



# The Food and Agricultural Organization of the United Nations

# Trade Opportunity Scan for the Western African ACP group of countries

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#### **Preface**

This report is an output of a collaborative effort between the Market Analysis & Research Section of ITC and the Trade and Markets Division of FAO. The report was prepared by Michael Freudenberg, Thierry Paulmier, Takako Ikezuki and Kerfalla Conté (ITC), Jamie Morrison, Amir Kassam, Eric Kueneman and Peter Griffee (FAO). The authors would like to thank Ian Sayers, Owen Skae, Hernan Manson, Antony Sandana (ITC), Julie Claro, Isabelle Verbeke and Freddy Nachtergaele (FAO) for fruitful discussions, assistance and suggestions. For further details on the present study, please contact Michael Freudenberg (email: <a href="mailto:freudenberg@intracen.org">freudenberg@intracen.org</a>).

The designations employed and the presentation of material in this report do not imply the expression of any opinion whatsoever on the part of the International Trade Centre (ITC), the Food and Agriculture Organization of the United Nations (FAO), UNCTAD and WTO concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. This report has not been formally edited by ITC.

While every effort has been made to ensure that the information presented in this document is accurate, the ITC and the FAO assume no responsibility for errors or omissions.

# **Executive summary**

# Rationale and main objectives

The objective of the EC All ACP Agricultural Commodities Programme is to strengthen stakeholders capacities to develop and implement sustainable commodity strategies, to improve the incomes and livelihoods of producers of traditional or other agricultural commodities and reduce vulnerability at both producer and macro levels. A core component of the initial phase of the All ACP Agricultural Commodities Programme is the identification of broad agricultural product sectors of development focus and the development priorities for each of those sectors.

To assist in facilitating this process, the International Trade Centre (ITC) and the Food and Agriculture Organization of the United Nations (FAO) have developed a methodology to rank 66 agricultural products for the group of 16 Western African countries according to their potential for growth. This methodology is based on a combination of indicators relative to current production and export performance, import dependency and world market trends.

This report gives a quantitative ranking that can be used as a preliminary indication of the product groupings having a potential of import substitution and/or export development. It is intended to provide insight for ACP country decision makers who need to select sectors of development focus.

# Major findings and interpretation

ITC and FAO have developed a potential ranking based on a set of indices reflecting the relative performance of products, aggregated at the regional level, in terms of their capacity and efficiency in production (Production index); their current export performance (Export index); the regional reliance on imports of the product (Import index); and on identified opportunities for trade on the basis of world market conditions (World Market index).

Table 1 presents the top 20 products for each of the four indices, grouped by broad product sectors:

- The top five products in terms of *proven supply capacity and efficiency (Production Index)* are Cocoa beans, Millet, Other roots and tubers, Cassava, and Dry cow peas.
- The top five products in terms of proven export performance (Export Index) are Cashew nuts, Cotton, Cocoa beans, Pineapples, and Other oil crops.
- The top five products in terms of the relative importance of imported products (Import Index) are Oil palm, Tea, Onions, Wheat, and Maize.
- The top five products in terms of high and accessible international demand (World Market Index) are Maize, Green coffee, Oil palm, Wheat, and Soybeans.

Table 1: Top 20 products for Western African countries according to each of four

Product sectors	Production Index	Export Index	Import Index	World Market Index
	1. Cocoa beans	1. Cashew nuts	1. Oil palm	1. Maize
	2. Millet	2. Cotton	2. Tea	2. Coffee, green
	<ol><li>Other roots and tubers</li></ol>	3. Cocoa beans	<ul><li>3. Onions</li><li>4. Wheat</li></ul>	<ol> <li>Oil palm</li> <li>Wheat</li> </ol>
	4. Cassava	<ul><li>4. Pineapples</li><li>5. Other oil crops</li></ul>	5. Maize	5. Soybeans
	5. Cow peas, dry	5. Mangoes	6. Potatoes	6. Tomatoes
	6. Sorghum	7. Sesame seed	7. Cow peas, dry	7. Bananas, plantains
	7. Sesame seed	8. Groundnuts in shell	8. Peas, dry	8. Cotton
	8. Other pulses	9. Coffee, green	9. Sorghum	9. Cocoa beans
	8. Groundnuts in shell	10. Other nuts	10. Garlic	10. Sesame seed
	8. Cashew nuts	11. Bananas,	10. Dates	10. Tang. mand.
Overall	<ul><li>11. Citrus fruit nes</li><li>12. Pimento, allspice</li></ul>	plantains 12. Other roots and	12. Rice, paddy	clement. satsma 12. Lettuce
	13. Other spices	tubers	<ul><li>13. Other vegetables</li><li>13. Carrots</li></ul>	13. Garlic
	13. Coconuts	13. Broad beans,	15. Tomatoes	13. Avocados
	15. Beans, dry	green	15. Cabbages	13. Chillies &
	16. Onions	14. Other vegetable	15. Other spices	peppers, green
	17. Other fruits	products	15. Other pulses	16. Pineapples
	18. Bananas,	<ul><li>14. Other vegetables</li><li>16. Beans</li></ul>	15. Pepper,	17. Beans
	plantains 18. Maize	17. Papayas	white/long/black	<ul><li>18. Cashew nuts</li><li>19. Other vegetables</li></ul>
	20. Broad beans, dry	17. Cantaloupes &	20. Other nuts	19. Other vegetables 19. Barley
	20. Broad Boaris, dry	other melons		ro. Dancy
		19. Ginger		
		19. Other cereals		
	2. Millet	<ol><li>Other cereals</li></ol>	4. Wheat	1. Maize
	5. Cow peas, dry		5. Maize	4. Wheat
Cereals, grains,	6. Sorghum		7. Cow peas, dry	19. Barley
beans, peas and pulses	<ul><li>8. Other pulses</li><li>15. Beans, dry</li></ul>		<ul><li>8. Peas, dry</li><li>9. Sorghum</li></ul>	
	18. Maize		12. Rice, paddy	
	20. Broad beans, dry		15. Other pulses	
Coffee, cocoa, tea	1. Cocoa beans	3. Cocoa beans	2. Tea	2. Coffee, green
Cotton		Coffee, green     Cotton		9. Cocoa beans 8. Cotton
Fibre crops		Z. COMOIT		o. Collon
тыго огоро	11. Citrus fruit nes	4. Pineapples	3. Onions	6. Tomatoes
	16. Onions	5. Mangoes	10. Dates	7. Bananas, plantains
	17. Other fruits	11. Bananas,	10. Garlic	10. Tang. mand.
	18. Bananas,	plantains	13. Other vegetables	clement. satsma
	plantains	13. Broad beans,	13. Carrots	12. Lettuce
Fruits and		green	15. Tomatoes	13. Garlic
vegetables		<ul><li>14. Other vegetables</li><li>14. Other vegetable</li></ul>	15. Cabbages	13. Chillies & peppers, green
		products		13. Avocados
		16. Beans		16. Pineapples
		17. Papayas		17. Beans
		47 Cantalaunas 0		19. Other vegetables
		17. Cantaloupes & other melons		10. Other vegetables
Niuto	8. Cashew nuts	other melons  1. Cashew nuts	20. Other nuts	18. Cashew nuts
Nuts	8. Cashew nuts	other melons	20. Other nuts	
	Cashew nuts     Sesame seed	other melons  1. Cashew nuts	20. Other nuts  1. Oil palm	18. Cashew nuts 2. Oil palm
Nuts Oil crops	7. Sesame seed 8. Groundnuts in shell	other melons  1. Cashew nuts 10. Other nuts 5. Other oil crops 7. Sesame seed		18. Cashew nuts 2. Oil palm 5. Soybeans
	7. Sesame seed	other melons  1. Cashew nuts 10. Other nuts 5. Other oil crops		18. Cashew nuts 2. Oil palm
Oil crops	7. Sesame seed 8. Groundnuts in shell 13. Coconuts 3. Other roots and	other melons  1. Cashew nuts 10. Other nuts 5. Other oil crops 7. Sesame seed 8. Groundnuts in shell 12. Other roots and		18. Cashew nuts 2. Oil palm 5. Soybeans
	<ul><li>7. Sesame seed</li><li>8. Groundnuts in shell</li><li>13. Coconuts</li><li>3. Other roots and tubers</li></ul>	other melons  1. Cashew nuts 10. Other nuts  5. Other oil crops 7. Sesame seed 8. Groundnuts in shell	1. Oil palm	18. Cashew nuts 2. Oil palm 5. Soybeans
Oil crops	<ol> <li>Sesame seed</li> <li>Groundnuts in shell</li> <li>Coconuts</li> <li>Other roots and tubers</li> <li>Cassava</li> </ol>	other melons  1. Cashew nuts 10. Other nuts  5. Other oil crops 7. Sesame seed 8. Groundnuts in shell  12. Other roots and tubers	Oil palm     One palm     Potatoes	18. Cashew nuts 2. Oil palm 5. Soybeans
Oil crops	<ul><li>7. Sesame seed</li><li>8. Groundnuts in shell</li><li>13. Coconuts</li><li>3. Other roots and tubers</li></ul>	other melons  1. Cashew nuts 10. Other nuts 5. Other oil crops 7. Sesame seed 8. Groundnuts in shell 12. Other roots and	1. Oil palm	18. Cashew nuts 2. Oil palm 5. Soybeans

Source: FAOSTAT, ITCs TradeMap and Market Access Map.

For full details, see Table 14, Table 20, Table 25, Table 30, Table 31. The numbers represent a product's rank within each index.

The potential for sector development has been analysed according to four possible strategic responses.

- Import substitution and export development: Products that rank highly in the Import index and in the Export and/or World Market Indices.
- Export development only. Products that rank highly in the Export and/or World Market Indices.
- Import substitution only: Products that rank highly in the Import index.
- No apparent potential: Products that rank low across all indices.

The possible responses above have then been analysed separately for products that are among the 20 best performers in the Production Index (Table 2) and those that are not (Table 3). Products shown in Table 3 may justify an increase in production to take advantage of these possible strategic responses. In both tables, products emanating from the region are grouped into broad agricultural product sectors.

Table 2: Western African countries: Potential strategic responses for products with <a href="https://high.production.org/">high production index rankings</a>

	Potential strategic responses				
Product sectors	Import substitution and Export development	Export development	Import substitution	No apparent potential	
	High rank in Import and Export or World Market indices	High rank in Export or World Market indices	High rank in Import index	High rank only in Production index	
Cereals, grains, beans, peas and pulses	Maize (15)		Cow peas, dry (5) Other pulses (15) Sorghum (14)	Beans, dry (4) Broad beans, dry (1) Millet (14)	
Coffee, cocoa, tea		Cocoa beans (7)			
Fruits and vegetables		Bananas, plantains (11)	Onions (9)	Citrus fruit nes (4) Other fruits (16)	
Nuts		Cashew nuts (9)			
Oil crops		Sesame seed (11) Groundnuts in shell (15)		Coconuts (11)	
Roots and tubers		Other roots and tubers (12)		Cassava (15)	
Spices			Other spices (6)	Pimento, allspice (10)	

Note: The number in parentheses indicates the number of producing countries in the region.

Table 3: Western African countries: Potential strategic responses for products with  $\underline{\text{low}}$  production index rankings

	Potential strategic responses				
Product sectors	Import substitution and Export development High rank in Import and Export or World Market	Export development  High rank in Export or World Market indices	Import substitution  High rank in Import index	No apparent potential  No high ranks	
Cereals, grains, beans, peas and pulses	indices Wheat (4)	Barley (1) Other cereals (11)	Peas, dry (3) Rice, paddy (15)	Chick-peas (1) Oats (1)	
Coffee, cocoa, tea		Coffee, green (8)	Tea (1)		
Cotton		Cotton (12)			
Fibre crops				Jute and other bast fibres (2) Sisal and other textile fibres of agave (1)	
Fruits and vegetables	Tomatoes (12) Garlic (2) Other vegetables (16)	Beans (6) Pineapples (8) Avocados (2) Tang. mand. clement. satsma (1) Chillies & peppers, green (7) Lettuce (2) Broad beans, green (1) Cantaloupes & other melons (1) Mangoes (12) Other vegetable products (4) Papayas (4)	Cabbages (3) Carrots (3) Dates (3)	Watermelons (3) Cauliflower (1) Cucumbers and gherkins (2) Eggplants (2) Grapefruit and pomelos (1) Oranges (8)	
Nuts	Other nuts (8)			Almonds (1)	
Oil crops	Oil palm (11)	Soybeans (5) Other oil crops (2)		Castor beans (3)	
Roots and tubers			Potatoes (7)	Sweet potatoes (14)	
Spices		Ginger (2)	Pepper, white/long/black (4)	Nutmeg, mace, cardamons (1)	

Note: The number in parentheses indicates the number of producing countries in the region.

# Discussion of the findings based on FAO's agro-ecological crop suitability assessment and expert agronomic knowledge

Based on FAO's agro-ecological crop suitability assessment and expert agronomic knowledge, Table 4 provides an idea of the regional level agro-ecological potential of crops. Crops that are combined into unspecified groups such as other pulses, other cereals, other fruits & vegetables, other oil crops etc are not included in Table 4 as it is not possible to make any useful comments. However, 'Other roots and tubers' as a crop group is included because it is assumed to comprise mainly of yams. Similarly, 'Jute like fibres' as a crop group is included because it is assumed to comprise mainly of kenaf and roselle.

In general, crops that have a high agro-ecological and agronomic regional potential are:

- Cereals and pulses sector: maize, millet, rice, sorghum, and cowpeas.
- Coffee, cocoa, tea sector: cocoa, and coffee.
- Fruits & vegetables: avocados, bananas, chillies & peppers, mangoes, onions & shallots, and tomatoes.
- Oil crop sector. groundnuts, oil palm, sesame, and soybeans.
- Roots & tubers: cassava, yams, sweet potatoes and potatoes in special cases.

Crops that have a medium agro-ecological and agronomic regional potential are:

- Fibre crop sector. Jute like fibres (kenaf & roselle)
- Fruits & vegetables: green beans, dates, eggplants, garlic, grapefruit & pomelos, lemons & limes, onions & shallots, oranges, papayas, pineapples, cantaloupes & other melons.
- Oil crop sector: castor beans, coconuts.
- Roots & tubers sector. potatoes
- Spices sector: pimento & all spice, pepper white/black.

Information in Table 4 provides a means to 'filter' the information in Table 2 and Table 3 for their agro-ecological and agronomic potential in the region. This has been done with explanatory comments in the main report. In addition, comments are provided for discussion on new opportunities for crops such as maize for fresh or vegetable market as opposed to grain market; on sweet sorghum, castor bean, sweet potatoes and cassava for bioenergy; on cold-tolerant and draught-resistant oil palm or red oil palm offering natural health products, and on 'System of Rice Intensification' (SRI) agronomy that offers higher yield and factor productivities.

Nearly all the above crops in all the countries in the region have relatively low yields, and there is good to very good agro-ecological potential to improve crop yields. However, in many instances, farming systems have been well established with cereals-legumescotton in the moist savanna and semi-arid ecologies, and short and long season root crops-perennial crops in the sub-humid and humid ecologies. In general, there is decreasing amount of surplus land available so that in some instances area expansion of crops may mean a reduction in the extent of other crops. In the moist and dry savanna areas, which constitutes the future bread basket for the region, maize has been gradually replacing sorghum in the cotton-cereal-legume farming system but because of low fertiliser use, economic impact of such substitution has been low to modest. In the humid and sub-humid costal regions, competition for land amongst perennial or long season crops such as oil palm, cocoa, coffee, coconut, cashew, bananas, citrus, avocados, pineapple, and cassava is or can be high.

In any case, whether there is room for expansion or not, with Good Agricultural Practices (GAP)<sup>1</sup>, yields of most crops in the region can be improved significantly. For example, with Conservation Agriculture (CA), energy and environmental costs can be kept to a minimum while achieving enhanced yields and factor productivities. In the case of legumes and cotton crops, integrated pest management (IPM) and integrated production and pest management (IPPM) approaches provide a solid basis for efficient production expansion, relying more on natural enemies, crop diversification, minimum tillage and judicious use of inorganic and organic fertilizers to harness greater on-farm production competitiveness.

In light of the above comments, interpretation of the results would certainly benefit from further discussions at the Kick-off Workshop because the possible response strategies could be better defined by taking into account country specific agro-ecological and farming systems conditions as well as any 'new' ecologically sound crop commodity that could be harnessed by the countries of the region in response to specific export opportunity or import situation, as well as domestic and regional trade.

Table 4: Western African countries: Regional level agro-ecological potential

Product sectors	Regional level agro-ecological potential				
1 Toddot Scotors	Low	Medium	High		
Cereals, grains, beans, peas and pulses	Beans, dry (4) Barley (1) Wheat (4) Oats (1) Peas, dry (3) Chick peas (1)		Cowpeas, dry (6) Maize (15) Millet (14) Rice, paddy (15) Sorghum (14)		
Coffee, coc oa, tea	Tea (1)		Cocoa beans (7) Coffee, green (8)		
Cotton			Cotton (12)		
Fibre crops	Sisal & other agave fibres (1)	Jute like fibres (3)			
Fruits and vegetables	Broad beans, green (1) Cabbages (4) Carrots (4) Cauliflower (1) Cucumbers and gherkins (2) Lettuce (2) Tang. mand. clement. (1) Watermelons (3)	Beans, green (5) Cantaloupes & other melons(1) Dates (3) Eggplants (2) Garlic (2) Grapefruit and pomelos (1) Lemons & limes (3) Oranges (8) Papayas (4) Pineapples (8)	Avocados (2) Bananas (10) Chillies & peppers, green (7) Mangoes (12) Onions & shallots (4) Tomatoes (12)		
Nuts	Almonds (1)	Cashew nuts (9) Karite nuts (sheanuts) (7)			
Oil crops		Castor beans (3) Coconuts (11)	Groundnuts in shell (15) Oil palm (11) Sesame seed (11) Soybeans (5)		
Roots and tubers		Potatoes (7)	Cassava (15) Roots & tubers nes (4) (yams) Sweet potatoes (14)		
Spices	Ginger (2) Nutmeg, mace, cardamoms (1)	Pimento, allspice (10) Pepper, white/long/black (4)			

Source: FAO.

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<sup>&</sup>lt;sup>1</sup> see companion document: Good Agricultural Practices: Opportunities for the ACP West Africa Group of Countries. May 2008, AGP, FAO.

#### What are the next steps?

The Trade Opportunity Scan is one component of the ACP Programmes Baseline Information Screening for sectors of development focus, based upon quantitative data available through global databases developed by ITC and by FAO. The results are discussed in light of FAO's agro-ecological crop suitability assessment and expert agronomic knowledge, but require further validation against other expert knowledge or qualitative information. Inputs from countries will also be essential for drawing valid conclusions.

In parallel with the Trade Opportunity Scan, each country in the region has been asked to contribute to a Country Information Questionnaire that was circulated by the EC Coordinating Unit in December 2007. This questionnaire requests information on five key qualitative aspects: country/sector information, institutional factors, competitiveness factors, development factors and perceived market potential.

Countries will have the opportunity to make comments and other inputs during a Regional Kick-off Workshop that will take place between 27 and 30 May in Dakar, Senegal. A representative cross-section of regional stakeholders, sector and country specialists has been invited to take part. Workshop participants may use the baseline information as they work together through a series of practical exercises to determine the sectors of development focus and development priorities that may be addressed under the Programme.

#### Introduction

The objective of the All ACP Agricultural Commodities Programme is to strengthen stakeholders capacities to develop and implement sustainable commodity strategies to improve the incomes and livelihoods of people that rely on agricultural commodities for their livelihoods and reduce their vulnerability at both producer and macro levels. A key activity of the first phase of the All ACP Agricultural Commodities Programme is the collection of information and analyses for use by stakeholders to determine the sectors of development focus and the development priorities for those sectors under the Programme.

It was agreed at the first Programme Steering Committee to identify a small number of broad product sectors in which the key beneficiary countries are engaged and where international organizations interventions may be expected to yield the highest positive impact on farmers livelihoods, trade or value addition.

ITC, together with FAO, has developed a methodology to evaluate, on a regional basis, agricultural products for their performance in terms of production and exports, their import dependency and the world market trends.

This report gives a quantitative ranking that can be used as a preliminary indication of the product groupings having a potential of import substitution and/or export development. It provides insight for ACP country decision makers who need to select sectors that could be the focus of appropriate development strategies or other development activities.

The structure of the study is as follows

- Chapter 1 (Methodology) provides an explanation of the methodological approach of the Trade Opportunity Scan. It discusses the conceptual framework, the definition of the relevant indicators, and the limitations of the method. It also discusses how the underlying indicators are transformed so that they can be compared.
- Chapter 2 (Major findings) shows tabular representations of the results, and an indication as to how these results should be interpreted in the context of the All ACP Agricultural Commodities Programme.

Finally, the *annex* provides information on the definition of the products and potential products for diversification.

# 1. Methodology

## **Conceptual framework**

We aim to evaluate commodities according to four major criteria: (1) their supply capacity and efficiency in production, (2) their export performance, (3) the extent to which the region is dependent on imports, and (4) the existence of high and accessible international demand. To do so, various indicators are calculated on the basis of each of these criteria. Then we convert these indicators into indices (Box 1). Finally, the indicators are aggregated into composite indices (receiving the same weighting) as follows:

- Supply capacity and production efficiency. The production index aims measuring the production capacity and efficiency of the commodities: the capacity takes into account four dimensions: "size" (share of the region in world production), "dynamism" (production growth rate), "producer diversification" (number of significant producing countries in the region and share of the top producing country in the region), and "yield" (relative efficiency evaluated by the ratio of the regions yield to world yield).
- Products with performing exports. The export Index aims measuring the export performance of the regions commodities by taking into account four dimensions: "size" (the export value and its share in world exports), "dynamism" (absolute change in regions export value and the regions export growth rate to the world over the period 2001-05), "exporter diversification" (number of significant exporting countries in the region and share of the top exporting country of the region) and "trade balance" (in absolute and relative terms).
- Reliance on imports. The import index aims measuring the significance of imports by taking into account three dimensions: "size" (import value and its share in world imports), "dynamism" (absolute change in regions import value and regions' import growth rate over the period 2001-05), and "importer diversification" (number of significant importing countries in the region and the share of the top one importing country of the region).
- Products with high and accessible international demand. The world markets index aims measuring world market trends of the products by taking into account three dimensions of the market demand: "size" (value of world imports and share of regional imports in world imports), "dynamism" (absolute change in world imports and the growth of world imports over the period 2001-05), and "market access conditions" (applied tariff to the region and the tariff differential between the region and the MFN regime).

Some additional filters need to be taken into account for the selection of the sectors such as the socio economic impact (especially in terms of employment creation), the current level of technical assistance as well as the number of Western Africa countries involved in the production. Table 5 summarizes the conceptual framework.

Table 5: Underlying indicators for the composite indices

Composite Indices	Dimension	Indicators
	Size	Share of region in world production
	Dynamism	Growth of regional production
Production index	Production diversification	Number of producing countries in the region Share of top producing country in the region
	Yield	Ratio of regional yield to world yield
	Size	Regions exports to world Share of region in world exports
Export index	Dynamism	Growth of regions exports to world Absolute change in regions exports
Export index	Export diversification	Number of exporting countries in the region Share of top exporting country in the region
	Trade balance	Absolute trade balance Relative trade balance
	Size	Regions imports from world Share of region in world imports
Import index	Dynamism	Growth of regional imports from the world Absolute change in regions imports
	Import diversification	Number of importing countries in the region Share of top importing country in the region
	Size	World imports
World market index	Dynamism	Growth of world imports Absolute change in world imports
	Market Access	Tariff applied to the region Preferential tariff advantage

Note: Indicators within a given index have the same weight.

#### Box 1. Methodology to convert indicators into indices

The method used here to convert indicators into indices transforms each indicator into a range of 0 (weak performance) and 100 (best performance). It gives 0 (100) points to products with values below (above) a certain threshold value, and points between 0 and 100 depending on the distance between these two thresholds. The *values of the thresholds* (i.e. the lower and upper limits) are defined through an analysis of the dispersion of the sectors. The 5% best performing products define the upper threshold, the 5% weakest performing products define the lower threshold. The following formula is applied:

$$100*\frac{\text{Value - Lower limit}}{\text{Upper limit - Lower limit}}$$

#### 16 Western African countries

We analysed 16 Western African countries, for which Table 6 provides some background information.

**Table 6. Western African countries** 

	WTO Member	LDC Status	Rank in Human develop- ment index	Population	GDP per capita (PPP US\$)	Exports (USD million)	Growth of exports (% p.a.)	Share of top 3 export products (%)	Share of top 3 export markets (%)
Benin	Yes	Yes	163	8,693,272	327	261	15	67	57
Burkina Faso	Yes	Yes	176	13,586,485	267	313	28	88	71
Cape Verde	No	Yes	102	518,311	1,393	110	94	68	56
Côte d'Ivoire	Yes	No	166	18,467,843	576	8,148		54	37
Gambia	Yes	Yes	155	1,552,746	342	11	25	72	85
Ghana	Yes	No	135	22,532,600	300	3,614	28	68	50
Guinea	Yes	Yes	160	9,199,000	406	1,182	10	81	41
Guinea-Bissau	Yes	Yes	175	1,632,865	136	8	-26	91	92
Liberia	No	Yes		3,380,127	142	1,254	16	71	60
Mali	Yes	Yes	173	13,910,874	250	274	17	82	66
Mauritania	Yes	Yes	137	3,153,751	466	1,591	30	79	46
Niger	Yes	Yes	174	14,416,684	158	365	41	90	92
Nigeria	Yes	No	158	144,749,000	439	55,596	34	97	65
Senegal	Yes	Yes	156	11,928,141	473	1,492	19	35	44
Sierra Leone	Yes	Yes	177	5,641,046	228	279	15	61	66
Togo	Yes	Yes	152	6,302,157	238	318	20	54	43

Source: ITCs TradeMap and Trade Competitiveness Map, World Bank Development Report, United National Development Report 2005, CIA World Factbook 2007.

The data refer to 2005, growth rates to 2001-05.

# 66 agricultural commodities

We examined 66 agricultural commodities produced in the region. The definition of the commodities is based on a FAO nomenclature (See Annex 1).

#### **Data sources**

We used the following databases:

- Production data are from FAOSTAT (<a href="http://faostat.fao.org">http://faostat.fao.org</a>).
- Trade data come from ITCs Trade Map, which is an online database of global trade flows and market access barriers for international business development and trade promotion, providing detailed export and import profiles and trends for over 5,300 products in 200 countries and territories. It includes official data reported by countries to the UNSD (Comtrade) and, for countries that did not report trade data, is completed by mirror statistics based on partners data.
- For market access conditions, tariff data are from ITCs Market Access Map database.
   Both ITC databases are available free of charge for developing countries (see <a href="https://www.intracen.org/mat">www.intracen.org/mat</a>).

#### Caveats

Some limitations need to be borne in mind when interpreting the results.

- The most recent year for which internationally comparable indicators are available is 2005 and may thus not reflect the importance of recently emerging products. Trends for production and trade are backwards looking, in as far they are generally based on the period 2001 to 2005. Trade data include intra-regional trade, which outweighs trade to and from the region for a number of products, as for example, some countries may play an important role as a natural trading hub due to their geographic location.
- The reader needs to be cautious in the interpretation of indices as they provide only a basic measure of the performance of sectors. The composite indices are sensitive to the choice and weight of the underlying indicators. The resulting product rankings should thus be interpreted with caution, especially when absolute differences are small, since many indicators lack precision. The distinction whether a product is among the "top" performers is necessarily arbitrary, and we use here whether they are among the top 20 best performers or not. Any other threshold (top 15, top 25, etc) would of course have modified the overall results.
- The methodology seeks to identify potentials for the region as a whole rather than country by country. However, we also examine the performance and the competition at the country level. This information may provide a useful input to identifying products with potential that are of relevance to the key beneficiary countries.

#### Table 7. Examined agricultural commodities

Cereals, grains, beans, peas and pulses Fruits and vegetables

Barley Avocados

Beans, dry Bananas, plantains

Broad beans, dry Beans

Chick-peas Broad beans, green

Cow peas, dry

Maize

Cabbages

Cantaloupes & other melons

Millet Carrots
Oats Cauliflower

Other cereals Chillies & peppers, green

Other pulses Citrus fruit nes

Peas, dry Cucumbers and gherkins

Rice, paddy Dates
Sorghum Eggplants
Wheat Garlic

Grapefruit and pomelos

CottonLettuceCottonMangoesOnionsFibre cropsOranges

Jute and other bast fibres

Other fruits

Sisal and other textile fibres of agave Other vegetable products

Other vegetables

Nuts Papayas
Almonds Pineapples

Cashew nuts Tang. mand. clement. satsma

Other nuts Tomatoes
Watermelons

Castor beans Roots and tubers Coconuts Cassava

Groundnuts in shell Other roots and tubers

Oil palm Potatoes
Other oil crops Sweet potatoes
Sesame seed

Soybeans Spices

Ginger Nutmeg, mace, cardamons

Other spices

Pepper, white/long/black Pimento, allspice

# 2. Major findings

#### Index 1: Production

The Production Index for the Western African region aims measuring the production efficiency of the products by taking into account four dimensions of production: "size", "dynamism", "diversification" and "relative yield". For illustrative purposes, only the top ten products under each index are presented. A complete list on products production indicators is given in Table 14. As will be detailed now, the major performing products in terms of proven supply capacity and efficiency are Cocoa beans, Millet, Other roots and tubers, Cassava, Dry cow peas, Sorghum, Sesame seed, Other pulses, Groundnuts in shell and Cashew nuts.

#### Size of production

Products in which the region has a higher share of world production relative to other products produced in the region are considered to have already proven their production capacity. The "size" index is measured as the share of the region in world production.

The major products in terms of production size are: Other roots and tubers, Dry cow peas, Cocoa beans, Citrus fruit, and Millet. For the first four products, Western Africa account for more than 50% of world production.

Table 8. Production index: Top ten products for "size"

Top 10 products	For information: Production		estern Africa production
	MT	%	Index
1. Other roots and tubers	42,863,289	74	100
1. Cow peas, dry	3,107,182	85	100
1. Cocoa beans	2,455,500	63	100
1. Citrus fruit nes	3,576,000	59	100
5. Millet	11,475,270	42	71
6. Cassava	56,048,960	28	46
7. Other vegetable products	354,300	25	43
8. Sorghum	11,649,579	20	34
9. Cashew nuts	440,500	19	32
10. Groundnuts in shell	5,457,922	15	26

Source: FAOSTAT, see Table 14.

Notes: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005.

#### Dynamism of production

We evaluate the "dynamism" of products by the average annual growth rate of the regions production over 5 years. Products with rapid production growth in volume terms suggest that the country is productive. Stagnant or declining growth rates indicate the opposite.

The major products in terms of dynamism are: Watermelons (with an average annual growth rate of 17% between 2001 and 2005), Dry broad beans (+11%), Eggplants, Wheat, and Cocoa beans.

Table 9. Production index: Top ten products for growth

Top 10 products		Growth of Western Africa production		
	% p.a.	Index		
1. Watermelons	17	100		
1. Broad beans, dry	11	100		
1. Eggplants	5	100		
1. Wheat	7	100		
5. Cocoa beans	4	94		
6. Cassava	4	88		
6. Beans, dry	4	88		
8. Maize	3	82		
9. Dates	3	81		
10. Sorghum	3	69		

Source: FAOSTAT, see Table 14.

Notes: All indices range from 0 (lowest) to 100 (best performance). Growth rates refer to 2001-05.

#### Diversification of production

The "producer diversification" indicates how numerous producing countries of the region are in each product. We appraise the regions production diversification index of the products by calculating a simple average of two indices: (1) the number of producing countries in the region (the higher the better) and (2) the share of the top one producing country of the region in a particular product, which is used as an indicator of production concentration (the lower the better). We assume that the more diversified production for a particular product is across the region, the more appropriate interventions to assist in sectoral development will be.

The major products in terms of producer diversification are: Other pulses, Rice, paddy, Maize, Cotton, and Bananas and plantains.

Table 10. Production index: Top ten products for "diversification"

Top 10 products	Number of producing countries in Western Africa		Share of top producer in Western Africa's production		Average index	
	0 to 16	Index	% (top producer)	Index		
1. Other pulses	15	100	19 (Burkina Faso )	100	100	
2. Rice, paddy	15	100	47 (Nigeria )	81	91	
3. Maize	15	100	49 (Nigeria )	77	89	
3. Cotton	12	79	25 (Mali )	100	89	
5. Bananas, plantains	11	71	34 (Ghana )	100	86	
6. Groundnuts in shell	15	100	54 (Nigeria )	70	85	
7. Coconuts	11	71	37 (Ghana )	96	83	
8. Millet	14	93	55 (Nigeria )	69	81	
9. Sesame seed	11	71	48 (Nigeria )	80	76	
9. Pimento, allspice	10	64	42 (Nigeria )	88	76	

Source: FAOSTAT, see Table 14.

Notes: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005.

#### **Yield**

The "yield" dimension reveals how efficient the production of commodities is. We estimate the yield index of the products by calculating the ratio of the regions yield to world yield.

The major products in terms of yield relative to the world are: Nutmeg, mace, cardamoms, Cucumbers and gherkins, Other spices, and Grapefruit and pomelos.

Table 11. Production index: Top ten products for "relative yield"

Top 10 products	Ratio of Western Africa's yield and world yield			
	Ratio	Index		
1. Nutmeg, mace, cardamons	1.92	100		
1. Cucumbers and gherkins	1.22	100		
1. Other spices	1.11	100		
1. Sesame seed	1.07	100		
5. Grapefruit and pomelos	1.07	99		
6. Other roots and tubers	1.02	94		
7. Millet	1.01	93		
8. Pimento, allspice	1.00	92		
9. Cocoa beans	0.99	90		
10. Coconuts	0.95	86		
10. Onions	0.95	86		

Source: FAOSTAT, see Table 14.

Notes: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005.

#### Overall production index

In total, the top products in terms of production capacity and efficiency (that score high in terms of size, dynamism, production diversification and yield) are: Cocoa beans, Millet, Other roots and tubers, Cassava, and Dry cow peas.

Table 12. Production index for Western African countries

	Rank size	Rank dynamism	Rank diversification	Rank relative yield
1. Cocoa beans	1	5	25	9
2. Millet	5	14	8	7
3. Other roots and tubers	1	24	22	6
4. Cassava	6	6	12	14
5. Cow peas, dry	1	26	34	12
6. Sorghum	8	10	15	21
7. Sesame seed	17	33	9	1
8. Cashew nuts	9	13	17	25
8. Groundnuts in shell	10	18	6	23
8. Other pulses	19	22	1	19

Source: FAOSTAT, see Table 14.

Notes: All indices range from 0 (lowest) to 100 (best performance). Products are ranked according to the Production Index. Data refer to 2005 and growth rates to 2001-05.

# Do the producing countries export only, import only, both export and import, or do not trade at all?

Table 13 shows which Western African countries trade the top five commodities in terms of the Production Index. It distinguishes between countries that both export and import the commodities, those that only export them or only import them, and the producers that do not trade at all. Annex Table 38 shows the results for all products.

- For example, five of the seven cocoa beans producers in Western Africa export the commodity: Ghana (which is ranked 2<sup>nd</sup> among all countries in the world in terms of the Production Index for countries, see Annex Table 37), followed by Côte d'Ivoire (ranked 3<sup>d</sup>), Nigeria (9), Guinea (18) and Liberia (27). Two producers (Togo and Sierra Leone) both export and import cocoa beans. In addition, two non-producing countries (marked with \*) also engage in trade: Gambia imported and Burkina Faso exported cocoa beans in 2005.
- The situation is quite different for millet: Of the 14 producing countries, only three countries export: Nigeria (ranked 4<sup>th</sup> in the world in terms in the Production Index for countries), Senegal (17) and Mali (18). Nine countries do not at all trade the commodity, which suggests that local production is consumed domestically in these countries. Two producers (Niger and Gambia) also import millet.

Table 13. Top five commodities in terms of the Production Index: Do the producing countries export only, import only, both export and import, or do not trade at all?

		-	-	
Products (rank in region's production index)	Producers that do not trade	Producers (and non-producers*) that import only	Producers (and non-producers*) that export only	Producers (and non-producers*) that export and import
production index)	(The number in p	arentheses is the countr	ries' world rank in the Pro	oduction Index)
Cocoa beans (1)		Gambia *	Ghana (2) Côte d'Ivoire (3) Nigeria (9) Guinea (18) Liberia (27) Burkina Faso *	Togo (26) Sierra Leone (34)
Millet (2)	Guinea-Bissau (21) Burkina Faso (21) Sierra Leone (32) Ghana (42) Guinea (46) Benin (50) Togo (54) Côte d'Ivoire (64) Mauritania (76)	Niger (11) Gambia (26)	Nigeria (4) Senegal (17) Mali (18)	
Other roots and tubers (3)	Liberia (59) Guinea-Bissau (67) Mauritania (82) Guinea (91) Sierra Leone (91)	Niger * Senegal *	Benin (1) Ghana (4) Nigeria (7) Côte d'Ivoire (8) Mali (14) Togo (27) Burkina Faso (30)	
Cassava (4)	Benin (16) Senegal (16) Guinea-Bissau (25) Mali (27) Guinea (50) Sierra Leone (62) Togo (67) Liberia (68) Burkina Faso (91)	Niger (16) Cape Verde (47) Gambia (88)	Nigeria (4) Ghana (10) Côte d'Ivoire (80)	
Cow peas, dry (5)	Mali (16)	Mauritania (27) Cape Verde * Gambia * Ghana * Liberia * Sierra Leone *		Niger (2) Nigeria (3) Burkina Faso (24) Côte d'Ivoire * Senegal *

\* Countries that do *not* produce. Source: ITCs TradeMap and Market Access Map, FAOSTAT.

Table 14. Production index for Western African countries and underlying indicators

		Size		Dynam	ism			Diversification			Yiel	b	
Rank in production index and product labels	For information: Production	Share of W Afric in world prod	a	Growth Western A produc	frica's	Numb produ counti Wester	ucing ries in	Share of top production		Average index	Ratio of W Africa's yie world y	eld and	Production index
	MT	%	Index	% p.a.	Index	0 to 16	Index	% (top producer)	Index		Ratio	Index	
1. Cocoa beans	2,455,500	63	100	4	94	7	43	54 (Côte d'Ivoire )	70	56	0.99	90	85
2. Millet	11,475,270	42	71	2	56	14	93	55 (Nigeria)	69	81	1.01	93	75
3. Other roots and tubers	42,863,289	74	100	1	41	12	79	71 (Nigeria )	44	61	1.02	94	74
4. Cassava	56,048,960	28	46	4	88	15	100	68 (Nigeria )	49	74	0.85	74	71
5. Cow peas, dry	3,107,182	85	100	1	40	5	29	75 (Nigeria )	39	34	0.92	82	64
6. Sorghum	11,649,579	20	34	3	69	14	93	69 (Nigeria )	47	70	0.70	56	57
7. Sesame seed	157,234	5	8	0	34	11	71	48 (Nigeria )	80	76	1.07	100	54
3. Other pulses	318,687	4	7	1	44	15	100	19 (Burkina Faso)	100	100	0.74	61	53
3. Groundnuts in shell	5,457,922	15	26	1	48	15	100	54 (Nigeria )	70	85	0.69	55	53
3. Cashew nuts	440,500	19	32	2	59	9	57	48 (Nigeria )	79	68	0.66	52	53
11. Citrus fruit nes	3,576,000	59	100	0	27	4	21	91 (Nigeria )	14	18	0.75	62	52
12. Pimento, allspice	112,300	5	8	0	28	10	64	42 (Nigeria )	88	76	1.00	92	51
13. Other spices	16,500	1	1	0	29	6	36	34 (Burkina Faso )	100	68	1.11	100	50
13. Coconuts	843,800	2	3	0	29	11	71	37 (Ghana )	96	83	0.95	86	50
15. Beans, dry	157,289	1	1	4	88	4	21	60 (Benin )	62	41	0.71	57	47
16. Onions	1,307,500	2	3	1	37	9	57	64 (Nigeria )	55	56	0.95	86	46
17. Other fruits	1,861,350	4	7	0	28	16	100	75 (Nigeria )	38	69	0.87	77	45
18. Bananas, plantains	6,949,158	6	11	1	47	11	71	34 (Ghana )	100	86	0.50	34	44
18. Maize	9,712,438	2	3	3	82	15	100	49 (Nigeria )	77	89	0.23	1	44
20. Broad beans, dry	1,500	0	0	11	100	1	0	100 (Sierra Leone )	0	0	0.84	73	43
21. Beans	61,500	1	1	1	39	6	36	37 (Niger)	95	66	0.76	63	42
21. Cotton	2,416,747	4	6	1	42	12	79	25 (Mali )	100	89	0.48	31	42
23. Mangoes	1,056,560	4	7	1	45	12	79	69 (Nigeria )	47	63	0.63	49	41
24. Rice, paddy	7,600,026	1	2	2	56	15	100	47 (Nigeria )	81	91	0.32	12	40
25. Eggplants	91,400	0	1	5	100	2	7	93 (Côte d'Ivoire )	11	9	0.60	45	39
26. Other vegetables	7,710,350	2	4	1	46	16	100	73 (Nigeria )	42	71	0.47	30	38
27. Wheat	86,167	0	0	7	100	4	21	82 (Nigeria )	27	24	0.42	23	37
28. Dates	32,800	1	1	3	81	3	14	73 (Mauritania )	41	28	0.52	36	36
29. Other nuts	202,200	12	20	-1	12	8	50	45 (Nigeria )	85	67	0.53	37	34
30. Cucumbers and gherkins	1,050	0	0	0	26	2	7	95 (Cape Verde )	7	7	1.22	100	33
31. Nutmeg, mace, cardamons	20	0	0	0	26	1	0	100 (Togo )	0	0	1.92	100	32
31. Watermelons	243,548	0	0	17	100	3	14	100 (Senegal)	0	7	0.38	19	32
33. Grapefruit and pomelos	150	0	0	0	26	1	0	100 (Burkina Faso )	0	0	1.07	99	31
33. Pepper, white/long/black	4,250	1	2	1	36	4	21	59 (Ghana )	63	42	0.58	42	31
33. Other cereals	275,759	1	2	1	37	11	71	49 (Guinea )	78	75	0.29	8	31
36. Pineapples	1,349,970	8	14	0	26	8	50	66 (Nigeria )	52	51	0.46	28	30

		Size		Dynam	ism			Diversification			Yield	t	
Rank in production index and product labels	For Share of Western information: Africa Production world production		Growth Western A produc	frica's	Numb produ countr Western	icing ies in	Share of top prod in Western Afric production		Average index	Ratio of W Africa's yie world y	eld and	Production index	
	MT	%	Index	% p.a.	Index	0 to 16	Index	% (top producer)	Index		Ratio	Index	
36. Tomatoes	1,604,234	1	2	1	41	12	79	55 (Nigeria)	68	73	0.26	5	30
38. Other vegetable products	354,300	25	43	0	24	4	21	98 (Nigeria )	4	12	0.45	27	27
38. Oil palm	12,913,000	7	13	0	33	11	71	67 (Nigeria )	50	61	0.24	2	27
40. Chick-peas	170	0	0	2	51	1	0	100 (Niger )	0	0	0.67	53	26
41. Oranges	401,600	1	1	0	30	8	50	75 (Ghana )	39	44	0.42	24	25
41. Chillies & peppers, green	1,072,063	4	7	0	30	7	43	67 (Nigeria )	50	46	0.37	18	25
43. Sweet potatoes	2,959,632	2	4	0	22	14	93	85 (Nigeria)	23	58	0.31	10	24
44. Papayas	759,950	11	19	0	30	4	21	99 (Nigeria )	1	11	0.48	31	23
45. Potatoes	675,915	0	0	2	63	7	43	97 (Nigeria)	4	24	0.22	0	22
46. Tang. mand. clement.	250	0	0	0	26	1	0	100 (Burkina Faso )	0	0	0.69	56	21
46. Coffee, green	220,580	3	5	-4	0	8	50	73 (Côte d'Ivoire)	42	46	0.50	33	21
46. Ginger	110,065	11	18	2	61	2	7	100 (Nigeria )	0	4	0.20	0	21
49. Cauliflower	60	0	0	0	26	1	0	100 (Cape Verde )	0	0	0.66	52	20
49. Jute and other bast fibres	2,200	0	0	0	26	2	7	59 (Mali )	62	35	0.37	18	20
49. Soybeans	478,998	0	0	2	52	5	29	97 (Nigeria )	4	17	0.31	11	20
52. Barley	800	0	0	-5	0	1	0	100 (Mauritania)	0	0	0.81	69	17
52. Almonds	1,250	0	0	0	26	1	0	100 (Burkina Faso )	0	0	0.56	40	17
52. Broad beans, green	4,600	0	1	1	35	1	0	100 (Niger )	0	0	0.50	33	17
52. Carrots	253,480	1	2	0	33	3	14	93 (Nigeria)	11	13	0.38	19	17
56. Castor beans	680	0	0	0	26	3	14	88 (Benin )	18	16	0.42	23	16
57. Cabbages	124,500	0	0	0	25	3	14	96 (Niger )	6	10	0.43	26	15
57. Peas, dry	12,300	0	0	1	38	3	14	81 (Mauritania )	29	21	0.21	0	15
59. Avocados	7,300	0	0	-2	0	2	7	86 (Ghana )	21	14	0.57	42	14
60. Lettuce	40,450	0	0	0	26	2	7	99 (Niger )	2	4	0.41	22	13
61. Tea	50	0	0	0	26	1	0	100 (Mali )	0	0	0.42	23	12
61. Cantaloupes & other melons	2,200	0	0	0	26	1	0	100 (Guinea )	0	0	0.40	22	12
63. Oats	20	0	0	0	26	1	0	100 (Ghana )	0	0	0.33	13	10
63. Other oil crops	750	0	0	-8	0	2	7	67 (Côte d'Ivoire )	51	29	0.32	12	10
65. Garlic	8,050	0	0	0	26	2	7	99 (Niger )	1	4	0.27	6	9
66. Sisal and other textile fibres of agave	130	0	0	0	26	1	0	100 (Guinea )	0	0	0.13	0	7
Source: EAOSTAT								` ,					

Source: FAOSTAT.

Notes: All indices range from 0 (lowest) to 100 (best performance). Products are ranked according to the Production Index. Data refer to 2005 and growth rates to 2001-05.

## **Index 2: Export**

The Export Performance Index for the Western African region aims measuring the export performance of the regions products by taking into account four dimensions: size, dynamism, exporter diversification, and trade balance. As will be detailed now, the major products in terms of proven export performance are Cashew nuts, Cotton, Cocoa beans, Pineapples, Mangoes, Other oil crops, Sesame seed, Groundnuts in shell, Green coffee, and Other nuts.

#### Size of exports

The "size" dimension indicates the magnitude of the respective product exports in absolute and relative terms. We measure the size index of the products by calculating a simple average of two indices: (1) the value of Western Africa's exports to the world and (2) the share of Western Africa in world exports. Products, which register already high export values and in which Western Africa manages to capture a high world market share are considered to have already proven their export capacity and to thus have a high potential for future exports.

The major products in terms of export size are: Cocoa beans, Cashew nuts, Cotton, Pineapples, and Sesame seed.

Table 15. Export index: Top ten products for "size"

Top 10 products	Western Afric to wor	•		Share of Western Africa in world exports				
	USD 1,000	Index	%	Index	Index			
1. Cocoa beans	2,868,638	100	67	100	100			
1. Cashew nuts	261,228	100	15	100	100			
3. Cotton	830,882	100	8	85	92			
4. Pineapples	119,338	46	10	100	73			
5. Sesame seed	47,913	18	6	60	39			
6. Other roots and tubers	13,726	5	6	61	33			
7. Other oil crops	9,597	4	5	55	29			
8. Bananas, plantains	99,208	38	2	17	27			
9. Coffee, green	94,166	36	1	9	23			
10. Ginger	11,768	5	4	38	21			
10. Oil palm	84,902	32	1	9	21			

Source: ITCs TradeMap and Market Access Map, see Table 20.

Note: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005. The trade balance excludes intra-Western Africa trade.

#### Dynamism of exports

The "dynamism" dimension shows how dynamic the products are. We evaluate the dynamism index of the products by calculating a simple average of two indices: (1) the absolute change in regions export value over the period 2001-05 and (2) the regions export growth rate to the world. Products with rapid export growth in value terms suggest that the country is competitive in the world markets. Stagnant or declining growth rates indicate the opposite. Everything else being equal, products which record fast growing exports over the last period are likely to experience the same trend if there is no major change in the world markets such as new competitors, new products, new technologies or fall in demand.

The major products in terms of export dynamism are Cashew nuts, Cotton, Cocoa beans, Other oil crops, and Other vegetable products.

Table 16. Export index: Top ten products for "dynamism"

Top 10 products		estern Africa to world	Absolute change Africa ex		Average Index
	% p.a	Index	USD 1,000	Index	IIIUEX
1. Cashew nuts	54	100	229,002	100	100
2. Cotton	17	60	359,504	100	80
3. Cocoa beans	16	59	1,394,960	100	79
4. Other oil crops	209	100	9,490	5	52
Other vegetable products	72	100	5,992	3	52
6. Cassava	94	100	2,140	1	51
6. Other fruits	162	100	1,973	1	51
6. Sorghum	85	100	1,807	1	51
9. Broad beans, green	144	100	481	1	50
9. Groundnuts in shell	78	100	803	1	50
9. Castor beans*	High	100	12	0	50
9. Cantaloupes & other melons	62	100	444	1	50
9. Chick-peas*	High	100	102	0	50
9. Watermelons	69	100	43	0	50
9. Grapefruit and pomelos*	High	100	10	0	50
9. Barley*	High	100	26	0	50
9. Soybeans	136	100	60	0	50

Source: ITCs TradeMap and Market Access Map, see Table 20.

Note: All indices range from 0 (lowest) to 100 (best performance). Growth rates and absolute changes refer to 2001-05. The trade balance excludes intra-Western Africa trade. Products marked with \* were not exported in 2001, thus growth rates between 2001 and 2005 are infinite; consequently, they get 100 points.

#### **Diversification of exports**

The "exporter diversification" points out how numerous exporting countries of the region are in each product. We appraise the regions exporter diversification index of the products by calculating a simple average of two indices: (1) the number of significant exporting countries in the region (the higher the better) and (2) the share of the top exporting country of the region in a particular product, which is used as an indicator of export concentration (the lower the better). We assume that the more diversified the region is across its countries, the better it is.

The main products in terms of exporter diversification are Cotton, Mangoes, Cashew nuts, Other nuts, and Tea.

Table 17. Export index: Top ten products for diversification

Top 10 products	Numb exporting		·	Share of top exporter in Western Africa exports				
	0 to 16	Index	% (top exporter)	Index	Index			
1. Cotton	11	100	29 (Burkina Faso)	100	100			
2. Mangoes	9	80	29 (Côte d'Ivoire )	100	90			
3. Cashew nuts	9	80	38 (Côte d'Ivoire)	94	87			
4. Other nuts	9	80	42 (Côte d'Ivoire )	88	84			
5. Tea	9	80	45 (Côte d'Ivoire )	84	82			
6. Cocoa beans	8	70	51 (Côte d'Ivoire)	74	72			
7. Beans, dry	5	40	34 (Niger)	100	70			
8. Groundnuts in shell	6	50	42 (Ghana)	89	69			
9. Cow peas, dry	5	40	38 (Niger)	94	67			
10. Other vegetables	11	100	83 (Ghana )	26	63			

Source: ITCs TradeMap and Market Access Map, see Table 20.

Note: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005. The trade balance excludes intra-Western Africa trade.

#### Trade balance

The "trade balance" reveals if the products prove to be net exporters or net importers. We measure the trade surplus index of the products by calculating a simple average of two indices: (1) the net trade balance, which is equal to exports minus imports, and (2) the relative trade balance, which is the ratio between the net exports (exports minus imports) and the total trade (exports plus imports). This reduces bias against large products, which tend to have either higher deficits or surpluses. Both exclude intraregional trade. They show whether a country is a net exporter or a net importer in absolute and relative terms respectively. In other words, they reveal whether the national production outweighs the national consumption or not. This index shows how the region performs on average in the world. It allows us to rank products according to their respective export performance index.

The main products in terms of trade balance are Cocoa beans, Cotton, Cashew nuts, Pineapples, Bananas and plantains, and Green coffee.

Table 18. Export index: Top ten products for trade balance

Top 10 products	Absolute trad	e balance	Relative tr	ade balance	Average
Top To producis	USD 1,000	Index	%	Index	Index
1. Cocoa beans	2,868,449	100	100	100	100
1. Cotton	826,009	100	100	100	100
1. Cashew nuts	261,156	100	100	100	100
4. Pineapples	119,217	54	100	100	77
5. Bananas, plantains	92,349	45	100	100	72
5. Coffee, green	92,510	45	97	98	72
7. Sesame seed	47,835	30	100	100	65
8. Other roots and tubers	13,665	19	100	100	59
8. Ginger	11,709	18	99	100	59
8. Other oil crops	9,082	17	99	100	59

Source: ITCs TradeMap and Market Access Map, see Table 20.

Note: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005 and growth rates to 2001-05. The trade balance excludes intra-Western Africa trade.

#### **Overall Export index**

The top products in terms of Western African export performance are Cashew nuts, Cotton, Cocoa beans, Pineapples, Mangoes, and Other oil crops.

Table 19. Export index for Western African countries

	Rank size	Rank dynamism	Rank diversification	Rank trade balance
1. Cashew nuts	1	1	3	1
2. Cotton	3	2	1	1
3. Cocoa beans	1	3	6	1
4. Pineapples	4	39	17	4
5. Mangoes	12	33	2	11
5. Other oil crops	7	4	12	8
7. Sesame seed	5	34	14	7
8. Groundnuts in shell	21	9	8	13
9. Coffee, green	9	47	11	5
10. Other nuts	21	39	4	20

Source: ITCs TradeMap and Market Access Map, see Table 20.

Table 20. Export index for Western African countries and underlying indicators

	Size					Dynamism			Diversification				Trade	balanc	е					
Products	Western Afrexports to we		Wester in w	re of n Africa orld orts	Average Index	Grow Wes Afri expoi	tern ca rts to	Absolute char in Western Af exports	_	Average Index	Numb expor count	rting	Share of top expo in Western Africa ea		erage Index	Absolute	Rela	tive	Average Index	Export index
	USD 1,000	Index	%	Index	Ave	% p.a	Index	USD 1,000	Index	Ave	0 to 16	Index	% (top exporter)	Index	Aver	USD <u>×</u> 1,000 <u>E</u>	%	Index	Ave	
1. Cashew nuts	261,228	100	15	100	100	54	100	229,002 1	100	100	9	80	38 (Côte d'Ivoire )	94	87	261,156 100	100	100	100	97
2. Cotton	830,882	100	8	85	92	17	60	359,504 1	100	80	11	100	29 (Burkina Faso)	100	100	826,009 100	100	100	100	93
3. Cocoa beans	2,868,638	100	67	100	100	16	59	1,394,960 1	100	79	8	70	51 (Côte d'Ivoire)	74	72	2,868,449 100	100	100	100	88
4. Pineapples	119,338	46	10	100	73	3	44	19,598	9	26	6	50	59 (Ghana )	62	56	119,217 54	100	100	77	58
5. Other oil crops	9,597	4	5	55	29	209	100	9,490	5	52	6	50	55 (Ghana )	68	59	9,082 17	99	100	59	50
5. Mangoes	18,651	7	3	26	17	17	60	14,752	7	33	9	80	29 (Côte d'Ivoire )	100	90	17,048 20	92	96	58	50
7. Sesame seed	47,913	18	6	60	39	11	54	16,834	8	31	9	80	77 (Nigeria )	36	58	47,835 30	100	100	65	48
8. Groundnuts in shell	892	0	1	5	3	78	100	803	1	50	6	50	42 (Ghana )	89	69	605 15	100	100	57	45
9. Coffee, green	94,166	36	1	9	23	-6	32	-20,456	0	16	9	80	74 (Côte d'Ivoire)	40	60	92,510 45	97	98	72	43
10. Other nuts	3,712	1	1	5	3	9	50	2,368	1	26	9	80	42 (Côte d'Ivoire )	88	84	474 15	73	86	50	41
11. Bananas, plantains	99,208	38	2	17	27	11	53	65,498	29	41	4	30	95 (Côte d'Ivoire )	8	19	92,349 45	100	100	72	40
12. Other roots and tubers	13,726	5	6	61	33	14	56	5,531	3	30	7	60	95 (Ghana )	7	33	13,665 19	100	100	59	39
13. Broad beans, green	495	0	1	9	5	144	100	481	1	50	5	40	63 (Senegal)	56	48	372 15	61	81	48	38
14. Other vegetable products	6,757	3	2	21	12	72	100	5,992	3	52	4	30	83 (Nigeria )	25	28	6,461 17	100	100	58	37
14. Other vegetables	13,941	5	1	6	5	7	48	3,443	2	25	11	100	83 (Ghana )	26	63	12,748 19	88	94	56	37
16. Beans	8,141	3	1	15	9	2	42	564	1	21	6	50	57 (Senegal)	66	58	6,512 17	96	98	57	36
17. Papayas	3,495	1	2	19	10	30	76	3,764	2	39	4	30	74 (Ghana )	39	35	3,457 16	98	99	57	35
17. Cantaloupes & other melons	522	0	0	0	0	62	100	444	1	50	5	40	69 (Senegal)	48	44	340 15	49	74	44	35
19. Ginger	11,768	5	4	38	21	43	91	8,338	4	48	3	20	100 (Nigeria)	0	10	11,709 18	99	100	59	34
19. Other cereals	744	0	0	5	2	32	78	500	1	40	5	40	54 (Nigeria )	70	55	28 14	25	62	38	34
21. Other fruits	2,185	1	0	2	2	162	100	1,973	1	51	5	40	91 (Ghana )	13	27	1,720 15	65	82	49	32
21. Oil palm	84,902	32	1	9	21	23	67	29,592	13	40	14	100	88 (Côte d'Ivoire )	19	59	-110,745 0	-77	12	6	32
23. Cassava	2,312	1	0	5	3	94	100	2,140	1	51	3	20	92 (Ghana )	12	16	2,142 15	88	94	55	31
23. Chillies & peppers, green	2,597	1	0	1	1	39	87	1,884	1	44	7	60	96 (Ghana )	6	33	1,716 15	51	76	45	31
25. Sweet potatoes	462	0	1	5	3	30	76	301	1	38	3	20	86 (Ghana )	22	21	396 15	100	100	57	30
26. Tomatoes	6,499	2	0	1	2	30	75	4,176	2	39	5	40	99 (Senegal)	1	21	4,874 16	61	81	48	27
26. Tea	2,535	1	0	1	1	6	47	260	1	24	9	80	45 (Côte d'Ivoire )	84	82	-70,113 0	-95	3	1	27
28. Coconuts	7,010	3	2	19	11	2	42	458	1	22	3	20	93 (Côte d'Ivoire )	11	16	6,468 17	94	97	57	26
28. Cow peas, dry	2,191	1	1	7	4	-1	39	-59	0	20	5	40	38 (Niger )	94	67	-3,150 13	-69	16	15	26
30. Peas, dry	142	0	0	0	0	31	77	59	0	39	4	30	48 (Burkina Faso )	79	55	-3,890 13	-99	1	7	25
31. Eggplants	367	0	0	1	1	31	77	217	1	39	2	10	90 (Ghana )	15	12	225 15	47	73	44	24
32. Oranges	673	0	0	0	0	31	77	56	0	39	3	20	88 (Ghana )	19	19	0 14	0	50	32	23

	Size					Dynamism					Diversification			Trade balance						
Products	Western Af exports to w		Shar Westerr in wo	n Africa orld	Average Index	Grow Wes Afri expo	tern ica rts to	rn Absolute change x Number of Share of top exporter in Western Africa exports countries in Western Africa exports		Average Index	Absolute	Relative		Average Index	Export index					
	USD 1,000	Index	%	Index	Ave	% p.a	Index	USD 1,000	Index	Average	0 to 16	Index	% (top exporter)	Index	Ave	USD ※ 1,000 본	%	Index	Ave	
32. Beans, dry	310	0	0	0	0	-14	23	-219	0	12	5	40	34 (Niger)	100	70	-2,596 14	-88	6	10	23
34. Other spices	633	0	0	1	1	40	88	464	1	44	5	40	82 (Nigeria )	27	34	-6,199 12	-84	8	10	22
35. Castor beans*	12	0	0	2	1	High	100	12	0	50	1	0	100 (Ghana )	0	0	0 14	0	50	32	21
35. Chick-peas*	102	0	0	0	0	High	100	102	0	50	1	0	100 (Burkina Faso )	0	0	0 14	0	50	32	21
35. Watermelons	50	0	0	0	0	69	100	43	0	50	2	10	98 (Senegal )	3	7	-18 14	-16	42	28	21
35. Maize	1,872	1	0	0	0	12	55	677	1	28	6	50	57 (Senegal )	66	58	-44,244 0	-100	0	0	21
39. Sorghum	1,976	1	0	3	2	85	100	1,807	1	51	3	20	84 (Nigeria )	25	22	-5,507 13	-99	0	7	20
40. Soybeans	62	0	0	0	0	136	100	60	0	50	2	10	81 (Benin )	29	20	-5,178 13	-100	0	7	19
41. Dates	1,355	1	0	3	2	18	62	660	1	31	3	20	91 (Nigeria)	14	17	-2,213 14	-47	26	20	18
42. Other pulses	105	0	0	0	0	24	69	61	0	35	1	0	100 (Niger )	0	0	0 14	0	50	32	17
43. Grapefruit and pomelos*	10	0	0	0	0	High	100	10	0	50	1	0	100 (Guinea )	0	0	-42 14	-68	16	15	16
43. Potatoes	199	0	0	0	0	35	82	136	0	41	3	20	89 (Ghana )	16	18	-24,473 6	-99	1	4	16
45. Garlic	79	0	0	0	0	-27	8	-194	0	4	2	10	75 (Niger )	38	24	0 14	0	50	32	15
45. Millet	68	0	0	1	0	-61	0	-2,845	0	0	3	20	47 (Mali )	80	50	-63 14	-89	6	10	15
45. Pimento, allspice	134	0	0	0	0	-9	29	-64	0	14	5	40	78 (Nigeria )	33	36	-442 14	-91	4	9	15
45. Barley*	26	0	0	0	0	High	100	26	0	50	1	0	100 (Nigeria)	0	0	-996 14	-95	2	8	15
45. Onions	20,999	8	1	14	11	15	58	8,912	4	31	4	30	100 (Niger )	0	15	-35,804 3	-100	0	1	15
50. Wheat	26	0	0	0	0	-37	0	-134	0	0	2	10	77 (Cape Verde )	35	23	0 14	0	50	32	14
51. Cabbages	12	0	0	0	0	41	90	9	0	45	1	0	100 (Gambia )	0	0	-403 14	-94	3	9	13
52. Nutmeg, mace, cardamons	32	0	0	0	0	-2	38	-2	0	19	2	10	78 (Togo )	33	22	-493 14	-97	1	8	12
53. Rice, paddy	686	0	0	2	1	-39	0	-12	0	0	2	10	100 (Côte d'Ivoire)	0	5	0 14	0	50	32	10
54. Pepper, white/long/black	176	0	0	0	0	-37	0	-969	0	0	4	30	83 (Niger)	26	28	-4,704 13	-99	1	7	9
55. Lettuce	9	0	0	0	0	-27	7	-23	0	4	2	10	89 (Senegal )	17	13	-476 14	-96	2	8	6
56. Cucumbers and gherkins	49	0	0	0	0			0	0	0	1	0	100 (Côte d'Ivoire)	0	0	-190 14	-88	6	10	3

Source: ITCs TradeMap and Market Access Map.

Note: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005 and growth rates to 2001-05. The trade balance excludes intra-Western Africa trade. Products marked with \* were not exported in 2001, thus growth rates between 2001 and 2005 are infinite; consequently, they get 100 points.

## **Index 3: Import**

The Import Index for the Western African region aims measuring the current regional reliance on imports of the products by taking into account three dimensions of the import: size, dynamism, and diversification. As will be detailed now, the major products in terms of high regional demand for imports are Oil palm, Tea, Onions, Wheat, Maize, Potatoes, Dry cow peas, Dry peas, Sorghum, Garlic and Dates.

#### Size of imports

We measure *the "size"* index of the products by the share of the region in world imports. The main products in terms of import size are Onions, Tea, Wheat, Oil palm, and Maize.

Table 21. Import index: Top ten products for "size

Top 10 products	Western Afric		Share of Win world	Average Index	
	USD 1,000	Index	%	Index	iliuex
1. Onions	51,439	100	3	100	100
1. Tea	72,623	100	2	100	100
1. Wheat	848,058	100	4	100	100
4. Oil palm	200,722	100	2	91	96
5. Maize	49,390	96	0	17	57
6. Jute and other bast fibres	6,634	13	5	100	56
7. Rice, paddy	8,754	17	2	90	54
8. Potatoes	24,753	48	1	56	52
9. Cow peas, dry	5,464	11	2	84	47
10. Sorghum	8,137	16	1	51	34

Source: ITCs TradeMap and Market Access Map, see Table 25.

Note: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005.

#### Dynamism of imports

The "dynamism" dimension shows how dynamic the regional market is. We evaluate the dynamism index of the products by calculating the regions import growth rate. The major products in terms of import dynamism are Maize, Oil palm, Wheat, Tea, and Sorghum.

Table 22. Import index: Top ten products for "dynamism"

Top 10 products		estern Africa rom world	Absolute change Africa im	Average Index	
	% p.a	Index	USD 1,000	Index	IIIUEX
1. Maize	33	76	31,518	100	88
2. Oil palm	18	53	77,184	100	76
3. Wheat	15	50	363,378	100	75
4. Tea	11	43	24,478	100	71
5. Sorghum	163	100	7,966	34	67
6. Soybeans	246	100	5,262	23	61
7. Onions	12	44	18,129	75	59
8. Other pulses	83	100	576	4	52
9. Castor beans*	High	100	12	2	51
9. Citrus fruit nes	98	100	58	2	51
9. Almonds	79	100	129	2	51
9. Broad beans, dry*	High	100	11	2	51
9. Oats*	High	100	31	2	51

Source: ITCs TradeMap and Market Access Map, see Table 25.

Note: All indices range from 0 (lowest) to 100 (best performance). Growth rates refer and absolute changes to 2001-05. Products marked with \* were not imported in 2001, thus growth rates between 2001 and 2005 are infinite.

#### Diversification of imports

The "importer diversification" indicates how numerous producing countries of the region are in each commodity. We appraise the regions production diversification index of the products by calculating a simple average of two indices: (1) the number of significant producing countries in the region (the higher the better) and (2) the share of the top one producing country of the region in a particular product, which is used as an indicator of production concentration (the lower the better). We assume that the more diversified the region is across its countries, the more appropriate will be interventions under the Programme.

The major products in terms of importer diversification are Onions, Oil palm, Potatoes, Dry peas, and Tea.

Table 23. Import index: Top ten products for "diversification"

Top 10 products	Numb importing o Wester	ountries in	• •	Share of top importer in Western Africa exports				
	0 to 16	Index	% (top importer)	Index				
1. Onions	15	100	26 (Senegal)	100	100			
2. Oil palm	16	100	30 (Ghana )	98	99			
2. Potatoes	16	100	30 (Senegal)	97	99			
4. Peas, dry	14	93	15 (Liberia )	100	96			
5. Tea	15	100	38 (Ghana )	87	93			
6. Maize	13	86	34 (Senegal)	92	89			
7. Other vegetables	11	71	28 (Mali )	100	86			
8. Garlic	14	93	51 (Senegal)	69	81			
8. Cow peas, dry	11	71	35 (Niger )	91	81			
10. Tomatoes	14	93	53 (Liberia )	65	79			
10. Dates	10	64	32 (Senegal)	94	79			

Source: ITCs TradeMap and Market Access Map, see Table 25.

Note: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005.

#### Overall Import index

The top products in terms of Western African import index are Oil palm, Tea, Onions, Wheat, and Maize.

Table 24. Import index for Western African countries

	Rank	Rank	Rank
	size	growth	diversification
1. Oil palm	4	2	2
2. Tea	1	4	5
3. Onions	1	7	1
4. Wheat	1	3	14
5. Maize	5	1	6
6. Potatoes	8	19	2
7. Cow peas, dry	9	42	8
8. Peas, dry	19	31	4
9. Sorghum	10	5	33
10. Garlic	14	38	8
10. Dates	13	42	10

Source: ITCs TradeMap and Market Access Map, see Table 25.

Table 25. Import index for Western African countries and underlying indicators

		Size					Dynamism			Diversification						
Products	Western impor	ts orld	Africa	of Western in world orts (%)	Average Index	Grow Westerr impo	n Africa	Absolute ch Western impor	Africa ts	Average Index	Number of countries in Africa	Westerr		Africa	Average Index	Import Index
	USD 1,000	Index	%	Index	Avera	% p.a	Index	USD 1,000	Index	Avera	0 to 16	Index	% (top importer)	Index	Avera	
1. Oil palm	200,722	100	2	91	96	18	53	77,184	100	76	16	100	30 (Ghana )	98	99	90
2. Tea	72,623	100	2	100	100	11	43	24,478	100	71	15	100	38 (Ghana )	87	93	88
3. Onions	51,439	100	3	100	100	12	44	18,129	75	59	15	100	26 (Senegal)	100	100	86
4. Wheat	848,058	100	4	100	100	15	50	363,378	100	75	14	93	69 (Nigeria)	43	68	81
5. Maize	49,390	96	0	17	57	33	76	31,518	100	88	13	86	34 (Senegal)	92	89	78
6. Potatoes	24,753	48	1	56	52	14	47	9,451	40	44	16	100	30 (Senegal)	97	99	65
7. Cow peas, dry	5,464	11	2	84	47	7	38	1,175	6	22	11	71	35 (Niger )	91	81	50
8. Peas, dry	4,032	8	0	21	14	19	55	1,920	9	32	14	93	15 (Liberia )	100	96	48
9. Sorghum	8,137	16	1	51	34	163	100	7,966	34	67	4	21	56 (Niger)	61	41	47
10. Garlic	5,534	11	1	31	21	11	43	1,571	8	26	14	93	51 (Senegal)	69	81	42
10. Dates	3,580	7	1	42	24	8	39	978	6	22	10	64	32 (Senegal)	94	79	42
12. Rice, paddy	8,754	17	2	90	54	22	59	4,462	20	40	7	43	87 (Gambia )	18	31	41
13. Other vegetables	1,193	2	0	2	2	20	57	841	5	31	11	71	28 (Mali )	100	86	40
13. Carrots	4,613	9	1	33	21	32	74	2,797	13	44	6	36	44 (Senegal )	78	57	40
15. Tomatoes	1,632	3	0	1	2	19	55	703	5	30	14	93	53 (Liberia )	65	79	37
15. Cabbages	415	1	0	2	1	28	68	295	3	35	9	57	33 (Liberia )	93	75	37
15. Other spices	6,832	13	1	48	31	7	37	1,486	8	22	12	79	75 (Nigeria )	35	57	37
15. Other pulses	626	1	0	8	5	83	100	576	4	52	6	36	50 (Senegal)	70	53	37
15. Pepper, white/long/black	4,880	9	1	45	27	19	54	2,402	11	33	10	64	74 (Senegal )	36	50	37
20. Other nuts	5,579	11	1	29	20	7	37	979	6	21	7	43	39 (Niger )	85	64	35
21. Beans, dry	2,906	6	0	13	9	22	60	1,765	9	34	10	64	72 (Cape Verde )	40	52	32
22. Other fruits	465	1	0	2	1	2	30	39	2	16	10	64	42 (Senegal)	81	73	30
22. Oranges	3,084	6	0	4	5	2	29	139	2	16	8	50	38 (Senegal)	86	68	30
24. Sisal and other textile fibres of agave	426	1	1	29	15	-12	10	-104	1	6	7	43	37 (Côte d'Ivoire )	87	65	29
24. Chick-peas	684	1	0	7	4	10	41	203	3	22	7	43	43 (Gambia )	79	61	29
24. Coconuts	664	1	0	8	5	13	46	227	3	24	8	50	52 (Senegal)	66	58	29
27. Cotton	3,627	7	0	1	4	8	39	790	5	22	8	50	59 (Nigeria )	57	53	27
27. Cantaloupes & other melons	182	0	0	0	0	30	71	110	2	37	4	21	54 (Cape Verde )	64	43	27
27. Broad beans, dry*	29	0	0	1	0	High	100	11	2	51	2	7	62 (Côte d'Ivoire )	53	30	27
27. Groundnuts in shell	287	0	0	7	4	47	95	225	3	49	3	14	70 (Mauritania )	42	28	27
31. Lettuce	485	1	0	1	1	8	38	57	2	20	8	50	56 (Côte d'Ivoire )	62	56	26
31. Tang. mand. clement.	1,076	2	0	2	2	19	54	458	4	29	7	43	62 (Senegal )	53	48	26
31. Chillies & peppers, green	877	2	0	1	1	31	73	469	4	38	7	43	75 (Liberia )	34	38	26
31. Jute and other bast fibres	6,634	13	5	100	56	1	28	2	2	15	3	14	99 (Côte d'Ivoire )	1	8	26
35. Cauliflower	251	0	0	2	1	6	35	27	2	19	6	36	47 (Côte d'Ivoire )	73	54	25
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		Size				Dynamism					Diversification					
Products	Western / import from wo	ts	Africa i	Western n world ts (%)	ge Index	Grow Western impo	n Africa	Absolute ch Western impor	Africa	ge Index	Number of countries in Afri	n Western	Share of top Western importer	Africa	ge Index	Import Index
	USD 1,000	Index	%	Index	Average	% p.a	Index	USD 1,000	Index	Average	0 to 16	Index	% (top importer)	Index	Average	
35. Soybeans	5,299	10	0	1	6	246	100	5,262	23	61	3	14	98 (Nigeria )	3	9	25
37. Coffee, green	1,656	3	0	0	2	7	37	399	3	20	8	50	62 (Cape Verde )	53	51	24
37. Mangoes	1,603	3	0	8	5	17	52	676	4	28	4	21	59 (Ghana )	57	39	24
37. Pineapples	121	0	0	0	0	28	68	76	2	35	3	14	58 (Cape Verde )	59	36	24
40. Pimento, allspice	581	1	0	4	3	9	40	167	2	21	7	43	64 (Senegal)	50	46	23
41. Watermelons	68	0	0	0	0	29	70	43	2	36	3	14	66 (Cape Verde )	47	31	22
42. Papayas	38	0	0	0	0	15	48	16	2	25	3	14	58 (Cape Verde )	59	36	21
42. Bananas, plantains	7,257	14	0	4	9	19	54	3,480	16	35	5	29	92 (Senegal)	11	20	21
42. Other cereals	716	1	1	29	15	30	70	448	4	37	3	14	94 (Niger )	8	11	21
42. Broad beans, green	123	0	0	11	6	49	98	98	2	50	2	7	96 (Niger )	6	6	21
46. Cashew nuts	72	0	0	0	0	0	27	0	2	14	3	14	44 (Liberia )	77	46	20
46. Almonds	143	0	0	3	2	79	100	129	2	51	2	7	97 (Mali )	5	6	20
48. Barley	1,022	2	0	1	1	9	40	303	3	22	3	14	61 (Ghana )	55	35	19
48. Ginger	59	0	0	1	0	12	45	22	2	23	2	7	59 (Liberia )	57	32	19
48. Eggplants	142	0	0	2	1	43	89	72	2	46	2	7	91 (Liberia )	13	10	19
48. Cucumbers and gherkins	239	0	0	0	0	43	90	106	2	46	2	7	91 (Liberia )	13	10	19
48. Castor beans*	12	0	0	15	7	High	100	12	2	51	1	0	100 (Togo )	0	0	19
53. Cocoa beans	455	1	0	0	0	20	56	282	3	30	3	14	78 (Togo )	31	23	18
53. Citrus fruit nes	49	0	0	7	3	98	100	58	2	51	1	0	100 (Nigeria )	0	0	18
55. Oats*	31	0	0	0	0	High	100	31	2	51	1	0	100 (Nigeria )	0	0	17
56. Nutmeg, mace, cardamons	525	1	0	10	5	-4	21	-79	1	11	6	36	82 (Nigeria )	25	30	16
56. Grapefruit and pomelos	52	0	0	0	0	44	92	40	2	47	1	0	100 (Liberia )	0	0	16
58. Millet	131	0	0	7	4	-55	0	-3,042	0	0	2	7	51 (Gambia )	68	38	14
59. Cassava	170	0	0	1	1	7	37	40	2	19	3	14	89 (Cape Verde )	16	15	12
60. Beans	1,623	3	0	11	7	-18	0	-2,021	0	0	6	36	89 (Nigeria )	16	26	11
61. Sweet potatoes	34	0	0	1	1	21	57	18	2	30	1	0	100 (Niger )	0	0	10
62. Sesame seed	78	0	0	0	0	-25	0	-168	1	1	2	7	67 (Nigeria )	46	27	9
63. Other oil crops	515	1	0	9	5	-14	6	-433	0	3	3	14	94 (Togo )	8	11	6
64. Other roots and tubers	78	0	0	1	1	-14	6	-67	1	4	2	7	94 (Niger )	9	8	4
65. Other vegetable products	296	1	0	7	4	-22	0	-492	0	0	2	7	100 (Nigeria )	0	4	2
66. Avocados	0	0	0	0	0			0	2	2	0	0			0	1

Source: ITCs TradeMap and Market Acces s Map.

Note: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005 and growth rates to 2001-05. Products marked with \* were not imported in 2001, thus growth rates between 2001 and 2005 are infinite; consequently, they get 100 points.

#### Index 4: World market

The World market index aims measuring world market trends of the products by taking into account three dimensions of the market demand: size, dynamism and the market access of Western African countries. As will be detailed now, the major products in terms of high and accessible international demand are Maize, Green coffee, Oil palm, Wheat, Soybeans, Tomatoes, Bananas and plantains, Cotton, Cocoa beans, Sesame seed, and Tangerines, mandarins and clementines.

#### Size of world markets

We estimate *the size* of the products by calculating a simple average of two indices:(1) the value of world imports and (2) the share of regional imports in world imports. All things being equal, products which already register a large international demand are more promising for future export growth. The major products in terms of world import size are Wheat, Soybeans, Maize, Oil palm, and Green coffee.

Table 26. World market index: Top ten products for "size"

Top 10 products	World im	oorts
Top To products	USD million	Index
1. Wheat	21,381	100
1. Soybeans	18,916	100
1. Maize	13,250	100
1. Oil palm	10,441	100
5. Coffee, green	10,154	97
6. Cotton	9,922	95
7. Bananas, plantains	8,743	84
8. Tomatoes	5,253	50
9. Cocoa beans	4,745	45
10. Barley	4,119	39

Source: ITCs TradeMap and Market Access Map, see Table 30.

Note: All indices range from 0 (lowest) to 100 (best performance). Data refer to 2005.

#### Dynamism of world markets

We evaluate *the dynamism* of the products by calculating a simple average of (1) the absolute change in world imports and (2) the growth of world imports. Fast growing global markets are more likely to produce net gains for an exporting country/region than slow growing, stagnant or declining markets. All things being equal, the more dynamic world imports are, the higher the probability of future export growth is. The dynamism of international demand for each product is measured by the world import growth rate between 2001 and 2005.

The main products in terms of world import dynamism are Oil palm, Green coffee, Soybeans, Cocoa beans, and Wheat.

Table 27. World market index: Top ten products for "dynamism"

Top 10 products	Growth of w	orld imports	Absolute o	Average Index	
	% p.a	Index	USD million	Index	iliuex
1. Oil palm	23	100	5,807	100	100
2. Coffee, green	13	59	3,826	100	79
3. Soybeans	12	57	6,918	100	78
4. Cocoa beans	16	73	2,152	57	65
4. Wheat	6	31	4,167	100	65
6. Tomatoes	14	65	2,168	57	61
7. Cashew nuts	21	93	1,000	27	60
7. Maize	7	37	3,180	83	60
9. Bananas, plantains	10	47	2,704	71	59
10. Avocados	24	100	574	16	58

Source: ITCs TradeMap and Market Access Map, see Table 30.

Note: All indices range from 0 (lowest) to 100 (best performance). Growth rates and absolute changes refer to 2001-05.

#### Market access

We assess the market access conditions of the products by calculating a simple average of two indices: (1) the applied tariff to the region, and (2) the tariff differential between the region and the MFN regime. All things being equal, products that enjoy open markets and preferential access are more promising for future export growth.

The top in terms of market access are Sesame seed, Cassava, Maize, Garlic, and Tomatoes.

Table 28. World market index: Top ten products for "market access"

Top 10 products		applied ern Africa	Tariff ac	Average Index	
	%	Index	%	Index	IIIGEX
1. Sesame seed	6	81	61	100	90
2. Cassava	8	73	45	100	87
3. Maize	10	66	42	100	83
4. Garlic	8	74	27	89	82
5. Tomatoes	1	96	16	54	75
6. Lettuce	2	94	13	42	68
6. Tang. mand. clement. satsma	2	93	13	43	68
8. Beans	1	98	9	31	65
9. Oats	3	91	11	37	64
10. Cabbages	1	96	9	30	63
10. Cantaloupes & other melons	1	98	8	27	63
10. Pimento, allspice	5	82	13	44	63

Source: ITCs TradeMap and Market Access Map, see Table 30.

Notes: All indices range from 0 (lowest) to 100 (best performance). The preferential tariff advantage is calculated as the difference between the MFN rate (applied to WTO members) and the rate applied to Western African countries.

## **Overall World Market index**

The top products in terms of the World market index are Maize, Green coffee, Oil palm, Wheat, and Soybeans.

Table 29. World market index

	Rank	Rank	Rank
	size	growth	Market access conditions
1. Maize	1	7	3
2. Coffee, green	5	2	32
2. Oil palm	1	1	58
4. Wheat	1	4	41
5. Soybeans	1	3	62
6. Tomatoes	8	6	5
7. Bananas, plantains	7	9	54
8. Cotton	6	15	58
9. Cocoa beans	9	4	29
10. Sesame seed	30	27	1
10. Tang. mand. clement. satsma	14	18	6

Source: ITCs TradeMap and Market Access Map, see Table 30.

Table 30. World market index and underlying indicators

	Size			1	Dynamism			Market access					
Products	World impo	rts		of world	Absolute cha world imp		Average index	to the	f applied Western Africa		ariff antage*	Average index	World Market Index
	USD million	Index	% p.a.	Index	USD millions	Index	§.⊨	%	Index	%	Index	§.=	
. Maize	13,250	100	7	37	3,180	83	60	10	66	42	100	83	81
2. Coffee, green	10,154	97	13	59	3,826	100	79	1	96	0	0	48	75
2. Oil palm	10,441	100	23	100	5,807	100	100	17	43	2	6	25	75
I. Wheat	21,381	100	6	31	4,167	100	65	10	68	7	22	45	70
5. Soybeans	18,916	100	12	57	6,918	100	78	18	41	0	0	21	66
6. Tomatoes	5,253	50	14	65	2,168	57	61	1	96	16	54	75	62
7. Bananas, plantains	8,743	84	10	47	2,704	71	59	13	56	2	8	32	58
3. Cotton	9,922	95	7	36	2,324	61	49	15	50	0	0	25	56
9. Cocoa beans	4,745	45	16	73	2,152	57	65	1	97	0	0	49	53
0. Sesame seed	835	7	13	61	325	9	35	6	81	61	100	90	44
0. Tang. mand. clement. satsma	2,408	23	13	60	930	25	43	2	93	13	43	68	44
2. Lettuce	1,860	17	14	66	776	21	43	2	94	13	42	68	43
3. Garlic	848	8	13	60	331	9	35	8	74	27	89	82	41
3. Avocados	996	9	24	100	574	16	58	1	97	5	15	56	41
3. Chillies & peppers, green	2,866	27	12	55	1,022	27	41	1	97	3	10	54	41
6. Pineapples	1,497	14	20	86	766	21	54	2	94	4	12	53	40
7. Beans	661	6	19	84	331	9	47	1	98	9	31	65	39
8. Cashew nuts	1,874	17	21	93	1,000	27	60	9	70	0	0	35	38
9. Other vegetables	2,470	23	11	52	836	22	37	5	83	5	18	51	37
9. Barley	4,119	39	11	52	1,400	37	45	19	37	6	19	28	37
21. Cassava	574	5	6	31	115	4	17	8	73	45	100	87	36
21. Sweet potatoes	97	0	24	100	56	2	51	2	94	5	17	56	36
21. Oranges	3,161	30	9	43	888	24	33	9	70	7	22	46	36
24. Other nuts	911	8	22	95	488	13	54	5	82	1	4	43	35
25. Cantaloupes & other melons	1,253	11	10	46	382	11	29	1	98	8	27	63	34
25. Eggplants	283	2	17	75	130	4	39	2	93	9	29	61	34
27. Cabbages	820	7	10	48	259	8	28	1	96	9	30	63	33
27. Onions	1,581	15	10	48	500	14	31	4	87	6	19	53	33
29. Pimento, allspice	644	6	10	49	209	6	28	5	82	13	44	63	32
29. Watermelons	657	6	12	54	230	7	30	2	94	7	24	59	32
29. Cauliflower	637	5	14	63	256	7	35	4	88	7	25	57	32
29. Other cereals	116	0	17	78	55		40	6	79	10	33	56	32
29. Tea	3,440	32	6	30	634	17	24	7	77	1	4	41	32
34. Potatoes	2,091	19	7	38	513		26	8	72	8	25	49	31
34. Other fruits	1,085	10	12	58	404	11	35	6	81	4	14	47	31
36. Mangoes	944	8	12	55	338		32	2	95	1	4	49	30

	Size			ı	Dynamism				Mari	ket acce	ess		
Products	World impo	rts		of world ports	Absolute ch world imp		Average index	to the	f applied Western Africa		ariff antage*	Average index	World Market Index
	USD million	Index	% p.a.	Index	USD millions	Index	Α̈́Ξ	%	Index	%	Index	Ϋ́Ε	¥ .⊑ Illuex
36. Ginger	321	2	17	78	154	5	41	5	82	3	10	46	30
38. Carrots	666	6	9	43	191	6	25	4	85	8	26	56	29
39. Oats	440	4	6	32	92	2 3	18	3	91	11	37	64	28
39. Other spices	666	6	12	57	246	6 7	32	3	90	1	4	47	28
41. Broad beans, green	50	0	9	44	14	1	23	2	93	7	24	58	27
41. Coconuts	363	3	15	68	151	5	36	5	84	0	0	42	27
43. Papayas	222	1	9	46	67	7 3	24	0	98	2	8	53	26
43. Millet	84	0	11	51	27	2	26	5	85	6	21	53	26
43. Other oil crops	264	2	13	59	100	3	31	3	91	0	0	46	26
46. Sisal and other textile fibres of agave	70	0	11	53	23	3 1	27	3	90	1	4	47	25
46. Cucumbers and gherkins	1,434	13	13	60	556	15	38	18	41	3	10	26	25
48. Grapefruit and pomelos	778	7	6	33	164	5	19	3	89	1	4	47	24
48. Groundnuts in shell	185	1	10	50	60	) 2	26	3	88	0	1	45	24
48. Dates	404	3	11	53	134	4	28	10	67	4	12	40	24
51. Rice, paddy	459	4	13	59	170	) 5	32	11	62	2	7	35	23
52. Almonds	215	1	25	100	126	6 4	52	23	22	0	2	12	22
53. Broad beans, dry	144	1	3	20	16	3 1	11	4	86	6	19	53	21
54. Citrus fruit nes	33	0	-16	0	-33	3 0	0	2	95	7	24	59	20
54. Other roots and tubers	235	2	3	21	29	2	11	5	83	4	12	48	20
54. Jute and other bast fibres	122	1	7	36	18	3 1	19	6	80	0	0	40	20
57. Sorghum	747	7	-2	0	-64	0	0	6	81	1	4	43	16
57. Peas, dry	890	8	6	31	179	5	18	16	45	0	1	23	16
59. Pepper, white/long/black	517	4	-3	0	-60	0	0	5	82	0	1	42	15
60. Castor beans	4	0	-20	0	-5	5 1	0	5	85	0	0	42	14
60. Nutmeg, mace, cardamons	248	2	-2	1	-18	3 0	1	7	77	0	0	39	14
60. Cow peas, dry	306	2	6	32	60	2	17	21	30	4	14	22	14
60. Beans, dry	1,035	9	5	28	184	6	17	21	29	2	5	17	14
64. Chick-peas	472	4	-2	2	-31	0	1	11	63	0	0	32	12
65. Other pulses	344	3	1	11	10	) 1	6	18	39	0	1	20	10
65. Other vegetable products	204	1	12	55	73	3	29	35	0	0	0	0	10

Source: ITCs TradeMap and Market Access Map.

Notes: All indices range from 0 (lowest) to 100 (best performance). Products are ranked according to the world market Index. \* The preferential tariff advantage is calculated as the difference between the MFN rate (applied to WTO members) and the rate applied to Western African countries.

## Comparing products along the four indices

So far, we have examined the product rankings for individual indices (Table 31).

Table 31: Top 20 products for Western African countries in the four indices

	Production index	Export index	Import index	World market index
Top 20	Other roots and tubers	1. Cashew nuts	1. Onions	1. Maize
products	1. Cocoa beans	1. Cocoa beans	1. Tea	1. Wheat
•	1. Cow peas, dry	3. Cotton	1. Wheat	1. Oil palm
	1. Citrus fruit nes	4. Pineapples	4. Oil palm	1. Soybeans
	5. Millet	5. Sesame seed	5. Maize	5. Coffee, green
	6. Cassava	6. Other roots and tubers	6. Jute and other bast fibres	6. Cotton
	7. Other vegetable products	7. Other oil crops	7. Rice, paddy	7. Bananas, plantains
	8. Sorghum	8. Bananas, plantains	8. Potatoes	8. Tomatoes
	9. Cashew nuts	9. Coffee, green	9. Cow peas, dry	9. Cocoa beans
	10. Groundnuts in shell	10. Ginger	10. Sorghum	10. Barley
	11. Other nuts	10. Oil palm	11. Other spices	11. Tea
	12. Papayas	12. Mangoes	12. Pepper, white/long/black	12. Oranges
	13. Ginger	13. Other vegetable products	13. Dates	13. Chillies & peppers, green
	14. Pineapples	14. Coconuts	14. Garlic	14. Tang. mand. clement. satsma
	15. Oil palm	14. Onions	14. Carrots	14. Other vegetables
	16. Bananas, plantains	16. Papayas	16. Other nuts	16. Potatoes
	17. Sesame seed	17. Beans	17. Sisal & other textile fibres	17. Lettuce
	17. Pimento, allspice	18. Other vegetables	17. Other cereals	17. Cashew nuts
	19. Other fruits	18. Broad beans, green	19. Peas, dry	19. Onions
	19. Other pulses	20. Cow peas, dry	20. Beans, dry	20. Pineapples
	19. Mangoes		20. Bananas, plantains	
	19. Chillies & peppers, green			
Other	23. Cotton	21. Groundnuts in shell	22. Beans	21. Cucumbers and gherkins
products	24. Coffee, green	21. Sweet potatoes	22. Castor beans	22. Cantaloupes & other melons
p	25. Other vegetables	21. Cassava	24. Soybeans	23. Other fruits
	25. Sweet potatoes	21. Other nuts	24. Broad beans, green	24. Avocados
	27. Coconuts	25. Other fruits	26. Oranges	24. Beans, dry
	27. Onions	25. Tomatoes	26. Coconuts	26. Garlic
	27. Maize	25. Other cereals	26. Other pulses	26. Mangoes
	30. Pepper, white/long/black	25. Dates	26. Mangoes	26. Other nuts
	30. Carrots	25. Sorghum	26. Nutmeg, mace, cardamons	
	30. Rice, paddy	30. Chillies & peppers, green	26. Other oil crops	30. Sesame seed
	30. Other cereals	30. Eggplants	32. Chick-peas	30. Cabbages
	30. Tomatoes	30. Rice, paddy	32. Cotton	30. Grapefruit and pomelos
	35. Other spices	30. Castor beans	32. Millet	30. Sorghum
	35. Beans	30. Other spices	32. Groundnuts in shell	34. Beans
	35. Beans, dry	30. Tea	32. Other vegetable products	34. Pimento, allspice
	35. Eggplants	36. Cantaloupes & other	37. Pimento, allspice	34. Watermelons
	35. Dates	melons	37. Citrus fruit nes	34. Carrots
	35. Broad beans, green	36. Garlic	39. Other vegetables	34. Other spices
	35. Oranges	36. Wheat	39. Tomatoes	39. Cassava
		36. Oranges	39. Coffee, green	39. Cauliflower
	42. Nutmeg, mace, cardamons		39. Tang. mand. clement.	41. Oats
	42. Grapefruit and pomelos	36. Other pulses	39. Almonds	41. Pepper, white/long/black
	42. Broad beans, dry	36. Watermelons	44. Cabbages	41. Rice, paddy
	42. Barley	36. Grapefruit and pomelos	44. Other fruits	41. Chick-peas
	42. Tang. mand. clement.	36. Beans, dry	44. Lettuce	45. Coconuts
	42. Chick-peas	36. Millet	44. Cauliflower	45. Dates
	42. Cauliflower	36. Cucumbers and gherkins	44. Chillies & peppers, green	45. Other pulses
	42. Avocados	36. Pimento, allspice	44. Barley	48. Eggplants
	42. Almonds	36. Cabbages	44. Cassava	48. Other roots and tubers
	42. Cabbages	36. Nutmeg, mace, cardamons		48. Ginger
	42. Wheat	36. Lettuce	44. Other roots and tubers	48. Other oil crops
	42. Castor beans	36. Barley	44. Sweet potatoes	48. Nutmeg, mace, cardamons
	42. Tea	36. Peas, dry	54. Cashew nuts	48. Cow peas, dry
	42. Lettuce	36. Pepper, white/long/black	54. Cantaloupes & melons	54. Papayas
	42. Cantaloupes & other	36. Soybeans	54. Pineapples	54. Broad beans, dry
	melons	36. Potatoes	54. Papayas	54. Groundnuts in shell
	42. Watermelons	36. Maize	54. Ginger	54. Jute and other bast fibres
	42. Jute and other bast fibres		54. Watermelons	54. Almonds
	42. Oats		54. Broad beans, dry	54. Other vegetable products
	42. Other oil crops		54. Sesame seed	60. Citrus fruit nes
	42. Soybeans		54. Cocoa beans	60. Broad beans, green
	42. Garlic		54. Cucumbers and gherkins	60. Sweet potatoes
	42. Potatoes		54. Oats	60. Other cereals
	42. Peas, dry		54. Grapefruit and pomelos	60. Millet
	42. Sisal & other textile fibres		54. Avocados	60. Sisal & other textile fibres
				60. Castor beans

Source: FAOSTAT, ITCs TradeMap and Market Access Map, Table 14, Table 20, Table 25, Table 30.

We now combine the four indices, and distinguish whether a product is ranked among the top 20 products for each dimension or whether it is not. We can identify 16 possible combinations on the basis of the composite indices (Table 32). For simplicity's sake, we use the following colour scheme that for four possible strategic responses of the potential for sector development:

- Green: Import substitution and export development: Products that rank highly in the Import index and in the Export and/or World Market Indices.
- Yellow: Export development only. Products that rank highly in the Export and/or World Market Indices.
- Orange: Import substitution only: Products that rank highly in the Import index.
- Red: No apparent potential: Products that rank low across all indices.

The possible strategic responses are analysed separately for products that are among the 20 best performers in the Production Index (Table 33) and those that are not (Table 34). Products shown in Table 34 may justify an increase in production to take advantage of these possible strategic responses. In both tables, products emanating from the region are grouped into broad agricultural product sectors.

**Products with** <u>high</u> ranks in production are produced, efficiently in relatively large quantities and for which there is a potential for import substitution and/or export development (Table 33).

- A potential for export development and import substitution appears for Maize.
- A potential for export development only appears for Cocoa beans, Bananas, plantains, Cashew nuts, Sesame seed, Groundnuts in shell, Cassava, and Other roots and tubers.
- A potential for *import substitution only* appears for Dry cow peas, Other pulses, Sorghum, Onions, and Other spices.
- No apparent potential appears for Dry beans, Dry broad beans, Millet, Citrus fruit,
   Other fruits, Coconuts, Cassava, and Pimento, allspice.

**Products with** <u>Iow</u> **ranks in production** are produced inefficiently or in relatively small quantities but for which there is a potential for significant production capacity development prior to taking advantage of identified import substitution and/or export development (Table 34).

- A potential for capacity development for import substitution and export development appears for Wheat, Tomatoes, Garlic, Other vegetables, Other nuts, and Other palm fruit lie in this subcategory.
- A potential for capacity development for export development only appears for fruits and vegetables (Beans, Pineapples, Avocados, Tangerines, mandarins and clementines, Green chillies & peppers, Lettuce, Green broad beans, Cantaloupes and other melons, Mangoes, Papayas, and Other vegetable products,), Cotton, Green coffee, Barley, Other cereals, Soybeans, Other oil crops, and Ginger.
- A potential for capacity development for Import substitution only appears for Dry peas, Rice, paddy, Tea, Cabbages, Carrots, Dates, Potatoes, and Pepper.
- The remaining products have a low regional and world market demand, implying little market opportunities to expand production.

Table 32: Top 20 products for Western African countries in the four indices – synthetic view

	Low ranks in Production and World markets	Low ranks in Production, High ranks in World markets	High ranks in Production, Low ranks in World markets	High ranks in Production and World markets
High ranks in Exports and	High ranks in Exports and Imports:	High ranks in Exports, Imports and World Markets:	High ranks in Production, Exports and Imports:	High ranks in Production, Exports, Imports and World Markets:
Imports	Other nuts (29,10,20,24)	Other vegetables (26,14,13,19)		
High ranks in Exports Low ranks in Imports	High ranks in Exports:  Mangoes (23,5,37,36) Other cereals (33,19,42,29) Other vegetable products (38,14,65,65) Papayas (44,17,42,43) Ginger (46,19,48,36) Broad beans, green (52,13,42,41) Cantaloupes & other melons (61,17,27,25)	High ranks in Exports and World Markets  Beans (21,16,60,17) Cotton (21,2,27,8) Pineapples (36,4,37,16) Coffee, green (46,9,37,2)	High ranks in Production and Exports:  Other roots and tubers (3,12,64,54) Groundnuts in shell (8,8,27,48)	High ranks in Production, Exports and World Markets:  Cocoa beans (1,3,53,9) Sesame seed (7,7,62,10) Cashew nuts (8,1,46,18) Bananas, plantains (18,11,42,7)
	Other oil crops (63,5,63,43)  High ranks in	High ranks in	High ranks in	High ranks in
High ranks in Imports Low ranks in Exports	Imports:  Rice, paddy (24,53,12,51) Dates (28,41,10,48) Pepper, white/long/black (33,54,15,59) Potatoes (45,43,6,34) Carrots (52,-,13,38) Cabbages (57,51,15,27) Peas, dry (57,30,8,57) Tea (61,26,2,29)	Imports and World Markets:  Wheat (27,50,4,4) Tomatoes (36,26,15,6) Oil palm (38,21,1,2) Garlic (65,45,10,13)	Production and Imports:  Cow peas, dry (5,28,7,60) Sorghum (6,39,9,57) Other pulses (8,42,15,65) Other spices (13,34,15,39) Onions (16,45,3,27)	Production, Imports and World Markets:  Maize (18,35,5,1)
Low ranks in Exports and Imports	Eggplants (25,31,48,25) Cucumbers and gherkins (30,56,48,46) Nutmeg, mace, cardamons (31,52,56,60) Watermelons (31,35,41,29) Grapefruit and pomelos (33,43,56,48) Chick-peas (40,35,24,64) Oranges (41,32,22,21) Sweet potatoes (43,25,61,21) Cauliflower (49,-,35,29) Jute and other bast fibres (49,-,31,54) Almonds (52,,46,52) Castor beans (56,35,48,60) Oats (63,,55,39) Sisal and other textile fibres (66,,24,46)	High ranks in World Markets:  Chillies & peppers, green (41,23,31,13) Tang. mand. clement. (46,,31,10) Soybeans (49,40,35,5) Barley (52,45,48,19) Avocados (59,,66,13) Lettuce (60,55,31,12)	High ranks in Production:  Millet (2,45,58,43) Cassava (4,23,59,21) Citrus fruit nes (11,-,53,54) Pimento, allspice (12,45,40,29) Coconuts (13,28,24,41) Beans, dry (15,32,21,60) Other fruits (17,21,22,34) Broad beans, dry (20,,27,53)	High ranks in Production and World Markets:

Source: FAOSTAT, ITCs TradeMap and Market Access Map, Table 14, Table 20, Table 25, Table 30.

The numbers in parentheses indicate the products rank among all products in 1. production index, 2. export index, 3. import index, and 4. world market index. Colour codes: Number of dimensions for which the product is among the top 20 products for the region: Dark red (0), red (1), yellow (2), green (3), dark green (4).

Table 33: Western African countries: Products with <u>high</u> ranks in production for import substitution and/or export development opportunity

Product sectors	No apparent potential	Import substitution		Export development			bstitution and Export de	evelopment
	(low rank in World Markets, Imports and Exports)	High rank in Imports (low rank in exports and world markets)	High rank in World Markets and Exports (low rank in imports)	High rank in World Markets (low rank in imports and exports)	High rank in Exports (low rank in imports and world markets)	High rank in Imports and Exports (low rank in world markets)	High rank in Imports and World Markets (low rank in exports)	High rank in World Markets, Imports and Exports
Cereals, grains, beans, peas and pulses	Beans, dry (4) Broad beans, dry (1) Millet (14)	Cow peas, dry (5) Other pulses (15) Sorghum (14)					Maize (15)	
Coffee, cocoa, tea			Cocoa beans (7)					
Fruits and vegetables	Citrus fruit nes (4) Other fruits (16)	Onions (9)	Bananas, plantains (11)					
Nuts			Cashew nuts (9)					
Oil crops	Coconuts (11)		Sesame seed (11)		Groundnuts in shell (15)			
Roots and tubers	Cassava (15)				Other roots and tubers (12)			
Spices	Pimento, allspice (10)	Other spices (6)						

Note: "High" rank means that the product is among the top 20 products for the dimension. The number in parentheses indicates the number of producing countries in the region.

Table 34: Western African countries: Products with <u>low</u> ranks in production for production capacity development and opportunities

Product sectors	No apparent potential	Capacity development for Import substitution	Сара	city development for E	Export	( Import sub	Capacity development fostitution and Export d	or evelopment
	(low rank in World Markets, Imports and Exports)	High rank in Imports (low rank in exports and world markets)	High rank in World Markets and Exports (low rank in imports)	High rank in World Markets (low rank in imports and exports)	High rank in Exports (low rank in imports and world markets)	High rank in Imports and Exports (low rank in world markets)	High rank in Imports and World Markets (low rank in exports)	High rank in World Markets, Imports and Exports
Cereals, grains, beans, peas and pulses	Chick-peas (1) Oats (1)	Peas, dry (3) Rice, paddy (15)		Barley (1)	Other cereals (11)		Wheat (4)	
Coffee, cocoa, tea		Tea (1)	Coffee, green (8)					
Cotton			Cotton (12)					
Fibre crops	Jute and other bast fibres (2)							
	Sisal and other textile fibres of agave (1)							
Fruits and vegetables	Watermelons (3) Cauliflower (1) Cucumbers and gherkins (2) Eggplants (2) Grapefruit and pomelos (1) Oranges (8)	Cabbages (3) Carrots (3) Dates (3)	Beans (6) Pineapples (8)	Avocados (2) Tang. mand. clement. (1) Chillies & peppers, green (7) Lettuce (2)	Broad beans, green (1) Cantaloupes & other melons (1) Mangoes (12) Other vegetable products (4) Papayas (4)		Tomatoes (12) Garlic (2)	Other vegetables (16)
Nuts	Almonds (1)					Other nuts (8)		
Oil crops	Castor beans (3)			Soybeans (5)	Other oil crops (2)		Oil palm (11)	
Roots and tubers	Sweet potatoes (14)	Potatoes (7)						
Spices	Nutmeg, mace, cardamons (1)	Pepper, white / long / black (4)			Ginger (2)			

Note: "High" rank means that the product is among the top 20 products for the dimension. The number in parentheses indicates the number of producing countries in the region.

## Discussion of the findings based on FAO's agro-ecological crop suitability assessment and expert agronomic knowledge

Based on FAO's agro-ecological crop suitability assessment and expert agronomic knowledge, Table 35 provides an idea of the regional level agro-ecological potential of crops. Crops that are combined into unspecified groups such as other pulses, other cereals, other fruits & vegetables, other oil crops etc are not included in Table 35 as it is not possible to make any useful comments. However, 'Other roots and tubers' as a crop group is included because it is assumed to comprise mainly of yams. Similarly, 'Jute like fibres' as a crop group is included because it is assumed to comprise mainly of kenaf and roselle.

In general, crops that have a high agro-ecological and agronomic regional potential are:

- Cereals and pulses sector. maize, millet, rice, sorghum, and cowpeas.
- Coffee, cocoa, tea sector. cocoa, and coffee.
- Fruits & vegetables: avocados, bananas, chillies & peppers, mangoes, onions & shallots, and tomatoes.
- Oil crop sector. groundnuts, oil palm, sesame, and soybeans.
- Roots & tubers: cassava, yams, sweet potatoes and potatoes in special cases.

Table 35: Western African countries: Regional level agro-ecological potential

Product sectors	Re	gional level agro-ecological pote	ential
1 Toddol Sectors	Low	Medium	High
Cereals, grains, beans, peas and pulses	Barley (1) Beans, dry (4) Wheat (4) Oats (1) Peas, dry (3) Chick peas (1)		Cowpeas, dry (6) Maize (15) Millet (14) Rice, paddy (15) Sorghum (14)
Coffee, cocoa, tea	Tea (1)		Cocoa beans (7) Coffee, green (8)
Cotton			Cotton (12)
Fibre crops	Sisal & other agave fibres (1)	Jute like fibres (3)	
Fruits and vegetables	Broad beans, green (1) Cabbages (4) Carrots (4) Cauliflower (1) Cucumbers and gherkins (2) Lettuce (2) Tang. mand. clement. (1) Watermelons (3)	Beans, green (5) Cantaloupes & other melons(1) Dates (3) Eggplants (2) Garlic (2) Grapefruit and pomelos (1) Lemons & limes (3) Oranges (8) Papayas (4) Pineapples (8)	Avocados (2) Bananas (10) Chillies & peppers, green (7) Mangoes (12) Onions & shallots (4) Tomatoes (12)
Nuts	Almonds (1)	Cashew nuts (9) Karite nuts (sheanuts) (7)	
Oil crops		Castor beans (3) Coconuts (11)	Groundnuts in shell (15) Oil palm (11) Sesame seed (11) Soybeans (5)
Roots and tubers		Potatoes (7)	Cassava (15) Roots & tubers nes (yams) (4) Sweet potatoes (14)
Spices	Ginger (2) Nutmeg, mace, cardamoms (1)	Pimento, allspice (10) Pepper, white/long/black (4)	

Source: FAO.

Nearly all the above crops in all the countries in the region have relatively low yields, and there is good to very good agro-ecological potential to improve crop yields. However, in many instances, farming systems have been well established with cereals-legumes-cotton in the moist savanna and semi-arid ecologies, and short and long season root crops-perennial crops in the sub-humid and humid ecologies. In general, there is decreasing amount of surplus land available so that in some instances area expansion of crops may mean a reduction in the extent of other crops. In the moist and dry savanna areas, which constitutes the future bread basket for the region, maize has been gradually replacing sorghum in the cotton-cereal-legume farming system but because of low fertiliser use, economic impact of such substitution has been low to modest. In the humid and sub-humid costal regions, competition for land amongst perennial or long season crops such as oil palm, cocoa, coffee, coconut, cashew, bananas, citrus, avocados, pineapple, and cassava is or can be high.

In any case, whether there is room for expansion or not, with Good Agricultural Practices (GAP)<sup>2</sup>, yields of most crops in the region can be improved significantly. For example, with Conservation Agriculture (CA), energy and environmental costs can be kept to a minimum while achieving enhanced yields and factor productivities. In the case of legumes and cotton crops, integrated pest management (IPM) and integrated production and pest management (IPPM) approaches provide a solid basis for efficient production expansion, relying more on natural enemies, crop diversification, minimum tillage and judicious use of inorganic and organic fertilizers to harness greater on-farm production competitiveness.

Information in Table 35 provides a means to 'filter' the information in Table 33 and Table 34.

For products with high ranks in production (Table 33):

- The potential for export development and import substitution for maize appears sound. Within maize-based farming system, maize combines well with legume crops such as cowpeas, soybeans and groundnuts. The potential for maize goes beyond grain into fresh maize products such as maize on-the-cob, or sweet corn and baby corn as vegetables.
- A potential for export development only for cocoa, bananas & plantains, cashew nuts, sesame seed, ground nut, cassava and other roots & tubers (yams) appears sound. Cassava is also a potential bioenergy crop.
- A potential for important substitution only for cowpeas, onions and sorghum also appears sound. Onions could be expanded in some regions where irrigation is established. For sorghum, there is also good potential for the new drought and saline-resistant sweet sorghums as a bioenergy crop whose agro-ecological potential is perhaps greater than for grain sorghum in the drier and in the wetter parts of the savanna agro-ecologies.
- No apparent potential due to low rank in world markets, imports and exports for beans and broad beans appears sound as there is perhaps marginal agro-ecological potential for these crops in the region. However, millet, citrus, cantaloupes & other melons, coconuts, cassava, and pimento & allspice, alongside sorghum and sweet potatoes have medium to high potential agro-ecological potential, and are important products in the domestic and regional markets. Both sorghum (sweet sorghum) and sweet potatoes are also potential bioenergy crops.

For products with low ranks in production (Table 34):

The potential for capacity development for import substitutions and export development for garlic, tomatoes and oil palm is sound. In the case of oil palm, there are new opportunities to expand and intensify production with the cool-tolerant and partially drought-resistant 'compact' hybrids although these do not currently play a significant economic or food security role. Similarly, red palm oil (RPO) offers natural health products and could be considered for export development and import substitution. It has the precursors of vitamin

<sup>&</sup>lt;sup>2</sup> see companion document: Good Agricultural Practices: Opportunities for the ACP West Africa Group of Countries. May 2008, AGP, FAO.

A and E and has been proven to reduce vitamin A deficiency and enhance anti-oxidant vitamin E benefits. RPO can be produced at on-farm level with artesian technology as can soap from crude oil palm. However, there is low agro-ecological potential for wheat in the region, although wheat could be produced in the dry semi-arid savanna agro-ecologies during the cool dry season under irrigation. It is not possible to comment on 'other vegetables' and 'other nuts' as it is not clear what they are composed of.

It would seem appropriate to include rice in the green strategic response group because of the very high domestic, regional and international demand for rice and of the high agroecological potential for rice in the region. Integrated rice production system such as the 'System of Rice Intensification' (SRI), assembled in Madagascar over 20-year period and gaining application internationally since 2000 including West Africa, enables farmers to raise 'wetland' rice production substantially, just by making changes in their management practices rather than by increasing inputs, which means even greater competitiveness and profitability. SRI capitalizes on existing genetic potentials of adapted traditional or bred cultivars, and produces productive phenotypes from practically all adapted genotypes of rice. SRI methods achieve higher productivity of land, labour, capital, water and nutrients in part by mobilizing services from soil biota under aerobic soil water management and from a different much larger plant rooting and tillering system that can benefit crop health and biomass growth and yield.

- A potential for capacity development for export development only for green beans, pineapples, avocados, chillies & peppers, cantaloupes & other melons, mangoes, papayas, cotton, coffee and soybeans appears sound as there is medium to high agro-ecological potential for these crops in the regions. The agro-ecological potentials in the region for tangerines/mandarins//clementines, lettuce, dry beans, green broad beans and ginger appear low or marginal. Again, it is not possible to comment on 'other vegetables', 'other cereals' and 'other oil crops' because it is not clear what they are composed of. Other crops such as castor beans, karate nuts and citrus would justify investment as these crops have good agro-ecological potential in the region. Castor beans as a potential bioenergy crop in remote villages in the semi-arid agro-ecologies may have scope and could be tested; new work in the NE of Brazil provides insights on how this might work.
- A potential for capacity development for import substitution only for rice, dates and pepper appears sound as there is medium to high agro-ecological potentials for these crops in the region. However, dry peas, tea, cabbages, and carrots have marginal or low agro-ecological potential in the region and would not offer attractive returns to investment. Potatoes for fresh market and some processed products for urban populations could be expanded in some regions where irrigation is established. Investment for clean seed and storage would be substantial.
- No apparent potential due to low rank in world markets, imports and exports for chick peas, oats, sisal, watermelons, cauliflower, cucumber & gherkins, almonds and nutmeg is sound as there is marginal or low agro-ecological potential for these crops in the region. However, jute fibres (kenaf & roselle), eggplants, grapefruit & pomelos, oranges, castor beans and sweet potatoes have good agro-ecological potential and some of these crops particularly eggplants, oranges and sweet potatoes serve significant domestic markets.

In light of the above comments, interpretation of the results in Table 33 and Table 34 would certainly benefit from further discussions at the Kick-off Workshop because the possible response strategies could be better defined by taking into account country specific agroecological and farming systems conditions as well as any 'new' ecologically sound crop commodity that could be harnessed by the countries of the region in response to specific export opportunity or import situation, as well as domestic and regional trade.

## **Annex**

Table 36. Definition of products and sectors in terms of the Harmonised System

Broad sectors	FAO products	HS6 rev1	HS 6 rev1 description
Cereals, grains,	Barley	100300	Barley
beans, peas and pulses	Beans, dry	071331	Dried, shelled beans of species "Vigna mungo (L.) Hepper or Vigna radiata (L.) Wilczek", whether or not skinned or split
		071332	Dried, shelled small red "Adzuki" beans "Phaseolus or Vigna angularis", whether or not skinned or split
		071333	Dried, shelled kidney beans "Phaseolus vulgaris", whether or not skinned or split
	Broad beans, dry	071350	Dried, shelled broad beans "Vicia faba var. major" and horse beans "Vicia faba var. equina and Vicia faba var. minor", whether or not skinned or split
	Chick-peas	071320	Dried, shelled chickpeas "garbanzos", whether or not skinned or split
	Cow peas, dry	071339	Dried, shelled beans "Vigna and Phaseolus", whether or not skinned or split (excl beans of species "Vigna mungo (L.) Hepper or Vigna radiata (L.) Wilczek", small red "Adzuki" beans and kidney beans)
	Maize	100510	Maize seed
		100590	Maize (excl. seed)
	Millet	100820	Millet (excl. grain sorghum)
	Oats	100400	Oats
	Other cereals	100890	Cereals (excl. wheat and meslin, rye, barley, oats, maize, rice, buckwheat, millet, canary seed and grain sorghum)
		071390	Dried, shelled leguminous vegetables, whether or not skinned or split (excl. peas, chickpeas, beans, lentils, broad beans and horse beans)
	Peas, dry	071310	Dried, shelled peas "Pisum sativum", whether or not skinned or split
	Rice, paddy	100610	Rice in the husk, "paddy" or rough
	Sorghum	100700	Grain sorghum
	Wheat	100110	Durum wheat
		100190	Wheat and meslin (excl. durum wheat)
Coffee, cocoa, tea	Cocoa beans	180100	Cocoa beans, whole or broken, raw or roasted
	Coffee, green	090111	Coffee (excl. roasted and decaffeinated)
		090112	Decaffeinated coffee (excl. roasted)
	Tea	090210	Green tea in immediate packings of <= 3 kg
		090220	Green tea in immediate packings of > 3 kg
		090230	Black fermented tea and partly fermented tea, whether or not flavoured, in immediate packings of $\leq$ 3 kg
		090240	Black fermented tea and partly fermented tea, whether or not flavoured, in immediate packings of $> 3 \ kg$
Cotton	Cotton	120720	Cotton seeds, whether or not broken
		520100	Cotton, neither carded nor combed
Fibre crops	Jute and other bast	530310	Jute and other textile bast fibres, raw or retted (excl. flax, true hemp and ramie)
	fibres	530390	Jute and other textile bast fibres, processed but not spun; tow and waste of such fibres, incl. yarn waste and garnetted stock (excl. retted fibres of this kind, flax, true hemp and ramie)
	Sisal and other textile	530410	Sisal and other tex tile fibres of the genus Agave, raw
	fibres of agave	530490	Sisal and other textile fibres of the genus Agave, processed but not spun; tow and waste of such fibres, incl. yarn waste and garnetted stock
Fruits and vegetables	s Avocados	080440	Fresh or dried avocados
	Bananas, plantains	080300	Bananas, incl. plantains, fresh or dried
	Beans	070820	Fresh or chilled beans "Vigna spp., Phaseolus spp.", shelled or unshelled
	Broad beans, green	070890	Fresh or chilled leguminous vegetables, shelled or unshelled (excl. peas "Pisum sativum" and beans "Vigna spp., Phaseolus spp.")
	Cabbages	070490	Fresh or chilled cabbages, kohlrabi, kale and similar edible brassicas (excl. cauliflowers, headed broccoli and Brussels sprouts)
	Cantaloupes & other melons	080719	Fresh melons (excl. watermelons)
	Carrots	070610	Fresh or chilled carrots and turnips

Broad sectors	FAO products	HS6 rev1	HS 6 rev1 description
	Cauliflower	070410	Fresh or chilled cauliflowers and headed broccoli
	Chillies & peppers, green	070960	Fresh or chilled fruits of the genus Capsicum or Pimenta
	Citrus fruit nes	080590	Fresh or dried citrus fruit (excl. oranges, lemons, grapefruit, mandarins, incl. tangerines and satsumas, clementines, wilkings and similar citrus hybrids)
	Cucumbers and gherkins	070700	Cucumbers and gherkins, fresh or chilled
	Dates	080410	Fresh or dried dates
	Eggplants	070930	Fresh or chilled aubergines
	Garlic	070320	Garlic, fresh or chilled
	Grapefruit and pomelos	080540	Fresh or dried grapefruit
	Lettuce	070511	Fresh or chilled cabbage lettuce
		070519	Fresh or chilled lettuce (excl. cabbage lettuce)
		070521	Fresh or chilled witloof chicory
		070529	Fresh or chilled chicory (excl. witloof chicory)
	Mangoes	080450	Fresh or dried guavas, mangoes and mangosteens
	Onions	070310	Fresh or chilled onions and shallots
	Oranges	080510	Fresh or dried oranges
	Other fruits	081090	Fresh tamarinds, cashew apples, jackfruit, lychees, sapodillo plums, passion fruit carambola, pitahaya and other edible fruit (excl. nuts, bananas, dates, figs, pineapples, avocadoes, guavas, mangoes, mangosteens, papaws "papayas", citrus fruit, grapes,
	Other vegetable	121292	Sugar cane, fresh, chilled, frozen or dried, whether or not ground
	products	121299	Fruit stones and kernels and other vegetable products, incl. unroasted chicory roots of the variety cichorium intybus sativum, of a kind used primarily for human consumption n.e.s.
	Other vegetables	070690	Fresh or chilled salad beetroot, salsify, celeriac, radishes and similar edible roots (excl. carrots and turnips)
		070940	Fresh or chilled celery (excl. celeriac)
		070990	Fresh or chilled vegetables (excl. potatoes, tomatoes, vegetables of the Allium spp., cabbages of the genus Brassica, lettuces of the species Lactuca sativa and Cichorium, carrots, turnips, salad beetroot, salsify, celeriac, radishes and similar edible ro
	Papayas	080720	Fresh pawpaws "papayas"
	Pineapples	080430	Fresh or dried pineapples
	Tang. mand. clement. satsma	080520	Fresh or dried mandarins incl. tangerines and satsumas, clementines, wilkings and similar citrus hybrids
	Tomatoes	070200	Tomatoes, fresh or chilled
	Watermelons	080711	Fresh watermelons
Nuts	Almonds	080211	Fresh or dried almonds in shell
	Cashew nuts	080131	Fresh or dried cashew nuts, in shell
		080132	Fresh or dried cashew nuts, shelled
	Other nuts	080290	Nuts, fresh or dried, whether or not shelled or peeled (excl. coconuts, Brazil nuts, cashew nuts, almonds, hazelnuts, walnuts, chestnuts "Castania spp." and pistachios)
Oil crops	Castor beans	120730	Castor oil seeds, whether or not broken
	Coconuts	080111	Desiccated coconuts
		080119	Fresh coconuts, whether or not shelled or peeled
	Groundnuts in shell	120210	Ground-nuts in shell, not roasted or otherwise cooked
	Oil palm	120710	Palm nuts and kernels, whether or not broken
		151110	Crude palm oil
		151190	Palm oil and its fractions, whether or not refined (excl. chemically modified and crude)
	Other oil crops	120792	Shea nuts "karite nuts", whether or not broken
		120799	Oil seeds and oleaginous fruits, whether or not broken (excl. edible nuts, olives, soya beans, ground-nuts, copra, linseed, rape or colza seeds, sunflower seeds, palm nuts and kernels, cotton, castor oil, sesamum, mustard, safflower and popp seeds, and s
	Sesame seed	120740	Sesamum seeds, whether or not broken
			<u> </u>

Broad sectors	FAO products	HS6 rev1	HS 6 rev1 description
	Soybeans	120100	Soya beans, whether or not broken
Roots and tubers	Cassava	071410	Fresh, chilled, frozen or dried roots and tubers of manioc "cassava", whether or not sliced or in the form of pellets
	Other roots and tubers	071490	Roots and tubers of arrowroot, salep, Jerusalem artichokes and similar roots and tubers with high starch or inulin content, fresh, chilled, frozen or dried, whether or not sliced or in the form of pellets and sago pith (excl. manioc "cassava" and sweet po
	Potatoes	070110	Seed potatoes
		070190	Fresh or chilled potatoes (excl. seed)
	Sweet potatoes	071420	Sweet potatoes, fresh, chilled, frozen or dried, whether or not sliced or in the form of pellets
Spices	Ginger	091010	Ginger
	Nutmeg, mace,	090810	Nutmeg
		cardamons	090820
		090830	Cardamoms
	Other spices	091020	Saffron
		091030	Turmeric "curcuma"
		091040	Thyme and bay leaves
		091050	Curry
		091091	Mixtures of different types of spices
		091099	Spices (excl. pepper of the genus Piper, fruit of the genus Capsicum or of the genus Pimenta, vanilla, cinnamon, cinnamontree flowers, clove "wholefruit", clove stems, nutmeg, mace, cardamoms, seeds of anise, badian, fennel, coriander, cumin and caraway,
	Pepper,	090411	Pepper of the genus Piper, neither crushed nor ground
	white/long/black	090412	Pepper of the genus Piper, crushed or ground
	Pimento, allspice	090420	Fruits of the genus Capsicum or of the genus Pimenta, dried or crushed or ground

Table 37: Underlying indicators for the composite indices at country level

Composite Indices	Dimension	Indicators
	Size	Share of country in world production
Production index	Dynamism	Growth of country's production
	Yield	Ratio of regional yield to world yield
	Size	Share of country in world exports
Export index	Dynamism	Growth of country's exports to world Absolute change in country's exports
	Trade balance	Net exports Relative trade balance (net exports / total trade)
	Size	Share of country in world imports
Market index	Dynamism	Growth of country's imports Absolute change in country's imports
	Market Access	Tariff applied to the country Preferential tariff advantage

Note: Indicators within a given index have the same weight.

Table 38. Do the producing countries export only, import only, both export and import, or do not trade at all?

Sectors	Products (rank in region's production index)	Producers that do not trade	Producers (and non-producers*) that import only	Producers (and non-producers*) that export only	Producers (and non-producers*) that export and import
		(The number in p	parentheses is the countr	ries' world rank in the Pro	·
Cereals, grains,	Barley (52)		Mauritania (74) Ghana *		Nigeria *
beans, peas and pulses	Beans, dry (15)	Benin (57) Togo (97)	Mauritania (48) Cape Verde * Liberia * Guinea-Bissau * Senegal * Sierra Leone *	Côte d'Ivoire *	Niger (85) Ghana * Nigeria * Burkina Faso *
	Broad beans, dry (20)	Sierra Leone (19)	Cape Verde * Côte d'Ivoire *		
	Chick-peas (40)		Niger (35) Cape Verde * Gambia * Côte d'Ivoire * Liberia * Senegal * Sierra Leone *	Burkina Faso *	
	Cow peas, dry (5)	Mali (16)	Mauritania (27) Cape Verde * Gambia * Ghana * Liberia * Sierra Leone *		Niger (2) Nigeria (3) Burkina Faso (24) Côte d'Ivoire * Senegal *
	Maize (18)	Guinea-Bissau (65) Gambia (121) Mauritania (144)	Benin (86) Togo (107) Niger (116) Sierra Leone (127) Guinea (139) Cape Verde (144) Liberia *		Senegal (38) Côte d'Ivoire (62) Mali (68) Nigeria (68) Ghana (82) Burkina Faso (140)
	Millet (2)	Guinea-Bissau (21) Burkina Faso (21) Sierra Leone (32) Ghana (42) Guinea (46) Benin (50) Togo (54) Côte d'Ivoire (64) Mauritania (76)	Niger (11) Gambia (26)	Nigeria (4) Senegal (17) Mali (18)	
	Oats (63)	Ghana (58)	Nigeria *		
	Other cereals (33)	Guinea (43) Sierra Leone (43) Togo (56) Benin (60) Guinea-Bissau (64)	Côte d'Ivoire (32) Niger (57) Liberia *	Senegal (32) Nigeria (53) Mali (57) Burkina Faso (63) Ghana *	
	Other pulses (8)	Benin (18) Guinea (37) Sierra Leone (39) Côte d'Ivoire (65) Mauritania (65) Togo (79) Liberia (84) Guinea-Bissau (89) Cape Verde (96)	Burkina Faso (37) Nigeria (51) Mali (94) Gambia (96) Senegal (96) Ghana *	Niger (65)	

Sectors	Products (rank in region's production index)	Producers that do not trade	Producers (and non-producers*) that import only	Producers (and non-producers*) that export only	Producers (and non-producers*) that export and import
		(The number in p	parentheses is the countr		duction Index)
	Peas, dry (57)		Sierra Leone (66) Mauritania (79) Cape Verde * Gambia * Ghana * Guinea * Liberia * Nigeria * Senegal * Togo *		Niger (73) Côte d'Ivoire * Mali * Burkina Faso *
	Rice, paddy (24)	Mauritania (49) Benin (58) Senegal (70) Guinea-Bissau (78) Togo (82) Sierra Leone (87) Mali (105)	Nigeria (62) Guinea (76) Ghana (98) Niger (103) Liberia (107) Gambia (109)	Côte d'Ivoire (87)	Burkina Faso (108)
	Sorghum (6)	Sierra Leone (33) Ghana (40) Côte d'Ivoire (41) Mali (47) Guinea-Bissau (53) Benin (72) Guinea (72) Mauritania (100)	Senegal (65) Gambia (82) Niger (88)	Burkina Faso (30) Togo (59)	Nigeria (10)
	Wheat (27)		Mali (82) Mauritania (93) Niger (109) Benin * Gambia * Ghana * Guinea * Côte d'Ivoire * Senegal * Sierra Leone * Togo * Burkina Faso *		Nigeria (69) Cape Verde *
Coffee, cocoa, tea	Cocoa beans (1)		Gambia *	Ghana (2) Côte d'Ivoire (3) Nigeria (9) Guinea (18) Liberia (27) Burkina Faso *	Togo (26) Sierra Leone (34)
	Coffee, green (46)	Benin (73)	Senegal *	Ghana (44) Liberia (58)	Sierra Leone (11) Togo (29) Nigeria (33) Guinea (49) Côte d'Ivoire (50) Cape Verde * Mali *
	Tea (61)		Mali (40) Cape Verde * Benin * Liberia * Mauritania * Togo *		Gambia * Ghana * Guinea * Côte d'Ivoire * Nigeri * Nigeria * Senegal * Sierra Leone * Burkina Faso *
Cotton	Cotton (21)	Gambia (31) Guinea-Bissau (52)	Sierra Leone *	Burkina Faso (27) Senegal (31) Benin (41)	Niger (16) Côte d'Ivoire (35) Mali (41)

Sectors	Products (rank in region's production index)	Producers that do not trade	Producers (and non-producers*) that import only	Producers (and non-producers*) that export only	Producers (and non-producers*) that export and import
	,	(The number in p	parentheses is the counti	· · · · · · · · · · · · · · · · · · ·	oduction Index)
				Liberia *	Togo (41) Ghana (66) Guinea (78) Nigeria (79)
Fibre crops	Jute and other bast fibres (49)	Mali (21)	Nigeria (18) Guinea * Côte d'Ivoire *		<u> </u>
	Sisal and other textile fibres of agave (66)		Guinea (24) Benin * Ghana * Côte d'Ivoire * Mauritania * Nigeria * Senegal *		
Fruits and vegetables	Avocados (59)	Ghana (51) Côte d'Ivoire (57)			
	Bananas, plantains (18)	Cape Verde (37) Nigeria (47) Togo (58) Guinea (89) Benin (99) Guinea-Bissau (99)	Senegal (43) Sierra Leone (74) Mauritania * Niger *	Ghana (28) Côte d'Ivoire (74) Burkina Faso *	Liberia (92)
	Beans (21)		Cape Verde (28) Ghana (33) Liberia *	Burkina Faso (24) Mali (33) Niger (71)	Senegal (37) Gambia * Nigeria *
	Broad beans, green (52)			Gambia * Ghana * Senegal *	Niger (42) Nigeria *
	Cabbages (57)	Togo (94) Niger (102)	Cape Verde (77) Guinea * Côte d'Ivoire * Liberia * Mauritania * Nigeria * Guinea-Bissau * Senegal * Sierra Leone *	Gambia *	
	Cantaloupes & other melons (61)	Guinea (59)	Cape Verde * Liberia * Sierra Leone *	Ghana * Mauritania * Senegal * Burkina Faso *	Côte d'Ivoire *
	Carrots (52)	Nigeria (65) Niger (95)	Cape Verde (65) Côte d'Ivoire * Liberia * Mauritania * Senegal * Sierra Leone *		
	Cauliflower (49)		Cape Verde (58) Côte d'Ivoire * Liberia * Mauritania * Senegal * Sierra Leone *		
	Chillies & peppers, green (41)	Mali (65) Burkina Faso (84)	Cape Verde * Liberia * Mauritania * Sierra Leone *	Côte d'Ivoire (77) Guinea-Bissau * Senegal * Benin (70)	Nigeria (21) Ghana (57) Niger (73)
	Citrus fruit nes (11)	Guinea (4) Sierra Leone (22) Côte d'Ivoire (24)	Nigeria (7)		

Sectors	Products (rank in region's production index)	Producers that do not trade	Producers (and non-producers*) that import only	Producers (and non-producers*) that export only	Producers (and non-producers*) that export and import
		(The number in p	parentheses is the countr	ries' world rank in the Pro	oduction Index)
	Cucumbers and gherkins (30)	Ghana (89)	Cape Verde (72) Liberia *	Côte d'Ivoire *	
	Dates (28)	Benin (24)	Mauritania (21) Cape Verde * Gambia * Liberia * Mali * Senegal * Sierra Leone *		Niger (23) Côte d'Ivoire * Nigeria *
	Eggplants (25)		Cape Verde * Liberia *	Côte d'Ivoire (29) Ghana (58)	
	Garlic (65)		Cape Verde (63) Benin * Gambia * Ghana * Guinea * Côte d'Ivoire * Liberia * Mali * Mauritania * Guinea-Bissau * Senegal * Togo *		Niger (64) Nigeria *
	Grapefruit and pomelos (33)	Burkina Faso (37)	Liberia *	Guinea *	
	Lettuce (60)	Niger (63)	Cape Verde (59) Ghana * Côte d'Ivoire * Liberia * Mali * Nigeria * Sierra Leone *	Gambia *	Senegal *
	Mangoes (23)	Benin (62) Sierra Leone (74)	Cape Verde (9) Liberia * Niger *	Burkina Faso (20) Nigeria (23) Guinea (35) Mali (35) Senegal (45) Guinea-Bissau (51) Gambia (62) Côte d'Ivoire (68)	Ghana (45)
	Onions (16)		Nigeria (38) Cape Verde (62) Mali (81) Benin (92) Côte d'Ivoire (124) Gambia * Guinea * Liberia * Mauritania * Guinea-Bissau * Sierra Leone * Togo *	Niger (28)	Senegal (81) Burkina Faso (86) Ghana (118)
	Oranges (41)	Benin (84) Guinea-Bissau (84) Togo (84)	Senegal (52) Côte d'Ivoire (58) Liberia (95) Cape Verde * Mauritania * Niger * Sierra Leone *	Burkina Faso (84) Nigeria *	Ghana (62)

Sectors	Products (rank in region's production index)	Producers that do not trade	Producers (and non-producers*) that import only	Producers (and non-producers*) that export only	Producers (and non-producers*) that export and import
		(The number in p	parentheses is the counti	ries' world rank in the Pro	oduction Index)
	Other fruits (17)	Nigeria (10) Guinea-Bissau (79) Niger (110) Togo (119) Gambia (134)	Guinea (99) Burkina Faso (110) Benin (122) Liberia (122) Sierra Leone (122) Cape Verde (134)	Mauritania (128)	Côte d'Ivoire (86) Senegal (110) Mali (134) Ghana (145)
	Other vegetable products (38)	Mali (15) Mauritania (15)	Ghana *	Senegal (13) Niger * Burkina Faso *	Nigeria (5)
	Other vegetables (26)	Benin (97) Niger (136)	Cape Verde (91) Guinea (161) Liberia (172)	Burkina Faso (115) Guinea-Bissau (161) Gambia (168)	Nigeria (25) Senegal (31) Sierra Leone (104) Ghana (136) Mali (151) Mauritania (151) Côte d'Ivoire (161) Togo (161)
	Papayas (44)	Guinea-Bissau (39)	Nigeria (6) Cape Verde * Liberia *	Ghana (33) Côte d'Ivoire (43) Niger * Sierra Leone *	-5-()
	Pineapples (36)	Guinea-Bissau (61)	Nigeria (20) Cape Verde *	Benin (3) Côte d'Ivoire (20) Guinea (46) Ghana (61) Togo (61)	Liberia (66)
	Tang. mand. clement. satsma (46)	Burkina Faso (42)	Cape Verde * Côte d'Ivoire * Liberia * Mauritania * Nigeria * Senegal * Sierra Leone *		
	Tomatoes (36)	Benin (69)	Mali (44) Sierra Leone (91) Cape Verde (93) Ghana (105) Liberia (112) Togo (128) Gambia * Guinea * Mauritania * Guinea-Bissau *	Burkina Faso (112)	Nigeria (76) Senegal (85) Niger (97) Côte d'Ivoire (105)
	Watermelons (31)	Mauritania (95)	Cape Verde (68) Liberia * Sierra Leone *	Senegal (31) Côte d'Ivoire *	
Nuts	Almonds (52)	Burkina Faso (37)	Mali * Sierra Leone *		
	Cashew nuts (8)		Liberia * Sierra Leone *	Nigeria (6) Togo (6) Guinea-Bissau (16) Senegal (17) Ghana (19) Benin (21) Burkina Faso (22) Guinea (29)	Côte d'Ivoire (10)

Sectors	Products (rank in region's production index)	Producers that do not trade	Producers (and non-producers*) that import only	Producers (and non-producers*) that export only	Producers (and non-producers*) that export and import
		(The number in p	parentheses is the counti	ries' world rank in the Pro	oduction Index)
	Other nuts (29)	Liberia (55)	Mali (39) Cape Verde *	Côte d'Ivoire (30) Ghana (50) Benin (59) Guinea *	Nigeria (15) Senegal (46) Sierra Leone (50) Gambia * Niger *
Oil crops	Castor beans (56)	Cape Verde (17) Benin (17)	Togo (28)	Ghana *	
	Coconuts (13)	Guinea-Bissau (39) Nigeria (45) Togo (52) Guinea (54)	Cape Verde (55) Senegal (62) Liberia (65) Benin (75) Gambia * Mali * Mauritania * Burkina Faso *	Côte d'Ivoire (20) Ghana (30) Sierra Leone (77)	
	Groundnuts in shell (8)	Guinea (22) Côte d'Ivoire (47) Gambia (54) Guinea-Bissau (54) Benin (57) Burkina Faso (79) Sierra Leone (84) Liberia (94)	Mauritania (84)	Ghana (20) Senegal (23) Mali (47) Togo (94)	Nigeria (6) Niger (100)
	Oil palm (38)		Gambia (35) Cape Verde *		Nigeria (11) Benin (22) Côte d'Ivoire (25) Senegal (25) Sierra Leone (29) Ghana (33) Liberia (33) Guinea-Bissau (38) Togo (38) Guinea (42) Mali * Mauritania * Niger * Burkina Faso *
	Other oil crops (63)		Gambia * Togo *	Benin (39) Ghana * Niger * Nigeria * Burkina Faso *	Côte d'Ivoire (39)
	Sesame seed (7)	Sierra Leone (37) Benin (45) Côte d'Ivoire (45) Gambia (54)	Togo (58)	Senegal (12) Mali (33) Niger (41) Guinea (58) Burkina Faso (66) Ghana * Mauritania * Guinea-Bissau *	Nigeria (29)
	Soybeans (49)	Côte d'Ivoire (60) Burkina Faso (78) Liberia (82)	Ghana * Niger *	Benin (62)	Nigeria (62)
Roots and tubers	Cassava (4)	Benin (16) Senegal (16) Guinea-Bissau (25) Mali (27) Guinea (50) Sierra Leone (62) Togo (67) Liberia (68) Burkina Faso (91)	Niger (16) Cape Verde (47) Gambia (88)	Nigeria (4) Ghana (10) Côte d'Ivoire (80)	

Sectors	Products (rank in region's production index)	Producers that do not trade	Producers (and non-producers*) that import only	Producers (and non-producers*) that export only	Producers (and non-producers*) that export and import
		(The number in )	parentheses is the count	ries' world rank in the Pro	oduction Index)
	Other roots and tubers (3)	Liberia (59) Guinea-Bissau (67) Mauritania (82) Guinea (91) Sierra Leone (91)	Niger * Senegal *	Benin (1) Ghana (4) Nigeria (7) Côte d'Ivoire (8) Mali (14) Togo (27) Burkina Faso (30)	
	Potatoes (45)		Benin (67) Senegal (82) Cape Verde (88) Mauritania (107) Niger (115) Burkina Faso (132) Gambia * Guinea * Liberia * Mali * Guinea-Bissau * Sierra Leone *		Nigeria (115) Ghana * Côte d'Ivoire *
	Sweet potatoes (43)	Mali (29) Liberia (59) Burkina Faso (69) Cape Verde (74) Senegal (76) Sierra Leone (83) Benin (92) Côte d'Ivoire (92) Mauritania (99) Guinea (105)	Niger (43)	Nigeria (10) Togo (53) Ghana (83)	
Spices	Ginger (46)	,	Ghana (28) Liberia *	Nigeria (8) Benin * Côte d'Ivoire *	
	Nutmeg, mace, cardamons (31)		Cape Verde * Ghana * Liberia * Nigeria * Sierra Leone *	Côte d'Ivoire *	Togo (10)
	Other spices (13)		Sierra Leone (24) Burkina Faso (26) Cape Verde * Benin * Liberia * Mali * Senegal *		Niger (27) Nigeria (33) Togo (40) Côte d'Ivoire (45) Ghana *
	Pepper, white/long/black (33)	Benin (31)	Côte d'Ivoire (26) Cape Verde * Gambia * Liberia * Mali * Sierra Leone *		Ghana (17) Niger (17) Nigeria * Senegal *
	Pimento, allspice (12)	Ghana (30) Mali (56)	Cape Verde (4) Sierra Leone (35) Côte d'Ivoire (38) Liberia *	Benin (38) Togo (58)	Nigeria (23) Senegal (24) Niger (58)

Source: ITCs TradeMap and Market Access Map, FAOSTAT.

Table 39: Top 10 producers, exporters and markets in the world and in the Western African region

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Top 10 exporters: Countries with the highest rank in the export index		Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region
Cereals, grains, beans, peas and pulses	Barley	France (1) Germany (2) Canada (3) Turkey (4) United Kingdom (5) Ukraine (6) Denmark (6)	Mauritania (74)	Ukraine (1) Australia (1) France (3) Germany (4) Canada (5) Russian Federation (6) Czech Republic (7)	Nigeria (33)	Area Nes (1) Saudi Arabia (2) China (3) Iran (4) Syrian Arab Republic (4) Spain (4) Jordan (7)	Nigeria (34) Mauritania (38) Ghana (67) Senegal (88) Guinea (109) Liberia (137)
		New Zealand (8) Russian Federation (9) Uruguay (10)		United Kingdom (8) Lithuania (9) Slovakia (10)		Tunisia (8) Belgium (9) Netherlands (10)	
	Beans, dry	United States (1) China (2) Latvia (3) Belarus (4) Serbia and Montenegro (5) Mexico (6) Belgium (7) Brazil (7) Myanmar (9) Croatia (9)	Mauritania (48) Benin (57) Niger (85) Togo (97)	Myanmar (1) China (2) Canada (3) Nicaragua (4) United States (5) Netherlands (6) Ethiopia (7) Argentina (8) Egypt (9) Kyrgyzstan (10)	Burkina Faso (38) Nigeria (41) Côte d'Ivoire (51) Ghana (51) Niger (90)	United States (1) United Kingdom (2) Italy (3) France (4) Cuba (4) Spain (6) Algeria (7) India (7) Pakistan (7) Belgium (10)	Senegal (29) Côte d'Ivoire (33) Guinea-Bissau (36) Niger (36) Cape Verde (50) Liberia (59) Burkina Faso (66) Mauritania (108) Mali (118) Benin (118)
	Broad beans, dry	France (1) United Kingdom (2) Egypt (3) China (4) Lebanon (5) Sudan (6) Ethiopia (7) Argentina (8) Palestine (9) Slovakia (9)	Sierra Leone (19)	France (1) United Kingdom (2) Australia (3) Russian Federation (4) Syrian Arab Republic (5) Belgium (6) Germany (7) China (8) Guatemala (9) Chile (10)		Norway (1) Egypt (2) France (3) United Arab Emirates (4) Jordan (5) Yemen (6) United States (7) Italy (8) Saudi Arabia (9) Spain (9)	Cape Verde (32) Côte d'Ivoire (54)
	Chick-peas	Pakistan (1) India (2) China (3) Turkey (4) Kazakhstan (5) Bosnia and Herzegovina (5) Russian Federation (7) Myanmar (8) Jordan (9) Sudan (10)	Niger (35)	Turkey (1) Pakistan (2) Iran (2) Australia (2) Mexico (5) India (6) Tanzania (7) Canada (8) Myanmar (9) Kazakhstan (10)	Burkina Faso (16)	United Kingdom (1) Bangladesh (2) Italy (2) Spain (4) Algeria (5) Portugal (6) Iraq (7) Afghanistan (8) United States (9) Jordan (10)	Niger (15) Senegal (16) Benin (26) Côte d'Ivoire (26) Liberia (49) Mali (57) Cape Verde (72) Sierra Leone (78) Gambia (120) Nigeria (126)

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Countries with the	Top 10 exporters: Countries with the highest rank in the export index		Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region	
	Cow peas, dry	Palestine (1) Niger (2) United States (3) Nigeria (3) TFYR of Macedonia(5) Croatia (5) Trinidad and Tobago (7) Cameroon (8) Egypt (9) Myanmar (10)	Niger (2) Nigeria (3) Mali (16) Burkina Faso (24) Mauritania (27)	Myanmar (1) Pakistan (2) Canada (3) Peru (4) Australia (5) United States (6) Thailand (7) China (8) Tanzania (9) Uganda (10)	Burkina Faso (27) Senegal (32) Nigeria (35) Niger (67) Côte d'Ivoire (68)	Canada (1) United States (1) Malaysia (3) Angola (4) Dominican Republic (5) Niger (5) India (7) Senegal (8) Pakistan (9) Japan (10)	Niger (5) Senegal (8) Burkina Faso (40) Liberia (44) Gambia (49) Cape Verde (59) Benin (86) Côte d'Ivoire (97) Nigeria (130) Mauritania (144)	
	Maize	United States (1) Italy (2) Argentina (3) Chile (4) South Africa (5) Ukraine (6) Tajikistan (6) Hungary (8) Kuwait (9) France (10)	Senegal (38) Côte d'Ivoire (62) Guinea-Bissau (65) Mali (68) Nigeria (68) Ghana (82) Benin (86) Togo (107) Niger (116) Gambia (121)	Ukraine (1) South Africa (2) China (3) Argentina (4) France (5) United States (6) Hungary (7) Serbia and Montenegro (8) India (9) Bulgaria (10)	Mali (34) Senegal (43) Burkina Faso (65) Ghana (95) Nigeria (98) Côte d'Ivoire (102)	Rep. of Korea (1) Spain (2) Germany (3) Netherlands (4) Malaysia (5) Taiwan (PoC) (6) Iran (7) Italy (8) Zimbabwe (9) Japan (10)	Côte d'Ivoire (29) Mali (31) Burkina Faso (31) Togo (40) Niger (45) Senegal (45) Guinea (60) Nigeria (60) Liberia (91) Ghana (104)	
	Millet	China (1) Spain (2) France (3) Nigeria (4) Romania (5) Ukraine (6) Slovenia (7) India (8) Serbia and Montenegro (8) Mexico (8)	Nigeria (4) Niger (11) Senegal (17) Mali (18) Guinea-Bissau (21) Burkina Faso (21) Gambia (26) Sierra Leone (32) Ghana (42) Guinea (46)	India (1) France (2) China (3) United States (3) Ukraine (5) Austria (6) Egypt (7) Bulgaria (8) Hungary (9) Slovakia (10)	Senegal (13) Mali (30) Nigeria (36)	Belgium (1) United Kingdom (1) Germany (3) Rep. of Korea (4) Sudan (5) Italy (6) South Africa (7) Philippines (8) United States (8) Netherlands (10)	Gambia (56) Côte d'Ivoire (82) Mauritania (82) Burkina Faso (82) Niger (100) Sierra Leone (106)	
	Oats	Canada (1) Germany (2) Finland (3) Belarus (3) Poland (5) United States (6) Denmark (6) United Kingdom (8) France (9) Chile (10)	Ghana (58)	Canada (1) Australia (2) Sweden (3) Finland (4) Poland (4) France (6) Czech Republic (7) Germany (8) Estonia (9) Chile (10)		Area Nes (1) Spain (2) Denmark (3) Germany (4) Belgium (5) Portugal (5) Switzerland (7) United Kingdom (7) South Africa (9) United States (10)	Nigeria (47) Ghana (123)	

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Top 10 expo Countries with the in the export i	highest rank	Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region
	Other	France (1)	Senegal (32)	China (1)	Burkina Faso (13)	Spain (1)	Niger (23)
	cereals	China (2)	Côte d'Ivoire (32)	Poland (2)	Senegal (15)	Portugal (2)	Liberia (65)
		Belarus (3)	Guinea (43)	Germany (3)	Mali (15)	Thailand (3)	Côte d'Ivoire (86)
		Germany (4)	Sierra Leone (43)	France (4)	Ghana (15)	Netherlands (4)	Burkina Faso (94)
		Poland (5)	Nigeria (53)	United States (5)	Nigeria (32)	Italy (4)	Nigeria (104)
		Belgium (6)	Togo (56)	Hungary (6)		Germany (4)	Sierra Leone (104)
		Sweden (7)	Mali (57)	Bolivia (7)		United Kingdom (7)	Guinea (104)
		Czech Republic (8)	Niger (57)	Lao RDR (8)		France (8)	Ghana (130)
		Hungary (9)	Benin (60)	Thailand (9)		Belgium (9)	
		Netherlands (10)	Burkina Faso (63)	Czech Republic (10)		Rep. of Korea (10)	
	Other	Poland (1)	Benin (18)	United Kingdom (1)	Niger (20)	Egypt (1)	Senegal (17)
	pulses	China (2)	Guinea (37)	Pakistan (2)		Nepal (2)	Mali (18)
		Tajikistan (3)	Burkina Faso (37)	Myanmar (3)		China (2)	Côte d'Ivoire (18)
		United Kingdom (4)	Sierra Leone (39)	Australia (4)		United Kingdom (2)	Burkina Faso (22)
		Myanmar (5)	Nigeria (51)	India (5)		United Arab Emirates (5)	Gambia (55)
		Denmark (5)	Niger (65)	Madagascar (6)		United States (5)	Ghana (79)
		Lithuania (7)	Côte d'Ivoire (65)	Africa nes (6)		Malaysia (7)	Nigeria (107)
		Iran (8)	Mauritania (65)	Malawi (8)		Pakistan (8)	Guinea (115)
		Azerbaijan (9)	Togo (79)	Uganda (9)		Sudan (9)	Liberia (125)
		Spain (10)	Liberia (84)	Ukraine (9)		Turkey (10)	
	Peas, dry	United States (1)	Sierra Leone (66)	United States (1)	Burkina Faso (29)	Spain (1)	Côte d'Ivoire (15)
		France (2)	Niger (73)	Canada (2)	Mali (36)	United Kingdom (1)	Mali (16)
		Canada (3)	Mauritania (79)	France (3)	Côte d'Ivoire (67)	Italy (3)	Senegal (16)
		Germany (4)		Ukraine (4)	Niger (74)	United States (4)	Niger (16)
		Ireland (5)		Tanzania (5)		Canada (4)	Togo (19)
		China (6)		Germany (6)		Netherlands (6)	Burkina Faso (26)
		India (7)		Australia (7)		China (6)	Benin (41)
		Switzerland (7)		Russian Federation (8)		Belgium (8)	Gambia (60)
		Slovenia (9)		New Zealand (9)		United Arab Emirates (9)	Liberia (60)
		Italy (9)		Hungary (10)		Norway (9)	Cape Verde (60)
	Rice, paddy	China (1)	Mauritania (49)	United States (1)	Côte d'Ivoire (22)	Guatemala (1)	Gambia (3)
		Viet Nam (2)	Benin (58)	China (2)	Burkina Faso (50)	Saudi Arabia (2)	Burkina Faso (24)
		Indonesia (3)	Nigeria (62)	Paraguay (3)		Gambia (3)	Guinea (82)
		Bangladesh (4)	Senegal (70)	Egypt (4)		Honduras (4)	Mali (98)
		Myanmar (5)	Guinea (76)	India (5)		Mexico (5)	Niger (98)
		Iran (6)	Guinea-Bissau (78)	Russian Federation (6)		United Kingdom (5)	Senegal (98)
		United States (7)	Togo (82)	France (6)		South Africa (7)	Cape Verde (106)
		Egypt (7)	Côte d'Ivoire (87)	Italy (8)		Costa Rica (8)	Nigeria (114)
		Turkey (9)	Sierra Leone (87)	Tanzania (9)		Yemen (9)	Côte d'Ivoire (122)
		Thailand (10)	Ghana (98)	TFYR of Macedonia(10)		Panama (9)	Ghana (126)

Sector	Industry	Top 10 prod Countries with the in the production	highest rank	Top 10 expo Countries with the l in the export i	highest rank	Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region
	Sorghum	Jordan (1) Argentina (2) United States (3)	Nigeria (10) Burkina Faso (30) Sierra Leone (33)	India (1) Australia (2) Argentina (3)	Burkina Faso (12) Togo (14) Nigeria (18)	Sudan (1) Brazil (2) Taiwan (PoC) (3)	Niger (7) Nigeria (17) Senegal (21)
		Palestine (3) Mexico (5) Israel (6)	Ghana (40) Côte d'Ivoire (41) Mali (47)	United States (3) France (5) Ukraine (6)	<b>3</b>	Spain (4) Eritrea (5) Uganda (5)	Gambia (57) Côte d'Ivoire (83) Togo (83)
		China (7) Egypt (8) Panama (9) Nigeria (10)	Guinea-Bissau (53) Togo (59) Senegal (65) Benin (72)	China (7) Egypt (8) South Africa (9) Myanmar (9)		Niger (7) Japan (8) Zimbabwe (9) United Kingdom (10)	3 ( )
	Wheat	France (1) Germany (2)	Nigeria (69) Mali (82)	Australia (1) Russian Federation (2)	Cape Verde (45) Nigeria (85)	Area Nes (1) Spain (2)	Nigeria (9) Mauritania (59)
		United Kingdom (3) China (4) Canada (5)	Mauritania (93) Niger (109)	France (3) United States (3) Argentina (5)		Italy (3) Indonesia (4) Belgium (4)	Senegal (83) Gambia (101) Mali (112)
		Egypt (6) Zambia (7)		Canada (6) Ukraine (7)		Algeria (6) Japan (6)	Niger (112) Ghana (123)
		United States (8) India (9) Netherlands (10)		Czech Republic (8) Germany (9) Bulgaria (10)		Egypt (6) Rep. of Korea (9) Nigeria (9)	Côte d'Ivoire (129) Guinea (133) Cape Verde (137)
Coffee, cocoa, tea	Cocoa beans	Indonesia (1) Ghana (2) Côte d'Ivoire (3)	Ghana (2) Côte d'Ivoire (3) Nigeria (9)	Ghana (1) Nigeria (1) Indonesia (3)	Ghana (1) Nigeria (1) Côte d'Ivoire (3)	Malaysia (1) Belgium (2) Germany (3)	Togo (23) Sierra Leone (28) Mali (68)
		Solomon Is (4) Grenada (5)	Guinea (18) Togo (26)	Côte d'Ivoire (3) Cameroon (5)	Guinea (9) Togo (10)	United States (4) Netherlands (5)	Burkina Faso (68) Côte d'Ivoire (82)
		Ecuador (6) Cameroon (7) El Salvador (8) Madagascar (9)	Liberia (27) Sierra Leone (34)	Belgium (6) Ecuador (7) Papua New Guinea (8) Guinea (9)	Sierra Leone (11) Liberia (14) Burkina Faso (14)	France (6) Spain (7) Turkey (8) Italy (9)	Nigeria (85) Gambia (106) Ghana (106)
	0-#	Nigeria (9)	0:	Togo (10)	Outre - (00)	Russian Federation (10)	NA-1: (00)
	Coffee, green	Viet Nam (1) Colombia (2) Brazil (3) Indonesia (4)	Sierra Leone (11) Togo (29) Nigeria (33) Ghana (44)	Indonesia (1) Ethiopia (1) Brazil (3) Viet Nam (4)	Guinea (32) Côte d'Ivoire (37) Mali (37) Nigeria (40)	United States (1) Sweden (1) Belgium (3) Germany (3)	Mali (20) Senegal (20) Togo (20) Côte d'Ivoire (65)
		China (5) Zimbabwe (6)	Guinea (49) Côte d'Ivoire (50)	Colombia (4) Honduras (6)	Sierra Leone (44) Togo (50)	Japan (3) Netherlands (3)	Burkina Faso (81) Guinea (88)
		Ethiopia (7) Belize (8) Tonga (8)	Liberia (58) Benin (73)	Guatemala (7) Peru (8) Costa Rica (9)	Ghana (62) Liberia (72) Cape Verde (72)	Spain (3) Switzerland (3) Italy (9)	Cape Verde (88) Sierra Leone (101) Nigeria (147)
		India (10)		India (10)	. , ,	Canada (9)	Ghana (159)

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Countries with the	Top 10 exporters: Countries with the highest rank in the export index		Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region	
	Tea	Turkey (1)	Mali (40)	China (1)	Guinea (62)	United States (1)	Ghana (20)	
		Kenya (2)		Sri Lanka (2)	Burkina Faso (62)	Canada (2)	Mauritania (25)	
		China (3)		Indonesia (3)	Gambia (72)	France (2)	Burkina Faso (35)	
		India (4)		Kenya (4)	Senegal (72)	Russian Federation (2)	Niger (39)	
		Sri Lanka (5)		India (4)	Sierra Leone (97)	Germany (5)	Togo (55)	
		Malawi (6)		Germany (6)	Nigeria (110)	United Arab Emirates (5)	Gambia (81)	
		Japan (7)		United Arab Emirates (7)	Niger (110)	Saudi Arabia (7)	Senegal (81)	
		Ecuador (8)		Viet Nam (8)	Côte d'Ivoire (121)	Morocco (8)	Guinea (99)	
		Indonesia (9)		United Kingdom (8)	Ghana (139)	Australia (9)	Côte d'Ivoire (107)	
		Viet Nam (9)		Malawi (10)		Ukraine (10)	Mali (120)	
Cotton	Cotton	Brazil (1)	Niger (16)	India (1)	Burkina Faso (5)	Thailand (1)	Togo (37)	
		China (2)	Burkina Faso (27)	Brazil (2)	Mali (6)	Turkey (2)	Côte d'Ivoire (37)	
		Uzbekistan (3)	Senegal (31)	United States (3)	Benin (10)	Pakistan (3)	Guinea (37)	
		Pakistan (3)	Gambia (31)	Greece (4)	Togo (18)	Taiwan (PoC) (4)	Mali (37)	
		United States (5)	Côte d'Ivoire (35)	Burkina Faso (5)	Senegal (19)	China (5)	Ghana (55)	
		Turkey (6)	Mali (41)	Mali (6)	Côte d'Ivoire (21)	Egypt (6)	Benin (68)	
		India (7)	Benin (41)	Uzbekistan (7)	Niger (41)	Tokelau (7)	Mauritania (68)	
		Syrian Arab Republic (8)	Togo (41)	Australia (8)	Ghana (46)	Rep. of Korea (8)	Senegal (68)	
		Israel (9)	Guinea-Bissau (52)	Kazakhstan (9)	Nigeria (50)	Russian Federation (8)	Burkina Faso (68)	
		Spain (10)	Ghana (66)	Benin (10)	Liberia (60)	Italy (10)	Gambia (94)	
Fibre crops	Jute and	India (1)	Nigeria (18)	Bangladesh (1)		United States (1)	Côte d'Ivoire (9)	
	other bast	Bangladesh (2)	Mali (21)	Israel (1)		China (2)	Guinea (37)	
	fibres	Bhutan (3)		Myanmar (3)		Rep. of Korea (3)	Burkina Faso (76)	
		Uzbekistan (3)		Belgium (4)		Saudi Arabia (4)	Nigeria (86)	
		Peru (5)		Viet Nam (5)		Nepal (5)	Ghana (89)	
		Cambodia (6)		India (6)		Philippines (6)		
		Viet Nam (7)		France (7)		India (7)		
		China (8)		South Africa (8)		Malaysia (8)		
		Brazil (9)		Lao RDR (8)		Côte d'Ivoire (9)		
	0:	Russian Federation (10)	Outre = (04)	Syrian Arab Republic (10)		Pakistan (10)	Danie (44)	
	Sisal and	Kenya (1)	Guinea (24)	Brazil (1)		China (1)	Benin (41)	
	other textile fibres of	China (2)		Kenya (2)		Saudi Arabia (2)	Ghana (43)	
	agave	Colombia (2)		Tanzania (3)		Spain (2)	Senegal (43)	
	9	Brazil (4)		Madagascar (4)		Mexico (4)	Côte d'Ivoire (63)	
		Ecuador (5) Madagascar (6)		Germany (5) El Salvador (6)		Belgium (5) India (6)	Mauritania (77) Niger (77)	
		Wadagascai (6)  Cuba (7)		\ /		Morocco (6)	Guinea (94)	
		Tanzania (8)		Bangladesh (7) Belgium (8)		Cuba (8)	Nigeria (109)	
		Indonesia (8)		Ecuador (9)		Chile (9)	i vigeria (109)	
		Mexico (10)		Denmark (9)		Netherlands (10)		
		IVIEXICO (10)		Defillark (9)		inculcitatius (10)		

Sector	Industry	Top 10 prod Countries with the in the productio	highest rank	Top 10 exp Countries with the in the export	highest rank	Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region
Fruits and vegetables	Avocados	Indonesia (1) Colombia (2) Brazil (3) Mexico (4) Dominican Republic (4) Chile (6) Kenya (6) United States (8) Lebanon (9)	Ghana (51) Côte d'Ivoire (57)	Mexico (1) Chile (2) Spain (3) Israel (4) South Africa (5) Peru (6) New Zealand (7) Dominican Republic (8) Netherlands (8)		United States (1) Japan (2) United Kingdom (2) Netherlands (2) Spain (5) France (6) Germany (7) Canada (8) Australia (9)	Côte d'Ivoire (77) Burkina Faso (77)
	Bananas, plantains	Ecuador (9)  India (1)  China (2)  Turkey (3)  Honduras (4)  Costa Rica (5)  Philippines (6)  Belize (6)  Ecuador (8)  Morocco (8)  Brazil (10)	Ghana (28) Cape Verde (37) Senegal (43) Nigeria (47) Togo (58) Côte d'Ivoire (74) Sierra Leone (74) Guinea (89) Liberia (92) Benin (99)	Kenya (10)  Ecuador (1)  Colombia (1)  Philippines (3)  Guatemala (4)  Belgium (5)  Honduras (6)  Dominican Republic (7)  Costa Rica (8)  United Arab Emirates (8)  Germany (10)	Côte d'Ivoire (12) Burkina Faso (22) Liberia (34) Ghana (40)	Sweden (10)  Russian Federation (1)  Japan (2)  Belgium (3)  Canada (4)  Italy (5)  Germany (5)  United Kingdom (5)  France (8)  Czech Republic (9)  Sweden (10)	Senegal (24) Niger (28) Benin (53) Mali (53) Burkina Faso (53) Sierra Leone (82) Côte d'Ivoire (133) Mauritania (133) Liberia (148)
	Beans	China (1) France (2) Turkey (3) United States (4) Ukraine (5) Indonesia (6) Morocco (7) Tajikistan (8) Spain (9) Belgium (10)	Burkina Faso (24) Cape Verde (28) Mali (33) Ghana (33) Senegal (37) Niger (71)	Morocco (1) Kenya (2) Egypt (3) France (4) Mexico (4) United States (6) Spain (7) Netherlands (8) Senegal (9) Ethiopia (10)	Senegal (9) Gambia (25) Burkina Faso (46) Niger (54) Mali (68) Nigeria (88)	Spain (1) United Kingdom (2) Netherlands (2) Belgium (2) Germany (5) France (5) Canada (7) United States (8) Italy (9) Portugal (10)	Côte d'Ivoire (14) Senegal (15) Niger (45) Gambia (48) Liberia (48) Cape Verde (48) Ghana (75) Nigeria (108) Guinea (117)
	Broad beans, green	China (1) Morocco (2) Algeria (3) Lebanon (4) Taiwan (PoC) (5) Spain (6) Malta (7) Kazakhstan (8) France (9) Libya (10)	Niger (42)	Guatemala (1)  Mexico (2)  China (3)  Jordan (4)  Taiwan (PoC) (5)  France (6)  Morocco (7)  Netherlands (7)  Spain (9)  Malaysia (10)	Senegal (12) Gambia (18) Ghana (25) Nigeria (25) Niger (58)	Spain (1) Belgium (2) Italy (3) United States (4) Netherlands (5) France (6) Portugal (7) Japan (8) Malaysia (9) Greece (9)	Niger (19) Côte d'Ivoire (49) Burkina Faso (54) Nigeria (79) Guinea (84)

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Top 10 expo Countries with the in the export	highest rank	Top 10 mar Countries with the in the market	highest rank
		in the world	in the region	in the world	in the region	in the world	in the region
	Cabbages	Rep. of Korea (1)	Cape Verde (77)	Mexico (1)	Gambia (27)	Russian Federation (1)	Cape Verde (42)
		Germany (2)	Togo (94)	Spain (2)		Netherlands (2)	Liberia (47)
		Japan (3)	Niger (102)	Poland (3)		United Kingdom (2)	Guinea (62)
		China (4)		Netherlands (4)		Germany (4)	Côte d'Ivoire (62)
		Belarus (4)		China (5)		United States (5)	Guinea-Bissau (62)
		Ukraine (6)		United States (5)		Canada (6)	Senegal (78)
		Poland (7)		Italy (7)		Sweden (7)	Mauritania (78)
		India (8) Russian Federation (8)		Uzbekistan (8)		Switzerland (8)	Nigeria (103)
				Germany (9)		Singapore (9)	Ghana (138)
		Kuwait (10)		Viet Nam (9)		Czech Republic (9)	Sierra Leone (138)
	Cantaloupe	Spain (1)	Guinea (59)	Panama (1)	Mauritania (21)	Russian Federation (1)	Côte d'Ivoire (23)
	s & other	China (2)		Guatemala (2)	Senegal (21)	France (2)	Cape Verde (42)
	melons	Morocco (3)		Brazil (2)	Ghana (64)	Netherlands (3)	Liberia (50)
		Italy (4)		Spain (4)	Burkina Faso (64)	Belgium (3)	Sierra Leone (101)
		United States (5)		Costa Rica (5)	Côte d'Ivoire (91)	Germany (5)	Ghana (114)
		Romania (6)		Morocco (6)		United Kingdom (5)	
		Iran (7)		Uzbekistan (7)		Spain (7)	
		France (8)		Mexico (8)		Canada (8)	
		Turkey (9)		Netherlands (9)		Italy (9)	
		Venezuela (10)		United States (10)		United States (10)	
	Carrots	Belgium (1)	Cape Verde (65)	China (1)		Russian Federation (1)	Senegal (31)
		Germany (2)	Nigeria (65)	Netherlands (2)		Belgium (2)	Cape Verde (47)
		Italy (3)	Niger (95)	United States (3)		Japan (3)	Côte d'Ivoire (47)
		United Kingdom (3)		Spain (4)		Canada (4)	Liberia (50)
		Netherlands (5)		Italy (5)		United States (4)	Mauritania (70)
		Ukraine (6)		Australia (6)		Germany (6)	Nigeria (139)
		United States (7)		France (7)		France (6)	Sierra Leone (141)
		China (8)		Belgium (8)		Portugal (8)	
		Poland (9)		Uzbekistan (9)		Malaysia (9)	
		Switzerland (10)		South Africa (10)		United Kingdom (10)	
	Cauliflower	China (1)	Cape Verde (58)	China (1)		Italy (1)	Senegal (44)
		Italy (2)		Spain (2)		Netherlands (2)	Mauritania (48)
		Morocco (3)		France (3)		Norway (2)	Liberia (53)
		India (4)		United States (4)		United Kingdom (4)	Cape Verde (73)
		Jordan (4)		Ecuador (5)		France (4)	Côte d'Ivoire (103)
		France (6)		Guatemala (6)		Germany (6)	Guinea (123)
		Spain (7)		Mexico (7)		Canada (7)	Nigeria (123)
		United States (8)		Italy (8)		Belgium (8)	Sierra Leone (123)
		Lebanon (9)		Netherlands (9)		Czech Republic (9)	
		Armenia (9)		Europe Othr. Nes (10)		Switzerland (10)	

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Top 10 expo Countries with the I in the export i	highest rank	Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region
	Chillies & peppers, green	Spain (1) United States (2) China (3) Turkey (4) Netherlands (5) Indonesia (5) Mexico (7) United Kingdom (7) Israel (7)	Nigeria (21) Ghana (57) Mali (65) Benin (70) Niger (73) Côte d'Ivoire (77) Burkina Faso (84)	Mexico (1) Spain (2) Turkey (3) Netherlands (3) Rep. of Korea (5) Canada (6) Morocco (7) France (8) United States (9)	Ghana (23) Benin (31) Guinea-Bissau (31) Senegal (31) Côte d'Ivoire (75) Nigeria (84) Niger (91)	Netherlands (1) Italy (2) France (3) United Kingdom (3) Germany (5) United States (6) Canada (7) Japan (8) Sweden (9)	Liberia (49) Ghana (74) Cape Verde (80) Niger (107) Nigeria (114) Sierra Leone (126) Mauritania (137) Côte d'Ivoire (139) Guinea-Bissau (139)
	Citrus fruit nes	Jordan (10)  Syrian Arab Republic (1) China (2) Cuba (2) Saudi Arabia (4) Japan (4) Guinea (4) Peru (7) Nigeria (7) French Polynesia (9) Greece (10)	Guinea (4) Nigeria (7) Sierra Leone (22) Côte d'Ivoire (24)	China (10)  Israel (1)  China (2)  Netherlands (3)  Taiwan (PoC) (4)  Spain (4)  India (6)  Thailand (7)  South Africa (8)  Egypt (8)  Malaysia (10)		Czech Republic (9)  Saudi Arabia (1)  United Kingdom (2)  Canada (3)  Ireland (4)  Denmark (5)  Sweden (6)  Italy (7)  Czech Republic (8)  Germany (9)  France (9)	Côte d'Ivoire (31) Nigeria (64) Ghana (72)
	Cucumbers and gherkins	France (1) Netherlands (2) Ukraine (3) Sweden (4) Russian Federation (5) China (6) Spain (7) Iran (7) Turkey (9) Japan (10)	Cape Verde (72) Ghana (89)	Jordan (1) Spain (2) Mexico (2) Netherlands (4) Canada (5) Iran (6) Turkey (7) Greece (8) Belgium (9) Poland (10)	Côte d'Ivoire (54)	Iraq (1) United States (1) Russian Federation (3) Netherlands (4) Czech Republic (5) United Kingdom (5) France (7) Canada (8) Germany (9) Belgium (10)	Liberia (38) Cape Verde (59) Sierra Leone (104)
	Dates	Egypt (1) Saudi Arabia (2) China (3) Iran (4) Jordan (4) Pakistan (6) Kuwait (7) United Arab Emirates (8) Qatar (9) Sudan (10)	Mauritania (21) Niger (23) Benin (24)	Israel (1) Saudi Arabia (2) Iran (3) Tunisia (4) Pakistan (5) Algeria (6) Iraq (7) United States (8) Egypt (9) Mexico (9)	Nigeria (11) Niger (61) Côte d'Ivoire (61)	Germany (1) United Kingdom (2) Spain (2) France (4) Italy (5) Malaysia (6) Canada (7) Russian Federation (8) Belgium (9) Netherlands (10)	Senegal (31) Côte d'Ivoire (51) Mali (57) Liberia (72) Gambia (75) Mauritania (78) Niger (78) Cape Verde (78) Benin (113) Burkina Faso (113)

Sector	Industry	Top 10 prod Countries with the in the production	highest rank	Top 10 expo Countries with the in the export	highest rank	Top 10 mar Countries with the in the market	highest rank
		in the world	in the region	in the world	in the region	in the world	in the region
	Eggplants	Egypt (1) China (2) Turkey (3) Netherlands (4) India (4) Jordan (6) Kazakhstan (7) Palestine (7) Israel (9) Italy (10)	Côte d'Ivoire (29) Ghana (58)	Jordan (1) Spain (2) Mexico (3) Netherlands (4) Turkey (5) Kenya (6) Iran (7) Uzbekistan (8) China (9) Kazakhstan (10)	Ghana (28) Côte d'Ivoire (52)	Italy (1) United Kingdom (2) France (3) Germany (4) Netherlands (5) United States (6) Canada (7) Iraq (8) Russian Federation (9) Syrian Arab Republic (10)	Cape Verde (38) Liberia (39) Sierra Leone (82)
	Garlic	China (1) United States (2) Egypt (3) Rep. of Korea (3) Russian Federation (5) Ethiopia (6) Cuba (7) Palestine (8) Argentina (9) India (10)	Cape Verde (63) Niger (64)	China (1) Argentina (2) Spain (3) India (4) Netherlands (4) France (6) Italy (7) Turkmenistan (8) Myanmar (9) Lao RDR (10)	Niger (60) Nigeria (65)	Germany (1) Italy (2) United Kingdom (3) France (4) Russian Federation (4) Pakistan (6) Malaysia (7) Netherlands (7) United States (7) Bangladesh (10)	Benin (40) Mali (40) Senegal (45) Côte d'Ivoire (45) Guinea-Bissau (67) Mauritania (74) Liberia (81) Ghana (97) Cape Verde (101) Burkina Faso (101)
	Grapefruit and pomelos	Turkey (1) China (2) Israel (3) India (4) Belize (5) Mexico (6) Cyprus (7) Lebanon (7) Taiwan (PoC) (9) Italy (9)	Burkina Faso (37)	South Africa (1) Turkey (2) Israel (3) Netherlands (4) United States (5) Spain (6) Belgium (7) China (8) Cyprus (9) Argentina (10)	Guinea (18)	Netherlands (1) Belgium (2) United Kingdom (2) France (4) Germany (4) Italy (4) Russian Federation (4) Canada (8) Poland (9) Slovenia (10)	Liberia (55) Mali (111) Sierra Leone (111) Senegal (114)
	Lettuce	United States (1) China (2) France (3) Spain (4) Congo (5) Italy (6) Rep. of Korea (7) Japan (7) Tunisia (9) Switzerland (9)	Cape Verde (59) Niger (63)	Spain (1) United States (2) Italy (3) Netherlands (4) France (5) Belgium (6) China (7) Portugal (7) Turkey (9) Egypt (9)	Senegal (33) Gambia (57)	Netherlands (1) Italy (2) France (3) Germany (4) United Kingdom (4) Austria (4) Canada (7) United States (8) Switzerland (9) Belgium (10)	Mali (32) Senegal (38) Liberia (53) Côte d'Ivoire (64) Benin (64) Ghana (69) Cape Verde (82) Nigeria (108) Sierra Leone (134)

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Countries with the l	Top 10 exporters: Countries with the highest rank in the export index		rkets: highest rank index
		in the world	in the region	in the world	in the region	in the world	in the region
	Mangoes	Pakistan (1)	Cape Verde (9)	India (1)	Burkina Faso (14)	France (1)	Niger (25)
		Peru (2)	Burkina Faso (20)	Brazil (2)	Mali (15)	United Arab Emirates (1)	Cape Verde (31)
		Indonesia (2)	Nigeria (23)	Peru (3)	Senegal (15)	Japan (1)	Liberia (61)
		China (4)	Mali (35)	Pakistan (4)	Côte d'Ivoire (20)	United Kingdom (4)	Côte d'Ivoire (61)
		India (5)	Guinea (35)	Thailand (5)	Gambia (24)	United States (4)	Ghana (83)
		Thailand (6)	Senegal (45)	Mexico (6)	Ghana (32)	Germany (6)	Guinea (122)
		Mexico (7)	Ghana (45)	Netherlands (6)	Nigeria (47)	Netherlands (7)	Nigeria (122)
		Guatemala (7)	Guinea-Bissau (51)	Philippines (8)	Guinea (59)	China (8)	Sierra Leone (122)
		Samoa (9)	Gambia (62)	Ecuador (9)	Guinea-Bissau (65)	Canada (9)	
		Cape Verde (9)	Benin (62)	Israel (10)		Portugal (10)	
	Onions	United States (1)	Niger (28)	China (1)	Niger (13)	Russian Federation (1)	Côte d'Ivoire (16)
		Egypt (2)	Nigeria (38)	India (1)	Burkina Faso (40)	United Kingdom (2)	Senegal (17)
		Rep. of Korea (3)	Cape Verde (62)	Mexico (3)	Senegal (69)	Belgium (3)	Ghana (19)
		France (4)	Senegal (81)	Netherlands (4)	Ghana (69)	Canada (4)	Mali (22)
		Japan (5)	Mali (81)	Egypt (5)		Saudi Arabia (5)	Guinea-Bissau (24)
		Spain (6)	Burkina Faso (86)	Spain (6)		Malaysia (6)	Benin (24)
		China (7)	Benin (92)	Poland (7)		United States (6)	Togo (36)
		Iran (8)	Ghana (118)	Uzbekistan (8)		Japan (8)	Burkina Faso (63)
		Netherlands (9)	Côte d'Ivoire (124)	United States (9)		Bangladesh (9)	Mauritania (76)
		Germany (10)		New Zealand (10)		Germany (10)	Gambia (89)
	Oranges	Italy (1)	Senegal (52)	Egypt (1)	Nigeria (23)	Saudi Arabia (1)	Liberia (64)
		India (2)	Côte d'Ivoire (58)	South Africa (2)	Ghana (26)	Germany (1)	Cape Verde (74)
		Brazil (3)	Ghana (62)	Morocco (3)	Burkina Faso (53)	Russian Federation (3)	Ghana (80)
		United States (4)	Burkina Faso (84)	Spain (4)		Netherlands (3)	Côte d'Ivoire (86)
		China (4)	Benin (84)	United States (5)		Belgium (3)	Niger (98)
		Egypt (6)	Guinea-Bissau (84)	Turkey (6)		France (6)	Senegal (110)
		Turkey (7)	Togo (84)	Australia (7)		United Kingdom (6)	Mauritania (158)
		Spain (8)	Liberia (95)	Greece (8)		Canada (6)	Mali (161)
		Indonesia (9)		Netherlands (9)		United States (9)	Guinea (167)
		Taiwan (PoC) (10)		Argentina (10)		Rep. of Korea (10)	Nigeria (167)
	Other fruits	Indonesia (1)	Nigeria (10)	Azerbaijan (1)	Ghana (22)	United Kingdom (1)	Liberia (60)
		Colombia (2)	Guinea-Bissau (79)	Uzbekistan (2)	Mauritania (25)	Russian Federation (2)	Benin (74)
		Viet Nam (3)	Côte d'Ivoire (86)	Viet Nam (3)	Mali (56)	France (2)	Burkina Faso (74)
		Cuba (4)	Guinea (99)	Thailand (4)	Côte d'Ivoire (86)	Netherlands (2)	Mali (80)
		Iran (5)	Senegal (110)	Colombia (5)	Senegal (86)	Germany (5)	Ghana (83)
		Taiwan (PoC) (6)	Niger (110)	Spain (5)		United States (6)	Cape Verde (83)
		Lebanon (7)	Burkina Faso (110)	Iran (7)		Indonesia (7)	Senegal (121)
		Philippines (7)	Togo (119)	Netherlands (8)		Italy (8)	Côte d'Ivoire (129)
		India (9)	Benin (122)	Madagascar (9)		Belgium (9)	Guinea (138)
		Nigeria (10)	Liberia (122)	Israel (10)		Canada (10)	Guinea-Bissau (142)

Sector	Industry	Top 10 prod Countries with the in the production	highest rank	Top 10 expo Countries with the in the export i	highest rank	Top 10 mar Countries with the in the market	highest rank
		in the world	in the region	in the world	in the region	in the world	in the region
	Other vegetable products	Belgium (1) France (2) Spain (3) Kazakhstan (3) Nigeria (5) Croatia (6) China (7) South Africa (8) Cameroon (8) Central African Republic (8)	Nigeria (5) Senegal (13) Mali (15) Mauritania (15)	South Africa (1) China (2) Nigeria (3) Sudan (4) Morocco (5) Ukraine (6) United States (7) Germany (8) Lao RDR (9) Malaysia (10)	Nigeria (3) Burkina Faso (17) Senegal (19) Niger (49)	United Arab Emirates (1)  Netherlands (1)  United Kingdom (3)  Germany (4)  United States (5)  Spain (6)  Viet Nam (7)  Syrian Arab Republic (8)  Japan (9)  Russian Federation (10)	Ghana (74) Senegal (89) Burkina Faso (89) Mauritania (101) Nigeria (101) Côte d'Ivoire (108) Niger (108)
	Other vegetables	Rep. of Korea (1) China (2) France (3) Tajikistan (4) Cuba (4) United Arab Emirates (4) Armenia (4) United States (8) Viet Nam (9) Italy (10)	Nigeria (25) Senegal (31) Cape Verde (91) Benin (97) Sierra Leone (104) Burkina Faso (115) Ghana (136) Niger (136) Mauritania (151) Mali (151)	Israel (1) Spain (2) China (3) Italy (4) Netherlands (4) Thailand (6) New Zealand (7) Mexico (8) Morocco (9) France (10)	Burkina Faso (26) Senegal (35) Ghana (44) Mauritania (59) Togo (59) Guinea-Bissau (69) Mali (82) Côte d'Ivoire (82) Nigeria (88) Gambia (103)	United States (1) Netherlands (2) United Kingdom (2) Italy (2) Belgium (5) France (5) Germany (7) Canada (8) Austria (9) Russian Federation (10)	Mali (69) Togo (69) Cape Verde (74) Ghana (80) Côte d'Ivoire (86) Senegal (119) Guinea (125) Liberia (138) Mauritania (146) Nigeria (153)
	Papayas	Brazil (1) Mexico (2) Belize (3) Indonesia (3) Taiwan (PoC) (5) Nigeria (6) India (7) Philippines (8) Honduras (9) Colombia (10)	Nigeria (6) Ghana (33) Guinea-Bissau (39) Côte d'Ivoire (43)	Belize (1) Mexico (2) Brazil (3) Malaysia (4) Netherlands (5) Côte d'Ivoire (6) Ecuador (7) India (8) Costa Rica (8) Guatemala (8)	Côte d'Ivoire (6) Ghana (8) Sierra Leone (17) Niger (36)	Netherlands (1) United Kingdom (1) United States (1) Germany (4) Canada (5) Portugal (6) Spain (7) France (8) Japan (9) Italy (10)	Liberia (41) Cape Verde (41) Nigeria (72)
	Pineapples	Philippines (1) Honduras (2) Benin (3) Panama (4) Mexico (4) Brazil (6) Colombia (7) Taiwan (PoC) (7) Thailand (9) Kenya (9)	Benin (3) Côte d'Ivoire (20) Nigeria (20) Guinea (46) Ghana (61) Togo (61) Guinea-Bissau (61) Liberia (66)	Costa Rica (1) Netherlands (2) Ghana (3) Belgium (4) Ecuador (5) Philippines (6) Panama (6) United States (8) Côte d'Ivoire (9) Guatemala (10)	Ghana (3) Côte d'Ivoire (9) Liberia (22) Benin (26) Guinea (42) Togo (59)	Belgium (1) United Kingdom (1) Germany (3) Italy (4) Canada (5) Netherlands (6) Spain (6) United States (8) Japan (9) France (10)	Cape Verde (41) Liberia (58) Nigeria (74) Ghana (123) Côte d'Ivoire (123) Sierra Leone (123)

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Top 10 expo Countries with the in the export i	highest rank	Top 10 mar Countries with the h in the market i	nighest rank
		in the world	in the region	in the world	in the region	in the world	in the region
	Tang. mand. clement. satsma	Brazil (1) Spain (2) Morocco (3) China (4) Japan (4) Italy (6) Egypt (7) Peru (8) Rep. of Korea (9)	Burkina Faso (42)	China (1)  Morocco (2)  Spain (3)  Turkey (3)  South Africa (5)  Netherlands (6)  Cyprus (7)  Argentina (8)  Peru (9)  Israel (10)		Russian Federation (1)  Netherlands (1)  France (3)  Poland (3)  United Kingdom (3)  Germany (6)  Belgium (7)  Italy (8)  United States (9)	Senegal (47) Liberia (60) Cape Verde (60) Côte d'Ivoire (72) Mauritania (77) Nigeria (139) Sierra Leone (139)
	Tomatoes	Australia (10) United States (1) Iran (2) Italy (3) China (3) Iceland (5) Spain (6) Netherlands (6) Egypt (6) Turkey (9) Austria (10)	Mali (44) Benin (69) Nigeria (76) Senegal (85) Sierra Leone (91) Cape Verde (93) Niger (97) Côte d'Ivoire (105) Ghana (105) Burkina Faso (112)	Mexico (1) Spain (2) Netherlands (3) Belgium (4) Turkey (5) Canada (5) Morocco (7) Jordan (8) Italy (9) France (10)	Senegal (36) Burkina Faso (51) Nigeria (84) Niger (101) Côte d'Ivoire (101)	Canada (10)  Italy (1)  Russian Federation (2)  Sweden (3)  France (3)  Germany (5)  Netherlands (5)  United Kingdom (5)  Canada (8)  Belgium (9)  United States (10)	Mali (27) Guinea-Bissau (27) Côte d'Ivoire (27) Niger (27) Senegal (38) Togo (42) Benin (48) Liberia (55) Guinea (73) Cape Verde (81)
	Watermelon s	China (1) Jordan (2) United States (3) Turkey (4) Syrian Arab Republic (4) Iran (6) Egypt (6) Spain (8) Rep. of Korea (9) Morocco (10)	Senegal (31) Cape Verde (68) Mauritania (95)	Panama (1) Mexico (2) Spain (3) Netherlands (4) Iran (5) Viet Nam (6) United States (7) Greece (8) Saudi Arabia (9) Kazakhstan (10)	Senegal (24) Côte d'Ivoire (57)	United Kingdom (1) United States (1) Russian Federation (3) France (4) Netherlands (4) Germany (6) Canada (7) Poland (8) Iraq (9) China (10)	Cape Verde (35) Côte d'Ivoire (43) Liberia (53) Ghana (118) Guinea (118) Mauritania (118) Sierra Leone (125)
Nuts	Almonds	Syrian Arab Republic (1) United States (2) Jordan (3) Lebanon (4) United Arab Emirates (5) Italy (6) France (6) TFYR of Macedonia(8) Kazakhstan (9) Spain (10)	Burkina Faso (37)	Australia (1) United States (2) Spain (2) Afghanistan (4) Chile (5) Tunisia (6) Tanzania (7) Greece (8) Kuwait (8) Tajikistan (10)		Italy (1) Spain (1) United Arab Emirates (3) France (4) Belgium (5) Austria (6) Greece (7) Turkey (8) India (9) Germany (10)	Mali (26) Sierra Leone (61) Côte d'Ivoire (88) Mauritania (103)

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Countries with the l	Top 10 exporters:  Countries with the highest rank in the export index		Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region	
	Cashew	Viet Nam (1)	Nigeria (6)	Viet Nam (1)	Côte d'Ivoire (2)	Australia (1)	Liberia (69)	
	nuts	Brazil (2)	Togo (6)	Côte d'Ivoire (2)	Guinea-Bissau (3)	United Kingdom (2)	Burkina Faso (79)	
		India (3)	Côte d'Ivoire (10)	Guinea-Bissau (3)	Ghana (8)	Netherlands (2)	Côte d'Ivoire (84)	
		Peru (4)	Guinea-Bissau (16)	Brazil (4)	Nigeria (10)	United Arab Emirates (4)	Sierra Leone (115)	
		Kenya (5)	Senegal (17)	India (5)	Benin (11)	Canada (4)	Mauritania (124)	
		Nigeria (6)	Ghana (19)	Netherlands (6)	Guinea (11)	United States (6)	Nigeria (124)	
		Togo (6)	Benin (21)	Indonesia (7)	Togo (13)	Germany (7)		
		Indonesia (8)	Burkina Faso (22)	Ghana (8)	Burkina Faso (21)	India (8)		
		Belize (9)	Guinea (29)	Mozambique (9)	Senegal (43)	Belgium (9)		
		Côte d'Ivoire (10)		Nigeria (10)		France (9)		
	Other nuts	Azerbaijan (1)	Nigeria (15)	South Africa (1)	Benin (17)	Area Nes (1)	Senegal (26)	
		Turkey (2)	Côte d'Ivoire (30)	Indonesia (2)	Guinea (17)	Italy (2)	Cape Verde (38)	
		Russian Federation (3)	Mali (39)	Australia (3)	Ghana (27)	United Kingdom (3)	Mali (42)	
		India (4)	Senegal (46)	China (4)	Côte d'Ivoire (29)	Spain (3)	Côte d'Ivoire (81)	
		Taiwan (PoC) (4)	Ghana (50)	United States (5)	Gambia (42)	United States (5)	Niger (86)	
		China (6)	Sierra Leone (50)	Guatemala (5)	Senegal (71)	Netherlands (6)	Burkina Faso (112)	
		United States (7)	Liberia (55)	Turkey (7)	Sierra Leone (75)	Germany (7)	Nigeria (145)	
		Mexico (8)	Benin (59)	Kenya (7)	Nigeria (78)	Japan (8)	Gambia (147)	
		Georgia (9)		Spain (7)	Niger (94)	Pakistan (9)	Guinea (147)	
		Guatemala (10)		Russian Federation (10)		Belgium (10)	Ghana (147)	
Oil crops	Castor	India (1)	Cape Verde (17)	Paraguay (1)	Ghana (6)	Brazil (1)	Togo (9)	
	beans	Brazil (2)	Benin (17)	United States (1)		China (2)		
		China (3)	Togo (28)	Myanmar (3)		Mexico (3)		
		Ukraine (4)		Pakistan (4)		Thailand (4)		
		Ethiopia (5)		Ethiopia (5)		United States (5)		
		Cambodia (5)		South Africa (6) Greece (6)		Saint Kitts and Nevis (6) Rep. of Korea (7)		
		Paraguay (7) Ecuador (8)		Lao RDR (6)		Canada (7)		
		Russian Federation (9)		Singapore (6)		Togo (9)		
		Pakistan (10)		Italy (6)		Bolivia (10)		
	Coconuts	Brazil (1)	Côte d'Ivoire (20)	Viet Nam (1)	Côte d'Ivoire (9)	Singapore (1)	Benin (23)	
	Cocorius	Indonesia (2)	Ghana (30)	Philippines (2)	Ghana (10)	Netherlands (2)	Mali (23)	
		Philippines (3)	Guinea-Bissau (39)	Indonesia (3)	Sierra Leone (23)	Germany (2)	Senegal (35)	
		El Salvador (3)	Nigeria (45)	Sri Lanka (4)	Oloria 200110 (20)	Belgium (4)	Cape Verde (56)	
		India (5)	Togo (52)	Singapore (5)		United States (5)	Burkina Faso (68)	
		Venezuela (6)	Guinea (54)	Thailand (6)		Canada (6)	Liberia (76)	
		Myanmar (6)	Cape Verde (55)	Dominican Republic (7)		United Arab Emirates (7)	Mauritania (95)	
		China (8)	Senegal (62)	Netherlands (8)		France (7)	Gambia (141)	
		Solomon Is (9)	Liberia (65)	Côte d'Ivoire (9)		Poland (7)	Nigeria (141)	
		Thailand (10)	Benin (75)	Mexico (10)		Spain (10)	Sierra Leone (141)	

Sector	Industry	Top 10 proc Countries with the in the production	highest rank	Top 10 expo Countries with the in the export	highest rank	Top 10 mar Countries with the in the market	highest rank
		in the world	in the region	in the world	in the region	in the world	in the region
	Groundnuts	United States (1)	Nigeria (6)	Egypt (1)	Ghana (8)	United Kingdom (1)	Niger (31)
	in shell	China (2)	Ghana (20)	India (2)	Senegal (9)	Germany (1)	Mauritania (60)
		Indonesia (3)	Guinea (22)	China (3)	Mali (12)	Canada (3)	Côte d'Ivoire (86)
		Mauritius (4)	Senegal (23)	United States (4)	Togo (12)	Italy (4)	Mali (86)
		Nicaragua (5)	Mali (47)	Israel (5)	Nigeria (20)	Mexico (4)	Nigeria (90)
		Malaysia (6)	Côte d'Ivoire (47)	South Africa (6)	Niger (31)	Indonesia (6)	Guinea (102)
		Nigeria (6)	Gambia (54)	Brazil (7)		Switzerland (7)	Ghana (110)
		Argentina (8)	Guinea-Bissau (54)	Ghana (8)		Slovakia (7)	Sierra Leone (110)
		Sudan (8)	Benin (57)	Malawi (9)		Netherlands (9)	
		Brazil (10)	Burkina Faso (79)	Tajikistan (9)		Spain (10)	
	Oil palm	Indonesia (1)	Nigeria (11)	Indonesia (1)	Côte d'Ivoire (8)	Italy (1)	Senegal (24)
		Malaysia (2)	Benin (22)	Malaysia (2)	Togo (26)	Netherlands (1)	Benin (33)
		Honduras (3)	Côte d'Ivoire (25)	Colombia (2)	Nigeria (32)	Germany (3)	Ghana (38)
		Costa Rica (4)	Senegal (25)	Papua New Guinea (2)	Benin (32)	Russian Federation (4)	Niger (41)
		Thailand (5)	Sierra Leone (29)	Singapore (5)	Liberia (41)	Belgium (5)	Mauritania (45)
		Colombia (6)	Liberia (33)	Costa Rica (6)	Mauritania (41)	United Kingdom (5)	Burkina Faso (56)
		Guatemala (6)	Ghana (33)	Ecuador (7)	Niger (55)	China (7)	Togo (63)
		Ecuador (8)	Gambia (35)	Côte d'Ivoire (8)	Guinea (72)	Bangladesh (8)	Liberia (90)
		Cameroon (9)	Togo (38)	Thailand (9)	Senegal (75)	Egypt (9)	Guinea (109)
		Nicaragua (10)	Guinea-Bissau (38)	Germany (10)	Ghana (79)	United States (9)	Sierra Leone (109)
	Other oil	China (1)	Benin (39)	Ethiopia (1)	Ghana (4)	Canada (1)	Gambia (62)
	crops	Bulgaria (2)	Côte d'Ivoire (39)	Bulgaria (2)	Benin (6)	Mexico (1)	Togo (87)
		India (3)		India (3)	Niger (14)	United States (1)	Mali (96)
		Paraguay (4)		Ghana (4)	Burkina Faso (15)	Spain (4)	Mauritania (96)
		Malaysia (5)		Indonesia (5)	Nigeria (18)	Germany (4)	Burkina Faso (96)
		Hungary (6)		China (6)	Côte d'Ivoire (85)	Rep. of Korea (6)	Côte d'Ivoire (105)
		Azerbaijan (7)		Benin (6)		Netherlands (7)	Nigeria (116)
		Czech Republic (8)		Sudan (8)		Austria (8)	Ghana (122)
		Austria (9)		Austria (9)		Belgium (9)	Sierra Leone (122)
		Kazakhstan (10)		Hungary (10)		Sweden (10)	Liberia (133)
	Sesame	China (1)	Senegal (12)	Ethiopia (1)	Nigeria (2)	China (1)	Togo (44)
	seed	Myanmar (2)	Nigeria (29)	Nigeria (2)	Burkina Faso (16)	Germany (2)	Mali (111)
		Ethiopia (3)	Mali (33)	India (3)	Mali (21)	Israel (3)	Côte d'Ivoire (111)
		Israel (3)	Sierra Leone (37)	Paraguay (3)	Senegal (25)	Japan (3)	Senegal (111)
		Italy (5)	Niger (41)	Sudan (5)	Guinea (25)	Turkey (5)	Burkina Faso (116)
		Lebanon (5)	Benin (45)	Bolivia (6)	Ghana (25)	Greece (5)	Nigeria (120)
		India (7)	Côte d'Ivoire (45)	Tanzania (7)	Guinea-Bissau (25)	Saudi Arabia (5)	Ghana (124)
		Ecuador (7)	Gambia (54)	Myanmar (8)	Mauritania (35)	United States (8)	
		Sudan (9)	Guinea (58)	Guatemala (8)	Niger (49)	Rep. of Korea (9)	
		TFYR of Macedonia(9)	Togo (58)	Mozambique (10)		Taiwan (PoC) (10)	

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Countries with the	Top 10 exporters: Countries with the highest rank in the export index		kets: highest rank index
		in the world	in the region	in the world	in the region	in the world	in the region
	Soybeans	Argentina (1) United States (2) Brazil (3) Switzerland (4) China (5) Canada (6) Egypt (7) Czech Republic (8) Kyrgyzstan (9)	Côte d'Ivoire (60) Benin (62) Nigeria (62) Burkina Faso (78) Liberia (82)	Brazil (1) Argentina (2) United States (3) Paraguay (3) Canada (5) Uruguay (6) Ukraine (7) Romania (8) Cambodia (8)	Benin (10) Nigeria (40)	China (1) Turkey (2) Italy (2) Taiwan (PoC) (4) Germany (5) Japan (5) Thailand (7) Mexico (8) Spain (9)	Niger (27) Nigeria (62) Ghana (68) Côte d'Ivoire (96) Benin (136) Guinea (144) Sierra Leone (151)
Roots and	Cassava	India (10) Indonesia (1)	Nigeria (4)	Tanzania (10) Viet Nam (1)	Ghana (5)	Egypt (10) United States (1)	Gambia (6)
tubers		Brazil (2) Thailand (3) Viet Nam (4) Angola (4) Nigeria (4) Cambodia (7)	Ghana (10) Benin (16) Niger (16) Senegal (16) Guinea-Bissau (25) Mali (27)	Costa Rica (1) Thailand (3) Indonesia (4) Ghana (5) Ecuador (6) Paraguay (7)	Nigeria (7) Côte d'Ivoire (33)	China (2) Rep. of Korea (3) Spain (4) Finland (5) Gambia (6) United Kingdom (7)	Cape Verde (32) Niger (62) Guinea (66)
		India (8) Paraguay (9) DR Congo (10)	Cape Verde (47) Guinea (50) Sierra Leone (62)	Mexico (7) Nicaragua (7) Suriname (7)		Botswana (8) Namibia (8) South Africa (8)	
	Other roots and tubers	Benin (1) China (2) Egypt (3) Ghana (4) Cuba (5) Ethiopia (6) Nigeria (7) Côte d'Ivoire (8) Solomon Is (9) Papua New Guinea (10)	Benin (1) Ghana (4) Nigeria (7) Côte d'Ivoire (8) Mali (14) Togo (27) Burkina Faso (30) Liberia (59) Guinea-Bissau (67) Mauritania (82)	Ghana (1) China (2) Fiji (3) Costa Rica (4) Panama (5) Jamaica (6) Brazil (7) Dominican Republic (8) Ecuador (9) Colombia (10)	Ghana (1) Togo (19) Benin (28) Burkina Faso (36) Côte d'Iv oire (41) Nigeria (58) Mali (61)	United States (1) United Kingdom (2) New Zealand (3) France (4) Canada (5) Taiwan (PoC) (6) Spain (7) Netherlands (8) Singapore (9) Australia (10)	Senegal (63) Niger (67) Côte d'Ivoire (73) Mali (73) Burkina Faso (73) Gambia (107)
	Potatoes	France (1) United States (2) Germany (3) Netherlands (4) China (5) United Kingdom (5) India (5) Ukraine (8) Canada (9) Belgium (9)	Benin (67) Senegal (82) Cape Verde (88) Mauritania (107) Nigeria (115) Niger (115) Burkina Faso (132)	France (1) Egypt (1) Canada (3) Netherlands (4) China (5) Israel (6) Germany (7) United States (8) Iran (9) United Kingdom (10)	Ghana (39) Nigeria (43) Côte d'Ivoire (103)	Belgium (1) Italy (1) Spain (1) Netherlands (1) Greece (1) Russian Federation (6) Germany (6) Iraq (8) United Kingdom (9) United States (10)	Mauritania (43) Nigeria (83) Senegal (92) Côte d'Ivoire (92) Benin (98) Ghana (102) Mali (110) Niger (110) Gambia (125) Liberia (144)

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Top 10 exporters:  Countries with the highest rank  in the export index		Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region
	Sweet potatoes	Japan (1) China (2) Israel (3) United States (3) Indonesia (5) Egypt (6) India (7) Viet Nam (8) Angola (8) Uganda (10)	Nigeria (10) Mali (29) Niger (43) Togo (53) Liberia (59) Burkina Faso (69) Cape Verde (74) Senegal (76) Ghana (83) Sierra Leone (83)	Israel (1) China (2) United States (3) Viet Nam (4) Indonesia (5) France (6) Egypt (7) Jamaica (8) Brazil (9) Dominican Republic (9)	Togo (15) Ghana (24) Nigeria (27)	Netherlands (1) United Kingdom (2) France (3) Canada (4) Singapore (5) Japan (6) United States (7) Belgium (8) Malaysia (9) Germany (10)	Niger (52)
Spices	Ginger	Fiji (1) China (2) Taiwan (PoC) (3) India (4) Indonesia (5) Nepal (6) Ethiopia (7) Nigeria (8) United States (9) Bangladesh (10)	Nigeria (8) Ghana (28)	Nigeria (1) China (2) Netherlands (3) India (4) Thailand (5) Brazil (6) Nepal (7) Ethiopia (8) Fiji (9) Taiwan (PoC) (9)	Nigeria (1) Benin (14) Côte d'Ivoire (44)	Malaysia (1) United States (2) United Arab Emirates (3) Netherlands (4) United Kingdom (5) Germany (6) Pakistan (7) Japan (8) Bangladesh (9) Singapore (10)	Liberia (64) Ghana (79) Côte d'Ivoire (116) Nigeria (116) Sierra Leone (116) Togo (116) Burkina Faso (116)
	Nutmeg, mace, cardamons	Dominica (1) Indonesia (2) Guatemala (3) Nepal (4) Bhutan (5) Grenada (6) India (6) Saint Vincent and the Grenadines (8) Lao RDR (9) Togo (10)	Togo (10)	Indonesia (1) Sri Lanka (2) Guatemala (3) Nepal (3) Grenada (3) Netherlands (6) India (7) Brazil (7) Singapore (9) Saint Vincent and the Grenadines (10)	Côte d'Ivoire (27) Togo (40)	Singapore (1) Germany (2) Viet Nam (3) India (4) Belgium (5) France (5) Brazil (7) Netherlands (8) United States (8) British Virgin Islands (8)	Côte d'Ivoire (44) Togo (55) Liberia (69) Nigeria (80) Ghana (110) Cape Verde (128) Sierra Leone (128)
	Other spices	Turkey (1) China (2) India (3) Mauritius (4) Kuwait (4) Vanuatu (4) Nepal (7) Ecuador (7) Syrian Arab Republic (9) Bangladesh (9)	Sierra Leone (24) Burkina Faso (26) Niger (27) Nigeria (33) Togo (40) Côte d'Ivoire (45)	Iran (1) India (2) France (3) Netherlands (4) Austria (5) Germany (6) Turkey (7) Spain (8) China (9) Pakistan (10)	Niger (24) Nigeria (59) Togo (94) Ghana (105) Côte d'Ivoire (110)	Germany (1) Netherlands (2) Belgium (2) France (2) United Kingdom (2) Saudi Arabia (6) Spain (6) United States (6) United Arab Emirates (9) Canada (10)	Nigeria (73) Burkina Faso (88) Ghana (103) Benin (144) Senegal (151) Côte d'Ivoire (162) Niger (169) Mali (169) Cape Verde (173) Togo (173)

Sector	Industry	Top 10 producers: Countries with the highest rank in the production index		Top 10 expo Countries with the in the export i	highest rank	Top 10 markets: Countries with the highest rank in the market index	
		in the world	in the region	in the world	in the region	in the world	in the region
	Pepper,	Viet Nam (1)	Niger (17)	Viet Nam (1)	Niger (43)	United Kingdom (1)	Senegal (5)
	white/long/b	Thailand (2)	Ghana (17)	Sri Lanka (2)	Ghana (57)	Belgium (1)	Mali (19)
	lack	Brazil (3)	Côte d'Ivoire (26)	Brazil (3)	Nigeria (93)	Poland (3)	Ghana (55)
		Indonesia (4)	Benin (31)	Mexico (4)	Senegal (109)	Japan (4)	Niger (62)
		Cambodia (5)		Indonesia (5)		Malaysia (5)	Benin (67)
		China (6)		Malaysia (6)		Senegal (5)	Côte d'Ivoire (79)
		Tajikistan (6)		India (7)		India (7)	Liberia (87)
		Costa Rica (8)		Germany (8)		Germany (8)	Gambia (111)
		Macau (9)		Ecuador (9)		Austria (9)	Cape Verde (141)
		Sri Lanka (10)		China (10)		France (9)	Nigeria (141)
	Pimento,	Hungary (1)	Cape Verde (4)	Peru (1)	Togo (16)	Netherlands (1)	Côte d'Ivoire (57)
	allspice	China (2)	Nigeria (23)	China (2)	Nigeria (62)	Germany (2)	Liberia (62)
		Myanmar (3)	Senegal (24)	India (2)	Benin (70)	United Kingdom (2)	Senegal (62)
		Cape Verde (4)	Ghana (30)	Brazil (4)	Senegal (75)	Spain (4)	Niger (105)
		Morocco (5)	Sierra Leone (35)	Spain (5)	Niger (101)	United States (5)	Cape Verde (115)
		Peru (6)	Benin (38)	Chile (6)		Malaysia (6)	Nigeria (122)
		India (7)	Côte d'Ivoire (38)	Tunisia (7)		Japan (7)	Sierra Leone (140)
		France (8)	Mali (56)	Netherlands (8)		Rep. of Korea (8)	Gambia (153)
		Ethiopia (9)	Togo (58)	Serbia and Montenegro (9)		Mexico (9)	
		Zambia (10)	Niger (58)	Myanmar (10)		Thailand (10)	

Source: FAOSTAT, ITCs TradeMap and Market Access Map.