,721,596

Source: TRA Extracts 2016

Table 8: Top 20 exports products in 2015 (fruits & vegetables) in terms value

Description of Goods	Destination Country	Values in TZS
Onions and shallots	DE,KE,KM,RW,BI,CD,UG,CG	174,992,940,998
Beans	AE,AO,AU,BE,BH,BI,GB,CA,CD,CN,DE,ES,FR,HK,ID,IL,ZA,ZM,VN,US,UG,TR,TZ,SG,SR,RW,QA,PK,MY,LK,KE,IN	132,982,187,860
Peas (Pisum sativum)	IN,OM,TW,KE,AE,IN,PK,UG,BE,SG,CD	77,066,981,488
Oranges	KE,KM,RW	45,108,857,507
Other vegetables	NL,GB,MZ,KM,RW,OM,DE,FR,ZM,CA,CH,IL	8,206,861,670
Other:Potatoes	DE,KM,RW, KE,FR	6,505,236,031
Mixture of vegetables	RW,CO,NL,PK,OM,IN,DE,AE	5,036,447,995

Avocados	BE,FR,GB,KE,NL	2,559,729,940
Potatoes	KM,KE	688,141,638
Raspberries, blackberries, mulberries and loganberries	NL	584,824,805
Leeks and other vegetables	KE,NL,SE	550,864,816
Pineapples	KE,GM,DE,DC,CD	333,908,876
Strawberries	NL	294,372,925
Other fruits	KE,RW	146,328,360
Peas (Pisum sativum)	KE,NL,OM,IN,ZM	87,340,616
Guavas, mangoes and mangosteens	AE,CD,FR,OM,RW	54,667,255
Wood ears (Auricularia spp.)	GB,IT	48,905,814
Cranberries, bilberries and other fruits of the genus Vaccinium	NL	47,463,735
Aubergines (egg-plants)	YE	37,706,222
Papaws (papayas)	DE,GE,GM	22,364,953
Tomatoes, fresh or chilled.	KM,KE,RW,CD,RW,NL	20,855,569
TOTAL (TZS)		455,376,989,073
TOTAL (USD) (TZS 2040/\$)		223,224,014

It is clear from the data that in the last 5 – 10 years, the main exports are either targeting EU and UK and Middle East or East African countries. Most commodities exported to EU/UK and Middle East are Green Beans, Peas, Assorted high value vegetables, avocado and berries. Common exports to the EAC countries include oranges, onions, tomatoes and pineapples.

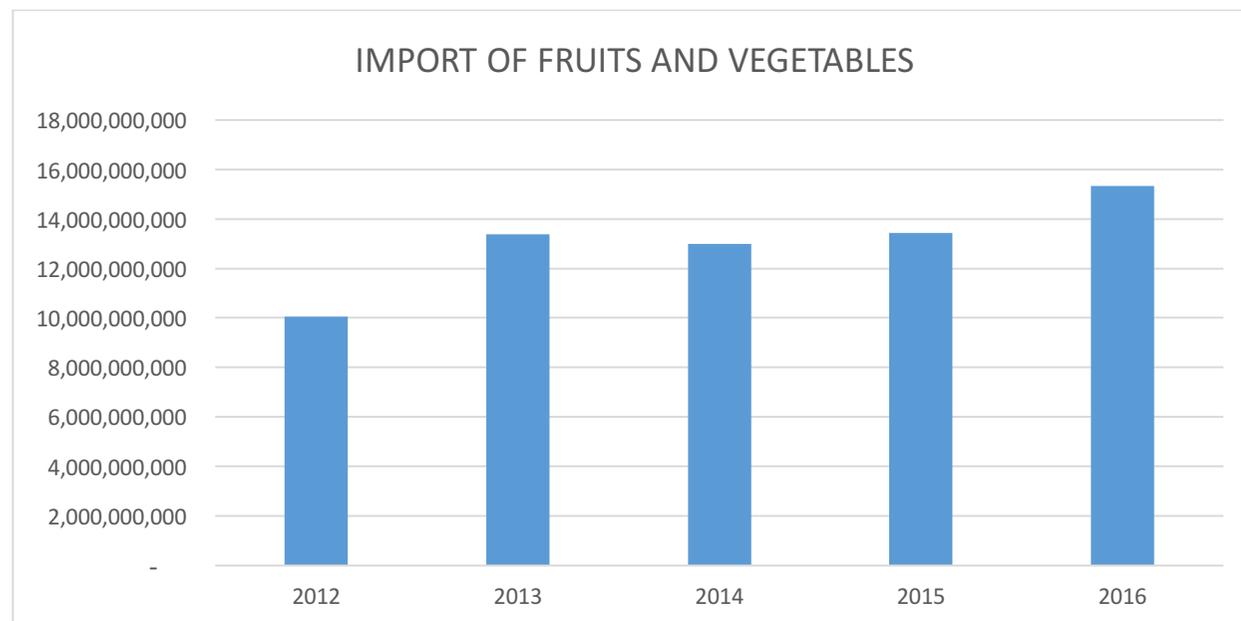
2.4.3 Import trends for main fruits and vegetables

Due to scarcity of data, the consultants used solely the TRA custom figures to analyse the import trends. Findings provide anecdotal evidence of increases in import volumes and value. Tables 9 provide the overall summary, while tables 10-12 provides details.

Table 9: Tanzania- Import trends for past 5 years for fruits and vegetables

YEARS	2012	2013	2014	2015	2016
VALUES (TZS)	10,039,311,933	13,383,741,675	12,996,834,317	13,428,556,693	15,349,292,919
VALUES (USD)	6,341,953	8,091,742	7,857,820	6,582,626	7,309,187
EXCHANGE RATE	TZS 1583 /\$	TZS 1654/\$	TZS 1654 /\$	TZS 2040 /\$	TZS 2100 /\$

Source: TRA Extracts 2016



Source: TRA 2016

Table 10: Top 20 import products (fruits & vegetables) in terms value - 2012

Description of Goods	Destination Country	Custom Values in TZS
Apples	AE,BE,CA,CN,FR,GB,IT,KE,NL,TH,US,ZA	3,128,042,052
Dates fresh or dried	DE,DZ,GB,IL,IN,IQ,IR,MA,ML,MY,MY,OM,PK,SA,SR,TH,TR,TZ,YE,ZA	2,067,864,694
Peas (Pisum sativum)	AE,BE,BR,CA,CN,ES,GB,IN,IT,KE,US	1,488,191,622
Beans	AE,AO,AU,BE,BH,BI,GB,CA,CD,CN,DE,ES,FR,HK,ID,IL,ZA,ZM,VN,US,UG,TR,TZ,SG,SR,RW,QA,PK,MY,LK,KE,IN	1,403,614,145
Other:Potatoes, fresh or chilled	AE,BE,CA,CN,DE,GB,IN,JP,KE,MY,NL,RW,SA,SY,UG,US,ZA	407,653,767
Onions and shallots	AE,GB,HK,IN,IT,KE,NL,PH,US,ZA	306,511,663
Garlic	AD,AE,CN,EG,GB,IN,KE,KR,NL,ZA	287,740,946
Grapes	AE,CA,CN,DK,EG,GB,IL,IN,IR,IT,NL,OM,US,ZA	281,755,240
Potatoes	AE,BE,CN,DE,ES,GB,HK,IT,KE,MY,NL,PE,PH,PK,PL,RW,SA,TH,ZA	153,850,569
Guavas, mangoes and mangosteens MANGO	AE,CN,DE,EG,GB,IN,KE,MY,ZA	150,658,320
Seed: Potatoes	AE,CN,DE,ES,GB,IN,IT,JP,KE,MX,NL,RE,TH,US,ZA	67,617,624
Other:Citrus fruit, fresh or dried. PLUMS	AE,CN,ES,GB,IN,IT,KE,PH,TR,US,ZA	49,084,791
Pears	AE,CN,ES,GB,IT,NL,ZA	38,471,574
Carrots and turnips	AE,CN,DE,GB,KE,NL,RW,US,ZA	37,698,508
Plums and sloes PLUMS	AE,CN,DE,ES,GB,IN,JP,NL,ZA	37,020,188
Other vegetables	AE,GB,IT,MY,UG,ZA	30,334,755
Strawberries	CA,DE,GB,IN,IT,MY,OM,PK,US,ZA	20,527,823
Lemons and other Citrus varieties	AE,CA,CZ,GB,IL,KE,IN,NL,PH,ZA	15,932,550
Mushrooms of the genus Agaricus	AE,CN,IT,ZA,IT	11,514,696
Wood ears (Auricularia spp.)	CN,GB	8,803,945
Other fruits	AE,CN,EG,ES,FR,GB,IN,IT,JP,KR,NL,OM,US,YE,ZA	8,162,319

TOTAL (TZS)		10,001,051,791
TOTAL USD (TZS 1583/\$)		6,317,784

Table 11: Top 20 import products (fruits & vegetables) in terms value 2014

Description of Goods	Destination Country	Values in TZS
Apples	AE,BE,CA,CN,FR,GB,IT,KE,NL,TH,US,ZA	3,937,942,572
Peas (Pisum sativum)	AE,BE,BR,CA,CN,ES,GB,IN,IT,KE,US	2,395,775,538
Beans	AE,AO,AU,BE,BH,BI,GB,CA,CD,CN,DE,ES,FR,HK,ID,IL,ZA,ZM,VN,US,UG,TR,TZ,SG,SR,RW,QA,PK,MY,LK,KE,I N	2,054,754,071
Dates fresh or dried	DE,DZ,GB,IL,IN,IQ,IR,MA,ML,MY,MY,OM,PK,SA,SR,TH,TR,TZ,YE,ZA	1,886,129,035
Garlic	AD,AE,CN,EG,GB,IN,KE,KR,NL,ZA	654,562,909
Potatoes	AE,BE,CN,DE,ES,GB,HK,IT,KE,MY,NL,PE,PH,PK,PL,RW,SA,TH,ZA	640,570,547
Grapes	AE,CA,CN,DK,EG,GB,IL,IN,IR,IT,NL,OM,US,ZA	580,462,560
Other:Potatoes, fresh or chilled	AE,BE,CA,CN,DE,GB,IN,JP,KE,MY,NL,RW,SA,SY,UG,US,ZA	184,358,272
Onions and shallots	AE,GB,HK,IN,IT,KE,NL,PH,US,ZA	105,872,878
Other vegetables	AE,GB,IT,MY,UG,ZA	79,223,101
Guavas, mangoes and mangosteens MANGO	AE,CN,DE,EG,GB,IN,KE,MY,ZA	67,988,509
Pears	AE,CN,ES,GB,IT,NL,ZA	61,219,206
Other:Citrus fruit, fresh or dried. PLUMS	AE,CN,ES,GB,IN,IT,KE,PH,TR,US,ZA	56,524,765
Carrots and turnips	AE,CN,DE,GB,KE,NL,RW,US,ZA	53,589,325
Seed: Potatoes	AE,CN,DE,ES,GB,IN,IT,JP,KE,MX,NL,RE,TH,US,ZA	26,631,605
Strawberries	CA,DE,GB,IN,IT,MY,OM,PK,US,ZA	25,941,161
Other:Other vegetables, fresh or chilled	AE,CN,GB,IN,IT,KE,KR,MY,TH,TR,US,ZA	21,708,046
Mushrooms of the genus Agaricus	AE,CN,IT,ZA,IT	21,471,719
Tomatoes, fresh or	AE,CN,DE,EG,GB,ID,IN,IT,KE,NL,US,ZA	18,479,851

chilled.		
Lemons and other citrus varieties	AE,CA,CZ,GB,IL,KE,IN,NL,PH,ZA	15,796,233
Other fruits	AE,CN,EG,ES,FR,GB,IN,IT,JP,KR,NL,OM,US,YE,ZA	14,285,380
TOTAL (TZS)		12,903,287,283
TOTAL USD (1654/\$)		7,801,262

Table 12: Top 20 import products (fruits & vegetables) in terms value 2015

Description of Goods	Destination Country	Values in TZS
Apples	AE,BE,CA,CN,FR,GB,IT,KE,NL,TH,US,ZA	6,632,014,869
Dates fresh or dried	DE,DZ,GB,IL,IN,IQ,IR,MA,ML,MY,MY,OM,PK,SA,SR,TH,TR,TZ,YE,ZA	1,991,423,364
Beans – seeds	AE,AO,AU,BE,BH,BI,GB,CA,CD,CN,DE,ES,FR,HK,ID,IL,ZA,ZM,VN,US ,TR,TZ,SG,SR,RW,QA,PK,MY,LK,KE, IN	1,489,410,498
Garlic	AD,AE,CN,EG,GB,IN,KE,KR,NL,ZA	707,663,729
Potatoes - seeds	AE,BE,CN,DE,ES,GB,HK,IT,KE,MY,NL,PE,PH,PK,PL,RW,SA,TH,ZA	540,402,296
Grapes	AE,CA,CN,DK,EG,GB,IL,IN,IR,IT,NL,OM,US,ZA	423,457,563
Peas (Pisum sativum)	AE,BE,BR,CA,CN,ES,GB,IN,IT,KE,US	225,577,080
Seed: Potatoes	AE,CN,DE,ES,GB,IN,IT,JP,KE,MX,NL,RE,TH,US,ZA	198,523,477
Other fruits	AE,CN,EG,ES,FR,GB,IN,IT,JP,KR,NL,OM,US,YE,ZA	188,790,780
Pears	AE,CN,ES,GB,IT,NL,ZA	179,771,823
Other: Potatoes, fresh or chilled	AE,BE,CA,CN,DE,GB,IN,JP,KE,MY,NL,RW,SA,SY,UG,US,ZA	170,733,603
Other vegetables	AE,GB,IT,MY,UG,ZA	99,675,747
Oranges	AE,CA,CN,GB,EG,IL,IN,IT,JP,KE,NL,ZA	86,659,557
Onions and shallots	AE,GB,HK,IN,IT,KE,NL,PH,US,ZA	64,791,935
Peaches, including nectarines	AE,AU,CN,GB,NL,US,ZA	45,208,503
Lemons and other citrus varieties	AE,CA,CZ,GB,IL,KE,IN,NL,PH,ZA	42,817,059
Other: vegetables, fresh or chilled	AE,CN,GB,IN,IT,KE,KR,MY,TH,TR,US,ZA	42,742,925

Tomatoes, fresh or chilled.	AE,CN,DE,EG,GB,ID,IN,IT,KE,NL,US,ZA	36,571,645
Plums and sloes PLUMS	AE,CN,DE,ES,GB,IN,JP,NL,ZA	31,720,867
Cabbages, cauliflowers, kohlrabi, kale	AE,CA,CN,GD,CR,NL,ZA	29,860,083
Carrots and turnips	AE,CN,DE,GB,KE,NL,RW,US,ZA	27,438,756
TOTAL (IN TZS)		13,255,256,159
TOTAL IN USD (TZS 2040)		6,497,675

The import trend has been rather steady over the last 10 years. Available figures do not show significant import values of these commodities. Annually about USD 10 millions of imports seems to be recorded. Typical imports include vegetable seeds, fruits such as apple, dates, guava etc and processed products.

2.5 Main stakeholders in Horticultural value chains in Tanzania

Tanzanian Horticultural Association (TAHA) – Apex Private Sector member based organization that facilitate the development and inclusive growth of the horticultural industry in Tanzania. Established in 2004 with the financing of a Dutch grant, TAHA aims at promoting and developing horticulture sector and addressing the general and specific needs of its members. TAHA defends farmers’ interests at national level by lobbying for the implementation of favourable private and public policies to promote farming and providing farmers with technical training. TAHA has been dealing with over 30,000 farmers, training them on various crop productivity technologies and Good Agricultural Practices (GAP) to enable them meet standards requirements for international markets such as the Global Gap Certificatation. Furthermore, TAHA promotes the horticulture industry locally and abroad. TAHA’s ambition is to make horticulture industry a 1-billion-dollar industry by 2018.

HomeVeg & other Off takers in Northern & Southern Tanzania: have been promoting vegetables production and have facilitated formation of farmer groups in Arusha and Kilimanjaro regions. The key players in the HomeVeg Business Model include Private Organizations like HomeVeg itself, small-scale producers, Input Suppliers and Service Providers, Transporters, Exporters, Airport Authorities, and Clients (in the export market). This marketing model operates through contract farming system where private organizations like HomeVeg enter into contract with farmer association or groups. Through contract farming, HomeVeg promotes and help small-scale producers to form groups where group members are initially trained vigorously on group dynamics, farming techniques and extension services. In addition, HomeVeg supports these groups to access input credit, extension services, storage facilities (including input storage rooms, cold rooms) and markets for their products. In turn all producers under contract farming sell their products to HomeVeg at a given price. HomeVeg supplies its produce to main companies like Serengeti Fresh and Flamingo who in turn have direct export markets. Profile of other key exporting companies is highlighted in annex 1.

Large Scale Farmers: According to TAHA, large scale farmers are those having farms of at least 12 hectares (i.e. approximately 30 acres). Tanzania’s horticulture industry has less than 30 large-scale growers, majority of them located in northern Tanzania (Arusha and Manyara).

Small Scale Farmers: are those having plot sizes that are below 2 acres. Small-scale farmers practice a mix of commercial and subsistence production. They are very important in the value chain of horticulture products in Tanzania because they are dominant in the production, especially in vegetables production where they account for 70% of vegetable producers. In horticulture industry, small scale farmers are divided into three groups; (i) individual small scale farmers (ii) small scale farmers in groups without a registered group or association and (iii) out grower famer’s groups (registered). Small-scale farmers lack the skills and knowledge needed to produce horticulture crops because for many of them, these crops are new (or have only produced for the local market) and difficult to produce to meet international quality standards.

TAHA Fresh Logistics Company: a liability partnership between the Tanzania Horticulture Association and some of the top horticulture producers and exporters in Tanzania. Established in 2008 by TAHA and funded by USAID to ensure systemic and reliable services by enhancing the structure through the facilitation of quality and innovative logistical services to the horticultural industry in Tanzania. The company offers quick professional logistic services for the prompt delivery of horticulture products. Whether it’s KIA, JNIA in Tanzania or JKIA in Kenya or at regional, continental and inter-continental destinations. TAHA Fresh Company is becoming instrumentals in facilitating exports logistics in the country and its performance has been impressive as summarised in Table 5 below.

Table 13: TAHA Fresh Company performance 2012 - 2015

Key performance	2012	2013	2014	2015
Number of clients	15	14	17	30
Airfreighting (MT)	870	888	683	1,109
Trucking (MT)	954	1,666	624	791

Source: TAHA Fresh, 2016

Exporters: Exporters of horticulture products prefer to use a direct plane to its destinations to avoid risks of delay and losing control of products when they have to be offloaded and uplifted again at another airport. At KIA, exporters have only one option to export products to Europe, the KLM passenger airline resulting into limited and unpredictable cargo capacity at the airport. Due to this situation, most exporters in northern zone opt to export their products through JKIA in Nairobi and JNIA in Dar es Salaam. Limited capacity at KIA and high airfreight cost make it extremely difficult for exporters to export via KIA. Exporters prefer to use JKIA because it is reliable and also there are more options to transport their products unlike at KIA. Also, the fact that most exporters have sister companies in Kenya makes bulking and logistics arrangement from Nairobi much more economical.

Input Suppliers (Seed, Fertilizer, Pesticides, Farm equipment and machinery): Input suppliers like By-Trade, Yara, Minjingu and Balton are important partners for the horticulture farmers as they provide a range of pesticides, fungicides and fertilizers necessary to cope with increasing demand among horticulture farmers. The agro-dealers located in rural areas close to farmers are stocking inputs that farmers often demand.

Research institutes: Sokoine University of Agriculture (SUA), the World Vegetable Centre, the Horticultural Tengeru Institute, the Selian Agricultural Research Institute and the Mikocheni Research Institute are among the institutes that support the horticultural producers and processors with research related services for their compliance to standards.

Ministries and Government Department and Agencies: Responsible ministries and government agencies include; Ministry of Agriculture Livestock and Fisheries (MALF), Ministry of Transport, Ministry of Industry and Trade (MIT), Tanzania Revenue Authority (TRA), Tanzania Airport Authority (TAA), Energy and Water Regulatory Authority (EWURA), Tanzania Port Authority (TPA), Tanzania Civil Aviation Authority (TCAA), Local Government Authorities (LGAs), Tanzania Pesticide Regulatory Authorities (TPRA), Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA). All these government institutions are supporting the horticulture sector, but lack adequate coordination. An initiative which was once started to establish Horticultural Development Council (HODECT) did not materialise.

TBS and TFDA: Horticultural produce consists of fresh and processed produce for export and domestic markets; the standards related matters for processed products are taken care of by the Tanzania Bureau of Standards (TBS) and the Tanzania Food and Drugs Authority (TFDA). While the TBS is more concerned with the standardization and quality matters, TFDA works more around food safety and the protection of the consumer's health.

2.6 Logistics requirements & challenges

Stakeholders have identified several critical success factors and challenges to meet such success factors. Among the main issues includes:

- Insufficient critical mass of production (quantity) with requisite quality / standards of the importing countries- Quantity, Quality and Consistent supply (QQC).
- Inadequate comprehensive and competitive logistics infrastructure for export market response. TAHA Fresh is filling the gap but still not sufficient. The situation is worsened by lack of investment in cargo airfreighting.
- High infrastructural and logistics costs of aggregation and transport from different production areas in the country.
- Data mismatch and unavailability: There is undesirable mismatch between vegetable production in Tanzania and official exports data from the country. This mismatch is a result of the fact that most of the horticulture products grown in the northern zone of Tanzania are exported through Nairobi as Kenya is attractive in terms of airport tariff than Tanzania. Also, it is important to note that Nairobi has the required airport facilities compared to the insufficient facilities present at Kilimanjaro International Airport (KIA) in Kilimanjaro region and Mwalimu Julius Nyerere International (JNIA) Airports in Dar es Salaam. Furthermore, storage and other export facilities are not yet developed in airports such as Mwanza, and Songwe (Mbeya), which are situated in the potential horticultural zones.

2.7 Analysis of the enabling business environment

The horticulture industry has been operating within the framework of the national policy priorities, national framework of institutions as well as the legal framework. In Tanzania, horticulture is regarded as a subsector of agriculture. It falls under sectoral (agricultural) policies which include **“the draft of the national agricultural policy of 2010”** which seeks to revolutionize agriculture through modernization and productivity enhancement and **The National Horticultural Strategy 2010-2020** which seeks to double agricultural exports by 2020. **“The national irrigation policy of 2009”** seeks to expand land under agriculture and improve agricultural productivity and profitability for food security and poverty alleviation through irrigation. In addition, horticulture industry also falls under the **“agricultural marketing policy of 2007”** which seeks to develop an efficient, effective, flexible, accessible, and equitable agricultural marketing system such as institutional and tax reforms in value chain, infrastructure and private sector development. Also, horticulture industry falls under **“Rural Development Policy of 2001”** focusing on increasing rural incomes through improving productivity of the agricultural sector, and growth of rural non-farm businesses to reduce poverty.

TAHA via lobbying and advocacy for policy changes role has successfully campaigned for numerous policy changes that have positively impacted the whole horticulture industry. For instance, TAHA played a crucial role in persuading the government of Tanzania to waive the 18% VAT placed on airfreight for horticulture products, which was hindering Tanzanian businesses to become more competitive in the international markets. Also, in 2013, TAHA uplifted Kenya’s import ban on Tanzania’s cut flowers in transit (imposed by Kenya in 2011 to protect Kenyan horticulture industry from pests) through JKIA for export to Europe and other countries.

Through the USAID funded project to TAHA - INSTITUTIONAL STRENGTHENING AND SUPPORT TO HORTICULTURE SECTOR PROGRAM (ISSHSP) 2012 – June 2016, a number of strategic issues holding back the competitiveness and growth were discussed and resolved with various government authorities. Summaries of the issues, which have a bearing to promote export potential of horticulture, are cited in Table 6 below.

Table 14: Summary of key policy issues recently resolved by government

	Issue	Programmatic Results
1.	Inclusion of agriculture in SDL exemptions in the VETA and Finance Laws	TAHA successfully advocated for reinstatement of agriculture in Skills Development levy (SDL) exemption list through VETA/Finance Act Amendments 2015).
2.	Reduction of land rent	Land rent has been reduced by 60% and 50% for village and commercial farms respectively.
3.	Inclusion of horticulture input and equipment in the VAT Act 2014	TAHA recommendations have been considered and included in the VAT Act 2015.
4.	Facilitating EPZA registrations for horticultural companies.	TAHA facilitated the registration of her companies under EPZA. In the recent past however, following the regulatory challenges raised between EPZA and LGAs, the EPZA has for some time suspended the licensing of continuing investments.
5.	Addressing inputs registration and importation challenges resulting from restrictive policies	TAHA successfully managed to engage the government to address input registration issues. As a result, the Ministry of Agriculture is amending fertilizer Act (2009) and regulations to address TAHA concerns.
6.	Facilitating industry involvement in the SAGCOT corridor	TAHA in collaboration with the SAGCOT has successfully mobilized partnerships to participate in the SAGCOT initiative
7.	Fast-tracking the issuance of import permit of unregistered chemicals from TPRI	Through TAHA engagements, TPRI issued registration permits to a number of pest control products including Cryptogram for controlling rotting pests in avocado, leaf miner (Tuta Absoluta) control products and Ethylene products for banana ripening

8.	Facilitation of VAT and Import duty Exemptions on importation of agricultural equipment.	The waiver of import duty and VAT for several products was granted to value chain actors to facilitate ease of access of agricultural inputs/equipment.
9.	Addressing the challenges related to the newly introduced TRA clearing system (TANCIS)	TRA accorded a special clearance of the horticultural products at the border immediately. Trucks clearance takes 2-3 hours instead of 10 hours before the intervention.
10.	Securing the VAT and import duty exemptions on importation irrigation equipment and tools	TAHA managed to secure these exemptions for items with multiple uses (not directly qualify for exemption) after assuring TRA that the imported items will solely be used in agriculture farms.
11.	Kenya Government uplift of the ban on importation of cut roses from Tanzania.	The Kenyan government imposed ban on importation of Tanzania cut flower. The ban was removed following several engagements by TAHA.
12.	Exemption on importation and use of plastic bags	Government banned importation and use of plastic bags with film thickness less than 0.03mm. TBS granted TAHA request to provide special waiver for horticultural industry to import and use the bags for re-export.
13.	Removal of Kenya import levy for fresh produce from Tanzania	The Kenyan government was imposing importation levy (Kshs. 2 per kilo) to horticultural produce imports. After TAHA engagement, the levy was removed.
14.	Inclusion of horticulture in Agricultural Policy 2013	Horticulture was included as one the key sectors in the Agriculture Policy 2013.
15.	Selection of horticulture as priority sector in some districts such as Meru	Some of the districts have selected horticulture as a priority sector in the DADPs implementations following capacity building and awareness creation activities by TAHA.
16.	Medical health and safety inspection at farm	TAHA worked with OSHA to streamline modality to undertake farm workers medical health examination and the Occupational Safety and Health Authority (OSHA) surveys while ensuring conducive business
17.	Mobilizing support from the government	TAHA has mobilized support from the government for establishment of market support and irrigation infrastructures in Njombe, Morogoro, Coast, Kilimanjaro and Arusha.
18.	Develop a Guideline for undertaking crop inspections	TAHA worked with the government to simplify guidelines for conducting crop inspections in farms for SPS compliances.
19.	Agro-nets VAT exemption in 2013 law amendments	TAHA advocated for inclusion of agro-nets in the VAT exemption list. The government granted TAHA request by providing 45% VAT exemption to agro-net.
20.	Greenhouse VAT exemptions in 2013 law amendments	TAHA advocated for inclusion of greenhouses in the VAT exemption list. The government granted TAHA request by providing 45% VAT exemption to greenhouses.
21.	Inclusion of horticulture as priority sector in District Agricultural Development Plans (DADPs)	Following TAHA engagement, some LGAs such as Meru and Arusha have chosen horticulture as priority sector in the DADPs planning process. The districts have therefore allocated funds in their budgets
22.	Waiver of Environmental Compliance Monitoring and Audit Fees for the period between 2011 and 2014	NEMC notified horticultural companies that they must pay assessment fees for 2011 and 2014, even though the services were not delivered. TAHA presented the case to the NEMC and fees were
23.	Changes in the Immigration procedures	The government abolished some Immigration permits (including CTA's) introduced Business Pass and Visa. As a result, many of foreign experts were not eligible to visit the country. TAHA engaged the
24.	Creating partnerships to address industry challenges in Zanzibar	TAHA mobilize partnerships with institutions such as Milele Foundation and as a result, support on development of irrigation infrastructure and input was secured.

25.	Mobilization of resources to compliment USAID/TAHA program	TAHA managed to mobilize resources from various development partners to compliment USAID efforts in transforming the industry (Table 7). The resources were channelled to infrastructure
26.	Reduction of airport charges at Kilimanjaro International Airport (KIA)	As a result of TAHA/TAHA Fresh engagement: Equipment charge (US \$ 25 – 60 per airway bill) have been abolished Screening charge has been reduced from US \$ 0.05 – 0.03 per kilo)

Source: TAHA USAID Final Report June 2016

2.8 Support programmes / initiatives

Current relevant strategies that may influence the development of horticulture sector in Tanzania include the following:

National Horticulture Development Strategy 2012 – 2021: was drawn by Horticultural Development Council of Tanzania (HODECT), and sets a road map for transforming horticulture sector in Tanzania through achieving the seven pillars of its strategic initiatives including the promotion of horticulture; expanding long-term financing and investment; addressing land, policy and infrastructure bottlenecks; expanding production base and improve quality; strengthen industry linkages and mobilize human resources which are expected to directly address the most critical constraints in the industry and provide the catalyst for expanding the market for Tanzania horticulture.

Potatoes Development Strategy 2016 – 2025: Government of Tanzania and embassy of the kingdom of the Netherlands initiative this strategy with the aim to sets a road map for transforming potatoes subsector in Tanzania.

Post-Harvest Management Strategy 2017 – 2026: The government of Tanzania though MALF under Post-Harvest Management Service unit together with other PHM stakeholders are in the process of sets a road map for transforming post-harvest management practices of food crops in Tanzania including the PHM practices of horticultural industry. According to MALF, this strategy will be ready by June 2017.

Seeds of Expertise for the Vegetable Sector of Africa (SEVIA): is a private sector driven project, funded by two world leaders in vegetable seeds: East-West Sees and Rijk Zwaan (partners in the breeding programme Afrisem), and by the Dutch Ministry of Foreign Affairs. This project aims to contribute to the development of the vegetable industry in Africa and to food security. It has an interest to develop the African vegetable sector by breeding improved African vegetable varieties for the farmers and by testing existing genetic vegetable resources for Africa. Thereafter, develops and disseminates adapted technical innovations in order to enhance productivity and to increase farmers' income. Recent programmes and projects that are either just concluded or on-going in the horticulture sector are summarised in Table 7 most of these projects have taken TAHA as their partner on the ground.

Table 15: Programmes and Projects in Horticulture Tanzania

No.	Partner	Collaboration Area	Period
1.	Government of Tanzania through MAFC and MIT	Establishment of Farmers Service Centers/collection centres in Morogoro, Njombe, Kilimanjaro Arusha	2013 – 2015
2.	Ministry of Agriculture and Natural Resources (Zanzibar)	Establishment of the PTCs Addressing business enabling environment issues in Zanzibar (e.g. formalizing producers – buyer's relationships)	2012 – present
3.	Government of Tanzania (Ministry of Agric., TRA, PMO, TBS, Ministry of Industry, EPZA, SIDO, PDB etc.)	Addressing business enabling environment issues (various) Innovative technologies in value addition Trade facilitation	2012 – present
4.	Winrock International	Integrated water, sanitation and Hygiene activities	2012 – 2015
5.	Finish Partners (FFD and Agricord)	Zanzibar Horticulture Linkages Project (including development of market infrastructure)	2012 - 2016

7.	BEST Dialogue	Advocacy activities (addressing input access, trade facilitation and taxation regime issues)	2015 – 2016
8.	VECO – East Africa	Inclusive Modern Markets Program	2014 –2016
9.	Agha-Khan foundation	Horticulture Value Chain Development Program in Lindi and Mtwara (Technical support and market	2014 – 2017
10.	Dutch Government	Amsterdam Initiative against Malnutrition (AIM): Vegetable for all addressing nutrition issues	2016 – 2018
11.	Kilimo Trust	Calories and Household Incomes from Potatoes Sub-sector' (CHIPS) – development of irish potato crop in	2014 – present
12.	International Trade Centre	Linking Horticulture and Tourism chains Horticulture Stakeholders Forum on facilitating Trade and	2014-2017
13.	Local Government Authorities	Establishment of Farmers Service Centres Addressing business enabling environment issues	2012 – present
14.	Financial Institutions (Vision Fund, Mwangi Community Bank, TADB, NMB etc.)	Facilitating access to finance to horticultural farmers	2013 – present

Source: ISSHSP TAHA 2016

3. Summary of main constraints for growth and competitiveness of Horticulture

There are numerous constraints that have been identified hindering growth and competitiveness of the horticulture sub sector in Tanzania. The following are main ones and have special bearing on hindering export capabilities.

1. Limited cargo airfreight space capacity and insufficient facilities at the Kilimanjaro (KIA) and Mwalimu Julius Nyerere International (JNIA) airports. Investors/exporters have to therefore truck their produce from uplift out of Jomo Kenyatta International Airport which adding up cost of doing business to Tanzania investors/exporters.
2. Inefficiency business development infrastructures such appropriate transportation system (especially the cold and preservation infrastructure), energy, communication (for accessing markets), processing, grading, finance, storage facilities, insurance schemes and irrigation schemes which play a role on improving the performance of horticulture sector. For example, in Tanzania transport costs constitute 46% of the total value of export consignments while in Zambia they are just 17%.
3. Government policies and operational procedures that are not yet fully in favour of horticulture development; produce cess, land rent, duty and VAT on packaging material, etc., despite significant improvements that have been made in this area.

3.1 Summary of main Opportunities for future investments

1. Strategic positioning of the country: good links to ports and airports – Dar es Salaam and Tanga ports, Julius Nyerere International Airport in Dar es Salaam, Songwe International Airport in Mbeya and KIA provides guarantee for sea freighting and airlifting of horticultural products destined for export markets.
2. The industry has been earmarked as one of the potential areas for fast growth in the Tanzania Agriculture and Food Security Investment Plan (TAFSIP) and Southern Agricultural Growth Corridor of Tanzania (SAGCOT).
3. There is huge demand for quality horticultural products in both local and export markets and Tanzania's horticulture exports have increased significantly.
4. Potential investments have been identified in this scoping exercise include the following areas:
 - Investing in increased production and productivity for most crops (avocado, beans, herbs), in new farms or in strategic collaboration with existing entrepreneurs with land.
 - Investing as an off taker with requisite logistics infrastructure (storage, transport, etc.). Southern Tanzania has room for more off-takers and it may be feasible to invest in containerisation along the TAZARA railway that could connect with Dar port.
 - NB: Currently the governments of Zambia and Tanzania have resolved to upgrade the TAZARA railway line.

- Investment in airfreight Cargo with necessary facilities and services. One critical service is insurance for export cargo. TAHA Fresh is working on the issue.
- Investment in value addition in particular Canning of Fine French beans (currently only 1 company has invested in caning); Gurkin and Asparagus (although no investment in the country yet);
- Investment in the start of the art canning & packaging materials (promising prospects especially if VAT exemption could be negotiated with TRA, which is currently being pursued by TAHA.)
- Investment in Marketing and Distribution in the source markets (UK & EU).
- Investment in technologies & simple equipment supply e.g. for seed cleaning, storage, packing, cold chain transportation etc.)
- Irish potatoes – processed in chips mainly for local market (3 varieties have already been registered, and Netherlands government has signed MOU with Tanzanian government to supply technologies for storage of seed materials. Seed
- Investment in the value chain of Orange Flesh Sweet Potatoes (OFSP) that have appropriate growing conditions in Southern Tanzania and have local and regional market as well as small niche EU market. The investment should include relevant logistics for storage, transport and export via containers by Sea freight.
- Investment in Banana production based on appropriate conditions for local and export market (this opportunity require market confirmation)

Annexes

Annex 1: Summary of interviews with key stakeholders in horticultural export business

Name of the Company	Main Products	Main season (peak availability)	Annual volumes	Destination markets / Buyers	Main trade barriers	Out-grower operations	Main opportunities for Investments
Rungwe Avocados (Mbeya) <i>Contact:</i> <i>Mr Robert Clowes</i> <i>rob.clowes1@gmail.com</i>	Avocado – HASS	July – Sept & Jan - Feb	1,500 T/ annum Demand 10 times	EU - UK, France, etc. By Halls International - Westphalia		4,000 SHFs	<ul style="list-style-type: none"> Farming (both Small & Large scale. Off takers with logistics Railway (TAZARA) containerisation
Africado (Kilimanjaro) <i>Mr James Parsons</i> <i>james.parsons@africado.co.tz</i>	Avocado – HASS (Main), Carmen coming	May - August & Nov – Dec	3,000 t/year	EU – UK, France, etc.			<ul style="list-style-type: none"> Farming (Large scale) if land is accessible.
Mara Farming Co Ltd (Subsidiary of Kenya based Co.) <i>Mr Eric Mdee</i> <i>Eric.mdee@gmail.com</i>	French Beans main Others: Peas and Passion Fruits	April – Sept Oct – April	500 T/ year aggregated at Nairobi	EU – UK and NL		3 groups	<ul style="list-style-type: none"> Cargo airfreighting
Serengeti Fresh (Subs of Sunripe in Kenya) <i>Mr Mittal Ziah</i> <i>zia@serengetifresh.com</i>	French Beans Sugar Snaps Peas Baby Corn Broccoli (TSB) Soy Beans Okra	June- Dec	1,500 T (70% French Beans)	UK (70%), France, Belgium, NL, etc. By NOVAGRIM	High freight cost	70% from individual SHFs & 30% LSFs & companies like Home Veg, Kilimanjaro Flair, Proxy, Flamingo etc.	<ul style="list-style-type: none"> Farming and pack house nearby Airports (Tz exempted in MRL /taxes to EU) State of art packaging (Customer specifications) Investments in Irrigation Equipment
Darsh Industries Ltd <i>Mr Jovane</i> <i>+255 783 866 700</i>	Tomato (processed)	Aug – Oct	10,000 t /year required	In 2017 plans to Mozambique & Burundi. Also EU& UK	ISO 2200-2015	5,000 SHFs	<ul style="list-style-type: none"> High productivity farming – hybrid Marketing & Distribution
Steve Mworira (Kilimanjaro) <i>+255 755 808 406</i>	French Beans sub contract (stopped in	Dec- Feb	N/A	EU via Serengeti Fresh		N/A	<ul style="list-style-type: none"> Joint Venture partner in farming

	2015), Has 260 acres with water.						
Will Byabato E: <i>rob.byabato@monitraci nternational.com</i>	New venture underway on Hydroponics tech in Horticultural production	N/A	N/A	N/A		N/A	<ul style="list-style-type: none"> Partner to pilot introduction of hydroponics tech in Tanzania
ECOVEG Mr Abdullah Mbuluo <i>sales@hortiorganics.co. tz</i>	Various vegetables with cucumber & capsicum for export	Greenhouse + Drip Irrigation system	1.5 tons /week capacity	EAC market		Mostly own farm 100 acres + some outgrowers	<ul style="list-style-type: none"> Marketing partner
HOME VEG Mr Machel E: <i>tmachel.homevegtz@g mail.com</i>	French Beans Baby Peas (Sugar Snaps & Mangetout Passion fruit & Chilli (Minor)	Jan- May Sept- April All year round	156 tons per year 80 tons/ year	EU via Serengeti Fresh or Mara Farming		Outgrower scheme based	<ul style="list-style-type: none"> Marketing partner
Kilimanjaro Nature Ripe Ms Fatma Riyami <i>+255 784 284 800</i>	Mango	Nov- Dec	Capacity: 3,500 t / current export 10 tons/ year	Dubai & Oman		Medium farms under AMAGRO	<ul style="list-style-type: none"> Marketing partner
Hortanzia Ltd Mr Yusuf E: <i>hortanziagm@cybernet .co.tz</i>	Chives Mint Green Beans	Sept- Feb Sep – Feb Jun - Dec	150 t/year 25 t/year 400 t/year (via other exporters)	UK & EU UK & EU via Israel trading Companies in NL		Own farm under greenhouse + drip irrigation	<ul style="list-style-type: none"> Direct marketing partner
Arusha Blooms & Finlays Mr Joseph E: <i>mdmalalua@cybernet.c</i>	French Beans Baby corns Other vegetables &	Jan – June (ideal for EU markets) but due to water & pests stress not	1,200 t/year of French beans from Arusha Blooms &80	Via Finlays Company for EU/UK markets	<ul style="list-style-type: none"> . Multiple taxes (47) . High transport & 		<ul style="list-style-type: none"> Canning of French Beans Complementary Strategic alliance (firms combining resources to become

<i>o.tz</i>	grains and Orange Flesh Potatoes	feasible to optimise the window.	tons from contracted farmers (46)		freight costs affecting margins		competitive)
Kilihortex Holding <i>E: Kilihortex@babari.co.tz</i>	Rasberries	Throughout grown under irrigation. Recently 45 ha added.	No available	EU markets Buyers: Fruit World		Own farm	
Crop Bioscience Solutions Ltd <i>Mr Wilfred Mushobozi +255 754 282 182</i>	Banana Tissue Culture varieties (Williams, Grand Nain, Cavendish & Orange Flesh Sweet Potatoes cultivars	Throughout the year. Capacity to produce 250,000 banana plants (Cavendish)	N/A	N/A		N/A	<ul style="list-style-type: none"> Off taker with commercial production venture + pack-house in Banana & Orange Flesh Sweet potatoes+ marketing expertise
TAHA Fresh Horticulture Logistics Solution <i>Joseph Mwita E: logistics@tahafresh.com</i>	Handling exports & imports of Horticultural products out of regional airports (DIA, JKIA, KIA), sea freight (Mombasa & Dsm)	Throughout the year (capacity of 6 refrigerated trucks with over 50 MT capacity, offices in Dsm, Namanga & Arusha. Member of IATA & FIATA	In 2015: Airfreighted 1,109 Mt Trucking 791 Mt For over 30 clients	EU/UK depends on clients etc	High Logistics Infrastructure costs	N/A	<ul style="list-style-type: none"> Air freight cargo Insurance products Ground handling at airports

Annex 2: Export trends 2012-2016

YEARS	2012		2013		2014		2015		Jan-Nov 2016	
	Customs Value TZS	Net Weight in tonnes	Customs Value TZS	Net Weight (Ton)	Customs Value TZS	Net Weight i(Ton)	Customs Value TZS	Net weight (Ton)	Customs Value TZS	Net weight (T)
Seed: Potatoes	19,058,990	512	506,633	265	4,062	4	-	-	-	-
Beans	38,358,463	38,424	30,613,545	26,711	100,412,312	107,763	132,982,187	67,168	219,967,641	131,362
Other: Potatoes	334,668	3,155	120	1	10,003	8	6,505,236	3,414	17	0
Tomatoes, fresh or chilled.	670,763	1,797	750,875	2,054	95,178	1,340	20,856	252	57,663	546
Onions and shallots	3,994,325	11,598	2,630,246	11,409	1,002,363	4,891	174,992,941	11,582	352,416,086	20,440
Leeks and other vegetables	54,885	204	-	-	-	-	550,865	47	4,145,666	206
Cauliflowers and headed broccoli	-	-	27,000	425	5,150	100	2,380	21	3,000	4
Cabbage lettuce (head lettuce)	-	-	-	-	4,000	4	-	-	1,400	0
Other vegetables	463,092	49	2,280,409	296	89,359,597	3,158	8,206,862	232	1,104,749	14
Cucumbers and gherkins	2,741	0	22	0	831	0	-	-	1,521	0
Peas (Pisum sativum)	169,099,752	8,266	17,272,941	1,515	29,992,357	31,286	77,066,981	37,147	30,698,579	17,076
Aubergines (egg-plants)	-	-	-	-	7,500	25	37,706	150	-	-
Pumpkin seeds	-	-	-	-	18,720	62	-	-	-	-
Potatoes	90,000	600	-	-	3,000	4	688,142	2,422	23,893,992	96
Mixture of vegetables	4,184,683	5,682	6,358,304	10,786	9,714,615	16,407	5,036,448	8,483	124,928,935	23,003
Wood ears (Auricularia spp.)	-	-	-	-	734	0	48,906	2	-	-
Dates	9,286	5	12,117	49	-	-	-	-	620	0
Pineapples	148,268	40	282,659	715	193,992	17	333,909	48	401,156	75

Avocados	646,087	615	2,906,853	1,349	1,440,143	1,755	2,559,730	3,279	4,640,683	3,750
Guavas, mangoes and mangosteens	68,917	516	25,563	228	5,900	29	54,667	26	686	0
Oranges	10,040,373	7,216	1,217,600	17,424	393,512	5,991	45,108,858	10,528	5,439,705	18,512
Lemons	250	2	-	-	151	1	26	0	-	-
Other:Citrus fruit	36,250	203	20,756	140	2,372	23	5,050	3	32,258	35
Grapes	1,440	2	-	-	800	2	20,000	100	40,000	400
Papaws (papayas)	8,087	1	12,633	1	25,377	2	22,365	1	36,983	2
Apples	14,409	18	42,255	25	-	-	4,200	3	16,000	5
Pears and quinces	29,433	1,200	-	-	25,959	200	8,899	19	-	-
Other fruits	-	-	3,120	0	2,601	26	146,328	2,066	4,830,398	1,870
Plums and sloes	23,483	201	13,249	100	3,500	15	918	15	-	-
Strawberries	199,603	19	30,601	2	36,278	2	294,373	30	-	-
Mushrooms and truffles	-	-	-	-	-	-	1,598	0	214,384	20
Fruits of the genus Capsicum or of the genus Pimenta	-	-	-	-	-	-	19,057	2	862,722	66
Pumpkins,squash and gourds(Cucurbita spp.)	-	-	-	-	-	-	13,125	98	5,024	75
Carrots, turnips, salad beetroot, salsify, celeriac	-	-	-	-	-	-	11	0	13,000	8
Peas (Pisum sativum)	-	-	-	-	-	-	87,341	351	450,891	2,670
Raspberries, blackberries, mulberries and loganberries	-	-	-	-	-	-	584,825	55	130,420	10
Cranberries, bilberries and other fruits of the genus	-	-	-	-	-	-	47,464	4	-	-

Vaccinium										
Watermelons	-	-	-	-	-	-	1,314	7	161,584	241
Oranges	-	-	-	-	-	-	45,108,858	10,528	5,439,705	18,512
Other: Manioc	-	-	-	-	-	-	10,324	113	-	-
TOTAL	247,538,250	80,323	65,007,499	73,495	232,761,008	173,144	455,463,890	147,669	774,495,763	220,487

Annex 3: Import trends 2012-2016

Years	2012		2013		2014		2015		Jan-Nov 2016	
Description of Goods	Customs Value (TZS)	Net Weight Tonnes	Customs Value	Net Weight Tonnes	Customs Value	Net Weight Tonnes	Customs Value tshs	Net Tonnes	Customs Value tshs	Net Tonnes
Beans	1,403,614	1,421	1,923,685	10,274	2,054,754	4,007	1,489,410	4,328	3,045,274	4,269
Seed: Potatoes	67,618	267	30,461	11	26,632	7	198,523	356	195,658	101
Other:Potatoes, fresh or chilled	407,654	1,501	275,078	733	184,358	340	170,734	326	195,545	100
Tomatoes, fresh or chilled.	3,128	1	3,459	6	18,480	12	36,572	24	21,196	20
Onions and shallots	306,512	365	33,066	132	105,873	389	64,792	189	223,425	345
Garlic	287,741	312	295,576	314	654,563	633	707,664	673	804,972	637
Leeks and other alliaceous vegetables	422	1	767	1	109	0	-	-	2,638	20
Cauliflowers and headed broccoli	315	0	622	0	451	0	3,055	0	-	-
Brussels sprouts	21	0	674	0	23	0	1,572	0	49,284	3
Other:Cabbages, cauliflowers, kohlrabi, kale	1,381	1	1,269	2	5,071	1	29,860	2	8,639	2
Cabbage lettuce (head lettuce)	305	1	587	0	55	0	15,495	6	8,195	3
Lettuce (Lactuca sativa) and chicory	99	0	160	0	2,275	3	3,055	0	-	-
Carrots and turnips	37,699	201	132,908	702	53,589	617	27,439	605	46,975	1,204
Other:Carrots, turnips, salad beetroot, salsify, celeriac, radishes and similar e WHOLECARROT B/IN	252	1	1,849	1	5,077	5	11,075	14	5,929	6
Cucumbers and gherkins, fresh or chilled.	183	0	485	1	1,181	2	5,129	1	4,136	3
Peas (Pisum sativum)	1,488,192	1,182	1,729,705	1,747	2,395,776	2,425	225,577	5	165,864	100
Asparagus	709	1	2,228	2	1,062	2	790	1	1,621	5

Aubergines (egg-plants)	-	-	75	0	461	0	537	0	31	0
Celery other than celeriac	67	0	500	2	465	1	934	1	1,069	3
Mushrooms of the genus Agaricus	11,515	7	15,064	11	21,472	5	12,114	5	23,467	6
Other:Other vegetables, fresh or chilled	2,026	4	6,181	7	21,708	17	42,743	49	65,598	78
Fruits of the genus Capsicum or of the genus Pimenta	2,358	1	270	0	1,319	1	2,129	0	2,015	0
Spinach, New Zealand spinach and orache spinach (garden spinach)	343	1	983	2	828	1	2,700	0	485	0
Other fruits	8,162	16	34,002	14	14,285	11	188,791	98	723,116	636
Potatoes	153,851	607	321,522	734	640,571	2,376	540,402	3,959	618,110	5,744
Other vegetables	30,335	16	52,611	25	79,223	31	99,676	50	175,914	65
Cucumbers and gherkins	-	-	39	0	642	3	218	0	622	0
Wood ears (Auricularia spp.)	8,804	1	13,079	3	3,879	1	595	1	1,040	0
Jelly fungi (Tremella spp.)	96	0	1,729	0	284	1	-	-	-	-
Sweet potatoes	878	1	2,301	3	818	1	5,672	5	6,338	8
Yams (Dioscorea spp.)	-	-	-	-	208	0	28	0	-	-
Taro (Colocasia spp.)	-	-	-	-	274	0	69	0	-	-
Other BANANA	8	0	358	1	308	0	-	-	-	-
Dates fresh or dried	2,067,865	3,799	2,194,230	3,683	1,886,129	3,152	1,991,423	2,963	2,017,084	2,578
Figs fresh or dried FIGS.	6,055	3	9,165	9	12,719	9	5,723	2	8,105	4
Pineapples	156	0	631	0	2,642	1	870	1	245	0
Avocados	112	0	982	1	-	-	6,492	1	1,981	0
Guavas, mangoes and mangosteens MANGO	150,658	3,253	177,715	4,500	67,989	2,603	21,046	302	41,287	708
Oranges	62	0	66,514	46	12,855	20	86,660	83	99,621	61
Mandarins (including tangerines and satsumas); clementines, wilkings and simila VANILA DESSERT	-	-	35,022	15	5,067	4	-	-	-	-
Lemons (Citrus limon, Citrus limonum) and limes (Citrus aurantifolia,Citrus latifolia))	15,933	1	28,584	505	15,796	261	42,817	221	67,309	23
Other:Citrus fruit, fresh or dried. PLUMS	49,085	31	23,693	19	56,525	39	-	-	-	-
Grapes	281,755	188	399,674	278	580,463	271	423,458	242	695,769	266

Watermelons	1,588	0	1,139	1	1,467	2	8,180	3	388	0
Papaws (papayas)	1,456	2	7,276	3	194	0	3,941	1	6,154	3
Apples	3,128,042	1,581	5,431,694	2,456	3,937,943	1,807	6,632,015	2,599	5,542,832	2,321
Pears	38,472	50	16,963	19	61,219	45	179,772	88	211,345	113
Apricots	4,262	2	30,124	12	3,957	5	2,424	2	8,010	4
Cherries RED CHERIES	843	0	-	-	-	-	-	-	-	-
Sour cherries(Prunus cerasus)	51	0	397	1	429	1	-	-	1,072	1
Peaches, including nectarines	2,317	1	4,572	8	5,785	6	45,209	19	84,951	30
Plums and sloes PLUMS	37,020	4	16,356	17	5,545	4	31,721	10	34,334	14
Strawberries	20,528	8	34,311	9	25,941	13	6,357	1	19,259	8
Raspberries, blackberries, mulberries and loganberries	942	1	579	1	3,256	1	2,020	0	7,280	0
Cranberries, bilberries and other fruits of the genus Vaccinium	225	0	58	0	1,501	0	-	-	-	-
Kiwifruit	1,463	1	3,417	2	12,377	9	22,314	10	45,678	14
Cherries CHERRIES	123	0	-	-	-	-	22,314	10	45,678	14
Prunes	5,680	2	5,108	3	960	1	3,202	3	9,861	1
Other:Pumpkins,squash and gourds(Cucurbita spp.)	-	-	-	-	-	-	3,252	6	3,563	6
Peel of citrus fruit or melons	334	0	14,243	0	-	-	-	-	-	-
Quinces	-	-	-	-	-	-	-	-	328	0
TOTAL	10,039,312	14,840	13,383,742	26,318	12,996,834	19,145	13,428,557	17,269	15,349,293	19,528

Annex 4: Additional information from – Tan Trade

Products	Export Markets
Avocado	<ul style="list-style-type: none"> • Tanzania import avocado from Burundi informally during shortage season (Aug to November) for domestic market. • Exports limited volumes to EU market • On-going initiatives from International Trade Centre (Market linkage project) • Trade specifications and barriers – go to https://www.cbi.eu/market-information/fresh-fruit-vegetables/
Mangoes	<ul style="list-style-type: none"> • Tanzania export mangoes to Middle East, Comoro and regional markets i.e. EAC & SADC • Trade barriers – Quality (presence of fruit and comparative advantage from other producing countries).
Pineapples	<ul style="list-style-type: none"> • Tanzania has imported improved variety from Ghana but not well adopted yet by Tanzania's producers
Carrots	<ul style="list-style-type: none"> • Exported to EAC, SADC and Middle East • Kenya and Uganda and re-export to South Sudan and Middle East.
Baby carrot	<ul style="list-style-type: none"> • Exported to EU
French beans	<ul style="list-style-type: none"> • Exported to EU and UK
Baby corn	<ul style="list-style-type: none"> • Exported to EU
Green peas	<ul style="list-style-type: none"> • Exported to EU

*** Most of the horticultural products exported to the regional markets are not captured by TRA. **TCCIA** is responsible to offer certificates of origin to exporters.