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Medium-term prospects for raw materials, horticulture and tropical products



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*Trade and Markets Division
Food and Agriculture Organization of the United Nations*

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Foreword

Tropical fruits, beverage crops, sugar and raw materials contribute significantly to the economies of many developing countries, particularly the least-developed countries (LDCs), as a major source of livelihood and income for millions of rural smallholders. In 2014, the value of world production of these commodities was estimated at USD 255 billion, while global trade value was worth some USD 75 billion. The reliance on these agricultural primary commodities for export earnings highlights the necessity to understand the fundamentals that drive their markets as well as to identify the opportunities and challenges that lie ahead.

Market expansion opportunities have been important over the last decade. Evidence shows a marked growth in demand for tropical fruits, beverages, sugar and raw material products, driven by gains in per capita income, population growth and shifts in consumer preferences. In the case of tea and tropical fruits, well-publicized scientific studies underlying the health benefits associated with their consumption have been instrumental in boosting demand. Consumption of tea has been expanding notably not only because of research on tea and human health, but also thanks to considerable expansion by gourmet niche markets, notably in the European Union and the United States. Similarly, production of raw materials, such as jute and sisal, has been very robust, prompted by rising consumer demand for natural fibres. Today, these natural fibres find their usage in a number of sectors, including automotive, textile, and construction. These market opportunities exist not only in importing markets, but increasingly so in the domestic markets of developing producing countries themselves, where consumer purchasing power has improved amid rising real income. Expansion in demand for these products is expected to continue over the medium-term, implying greater opportunities for employment generation along the value chain and dynamic investment inflows.

There are, however, risks that can impede the sustainability of expanding markets. Importantly, there is mounting evidence on the impact of climate change on agricultural systems in general and on tropical fruits and beverage crops in particular. The problem is so critical that in 2012, a Working Group on climate change was established by the FAO Intergovernmental Group on tea (IGG/Tea) to look into, amongst other issues, mitigation and adaptation strategies that could be adopted for the tea sub-sector. Strategies to address climate change will have to take place in the face of declining land and water resources in many parts of the world. Clearly, supply expansion will have to come from productivity gains at the farm level but most importantly all along the value chain.

Market access has been the main topic dominating trade issues concerning tropical fruits, beverages, sugar, and raw material products. Although import tariffs remain relatively low for these products' less-processed forms, import duties generally increase along the value chain, a practice known as tariff escalation. A reduction of tariff escalation should enable poorer countries to exploit diversification opportunities and mitigate some of the effects of price volatility that characterise international markets of primary commodities.

Non-tariff barriers (NTBs) disputes also represent another source of concern between trading countries. There have been several cases where tea and fruits consignments, for example, have been refused access at ports of entry for exceeding maximum residue levels (MRLs) established by national authorities. These actions raise export costs and undermine the reliability of trade for sourcing supplies. Efforts to harmonise MRLs of

various chemicals between trading partners need to continue and replicate the successes achieved so far most notably in the case of the tea sub-sector under the FAO IGG/tea.

Agriculture plays a critical role in the achievement of many goals in the 2030 Agenda for Sustainable Development, which aim at ending poverty and hunger as well as promoting the people's wellbeing while protecting the environment. Tropical fruits, beverages, sugar, and raw material products, through the economic activity they generate and their impact on millions of rural smallholders and labourers, can make a positive contribution to the achievements of these noble development goals.

This report examines the medium-term outlook for sugar, banana, tropical fruits, citrus, tea, jute and hard fibres. It sheds some light on the underlying factors likely to shape development prospects for these commodities and analyses commodity specific trade policy issues and their implications. The report depicts a plausible baseline scenario of key market trends over the coming decade, which can serve to inform and support efforts by governments and all other concerned stakeholders in the formulation and implementation of policies and sector investment strategies.

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Acknowledgements

As part of the FAO mandate to inform Member Countries about agricultural commodity market developments, this report examines current and medium-term outlook for a selection of tropical beverage crops, fruits, raw materials, as well as sugar. These commodities constitute a vital economic activity for rural communities in many developing countries, particularly the least developed countries, as a result of the revenues and employment opportunities they generate. The importance on these primary commodities as a source of export earnings underlines also the necessity to understand the implications of current and prospective developments in these markets.

The projections addressed in this report cover the period from 2015 to 2024, and are based on a set of plausible assumptions pertaining to the macroeconomic conditions, trade policy settings, weather conditions, productivity trends and key market developments likely to prevail over the next 10 years. The document carries out also an extensive discussion on key market trends and policy issues specific to each commodity product.

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1. Introduction

The Food and Agriculture Organization of the United Nations (FAO) produces, on a regular basis, medium-term projections for production, consumption, stocks and trade for major international agricultural commodities. These projections are of practical relevance, especially to all those government agencies, policy-makers, national and international research institutions which require a quantitative framework to analyse agricultural policy issues, investment strategies and food security prospects. In the case of temperate crops, biofuels and fish, the FAO has been producing projections in collaboration with the Organisation for Economic Co-operation and Development (OECD) regularly, and these are included as part of the OECD-FAO Agricultural Outlook yearly joint publication.

As a complement to the OECD-FAO Outlook, this publication examines the projections for a selected set of tropical beverage crops, fruits, sugar, and raw materials. These projections cover the period from 2015 to 2024, and are based on a set of plausible assumptions pertaining to the macroeconomic conditions, trade

policy settings, weather conditions, productivity trends and key market developments likely to prevail over the next 10 years.

Many developing countries, particularly the least-developed countries (LCDs), still depend on the export of primary commodities such as tropical beverage crops, fruits, sugar, and raw materials for the bulk of their export revenues. As Table 1 highlights, the share of tropical beverage crops, fruits, and sugar exports as a percentage of total merchandise exports remains relatively significant for a selected list of developing countries, although their shares have declined over the past two decades. The continued reliance on agricultural primary commodities as a source of export earnings underlines the necessity to understand the implications of current and likely developments in these markets. It also highlights the need to analyse key market trends likely to shape the medium-term outlook and their effects on local producers, most of whom are smallholders in rural communities. The importance of these primary commodities also has key implications for

government revenues, global trade, and the overall food security situation.

The production and export of tropical beverage crops, fruits, sugar, and raw materials constitute a fundamental economic activity for rural communities in many developing countries. They represent a significant source of revenues for smallholder producers through the sale of their produce in the domestic markets and to local exporting firms. This economic and commercial activity also provides rural households with employment opportunities at the farm level as well as at higher stages of the value chain (e.g. transport and packaging units), as in the case of tea, bananas, citrus, and tropical fruits. At the macroeconomic level, the production and export of tropical beverage crops, fruits, and raw materials contributes to government fiscal resources through tax revenues and, in addition, helps to build foreign currency reserves which facilitate the financing of imports of food and other goods and services.

The contribution of tropical beverage crops, fruits, sugar, and raw materials to smallholder households often goes beyond the benefits derived solely from production and rural employment opportunities. In fact, the consumption of bananas, tropical fruits and citrus carries with it important nutritional benefits which help support the food security of smallholder households. In addition, the proceeds from the sales of these primary commodities enable households to secure access to other essential staples such as rice, maize, and cassava, as well as to other needed local goods and services. Hence, the multiplier effects generated by the primary production and commercialization of these commodities can be very significant for local, national and regional rural communities.

In the higher income countries, consumption of tea, tropical fruits, citrus

fruits and other fruits is often associated with a healthy life style, a claim that is regularly backed by well-publicized scientific studies. For example, demand for tropical fruits has been growing at a robust rate since 2000. Also, consumption of tea has been growing steadily for more than two decades, reflecting in part the results of research on tea and human health, accompanied also by a significant expansion by gourmet niche markets in the European Union and in the United States. The economic benefits that accrued to the developed economies from the imports of tropical beverage crops, fruits, and raw materials can be relatively important, especially in terms of employment opportunities in the wholesale distribution, retail, transportation, marketing and other food services sectors. But it is significant also in terms of generating value addition as inputs to higher levels of processing. Furthermore, proceeds collected through various taxes associated with imports contribute to the government's total fiscal revenues.

The trade structure of the sector that includes tropical beverage crops, fruits, sugar, and raw materials generally is characterized by a high degree of concentration on the export side, with only a few countries responsible for the bulk of export volumes. For example, the world's five largest tea exporters account for 78.95 percent of world tea exports, while the top five jute exporters represent 93.95 percent of global jute exports. The import side, on the other hand, is far more heterogeneous, with a large number of countries responsible for the bulk of world imports. Concentration on the export market by so many countries implies that supply shocks have a greater impact on international quotations for tropical beverage crops, fruits, and raw materials. The trade structure is also characterized by a dichotomy of trade flows. In general, developing countries, including the least developed countries

(LDCs), account for most of the global exports of these products, while the developed countries drive most of the imports. In some circumstances, however, this can be nuanced. Indeed, in recent years, imports into developing countries have also been growing steadily, driven by rising population and marked increases in per capita income.

Given the trade structure described above, most of the trade issues tend to involve developing country exporters on the one side, and importing developed countries on the other, although recent increases in imports by developing countries are likely to alter the nature of contentious trade issues. Market access has been the main topic dominating trade negotiations. While tariffs levels for tropical beverage crops, fruits, sugar and raw materials are typically not high in these products' less-processed forms, these import levies generally rise along the value chain (e.g. tea, tropical fruits), a practice known as tariff escalation. A reduction of tariff escalation – a critical element of the development dimension of the Doha round – will enable poorer countries to exploit diversification opportunities all along the value chain, and hence to reduce the volatility that characterises their export earnings.

Non-tariff barrier (NTB) disputes represent another source of friction that characterizes international trade in tropical beverage crops and fruit products. For instance, there have been instances where tea consignments have been refused access at ports of entry for exceeding maximum residue levels (MRLs) established by national authorities. National standards are often more stringent than those established under the FAO/WHO Codex Alimentarius, thus creating uncertainty and higher trade costs for exporters. Similar cases have been reported for consignment of fruits. Nonetheless, a major achievement of the Intergovernmental Group on Tea (IGG/Tea) of the FAO is its submission to,

and acceptance by CODEX Alimentarius, of a list of priority chemicals, a submission that could facilitate the achievement of global harmonization of MRLs in tea. Research into the impact of MRLs on trade usually find that MRLs enhance import demand through consumer awareness of food safety; the research shows that they stimulate demand for products that are subject to standards, but at the same time hinder the demand for non-compliant export supplies. In addition, exporters from the least developed countries (LDCs) were more constrained by MRLs, in comparison to exporters from the developed countries.

Trade disruptions related to domestic supports are generally limited for the commodities covered in this publication, except in the case of sugar. Domestic support in the form of minimum sugar prices, production quotas, tariff-rate quotas, high import tariffs, and export subsidies are some of the features that define the sugar sub-sector in the main producing developed countries (e.g. the European Union, the United States and the Russian Federation), but also in an increasing number of developing countries (e.g. India, Thailand). These policy instruments distort price signals and create an uneven playing field that hampers the development of the sub-sector in developing countries, including the ACP sugar-producing countries which cannot afford the cost, or management, needed to maintain these various supports. An important developmental issue for the future, however, concerns the European Union's decision to abolish sugar quotas by 2017. This decision will introduce a new economic environment for the European Union sugar market and will carry wider implications for the EPA (Economic Partnership Agreement) countries that used to supply sugar to the European Union under the EU-ACP sugar protocol.

1.1 The economics of tropical products and raw materials

The perennial nature of the crops covered in this analysis means their supply is inelastic, at least in the short run. The implication of this is that production does not adjust quickly to rising or falling prices, which often leads to sharp peaks or prolonged periods of low prices. This is particularly the case for the beverage crops and sugar. In addition, demand for these products is also inelastic, meaning that low prices do not trigger the large increases in consumption that could help quickly absorb production surpluses. The net result of price inelastic supply and demand is a regular occurrence of sharp peaks or prolonged periods of depressed prices.

Also, prices of tropical beverage crops, fruits, sugar and raw materials exhibit a high degree of volatility. In particular, beverage crops and sugar are prone to frequent bursts of volatility. The volatile nature of these prices is explained by the intrinsic physical and economic characteristics of perennial crops, exacerbated by the concentrated number of exporters. A supply shock in a major exporter leads to a relatively significant impact on prices. For example, a 10.0 percent reduction in jute production in Bangladesh leads to an average 12.4 percent rise in international jute prices.

International real prices of tropical beverage crops, fruits, sugar, and raw materials are influenced by a number of factors. The extent of their effects depends on the nature of the shocks and the underlying characteristics influencing the market balance for the respective commodities. For example, certain supply shocks can have permanent effects on prices, while other shocks, such as economic recessions, may induce only a temporary effect on prices. Understanding

the properties of price behaviour, and the nature of the price shocks involved, is therefore critical to the design of effective market policy measures.

Most studies show that commodity real prices are characterised by nonstationarity, meaning that their long-term behaviour is marked by a series of downward, or upward, shifts. In the case of commodity markets subject to nonstationary price behaviour, shocks to prices tend to be permanent. Price or income stabilization programmes that ignore nonstationary properties become unsustainable in the long run. A case in point are the International Commodity Agreements (ICAs) with “economic clauses”, which were designed as a solution to counter the price weakness and volatility that characterized international tropical commodity markets. These agreements generally failed to achieve their intended objectives because of the difficulty in reversing, or slowing, the secular downward trend in prices. Interventions in sugar markets ended in 1984, while those for coffee and cocoa ceased in 1989 and 1993, respectively. Supply arrangements for jute and rubber were maintained up until 2000.

The effectiveness of the ICAs rested on the national mechanisms regulating domestic production and the delivery of supplies to the international market. The burden of stabilization was borne by these institutions (e.g. marketing boards). However, with declining economic resources, failing governance and the dismantlement of these bodies, there was little quantitative leverage that could be used to maintain prices within certain ranges; indeed, they were also generally negotiated at levels that were not necessarily competitive albeit being remunerative for producers. Today, ICAs focus their activities on market intelligence and on improving market transparency. However, scope for market intervention still exists when price shocks are related to a temporary,

or cyclical, phenomenon such as an economic recession. Still, the effectiveness of the intervention also depends on the persistence of such shocks. The longer the persistence, the more difficult it is to sustain a successful market intervention scheme.

1.2 About this Outlook

This document examines the medium-term outlook for sugar, banana, tropical fruits, citrus, tea, jute and hard fibres, with some discussion of the current market situation. It also analyses the key factors likely to impact the international markets for these commodities, in addition to elaborating on some commodity-specific themes. The projections are based on quantitative trade models¹ that capture the underlying market structures and dynamics for these products. Each of these projections represents a plausible scenario based on a conditioning set of assumptions pertaining notably to the macroeconomic environment that is expected to prevail over the next 10 years.

The macroeconomic assumptions used in this Outlook are based on the OECD Economic Outlook and the International Monetary Fund's World Economic Outlook. Overall, it is projected in this Outlook that the global economy will continue to grow at a moderate rate, in comparison to the past decade. However, this growth is expected to be unevenly distributed, with some OECD countries showing robust economic expansion (e.g. the United States, Australia, Turkey, the Republic of Korea), while for others growth will be more subdued (e.g. Japan, the European Union). Developing countries in Asia and Africa are foreseen

to display strong growth, but in most cases, the expansion will be lower than over the past 10 years. Sub-Saharan countries are expected to show strong growth, led notably by Ethiopia and Mozambique, with average GDP growth during the projection period likely to reach 8.0 percent and 7.8 percent per year, respectively. Growth in Latin America, however, is set to be weaker, partly as a result of lower commodity prices.

The Outlook, also assumes that world population growth will slow to a pace of 1.0 percent per year. The decline in population growth is expected to affect all regions, with population levels declining even further in some cases, such as in Japan and Europe. With respect to domestic price development, inflation is likely to differ among the regions, with low inflation set to continue in the OECD, due partly to falling energy and food prices. Inflationary pressure is expected, instead, to continue in many large emerging economies, but to ease slowly in the outlook period. The Outlook assumes a strong United States dollar, in line with the economic recovery in that country, while it assumes a decline in world oil prices from their elevated levels of the last decade.

Agricultural policies have a determining role in shaping current and future market developments. In this Outlook, policies pertaining to border measures, including tariff-rate quotas, import and export tariffs, and in some cases export bans, are assumed to remain in place over the next 10 years. Domestic support – such as price supports and input subsidies – is also assumed to continue during the projection period. Reforms that were already announced, such as the removal of the domestic sugar quotas in the European Union in 2017, were, however, taken into account in the projections.

This edition of the Outlook provides an overview of the anticipated market

¹ With the exception of citrus and banana, projection for tropical fruits, tea, sugar, jute and hard fibres are based on a partial equilibrium model. These are partial models because macroeconomic variables are taken as exogenous. Projections for bananas and citrus are based on time-series analyses.

developments for the tropical beverage crops, fruits, sugar and raw materials over the next decade based on the most recent information regarding key market drivers. It is hoped that the discussion about some of the key issues covered in this publication will help government agencies, policy makers, national and international research institutions in the design and implementation of sector investment strategies. Also, the objective of this publication is to raise awareness of the problems and challenges facing the tropical beverage crops, fruits, sugar, and raw materials, given their vital role in many developing countries in the achievement of food and nutritional security in the context of the post-2015 sustainable development agenda.

Table 1.1 The importance of cash crop trade for selected developing countries

Countries	Tropical beverage crops ^{1/} , fruits ^{2/} and sugar			Total agricultural products			Total merchandise exports			Tropical beverage crops ^{1/} , fruits ^{2/} and sugar as a percentage of total agricultural products			Tropical beverage crops ^{1/} , fruits ^{2/} and sugar as a percentage of total merchandise trade		
	1990	2000	2013	1990	2000	2013	1990	2000	2013	1990	2000	2013	1990	2000	2013
	million USD			million USD			million USD			%			%		
Belize	59	70	98	97	161	203	133	282	315	61.2	43.8	48.3	44.5	25.0	31.1
Brazil	1 781	2 784	16 466	8 764	12 761	83 945	31 414	55 086	242 179	20.3	21.8	19.6	5.7	5.1	6.8
Burundi	63	36	43	69	36	56	75	43	99	91.2	99.0	76.9	84.5	84.1	43.2
Côte d'Ivoire	1 038	1 231	2 403	1 613	1 911	5 441	3 128	3 888	13 247	64.3	64.4	44.2	33.2	31.7	18.1
Cameroon	356	217	657	554	364	1 045	2 008	1 856	4 200	64.4	59.5	62.9	17.8	11.7	15.6
Colombia	1 886	1 701	2 951	2 386	2 915	6 449	6 742	13 115	58 822	79.1	58.3	45.8	28.0	13.0	5.0
Costa Rica	635	971	2 015	786	1 529	3 977	1 448	5 820	11 603	80.8	63.5	50.7	43.9	16.7	17.4
Cuba	4 373	467	442	4 744	749	804	5 415	1 676	5 588	92.2	62.3	54.9	80.7	27.9	7.9
Dominica	31	14	4	36	22	10	55	54	38	85.8	61.2	43.3	55.9	24.9	11.6
Dominican Republic	261	147	350	381	573	1 781	732	966	9 651	68.4	25.6	19.6	35.6	15.2	3.6
Ecuador	649	881	2 782	790	1 325	4 925	2 714	4 927	24 951	82.1	66.5	56.5	23.9	17.9	11.2
Ethiopia	148	267	808	261	341	3 381	297	482	4 077	56.6	78.3	23.9	49.9	55.5	19.8
Fiji	152	111	65	183	158	311	495	546	1 113	83.1	70.1	20.8	30.7	20.2	5.8
Ghana	362	426	1 391	413	542	2 183	897	1 671	13 752	87.6	78.6	63.7	40.3	25.5	10.1
Guatemala	514	934	2 276	801	1 575	4 696	1 163	2 696	10 030	64.1	59.3	48.5	44.2	34.6	22.7
Guyana	83	121	114	107	180	356	276	505	1 376	77.9	67.4	32.1	30.3	24.0	8.3
Honduras	581	498	1 124	655	609	1 981	831	1 380	7 833	88.7	81.9	56.7	70.0	36.1	14.3
Kenya	472	618	1 408	687	1 018	3 097	1 095	1 774	5 856	68.6	60.7	45.5	43.1	34.8	24.1
Madagascar	62	10	73	176	117	366	308	631	1 900	35.1	8.3	19.9	20.0	1.5	3.8
Malawi	84	70	199	376	419	941	416	445	1 208	22.4	16.6	21.2	20.3	15.7	16.5
Mauritius	355	212	314	379	247	421	1 172	1 476	2 872	93.6	85.8	74.4	30.3	14.3	10.9
Mozambique	8	25	131	41	62	713	126	364	4 300	20.3	40.4	18.4	6.7	6.9	3.1
Peru	135	240	922	275	685	4 255	3 231	7 028	42 177	49.0	35.0	21.7	4.2	3.4	2.2
Philippines	292	369	1 392	1 230	1 540	4 883	8 186	39 793	56 698	23.8	24.0	28.5	3.6	0.9	2.5
Saint Lucia	74	22	10	86	31	20	127	54	174	86.4	69.6	47.7	58.2	40.6	5.6
Saint Vincent and the Grenadines	45	18	6	60	31	20	83	42	48	73.7	58.8	30.0	53.8	43.6	12.8
Sri Lanka	496	685	1 535	745	1 002	2 634	1 916	5 416	9 950	66.5	68.3	58.3	25.9	12.6	15.4
Swaziland	171	98	372	345	296	526	550	903	1 930	49.6	33.1	70.7	31.1	10.9	19.3
Uganda	145	162	648	173	260	1 328	190	469	2 408	84.0	62.3	48.8	76.4	34.5	26.9
United Republic of Tanzania	117	155	328	274	452	1 345	407	664	5 050	42.8	34.4	24.4	28.9	23.4	6.5
Viet Nam	125	599	2 678	737	2 299	10 100	2 404	14 483	132 033	16.9	26.1	26.5	5.2	4.1	2.0
Zambia	5	31	124	24	80	1 238	1 331	676	10 594	19.6	38.6	10.0	0.3	4.5	1.2
Zimbabwe	98	114	112	705	1 060	1 228	1 726	2 185	3 507	13.9	10.8	9.2	5.7	5.2	3.2

1/ Includes tea, coffee and cocoa

2/ Includes bananas and pineapples



2. Sugar outlook

2.1 Introduction¹

The sugar projections included in the present outlook were carried out using the Aglink/COSIMO model, a partial equilibrium dynamic model for the world's main agricultural commodities developed by the Organisation for Economic Co-operation and Development (OECD) and the Food and Agriculture Organization of the United Nations (FAO). The model is a multi-region, non-spatial, and multi-commodity system for medium-term projections and for a forward-looking analysis. A complete description of the model can be found in OECD (2014)². The sugar component of the model includes 1457 equations and covers about 55 countries and regions. It deals with two traded sugars: white (or refined) and raw; two sugar inputs, cane and beet; molasses; high fructose corn syrup (HFCS) and;

additional crop sweeteners for specific countries. Links between various commodities – through the principles of substitution and complementarity – are explicitly represented in the demand and supply systems. Links also exist between the biofuel component and the relevant agricultural feedstocks such as sugarcane and sugar beet. The model assumes the continuation of the current principal sugar policies, but takes account of the removal of the sugar and HFCS quotas in the European Union that are scheduled to begin in 2017.

Production, consumption and stocks are expressed in raw sugar equivalent, with cane and beet sugar supply response relationships depending as necessary on the specific country or region. Demand is expressed by the combination of the direct and indirect uses of sugar, and by stock demand equations through combined public and private stock building. Domestic prices for refined and raw sugar are incorporated (with other variables) in the supply, demand and stocks equations. Ad valorem tariffs link border prices (world prices) to domestic prices. Finally,

¹ This medium-term for sugar was generated in collaboration with the OECD, as part of the 2015-2024 OECD-FAO Agricultural Outlook.

² OECD (2014). OECD-FAO Agricultural Outlook 2014. OECD Publishing, Paris.

the model is closed through a domestic and world price solution for raw sugar. The projections cover the period from 2015 to 2024, taking 2012–2014 as a reference base.

At the onset of the projection period, international sugar prices had been on a declining trend since 2011, underpinned by five years of production surplus, which resulted in global sugar inventories rising to near record levels. The fall in prices was exacerbated by the intensification of competition among exporters to clear some of the large stock holdings. Preliminary forecasts for the 2015/16 season (October/September) indicated that world sugar production would decline, driven by reductions in some major sugar producing areas mostly because of unfavourable weather conditions. Sugar production was anticipated to decline, notably, in Brazil, the world's single largest sugar producer and exporter, Thailand, the European Union and China, while it was foreseen to expand in India, the world's second largest producer, South Africa, and the Russian Federation. Still, some of these forecasts remain preliminary and could be altered depending on weather developments as the new season progresses. On the other hand, world sugar consumption was set to grow, in line with long-term trends, driven by increases in several developing countries as a result of lower domestic sugar prices, ample availabilities, and the improved economic prospects for 2015/16. Sugar consumption growth was seen as likely to be particularly buoyant in Asia and Africa. With world sugar consumption expected to expand and global production to decline, the world sugar market would record its first deficit in the last five years.

Global sugar trade in 2015/16 was set to increase amid strong growth in import demand, notably from China, Indonesia, and the European Union. These larger imports would be covered in part by inventory releases from major exporting countries. Shipments were foreseen to rise from Thailand and Australia, but to remain

subdued in Brazil. The most significant change anticipated in 2015/16 would be the reappearance of India as a major net sugar exporter.

Despite the anticipated global production deficit for the 2015/16 season, world sugar prices were not expected to make large gains, as ample inventories are likely to keep the world sugar market sufficiently well supplied. Developments in exchange rate markets could also dampen sugar quotations. The continued weakening of the Brazilian real against the United States dollar could favour an increase in Brazilian sugar exports; since sugar is traded in United States dollars Brazilian producers would be eager to lock in higher returns in local currency. In addition, the depreciation of the currency of several sugar importing countries against the United States dollar, which means imports would become more expensive in local currency, could hinder their ability to buy.

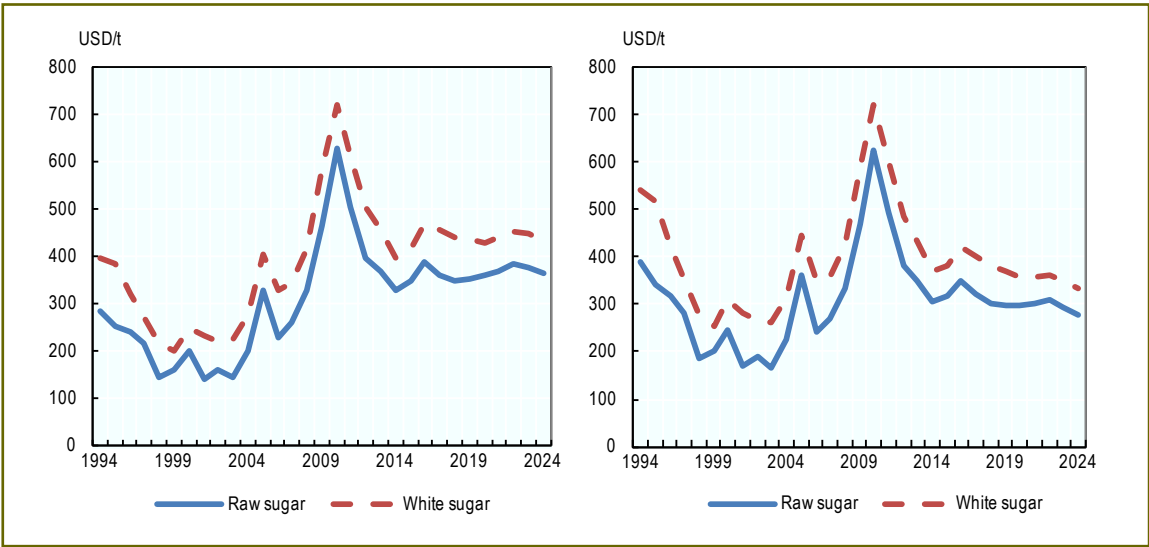
2.2 Prices

Volatility of prices has been a long-standing feature of the international sugar market, reflecting recurring supply and demand imbalances, with the market generally tending toward a structural surplus. For most of the past four decades, world production of sugar has been in excess of consumption, putting downward pressure on sugar prices and resulting in stock building. However, periods of deficit production due to weather-related shocks in the major sugar producing areas periodically have resulted in the drawing down of stocks and in increased market volatility characterized by sharp price increases (as in 2010/2011) followed by equally sharp declines. Since such events, as well as collapses in demand and sudden changes in macroeconomic variables, cannot be predicted in commodity models, the latter generally show projected price movements as tending to be smooth and gradual.

In the current projections, international sugar values are anticipated to recover in the near-term, as producers adjust capacity and output, with nominal prices foreseen to strengthen in 2015/16 and 2016/17. Prices would subsequently decline, as the market enters a new downturn, nevertheless settling over the projection period at a higher plateau than in the last decade. In real terms, sugar prices are foreseen to decline in the next decade in line with the long-term trend (see Figure 1).

In the developing world, the leading producing regions are Asia and the Pacific and Latin America and the Caribbean. In 2024, these regions would account for 38 percent and 35 percent, respectively, of global sugar production, about the same shares as existed in the base period. Sugar production in the Asia and Pacific region is expected to increase by 2.0 percent per year to 2024, while in Latin America the growth would be 2.2 percent annually. In both cases, this is a slower rate of growth than in the previous decade reflecting

Figure 1. Sugar prices stay volatile and fall in real term over the medium term



Source: FAO/OECD (2015)

2.3 Production

Global sugar production is projected to grow by 1.9 percent per year to reach 220 million tonnes by 2024, up nearly 38 million tonnes, or 21 percent, above the average base period. The baseline period reflects the chronic production surplus that has characterized the world sugar market for most of the past decade. Most of the additional production will originate in countries producing sugarcane rather than sugar beet. The global situation, however, masks some major regional and national changes. Developing countries will continue to increase their market share of global sugar production to reach 79 percent in 2024 compared to 77 percent during the base period.

some adjustments in the beginning of the projections period to earlier declining prices. In Asia, production would continue to rise in China, Thailand, and Pakistan, while in Latin America the increase would mainly reflect larger crops in Brazil as a result of further area expansion, although some yield improvements are also foreseen in both production and processing. In Africa, sugar output is projected to increase by 54 percent by the end of 2024, primarily as a result of production expansion in Sub-Saharan countries and to some extent in Egypt.

In contrast, developed countries are generally projected to expand only marginally over the coming decade, with the exception of South Africa where

production is expected to increase by 2.2 percent per year. Sugar output is set to grow annually by 0.3 percent in the European Union and 0.4 percent in the United States, while production in Australia is expected to rise by 1.6 percent over the medium term.

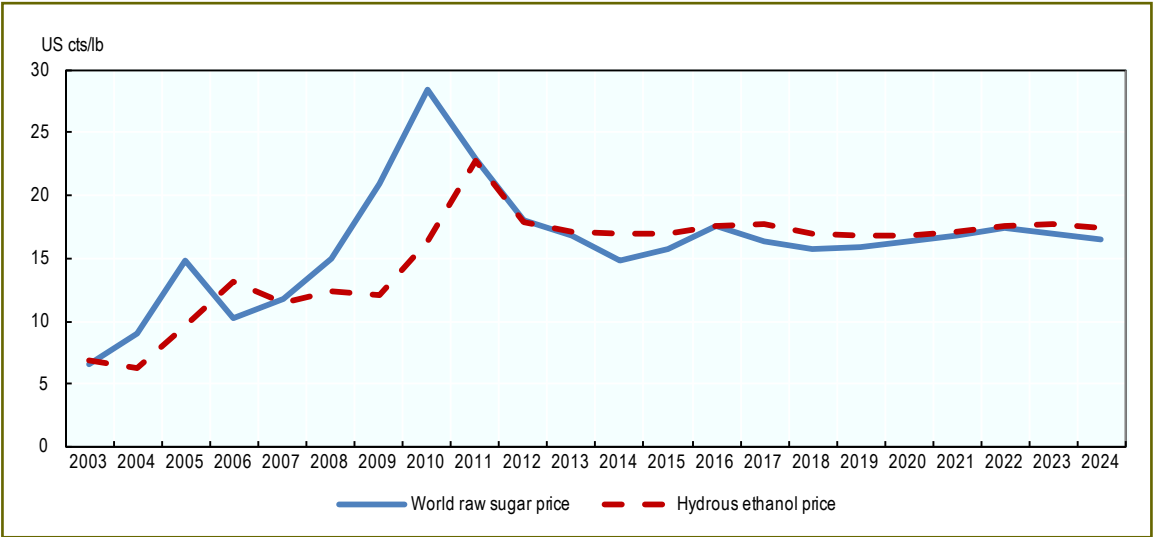
It is projected that by 2024, sugarcane will account for about 89 percent of sugar crop output, although some expansion of sugar beet production is anticipated in the Russian Federation and in the European Union following quota abolition in 2017. Most of the additional production is projected to come from higher yields and area expansion in sugarcane-producing countries. But growth would also result from higher yields in beet-producing countries. In parallel, the share of sugarcane allocated to ethanol will continue its upward trend and in 2024 as much as 26 percent of sugarcane will be allocated to ethanol production (up from 20 percent during the base period). The share of sugar beet allocated to ethanol will decrease slightly to 4.0 percent in 2024.

Given the dual usage by Brazil, the world's main sugar producer, of sugarcane both as a feedstock for ethanol and for the production of sugar, changes in the

ethanol/sugar price ratio have a direct effect on global sugar production and prices. With Brazil being the largest exporter of sugar, it follows that if the share of sugarcane diverted to ethanol were to increase, this will affect available supplies of sugar to the world market. In fact, the arbitrage between sugar and ethanol in Brazil creates a price floor for world sugar prices. An increase in ethanol prices raises the share of cane going into biofuel production, thereby reducing sugar output, and providing support to the sugar price. Similarly, an increase in sugar prices leads to a higher share of sugarcane being diverted to sugar production at the expense of ethanol, thereby reducing ethanol availabilities and creating a price floor for ethanol. Figure 2 shows the evolution of the world raw sugar price and of ethanol prices converted into raw sugar equivalent. As shown in the figure, on average the ethanol price is expected to be higher than the raw sugar quotations, especially in the first years of the Outlook, although in the last three years the prices are more or less the same.

As Brazil is the world's leading sugar producer, representing about 20 percent of world production, developments in its industry have important implications for global market conditions. Recently,

Figure 2. Domestic hydrous ethanol price in Brazil and the World sugar price



Source: FAO/OECD (2015)

investment in the industry has been impacted negatively by adverse weather conditions, higher production costs, increases in wages and limited access to credit. Bankruptcy rates have gone up as sugar mills face mounting debts in the face of lower returns. Since 2012, ethanol production has become more profitable than sugar production, a situation that is expected to continue over the course of the outlook, underpinned as it is by domestic policies favouring the ethanol industry. The share of sugarcane allocated to ethanol production is projected to expand from 53 percent in the base period to 60 percent by 2024. Assuming more favourable economic conditions, a low Brazilian real and higher sugar prices at the start of the outlook, the industry is expected to become attractive enough to stimulate new investments. This will affect the level of sugarcane devoted to sugar production. It is foreseen that it will take about four years for the sugar industry to recover and about six years to return to the prior high level of sugar production. By 2024, sugar production is projected to reach 48 million tonnes, up from 39 million tonnes during the base period.

In India, the world's second largest sugar producer and the largest single consuming country, the sugar market over the medium term will continue to be marked by a structural production cycle, turning the country into an occasional relatively large net exporter. Nonetheless, it is expected that the amplitude of the production cycle will be dampened as a result of recent reforms introduced to address the liquidity constraints facing India's millers. These constraints are one of the causes behind the discrepancy between administered sugarcane prices and the free market sugar prices. Recent initiatives to deregulate the market include a two-year abolition of the sugar levy mechanism and a system of quota release orders. The trade outlook for India also may be altered if the government decides to grant export subsidies to boost

sugar sales abroad, as was the case in 2014/2015. India's occasional large trade volumes often have significant effects on international sugar prices.

In Thailand, remunerative domestic sugarcane prices led to a surge in sugarcane area and production in 2010/11. Higher production was also recorded in subsequent seasons. Over the medium term, production will continue to expand, but as sugarcane expansion reaches areas that are less suitable for that crop, yields may become more volatile, thereby moderating the pace of growth. Furthermore, rising labour costs and extensive small-scale farming, which limits mechanization, do not provide additional incentives for higher growth in sugar output. Thailand is expected to replace China as the second largest Asian producer with 17 million tonnes produced by 2024. In China, however, low world sugar prices at the beginning of the Outlook period will not encourage large investments in sugar crop plantations and mills. Driven by strong growth in domestic demand, sugar production from mainly sugarcane, and a smaller crop of sugar beets, is projected to increase at 2.6 percent per year to reach 16 million tonnes in 2024.

Sugar production in Sub-Saharan Africa is projected to increase annually by 5.1 percent to the end of 2024, amid continuous expansion in production capacity at both the farm and processing levels. The growth in output will be driven by strong domestic demand for sugar as well as by trade opportunities, such as those offered under the Economic Partnership Agreements (EPAs) and the Everything But Arms (EBA) initiatives of the European Union. However, the removal of the sugar quota in the European Union is expected to have negative implications for exports from non-LDC ACP countries as price incentives decline in the European Union. Sugar output in South Africa has been expanding recently but at a moderate

rate, as labour disputes and delays in land reform limit any significant increase. It is expected that a similar situation will prevail over the medium term.

In the developed countries, the sugar sub-sector will grow moderately over the projection period in comparison to the developing countries. Australia is expected to see the highest production growth, benefiting from efforts to increase cane plantings and sugar yields as well as from a lower Australian dollar value with respect to the United States dollar. Assuming normal weather conditions, sugar production in Australia is foreseen to increase by 1.6 percent per year to reach 5.5 million tonnes in 2024.

In the European Union, sugar production is set to expand by 0.5 million tonnes over the next decade, driven mainly by higher yields in the main producing regions. The policy environment which governs the European Union sugar market will change in October 2017, when quotas for both sugar and high fructose corn syrup (HFCS) will be eliminated. As a consequence, the European Union sugar market will face greater exposure to changes in world sugar markets as well as tighter competition with isoglucose. Despite high import tariffs, an alignment of domestic prices with world prices is foreseen and the gap between the world and the European Union white sugar price is projected to fall from EUR 260 per tonne during the base period to EUR 52 per tonne in 2024. Isoglucose production is expected to take off as early as 2017 and to compete with sugar, especially in sugar deficit production areas. Finally, given the end of quotas, ethanol from sugar beet production can be expected to become less competitive toward the end of the outlook years.

Sugar production in the United States, the second largest producer among developed countries, remains heavily influenced by government policies. With the

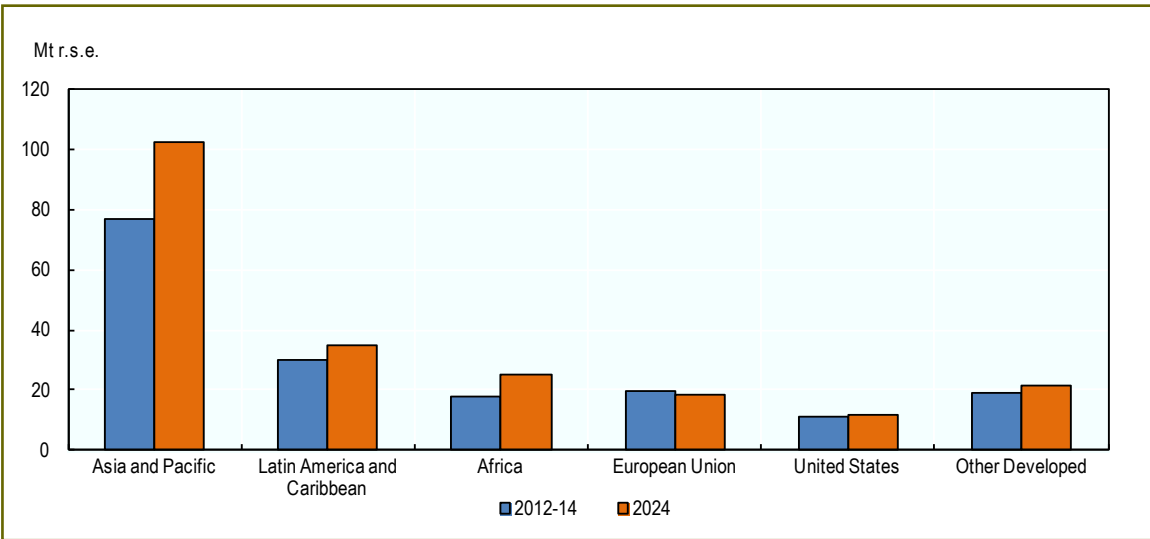
implementation of unrestricted sweetener trade with Mexico under the NAFTA agreement, market challenges emerged (in 2012) when both countries faced bumper harvests and consequently huge quantities of exports from Mexico flowed into the United States. A suspension agreement was signed on 19 December 2014 that restricts Mexican shipments entering the United States. This new arrangement was not taken into account in this outlook, as several legal matters were yet to be resolved. Sugar production in the United States is expected to increase moderately over the next decade at 0.4 percent per year, with some increases in duty-free imports from Mexico that will not, however, trigger the United States safeguard measures. On the other hand, an increase in the United States HFCS production is expected to fill the forecast deficit in the Mexican sweeteners market.

In the Russian Federation sugar production has been partly insulated from the world market by high import tariffs. This policy allowed the sugar industry to expand and modernize. But rising input costs, denominated in Russian roubles, as well as high interest rates, are expected to limit any further acceleration in growth. An anticipated rise in beet production over the next ten years will contribute to a stabilization of the sugar deficit that afflicted the country in the preceding decades.

2.4 Consumption

Being less volatile than production, global consumption of sugar is projected to grow steadily at an annual rate of 2.1 percent per year, slightly higher than in the previous decade, and to reach 214 million tonnes in 2024. World sugar demand will be influenced by the recovery in global economic growth and by the slower growth in world population. Rising concerns over excessive sugar consumption per capita also may limit further expansion.

Figure 3. Sugar demand in major countries and regions



Note: r.s.e.: Raw sugar equivalent

Source: FAO/OECD (2015)

Demand in developing countries will be underpinned by fast growth on the back of rising per capita income, urbanization, and population growth, although with considerable variation among countries (Figure 3). Per capita sugar consumption in the Africa and Asia regions is generally relatively low and growth prospects are, therefore, high compared to other regions. In contrast, per capita sugar consumption is projected to show little or no growth in many of the developed countries, consistent with their status as mature or saturated sugar markets.

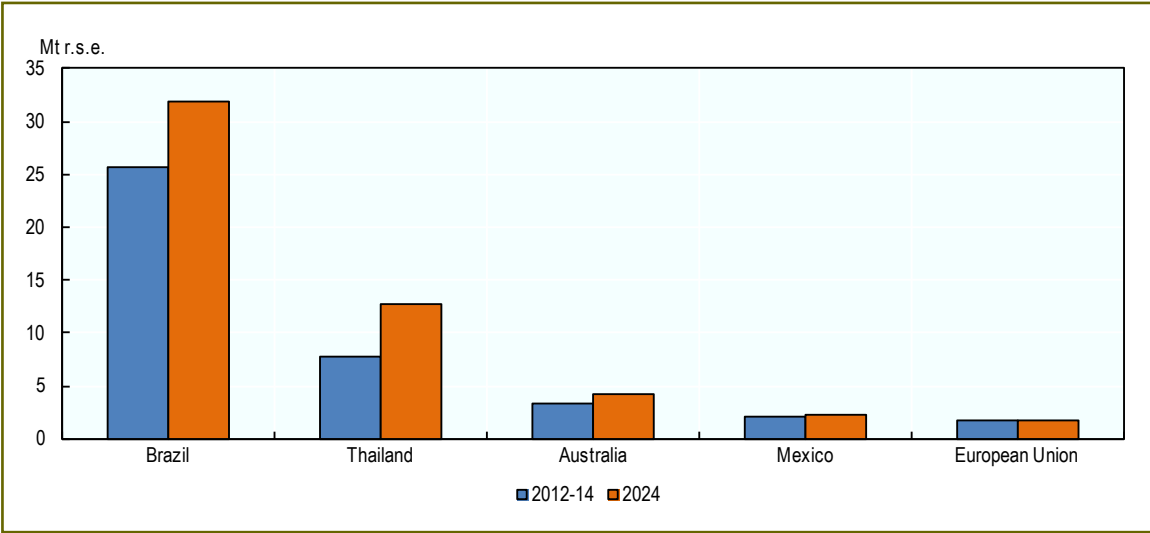
The regions of Asia and Pacific and Africa will be responsible for the bulk of the future expansion in sugar intake, 64 percent and 19 percent respectively. In Asia, it is expected that China, India and Indonesia will experienced the largest increase in sugar consumption. Intake in Indonesia is expected to increase faster than the world's average rate, driven by rising per capita income and expansion in the processing and food manufacturing sectors. The government has supported hefty investments in farm and processing units in order to attain self-sufficiency, yet large imports still will be required to satisfy domestic sugar utilization. In terms of per capita consumption, the

growth is expected to be most significant in Bangladesh and Thailand. In Africa, the highest increase in consumption is projected in the Sub-Saharan African countries.

In developed countries, growth in sugar intake per habitant is projected to decline, reflecting both slowing population growth and dietary changes. Rapid expansion of the demand is, however, foreseen for the Russian Federation and South Africa.

With respect to alternative sweeteners, starch-based sweeteners account for about 11 percent of world sweetener use. The most commonly used alternative sweetener is high fructose corn syrup (HFCS), but its utilization is rather limited due to relatively elevated transportation costs. Market growth is expected mainly in Mexico, due to the competitiveness of HFCS in the soft drink industry, and in the European Union with the elimination of the isoglucose quotas. The share of HFCS in sweetener consumption is set to reach 29 percent in Mexico and 10 percent in the European Union (up, respectively, from 23 percent and 3.0 percent during the base period).

Figure 4. Major countries exporting sugar



Note: r.s.e.: Raw sugar equivalent
Source: FAO/OECD (2015)

2.5 Trade

Over the coming decade, sugar exports are expected to remain highly concentrated (Figure 4). It is accepted that Brazil will maintain its position as the world's largest sugar exporter. The bulk of Brazilian shipments is in raw form and is mainly shipped to the markets of China, Indonesia, Algeria and Egypt. However, the final volume available for export will be influenced in part by the quantity of sugarcane production processed into ethanol, which in turn reflects the government-mandated blend ratio (currently set at 27.5 percent). Also, any further depreciation of the Brazilian real against the United States dollar could stimulate Brazil's exports beyond current projections. Brazil will account for nearly 44 percent of world trade in 2024, about the same level as that prevailing during the base period.

In Thailand, the world's second largest exporter, shipments are expected to increase by nearly 63 percent, driven by a steady growth in production and export availabilities. Thailand's exports to ASEAN countries should benefit from the reduction of import tariffs under the existing ASEAN economic community free

trade agreement. Similarly, in Australia, with rising investment in irrigation, and expansion of the sugarcane area as well as the country's milling capacities, higher production should boost export sales over the medium term.

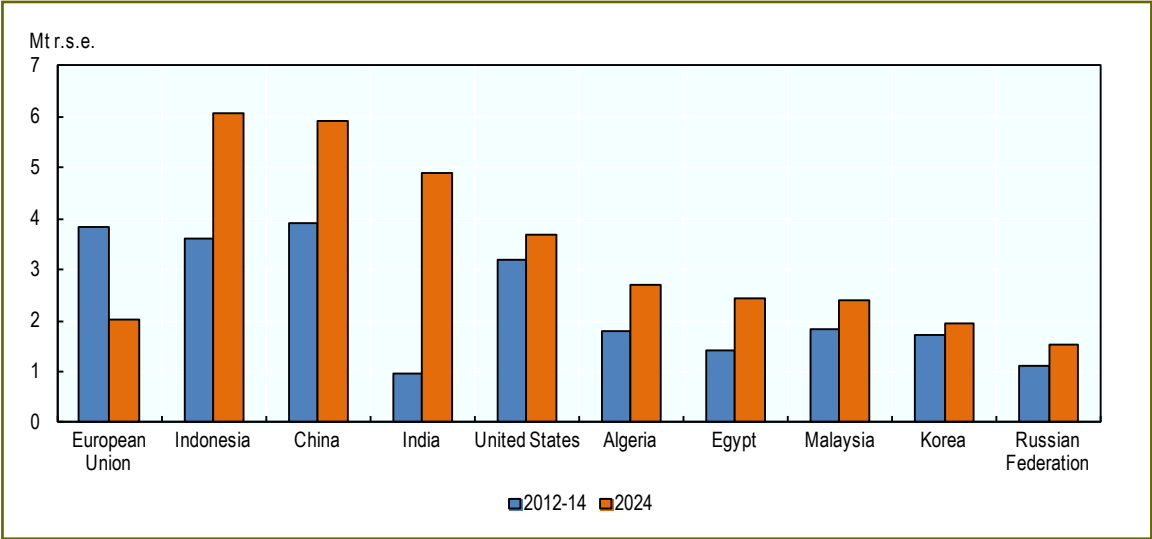
As a result of the structural production cycle, India is expected to turn into an occasional large net sugar exporter over the medium term. Policy measures to boost exports, such as the export subsidy programme introduced in 2014/15 could, however, stimulate further export volumes. The objective of the subsidy was to provide Indian sugar millers with additional cash flow, as part of a series of measures designed to address the issue of arrears owed to sugarcane growers. Under the subsidy programme, a total of 1.4 million tonnes of raw sugar could be exported and benefit from an export subsidy of USD 64.25 per tonne. Sugar exports from India are generally composed of raw sugar and geared to markets in Asia and Africa.

Global sugar imports are much less concentrated than world sugar exports. With robust growth in domestic demand expected over the next ten years, Asia and Pacific and Africa will see the strongest

growth in imports (Figure 5). Indonesia is foreseen to become the world’s leading sugar importer, surpassing China and the European Union, driven by buoyant domestic utilization particularly in the

Union is set to lose its position as the world’s largest sugar importer. The reform will also lead to a moderate increase in sugar exports. In the United States, trade will continue to be influenced by the

Figure 5. Major sugar-importing countries



Note: r.s.e.: Raw sugar equivalent
Source: FAO/OECD (2015)

beverage and food processing sectors. Likewise, shipments to Bangladesh and Malaysia are expected to increase markedly. Despite occasional periods of net exports, India is projected over time to be a large net importer to meet the growing requirements of its domestic market, the largest in the world accounting by itself for nearly 15 percent of global consumption. In Africa, imports by Algeria, the largest sugar importer in the continent, and Egypt, the second largest, are also expected to expand strongly amid robust domestic sugar intake. In Nigeria, the second largest sugar consumer in Africa, imports are set to grow at an annual rate of 4.0 percent over the next ten years.

As a result of the abolition of sugar and isoglucose quotas and the subsequent projected increase in production, imports of sugar into the European Union are expected to fall to 2.0 million tonnes in 2024, down from 3.8 million tonnes in the base period. As such, the European

government sugar programme, which tends to manage the amount of domestic production and the level of imports. With relatively low sugar and maize prices at the beginning of the period examined by the outlook, sugar supplies are expected to be relatively limited, resulting in a continuation of TRQ imports from third countries as well as from Mexico. Imports are expected to average 3.4 million tonnes per year, making the United States the world’s third largest sugar importer by 2024.

2.6 Main issues and uncertainties

Historically, international sugar prices have been marked by periods of high prices followed by long periods of relatively depressed prices, with occasional dips below the costs of production in major, low-cost exporting countries. The volatile nature of its prices is underpinned by the intrinsic physical and economic

characteristics of sugar. The perennial nature of the sugarcane plant means that supply is inelastic in the short-run and production does not adjust quickly to rising or falling prices, leading to sharp peaks or prolonged periods of depressed prices. Also, the price elasticity of demand is relatively low, which means that low prices do not trigger the large increases in consumption that normally help to quickly absorb production surpluses. The net result of the inelastic supply and demand of sugar is long periods of persistently falling prices, a situation exacerbated by the relatively high level of market distortions (e.g., border measures, price supports, etc.).

Aside from the inherent physical and economic features of sugar, international sugar prices are also impacted by government policies, sometimes ad hoc, that support domestic sugar crop producers as well as shield consumers from surges in sugar prices. A series of policy instruments are being applied in support of domestic markets and these include border measures, such as tariff-rate quotas, high import tariffs, export subsidies, price supports, stock purchasing and public distribution programmes. Also, indirect government support, for example by encouraging sugar crop-based biofuel production, has a direct effect on resource allocation in the sugar sub-sector. Reforms have taken place in some producing and consuming countries, but these remain modest and have not gone in the direction of full deregulation.

Another important developmental issue for the future concerns the European Union's decision to abolish sugar quotas by 2017. This decision will introduce a new economic environment for the European Union sugar market and will carry broader implications for the ACP sugar-producing countries. Although an expansion in sugar output and a decline in the European Union's internal sugar prices are expected, the extent of those

changes will remain uncertain until the measure comes into force. Nonetheless, the abolition of quotas is expected to be negative for EU producers with relatively high marginal costs and also for most of the traditional sugar exporters to the European Union, notably the EPA countries that used to supply under the EU-ACP sugar protocol. On the other hand, producers which are competitive at the world level and are supplying the EU under the Everything But Arms (EBA) initiative, or hold preferential access to the EU market through bilateral or multilateral TRQs or benefit from a special tariff (CXL countries with a duty of EUR 98/t), are foreseen to benefit through greater access to the EU market, as long as the EU internal price is higher than the world market price inclusive of transportation, marketing costs and, if applied, lower tariffs. If these costs are higher than the internal EU price, then exports from competitive preferential sources into the European Union are likely to fall, creating a challenging environment for the EU sugar refinery industry.



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3. Citrus outlook

After rapid expansion during the period from 1980 to 2000, the growth of world citrus production slowed over the past decade. Production during 2011–2013 averaged 115.8 million tonnes, up only 2.2 percent annually from 2001–2003, a growth rate that was significantly lower than the expansion of over 3.0 percent per annum in the previous two decades.

Several developments in the major citrus producing countries contributed to the slower growth in production. In particular, the huge explosion in China's citrus production (from 700 000 tonnes to 12 million tonnes) that took place during 1980 to 2000 slowed significantly, production in the United States declined due to the spread of citrus greening disease, and sharp increases in citrus production costs in Brazil led small growers there to shift away from orange production. Moreover, declining orange juice consumption in several major markets also had negative effects on world citrus production growth.

Given that most developments in the past decade do not appear to be temporary

events, it is expected that they will continue to affect the world citrus economy in the next decade. This assumption forms the basis for the following projections, which run up to 2023.

Citrus fruits consist of four major varieties: oranges, tangerines, lemons and grapefruits. While they have much in common, such as acid taste and high vitamin C content, there are considerable differences in cultivation methods and final utilizations. Thus, they are treated as different products in our projections.

3.1 Oranges

(a) Production

World production of oranges is projected to grow by 1.1 percent annually over the next ten years to reach 77 million tonnes in 2023, more than 10 percent higher than the base period (the three-year average for 2011–2013). The slightly slower growth in production compared with the 1.3 percent registered during the last decade reflects significantly slower growth in

China and further declines in output in the United States, although the latter are less pronounced than in the previous decade. While several countries such as Morocco and Pakistan are expected to experience higher production growth, this is insufficient to fully offset the slackening in China and the drop-off in the United States.

Brazil

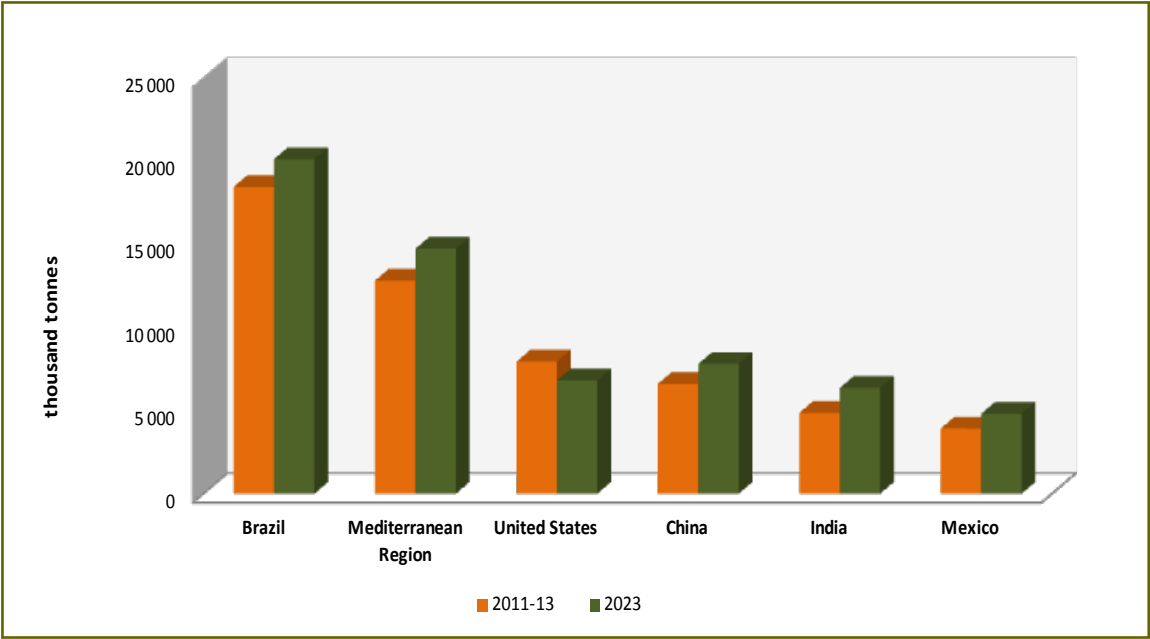
Despite the difficulties of recent years, Brazil is still, by far, the single largest orange producer in the world, ahead of countries like the United States, Mexico, China, and others in the European Union. Almost 30 percent of all the oranges produced in the world come from Brazil. Between 2001–2003 and 2011–2013, production grew by 1.3 percent annually to reach 18.4 million tonnes. While the rising costs of labour and chemicals were factors in the slowing of production growth, many small orange growers also put the blame on the decline on prices paid by the processing industry in recent years. The lower prices for fresh oranges can be attributed largely to the slowing of juice exports and to increases

in processing costs in the orange juice industry, which processes over two-thirds of the orange crop and exports over 80 percent of juice output. Considering the reduction since 2008 in fruit-bearing orange trees in Brazil’s principal producing state, São Paulo, it is projected that the annual growth rate of Brazilian orange production would be about 0.9 percent during the next decade. By 2023, total Brazilian orange output would reach 20.1 million tonnes, about 1.7 million tonnes more than the current level. Productivity and economic efficiency gains are expected to be the driving forces behind the projected increase in output.

The United States

A sharp decline in output has occurred in the world’s second largest orange producing country, the United States, over the past decade. Total orange production dropped by nearly 30 percent from 11.1 million tonnes during 2001–2003 to 7.9 million in 2011–2013. The crop in the main producing state, Florida, which accounts for nearly 60 percent of total United States orange production,

Figure 1. Actual and projected orange production



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

experienced continuous decline due to the spread of citrus greening, a devastating plant disease that reduces the ability of trees to produce fruit and renders much of the fruit that does grow inedible. Since the appearance of the disease in 2004, Florida has lost nearly half its orange output. As it is expected that the research efforts initiated in recent years eventually will contain the spread of citrus greening, production is projected at 6.8 million tonnes for 2023, which is lower than the 2011–2013 average but above the reported level of 6.4 million tonnes in the 2014–2015 season.

China

Orange production in China has been rapidly expanding over the past few decades. Output averaged 6.6 million tonnes during 2011–2013, nearly double the average output during the 2001–2003 period. Since more than 85 percent of China's oranges were consumed in fresh form, storage and transportation costs have acted as a constraint on market growth. Moreover, after several decades of rapid growth, production costs have increased notably, eroding the comparative advantage of orange production against other crops and the use of off-farm employment. As a result, it is expected that the growth in orange production will fall to 1.7 percent annually, far below the 7.0 percent experienced in the last decade. Total output would reach 7.8 million tonnes in 2023 making China the world's second largest orange producing country.

Other countries

During 2011–2013, the Mediterranean region as a whole produced roughly 12.8 million tonnes of oranges, accounting for 20 percent of world output. While some major producing countries such as Greece, Morocco and Spain experienced slow growth, several others, including Egypt,

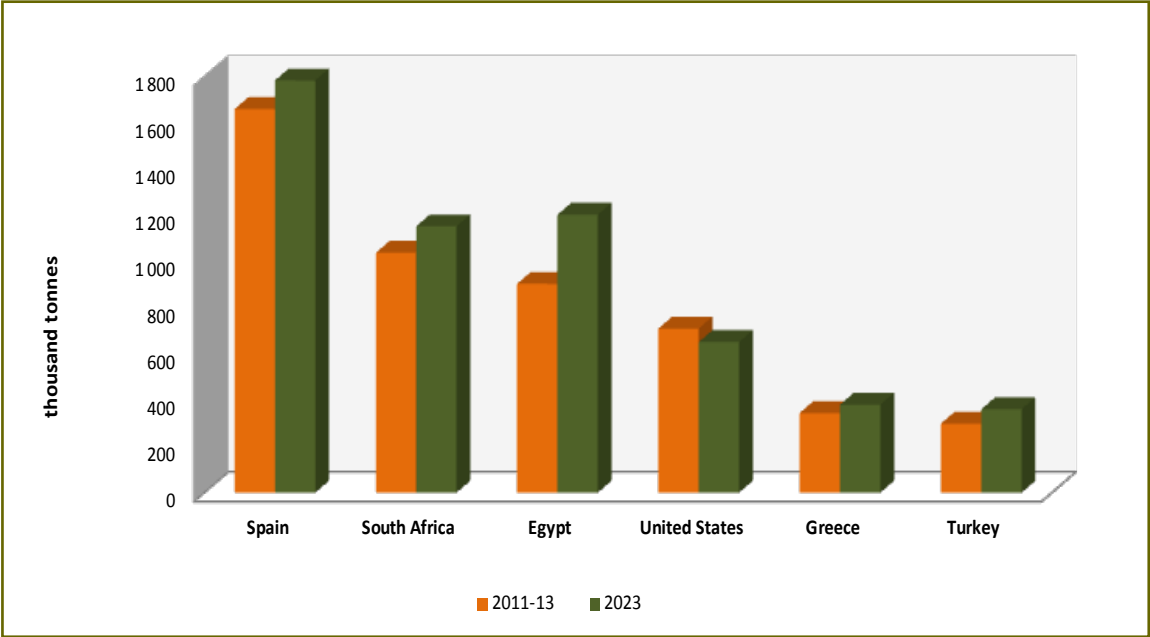
Italy and Turkey saw steady expansion in the sector, driven largely by the introduction of new varieties, by increased export demand and by some government support. For instance, between 2011 and 2013, Turkey produced 1.7 million tonnes of oranges, more than 50 percent above the 2001–2003 average. Meanwhile, Turkey's exports nearly doubled during the same period, a development pattern that is expected to continue throughout the next decade. With low annual growth in Greece, Italy and Spain (below 2.0 percent) but higher growth in Egypt, Morocco, and Turkey (above 2.0 percent), total orange production in the Mediterranean region is expected to reach 14.7 million tonnes, which would be nearly 2.0 million tonnes above the current level.

Other world major producing countries, including India, Mexico, Pakistan and South Africa, are expected to register steady growth in orange production over the next decade. With above average Growth rates, it is expected that the output of oranges in India, Mexico, Pakistan and South Africa is likely to reach 6.4, 4.8, 1.8 and 1.6 million tonnes, respectively, in 2023. Higher yields and a further expansion of planted areas would be the main drivers of this projected increase in production.

(b) Trade

Trade in fresh oranges has been growing steadily over the past decade. The ratio of world trade to production increased from around 8.0 percent during 2001–2003 to 10 percent during 2011–2013. Higher import demand from Russia and Eastern Europe resulting from increases in household incomes, improvements in quality, and technological advances in storage and transportation was the main factor in boosting trade. The bulk of fresh orange exports comes from the Northern Hemisphere, which accounted for nearly 80 percent of world fresh orange exports during 2011–2013. The Mediterranean

Figure 2. Actual and projected orange exports



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

region plays a prominent role in this, providing over 50 percent of global fresh orange exports. Southern Hemisphere countries, such as Argentina, Australia and South Africa also have increased their presence in international trade by providing off-season oranges to the North.

Trade flows have been affected by geographic locations and various trade agreements. The major destinations for the Mediterranean’s exports of fresh oranges were the European Union countries, the Near East and Russia, not surprising given their nearly adjacent geographic locations. In the case of the United States, the primary destinations for fresh citrus fruit exports were Japan, Canada and, under the 2012 Free Trade Agreement, the Republic of Korea.

It is expected that existing trade patterns will remain largely unchanged in the projection period. World trade in fresh oranges can be expected to reach 7.5 million tonnes by 2023, reflecting annual Growth rates of 1.7 percent over the next decade.

The leading exporters throughout the Outlook period are likely to be Spain,

Egypt and South Africa, with over one million tonnes of fresh oranges being exported by each. Spain would remain by far the world’s single largest exporter with nearly 1.8 million tonnes of fresh oranges exported annually by 2023. Increased demand for oranges from the European Union, Ukraine and the Middle East and, in particular, higher demand from Russia following its ban on orange imports from Spain, Greece and Italy would continue to drive Egyptian orange exports higher. Indeed, it is expected that exports of fresh oranges from Egypt could reach 1.3 million tonnes by 2023, 44 percent more than the 2011–2013 average. South Africa also is expected to experience steady growth, and by 2023 may well export nearly 1.2 million tonnes of fresh oranges to its traditional markets in Europe and Asia. Oranges produced for the fresh fruit market in the United States (oranges for processing juice are of a different variety) are mainly for export as domestic demand for fresh oranges is low. It is expected that the United States’ exports of fresh oranges would amount to only 650 000 tonnes by 2023, lower than the average during the 2011–2013. This is largely due to the water supply problems in California and the effects of citrus greening in Florida.

Many countries import fresh oranges. Russia is projected to become the world's largest importer for fresh oranges with 760 000 tonnes by 2023, accounting for nearly 10 percent of total volume. Most other significant importing countries (those bringing in over 100 000 tonnes per year) including several European Union countries, as well as Canada, Saudi Arabia and Japan can be expected to register steady growth in imports with increases in consumption being driven largely by economic and population growth as well as by greater attention to healthy diets.

3.2 Orange juice

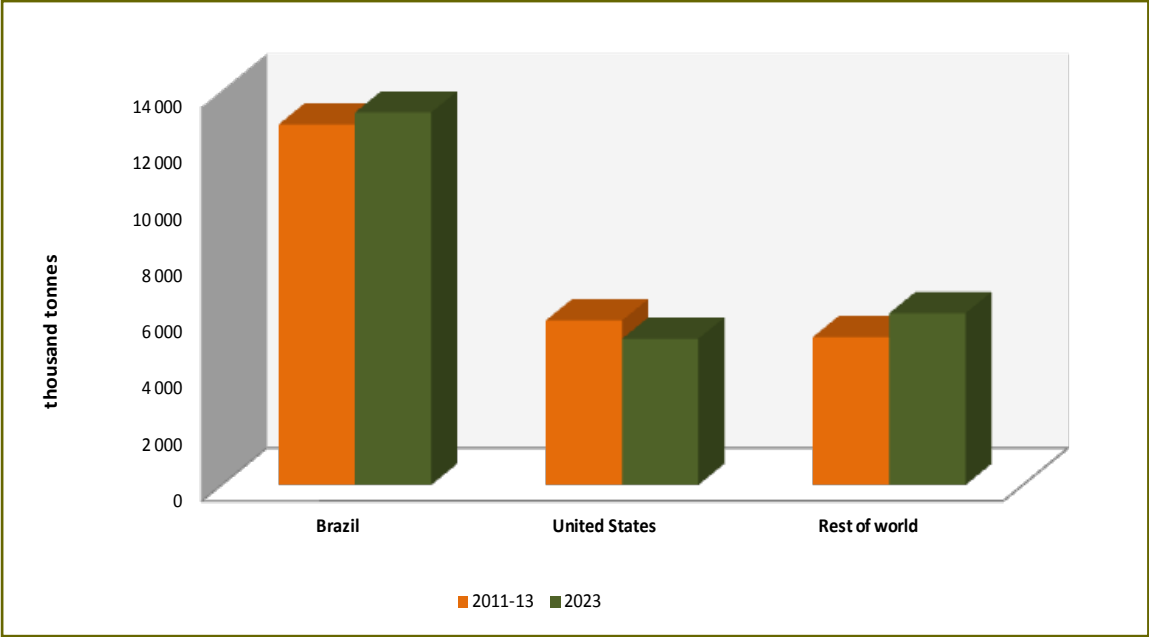
Consumption of orange juice experienced steady growth after World War II when orange juice became a popular breakfast drink in both the United States and many European countries. By 2000, about 40 percent of global orange production was being processed for juice. However, since then, the consumption of orange juice has been facing a two-track divide: on the one hand, increases in demand for flavourful and “functional” orange juice drinks and parallel declines in the consumption of 100

percent juice and, on the other, increased consumption of orange juice in several developing countries but corresponding declines in consumption in the major developed markets.

Over the past decade, innovative flavour-and-function-driven beverages with low orange juice content have experienced substantial growth. The biggest geographic growth for these products has been in Asia, where flavour-rich orange juice drinks have grown by over 15 percent annually despite facing strong competition from other beverages and bottled waters. At the same time, consumption of 100-percent orange juice also has increased steadily in several Asian countries, particularly in China. As a result, the overall consumption of orange juice has increased significantly. For instance, orange juice consumption in China grew by an astonishing 34 percent annually between 2001 and 2013 to reach over 1.2 million tonnes in fresh equivalent.

In contrast, the traditional major markets such as North America and Europe have experienced a considerable decrease in demand. From 2001 to 2013, orange juice consumption in the United States

Figure 3. Actual and projected orange juice production



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

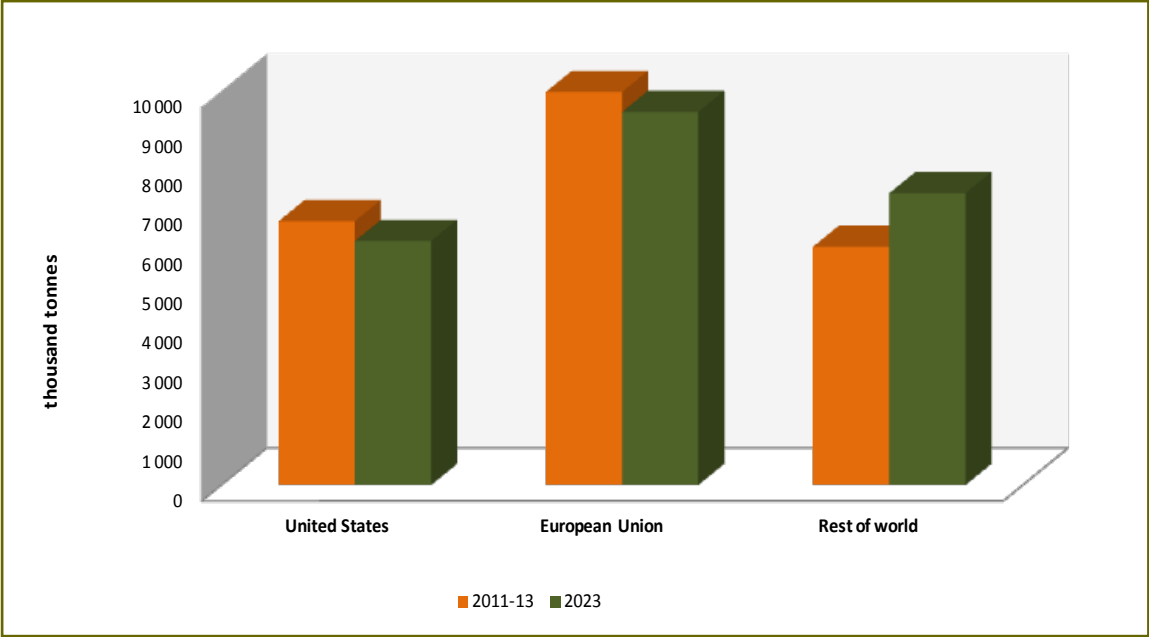
dropped 3.7 percent annually from 9.8 million tonnes (fresh equivalent) to 6.7 million tonnes. Over the same period, per capita consumption fell roughly by 40 percent. Many European Union member countries registered similar declines. The drop has been attributed to several factors. Changing eating habits that stigmatize sugar and leave little time for breakfast have reduced the presence of orange juice from the consumer's breakfast table. A broader range of beverage choices from diet sodas to sports drinks and, in particular, the surge in demand for bottled water, drinks that since 2007 have registered higher sales than all juices combined, basically have pushed 100-percent orange juice out of the beverage market. The higher price of orange juice in the past few years has also curtailed demand. Moreover, several media reports challenging the use of the term "fresh" and referring to the higher sugar content of orange juice also have affected demand negatively.

The present projections assume that the current two-track pattern of development described above will continue. With a slower decline in the consumption of orange juice in developed markets and

the continuing growth of consumption in developing countries, it is projected that the world consumption of orange juice would reach 23.1 million tonnes in fresh equivalent by 2023, slightly higher than the current level. In this projection, consumption in the United States would decline by 0.8 percent annually, much recovered from the 3.7 percent decline seen between 2001 and 2013. Most developing countries would record higher consumption. And with 4.1 percent annual growth, China could be consuming 1.9 million tonnes of orange juice by 2023, about 600 000 tonnes more than its 2011–2013 average.

Brazil is expected to remain the largest orange juice producer in the world, reaching 13 million tonnes by 2023, only slightly higher than its current level; indeed, the increase in production costs in both orange farming and juice processing can be expected to work against any substantial future expansion in Brazilian orange and orange juice production. Production in the United States would continue to decline but at a slower pace compared with the past decade, largely due to better control of citrus greening. It

Figure 4. Actual and projected orange juice consumption



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

is projected that United States production would be only 5.2 million tonnes by 2023, reflecting reductions of 1.2 percent annually, meaning growth would be much lower than the 3.7 percent per annum registered over the past decade. Mexico would continue to expand its production. With 2.5 percent annual growth, its production would reach 1.3 million tonnes by 2023, about 300 000 tonnes above its current level.

Brazil will almost certainly remain the world's largest exporter of orange juice, exporting 12 million tonnes by 2023. China, the European Union and the United States would be the major importing countries.

3.3 Tangerines

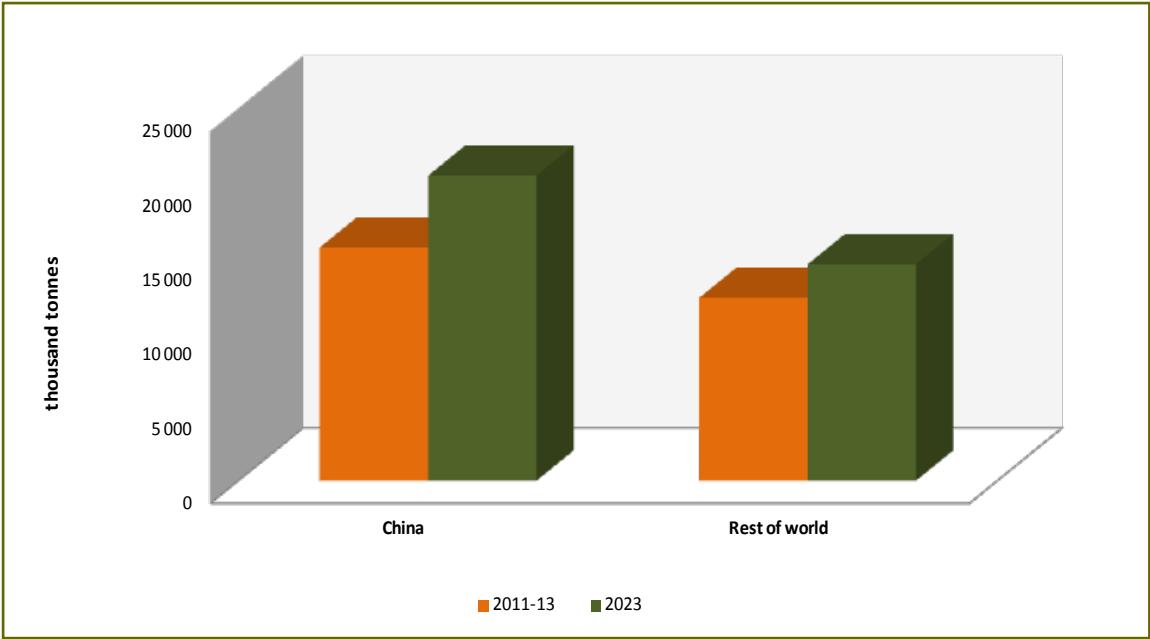
(a) Production

Between 1991–1993 and 2011–2013, world production increased from 12.5 million tonnes to nearly 28.0 million tonnes, a net increase of 15.5 million tonnes. Most of the increase was concentrated in China, where production rose by 12 million

tonnes. With an annual growth rate of about 10 percent over the past decade, production in China reached 15.7 million tonnes in 2011–2013, accounting for 56 percent of world output. During the base period, only one other country in the world, Spain, had production exceeding 1.0 million tonnes. Consequently, the future direction of production depends largely on developments in China.

With its per capita consumption at approximately 12 kg annually, China has great potential for further market expansion. However, with substantial increases in labour costs and farming input prices, as well as competition for land (from other crops) and for labour (from other sectors), the growth of production is expected to be slower in the next decade. It is projected that production will rise by 2.7 percent annually to reach 20.5 million tonnes by 2023, an increase of nearly 5.0 million tonnes. Spain would increase its production by 2.2 percent annually to nearly 2.6 million tonnes in 2023. Turkey is expected to continue the rapid expansion in production that began a decade ago and to produce more than 1.2 million tonnes in 2023, about 44 percent more

Figure 5. Actual and projected tangerines production



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

than its output during 2011–2013. As a result, world tangerine production can be expected to reach 35.0 million tonnes by 2023, reflecting an average annual growth rate of 2.3 percent.

(b) Trade

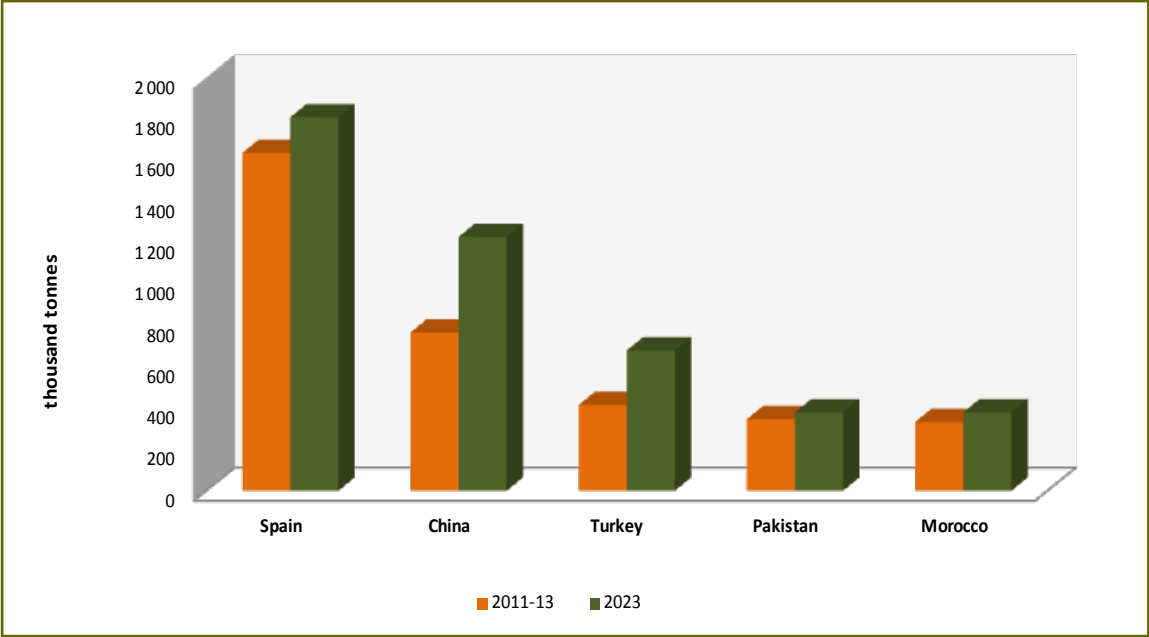
Trade in tangerines is relatively contained, accounting for only about 14 percent of total world production, primarily because most output is sold on local markets and consumed as fresh fruit. Moreover, exports are concentrated in a small number of countries. In the period from 2011 to 2013, Spain, China, Turkey, Pakistan and Morocco accounted for about 80 percent of total world exports of tangerines. Tangerines, however, are imported by a great number of countries. During 2011–2013, one country alone, Russia, imported over a half million tonnes of tangerines. It is expected that such trade patterns will continue throughout the next decade.

While Spain would maintain its position as the world’s single largest tangerine exporter, supplying over 1.8 million tonnes by 2023, its growth rate can be expected

to drop from 2.9 percent annually to only about 1.0 percent. The slower growth in Spanish exports can be attributed mostly to competition in the mature European Union markets, where demand is largely stable, from Egypt, Morocco and Turkey. Chinese tangerine exports would increase in 2023 by more than 450 000 tonnes or by about 60 percent above the 2011–2013 average. Increased demand in the Russian market and China’s “New Silk Road” initiatives to enhance economic cooperation with Central Asian countries also can be expected to contribute to this export growth. With its unique geographic location, Turkey is likely to expand its exports to the European Union, the Near East and to Russia. Indeed, it is expected that tangerine exports from Turkey will grow at 5.0 percent annually to reach 680 000 tonnes in 2023.

World imports of tangerines can be expected to increase steadily to more than 5.7 million tonnes by 2023. Given that the demand for tangerines is widely spread throughout the world, the rise in imports mentioned above is likely to reflect uniformly higher demand in all markets. However, as a standout, Russian

Figure 6. Actual and projected tangerines exports



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

imports of tangerines are likely to register a spike, reaching an annual growth rate of 5.4 percent and bringing imports to 1.25 million tonnes by 2023. Russia’s growing economic ties with China would allow it to easily access supply sources. Several Asian countries are also likely to register an increase in imports as tangerines become an increasingly popular fruit in their markets.

3.4 Lemons and limes

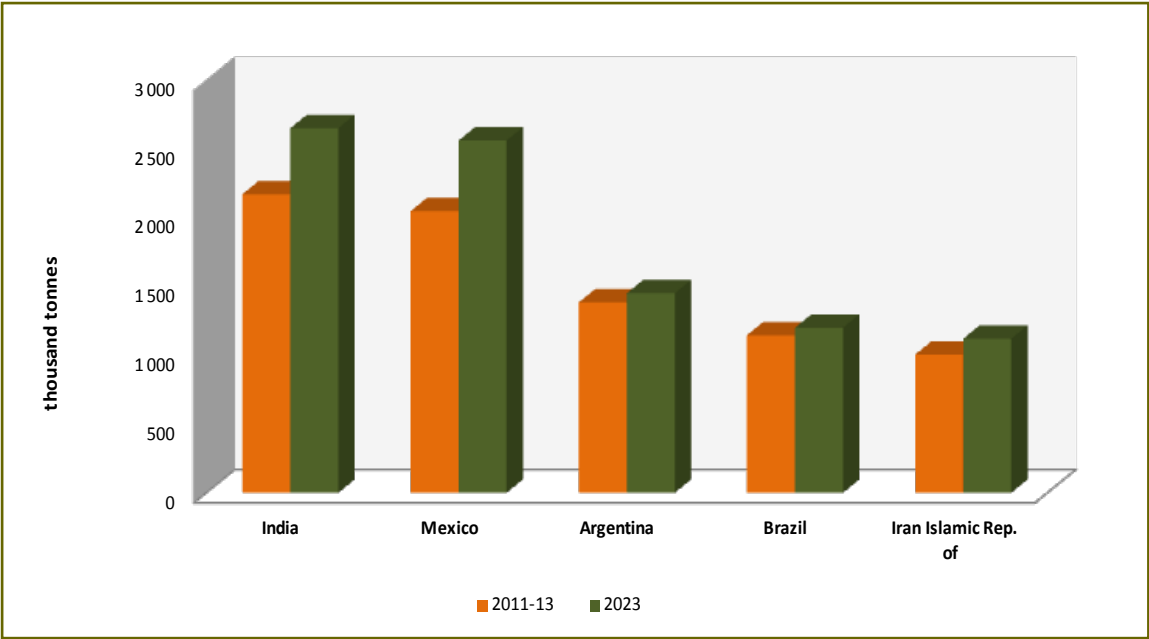
(a) Production

Lemons and limes require long periods of heat to mature, so production is limited to areas with mild to warm winters. The result is production concentration. In the case of lemons, the top ten producers in order of size are: India, Argentina, Iran, the United States, Turkey, Spain, Italy, Egypt, China and South Africa. Together these countries produced over 95 percent of world output during the 2011–2013 period. For limes, 90 percent of world production comes from Mexico and Brazil. The United States formerly was a major world lime producer. However, after

the spread of citrus canker, a bacterial disease that broke out in Florida, it lost almost all of its lime production. With respect to lemons and limes combined, global production reached 13.1 million tonnes during 2011–13, reflecting an annual growth rate of 1.6 percent in the past decade.

It can be expected that in the period to 2023, global production of lemons and limes is likely to grow at the same pace as in the past decade. A gradual recovery in production in Florida following the planting of new varieties, and continued expansion in Chinese production would be important factors contributing to higher world output. At the same time, the increasing demand for imports in the United States market is likely to induce Mexico to expand its lime production. Consequently, global production of lemons and limes can be expected to grow by 1.6 percent annually to reach 15.4 million tonnes by 2023. While their individual Growth rates will vary, six countries – in particular, India, Mexico, Argentina, Iran, Brazil, and Turkey – together will probably produce over 10 million tonnes of lemons and limes,

Figure 7. Actual and projected lemons and limes production



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

accounting for over 70 percent of the world total. Other producing countries such as China and Morocco are expected to experience much faster growth in production, but they would not make a significant contribution to global world output as their production bases are small.

(b) Trade

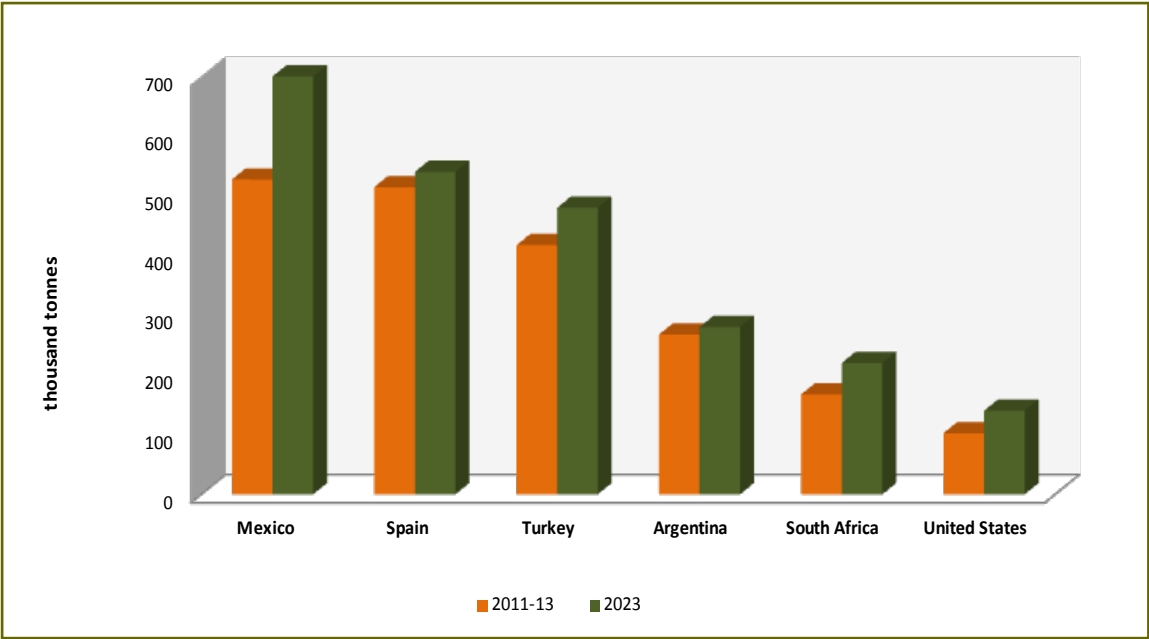
For many producing countries, the output of lemons and limes is mainly absorbed by the domestic market with only a tiny portion being exported. For example, India produced some 2.2 million tonnes during 2011–2013 but only exported 22 000 tonnes. In fact, the numbers of exporters in the world are limited. During 2011–2013, exports from Mexico, Spain, Turkey, Argentina and South Africa accounted for nearly 75 percent of world trade. In contrast, several countries, such as the United States, Russia and Saudi Arabia, depend heavily on imports to meet domestic consumption. Such trade patterns resulted in a “thin market” for international trade in lemons, and in particular for limes. The limited number of exporters and the existence of several

import-dependent countries can cause prices to overreact. In March 2014, a production shortage combined with transport problems in Mexico caused the prices of limes in the United States to surge over 300 percent in fewer than six months.

Current trading patterns are not expected to change significantly in the next decade. With the expansion of its production, Mexico, the world’s largest single exporter, would increase its exports to 700 000 tonnes by 2023, about 33 percent more than its average during the period from 2011 to 2013. The growing demand for limes from the United States, which has a free-trade agreement with Mexico, will be a major driving force behind Mexico’s export expansion since more than 80 percent of its exports are directed at the United States market. Other major exporting countries also are likely to increase their deliveries but at varying Growth rates, with Spain’s shipments increasing by 0.5 percent annually and those from South Africa by 2.8 percent.

In addition to the increased dining away from home that is induced by economic

Figure 8. Actual and projected lemons and limes exports



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

growth and which leads in turn to a greater demand for lemons and limes by restaurants and bars, the popularity of lemonade beverages also can be expected to drive import demand higher in the European Union, Russia, China and several Near Eastern countries. As a result, by 2023 world imports may well exceed 3.0 million tonnes, about 20 percent higher than the average during the 2011–2013 period.

3.5 Grapefruit

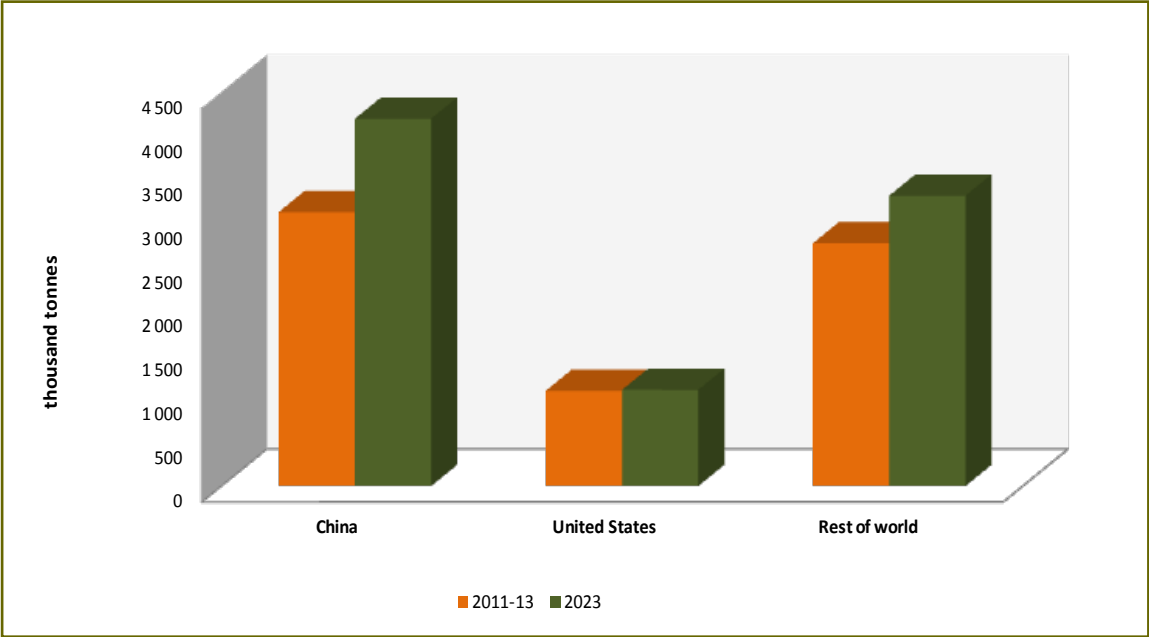
(a) Production

Over the past three decades, the growth in global production has been driven by this product’s rapid expansion in China, reflecting the popularity of several special varieties of sweet grapefruit to be consumed as fresh fruits in wintertime. Between 1991–1993 and 2011–2013, production in China grew by about 9.0 percent annually, from 485 000 tonnes to more than 3.1 million tonnes, an increase of about 2.6 million tonnes. During the same period, world production rose by 2.4 million tonnes to 7.0 million tonnes.

Thus, almost all of the past increase in world output is attributable to China’s expansion, the latter being only slightly offset by declines in output in other countries, in particular Cuba and Israel. With its rapid production growth, China has become the dominant producer, accounting for nearly half of global output. This development pattern is expected to continue although at slower Growth rates. In the period to 2023, China’s production is likely to increase at an annual rate of about 3.0 percent to reach 4.2 million tonnes. Only land-use constraints in the geographic regions suitable for cultivation and higher production costs could cap the continuing surge in production.

The United States was the world’s largest producer before the 21st century, with output amounting to over 2.0 million tonnes. However, the outbreak and spread of the citrus canker and then the citrus greening disease in the early 2000s, plus the powerful hurricanes in 2004–2005, badly devastated grapefruit production in Florida, which previously accounted for 80 percent of national production. United States production declined sharply from 2.1 million tonnes during 2001–

Figure 9. Actual and projected grapefruit production



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

2003 to about 1.1 million tonnes during 2011–2013. During the same period, domestic consumption of grapefruit also fell, largely due to a study highlighting the problematic effects of grapefruit consumption on certain medicines taken by many consumers. It is likely that the impact of these factors will subside in the next decade so that United States production in 2023 will probably stabilize around the current level of 1.1 million tonnes.

Other important producing countries, including Mexico, South Africa, Thailand, India and Turkey, also are expected to increase their output steadily although at slower rates than in the past decade, to reach 480 000, 420 000, 385 000 and 280 000 tonnes, respectively, by 2023. Only a decline in the growth of import demand in their major foreign markets would be likely to curtail this ongoing rapid expansion in output.

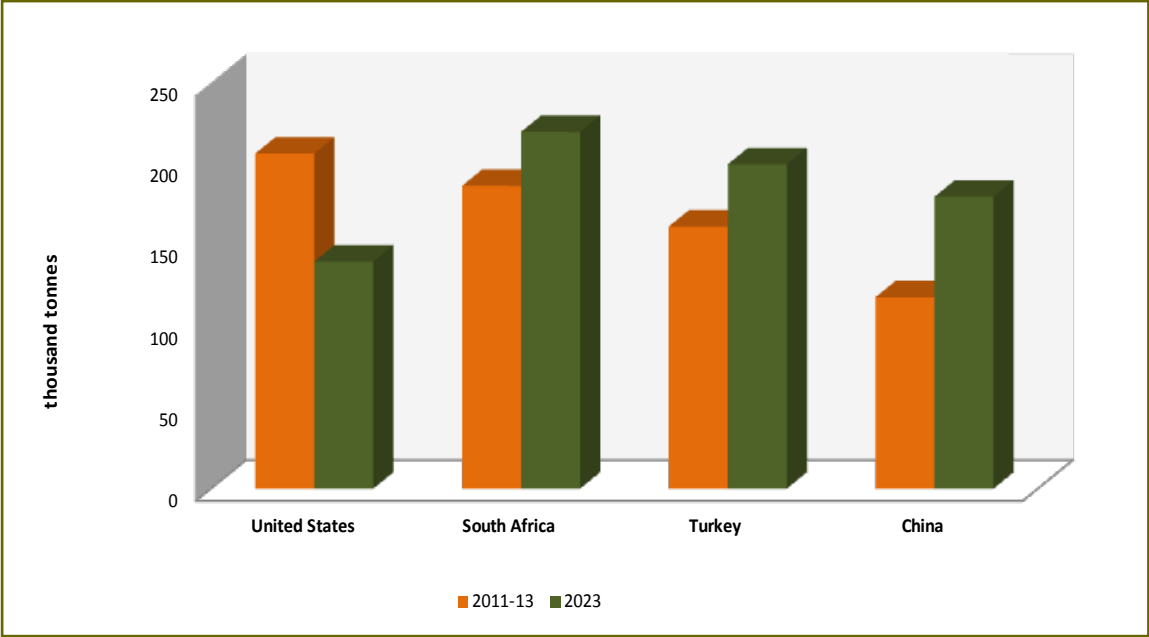
(b) Trade

European Union countries are likely to remain the major importers of grapefruit

over the next decade even without significant growth. Largely as a result of the health concerns mentioned above and also because of generally lower juice consumption, many European Union member countries registered a decline in grapefruit imports in the past decade. It is projected that France, Germany, Italy and the United Kingdom instead will see some growth in imports during the next decade, not least because of greater demand for Chinese grapefruit varieties and, in general, for flavoured beverages. Growth of imports by Russia also is likely to continue to rise as economic ties with China strengthen; higher demand for grapefruit will almost certainly increase as the number of Chinese workers inside Russia grows.

Four countries – the United States, South Africa, Turkey and China – accounted for over 50 percent of world grapefruit exports during 2011–2013. It is expected that this pattern will remain unchanged over the next ten years. However, as no production increase is expected in the United States, exports from that country are likely to continue to decline in the next decade from an average of 207 000

Figure 10. Actual and projected grapefruit exports



Source: FAO, Secretariat of the Intergovernmental Group on Citrus Fruit

tonnes during 2011–2013 to 140 000 tonnes by 2023. In contrast, exports by China, South Africa and Turkey can be expected to increase at above the world average growth rate. By 2023, these four countries would still account for over 50 percent of world trade.

3.6 Main issues and uncertainties

Over the past decades, while there have been significant variations among countries in both grower and retail prices for all citrus fruits, the overall trend in real prices has been a flattening one, except for lemons and limes, the prices of which moved higher. This overall trend may change its course in the next decade. If increasing demand were to surpass the more slowly growing supply, the prices of citrus fruits would move higher.

However, market developments for citrus juice consumption will be a key factor of uncertainty affecting the demand for citrus. The disappearance over the last decade of citrus juices, mainly orange juice, from consumers' breakfast tables in the United States and European countries has contributed to lower overall demand for oranges. The negative publicity about citrus juices regarding their significant sugar content and misleading statements concerning the "100 percent pure" label also drove demand for citrus juices lower. At the same time, functional drinks and bottled water have imposed substantial competitive pressures on the demand for citrus juices. While demand for citrus juice has been on the rise in developing countries, at present it is driven more by juice-flavoured beverages than by pure breakfast juice. If these tendencies were to prevail during the next decade, pressure on world citrus prices would continue.

To meet market challenges in the medium term, the continued improvement of citrus fruit quality and further reductions

in production costs remain, as always, priority areas for action by the citrus industry. Moreover, enhancing citrus supply chain management and giving emphasis to ensuring that citrus growers obtain a fair profit share over the chain will support sustainable growth in the citrus industry.



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4. Tropical fruits outlook

4.1 Introduction

The tropical fruits sub-sector is among the fastest growing agricultural sectors and represents a significant source of economic growth, income and food security and nutrition for the rural areas of many developing countries. While tropical fruits production and consumption data are subject to underestimation owing to extensive cultivation of these fruits on very small household plots, the available information nevertheless indicates that their importance has increased significantly in recent decades. For the major tropical fruits¹ – mango, pineapple, avocado and papaya – that are included in this Outlook, production grew at an average compound rate of 4.1 percent per year during the decade up to the reference period of 2012–2014, reaching a total of 84 million tonnes. Of this, 99 percent of production took place in developing countries. Looked at by region, 60 percent

originated in Asia, 25 percent in Latin America and 14 percent in Africa. Of the major tropical fruits, mango production is by far the largest, followed by pineapple, papaya and avocado, in that order. Over the past decade, trade in fresh tropical fruit also grew rapidly, by 6.5 percent per year, with over three quarters of exports going to developed countries during the above-mentioned reference period². However, for these major fruits, international trade is still small in proportion to overall production, representing only 6 percent. The opportunity for growth is thus significant.

The projections for major tropical fruits have been made with the use of a global, partial-equilibrium model that includes major producing, consuming and trading countries. The model takes account of crop area and yield on the supply side in a manner that attempts to capture the diverse supply dynamics inherent to perennial crops as they respond to both price and cost factors. On the demand side, population, income and relative

¹ The “minor” tropical fruits, including lychees, durian, rambutan, guavas and passion fruits are not included in this outlook.

² Measured by the quantity of imports.

prices are the key drivers of consumption. In this version of the model, only the (real) relative prices of the various tropical fruits are specified in the demand equations. International prices and domestic prices, both of which affect trade volumes, are influenced by tariffs and transaction costs which in our outlook have been assumed to be constant. Domestic and international price clear markets so that the supply and demand of domestic and international commodities balance.

The projections are dependent on critically important assumptions concerning the growth of key driving factors such as incomes, population, and input costs, as well as the specific conditions surrounding tropical fruit production in the rural sector; these include opportunity costs for land, which are affected in turn by the prices of other agricultural commodities, rural activities and ownership structures. The macroeconomic projections used are based on those provided by the International Monetary Fund's Global Economic Outlook and on population projections by the United Nations. The agricultural conditions that are also likely to affect the sector were drawn from the OECD-FAO Agricultural Outlook, 2015-2024.

4.2 Production

Global production of tropical fruit is projected to grow by 3.0 percent annually over the next decade, to about 116 million tonnes in 2024. This increase in total annual production over the next decade – projected at nearly 38 percent – will be achieved primarily through increases in yield and area harvested. Production is expected to be stimulated by growing demand, driven in turn by rising incomes and populations, particularly in urban centres where the demand for fresh fruit is anticipated to remain firm. The shares of production by region will remain largely unchanged, with Asia still accounting

for 60 percent in 2024. The portion of production attributed to developing African countries is projected to increase slightly to 15 percent, while the shares of Latin America, the Middle East and the developed countries are expected to fall marginally.

The global production of mangoes is projected to increase to 58 million tonnes by 2024, increasing at an annual rate of 2.8 percent over the next decade. Mangoes will remain the most significant tropical fruit, with a production share (among the major tropical fruits) of 50 percent. The top ten mango producers will continue to contribute about 80 percent of the world's supply. Asia's portion will remain approximately 75 percent of the global total, while India will continue to be the world's single largest mango-producing country with a share of nearly 40 percent. According to the Outlook's projections, developing Africa's share of mango production can be expected to increase marginally from 12 to 14 percent over the next decade, as mango production in that area is seen likely to be increasing by 4.1 percent annually. During the same period, mango production in Latin America and the Caribbean will fall slightly, from 12 to 11 percent; this is expected to occur as growth weakens in some countries of the region, especially in Mexico, which is the region's largest supplier, and in Brazil, the second largest. Pineapple production is projected to grow at 3.0 percent annually to reach 33.7 million tonnes by 2024. Amongst the major tropical fruits, pineapple is the least concentrated in terms of geographic distribution, with no single country producing more than 12 percent of global output. In 2024, the top ten producers will continue to account for around 70 percent of global supply, but a gradual shift in production shares can be anticipated. Asia will remain the largest producing region, but its production share can be expected to decline slightly from 46 percent to 45 percent. The share of the developing countries of Africa is

expected to rise from 16 to 18 percent, with continued strong growth in overall production at about 4.4 percent per year. The latter will reflect further expansion in Nigeria, the largest producer in the region, as well as in other major producers including Angola, Benin, Cameroon, Ghana and Tanzania. Production in Latin America and the Caribbean will continue to expand, but at a much slower pace than in the previous decade. Costa Rica became the world's largest producer of pineapple during the last decade with an annual average growth rate of over 10 percent. Over the outlook period, growth is expected to slow significantly, although output nevertheless would rise to 3.6 million tonnes, almost 11 percent of global supply. Production in Brazil, the second largest producer, is set to grow at about the same rate as in the past decade and can be expected to arrive at nearly 3.0 million tonnes in 2024.

Papaya production is projected to rise to 17.2 million tonnes by 2024, growing at 3.0 percent per year. Among the major producing regions, the strongest growth will be in Asia, where the overall production share is expected to rise from 58 to 62 percent. The world's single largest producer, India, is expected to increase output by 3.7 percent per year, down from an impressively large 10 percent per year growth rate over the last decade. During the reference period of 2012–2014, the production share of the Latin America and the Caribbean region will continue its longer-term slide from 30 percent to 27 percent. Brazil, which is the world's second largest papaya producer, accounted for 20 percent of global output in 2000, but its share fell to 13 percent in that same reference period and is projected to fall to below 10 percent by 2024. Africa's production, led by growth in Nigeria and the Democratic Republic of Congo, is set to expand by 3.1 percent annually, maintaining the region's global share of production at 11 percent.

Global production of avocado rose to 4.7 million tonnes in the reference period and is projected to rise to 6.9 million tonnes by 2024, growing at 3.5 percent annually. Country concentration is high for avocado production, with the top ten producing countries accounting for 88 percent of global output. Avocado is the only major tropical fruit for which developed countries account for a significant share of production. However, given stronger growth in the developing economies, the share of developed countries is anticipated to fall over the next decade from 12 percent in the reference period to less than 10 percent. Over 65 percent of avocado production takes place in Latin America and the Caribbean, and this share is likely to increase further since production in Mexico, the world's single largest producer, is expected to grow at 4.4 percent annually over the next ten years. However, production has been taking root in other Latin American and the Caribbean countries as well, notably Colombia, the Dominican Republic and Peru where production shares have more or less doubled over the last decade. Production of avocado in Asia is relatively low, standing at only about 400 000 tonnes in the reference period, but expected to rise to almost 650 000 tonnes by 2024. The most significant producers in Asia are Indonesia and China, where production is thought likely to grow by 2.6 and 3.1 percent per year, respectively. Overall growth of avocado production in developed countries was just 1.7 percent per year during the last decade, and is anticipated to be around 1.4 percent annually in the next one, with the United States, South Africa, Israel and the European Union as the principle producers.

4.3 Consumption

Globally, consumer demand for fresh tropical fruit has been strong and is projected to remain so over the

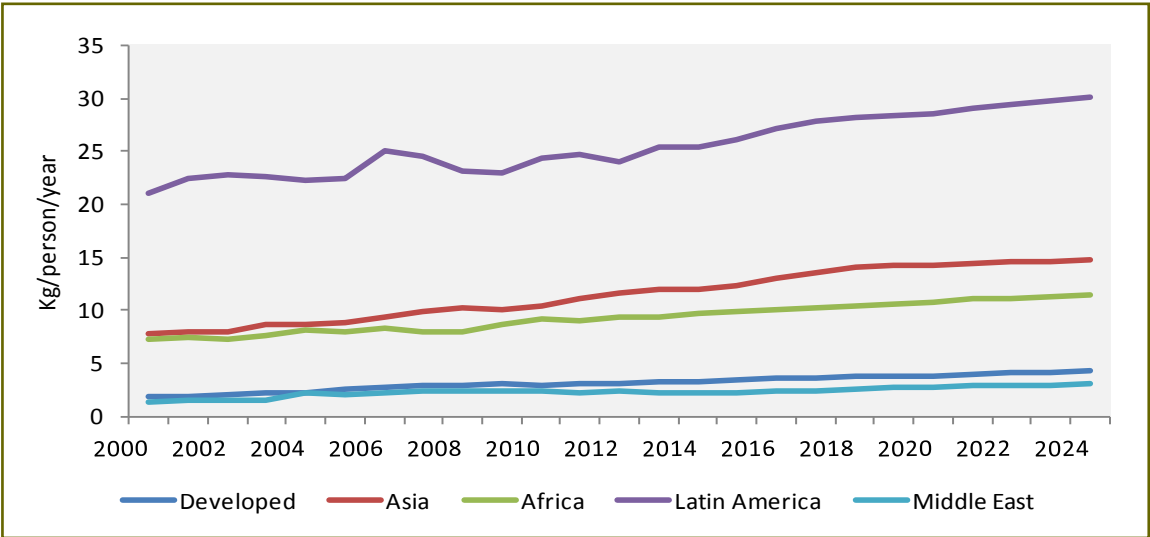
medium term, not only as incomes and population increase, but as dietary preferences continue to shift to higher fruit consumption. On a per capita basis, developing countries in Latin America and the Caribbean are the largest consumers of the major fresh tropical fruits covered in this outlook, averaging about 24.5 kg per person per year in the reference period, double the amount consumed by people in Asia and the Pacific, which is less than 12 kg per person. Per capita consumption in developing African countries was almost 10 kg per person, while in developed countries and in the developing countries of the Near East it stood at about 3 kg and 2 kg, respectively (see Figure 1)³. These estimates may be considerably understated as they do not take account of informal household consumption, which in many developing countries is difficult to quantify. It should also be said that the calculated levels represent the overall consumption of fresh fruit (production plus net trade of fresh fruit) and, except in the case of pineapples

where it is most significant, do not take account of the volumes of fresh fruit that is processed and which may be destined for export markets.

Over the medium term, the increase in global per capita consumption of each of the major tropical fruits is projected to average about 2.0 percent per year. Regional growth is anticipated to be strongest in the Near East at 2.8 percent per year, followed by Asia and by developed countries as a group, each at 2.2 percent, Africa at 1.8 percent and, lastly, Latin America at 1.7 percent. The wide range in per capita consumption growth rates is probably a strong indication that there is ample room for expansion in tropical fruits markets. Key issues affecting the changing dietary mix appear to be transportation limitations and costs, both of which may impede trade.

By type of fruit, per capita mango consumption is now highest in Asia, and is projected to reach over 10 kg per person

Figure 1. Per capita consumption of fresh tropical fruit by region



Source: FAO, Secretariat of the Intergovernmental Group on Bananas and Tropical Fruits

3 Apparent consumption divided by population. For certain reasons, the estimate may be too low, given production and consumption in households where values may not be reported, or be too high, given that some produce may be further processed or wasted within the value chain. The calculations are meant to be indicative of trends.

annually, compared to 8.5 kg per person in Latin America. Mango consumption is lowest in developed countries, at just 2.5 kg per person. In the case of pineapple, consumption is expected to rise to over

10 kg per person in Latin America, but will remain under 5 kg in all other areas. Papaya consumption in Latin America is set to remain steady in the range of 6–6.5 kg per person. It is growing most rapidly in Asia, from about 2.0 kg per person to 2.6 kg per person by 2024. Avocado consumption in Latin America is projected to rise to 4.6 kg per person in 2024 compared to 4.0 kg in 2014. At that time, the next biggest group, with only 1.3 kg per person, will be avocado consumers in developed countries.

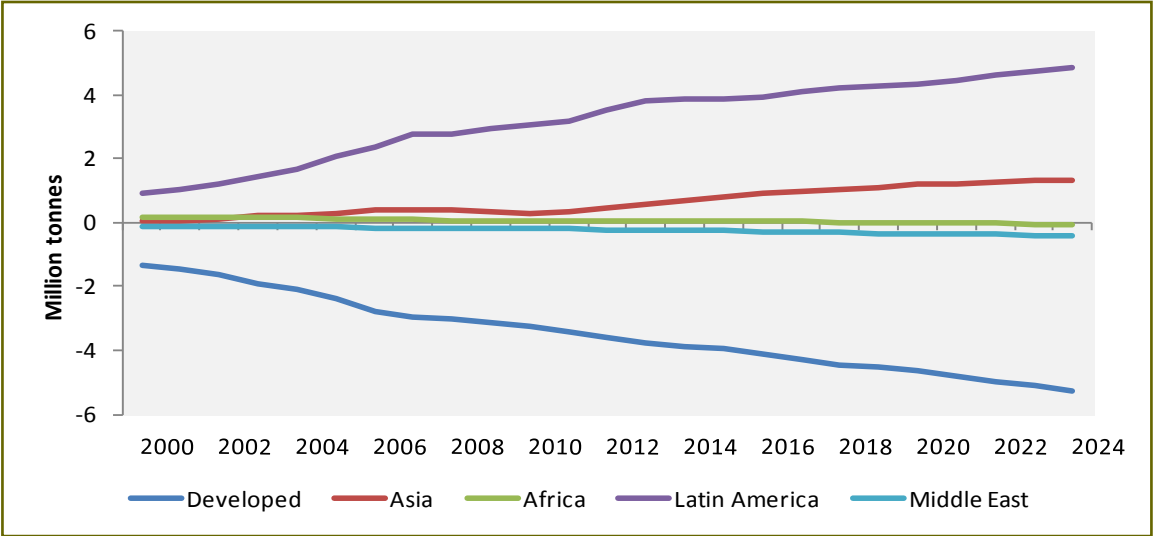
4.4 Trade⁴

Over the medium term, total trade (as measured by imports) in major fresh tropical fruits – growing at a compound rate of 3.0 percent per year – is projected to amount to 7.5 million tonnes, up from 5.4 million tonnes in the reference period.

This is down from the rapid growth of 6.5 percent per year registered over the last decade. The slowdown in growth is due mostly to a decline of net exports from the Latin America and Caribbean region, which is the main supplier of tropical fruit to importing regions as a whole (see Figure 2)⁵. Developed countries are by far the main importing countries for tropical fruit. The United States and the European Union are expected to account for 40 percent and 23 percent respectively of global imports of the major fresh tropical fruits by 2024, while Africa will remain largely self-sufficient in this sector.

As measured by imports, pineapples will remain the most-traded tropical fresh fruit, growing by 2.7 percent annually over the next decade to 3.4 million tonnes by 2024. This rate, however, is down considerably from the 7.4 percent annual growth registered in the last decade, a

Figure 2. Net exports of major fresh tropical fruit



Source: FAO, Secretariat of the Intergovernmental Group on Bananas and Tropical Fruits

4 Trade data for fresh tropical fruit is problematic in that export and import data do not always match up well for a number of reasons, including reporting issues and waste incurred during transport. The statistical discrepancy for exports minus imports in published data can be substantial: In the reference period, for mango the difference relative to the export level is about +10–12 percent, for pineapple +15–16 percent, for papaya about -35 percent and for avocado about -13 percent. These differences were maintained throughout the projection period.

good portion of which can be attributed to the rapid growth during that period in Costa Rica. That country emerged as the largest exporter of fresh pineapples in the last decade, but in recent years,

5 Net exports is defined as exports minus imports. It therefore excludes intra-regional trade and any re-exports within the region.

as its production has reached high capacity, the growth of its exports has slowed significantly. Costa Rica's exports nevertheless are projected to grow further by 2024, to 2.7 million tonnes or 70 percent of the global total.

Pineapple imports by developed countries, which represented 88 percent of global imports during the reference period, will increase to almost 3.0 million tonnes by 2024. Trade in fresh pineapple as a share of total production is expected to remain at around 10 percent. However, while excluded from formal analysis in this outlook, trade in processed and canned pineapple also is a significant element of the international market, with Asian countries – Thailand and Philippines in particular – the most important net exporters and with the European Union and the United States as the two key importers with a combined market share of almost 80 percent. Processed pineapple trade is anticipated to rise some 8–10 percent over the next decade.

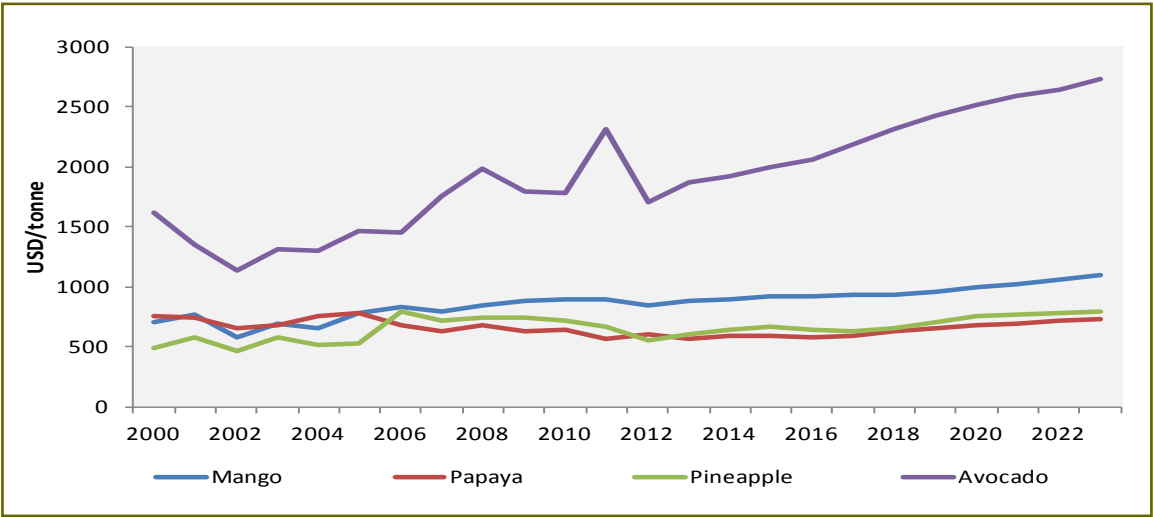
Trade in mangoes is projected to reach 2.1 million tonnes by 2024 and, while growing at 4 percent per year, will still remain low relative to total production. And if developed countries will still account for over 50 percent of total imports, their share has fallen as trade in and with other

regions has been increasing. The market shares of exporters, however, have been changing, with those of Asian countries rising quickly in recent years while the portions attributed to the countries of Latin America and the Caribbean gradually declining. Asia's share will account for over 73 percent of mango exports of by 2024. This is up from only 17 percent in 2002–2004.

Relative to production, trade in fresh avocados is the highest among the major tropical fruits, standing at 24 percent in the reference period. Trade is projected to grow to 1.5 million tonnes by 2024, with growth at 4.1 percent per year over the projection period. Developed countries currently account for 84 percent of total imports, and this share is set to rise slightly over the medium term as demand remains firm. Latin American countries dominate the export market with 78 percent of exports, and this share is anticipated to increase to 85 percent over the next ten years, mainly as a result of a significant expansion of the sector in Mexico, largely to meet growing demand in the United States and the European Union.

Trade in papaya is projected to grow at only 1.4 percent per year over the medium term to 448 000 tonnes. Developed countries remain the largest importers of

Figure 3. International prices for tropical fruits



Source: FAO, Secretariat of the Intergovernmental Group on Bananas and Tropical Fruits

papaya, accounting for some 60 percent of total trade. Latin America dominates exports, at over 70 percent of total trade, but this share is shrinking as exports from Asian countries, particularly India, increase more rapidly.

role in markets and any changes in these may considerably affect real demand.

4.5 International prices

While the nominal prices of tropical fruits (with the exception of avocado) have trended higher over the last decade, they did not suffer from the dramatic rise and fall of the prices of basic food commodities associated with the 2007–2008 price crisis (see Figure 3). Avocado, by far the most valuable of the tropical fruits on a per tonne basis, peaked at over USD 2 300 per tonne in 2011, but then fell dramatically to near USD 1200 per tonne. Tropical fruit prices are expected to rise gradually over the next decade in nominal terms, but to remain stable in real terms. The price of avocado will continue its longer-term rise relative to other tropical fruits, reflecting the higher production costs associated with investments in this sector and which have a longer payoff period compared to the other tropical fruits under discussion.

4.6 Uncertainties

Growth in the tropical fruit sector appears to be robust, and will largely follow the trends of the past decade. Risks to this growth scenario appear minimal, although the further expansion of commercial markets will depend on income growth in developing countries as well as on how the tropical fruits compete for the fruit component of consumer diets. Export suppliers will remain almost exclusively in developing countries and high concentration by region will continue. Trade in processed fruit will play an increasingly important role in the fruit sector and will be affected by the way in which labour and transportation costs evolve. Trade measures play an important



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5. Jute and hard fibres outlook

5.1 Introduction

This outlook includes projections for jute and kenaf and selected hard fibres, including sisal and henequen, coir and abaca. The outlook for these fibres over the medium term is driven by a number of complex forces that, on the one hand, are influenced significantly on the demand and supply side by long-standing traditional forces and, on the other, by emerging factors such as the rising demand for natural and environmentally-friendly products¹.

For each of these natural fibre markets, the supply sides are highly concentrated in a few developing countries, where smallholder production is an important element of supply and where fibres are processed into value-added products for both local consumption and export. However, there are exceptions and, increasingly, production comes from larger plantations that are more responsive to domestic and global economic conditions.

Raw supplies are exported to countries where processing is driven either by relatively favourable conditions for local consumption or by the further export of processed goods. Trade in manufactured goods is driven by demand factors such as rising population and incomes, shifting preferences – such as those for natural fibres – and prices of substitute products, both natural and synthetic. Trade in both raw and manufactured goods is therefore affected by transportation costs, trade policies and comparative economic factors, including wages and productivity in the industrial sector, movements in exchange rates, and other economic

¹ . A multi-country partial equilibrium model of raw fibre and fibre good markets was constructed and used as a basis for these projections. This model examines fibre supply on the basis of area and yield, and as driven by prices, costs and changing technology, except in the case of coir, which is a by-product of coconut production. The demand for fibre goods is driven by income and population and by the prices of competing fibres, in particular those of synthetic fibres. Trade is driven by relative country prices and tariffs. These projections have been adjusted on the basis of information provided by FAO experts.

and demographic conditions. Demand by consumers is mostly in the form of intermediate demand – such as for cordage and sacks – by sectors engaged in the production or marketing of other goods. Final demand by consumers is often complementary, consisting of demand for other products such as rugs. Jute products have a more comprehensive demand pattern that includes both textiles and apparel.

Measured at international prices, the approximate global production value of raw jute, sisal, coir and abaca amounted to over USD 2.6 billion in 2012 (1.8 billion, 0.2 billion, 0.6 billion and 16 million, respectively)². These commodities provide a source of income for a large number of smallholder producers, especially in India, Bangladesh, Sri Lanka, China, Philippines, Brazil, and in some African countries such as Tanzania and Kenya. Often, fibre crops generate an important source of income in areas where they may be the only crops that can sustainably withstand the natural conditions of the regions where they are grown. For example, sisal is a drought-resistant plant that may be intercropped with other crops, such as maize, to provide a source of income when the rains fail. Value-added products derived from these fibres also provide a source of income for these economies, as do revenues from exports.

In the decade prior to 2012–2014, fibre markets which, except for coir, had gone through several decades of declining production, largely fared better than had been expected³. The better outcomes for fibres were due, among other things, to improved price competitiveness relative to oil-related synthetic fibres and to emerging

higher demand in niche markets for natural fibres, especially in higher-income markets. Higher demand for natural fibres can be expected to continue, but there will be greater price competition from synthetics if the recent price decline in energy markets persists. In addition, rising labour costs in many developing countries where economic growth has been robust, can be expected to affect the price of fibre goods, as will the location of value-added production and the general patterns of trade.

5.2 Jute

Global production of jute is highly concentrated in India and Bangladesh, where production during the 2012–2014 reference period accounted for, respectively, 52 percent and 44 percent of global output (see Figure 1). The next largest producer, China, had a production share of only 2.0 percent in the same period. Looking at global production, about 45 percent of product is traded in either raw or processed form, with Bangladesh by far the largest single exporter with a market share of almost 84 percent of raw fibre exports and 71 percent of processed trade. Import markets are less concentrated than export markets, and while India is the single largest jute producer, it also has been a large importer. India accounted for 22 percent of raw fibre imports and 13 percent of jute products imports in that same period. However, Pakistan remains the largest importer of jute fibre and Turkey has now emerged as the largest single importer of jute manufactures. Indeed, the important role that developed countries have played traditionally in the importation of processed fibre products has diminished substantially over the last decade.

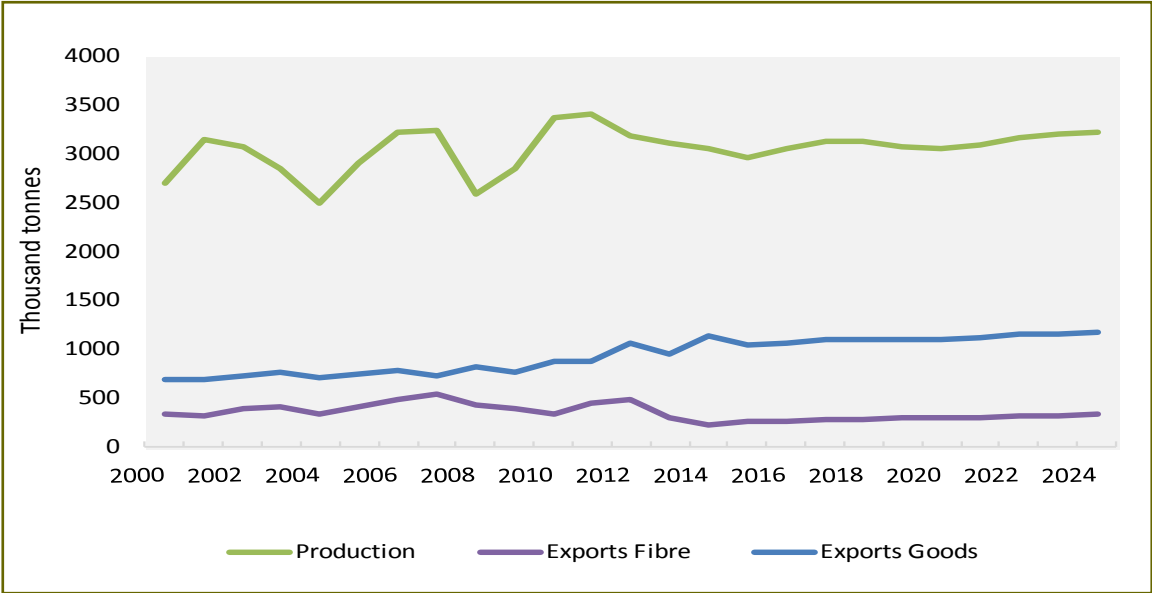
Production

After growing at a compound rate of 1.0 percent per year over the last decade, world jute and kenaf production is projected to rise to around 3.2 million tonnes in 2024,

² These figures were obtained using global production estimates for 2012 and representative prices for raw fibres in the main producing countries.

³ Compare data in this publication to that in “FAO: Agricultural Commodity Projections to 2010”.

Figure 1. World jute production and trade



Source: FAO, Secretariat of the Intergovernmental Group on Jute, Kenaf and Allied Fibres

marginally up from its average level during the period from 2012 to 2014. A further decline in production in India of 0.4 percent per year will be offset largely by further advances in Bangladesh (up by 1.1 percent per year). Indeed, at this rate production in Bangladesh is projected to approach that of India by 2024. Production is also expected to increase in Nepal and Pakistan, while that in Thailand and Vietnam, where significant declines in production occurred over the last decade, is not anticipated to recover as the land area once planted to jute has been moved into other crops. Little change is expected in China's output. Additionally, the production of jute in Africa rose slightly in the last decade and this trend is anticipated to continue over the next ten years.

Trade

Global raw jute exports are projected to decline to 332 000 tonnes, down from an average of 343 000 tonnes during the reference period. This decline will be more than offset, however, by higher exports of manufactured products, which may reach 1.18 million tonnes by 2024. This change is due largely to a decline in raw exports from Bangladesh. Despite an overall increase in jute production in Bangladesh, fibre exports

fell to 182 000 tonnes in 2014, the lowest level in decades, after reaching a peak of over 500 000 tonnes in 2007 and an average of 350 000 tonnes between 2008 and 2013. As domestic production of processed jute goods increased rapidly in response to relatively favorable labour costs, exports of jute goods from Bangladesh expanded by 6 percent in the last decade and will increase further, although at a slower rate (1.7 percent), to reach 885 000 tonnes in 2024. While raw exports from Bangladesh are projected to recover, they will – as jute goods exports continue to grow – nevertheless remain below the level achieved during the reference period. Exports of raw jute by India are projected to remain more or less at the current levels over the coming decade, while its imports are expected to decrease (by 1.5 percent), reflecting higher domestic processing costs as compared to Bangladesh. Imports of raw jute by China, in contrast, may continue their strong downward trend given higher production costs there. The demand for imported raw jute by other countries is not anticipated to change significantly over the next decade, while that for jute products will remain firm in developing countries, particularly China, but continue to stagnate in developed countries.

5.3 Hard fibres

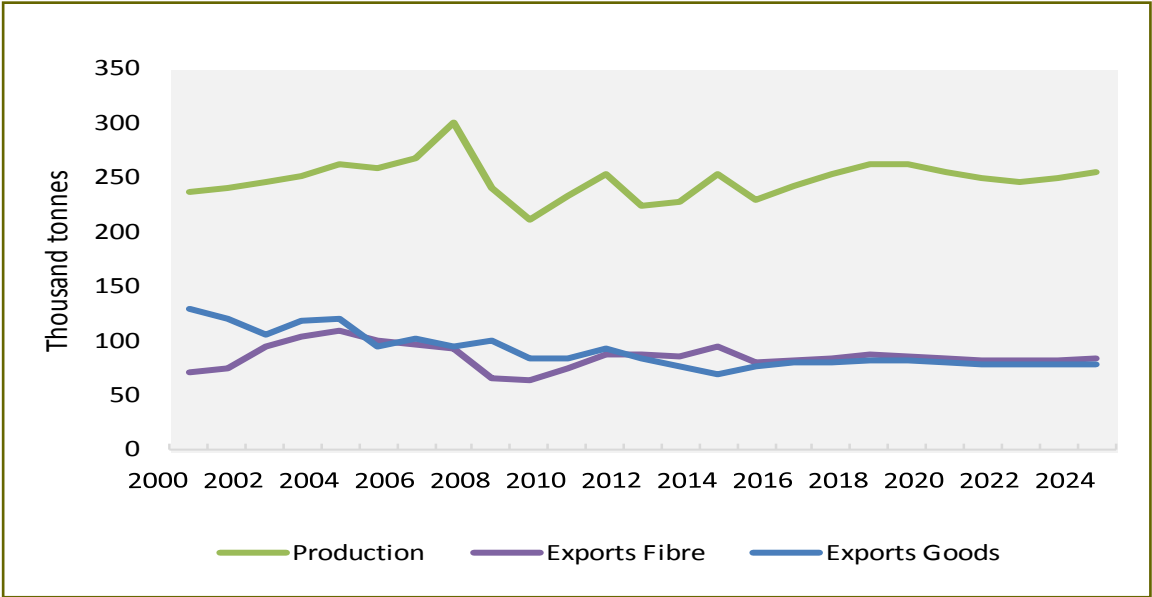
(a) Sisal

The top four sisal producers – Brazil, China, Tanzania and Kenya– accounted for 87 percent of global sisal production during the reference period 2012–2014. World production continues to be dominated by Brazil, however, market shares have changed considerably over the last decade, with a trend toward greater production in Africa and China and lower output in Brazil. African countries now dominate international export markets with a market share greater than 50 percent, while China and the European Union absorb over 70 percent of raw sisal imports. While the

Production

Global production of sisal is anticipated to rise over the medium term to 2024 to 256 000 tonnes from 235 000 tonnes in the reference period, an increase of 0.8 percent per year. This is the same level of production that was achieved a decade ago. The main reason for the decline over the past decade was the changed situation in Brazil, where production fell by 60 000 tonnes. The key question facing the outlook for sisal is whether Brazil will recover its former dominance of the industry or not. Brazil’s situation may depend on both the prospects for competing crops, and on broader economic factors such as its exchange rate. The projection of this outlook is that while

Figure 2: World sisal production and trade



Source: FAO, Secretariat of the Intergovernmental Group on Hard Fibres

markets for sisal appear to have contracted during the past decade, current global demand, particularly in the largest market for sisal, China, appears relatively strong despite increased competition from synthetic substitutes and other natural fibres. Apart from its traditional uses, sisal fibre is used increasingly in various new applications such as making composites for construction and car industries, metal polishing, and uses in the handicrafts industry.

Brazil’s production may stabilize, that of other countries, particularly China and Africa, will grow significantly in terms of market share. Production of sisal in China is projected to reach 80 400 tonnes by 2024, an increase of almost 20 000 tonnes, or 30 percent, from the reference period. African countries, led by Tanzania, are expected to grow by 7 000 tonnes or nearly 10 percent.

Trade

Global raw sisal trade declined from 103 000 tonnes to 90 000 tonnes during the last decade, due almost entirely to lower exports from Brazil. It is projected to drop even further to 85 000 tonnes by 2024 as Brazil's exports will continue to decline by 4.6 percent annually. However, the decline will be offset in part by African countries, particularly Tanzania.

On the import side, the decline in raw sisal trade can be attributed to changed conditions in China, where the strongly growing domestic supply is likely to lead to lower import requirements. Indeed, China's share of imports is expected to fall from around 45 percent to 40 percent by 2024. In other regions, imports by countries in the Near East are to rise marginally, while in developed countries, imports will remain stable. Imports of sisal by the European Union can be expected to remain at around 21 000 tonnes per year over the medium term. Slightly less than one-half of total sisal trade is in the form of manufactured goods. Trade in sisal goods is expected to

be stagnant over the next decade, but its share relative to total trade will increase slightly.

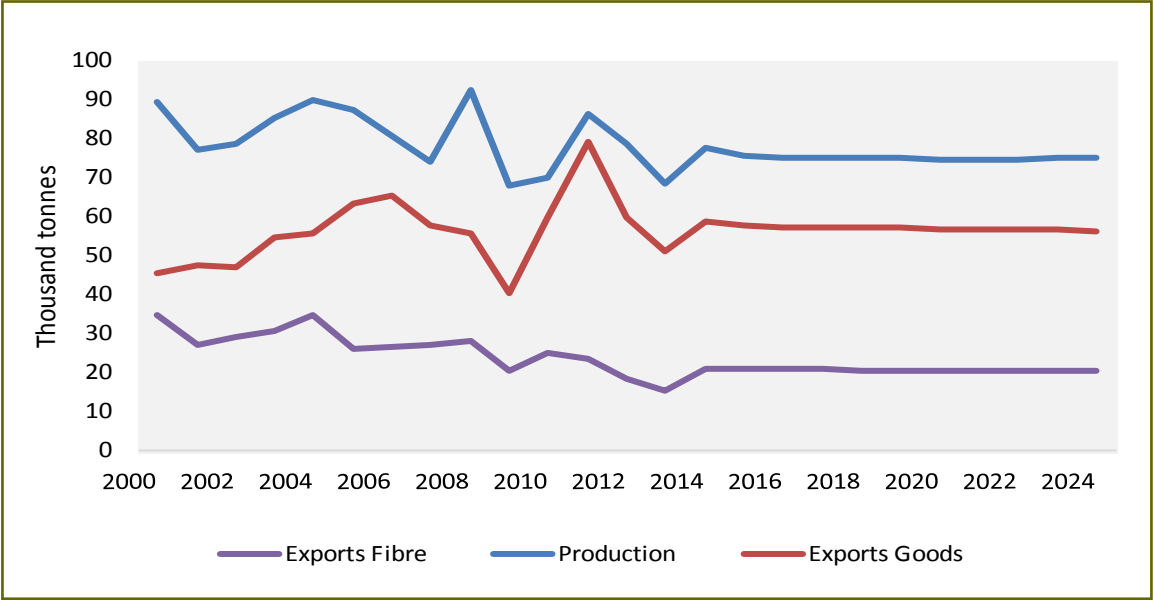
(b) Abaca

Abaca markets are the smallest of the major hard fibres and have been declining steadily in size. Supply is highly concentrated in two countries, the Philippines and Ecuador, which together account for about 95 percent of global production. Approximately 25 percent of abaca output is traded, with 90 percent of imports going to the European Union and Japan, which along with the United States are also the major importers of finished abaca goods. Hence global markets are highly concentrated on both the demand and supply sides.

Production

Global production of abaca fell to 75 000 tonnes in 2012-2014, down from 85 000 tonnes a decade earlier. Production in both the Philippines and Ecuador declined, respectively, by 1.0 percent and 3.0 percent per year over the period. For the medium

Figure 3: World abaca production and trade



Source: FAO, Secretariat of the Intergovernmental Group on Hard Fibres

term, by 2024, production is expected to remain at the same level of 75 000 tonnes, as further decreases in an already small crop area are offset by modest yield gains in these countries. Market shares of the two major suppliers should remain similar to current levels, at around 83 percent for the Philippines and 12 percent for Ecuador. Demand for abaca fibre remains static at the global level, with no markets anticipated to grow or shrink significantly.

Trade

Global exports of raw abaca fell markedly over the last decade to just over 18 000 tonnes, largely because of the decline in exports from the Philippines and Ecuador, which dropped by 9.9 percent and 3.0 percent, respectively. Exports of abaca goods increased marginally to 56 600 tonnes, representing over 75 percent of total exports of raw plus manufactured abaca goods. Ecuador, which exports virtually all its raw abaca production, will see its exports fall further in the medium term by 0.9 percent annually, totaling 8 800 tonnes in 2024, while exports from the Philippines should recover slightly to 8 400 in 2024 (a 3.7 percent annual increase) from the base period, but still substantially below the average in 2002-2004 of 16 500 tonnes. Imports by the European Union and Japan, the major markets for both raw abaca fibre and abaca goods, both fell in the last decade. However, given more stable production, the outlook is for trade to increase very marginally over the medium term for raw fibre, while remaining stable for processed goods.

(c) Coir

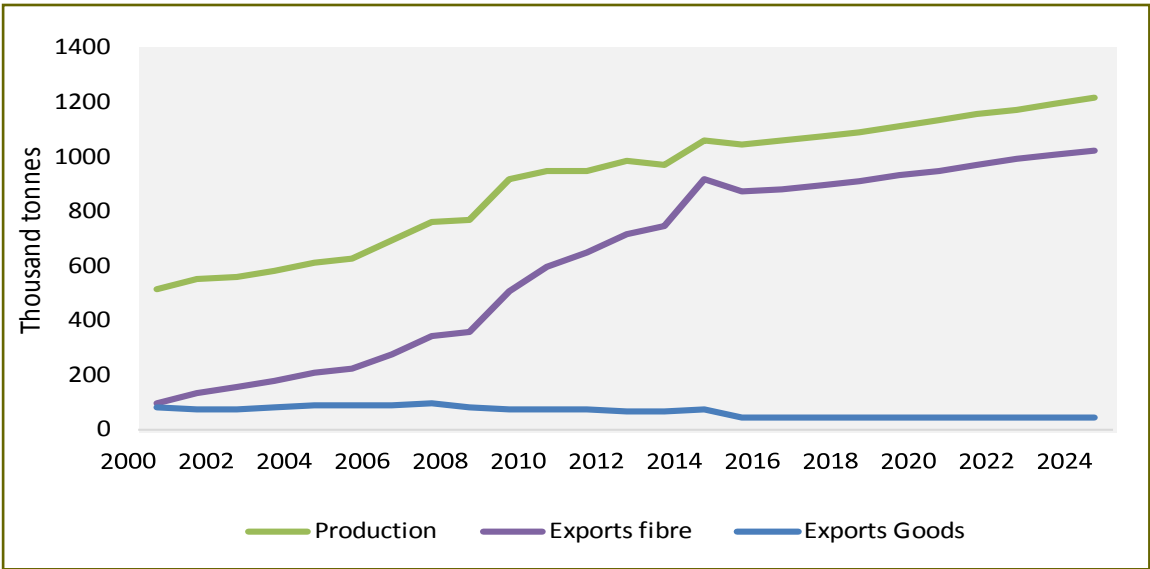
Coir is the fastest growing of the hard fibre markets. The factors influencing its production are somewhat different from those affecting the other hard fibres. Coir is primarily a by-product of coconut production, take-off rates of which have

been trending upwards considerably despite stagnant-to-declining coconut production in key producing coir countries such as India, Sri Lanka and Vietnam. This may limit future growth in these countries, while opening markets for those others which have existing coconut production but from which coir currently is not produced at high rates. Coir is produced almost exclusively in Asian countries, despite significant coconut production elsewhere. As in the case of the other fibres, production is heavily concentrated with about 95 percent of output originating in five countries, and with around 60 percent alone coming from India, and another 13 percent from Sri Lanka. Trade is also heavily focused, with China and the European Union accounting for about 78–80 percent of raw coir imports in the reference period.

Production

Global production of coir almost doubled over the last decade, reaching 1 million tonnes in the reference period and growing at a compound annual rate of 5.6 percent. Production in the market leader countries kept pace, with India growing 4.4 percent annually while production in Sri Lanka expanded very rapidly at 8.0 percent per year. During the same period, production in Indonesia grew from essentially nothing to a peak of almost 49 000 tonnes in 2011-2012, while coir output in the Philippines grew 16 percent annually. Output in Vietnam expanded by almost 7.0 percent, making this country the third largest supplier after Sri Lanka. Global production in these countries, however, is expected to slow over the next ten years from this rapid growth to about 1.9 percent annually, since sustaining such a high growth rate may be difficult given the generally stagnant growth in these countries' coconut production. Coir production should become less concentrated as the share in India continues to fall.

Figure 4. World coir production and trade



Source: FAO, Secretariat of the Intergovernmental Group on Hard Fibres

Trade

Global trade in raw coir grew at a rapid pace of almost 16 percent per year at compound rates, rising from only 185 000 tonnes in 2002–2004 to 796 000 tonnes in 2012–2014, which is more than a fourfold increase. However, exports of coir products actually declined over the same period. Growth in trade from India alone represented almost 400 000 tonnes of the total increase in global raw exports, as India’s own processing sector has not kept pace with production, and exports of processed Indian coir goods have fallen in the last decade. Of the increase in total trade of raw coir, over 70 percent has gone to China to fuel its expanding processing sector. However, imports by Europe, Korea and the United States also increased markedly during the same period. Global imports of coir products have fallen by only 0.6 percent in the base period, as the decline in the European Union and in the United States was offset by the 28 percent increase in the Russian Federation and the 3.6 percent increase in Asia.

The medium term outlook for trade in coir fibre is for continued rapid expansion, but at a much slower pace (albeit from a higher base), with a projected increase from the 2012–2014 reference period of 230 000 tonnes in 2024, a 2.6 percent annual

increase. India is likely to retain more than a 50 percent market share in fibre trade, but Sri Lanka may well be overtaken by Vietnam as the second largest exporter. The market shares of the Philippines, Indonesia and Malaysia are also expected to increase. China will consolidate its growing share of the import markets, accounting for over two thirds of demand, while Europe’s share can be expected to slide to about half the level of a decade ago. Rising imports by Korea will see that country’s share of fibre trade grow over the next decade. The outlook for trade in coir products is less bright, with exports expected to continue the downward trend of the last decade. In particular, India’s exports of coir products have more or less petered out and are not expected to resume.

5.4 Prices

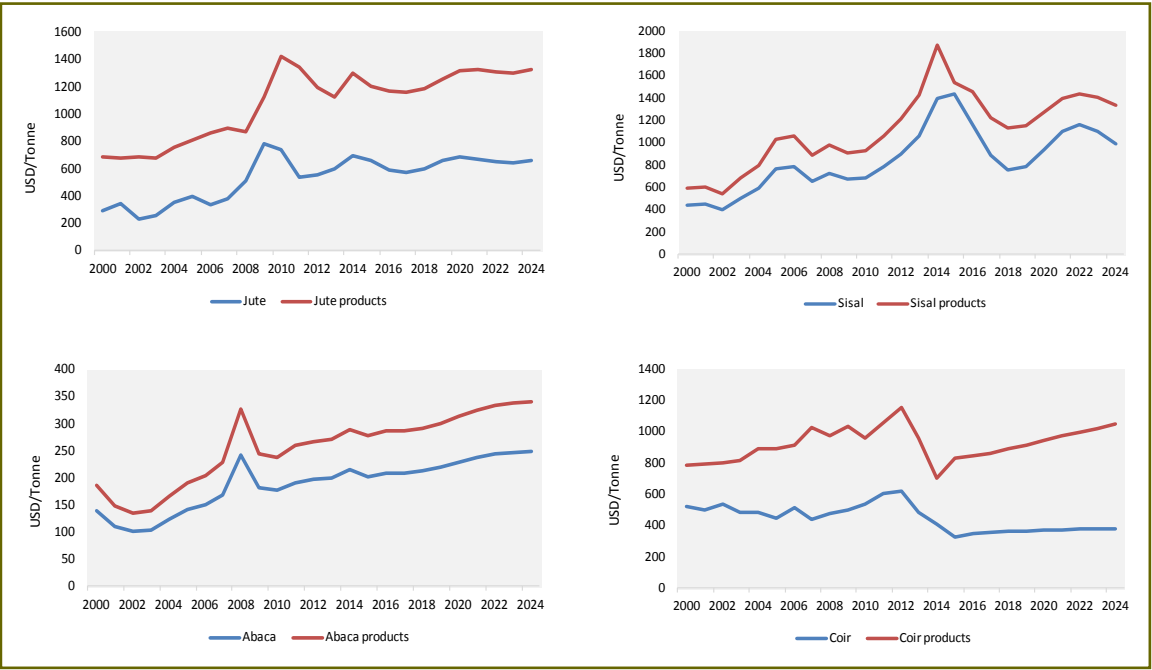
Internationally traded fibre prices largely trended up over the last decade. As for agricultural food commodities, the price of jute spiked in 2007–2008, but this was the exception among the fibres⁴. The price of sisal started to move significantly higher starting only in 2010, and this surge has

⁴ Coir: Sri Lanka coir bristle fibre. Abaca: Philippines grade G. Sisal: Brazil grade N3. Jute: Bangladesh Jute Fibre Export Price ‘BWD’ f.o.b. Mongla and BTD Bangladesh Port.

persisted through to 2015 as supplies from Brazil, the major exporter, tightened, and as import demand from China, strengthened. The medium term outlook for prices is for weakness relative to recent values, with some considerable uncertainty in the future

has risen dramatically over time and as fibre markets have fallen in relative terms. Possibly, rising niche demands for natural products having specific attributes may now be the key determinants of market growth. Clearly as indicated in this Outlook, in this

Figure 5. International prices for jute and hard fibres



Source: FAO, Secretariat of the Intergovernmental Group on Hard Fibres and the Intergovernmental Group on Jute, Kenaf and Allied Fibres

price of sisal given that product’s apparent disequilibrium with other competing fibres, including synthetics, the anticipated oil-based projections of which have been reduced significantly. While fibre prices generally are expected to continue their rising trend, coir prices may remain under pressure from expanding supplies.

5.5 Uncertainties in the outlook for jute and hard fibres

Over the medium term, demand factors can be expected to play a critical role in determining market size. How much do oil markets and competition from synthetics now matter to the demand for jute and hard fibres? Price studies indicate some cross-correlation among the sectors. But it is possible that the degree of substitution has fallen as the sheer quantity of synthetics

respect the prospects for coir appear much more positive than those of the other fibres..

The supply side is also important, but in this case, given the high degree of concentration of production in from two to possibly five global suppliers for each fibre, it is likely to be conditions in those countries themselves that will affect markets. Cost conditions and specifically cost conditions for labour will have direct effects on competitiveness in processing. This is particularly true in Asia where relative labour costs have been changing in those countries where economic growth has been robust. But it also includes issues of economic and political stability that can affect the investment and commercial environment. For sisal, clearly, the projection is particularly sensitive as to how Brazil’s sector performs over the next decade.



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6. Bananas outlook

6.1 Introduction

The banana is one of the world's largest herbs, and its fruits are among the few that are available throughout the year. Bananas play an important role in food security and in the livelihoods of consumers, producers and traders alike. Aside from large-scale commercial enterprises, informal production by households in rural areas of developing countries provides an easily accessible source of food for vulnerable populations. Bananas are an excellent source of major nutrients such as sugar, fiber, vitamins and several minerals (including potassium and magnesium). There are more than 300 varieties of bananas produced and consumed locally in the world, but the most commercialized is the Cavendish type banana. In 2014, based on export values alone, bananas represented a USD 11 billion industry, providing direct and indirect employment for millions of persons in producing and trading countries. A large, but declining share of the production and, especially, of the commercialization of banana fruits, is accounted for by a few multinational

companies. Nevertheless, the cultivation of the crop remains particularly important for the livelihood of small-scale producers in low-income countries in Asia, Sub-Saharan Africa, and Central and South America.

6.2 Production grows steadily

Because of the nature of banana cultivation, often originating in the informal sector and not passing through established market channels, reliable global production data for bananas is difficult to obtain. Nevertheless, available information indicates that production has continued to expand steadily over the past decade, increasing in line with the growing domestic consumption requirements of rising populations in developing countries. From somewhat more than 72 million tonnes in 2002 – 2004, world banana production was estimated by outside sources to have reached 135 to 140 million tonnes in 2014. In recent years, the bulk of the increase has come from top producers such as Brazil, the Philippines

and, especially, India and China. These significant increases, especially in the main producing countries, reflect both greater land areas and improved productivity at the farm level.

Among the major producers, output in Brazil reached about 7.2 million tonnes in 2014, regaining the level of the mid-2000s prior to a drop towards the end of the last decade. Production is expected to grow by nearly 1.0 percent in the period to 2024 reflecting mainly further gains in productivity. In the Philippines, banana production in 2014 reached 8.9 million tonnes, nearly 3 percent above the previous year. In India (which accounts for nearly 30 percent of world banana supplies), production jumped from 27 million to about 30 million tonnes between 2012 and 2013, and estimated output rose even further in 2014. Indeed, production in India has registered steady growth over the past decade, at nearly 8 percent annually. In China, which accounts for about 12 percent of global output, production has surged in recent years. In 2014, particularly favorable weather conditions and expanded land areas led to an increase of nearly 30 percent above the 12.5 million tonnes produced in 2013.

6.3 Recent market developments

(a) Banana imports and consumption

Around 15 percent of global banana production is traded in the international market. The reason for such a low trade share is mainly the significant absorption of output in large and growing domestic markets of developing countries. However, consumers' preferences for selected varieties also play an important role in determining trade volumes.

The European Union is the largest market for traded bananas, consuming some

5.1 million tonnes in 2014. The United States is the second largest market, with about 4.3 million tonnes imported and consumed (US domestic production is small, at about only 10 000 tonnes). On a per capita basis, banana consumption in developed countries has increased significantly – for example, the United States banana per capita consumption increased from 10.0 kg in 2009 to 12.7 kg in 2014 – but developing countries still top banana consumption worldwide. In recent years, countries with the highest per capita banana consumption included the Dominican Republic (62.6 kg), Angola (53.6 kg), and the Philippines (50.9 kg).

(b) Domestic price movements differ across regions

The banana market is highly segmented, and trends in import and export unit values at the global level often diverge from domestic price movements. One of the highlights of 2015 was the opposite directions that domestic prices took in large importing countries such as China and the Russian Federation. Since January 2015, China experienced falling domestic banana prices that raised fears that excess supplies would drive prices even below the costs of production; the wholesale price of domestically grown bananas was about CNY 2.4 per kg in August 2015 but since September 2015 has dropped by 30 to 40 percent. In contrast, the Russian Federation experienced rising banana prices as the winter and holiday season approached; since September 2015, some regions in the Russian Federation have registered increases of up to 40 percent in banana prices, reflecting both tight supply and, in particular, higher markups by sellers to take advantage of the seasonal rise in demand as well as to adjust to the strengthening of the United States dollar.

For the largest importing blocs, the European Union and the United States, no major changes took place in domestic

prices during 2015 in comparison with 2014. In the European Union, the rise in prices of domestically produced bananas and of imports from ACP countries was offset by the decline in prices of bananas from the so-called Dollar Zone countries in Latin America. Similarly, in the United States the average retail price of bananas for 2015 did not diverge much from the USD 0.59 per lb registered in 2014.

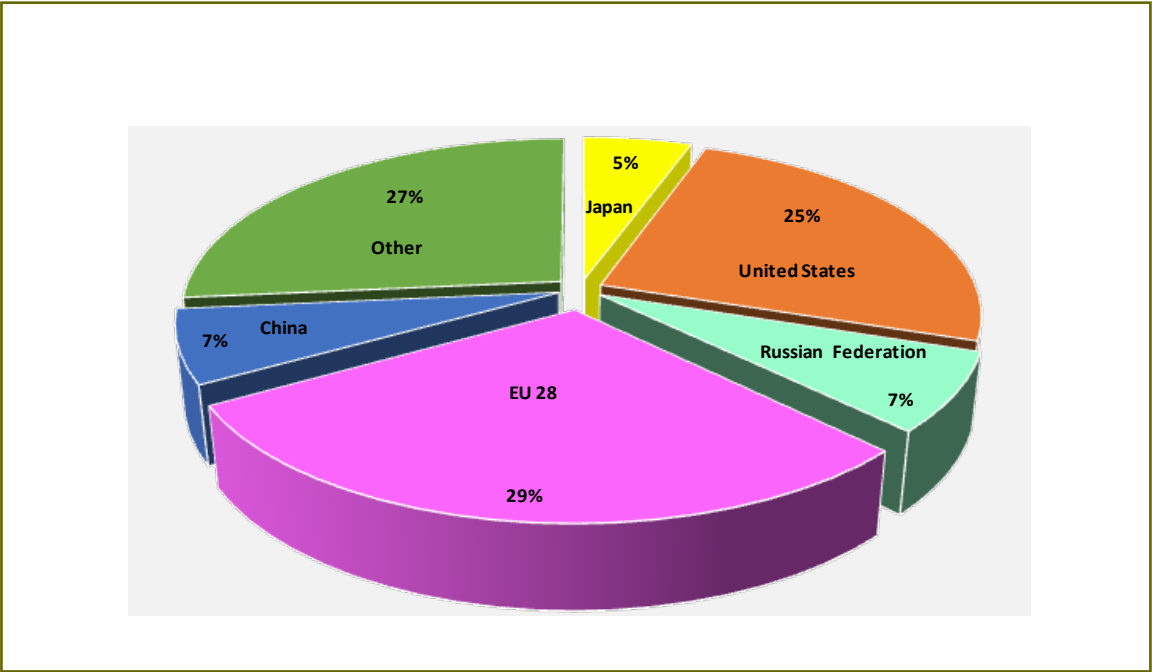
(c) Imports increase slightly in 2015

Preliminary information indicates only a slight rise in global banana imports in 2015 as further growth, particularly in the European Union and the United States, appeared likely to be partly offset by lower imports by China and the Russian Federation. In 2014, the European Union (29.6 percent in value share), United States (15.7 percent), Russian Federation (6.9 percent), China (6.1 percent), and Japan (5.8 percent), remained the largest importers of bananas. The volume of imports into the European Union reached 5.1 million tonnes, of which 80 percent

was supplied by Dollar Zone countries such as Ecuador (1.5 million tonnes), Colombia (1.1 million tonnes), and Costa Rica (0.9 million tonnes). The rest (about 20 percent) of European Union imports came from ACP countries (Figure 1 shows banana import volume share in 2014). Much has been said about the impact of the implementation of the so-called new European Union banana regime on ACP countries. Data show that although European Union imports from ACP countries dropped by about 65 000 tonnes between the critical years of 2010 and 2011, European Union imports from ACP countries have increased since 2012 and in 2014 reached an eight-year high of 1.08 million tonnes.

Although the European Union banana market relies mostly on imports, domestic production remains an important source of supply. In 2014, domestic production amounted to 656 000 tonnes, nearly 12 percent of overall supply. Total European Union demand for bananas increased by 2.2 percent per year between 2010 and 2014. The import prices set by its main suppliers, the Dollar Zone countries,

Figure 1. World banana imports share in 2014 (volume)



Source: FAO, Secretariat of the Intergovernmental Group on Bananas and Tropical Fruits.

reached a peak at EUR 0.62 per kg in 2012 and then declined slightly to EUR 0.59 per kg since 2014. This slight decline in the price of imports from the Dollar Zone was attributed in part to increased supply from European Union domestic production and from ACP countries.

In the second largest importer, the United States, total banana imports in 2014 reached 4.9 million tonnes, worth USD 2.2 billion, of which 4.3 million tonnes represented net imports. Preliminary data indicate a further increase, although slight, for 2015. Two-thirds of the United States banana imports come from Central America, including Guatemala (36 percent), Costa Rica (17 percent) and Honduras (12 percent).

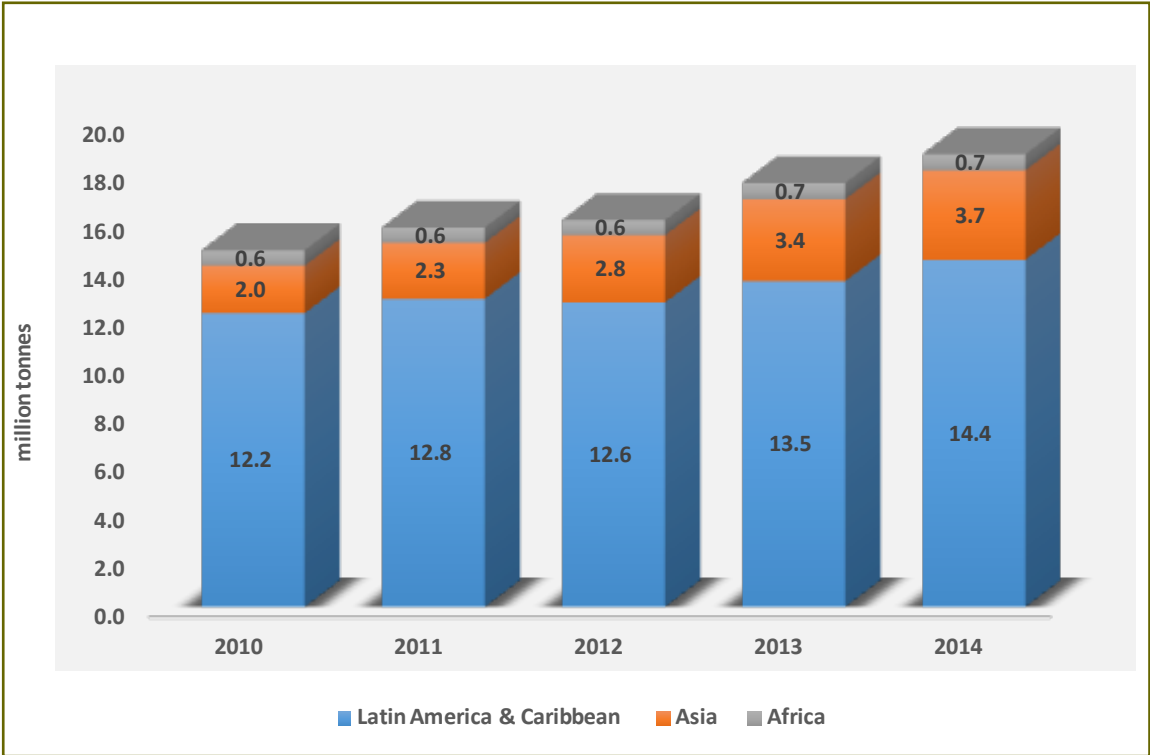
The Russian Federation imported 1.3 million tonnes (worth about USD 958 million) of bananas in 2014, slightly less than in the previous year. The Russian Federation's banana imports slowed further in 2015, in part because of the

depreciation of its currency, and this slackening is expected to continue in 2016. From about 0.57 million tonnes in 2013, banana imports by China more than doubled in 2014 to 1.18 million tonnes (valued at USD 858 million). This makes China the world's fourth largest banana importer, overtaking Japan by 0.95 million tonnes in 2014 (valued at USD 815 million). The reported excess supply in China, however, may prompt a decline in banana imports for 2015 and early 2016.

(d) Banana exports in 2014 and 2015

Global exports of bananas reached a record 18.76 million tonnes in 2014, valued at some USD 11 billion. Nearly one quarter of the value of trade was accounted for by exports from Ecuador, by far the largest supplier to world markets. Ecuador's shipments in 2014 surged by nearly 7.5 percent to 5.8 million tonnes

Figure 2. World banana exports by region, 2010-2014



Source: FAO, Secretariat of the Intergovernmental Group on Bananas and Tropical Fruits.

and continued to expand in 2015, albeit at a slower rate due to adverse weather and to a decline in import demand from the Russian Federation. Shipments from Colombia, the second largest exporter in South America, recovered to 1.8 million tonnes in 2014, following a 10.5 percent decline in 2013 to 1.64 million tonnes, the lowest level since 2006. However, the strongest growth in exports was recorded in the Central American countries, where exports were boosted by the preferential tariffs granted by the European Union. Exports from Guatemala and Costa Rica continued to increase, reaching respectively 2.25 million tonnes and 2.13 million tonnes in 2014, and thereby surpassing Colombia to become the second and third largest exporters of Latin America. Central America remains one of the largest exporting regions of Latin America, supplying some 5.0 million tonnes to world markets, although a slight decline took place in 2015.

In the Caribbean, the Dominican Republic is the major exporter, accounting for 98 percent of the region's exports, and reaching 0.47 million tonnes in 2014, an

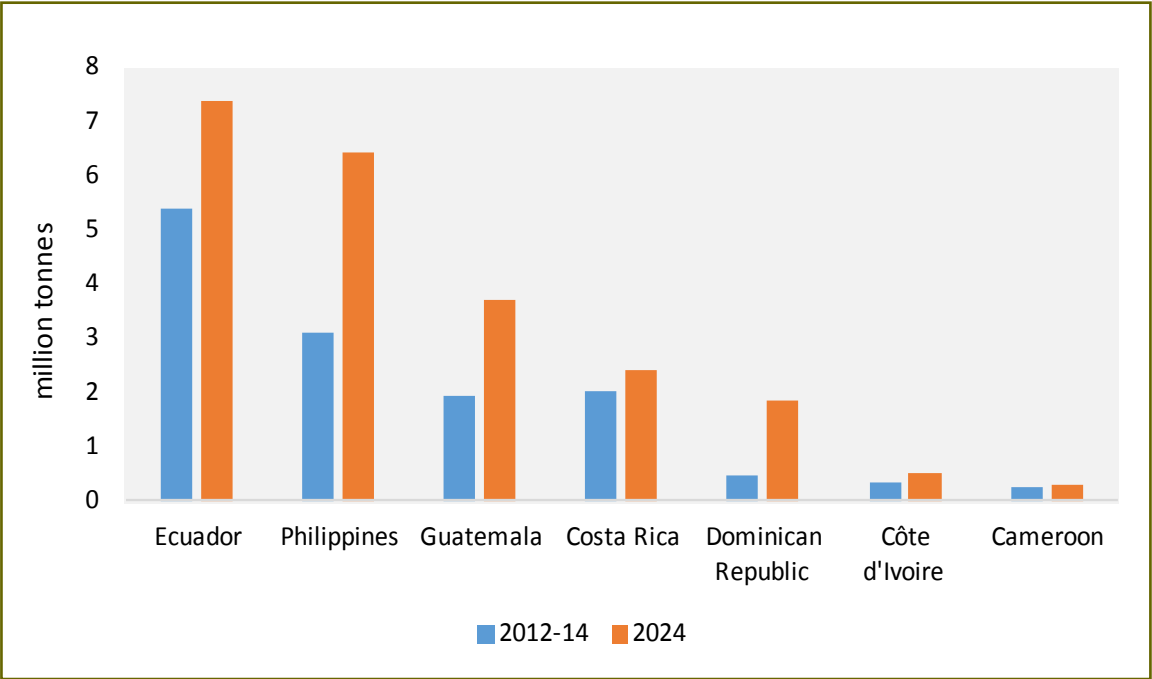
increase of 7.3 percent from 2013, and more than double the level reached in 2005.

Looking at other exporting regions, the Philippines, the major supplier in Asia, recovered steadily after a 2009 decline in exports to 1.66 million tonnes, achieving remarkable Growth rates (despite disease-induced constraints on production) and returning to its previous status as the world's second largest exporter. In Africa, Cote d'Ivoire and Cameroon are the two largest exporting countries, mainly to the European Union. Exports from these countries during 2014 and 2015 remained stable.

6.4 Trade projections to 2024

Export and import projections to 2024 are based on a long term trend analysis using data series starting in 1983. These series incorporate various negative shocks that lower the average growth rates. This analysis assumes that population and income growth and relative prices will

Figure 3. World banana export projections 2012-14/2024



Sources: FAO, Secretariat of the Intergovernmental Group on Bananas and Tropical Fruits.

continue to determine market demand. In addition, improvements in the conditions and logistics of transport, innovations and continued improvements in productivity are expected to lead to further reductions in production costs and thus to lower prices, contributing to stronger growth of demand.

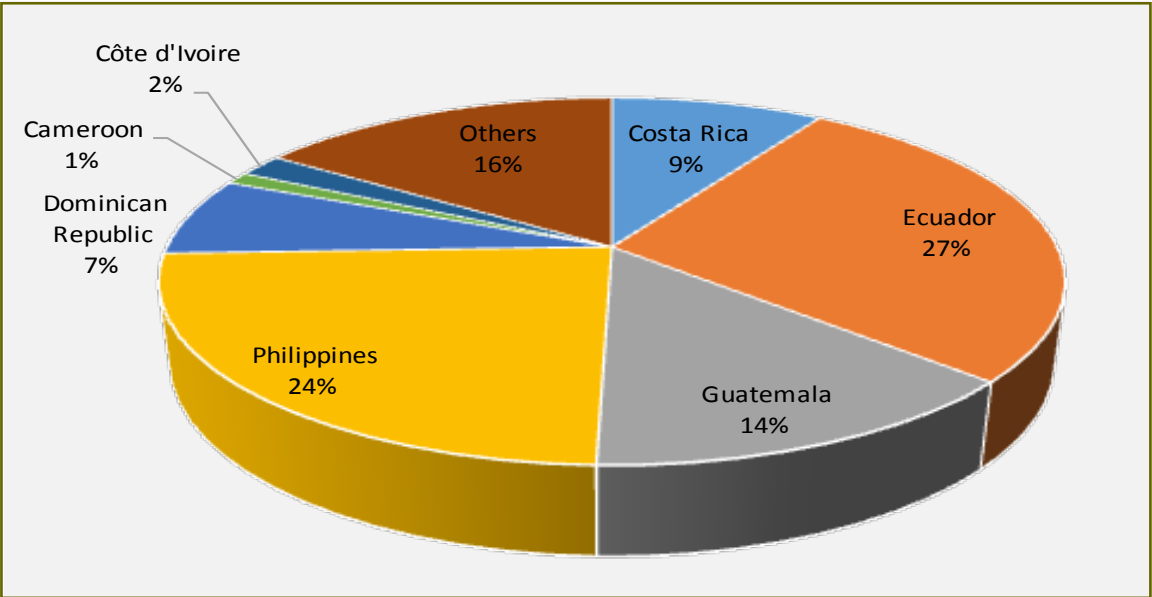
Export projections to 2024

Between 2012–2014 and 2024, world exports of bananas are projected to grow by 4.4 percent annually compared to 3.1 percent in the previous decade. Total

share in 2024, slightly lower than the 30.9 percent share achieved in 2012–14. In Latin America, Costa Rica and Guatemala would continue to be major banana exporters. Growth in Costa Rica would be substantially higher than in the previous decade while it can be expected to remain steady in Guatemala. In contrast, exports in Colombia are expected to decline slightly (Table 1).

Outside Latin America, the Philippines would continue to be the largest single banana exporter, accounting for a share of 24.0 percent of world exports in 2024, up from a 17.9 percent share in 2012–2014,

Figure 4. World banana projected export volume shares 2024



Sources: FAO, Secretariat of the Intergovernmental Group on Bananas and Tropical Fruits.

exports would reach 26.79 million tonnes compared to 17.45 million tonnes in the base period. Latin America would remain the main supplier, accounting for about 65.4 percent of the total, a lower share compared to the 74.7 percent registered in the base period. Exports from Ecuador are projected to increase by nearly 2 million tonnes from the base period, reflecting an increase of 3.2 percent annually, accounting for a 27.6 percent

and representing an annual increase of 7.5 percent compared to the 6.0 percent registered in the base period (Table 1).

Overall, the projections of global exports are subject to change depending on the availability of key production inputs such as land and labor in the exporting countries. Likewise, the mix of production and trade policies (including sanitary regulations) and the behavior of

multinational trading companies affect these projections.

Import projections to 2024

World imports of bananas are projected to rise at an annual average rate of 4.5 percent between 2012–2014 and 2024 to reach 25.86 million tonnes¹. Industrialized countries, especially the European Union, which currently accounts for 29 percent of the import share, followed by the United States at 25 percent, would remain by far the largest banana importers. In 2024, the Russian Federation would account for nearly 10 percent of world imports, China for 7.1 percent, Japan for 3.8 percent and Canada for 3.1 percent. Note that the share of imports accounted for by Saudi Arabia and Iran, would rise to 3.2 percent (Table 2).

The European Union's projected annual growth rate for banana imports is about 3.0 percent. This rate is above the growth rate (1.8 percent) registered in the previous decade and would be one of the driving forces behind the projected increase in global import demand. The acceleration, compared to the preceding decade, reflects improved access to supplies in the central and eastern European countries which in the meantime had joined the European Union as well as the consumer preferences in these same countries. Consumer preferences also would continue to underpin import demand in the Russian Federation. Currency stability and improved purchasing power can be expected to contribute to the growth of imports.

In Asia, China would remain by far the largest market, recording an increase of 8.4 percent annually, and accounting for a share of world imports of 7.1 percent,

compared to the 4.9 percent recorded in 2012–2014. Both, enhanced preferences for internationally traded banana varieties and sustained increases in income, are expected to lead to a stronger growth of imports. In Japan, imports would decline slightly in 2024, and the share of world imports would drop from 6.0 percent to 3.8 percent, owing to a reversal of the somewhat upward trend of the past decade. Changing consumer preferences in this mature market and the increasing availability of other types of fruits, such as tropical fruits and citrus in both fresh and processed form, would result in a weakening in demand for bananas (Table 2).

Looking at the medium-sized importers among the world's developing countries, the Middle East and Near East are the regions where banana imports are projected to grow the fastest. In Iran, Saudi Arabia and Turkey, the projected Growth rates of imports are, respectively, about 7.7, 10 and 7.8 percent annually (Table 2).

These high rates are driven by sustained increases in per capita income as bananas remain a luxury good in these countries. In Africa, banana imports are driven mainly by Algeria's strong import growth, currently projected to be 5.1 percent annually. This growth is seen as being fueled by both population growth (about 2.0 percent per year) and sustained per capita GDP annual increases (2.2 percent per year).

Projections of import volumes are particularly sensitive to changes in income, especially in emerging and some industrialized economies where bananas may be considered a luxury. With a more stable and improved economic outlook compared to the past decade, import demand may actually exceed the projected figures for many countries. Similarly, projections of global imports have always been highly sensitive to the

¹ Projected world exports are slightly above total imports because of losses, rounding off of figures and in some cases of minimal re-exports of bananas.

levels of transaction costs, especially transportation costs based on fuel prices. Banana import prices have been negatively correlated to fuel prices (as past experience during 2007–2008 shows), so a continued decline in the price of oil especially, the ‘bunker’ fuel as termed by importers, could increase imports even further. Such increases could strengthen prices and lead to stronger growth in both production and exports.

6.5 Other insights into the banana market

Brazil export interest

Of particular interest is the evolution of the export initiative in Brazil that has resulted from the merger of the Chiquita company with the Brazilian juice maker Cutrale Group and the financial conglomerate, the Safra Group. The rising interest in promoting Brazilian exports stems from the expectation of increased demand in the international market and the advantages in building up the country’s banana production and export potential. Chiquita and other large companies have come to realize that Brazil’s large land areas and labour endowment (plus its favourable climate) facilitate an expansion of production at a decreasing cost. In other words, they expect operating costs to decline as the state of infrastructure and technology transfers in Brazil (especially in banana-producing zones) continues to improve. This merger may be a sign or an anticipation that Brazil’s autarky price at some point will drop below world prices.

In theory, it is unlikely that Brazil will be able to export a commodity such as the banana that is highly demanded locally and which has an autarky price currently higher than the world price, but in reality commodity markets in developing countries are often segmented. The main reason is that exporters operate only in

specific locations where access to export market is high and operating costs are low. Moreover, products like bananas also have many varieties (i.e. they are source- and taste-differentiated) a factor that will always keep niche export markets alive. The reasoning is that bananas exports will one day thrive in a country like Brazil where local demand remains high. The impacts of strong future Brazilian exports will certainly spark a new era in the international banana market.

Banana plant diseases

The fungus disease code-named TR4 (tropical disease 4) remains a serious threat to the production of Cavendish bananas and other local varieties. It attacks the roots and leaves and kills the banana plant by destroying its nutrient channels and its ability to perform photosynthesis. The TR4’s natural boundaries so far have been confined mainly to Asia and Latin America. But the discovery in 2013 of its presence in farms in northern Mozambique (a USD 70 million industry) has alarmed scientists, creating the fear that it is just a matter of time before the disease also destroys large areas of banana plants in East and Southern Africa, a region where bananas represent a lifeline for food security. Scientists believe that the spread of the disease is being facilitated by the reduced biodiversity of the banana ecosystem and that it may also be linked to the increased monoculture in banana production due to commercialization. As research (mainly innovations in plant breeding) to improve plant resistance are still years away from producing applicable solutions capable of totally eradicating the disease, at the moment large banana-producing and trading companies are focusing more on ways to limit its spread. The current disease control practices come however at a high cost. In some areas of Central America (e.g. plantations in Costa Rica), more than 70 treatments per year (practically

one treatment every five days and costing more than USD 200 000 per hectare), are required to protect the banana plants. Such high costs puts downward pressure on competitiveness and, in the case of Costa Rica, has contributed to the decline of its share of the United States market. The hope, therefore, is that research soon will produce solid enough results to avert a new crisis in the world banana supply.

Weather uncertainties

Good weather in producing zones has boosted banana production in countries like China and, to a lesser extent, in Brazil and India for 2014–2015. But recent reports of an extended dry season and of severe droughts in 2015 raise some concerns in production areas in the Philippines and especially in some Latin America countries such as Ecuador and Honduras. These weather conditions will continue to affect banana production and trade in 2016 and beyond.



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7. Tea outlook

7.1 Introduction

Tea is available for consumption in six main varieties, distinguished one from the other by the oxidization and fermentation techniques applied, and is classified generally under either green and black teas.

The main determinant for growth of the global tea economy is demand for the commodity. The analysis of the demand for tea carried out in recent years by the Secretariat of the Intergovernmental Group (IGG) on Tea in selected markets indicates that both black and green tea are price inelastic. Price elasticities for black tea vary between -0.32 and -0.80, while estimates for green tea price elasticities range from -0.69 to -0.98. Several factors influence the demand for tea, including the traditional price and income variables, a variety of demographics such as age, education and occupation, and overall cultural background. In addition, health concerns are having an increasingly great influence on tea consumption, a factor that led the IGG to recommend

strengthening consumer awareness of the health benefits of tea consumption through an international generic promotion programme. Additional main drivers of international tea prices are market access, the potential effects of pests and diseases on production, and the changing dynamics among retailers, wholesalers and multinationals.

International tea prices, as measured by the FAO Tea Composite Price, remained firm over the last decade until 2014 when there was a 5.3 percent decline. The FAO Tea Composite Price is a weighted average price index for black tea, which includes CTC and Orthodox teas. The recent decline in the composite price was due largely to the weakening of CTC tea prices; a result of supplies exceeding demand at reigning auction prices and a situation that took 12 months to clear. The decline would have been more substantial had it not been for the firmness of Orthodox tea prices, which lasted through 2014. However, by 2015, the roles had been reversed. CTC prices recovered and reached levels that offset the substantial declines in Orthodox teas that occurred as imports from the Russian

Federation and from the Near East (the main markets for Orthodox teas) fell due to the weakened economic Growth rates associated with lower world oil prices. The FAO Composite Price thus averaged higher in 2015.

Robust demand and associated high prices stimulated substantial supply increases over the past decade, resulting in significant growth in domestic consumption and trade. Export earnings at the global level more than doubled over the decade beginning in 2005, rising from USD 2.58 billion to USD 5.61 billion in 2014, and contributing to improved rural incomes and household food security in tea-producing countries.

It is against this background that the following medium-term projections were generated.

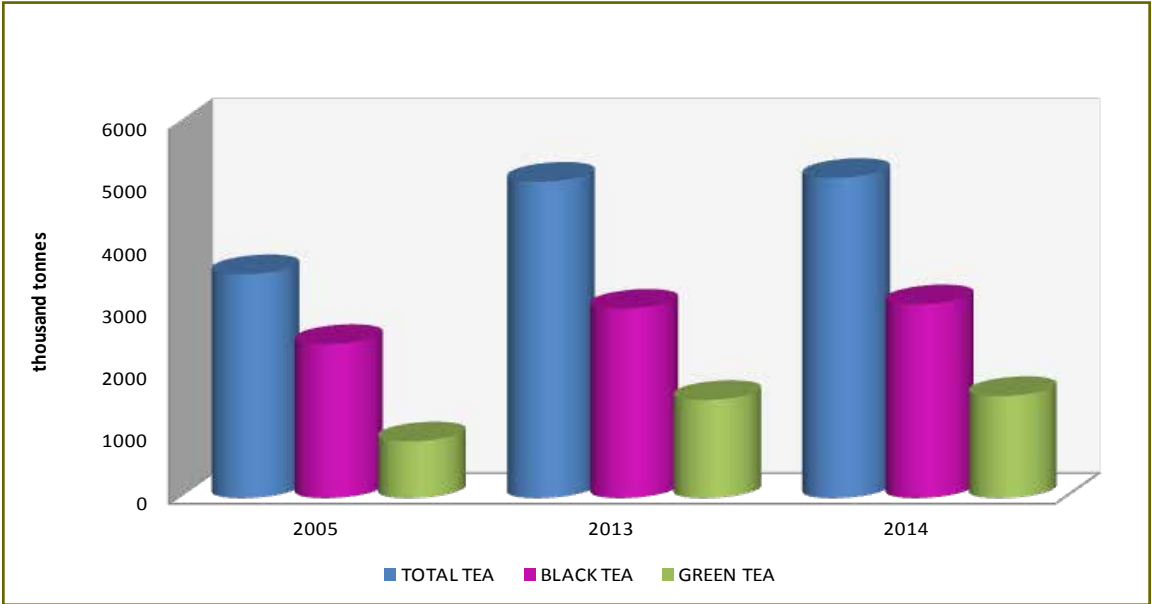
7.2 Production

World tea production (black, green, instant and other) increased by 4.2 percent annually over the last decade to reach 5.13 million tonnes in 2014 (Figure 1). The

accelerated growth in global tea output was due primarily to increases registered in China, where tea production more than doubled from 934 857 tonnes in 2005 to 1.95 million tonnes in 2014, an expansion that was underpinned by strong domestic demand as the growth in the country’s economy stayed close to 10 percent per year. China thus remained the world’s largest tea-producing country, accounting for 38 percent of the world total with an output of 1.95 million tonnes in 2014; production in India, the second largest producer, increased to 1.21 million tonnes from 950 176 tonnes in 2005; and output in the two largest exporting countries, Kenya and Sri Lanka, reached 448 739 tonnes and 339 900 tonnes, respectively. At the world level, black tea production increased annually by 2.6 percent and green tea by 6.4 percent, in response to consistently firm prices.

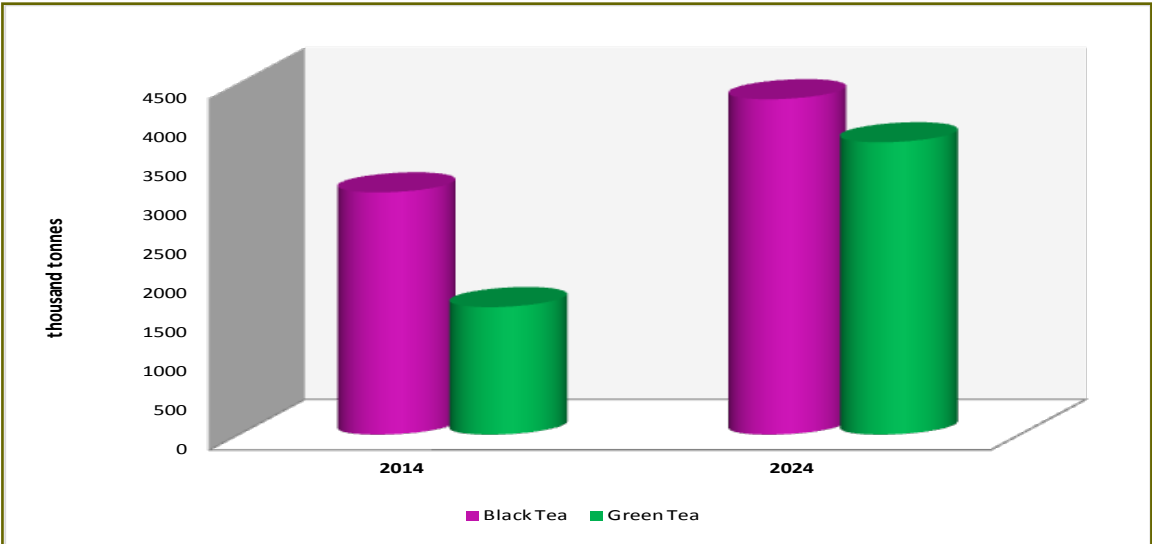
By 2024, world black tea production is projected to increase by an annual growth rate of 3.7 percent to reach 4.29 million tonnes, reflecting major increases in India, China, Kenya and Sri Lanka (Figure 2). Additional expansion in China, underpinned by strong growth in

Figure 1. World production of tea



Source: FAO, Secretariat of the Intergovernmental Group on Tea

Figure 2. Actual and projected production of black tea and green tea



Source: FAO, Secretariat of the Intergovernmental Group on Tea

domestic demand for black teas such as Pu'er, is expected to be significant, with output likely to surpass that of Kenya, the largest single black tea exporter.

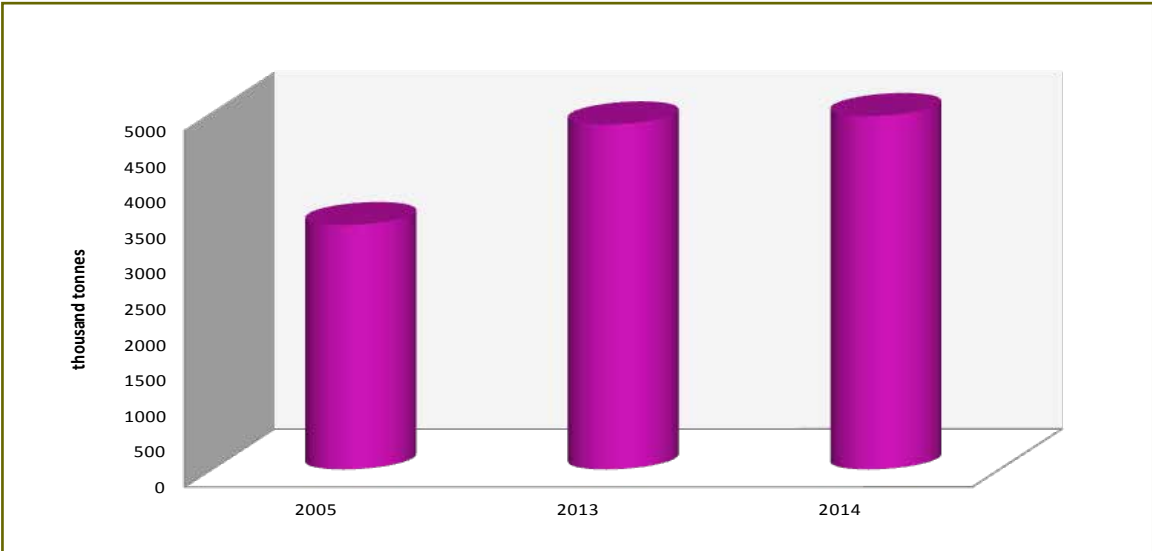
World green tea production would increase at an even faster rate of 9.1 percent annually to reach 3.74 million tonnes, again reflecting expansion of the sub-sector in China, where green tea output is expected to more than double from 1.38 million tonnes in 2014 to 3.22 million tonnes in 2024. The expansion is expected to come from increased productivity rather than from an expansion in area, that

is, it will be achieved through replanting of higher-yielding varieties and better agricultural practices.

7.3 Consumption

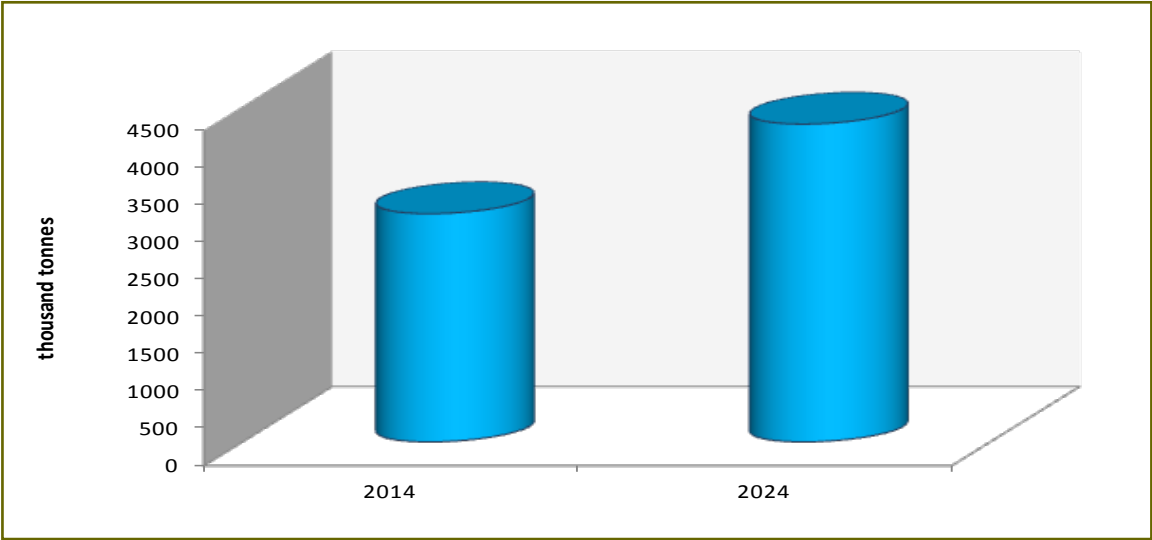
World tea consumption increased annually by 4.3 percent to 4.95 million tonnes over the decade that ended in 2014 (Figure 3). This expansion was underpinned by the rapid growth in per capita income levels, notably in China, India and other emerging economies. Demand grew significantly in most of the tea-

Figure 3. World consumption of tea



Source: FAO, Secretariat of the Intergovernmental Group on Tea

Figure 4. Actual and projected black tea consumption



Source: FAO, Secretariat of the Intergovernmental Group on Tea

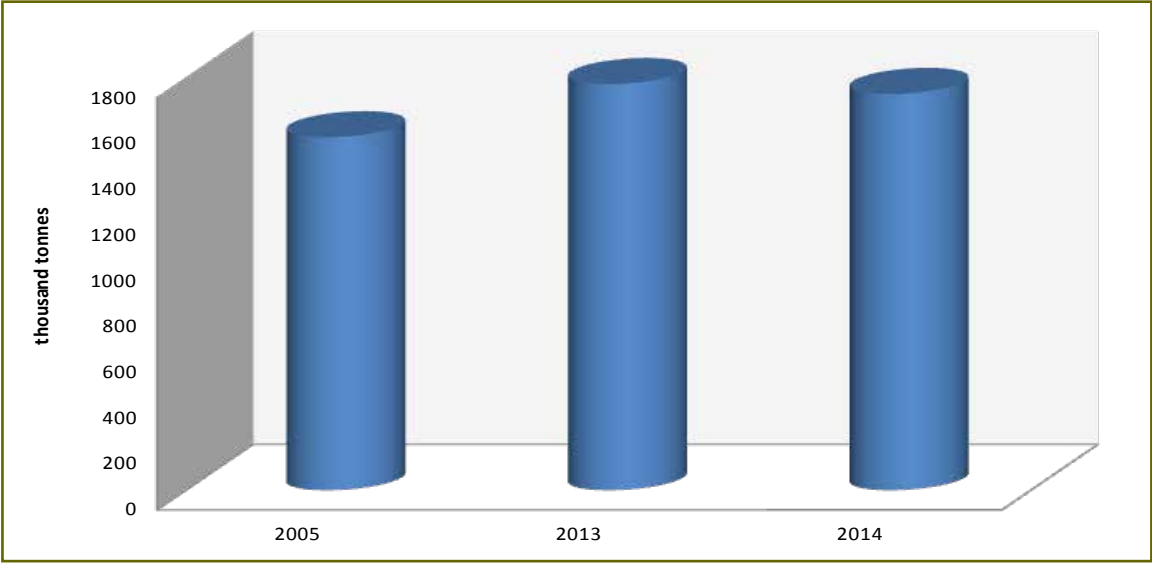
producing countries in Asia, Africa and Latin America. In China, consumption expanded spectacularly at an annual rate of 10.6 percent over the decade, reaching 1.67 million tonnes in 2014, or 34 percent of total world tea consumption. India, with consumption at 1.02 million tonnes, was the world's second largest tea consumer in 2014, accounting for slightly more than 20 percent of the global total.

In both the traditional importing countries of Europe (except Germany) and the Russian Federation tea consumption has declined over the last decade. The European tea market is mature and per capita consumption of tea has been declining as competition from other beverages, particularly bottled water and carbonated drinks, has intensified, while in the case of the Russian Federation, the decline in oil prices has negatively impacted on tea imports.

For mid-term projections of tea consumption, net imports were used as a proxy for consumption in non tea-producing countries, while for producing countries actual domestic consumption of tea was used. Data on green tea consumption, however, were not complete and it was therefore difficult to make any meaningful projections.

Black tea consumption is expected to grow at 3.7 percent annually to reach 4.27 million tonnes in 2024 (Figure 4), reflecting the strong growth in consumption in producing countries, which would more than offset projected declines in the traditional tea-importing countries. The greatest expansion is expected in China, where an annual growth of more than 15 percent is projected over the next ten years, followed by 10 percent in Malawi, 7.0 percent in Morocco, and 6.0 percent in Kenya, Uganda and Zimbabwe. Moderate Growth rates ranging between 3.0 and 5.0 percent are expected in other tea-producing countries such as Bangladesh (4.2 percent), India (3.0 percent), Sri Lanka (4.6 percent), Tanzania (3.3 percent) and Vietnam (4.8 percent). The major factors contributing to the expansion in tea consumption in tea-producing countries are the growth in per capita income as well as the growing awareness of the health benefits of black tea consumption. The latter is due largely to the efforts initiated by the Intergovernmental Group on Tea in the early 1990s in stimulating research on and promotion of the health benefits of black tea consumption under the programme funded by the CFC- (Common Fund for Commodities). The dramatic growth in China is due to the popularity of brick teas such as Pu'er

Figure 5. World exports of tea



Source: FAO, Secretariat of the Intergovernmental Group on Tea

which are heavily promoted for their health benefits.

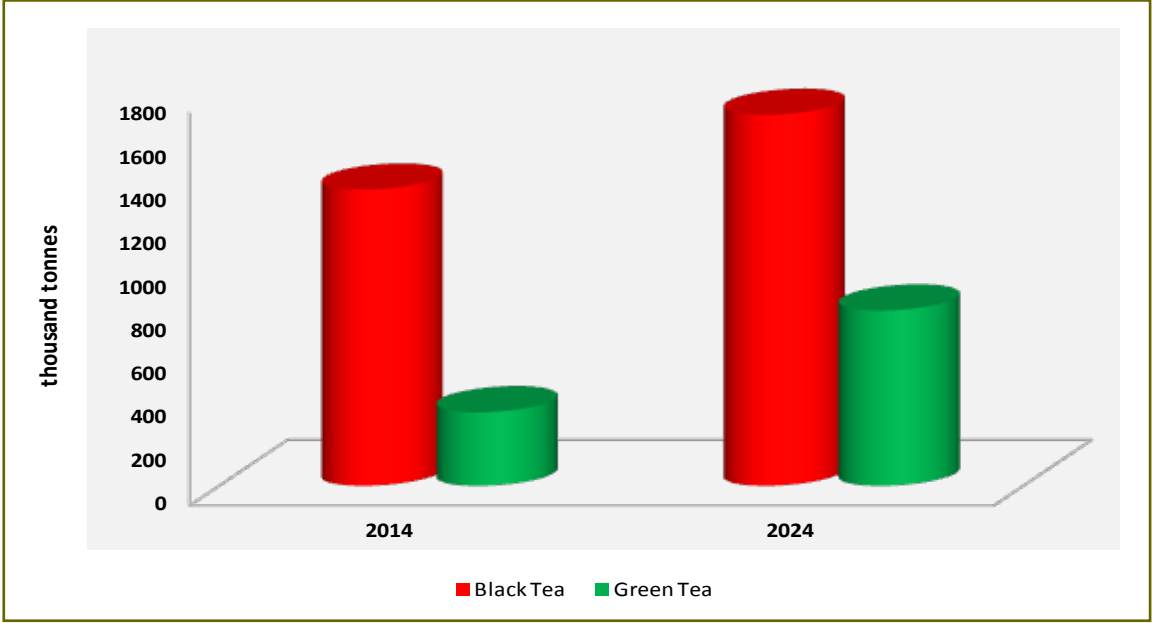
7.4 Trade

World tea exports increased annually by 1.6 percent over the last decade to reach 1.73 million tonnes in 2014 (Figure 5). This reflected larger shipments from Kenya, as total exports from there reached record levels in 2013, as well as an extremely strong annual growth of 3.8 percent in

green tea exports, compared to the annual growth rate of black tea exports of 1.2 percent. Smaller annual Growth rates in exports also were recorded by China, India and Sri Lanka as increasingly larger shares of total tea production, particularly in China and India, were consumed domestically.

In the medium term, black tea exports are projected to reach 1.70 million tonnes in 2024 (Figure 6), with similar growth rates seen for both Africa and Asia.

Figure 6. Actual and projected exports of black tea and green tea



Source: FAO, Secretariat of the Intergovernmental Group on Tea

However, by 2024, export volumes for Asia are projected to reach 837 991 tonnes compared to 767 381 tonnes for Africa. Otherwise, the major exporting countries are expected to remain the same, with Kenya being the single largest exporter followed by Sri Lanka, India, China, Vietnam, Indonesia, Malawi, Uganda and Tanzania.

World green tea exports are projected to grow by 8.9 percent annually to reach 804 300 tonnes by 2024 (Figure 6). China is expected to continue to dominate the tea scene with an export volume of 481 508 tonnes, followed by Vietnam at a distant second with 284 912 tonnes, Indonesia with 19 370 tonnes, and Japan at 8 394 tonnes.

7.5 Prices

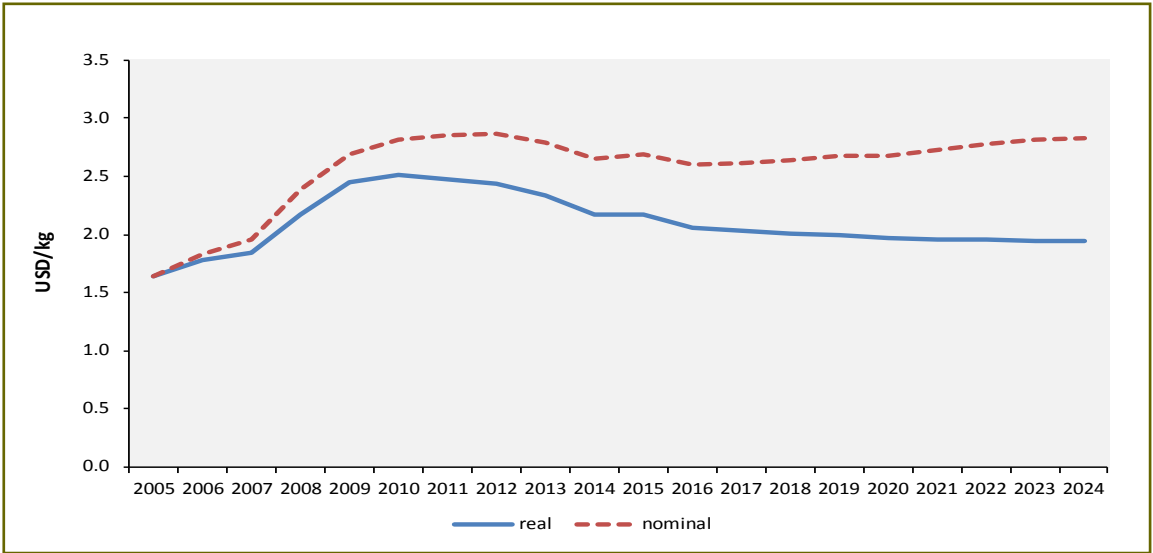
In terms of price developments, the average FAO Composite Price remained firm over the last decade and until 2014 when there was a 5.3 percent decline, mainly due to the weakening of CTC tea prices. Prices recovered in 2015, reflecting the recovery in CTC prices that offset the decline in Orthodox teas as imports from the Russian Federation and the Near East

fell due to weakened economic growth rates associated with lower world oil prices.

In the medium term, the projections suggest that the supply and demand of black tea will be in equilibrium in 2024 at a price of USD 2.83 per kg. This means that the upward trend established over the last decade will continue, with prices rising from an annual average of USD 1.64 per kg in 2005 to the USD 2.65 per kg averaged in 2014, with peaks of USD 3.18 per kg and USD 3.00 per kg reached in September 2009 and December 2012, respectively. Although the projections indicate an increase in nominal terms, in real terms prices are actually likely to decline by an annual average of 1.0 percent over the next decade (Figure 7).

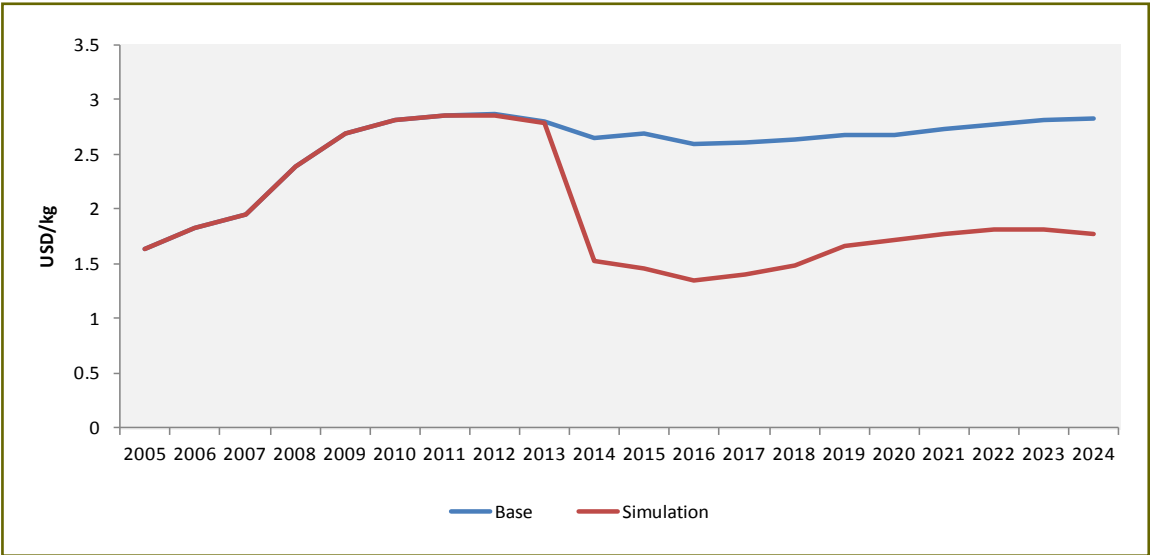
Price developments in 2014 demonstrate the delicate balance between supply and demand and the need to maintain this balance if sustainability is to be achieved. For example, assuming that output were to increase by an additional 5.0 percent, the impact on prices would be quite dramatic: there would be a nearly 40 percent decline over the next ten years, dropping to USD 1.78 per kg in 2024 (Figure 8).

Figure 7. FAO tea prices baseline projections to 2024



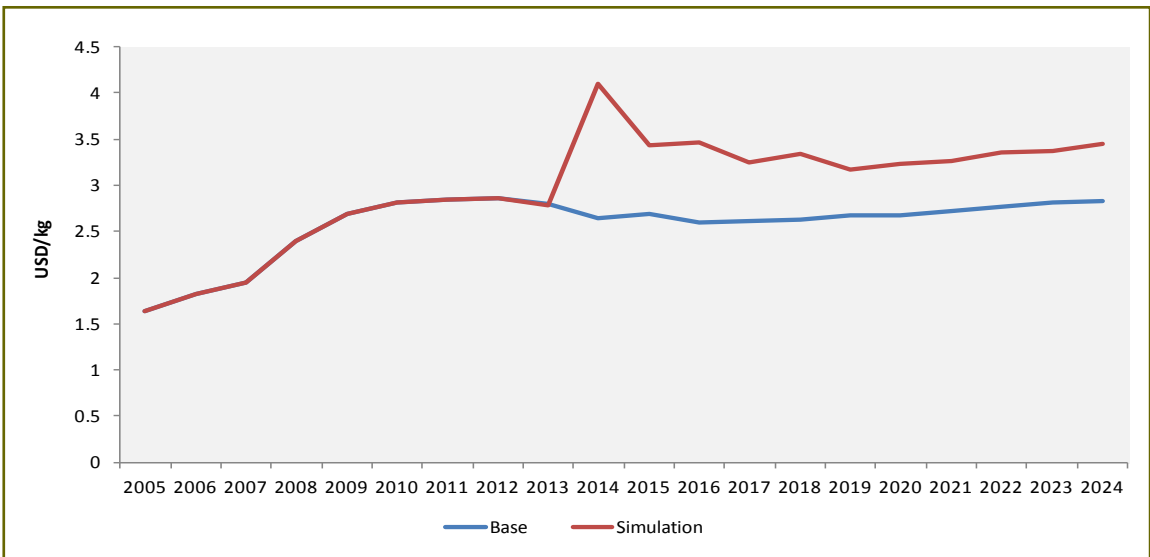
Source: FAO, Secretariat of the Intergovernmental Group on Tea

Figure 8. FAO tea prices 5 percent increase in world production



Source: FAO, Secretariat of the Intergovernmental Group on Tea

Figure 9. FAO tea prices 5 percent decline in world production



Source: FAO, Secretariat of the Intergovernmental Group on Tea

In contrast, if the reaction to the declining prices were to be a decision to cut back on production, say by 5 percent below the baseline, then prices could be 23 percent higher for the decade, reaching USD 3.44 per kg in 2024 (Figure 9).

7.6 Main issues and uncertainties

This review of the world tea market indicates that there was a 2.4 percent decrease in trade volumes in 2014, resulting in an estimated 4.4 percent

decline that year in export earnings, which dropped to USD 5.61 billion at the global level. However, this revenue nevertheless contributed significantly to financing the food import bills of tea-exporting countries. For example, in Kenya and Sri Lanka export earnings, of USD 1.15 billion and USD 1.63 billion, respectively, financed more than 60 percent of Kenya's and 63.8 percent of Sri Lanka's food import bills in 2014. And although foreign exchange earnings from tea were relatively lower in other producing countries, these, too, nevertheless remained significant.

Reiterating the advice and recommendations of the IGG on Tea over the last 15 years and the tireless efforts of its Working Groups, caution needs to be exercised by stakeholders in the world tea economy who must avoid overreacting to periodic price hikes. Greater efforts should be directed at expanding demand. For example, there is scope for increasing per capita consumption in producing countries where it is relatively low compared to that of traditional import markets. Diversification into other segments of the market, such as organic and specialty teas, should also be encouraged and the health benefits of tea consumption should be used more extensively in promoting consumption in both producing and importing countries. However, in targeting potential growth markets, recognition of and compliance with food safety and quality standards is also essential.

Although the advice both from the IGG on Tea, based on the analyses and recommendations of its Working Groups, and from the FAO Secretariat, may appear repetitive and at times tedious, the effectiveness of its implementation has been significant. A review of the possible effects of the advice of the IGG on Tea on the demand for tea, its diversification and the accompanying compliance, indicates that there have been several noteworthy developments, including:

- Per capita consumption levels in tea-producing countries have increased over the last decade. Although not significantly large in most cases, except for China and India, collectively their contribution has been significant;
- The impact at the global level was particularly significant for China, with an annual per capita growth rate in tea consumption of 9.9 percent over the last decade and for India, with a growth rate of 2.1 percent, because when combined, in 2014 the two

countries accounted for more than 36 percent of the world's population and 54 percent of tea consumption;

- Almost exclusively, market promotion in tea-producing countries was based on the health benefits of tea consumption. Research into, and test marketing of, the health benefits of black tea consumption was initiated globally by the IGG on Tea in 1995 through funding from the Common Fund for Commodities. Results of the scientific and market research into the health benefits of black tea consumption were provided to the IGG member countries for use in their market promotion programmes;
- Product diversification, targeting specific market segments, has developed significantly in several producing countries. Examples include organic tea in China and India, Orthodox tea in Sri Lanka, and white, yellow, red and purple teas in several producing countries;
- Value addition such as retail packing has increased in several producing countries, moving away from bulk shipments; and finally
- There has been greater cohesion in the efforts of producing countries towards harmonizing market requirements (MRLs and quality) and reducing the costs of compliance.

Other features that could lead to a dramatic expansion in the demand for tea over the next decade (but which have not been factored into the projections as complete data is not yet available) would be the innovative developments from non-traditional players in the retail and service sectors. These include Teavana, a company specializing in selling teas and tea products that has been owned by Starbucks since 31 December 2012, and several large beverage companies, which

have expanded global production and marketing of ready to drink (RTD) teas, such as Ito En, Coca Cola and AriZona. Teavana currently has more than 400 stores in locations throughout North America and the Near East, and plans are to expand the franchise globally. In the meantime, teas and tea products are beginning to be sold through Starbucks outlets worldwide.

On the supply side, as is well known the tea plant (*Camellia sinensis*) is highly sensitive to changes in growing conditions. Hence, the commercial growing of tea is geographically limited to a few areas of the world, areas which are at risk from ongoing climate change. Therefore, and given the possible constraints regarding the availability of suitable land, a supply response to expanding demand may not be as easy to obtain as it has been in the past.

Finally, the IGG on Tea has to consider future strategies and appropriate enabling policies in order to maintain the sustainable development of the rapidly changing Global Tea Economy.

The Intergovernmental Group on Tea

Against a backdrop of low international tea prices, resulting in unremunerated export and on-farm earnings, an emergency meeting of tea exporting countries was called in 1969, which led to the establishment of the Consultative Committee on Tea by the Committee on Commodity Problems (CCP) at its Forty-fourth Session in the same year. In 1971, the Consultative Committee was renamed as the Intergovernmental Group on Tea (IGG/Tea).

During this period, prices were commonly stabilized by using mechanisms to influence market prices, such as adjusting export quotas, production and sometimes buffer stocks. Hence, it was common practice to establish international commodity agreements to obtain cooperation from producing and consuming countries to achieve this common objective. The continuous surplus of tea supplies in the world market and the consequent decrease in prices worsened from the mid-1960s and negatively impacted the profitability of the industry in tea producing countries.

Rather than negotiating an international commodity agreement, the IGG/Tea was established to provide a forum for consultations on and studies of all problems connected with the tea industry. In particular, it was to regularly conduct a review of short and long term developments in tea production, consumption, trade and prices; to consult and exchange information on trends in the tea industry; to study market structures and the promotion of tea consumption; and to consider international action and prepare proposals for submission to Governments. The Group also considers changes in national policies and examines their international effects as pertaining to the current and prospective market situation.

The IGG/Tea is open to all Members and Associate Members of the Food and Agriculture Organization of the United Nations (FAO) that are substantially interested in the production, consumption of and trade in tea. Interested non-Member Nations of the Organization that are Members of the United Nations, any of its Specialized Agencies or the International Atomic Energy Agency, may be admitted by the FAO Council to Membership in the Group. Increasingly, however, technical side events are organized in conjunction with official IGG/Tea sessions to facilitate a dialogue between country delegates, international policy makers and the private sector.

Annex: Commodity tables

Table 2.1 - Sugar production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
World	144 701	182 245	220 491	2.3	1.9
Developed countries	43 300	42 098	45 282	-0.3	0.7
<i>North America</i>	<i>7 643</i>	<i>7 996</i>	<i>8 301</i>	<i>0.5</i>	<i>0.4</i>
Canada	83	118	134	3.6	1.3
United States of America	7 560	7 877	8 167	0.4	0.4
<i>Europe</i>	<i>26 848</i>	<i>26 136</i>	<i>27 519</i>	<i>-0.3</i>	<i>0.5</i>
European Union	22 016	17890	18 465	-2.1	0.3
Russian Federation	2 226	4 816	5 102	8.0	0.6
<i>Oceania developed</i>	<i>5 241</i>	<i>4 687</i>	<i>5 512</i>	<i>-1.1</i>	<i>1.6</i>
Australia	5 241	4 687	5 512	-1.1	1.6
<i>Other developed¹</i>	<i>3 568</i>	<i>3 279</i>	<i>3 950</i>	<i>-0.8</i>	<i>1.9</i>
Japan	961	730	765	-2.7	0.5
South Africa	2 435	2457	3 062	0.1	2.2
Developing countries	101 401	140 147	175 209	3.3	2.3
<i>Africa</i>	<i>6 323</i>	<i>9 143</i>	<i>14 084</i>	<i>3.8</i>	<i>4.4</i>
<i>North Africa</i>	<i>2 025</i>	<i>2 540</i>	<i>3 190</i>	<i>2.3</i>	<i>2.3</i>
Algeria	0	0	0	-0.0	0.0
Egypt	1 500	2 100	2 588	3.4	2.1
<i>Sub-Saharan Africa</i>	<i>5 024</i>	<i>6 603</i>	<i>10 894</i>	<i>2.8</i>	<i>5.1</i>
Mozambique	215	424	976	7.1	8.7
Zambia	245	446	890	6.2	7.1
Ethiopia	318	473	839	4.0	5.9
United Republic of Tanzania	225	345	995	4.4	11.2
Sudan	726	899	1 338	2.2	4.1
<i>Latin America and Caribbean</i>	<i>46 251</i>	<i>61 746</i>	<i>76 511</i>	<i>2.9</i>	<i>2.2</i>
Argentina	1 874	2 030	2 424	0.8	1.8
Brazil	26 241	38 944	48 379	4.0	2.2
Chile	397	303	437	-2.7	3.7
Mexico	5 568	6 853	6 998	2.1	0.2
Uruguay	8	35	68	16.4	6.9
<i>Asia and Pacific</i>	<i>48 100</i>	<i>69 258</i>	<i>84 614</i>	<i>3.7</i>	<i>2.0</i>
Bangladesh	158	105	113	-4.0	0.7
China ²	10 693	13 370	16 408	2.3	2.1
Philippines	2 291	2 640	3 237	1.4	2.1

Table 2.1 - Sugar production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
India	17 062	26 603	27 430	4.5	0.3
Indonesia	2 043	2 768	3 020	3.1	0.9
Iran (Islamic Republic of)	1 227	1 380	2 226	1.2	4.9
Malaysia	93	10	14	-20.0	3.4
Pakistan	3 811	5 567	7 698	3.9	3.3
Thailand	6 680	11 576	17 169	5.7	4.0
Turkey	2 090	2 465	3 185	1.7	2.6
Viet Nam	992	1 730	2 657	5.7	4.4
Least Developed Countries (LDC)	2 729	4 494	7 981	5.1	5.9

¹ Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.

² Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.

Table 2.2 - Sugar consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
World	143 256	174 290	214 295	2.0	2.1
Developed countries	48 360	49 727	51 856	0.3	0.4
<i>North America</i>	<i>10 385</i>	<i>12 224</i>	<i>13 037</i>	<i>1.6</i>	<i>0.6</i>
Canada	1 298	1 330	1 449	0.2	0.9
United States of America	9 086	10 894	11 587	1.8	0.6
<i>Europe</i>	<i>30 298</i>	<i>29 066</i>	<i>28 759</i>	<i>-0.4</i>	<i>-0.1</i>
European Union	19 619	19 482	18 719	-0.1	-0.4
Russian Federation	6 633	5 892	6 469	-1.2	0.9
Ukraine	2 288	2 008	1 890	-1.3	-0.6
<i>Oceania developed</i>	<i>1 299</i>	<i>1 323</i>	<i>1 469</i>	<i>0.2</i>	<i>1.1</i>
Australia	1 071	1 105	1 230	0.3	1.1
New Zealand	228	218	239	-0.5	0.9
<i>Other developed¹</i>	<i>6 378</i>	<i>7 115</i>	<i>8 591</i>	<i>1.1</i>	<i>1.9</i>
Japan	2 408	2 127	2 103	-1.2	-0.1
South Africa	1 485	2 151	3 247	3.8	4.2
Developing countries	94 897	124 563	162 440	2.8	2.7
<i>Africa</i>	<i>11 214</i>	<i>17 600</i>	<i>25 176</i>	<i>4.6</i>	<i>3.6</i>
<i>North Africa</i>	<i>5 407</i>	<i>6 878</i>	<i>8 961</i>	<i>2.4</i>	<i>2.7</i>
Algeria	1 125	1 405	1 676	2.2	1.8
Egypt	2 568	3 439	4 913	3.0	3.6
<i>Sub-Saharan Africa</i>	<i>6 457</i>	<i>10 722</i>	<i>16 214</i>	<i>5.2</i>	<i>4.2</i>
<i>Latin America and Caribbean</i>	<i>25 765</i>	<i>30 101</i>	<i>34 616</i>	<i>1.6</i>	<i>1.4</i>
Argentina	1 569	1 829	2 182	1.5	1.8
Brazil	10 694	13 477	15 764	2.3	1.6
Chile	682	839	935	2.1	1.1
Mexico	5 178	4 733	4 901	-0.9	0.3
Uruguay	113	136	171	1.8	2.3
<i>Asia and Pacific</i>	<i>57 267</i>	<i>76 862</i>	<i>102 648</i>	<i>3.0</i>	<i>2.9</i>
Bangladesh	768	1 810	3 484	8.9	6.8
China ²	11 407	16 230	22 363	3.6	3.3
India	19 720	25 059	31 284	2.4	2.2
Indonesia	3 880	6 163	9 000	4.7	3.9
Iran (Islamic Republic of)	2 043	2 628	3 415	2.5	2.7
Republic of Korea	1 268	1 383	1 717	0.9	2.2

Table 2.2 - Sugar consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
Malaysia	1 183	1 596	2 272	3.0	3.6
Pakistan	4 030	5 145	7 120	2.5	3.3
Saudi Arabia	713	1 121	1 714	4.6	4.3
Thailand	2 227	3 063	4 197	3.2	3.2
Turkey	1 834	2 541	3 361	3.3	2.8
Least Developed Countries (LDC)	5 178	10 218	16 119	7.0	4.7

¹ Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.

² Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.

Table 2.3 - Sugar exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
World	45 907	57 951	73 006	2.4	2.3
Developed countries	12 283	6 882	7 758	-5.6	1.2
<i>North America</i>	<i>151</i>	<i>177</i>	<i>322</i>	<i>1.6</i>	<i>6.2</i>
Canada	18	55	95	11.9	5.6
United States of America	133	121	227	-0.9	6.5
<i>Europe</i>	<i>6 232</i>	<i>2 470</i>	<i>2 905</i>	<i>-8.8</i>	<i>1.6</i>
European Union	5 130	1 670	1 809	-10.6	0.8
Russian Federation	134	88	125	-4.2	3.6
Ukraine	233	83	95	-9.8	1.3
<i>Oceania developed</i>	<i>4 164</i>	<i>3 371</i>	<i>4 262</i>	<i>-2.1</i>	<i>2.4</i>
Australia	4 142	3 361	4 257	-2.1	2.4
New Zealand	22	10	5	-7.6	-6.7
<i>Other developed¹</i>	<i>1 736</i>	<i>864</i>	<i>268</i>	<i>-6.7</i>	<i>-11.0</i>
Japan	2	4	5	6.2	3.2
South Africa	1 133	614	199	-5.9	-10.7
Developing countries	33 624	51 069	65 248	4.3	2.5
<i>Africa</i>	<i>2 449</i>	<i>3 199</i>	<i>4 204</i>	<i>2.7</i>	<i>2.8</i>
<i>North Africa</i>	<i>119</i>	<i>451</i>	<i>999</i>	<i>14.3</i>	<i>8.3</i>
Algeria	4	295	984	52.5	12.8
Egypt	76	155	16	7.4	-20.6
<i>Sub-Saharan Africa</i>	<i>2 472</i>	<i>2 748</i>	<i>3 205</i>	<i>1.1</i>	<i>1.5</i>
Mozambique	86	259	679	11.7	10.1
Zambia	126	274	552	8.1	7.3
Ethiopia	21	50	181	8.9	13.7
United Republic of Tanzania	20	20	98	0.0	17.2
Sudan	142	177	128	2.2	-3.2
<i>Latin America and Caribbean</i>	<i>22 403</i>	<i>34 068</i>	<i>42 921</i>	<i>4.3</i>	<i>2.3</i>
Argentina	277	241	252	-1.4	0.5
Brazil	16 034	25 715	31 893	4.8	2.2
Chile	0	0	0	0.0	0.0
Mexico	199	2 157	2 265	26.9	0.5
Uruguay	5	7	10	2.3	4.1
<i>Asia and Pacific</i>	<i>8 629</i>	<i>13 803</i>	<i>18 123</i>	<i>4.8</i>	<i>2.8</i>
Bangladesh	3	192	973	49.9	17.6

Table 2.3 - Sugar exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
China ²	176	142	89	-2.1	-4.6
India	753	1 539	277	7.4	-15.7
Indonesia	0	0	0	0.0	0.6
Iran (Islamic Republic of)	4	0	0	-22.3	-24.9
Republic of Korea	317	291	211	-0.9	-3.2
Malaysia	233	245	72	0.5	-11.5
Pakistan	97	388	576	14.8	4.0
Philippines	204	228	286	1.1	2.3
Saudi Arabia	91	275	337	11.7	2.1
Thailand	4 500	7 803	12 753	5.7	5.0
Turkey	133	63	77	-7.2	2.0
Viet Nam	11	184	25	32.1	-18.2
Least Developed Countries (LDC)	967	1 819	2 942	6.5	4.9

¹ Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.

² Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.

Table 2.4 - Sugar imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
World	42 911	54 127	70 580	2.3	2.7
Developed countries	17 153	15 326	14 729	-1.1	-0.4
<i>North America</i>	<i>2 864</i>	<i>4 454</i>	<i>5 092</i>	<i>4.5</i>	<i>1.3</i>
Canada	1 300	1 251	1 410	-0.4	1.2
United States of America	1 565	3 202	3 682	7.4	1.4
<i>Europe</i>	<i>9 305</i>	<i>5 772</i>	<i>4 154</i>	<i>-4.7</i>	<i>-3.2</i>
European Union	2 988	3 852	2 022	2.6	-6.2
Russian Federation	3 954	1 128	1 533	-11.8	3.1
Ukraine	729	8	3	-36.0	-8.8
<i>Oceania developed</i>	<i>270</i>	<i>330</i>	<i>344</i>	<i>2.0</i>	<i>0.4</i>
Australia	10	99	100	26.2	0.1
New Zealand	261	232	244	-1.2	0.5
<i>Other developed¹</i>	<i>4 714</i>	<i>4 770</i>	<i>5 139</i>	<i>0.1</i>	<i>0.7</i>
Japan	1 466	1 400	1 343	-0.5	-0.4
South Africa	269	352	571	2.7	5.0
Developing countries	25 758	38 802	55 852	4.2	3.7
<i>Africa</i>	<i>8 042</i>	<i>11 895</i>	<i>15 936</i>	<i>4.0</i>	<i>3.0</i>
<i>North Africa</i>	<i>3 850</i>	<i>4 847</i>	<i>6 943</i>	<i>2.3</i>	<i>3.7</i>
Algeria	1 412	1 786	2 693	2.4	4.2
Egypt	1 166	1 433	2 431	2.1	5.4
<i>Sub-Saharan Africa</i>	<i>4 242</i>	<i>7 048</i>	<i>8 993</i>	<i>5.2</i>	<i>2.5</i>
Mozambique	11	1	0	-21.4	-34.3
Zambia	0	0	0	0.0	-1.4
Ethiopia	13	56	73	15.9	2.8
United Republic of Tanzania	84	250	42	11.5	-16.4
Sudan	50	1 337	2 200	38.9	5.1
<i>Latin America and Caribbean</i>	<i>1 640</i>	<i>2 393</i>	<i>2 093</i>	<i>3.8</i>	<i>-1.3</i>
Argentina	5	1	1	-15.4	0.0
Brazil	0	0	0	-	-
Chile	203	556	529	10.6	-0.5
Mexico	67	135	234	7.2	5.7
Uruguay	121	113	115	-0.7	0.1
<i>Asia and Pacific</i>	<i>16 026</i>	<i>24 514</i>	<i>37 822</i>	<i>4.3</i>	<i>4.4</i>
Bangladesh	745	1 824	4 474	9.4	9.4

Table 2.4 - Sugar imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
China ²	1 086	3 925	5 903	13.7	4.2
India	922	965	4 897	0.4	17.6
Indonesia	1 802	3 619	6 079	7.2	5.3
Iran (Islamic Republic of)	764	1 356	1 251	5.9	-0.8
Republic of Korea	1 587	1 727	1 935	0.8	1.1
Malaysia	1 409	1 849	2 409	2.8	2.7
Pakistan	249	67	81	-12.3	1.9
Philippines	2	0	0	-37.0	0.0
Saudi Arabia	831	1 330	2 100	4.8	4.7
Thailand	2	10	15	19.9	3.5
Turkey	2	106	318	51.3	11.7
Viet Nam	30	52	33	5.6	-4.5
Least Developed Countries (LDC)	3 730	7 578	11 544	7.3	4.3

¹ Includes Israel and also transition economies: Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Armenia, Azerbaijan and Georgia.

² Refers to mainland only. The economies of Chinese Taipei, Hong Kong (China) and Macau (China) are included in the Other Asia Pacific aggregate.

Table 3.1 - Orange production

Countries / Regions	Production					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	47 960.8	60 539.6	68 836.0	77 040.0	1.29	1.13
Northern Hemisphere	30 255.1	39 939.6	45 569.5	51 640.0	1.33	1.26
United States of America	8 490.2	11 063.9	7 933.5	6 800.0	-3.27	-1.53
Mediterranean Region	10 738.6	10 935.9	12 800.8	14 720.0	1.59	1.41
Algeria	219.2	359.6	415.0	430.0	1.44	0.36
Cyprus	121.2	94.8	82.9	100.0	-1.33	1.89
Egypt	1 656.6	1 810.7	2 464.4	3 010.0	3.13	2.02
Greece	889.5	1 085.4	920.7	1 050.0	-1.63	1.32
Israel	495.8	173.4	95.2	110.0	-5.82	1.45
Italy	2 041.0	1 809.5	2 302.3	2 650.0	2.44	1.42
Lebanon	266.8	177.7	109.3	120.0	-4.74	0.94
Morocco	922.8	744.0	846.3	1 060.0	1.30	2.28
Spain	2 775.3	2 855.8	2 954.5	3 080.0	0.34	0.42
Syrian Arab Republic	196.5	434.0	594.2	560.0	3.19	-0.59
Tunisia	134.1	179.2	201.8	240.0	1.19	1.75
Turkey	785.3	1 101.7	1 700.6	2 180.0	4.44	2.51
Others	234.4	109.9	113.6	130.0	0.33	1.36
China (Mainland)	1 307.8	3 359.5	6 600.0	7 800.0	6.99	1.68
Costa Rica	125.7	390.2	340.0	400.0	-1.37	1.64
Cuba	433.3	453.3	103.6	200.0	-13.72	6.80
Dominican Republic	65.0	103.3	150.0	160.0	3.80	0.65
Ghana	50.0	300.0	616.7	760.0	7.47	2.11
Guatemala	81.1	106.0	156.1	170.0	3.95	0.86
Honduras	56.5	212.5	283.3	320.0	2.92	1.22
India	1 686.7	3 016.7	4 857.0	6 350.0	4.88	2.72
Indonesia	334.1	1 063.1	1 676.9	2 140.0	4.66	2.47
Iran (Islamic Republic of)	1 489.1	1 882.8	2 663.9	2 760.0	3.53	0.36
Mexico	2 494.4	3 879.7	3 915.7	4 800.0	0.09	2.06
Pakistan	1 144.3	1 234.3	1 404.2	1 750.0	1.30	2.23
Portugal	175.0	258.8	200.5	230.0	-2.52	1.38
Sudan	14.7	94.3	135.7	150.0	3.70	1.01
Thailand	308.3	345.5	431.7	490.0	2.25	1.28
Viet Nam	133.7	453.4	645.0	800.0	3.59	2.18
Others	1 126.4	786.4	655.0	840.0	-1.81	2.52
Southern Hemisphere	17 705.7	20 600.0	23 266.6	25 400.0	1.22	0.88
Argentina	647.1	797.7	638.3	760.0	-2.20	1.76
Australia	547.8	492.3	372.0	410.0	-2.76	0.98

Table 3.1 - Orange production

Countries / Regions	Production					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
Bolivia (Plurinational State of)	84.7	99.8	174.2	200.0	5.73	1.39
Brazil	13 940.0	16 157.0	18 433.0	20 100.0	1.33	0.87
Colombia	273.0	201.6	264.6	280.0	2.76	0.57
Paraguay	177.5	205.7	233.3	240.0	1.27	0.28
Peru	154.3	292.4	422.5	450.0	3.75	0.63
South Africa	690.7	1 176.7	1 426.0	1 620.0	1.94	1.28
Uruguay	130.6	142.3	149.7	160.0	0.51	0.67
Venezuela (Bolivarian Republic of)	431.2	377.1	413.5	420.0	0.92	0.16
Others	628.9	657.4	739.5	760.0	1.18	0.27

Table 3.2 - Orange imports

Countries / Regions	Imports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	4 341.1	4 883.4	6 304.3	7 465	2.59	1.70
Northern Hemisphere	4 313.7	4 833.6	6 204.1	7 345	2.53	1.70
United States of America	29.3	56.3	120.0	140	7.86	1.55
Mediterranean Region	653.7	774.1	941.5	1 075	1.98	1.34
France	596.1	443.7	455.9	510	0.27	1.13
Italy	0.0	97.9	183.2	190	6.47	0.37
Spain	1.9	146.6	124.7	140	-1.61	1.17
Others	55.6	85.8	177.7	235	7.55	2.83
Russian Federation	283.3	346.3	539.5	760	4.53	3.49
Germany	570.5	543.1	518.1	560	-0.47	0.78
Netherlands	377.4	346.4	467.8	530	3.05	1.26
Saudi Arabia	213.7	247.4	326.3	410	2.81	2.31
United Kingdom	364.5	312.4	285.1	320	-0.91	1.16
China, Hong Kong SAR	148.0	205.9	201.7	225	-0.21	1.10
Canada	195.8	209.0	200.0	220	-0.44	0.96
United Arab Emirates	46.6	56.3	188.7	210	12.86	1.08
Iraq	1.1	0.8	161.7	200	70.04	2.15
Republic of Korea	0.7	112.7	155.7	205	3.29	2.79
Poland	126.6	129.7	144.4	165	1.08	1.34
Ukraine	22.9	45.5	131.7	150	11.20	1.31
Belgium-Luxembourg	174.3	185.1	123.5	195	-3.97	4.68
Japan	139.5	117.5	118.6	160	0.09	3.04
Iran (Islamic Republic of)	0.0	0.0	100.3	90		-1.08
China	14.2	69.0	95.0	160	3.25	5.35
Malaysia	43.0	72.7	94.7	110	2.68	1.51
Sweden	75.9	70.4	93.1	100	2.84	0.71
Costa Rica	0.0	8.9	75.0	80	23.82	0.65
Romania	66.0	53.0	70.7	85	2.92	1.85
Portugal	20.4	32.8	70.0	75	7.86	0.69
Switzerland	65.1	61.2	64.7	70	0.56	0.80
Czech Republic	19.8	61.1	60.4	70	-0.10	1.48
Austria	79.9	56.4	56.1	60	-0.06	0.68
Others	581.3	659.7	800.0	920	1.95	1.41
Southern Hemisphere	27.4	49.7	100.1	120	7.25	1.83
Paraguay	10.0	15.5	29.8	30	6.79	0.05
Australia	5.0	9.7	20.0	25	7.53	2.27
New Zealand	11.1	11.3	16.6	20	3.93	1.90

Table 3.2 - Orange imports

Countries / Regions	Imports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
Brazil	0.0	1.2	12.7	15	26.55	1.71
Others	4.1	16.3	21.1	30	2.58	3.60

Table 3.3 - Orange exports

Countries / Regions	Exports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	4 192.7	4 957.0	6 692.1	7 465	3.0	1.1
Northern Hemisphere	3 485.3	3 866.6	5 256.8	5 850	3.1	1.1
United States of America	428.0	570.7	708.7	650	2.2	-0.9
Mediterranean Region	2 668.1	2 776.1	3 804.3	4 380	3.2	1.4
Egypt	167.5	299.0	901.7	1 200	11.7	2.9
Greece	289.0	316.1	343.9	380	0.8	1.0
Italy	138.1	110.2	142.1	165	2.6	1.5
Lebanon	67.9	80.8	77.7	90	-0.4	1.5
Morocco	400.0	257.1	130.3	145	-6.6	1.1
Spain	1 213.1	1 348.1	1 656.1	1 780	2.1	0.7
Syrian Arab Republic	0.4	22.3	106.7	110	16.9	0.3
Turkey	57.0	167.3	298.2	360	5.9	1.9
Others	335.2	175.2	147.6	150	-1.7	0.2
China	21.8	7.0	101.3	120	30.6	1.7
Honduras	15.4	16.7	31.4	45	6.5	3.7
India	7.3	37.8	31.7	40	-1.8	2.4
Mexico	14.1	14.7	22.5	50	4.4	8.3
Others	330.5	443.6	556.9	565	2.3	0.1
Southern Hemisphere	707.4	1 090.4	1 435.2	1 615	2.8	1.2
Argentina	75.8	87.7	93.3	105	0.6	1.2
Australia	74.2	125.3	113.2	150	-1.0	2.9
Brazil	94.0	77.3	26.2	30	-10.3	1.4
Chile	0.0	5.2	67.1	80	29.2	1.8
South Africa	378.7	679.2	1 035.7	1 150	4.3	1.1
Uruguay	66.5	57.6	57.0	60	-0.1	0.5
Others	18.2	58.1	42.8	40	-3.0	-0.7

Table 3.4 - Tangerines production

Countries / Regions	Production					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	12 490.2	17 230.8	27 953.3	35 040	4.96	2.29
Northern Hemisphere	11 240.1	15 025.3	25 841.2	32 530	5.57	2.33
United States of America	317.6	440.4	636.5	740	3.75	1.52
Mediterranean Region	3 335.3	4 214.5	5 759.1	7 140	3.17	2.17
Algeria	90.8	110.7	111.0	120	0.03	0.78
Cyprus	9.8	40.3	45.9	50	1.33	0.85
Egypt	288.6	557.7	729.0	810	2.71	1.06
Greece	74.0	78.5	123.0	140	4.60	1.30
Israel	121.5	78.1	153.7	190	7.00	2.14
Italy	492.8	584.1	802.9	920	3.23	1.37
Lebanon	44.1	44.2	23.7	30	-6.06	2.40
Morocco	310.5	378.3	704.8	920	6.42	2.70
Spain	1 482.2	1 869.0	2 063.5	2 560	0.99	2.18
Tunisia	40.2	38.2	46.2	50	1.92	0.79
Turkey	345.3	384.8	868.6	1 250	8.48	3.71
Others	35.4	50.5	86.9	100	5.59	1.42
China	3 651.1	6 330.3	15 666.7	20 500	9.49	2.73
Iran (Islamic Republic of)	215.2	413.8	728.5	880	5.82	1.91
Japan	1 959.7	1 419.0	901.3	900	-4.44	-0.01
Republic of Korea	589.3	634.7	606.0	690	-0.46	1.31
Mexico	173.3	370.6	428.8	460	1.47	0.70
Pakistan	425.0	459.0	521.8	560	1.29	0.71
Portugal	25.5	54.0	34.2	40	-4.46	1.58
Thailand	320.0	465.9	370.0	380	-2.28	0.27
Others	228.1	223.2	188.3	240	-1.69	2.46
Southern Hemisphere	1 250.0	2 205.5	2 112.0	2 510	-0.43	1.74
Argentina	366.4	432.3	296.7	480	-3.70	4.93
Bolivia (Plurinational State of)	41.9	51.1	136.4	150	10.31	0.95
Brazil	576.0	1 230.9	974.8	1 050	-2.31	0.75
Peru	54.5	141.3	265.7	320	6.52	1.88
South Africa	41.2	123.3	152.9	180	2.17	1.65
Uruguay	52.8	82.2	112.7	130	3.21	1.44
Others	117.2	144.4	172.9	200	1.81	1.47

Table 3.5 - Tangerines imports

Countries / Regions	Imports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	1 646.9	2 348.8	4 083.7	5 735	5.69	3.45
Northern Hemisphere	1 646.4	2 342.0	4 053.4	5 575	5.64	3.24
United States of America	19.3	79.7	150.7	185	6.58	2.07
Mediterranean Region	315.2	421.0	526.4	675	2.26	2.52
France	294.3	298.6	349.8	415	1.60	1.72
Italy	8.1	78.1	90.2	100	1.45	1.04
Others	12.0	29.8	62.8	160	7.73	9.80
Russian Federation	50.0	160.7	736.0	1 250	16.43	5.44
Germany	382.1	336.7	375.2	400	1.09	0.64
United Kingdom	155.6	253.7	269.2	295	0.59	0.92
Indonesia	2.3	50.2	200.7	320	14.86	4.78
Netherlands	123.2	110.6	186.9	250	5.38	2.95
Ukraine	0.2	38.9	183.0	260	16.75	3.57
Poland	44.6	118.1	174.8	225	4.00	2.55
Canada	72.5	91.1	131.7	160	3.75	1.97
Thailand	0.0	45.0	119.2	180	10.23	4.21
Belgium-Luxembourg	62.5	65.5	68.4	80	0.44	1.57
Philippines	2.8	28.4	59.0	80	7.59	3.09
Czech Republic	13.1	47.2	56.9	80	1.88	3.48
Sweden	39.2	44.4	52.2	60	1.63	1.40
Kazakhstan	0.1	2.7	55.8	85	35.37	4.30
Saudi Arabia	41.1	50.0	55.9	100	1.12	5.98
Others	322.6	442.6	651.0	890	3.94	3.18
Southern Hemisphere	20.0	65.7	105.8	160	4.88	4.22

Table 3.6 - Tangerines exports

Countries / Regions	Exports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	1 639.0	2 534.8	4 497.0	5 735	5.9	2.5
Northern Hemisphere	1 567.0	2 312.5	4 129.0	5 300	6.0	2.5
United States of America	15.7	15.3	46.0	50	11.6	0.8
Mediterranean Region	1 351.9	1 833.5	2 768.0	3 310	4.2	1.8
Spain	965.3	1 232.6	1 636.6	1 810	2.9	1.0
Turkey	115.3	220.1	416.1	680	6.6	5.0
Morocco	164.6	177.9	333.5	380	6.5	1.3
Italy	16.7	60.9	106.5	110	5.7	0.3
Greece	12.8	32.4	77.3	80	9.1	0.3
Israel	27.4	25.8	72.9	110	11.0	4.2
Others	43.8	69.7	125.1	140	6.0	1.1
China	39.0	178.8	767.0	1230	15.7	4.8
Pakistan	30.1	108.0	347.6	380	12.4	0.9
Others	130.4	176.9	200.0	330	1.2	5.1
Southern Hemisphere	71.9	222.3	368.0	435	5.2	1.7
South Africa	6.1	78.4	115.0	160	3.9	3.4
Argentina	36.4	41.8	101.7	115	9.3	1.2
Peru	0.1	9.9	75.2	80	22.5	0.6
Others	29.3	78.6	76.5	80	-0.3	0.5

Table 3.7 - Lemons and limes production

Countries / Regions	Production					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	7 326.3	11 225.3	13 121.8	15 430	1.6	1.6
Northern Hemisphere	5 722.2	8 304.6	9 815.0	11 900	1.7	1.9
United States of America	742.1	886.8	795.4	835	-1.1	0.5
Mediterranean Region	2 515.2	2 634.7	2 845.5	3 410	0.8	1.8
Algeria	12.2	37.2	42.3	50	1.3	1.7
Cyprus	49.3	21.9	15.1	30	-3.7	7.1
Egypt	375.8	258.1	321.0	380	2.2	1.7
Greece	181.6	116.1	48.8	70	-8.3	3.7
Israel	30.0	27.7	63.4	80	8.6	2.4
Italy	722.8	531.5	487.7	560	-0.9	1.4
Lebanon	87.0	89.2	81.3	80	-0.9	-0.2
Morocco	9.3	15.3	94.0	140	19.9	4.1
Spain	673.9	941.9	706.9	810	-2.8	1.4
Syrian Arab Republic	44.9	81.4	152.4	150	6.5	-0.2
Tunisia	16.4	24.4	46.8	50	6.8	0.7
Turkey	295.0	469.8	762.5	970	5.0	2.4
Others	17.1	20.0	23.3	40	1.5	5.5
China	5.5	144.1	350.0	580	9.3	5.2
Guatemala	121.4	124.2	110.4	115	-1.2	0.4
India	750.7	1 393.3	2 169.3	2 650	4.5	2.0
Iran (Islamic Republic of)	486.2	1 042.9	1 004.4	1 120	-0.4	1.1
Mexico	725.3	1 652.7	2 046.0	2 560	2.2	2.3
Portugal	10.3	12.0	13.7	20	1.3	3.8
Thailand	66.3	121.7	126.8	130	0.4	0.2
Others	299.3	292.3	353.4	480	1.9	3.1
Southern Hemisphere	1 604.0	2 920.7	3 306.8	3 530	1.2	0.7
Argentina	566.7	1 205.7	1 383.3	1 450	1.4	0.5
Australia	34.8	36.9	24.9	30	-3.9	1.9
Bolivia (Plurinational State of)	57.7	63.9	18.6	20	-11.6	0.7
Brazil	479.3	976.9	1 145.0	1200	1.6	0.5
Chile	91.7	147.3	157.7	170	0.7	0.8
Peru	208.4	236.2	229.6	240	-0.3	0.4
South Africa	60.7	156.7	254.0	300	5.0	1.7
Uruguay	45.3	40.6	41.7	50	0.3	1.8
Others	59.6	56.6	52.0	70	-0.8	3.0

Table 3.8 - Lemons and limes imports

Countries / Regions	Imports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	994.8	1 636.9	2 385.8	3 015	3.84	2.37
Northern Hemisphere	992.6	1 628.4	2 360.8	3 015	3.78	2.48
United States of America	99.4	234.0	465.0	565	7.11	1.97
Canada	31.8	50.6	92.0	110	6.16	1.80
Mediterranean Region	156.7	312.9	354.5	380	1.25	0.70
France	134.5	115.1	131.0	140	1.30	0.66
Italy	0.0	87.1	95.5	100	0.93	0.46
Spain	0.0	47.7	49.0	50	0.25	0.21
Greece	0.0	10.3	29.0	30	10.86	0.35
Others	22.2	52.6	50.0	60	-0.51	1.85
Russian Federation	20.4	144.9	221.3	280	4.32	2.38
Netherlands	48.9	82.6	174.2	205	7.74	1.64
Germany	129.9	145.1	148.4	170	0.22	1.37
China	8.0	28.7	68.4	150	9.07	8.17
United Kingdom	58.4	77.3	109.5	125	3.55	1.33
Saudi Arabia	41.4	46.7	107.9	130	8.73	1.88
Poland	67.4	103.4	95.5	120	-0.79	2.31
United Arab Emirates	8.5	20.5	65.3	80	12.31	2.05
Ukraine	6.0	32.7	63.0	100	6.77	4.73
Japan	91.7	87.3	52.8	75	-4.91	3.58
Others	232.2	289.0	410.6	525	3.57	2.49

Table 3.9 - Lemons and limes exports

Countries / Regions	Exports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	1 019.0	1 739.6	2 559.2	3 015	3.9	1.7
Northern Hemisphere	898.1	1 298.8	1 991.9	2 360	4.4	1.7
United States of America	128.0	108.0	102.3	140	-0.5	3.2
Mediterranean Region	624.1	807.0	1 058.7	1 190	2.8	1.2
Spain	347.7	495.8	514.5	540	0.4	0.5
Turkey	143.0	202.6	417.3	480	7.5	1.4
Italy	46.0	23.4	42.1	65	6.0	4.4
Egypt	0.7	8.9	34.8	50	14.6	3.7
Others	86.7	76.2	50.0	55	-4.1	1.0
Mexico	82.3	258.3	527.3	700	7.4	2.9
India	0.2	5.0	22.5	50	16.3	8.3
Others	63.4	120.4	281.0	280	8.8	0.0
Southern Hemisphere	121.0	440.9	567.3	655	2.6	1.4
Argentina	64.1	284.0	267.3	280	-0.6	0.5
South Africa	27.7	83.7	167.3	220	7.2	2.8
Brazil	5.3	23.5	70.4	85	11.6	1.9
Chile	2.9	26.2	39.9	45	4.3	1.2
Others	20.9	23.5	22.3	25	-0.5	1.1

Table 3.10 - Grapefruit production

Countries / Regions	Production					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	4 596.1	5 807.9	6 996.6	8 620	1.88	2.11
Northern Hemisphere	4 073.9	5 097.0	6 280.5	7 825	2.11	2.22
United States of America	2 198.7	2 103.2	1 088.7	1 100	-6.37	0.10
Mediterranean Region	670.3	577.8	708.3	810	2.06	1.35
Cyprus	108.7	38.2	44.0	55	1.43	2.25
Egypt	2.1	3.0	59.4	80	34.79	3.02
Greece	7.6	9.1	5.8	10	-4.49	5.66
Israel	363.0	273.8	213.4	200	-2.46	-0.65
Italy	6.7	5.1	7.1	10	3.40	3.45
Lebanon	53.0	12.2	7.3	10	-4.96	3.15
Spain	25.3	31.7	50.9	60	4.85	1.67
Tunisia	48.5	70.0	94.4	115	3.04	1.99
Turkey	38.3	125.8	219.8	260	5.74	1.69
Others	17.1	8.9	6.2	10	-3.58	4.98
China	485.0	1 218.4	3 131.9	4 200	9.90	2.98
Cuba	281.9	222.5	93.9	140	-8.27	4.07
India	75.0	137.3	198.7	280	3.76	3.49
Iran (Islamic Republic of)	16.0	36.5	68.2	80	6.44	1.61
Mexico	105.7	299.3	410.7	480	3.21	1.57
Thailand	36.7	252.5	320.3	385	2.41	1.86
Others	204.5	249.3	259.7	350	0.41	3.03
Southern Hemisphere	522.3	710.9	716.1	795	0.07	1.05
Argentina	172.6	177.3	139.7	160	-2.36	1.37
Australia	24.1	14.8	9.1	8	-4.75	-1.25
Brazil	57.7	66.7	74.7	81	1.14	0.82
Paraguay	73.3	45.3	42.7	46	-0.60	0.76
South Africa	120.0	309.4	372.0	420	1.86	1.22
Others	74.6	97.4	78.0	80	-2.19	0.25

Table 3.11 - Grapefruit imports

Countries / Regions	Imports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	1 002.1	1 030.6	1 095.2	1 220	0.61	1.09
Northern Hemisphere	982.1	1 006.0	1 058.7	1 180	0.51	1.09
United States of America	10.0	21.0	7.1	20	-10.33	10.98
Canada	73.9	53.7	44.0	45	-1.97	0.22
Mediterranean Region	185.6	161.5	133.6	155	-1.88	1.50
France	141.4	105.2	76.8	85	-3.10	1.02
Italy	42.2	34.2	28.9	30	-1.66	0.36
Others	2.0	22.0	27.8	40	2.35	3.71
Netherlands	78.2	101.0	171.2	180	5.42	0.50
Japan	237.2	274.3	165.4	145	-4.93	-1.31
Russian Federation	13.9	29.1	127.0	165	15.88	2.65
Germany	86.0	67.3	62.9	65	-0.67	0.33
Poland	19.0	33.9	43.0	50	2.39	1.53
United Kingdom	84.0	66.3	36.3	40	-5.86	0.98
Ukraine	0.2	3.6	26.7	35	22.03	2.76
Belgium-Luxembourg	68.2	63.5	24.3	30	-9.15	2.13
Others	125.8	130.8	217.4	250	5.21	1.41
Southern Hemisphere	20.0	24.6	36.5	40	4.02	0.92

Table 3.12 - Grapefruit exports

Countries / Regions	Exports					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	1 014.0	1 001.7	1 135.0	1 220	1.26	0.72
Northern Hemisphere	896.9	808.1	918.2	975	1.29	0.60
United States of America	455.0	379.0	206.7	140	-5.88	-3.82
Mediterranean Region	237.8	247.4	358.6	410	3.78	1.35
Turkey	24.6	98.5	161.6	200	5.08	2.15
Israel	114.3	75.4	80.5	85	0.65	0.55
Spain	9.8	28.0	51.4	55	6.27	0.67
Others	89.0	45.5	65.0	70	3.63	0.74
China	4.6	9.6	118.0	180	28.55	4.31
Mexico	1.0	6.3	18.3	25	11.21	3.15
Others	198.5	165.8	216.6	220	2.71	0.16
Southern Hemisphere	117.2	193.6	216.9	245	1.14	1.23
South Africa	70.8	121.5	186.7	220	4.39	1.65

Table 3.13 - Orange juice production

Countries / Regions	Production					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	20 880.2	25 189.1	23 941.5	24 560	-0.51	0.26
Northern Hemisphere	9 130.9	12 178.6	9 333.7	9 370	-2.63	0.04
United States of America	6 731.7	8 930.7	5 852.0	5 200	-4.14	-1.17
Mediterranean Region	1 819.3	1 944.0	1 549.1	1 695	-2.24	0.90
Greece	179.0	306.9	204.9	240	-3.96	1.59
Israel	294.8	136.9	29.9	60	-14.12	7.23
Italy	653.7	755.5	485.3	500	-4.33	0.30
Morocco	78.9	32.5	43.3	50	2.92	1.44
Spain	309.8	474.1	606.7	650	2.50	0.69
Turkey	49.3	81.1	98.5	120	1.96	1.99
Others	253.7	156.9	80.5	75	-6.45	-0.71
Other European Union	18.0	22.0	18.0	20	-1.99	1.06
Mexico	410.7	628.4	1 036.7	1325	5.13	2.48
China	15.0	19.7	433.3	650	36.24	4.14
Costa Rica	10.0	234.1	235.0	250	0.04	0.62
Cuba	80.7	349.7	156.7	180	-7.72	1.40
Others	45.5	50.1	52.9	50	0.55	-0.56
Southern Hemisphere	11 749.3	13 010.4	14 607.8	15 190	1.16	0.39
Brazil	10 461.5	11 138.7	12 825.7	13 250	1.42	0.33
South Africa	241.7	486.2	588.7	620	1.93	0.52
Argentina	674.7	1 135.0	1 045.9	1 200	-0.81	1.38
Australia	344.5	226.3	112.7	100	-6.74	-1.19
Others	26.9	24.2	34.8	20	3.69	-5.39

Table 3.14 - Orange juice consumption

Countries / Regions	Consumption					
	Actual			Projected	Growth rates	
	1991-93	2001-03	2011-13	2023	2001-03/ 2011-13	2011-13/ 2023
	thousand tonnes				percent per year	
World	20 350.0	24 500.8	22 742.9	23 095	-0.7	0.2
Northern Hemisphere	19 651.6	23 659.3	21 482.6	21 575	-1.0	0.0
Canada	994.4	1 177.6	998.7	920	-1.6	-0.8
United States of America	8 710.8	9 795.2	6 703.4	6 200	-3.7	-0.8
Mediterranean Region	2 754.6	4 641.2	4 462.2	4 255	-0.4	-0.5
France	1 548.6	2 660.1	2 867.3	2 650	0.8	-0.8
Greece	180.6	455.7	398.6	380	-1.3	-0.5
Israel	80.4	83.0	50.4	60	-4.9	1.8
Italy	542.6	833.4	418.7	400	-6.7	-0.5
Morocco	56.9	1.4	21.1	30	31.6	3.6
Spain	134.9	389.0	501.4	520	2.6	0.4
Turkey	46.8	67.6	90.7	110	3.0	2.0
Others	163.7	151.1	114.1	105	-2.8	-0.8
Germany	741.5	1 900.5	1 257.7	1 200	-4.0	-0.5
UK	1 409.3	2 184.4	2 006.5	1 850	-0.8	-0.8
Other European Union	3 539.6	2 450.9	2 535.9	2 480	0.3	-0.2
Russian Federation	86.1	88.3	148.6	210	5.3	3.5
Japan	137.4	274.6	223.1	230	-2.1	0.3
Mexico	240.9	235.7	546.9	650	8.8	1.7
China)	15.8	66.8	1 245.8	1 860	34.0	4.1
Costa Rica	21.3	73.4	82.4	100	1.2	2.0
Cuba	213.1	124.9	66.8	80	-6.1	1.8
Others	786.9	645.9	1 204.6	1 540	6.4	2.5
Southern Hemisphere	698.4	841.4	1 260.4	1 520	4.1	1.9
Brazil	142.7	221.5	248.6	380	1.2	4.3
South Africa	132.1	101.4	239.8	340	9.0	3.6
Argentina	122.5	112.3	221.5	250	7.0	1.2
Australia	256.0	360.5	498.6	480	3.3	-0.4
Others	45.1	45.8	51.9	70	1.3	3.0

Table 4.1 - Avocado production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	3 113.2	4 710.5	6 867.2	4.2	3.5
Developing	2 647.0	4 160.0	6 226.1	4.6	3.7
Africa developing	313.3	655.1	1 052.8	7.7	4.4
Cameroon	53.1	79.1	136.1	4.1	5.1
Democratic Republic of the Congo	61.0	68.1	101.0	1.1	3.6
Kenya	67.9	199.0	366.9	11.4	5.7
Rwanda	30.0	152.6	221.1	17.7	3.4
Latin America and Caribbean	1 966.7	3 070.9	4 591.5	4.6	3.7
Brazil	167.0	160.0	200.0	-0.4	2.1
Columbia	159.0	296.8	416.8	6.4	3.1
Dominican Republic	213.3	357.6	525.1	5.3	3.6
Guatemala	57.2	97.1	142.3	5.4	3.5
Haiti	49.7	53.3	61.2	0.7	1.3
Mexico	931.0	1 431.6	2 300.9	4.4	4.4
Peru	100.9	285.1	435.4	10.9	3.9
Venezuela (Bolivarian Republic of)	49.5	115.8	185.9	8.9	4.4
Middle East	5.3	10.4	12.9	7.0	2.0
Asia and Pacific	361.7	423.5	568.9	1.6	2.7
China	85.3	113.1	158.8	2.9	3.1
Indonesia	238.6	283.9	378.1	1.8	2.6
Developed	466.1	550.6	641.1	1.7	1.4
European Union	89.6	93.6	97.6	0.4	0.4
Australia	37.0	51.1	68.7	3.3	2.7
Israel	75.6	89.8	113.2	1.7	2.1
South Africa	66.9	91.9	132.0	3.2	3.3
United States of America	185.1	202.5	196.5	0.9	-0.3

Table 4.2 - Avocado imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	464.5	1 119.6	1 637.5	9.2	3.5
Developing	146.8	178.5	243.3	2.0	2.9
Africa developing	33.0	42.3	55.6	2.5	2.5
Other LDC Africa	19.8	20.4	25.1	0.3	1.9
Other Africa	4.2	5.7	7.5	3.0	2.6
Latin America and Caribbean	58.9	74.4	104.7	2.4	3.2
Argentina	0.5	9.4	8.8	34.1	-0.6
Costa Rica	6.8	13.3	12.4	6.9	-0.6
Guatemala	4.4	3.5	8.2	-2.3	8.1
Other Latin America	32.2	39.4	69.4	2.0	5.3
Middle East	9.8	12.8	14.2	2.7	0.9
Asia and Pacific	45.0	48.9	68.7	0.8	3.1
Developed	317.7	941.1	1 394.3	11.5	3.6
European Union	121.7	244.8	349.2	7.2	3.3
Russian Federation	1.3	13.2	16.3	26.3	1.9
Canada	16.7	40.1	62.9	9.2	4.2
Japan	22.2	60.0	75.7	10.5	2.1
United States of America	135.1	546.1	855.3	15.0	4.2

Table 4.3 - Avocado exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	366.3	994.3	1 542.3	10.5	4.1
Developing	254.7	804.2	1 332.3	12.2	4.7
Africa developing	1.2	22.9	19.1	34.0	-1.7
Latin America and Caribbean	253.5	779.4	1 312.4	11.9	4.9
Chile	95.7	88.9	101.0	-0.7	1.2
Mexico	118.1	548.5	1 027.5	16.6	5.9
Peru	10.3	105.9	119.5	26.2	1.1
Middle East	0.2	0.9	0.7	14.7	-2.6
Asia and Pacific	0.2	1.0	0.1	20.5	-17.9
Developed	111.6	190.1	210.0	5.5	0.9
European Union	7.4	30.8	21.0	15.3	-3.4
Israel	51.1	51.0	53.3	0.0	0.4
New Zealand	6.0	15.0	23.8	9.6	4.3
South Africa	38.4	53.7	82.5	3.4	4.0
United States of America	8.2	36.7	24.7	16.1	-3.5

Table 4.4 - Avocado consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	3 211.4	4 835.8	6 962.4	4.2	3.4
Developing	2 539.2	3 534.3	5 137.1	3.4	3.5
Africa developing	345.1	674.4	1 089.4	6.9	4.5
Cameroon	53.1	79.1	136.1	4.1	5.1
Democratic Republic of the Congo	61.0	68.1	101.0	1.1	3.6
Kenya	67.9	181.0	349.4	10.3	6.2
Rwanda	30.0	152.6	221.1	17.7	3.4
Other LDC Africa	50.5	53.2	63.5	0.5	1.6
Other Africa	34.1	50.6	75.9	4.0	3.8
Latin America and Caribbean	1 772.6	2 366.0	3 383.8	2.9	3.3
Brazil	166.4	155.2	172.7	-0.7	1.0
Chile	51.5	75.3	91.0	3.9	1.7
Columbia	171.6	300.6	417.1	5.8	3.0
Dominican Republic	199.3	339.1	495.5	5.5	3.5
Guatemala	57.5	97.7	148.9	5.4	3.9
Haiti	49.7	53.3	61.2	0.7	1.3
Mexico	813.0	884.1	1 274.8	0.8	3.4
Peru	90.6	179.4	316.1	7.1	5.3
Venezuela (Bolivarian Republic of)	47.7	114.1	184.2	9.1	4.4
Other Latin America	74.0	97.1	139.8	2.8	3.4
Middle East	14.9	22.3	26.4	4.1	1.6
Asia and Pacific	406.6	471.5	637.5	1.5	2.8
China	85.3	113.1	158.8	2.9	3.1
Indonesia	238.7	283.9	378.1	1.8	2.6
Developed	672.2	1 301.5	1 825.4	6.8	3.1
European Union	203.9	307.6	425.8	4.2	3.0
Australia	42.1	59.5	72.7	3.5	1.8
Canada	16.6	40.1	62.8	9.2	4.2
Israel	24.5	38.8	59.9	4.7	4.0
Japan	22.2	60.0	75.7	10.5	2.1
South Africa	29.1	40.0	50.6	3.2	2.2
United States of America	312.1	711.9	1 027.1	8.6	3.4

Table 4.5 - Papaya production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	8 474.7	12 379.8	17 212.7	3.9	3.0
Developing	8 433.1	12 347.4	17 172.0	3.9	3.0
Africa developing	1 205.9	1 318.5	1 838.0	0.9	3.1
Democratic Republic of the Congo	212.2	229.4	323.2	0.8	3.2
Ghana	2.3	51.1	74.1	36.6	3.4
Kenya	84.8	122.5	217.0	3.8	5.3
Nigeria	805.9	771.2	1007.1	-0.4	2.5
Latin America and Caribbean	3 617.2	3 772.7	4 648.9	0.4	1.9
Brazil	1 641.5	1 559.8	1 643.8	-0.5	0.5
Columbia	94.1	176.2	314.9	6.5	5.4
Costa Rica	30.5	81.8	138.4	10.4	4.9
Dominican Republic	300.3	486.0	536.5	4.9	0.9
Guatemala	42.0	50.6	52.6	1.9	0.3
Mexico	873.2	748.2	898.5	-1.5	1.7
Peru	185.5	142.2	207.2	-2.6	3.5
Venezuela (Bolivarian Republic of)	144.2	195.0	352.9	3.1	5.5
Other Latin America	270.8	291.5	435.3	0.7	3.7
Middle East	58.5	29.1	46.7	-6.7	4.4
Iran	0.3	1.4	2.8	17.7	6.4
Yemen	55.6	25.9	40.4	-7.3	4.1
Other middle east	2.6	1.8	3.5	-4.0	6.4
Asia and Pacific	3 551.5	7 227.1	10 638.4	7.4	3.6
Bangladesh	48.7	127.1	171.7	10.1	2.8
China	20.7	32.5	53.0	4.6	4.5
Indonesia	654.9	890.5	1 265.6	3.1	3.2
India	2 124.8	5 577.4	8 277.0	10.1	3.7
Philippines	130.8	165.8	235.7	2.4	3.2
Thailand	312.9	216.1	316.3	-3.6	3.5
Taiwan Province of China	140.9	134.2	192.9	-0.5	3.4
Other LDC Asia	29.5	33.3	56.5	1.2	4.9
Developed	41.5	32.4	40.7	-2.5	2.1
Australia	8.4	6.4	8.8	-2.7	2.9
South Africa	14.1	13.4	17.9	-0.5	2.7
United States of America	18.8	12.5	13.9	-4.0	1.0

Table 4.6 - Papaya exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	239.2	285.1	353.8	1.8	2.0
Developing	230.7	264.4	334.1	1.4	2.2
Africa developing	2.7	2.5	2.0	-0.8	-1.7
Latin America and Caribbean	148.6	209.1	242.5	3.5	1.4
Belize	19.0	23.8	25.9	2.3	0.8
Brazil	34.7	28.0	46.6	-2.1	4.8
Guatemala	1.8	28.4	24.8	32.0	-1.2
Mexico	80.0	113.5	108.7	3.6	-0.4
Middle East	0.1	0.3	0.2	19.6	-4.5
Asia and Pacific	79.4	52.4	89.4	-4.1	5.0
India	3.5	15.7	54.9	16.2	12.0
Malaysia	63.5	22.7	26.7	-9.8	1.5
Developed	8.5	20.8	19.7	9.4	-0.5
Kazakstan	0.0	4.3	4.5	-	0.4
New Zealand	0.0	1.3	1.4	113.9	0.4
United States of America	8.0	14.0	12.9	5.8	-0.7

Table 4.7 - Papaya imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	335.2	384.2	447.6	1.4	1.4
Developing	172.0	158.5	179.0	-0.8	1.1
Africa developing	34.7	36.0	51.8	0.4	3.4
Latin America and Caribbean	25.0	27.0	14.3	0.8	-5.6
Middle East	12.0	16.7	19.7	3.4	1.5
Asia and Pacific	100.4	78.8	93.3	-2.4	1.5
Developed	163.2	225.7	268.6	3.3	1.6
European Union	35.8	28.8	34.2	-2.1	1.6
Canada	7.3	16.5	21.7	8.4	2.6
United States of America	105.5	151.6	179.5	3.7	1.6

Table 4.8 - Papaya consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	8 570.7	12 478.9	17 306.5	3.8	3.0
Developing	8 374.4	12 241.6	17 016.9	3.9	3.0
Africa developing	1 238.0	1 352.0	1 887.8	0.9	3.1
Democratic Republic of the Congo	212.2	229.4	323.2	0.8	3.2
Ghana	0.5	50.8	73.7	59.7	3.4
Kenya	84.8	122.5	217.0	3.8	5.3
Mozambique	42.9	43.7	65.4	0.2	3.7
Nigeria	805.9	771.2	1007.1	-0.4	2.5
Other LDC Africa	53.8	59.2	77.9	1.0	2.5
Latin America and Caribbean	3 493.6	3 590.5	4 420.7	0.3	1.9
Brazil	1 606.9	1 531.8	1 597.2	-0.5	0.4
Columbia	95.1	176.2	314.9	6.4	5.4
Costa Rica	30.0	77.6	118.5	10.0	3.9
Dominican Republic	295.8	483.5	533.8	5.0	0.9
Mexico	793.2	634.7	789.9	-2.2	2.0
Peru	185.5	143.9	207.9	-2.5	3.4
Venezuela (Bolivarian Republic of)	143.3	194.6	352.5	3.1	5.6
Other Latin America	283.3	306.7	433.4	0.8	3.2
Middle East	70.4	45.5	66.1	-4.3	3.5
Asia and Pacific	3 572.4	7 253.6	10 642.3	7.3	3.5
Bangladesh	48.7	127.1	171.7	10.1	2.8
Indonesia	655.3	890.7	1 265.9	3.1	3.2
India	2 121.3	5 561.7	8 222.1	10.1	3.6
Philippines	127.7	161.3	235.2	2.4	3.5
Thailand	310.5	215.7	316.0	-3.6	3.5
Taiwan Province of China	140.7	134.0	192.8	-0.5	3.4
Developed	196.3	237.3	289.6	1.9	1.8
European Union	35.3	28.0	33.5	-2.3	1.6
Canada	7.3	16.5	21.7	8.4	2.6
United States of America	116.3	150.1	180.5	2.6	1.7

Table 4.9 - Pineapple production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	16 286.4	24 294.1	33 728.2	4.1	3.0
Developing	15 739.0	23 929.4	33 326.5	4.3	3.1
Africa developing	2 521.8	3 826.5	6 144.0	4.3	4.4
Angola	40.9	416.2	834.2	26.1	6.5
Benin	101.1	366.6	647.9	13.7	5.3
Cameroon	47.0	168.7	299.6	13.6	5.4
Democratic Republic of the Congo	194.2	201.2	267.5	0.4	2.6
Ghana	69.6	100.9	179.2	3.8	5.4
Kenya	539.7	125.3	119.8	-13.6	-0.4
Mozambique	12.4	53.3	92.2	15.7	5.1
Nigeria	948.9	1 558.2	2 402.3	5.1	4.0
Rwanda	13.0	83.0	113.1	20.4	2.9
United Republic of Tanzania	100.8	357.6	660.6	13.5	5.7
Other LDC Africa	169.8	234.2	375.9	3.3	4.4
Other Africa	276.4	148.4	133.5	-6.0	-1.0
Latin America and Caribbean	5 422.7	9 011.8	12 171.7	5.2	2.8
Brazil	2 175.3	2 504.3	2 976.9	1.4	1.6
Columbia	378.5	593.5	912.9	4.6	4.0
Costa Rica	1 017.8	2 681.5	3 596.3	10.2	2.7
Dominican Republic	99.5	515.5	979.2	17.9	6.0
Guatemala	75.3	245.4	396.1	12.5	4.4
Mexico	669.2	764.5	858.9	1.3	1.1
Peru	166.0	450.4	707.7	10.5	4.2
Paraguay	69.4	61.1	79.5	-1.3	2.4
Venezuela (Bolivarian Republic of)	336.8	542.6	805.7	4.9	3.7
Other Latin America	426.9	641.7	839.7	4.2	2.5
Middle East	0.0	0.0	0.0	-	-
Asia and Pacific	7 794.5	11 091.0	15 010.8	3.6	2.8
Bangladesh	173.3	179.8	225.6	0.4	2.1
China	819.1	1 365.4	1 990.4	5.2	3.5
Indonesia	647.5	1 793.4	2 551.2	10.7	3.3
India	1 241.4	1 538.6	1 979.9	2.2	2.3
Malaysia	320.0	300.6	328.3	-0.6	0.8
Philippines	1 699.0	2 475.7	3 375.5	3.8	2.9
Thailand	1 913.1	2 286.8	2 961.7	1.8	2.4
Taiwan Province of China	440.9	384.8	509.1	-1.3	2.6
Viet Nam	390.6	594.3	864.2	4.3	3.5

Table 4.9 - Pineapple production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Other LDC Asia	66.9	92.1	127.5	3.3	3.0
Developed	547.4	364.7	401.7	-4.0	0.9
Australia	111.5	90.2	107.6	-2.1	1.6
South Africa	167.2	94.6	110.4	-5.5	1.4
United States of America	254.0	170.9	173.3	-3.9	0.1

Table 4.10 - Pineapple exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	1 265.3	2 997.1	3 883.2	9.0	2.4
Developing	1 186.6	2 836.6	3 761.6	9.1	2.6
Africa developing	221.9	62.1	49.0	-12.0	-2.1
Latin America and Caribbean	735.3	2 283.2	3 119.1	12.0	2.9
Costa Rica	585.5	1 953.0	2 724.7	12.8	3.1
Mexico	26.3	55.7	32.6	7.8	-4.7
Other Latin America	96.0	243.4	331.5	9.8	2.8
Middle East	1.9	8.0	7.9	15.1	0.0
United Arab Emirates	1.3	6.4	6.4	16.9	0.0
Asia and Pacific	227.5	483.3	585.6	7.8	1.8
Philippines	192.5	456.9	534.9	9.0	1.4
Thailand	5.1	2.7	37.4	-6.2	27.2
Developed	78.7	160.6	121.6	7.4	-2.5
European Union	12.9	45.6	33.7	13.4	-2.7
United States of America	61.8	112.7	85.7	6.2	-2.5

Table 4.11 - Pineapple imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	1 249.2	2 542.4	3 420.4	7.4	2.7
Developing	106.1	309.0	481.7	11.3	4.1
Africa developing	2.6	8.1	14.0	12.1	5.1
Latin America and Caribbean	25.8	55.5	67.3	8.0	1.8
Middle East	11.5	83.1	126.4	21.8	3.9
Saudi Arabia	2.9	18.3	31.8	20.3	5.1
United Arab Emirates	6.0	26.7	44.4	16.2	4.7
Other middle east	1.3	15.1	35.5	27.6	8.1
Asia and Pacific	66.2	162.3	273.9	9.4	4.9
China	0.4	36.2	80.1	58.8	7.5
Republic of Korea	37.4	76.1	115.2	7.4	3.8
Other Asia Developing	25.2	41.0	46.4	5.0	1.1
Developed	1 143.1	2 233.5	2 938.8	6.9	2.5
European Union	442.3	867.2	1 165.5	7.0	2.7
Russian Federation	21.7	49.4	58.9	8.6	1.6
Canada	63.0	122.3	155.0	6.9	2.2
Japan	129.3	177.7	202.8	3.2	1.2
United States of America	464.5	966.6	1 298.8	7.6	2.7

Table 4.12 - Pineapple consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	16 270.3	23 839.4	33 265.4	3.9	3.1
Developing	14 658.5	21 401.8	30 046.5	3.9	3.1
Africa developing	2 302.5	3 772.5	6 109.0	5.1	4.5
Angola	40.9	416.2	834.2	26.1	6.5
Benin	100.1	364.5	646.6	13.8	5.3
Cameroon	45.6	161.2	295.2	13.5	5.7
Democratic Republic of the Congo	194.2	201.2	267.5	0.4	2.6
Ghana	20.3	88.8	146.6	15.9	4.7
Kenya	539.3	125.8	119.9	-13.5	-0.4
Mozambique	12.4	53.3	92.2	15.7	5.1
Nigeria	948.9	1 558.2	2 402.3	5.1	4.0
Rwanda	13.0	83.0	113.1	20.4	2.9
United Republic of Tanzania	100.8	356.9	660.1	13.5	5.7
Other LDC Africa	170.6	232.8	370.9	3.2	4.3
Other Africa	107.8	112.6	137.9	0.4	1.9
Latin America and Caribbean	4 713.2	6 784.1	9 120.0	3.7	2.7
Brazil	2 160.6	2 502.9	2 971.6	1.5	1.6
Columbia	378.3	591.7	912.3	4.6	4.0
Costa Rica	432.4	728.7	871.6	5.4	1.6
Dominican Republic	98.2	511.0	975.1	17.9	6.1
Guatemala	65.5	223.8	376.7	13.1	4.8
Mexico	643.2	709.3	826.5	1.0	1.4
Peru	166.1	452.0	708.4	10.5	4.2
Paraguay	69.6	60.8	80.2	-1.3	2.5
Venezuela (Bolivarian Republic of)	336.3	542.4	805.4	4.9	3.7
Other Latin America	339.4	412.7	519.2	2.0	2.1
Middle East	9.6	75.1	118.4	22.9	4.2
Asia and Pacific	7 633.2	10 770.0	14 699.1	3.5	2.9
Bangladesh	173.3	179.8	225.6	0.4	2.1
China	814.2	1 399.6	2 069.5	5.6	3.6
Indonesia	644.7	1 793.4	2 551.2	10.8	3.3
India	1 240.1	1 535.8	1 969.9	2.2	2.3
Republic of Korea	38.4	76.9	116.5	7.2	3.8
Malaysia	306.5	291.5	355.9	-0.5	1.8
Philippines	1 506.5	2 018.8	2 840.7	3.0	3.2
Thailand	1 908.1	2 284.2	2 924.4	1.8	2.3
Taiwan Province of China	440.0	383.9	509.0	-1.4	2.6

Table 4.12 - Pineapple consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Viet Nam	390.6	594.3	864.2	4.3	3.5
Other LDC Asia	67.3	93.3	129.2	3.3	3.0
Developed	1 611.8	2 437.6	3 218.8	4.2	2.6
European Union	431.3	825.0	1 137.0	6.7	3.0
Russian Federation	21.7	49.2	58.7	8.6	1.6
Australia	112.1	90.5	108.0	-2.1	1.6
Canada	63.0	122.1	154.8	6.8	2.2
Japan	140.9	183.2	207.7	2.7	1.1
South Africa	163.4	93.0	108.8	-5.5	1.4
United States of America	656.7	1 024.7	1 386.5	4.5	2.8

Table 4.13 - Mango production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	28 553.4	42 601.9	57 976.0	4.1	2.8
Developing	28 393.2	42 469.6	57 838.2	4.1	2.8
Africa developing	3 072.9	5 047.4	7 831.1	5.1	4.1
Democratic Republic of the Congo	199.9	314.9	455.2	4.7	3.4
Egypt	327.2	827.9	1 293.3	9.7	4.1
Ethiopia	28.1	68.8	108.0	9.4	4.2
Ghana	5.7	94.3	169.6	32.5	5.5
Kenya	141.3	565.8	1 087.6	14.9	6.1
Nigeria	841.7	858.6	1 318.1	0.2	4.0
Sudan	398.3	625.4	890.5	4.6	3.3
United Republic of Tanzania	328.7	440.1	700.7	3.0	4.3
Zambia	0.0	0.0	0.0	-	-
Other LDC Africa	688.1	1 089.3	1 571.7	4.7	3.4
Other Africa	64.7	99.0	140.3	4.4	3.2
Latin America and Caribbean	3 851.5	5 046.0	6 286.9	2.7	2.0
Brazil	908.1	1 175.4	1 255.4	2.6	0.6
Columbia	172.4	275.7	456.9	4.8	4.7
Guatemala	94.7	115.3	169.2	2.0	3.6
Haiti	253.0	198.4	196.6	-2.4	-0.1
Mexico	1 486.1	1 824.5	2 144.6	2.1	1.5
Peru	218.7	378.4	558.4	5.6	3.6
Venezuela (Bolivarian Republic of)	70.3	198.2	362.9	10.9	5.7
Other Latin America	490.4	772.9	988.2	4.7	2.3
Middle East	224.8	414.0	621.1	6.3	3.8
Yemen	193.5	379.3	575.9	7.0	3.9
Asia and Pacific	21 244.1	31 962.2	43 099.1	4.2	2.8
Bangladesh	224.3	971.3	1 760.6	15.8	5.6
China	3 436.7	4 475.4	5 996.5	2.7	2.7
Indonesia	1 455.7	2 184.9	2 944.9	4.1	2.8
India	11 414.5	17 208.0	22 478.8	4.2	2.5
Malaysia	19.8	80.9	188.3	15.1	8.0
Pakistan	1 042.6	1 700.8	2 461.6	5.0	3.4
Philippines	976.6	813.9	1 029.9	-1.8	2.2
Thailand	1 902.0	3 153.8	4 117.8	5.2	2.5
Taiwan Province of China	205.4	169.4	199.5	-1.9	1.5
Viet Nam	276.1	739.9	1 264.6	10.4	5.0
Other Asia Developing	96.7	83.2	100.1	-1.5	1.7

Table 4.13 - Mango production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Other LDC Asia	189.4	376.3	551.4	7.1	3.5
Other developing Oceania	4.5	4.4	5.1	-0.3	1.4
Developed	160.2	132.3	137.9	-1.9	0.4
Australia	39.2	41.5	40.0	0.6	-0.3
Israel	27.4	27.2	23.2	-0.1	-1.4
South Africa	89.6	60.1	69.2	-3.9	1.3

Table 4.14 - Mango exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	789.9	1 551.5	2 316.5	7.0	3.7
Developing	742.8	1 471.0	2 241.5	7.1	3.9
Africa developing	25.5	70.5	47.2	10.7	-3.6
Latin America and Caribbean	432.4	669.1	472.1	4.5	-3.1
Brazil	117.7	127.3	96.0	0.8	-2.5
Mexico	207.8	305.0	256.1	3.9	-1.6
Peru	45.0	123.7	60.8	10.6	-6.2
Middle East	15.3	43.1	26.9	11.0	-4.2
Asia and Pacific	269.6	688.3	1 695.3	9.8	8.5
India	125.7	235.6	507.8	6.5	7.2
Pakistan	63.4	105.3	314.2	5.2	10.4
Thailand	16.6	276.3	827.7	32.4	10.5
Other Asia Developing	7.9	20.1	25.8	9.9	2.3
Developed	47.1	80.5	75.0	5.5	-0.6
European Union	6.4	19.2	14.6	11.6	-2.5
Kazakstan	0.1	11.3	11.8	54.5	0.4
Israel	7.8	18.6	21.6	9.1	1.4
United States of America	16.7	25.9	20.7	4.5	-2.0

Table 4.15 - Mango imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	845.0	1 361.3	2 087.4	4.9	4.0
Developing	339.5	581.0	991.9	5.5	5.0
Africa developing	20.6	23.8	36.0	1.5	3.8
Latin America and Caribbean	18.4	46.1	87.3	9.6	6.0
Middle East	116.2	168.7	285.8	3.8	4.9
Saudi Arabia	38.9	63.3	105.7	5.0	4.8
United Arab Emirates	57.1	48.7	64.8	-1.6	2.6
Other Middle East	20.3	55.0	115.1	10.5	6.9
Asia and Pacific	184.3	342.4	582.8	6.4	5.0
China	30.1	138.7	234.5	16.5	4.9
Malaysia	33.9	54.3	96.0	4.8	5.3
Other Asia Developing	53.4	97.3	135.1	6.2	3.0
Other LDC Asia	4.4	13.7	58.4	11.9	14.1
Developed	505.5	780.3	1 095.5	4.4	3.1
European Union	159.1	254.6	357.0	4.8	3.1
Canada	37.1	58.1	78.0	4.6	2.7
United States of America	272.7	408.2	590.0	4.1	3.4

Table 4.16 - Mango consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	28 608.6	42 411.7	57 746.9	4.0	2.8
Developing	27 989.9	41 579.6	56 588.6	4.0	2.8
Africa developing	3 067.9	5 000.7	7 819.9	5.0	4.1
Democratic Republic of the Congo	199.9	314.9	455.2	4.7	3.4
Egypt	326.5	802.0	1 277.2	9.4	4.3
Ethiopia	27.2	67.1	105.9	9.5	4.2
Ghana	6.3	93.5	169.1	31.0	5.5
Kenya	138.3	558.1	1 087.5	15.0	6.3
Nigeria	841.7	858.5	1 318.1	0.2	4.0
Sudan	395.8	624.1	888.5	4.7	3.3
United Republic of Tanzania	328.7	441.2	700.7	3.0	4.3
Other LDC Africa	691.1	1 081.8	1 565.5	4.6	3.4
Other Africa	59.7	90.8	146.8	4.3	4.5
Latin America and Caribbean	3 437.4	4 423.0	5 902.1	2.6	2.7
Brazil	790.5	1 048.1	1 159.4	2.9	0.9
Columbia	174.5	286.2	457.6	5.1	4.4
Guatemala	89.0	96.4	150.9	0.8	4.2
Haiti	245.5	189.6	194.2	-2.5	0.2
Mexico	1 279.8	1 522.6	1 892.5	1.8	2.0
Peru	173.7	254.6	497.6	3.9	6.3
Venezuela (Bolivarian Republic of)	69.0	198.0	362.7	11.1	5.7
Other Latin America	461.7	732.1	1 046.8	4.7	3.3
Middle East	325.8	539.6	880.0	5.2	4.5
Saudi Arabia	38.0	62.5	105.3	5.1	4.9
Yemen	187.4	347.0	565.1	6.4	4.5
Other Middle East	31.8	67.8	131.7	7.9	6.2
Asia and Pacific	21 158.8	31 616.3	41 986.6	4.1	2.6
Bangladesh	255.6	974.0	1 764.1	14.3	5.5
China	3 459.8	4 608.6	6 227.5	2.9	2.8
Indonesia	1 454.8	2 179.6	2 935.7	4.1	2.7
India	11 288.8	16 972.8	21 971.1	4.2	2.4
Malaysia	50.6	127.1	279.3	9.6	7.4
Pakistan	979.2	1 595.5	2 147.5	5.0	2.7
Philippines	939.8	788.3	1 029.0	-1.7	2.5
Thailand	1 885.3	2 877.8	3 290.2	4.3	1.2
Taiwan Province of China	197.6	164.6	198.9	-1.8	1.7
Viet Nam	279.1	745.3	1 272.5	10.3	5.0

Table 4.16 - Mango consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Other Asia Developing	142.2	160.4	209.4	1.2	2.5
Other LDC Asia	193.8	389.3	609.7	7.2	4.2
Developed	618.6	832.1	1 158.3	3.0	3.1
European Union	152.7	235.4	342.5	4.4	3.5
Canada	37.0	58.1	78.0	4.6	2.7
South Africa	74.0	59.1	67.2	-2.2	1.2
United States of America	258.6	383.3	571.9	4.0	3.7

Table 5.1 - Abaca production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	84.8	75.0	75.0	-1.2	0.0
Developing	84.8	75.0	75.0	-1.2	0.0
Africa	0.4	0.3	0.3	-1.9	-0.2
Latin America and Caribbean	14.4	10.7	10.1	-2.9	-0.6
Costa Rica	1.3	1.1	1.3	-1.7	1.5
Ecuador	13.1	9.6	8.8	-3.0	-0.9
Near East	0.0	0.0	0.0	-	-
Asia	70.0	63.9	64.6	-0.9	0.1
Philippines	68.5	62.3	62.9	-1.0	0.1
Developed	0.0	0.0	0.0	-	-

Table 5.2 - Abaca exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	31.7	18.4	20.4	-5.3	1.1
Developing	30.7	16.8	18.6	-5.8	1.0
Latin America and Caribbean	13.1	9.6	8.8	-3.0	-0.9
Ecuador	13.1	9.6	8.8	-3.0	-0.9
Near East	0.0	0.0	0.0	-	-
Asia	17.6	7.2	9.8	-8.5	3.2
Philippines	16.5	5.9	8.4	-9.9	3.7
Residual attributed to Asia	0.9	1.0	1.1	0.8	0.5
Developed	1.0	1.6	1.9	4.7	1.7
European Union	0.3	1.1	1.1	12.1	0.3
United States of America	0.7	0.5	0.8	-2.7	4.2
Manufactures					
World	52.5	56.6	56.4	0.8	0.0
Asia	51.4	56.1	56.0	0.9	0.0
Philippines	47.9	47.6	47.5	-0.1	0.0
Thailand	0.7	4.2	4.2	19.6	0.0
Developed	1.1	0.5	0.5	-7.0	-0.7

Table 5.3 - Abaca imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	28.1	18.2	20.7	-4.3	1.3
Developing	0.8	1.4	1.8	5.7	2.3
Africa	0.0	0.0	0.0	-	-
Latin America and Caribbean	0.0	0.0	0.0	-	-
Near East	0.0	0.0	0.0	-	-
Asia	0.8	1.4	1.8	6.0	2.3
China	0.1	0.4	0.9	11.7	6.9
India	0.1	0.1	0.1	3.3	0.3
Indonesia	0.3	0.1	0.1	-12.2	-3.0
Philippines	0.1	0.5	0.5	16.7	0.0
Residual attributed to Asia	0.2	0.3	0.3	5.5	-1.3
Developed	27.4	16.8	19.0	-4.7	1.2
European Union	17.9	11.2	12.4	-4.5	1.0
Japan	8.1	5.1	5.8	-4.6	1.4
United States of America	1.2	0.5	0.8	-8.0	4.1
Manufactures					
World	51.9	53.4	55.1	0.3	0.3
Developing	7.9	13.2	14.5	5.2	0.9
Asia	7.9	13.2	14.5	5.2	0.9
Developed	44.0	40.2	40.6	-0.9	0.1
European Union	27.7	26.9	26.8	-0.3	0.0
Japan	8.7	6.8	6.0	-2.4	-1.2
United States of America	6.7	5.6	6.9	-1.7	2.1

Table 5.4 - Abaca consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	81.3	74.8	75.3	-0.8	0.1
Developing	55.0	59.6	58.2	0.8	-0.2
Africa	0.4	0.3	0.3	-1.9	-0.2
Equatorial Guinea	0.4	0.3	0.3	-2.1	-0.1
Kenya	0.0	0.0	0.0	0.0	-1.5
Latin America and Caribbean	1.3	1.1	1.3	-1.7	1.5
Costa Rica	1.3	1.1	1.3	-1.7	1.5
Near East	0.0	0.0	0.0	-	-
Asia	53.2	58.1	56.6	0.9	-0.3
China	0.0	0.1	0.5	-	18.4
India	0.6	0.6	0.6	-0.3	0.0
Indonesia	0.3	0.1	0.1	-12.2	-3.0
Philippines	52.1	56.9	55.0	0.9	-0.3
Residual attributed to Asia	0.3	0.5	0.4	6.5	-0.6
Developed	26.4	15.3	17.1	-5.3	1.1
European Union	17.5	10.2	11.3	-5.3	1.0
Japan	8.1	5.1	5.8	-4.6	1.4

Table 5.5 - Coir production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	584.2	1008.6	1217.4	5.6	1.9
Developing	584.2	1008.6	1217.4	5.6	1.9
Africa	0.0	0.0	0.0	-	-
Latin America and Caribbean	0.0	0.0	0.0	-	-
Near East	0.0	0.0	0.0	-	-
Asia	584.2	1008.6	1217.4	5.6	1.9
India	388.2	599.9	680.0	4.4	1.3
Indonesia	1.0	37.6	51.0	43.9	3.1
Malaysia	26.0	24.5	26.4	-0.6	0.7
Philippines	5.6	24.0	50.2	15.8	7.7
Sri Lanka	62.6	135.1	165.3	8.0	2.0
Thailand	37.6	64.9	81.7	5.6	2.3
Viet Nam	62.2	121.5	161.4	6.9	2.9
Developed	0.0	0.0	0.0	-	-

Table 5.6 - Coir exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Raw fibre					
World	184.7	796.2	1027.7	15.7	2.6
Developing	180.8	785.8	1018.0	15.8	2.6
Latin America and Caribbean	2.1	2.8	2.8	3.0	-0.1
Mexico	1.6	2.8	2.8	6.0	-0.1
Asia	178.7	783.0	1015.2	15.9	2.6
India	28.7	426.4	537.3	31.0	2.3
Indonesia	0.9	35.8	49.1	43.9	3.2
Malaysia	0.5	14.8	21.8	40.1	3.9
Philippines	2.7	23.4	49.8	24.1	7.8
Singapore	0.0	0.0	0.0	-	-
Sri Lanka	53.0	114.5	135.4	8.0	1.7
Thailand	31.3	54.1	70.0	5.6	2.6
Viet Nam	61.2	112.5	150.0	6.3	2.9
Developed	3.9	10.4	9.7	10.4	-0.6
European Union	3.1	9.4	8.9	11.7	-0.6
United States of America	0.7	1.0	0.9	2.7	-0.9
Manufactures					
World	83.1	69.8	45.5	-1.7	-4.2
Developing	78.3	66.8	36.5	-1.6	-5.9
Asia	78.3	66.8	36.5	-1.6	-5.9
India	63.8	39.9	1.9	-4.6	-26.2
Sri Lanka	12.2	18.5	26.1	4.3	3.5
Developed	4.9	3.8	9.0	-2.5	8.9
European Union	4.9	3.8	9.0	-2.5	8.9

Table 5.7 - Coir imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Raw fibre					
World	204.4	796.3	1032.4	14.6	2.6
Developing	121.7	551.8	721.4	16.3	2.7
Latin America and Caribbean	2.1	2.8	2.8	2.8	-0.1
Mexico	1.6	2.8	2.8	5.9	-0.1
Near East	0.1	4.7	6.6	47.0	3.5
Saudi Arabia	0.1	4.7	6.6	47.0	3.5
Asia	119.3	544.2	711.9	16.4	2.7
China	103.4	530.8	697.6	17.8	2.8
Pakistan	1.0	2.8	3.3	10.5	1.5
Taiwan Province of China	10.0	5.0	6.2	-6.7	2.2
Other Asia	1.0	3.7	3.0	13.9	-2.0
Developed	82.7	244.4	311.0	11.4	2.4
European Union	53.3	96.4	128.9	6.1	2.9
Russia	1.3	5.3	4.9	14.6	-0.8
Australia	1.2	4.1	5.9	12.9	3.6
Canada	2.6	10.4	12.2	14.7	1.6
Japan	5.1	2.4	4.0	-7.3	5.3
Republic of Korea	2.4	73.0	79.0	40.6	0.8
New Zealand	0.4	1.8	1.8	15.2	0.1
South Africa	2.5	4.3	4.5	5.6	0.6
United States of America	13.8	46.9	69.8	13.0	4.1
Manufactures					
World	67.2	63.4	38.3	-0.6	-4.9
Developing	7.7	10.7	11.1	3.3	0.4
Asia	6.7	9.6	10.0	3.6	0.5
Bhutan	2.2	2.2	2.7	0.0	1.9
Developed	59.5	52.8	27.2	-1.2	-6.4
European Union	36.4	22.9	9.7	-4.5	-8.2
Russia	0.7	7.8	5.9	28.0	-2.7
United States of America	19.0	14.1	8.2	-2.9	-5.2

Table 5.8 - Coir consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	603.9	1008.6	1222.0	5.3	1.9
Developing	525.1	774.6	920.8	4.0	1.7
Africa	0.1	0.1	0.1	-0.5	1.8
Near East	0.1	4.7	6.6	47.0	3.5
Saudi Arabia	0.1	4.7	6.6	47.0	3.5
Asia	524.8	769.7	914.0	3.9	1.7
China	103.2	530.3	696.6	17.8	2.8
India	359.6	173.5	142.7	-7.0	-1.9
Indonesia	0.0	1.8	1.9	43.9	0.8
Malaysia	28.4	11.5	6.3	-8.6	-5.9
Pakistan	1.0	2.8	3.3	10.5	1.5
Philippines	2.8	0.6	0.4	-14.7	-2.7
Sri Lanka	9.5	20.6	30.0	8.0	3.8
Taiwan Province of China	10.0	5.0	6.2	-6.7	2.2
Thailand	6.3	10.8	11.8	5.6	0.9
Viet Nam	1.6	8.9	11.5	18.7	2.5
Other Asia	1.0	3.7	3.0	13.9	-2.0
Developed	78.8	234.0	301.2	11.5	2.6
European Union	50.1	86.9	120.0	5.7	3.3
Russian Federation	1.3	5.3	4.9	14.6	-0.8
Australia	1.2	4.1	5.9	12.9	3.6
Canada	2.6	10.4	12.2	14.7	1.6
Japan	5.1	2.4	4.0	-7.3	5.3
Republic of Korea	2.4	73.0	79.0	40.6	0.8
New Zealand	0.4	1.8	1.8	15.2	0.1
South Africa	2.5	4.3	4.5	5.6	0.6
United States of America	13.1	45.9	68.9	13.4	4.1

Table 5.9 - Jute production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	2815.9	3115.8	3217.7	1.0	0.3
Developing	2809.0	3109.0	3210.9	1.0	0.3
Africa	16.6	17.3	22.8	0.4	2.8
Congo	5.8	6.5	9.7	1.2	4.1
Mali	1.4	1.6	2.1	1.4	2.7
Mozambique	2.9	3.0	3.1	0.3	0.4
Sudan	3.6	3.2	4.3	-1.2	3.0
Latin America and Caribberan	30.1	28.7	34.0	-0.5	1.7
Brazil	11.1	9.9	14.1	-1.1	3.6
Chile	9.4	9.3	10.5	-0.1	1.2
Cuba	6.2	6.9	7.0	1.0	0.3
El Salvador	2.9	2.1	1.8	-3.2	-1.1
Near East	0.0	0.1	0.1	14.2	-1.0
Asia	2762.3	3062.9	3154.1	1.0	0.3
Bangladesh	884.6	1361.0	1519.3	4.4	1.1
China	105.6	64.2	60.3	-4.8	-0.6
India	1650.0	1614.0	1547.6	-0.2	-0.4
Indonesia	6.9	4.0	4.2	-5.4	0.6
Myanmar	39.2	0.9	3.0	-31.7	13.3
Nepal	17.0	15.6	16.9	-0.9	0.9
Pakistan	1.5	1.0	1.3	-4.0	2.5
Thailand	41.1	1.0	0.6	-30.9	-4.5
Viet Nam	15.7	1.0	0.4	-24.4	-8.9
Developed	6.9	6.9	6.8	0.0	-0.1
United States of America	6.0	6.0	5.8	0.0	-0.4

Table 5.10 - Jute exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Raw fibre					
World	386.8	342.7	332.1	-1.2	-0.3
Developing	376.2	330.9	319.2	-1.3	-0.4
Bangladesh	349.5	288.0	274.0	-1.9	-0.5
India	10.5	36.2	35.5	13.2	-0.2
Myanmar	11.6	0.0	0.0	-100.0	-
Nepal	0.0	2.0	2.7	-	3.3
Pakistan	1.1	0.1	2.5	-23.9	43.1
Thailand	1.1	0.7	0.4	-4.4	-5.4
Vietnam	1.2	1.0	0.5	-2.0	-7.4
Developed	10.6	11.8	13.0	1.1	1.0
European Union	9.2	10.1	11.0	0.9	0.9
United States	1.1	1.5	1.8	3.4	1.6
Manufactures					
World	738.7	1053.8	1177.1	3.6	1.1
Developing	690.5	1034.1	1157.9	4.1	1.1
Syria	0.1	4.3	4.3	50.6	0.1
Turkey	3.2	5.0	5.6	4.7	1.1
Bangladesh	416.5	746.8	885.3	6.0	1.7
India	223.5	184.0	124.3	-1.9	-3.9
Nepal	11.8	68.7	116.0	19.3	5.4
Pakistan	9.8	13.7	6.3	3.4	-7.4
Thailand	7.7	1.4	10.9	-15.5	22.6
Developed	48.2	19.7	19.2	-8.6	-0.2
European Union	44.2	16.3	15.1	-9.5	-0.8
South Africa	0.3	0.9	1.3	13.2	3.5
United States	2.2	2.3	2.7	0.7	1.3

Table 5.11 - Jute imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Raw fibre					
World	369.6	368.1	364.1	0.0	-0.1
Developing	337.7	331.7	327.4	-0.2	-0.1
Cote d'Ivoire	15.4	13.1	14.2	-1.6	0.8
Ethiopia	4.3	3.8	4.0	-1.1	0.5
Brazil	6.6	3.7	2.0	-5.6	-6.1
China	46.8	64.9	23.4	3.3	-9.7
India	105.6	82.0	70.3	-2.5	-1.5
Pakistan	103.2	84.1	90.3	-2.0	0.7
Thailand	23.1	4.9	0.1	-14.4	-31.9
Developed	31.9	36.3	36.7	1.3	0.1
European Union	16.3	14.9	15.8	-0.9	0.6
Manufactures					
World	687.2	996.8	1120.8	3.8	1.2
Developing	381.5	837.3	969.4	8.2	1.5
Africa	93.5	108.6	109.2	1.5	0.1
Algeria	7.7	9.5	10.5	2.2	0.9
Egypt	5.1	18.7	21.6	13.9	1.5
Ghana	11.9	23.7	26.6	7.2	1.2
Kenya	3.1	3.7	3.4	1.8	-1.0
Morocco	2.9	4.6	4.6	4.7	0.1
Sudan	55.8	37.6	28.3	-3.9	-2.8
Tanzania	2.8	4.2	5.7	4.2	3.1
Zimbabwe	2.2	4.4	5.7	6.9	2.7
Latin America and Caribbean	7.2	10.7	12.0	4.0	1.2
Argentina	2.5	0.7	1.1	-12.3	4.6
Brazil	2.2	5.7	6.5	9.9	1.4
Near East	242.5	354.6	361.2	3.9	0.2
Iran	70.8	49.9	48.0	-3.4	-0.4
Saudi Arabia	16.3	20.7	24.1	2.4	1.6
Syria	62.7	35.7	33.2	-5.5	-0.7
Turkey	89.6	235.4	243.3	10.1	0.3

Table 5.11 - Jute imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Asia	38.3	363.5	487.0	25.2	3.0
China	4.1	101.1	143.5	37.8	3.6
India	17.7	132.7	177.5	22.4	2.9
Indonesia	11.5	35.7	36.5	12.0	0.2
Nepal	0.0	6.4	7.3	-	1.3
Pakistan	0.3	3.4	2.9	26.8	-1.6
Thailand	1.0	79.2	112.7	54.5	3.6
Developed	305.7	159.5	151.4	-6.3	-0.5
European Union	182.5	78.6	72.7	-8.1	-0.8
Russia	6.0	14.4	12.5	9.1	-1.4
Australia	30.1	15.0	17.7	-6.7	1.6
Japan	20.3	7.5	7.3	-9.5	-0.3
South Africa	4.8	2.0	2.4	-8.3	1.8
United States	58.5	37.1	31.8	-4.4	-1.5

Table 5.12 - Jute consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	2798.7	3141.2	3249.7	1.2	0.3
Developing	2770.5	3109.8	3219.1	1.2	0.3
Africa	56.0	44.3	51.6	-2.3	1.5
Congo	5.8	6.5	9.7	1.2	4.1
Côte d'Ivoire	15.4	13.1	14.2	-1.6	0.8
Ethiopia	4.3	3.8	4.0	-1.1	0.5
Ghana	0.3	0.0	1.6	-100.0	-
Mali	1.4	1.6	2.1	1.4	2.7
Mozambique	3.0	1.6	1.6	-6.1	-0.2
Nigeria	1.3	1.5	1.7	2.0	1.1
Sudan	3.6	3.2	4.3	-1.2	3.0
Tunisia	1.2	1.8	1.8	4.4	0.1
Other Africa	16.6	9.4	8.3	-5.5	-1.3
Latin America and Caribbean	40.5	37.1	41.1	-0.9	1.0
Brazil	17.7	13.6	16.1	-2.6	1.7
Chile	9.4	9.3	10.5	-0.1	1.2
Cuba	8.6	8.6	8.9	0.0	0.3
El Salvador	3.5	3.2	3.1	-0.7	-0.5
Near East	5.7	4.7	4.5	-1.9	-0.5
Other Near East	1.5	3.2	3.3	7.9	0.3
Asia	2668.2	3023.7	3122.0	1.3	0.3
Bangladesh	535.1	1072.9	1245.3	7.2	1.5
China	151.4	129.2	83.7	-1.6	-4.2
India	1745.2	1659.8	1582.4	-0.5	-0.5
Indonesia	8.9	6.2	6.5	-3.5	0.3
Myanmar	27.6	0.9	3.0	-29.2	13.3
Nepal	17.0	63.9	108.8	14.2	5.5
Pakistan	103.6	85.0	89.1	-2.0	0.5
Thailand	63.2	5.2	0.4	-22.1	-23.5
Viet Nam	14.5	0.1	0.0	-41.0	-100.0
Developed	28.2	31.4	30.6	1.1	-0.3
European Union	7.1	4.8	4.8	-3.8	-0.1
Russian Federation	4.6	8.5	9.0	6.2	0.6
Japan	1.4	0.3	0.4	-15.3	3.9
Republic of Korea	4.1	7.6	6.9	6.5	-1.0
United States of America	5.4	7.0	6.2	2.6	-1.2

Table 5.13 - Sisal production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	253.8	235.1	255.8	-0.8	0.8
Developing	252.4	233.7	254.4	-0.8	0.8
Africa	61.6	76.6	83.8	2.2	0.9
Kenya	24.6	26.6	26.4	0.8	-0.1
Madagascar	8.1	8.7	9.3	0.7	0.7
Malawi	0.1	0.1	0.1	2.9	0.0
United Republic of Tanzania	24.8	37.2	43.8	4.2	1.6
Latin America and Caribberan	150.4	94.6	89.2	-4.5	-0.6
Brazil	139.9	80.0	72.5	-5.4	-1.0
Cuba	0.2	1.0	0.9	16.1	-1.1
Haiti	5.5	9.0	10.1	5.1	1.2
Jamaica	0.2	0.4	0.4	6.7	0.2
Venezuela (Bolivarian Republic of)	4.1	4.2	5.2	0.3	2.2
Near East	0.0	0.0	0.0	-	-
Asia	40.4	62.6	81.4	4.5	2.7
China	40.4	61.6	80.4	4.3	2.7
Indonesia	0.0	1.0	1.0	-	0.0
Developed	1.4	1.4	1.4	-0.6	0.4

Table 5.14 - Sisal exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Raw Fibre					
World	102.9	90.3	84.7	-1.3	-0.6
Developing	97.1	83.9	76.7	-1.4	-0.9
Africa	39.2	47.6	53.7	2.0	1.2
Kenya	19.7	23.7	22.9	1.9	-0.3
United Republic of Tanzania	11.7	16.9	23.4	3.8	3.3
Latin America and Caribbean	57.3	35.9	22.5	-4.6	-4.6
Brazil	57.3	35.9	22.5	-4.6	-4.6
Near East	0.0	0.0	0.0	-	-
Asia	0.6	0.5	0.5	-3.1	0.5
Developed	5.8	6.4	8.0	1.0	2.3
European Union	5.3	6.1	7.7	1.4	2.4
Manufactures					
World	115.6	76.7	79.7	-4.0	0.4
Developing	89.9	63.8	68.4	-3.4	0.7
United Republic of Tanzania	2.1	5.6	4.3	10.1	-2.5
Brazil	65.8	33.6	37.1	-6.5	1.0
Mexico	4.0	2.0	1.1	-6.5	-6.2
China	4.4	6.1	7.2	3.2	1.7
India	0.8	4.3	4.5	18.3	0.5
Developed	25.7	12.9	11.2	-6.7	-1.4
European Union	19.9	11.2	9.9	-5.6	-1.2
United States of America	4.4	1.2	0.8	-12.3	-4.0

Table 5.15 - Sisal imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
Raw fibre					
World	94.3	78.8	73.9	-1.8	-0.6
Developing	57.1	56.3	51.5	-0.2	-0.9
Africa	5.3	8.5	9.4	4.8	1.1
Algeria	0.9	2.2	2.4	8.9	1.1
Egypt	1.0	1.2	1.4	2.4	1.3
Morocco	3.0	4.7	5.3	4.6	1.1
Latin America and Caribbean	17.7	3.7	2.9	-14.6	-2.4
Mexico	11.9	2.5	1.7	-14.5	-4.0
Nicaragua	0.0	0.0	0.0	-	-
Panama	0.0	0.0	0.0	-	-
Peru	0.1	0.0	0.0	-100.0	-
Uruguay	0.0	0.0	0.0	-	-
Venezuela (Bolivarian Republic of)	0.1	0.3	0.4	17.9	2.3
Other Latin America	0.0	0.0	0.0	-	-
Near East	3.3	3.7	4.2	1.2	1.2
Saudi Arabia	2.3	3.4	3.9	3.9	1.3
Asia	30.8	40.5	35.1	2.8	-1.4
China	27.0	35.0	29.6	2.6	-1.7
India	1.2	3.1	3.1	9.5	0.0
Indonesia	1.3	1.6	1.6	1.8	0.1
Developed	37.2	22.5	22.4	-4.9	0.0
European Union	33.5	21.3	21.0	-4.4	-0.1
Manufactures					
World	104.6	74.7	74.8	-3.3	0.0
Developing	15.8	22.9	24.0	3.8	0.5
Africa Developing	2.3	3.7	3.9	5.2	0.5
Latin America and Caribbean	1.0	4.7	4.8	16.9	0.3
Asia	10.5	11.8	12.3	1.2	0.4
Developed	88.8	51.8	50.7	-5.3	-0.2
European Union	25.9	16.1	13.9	-4.7	-1.5
Canada	4.6	2.4	3.0	-6.5	2.3
United States of America	54.8	30.2	30.7	-5.8	0.1

Table 5.16 - Sisal consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	245.2	223.6	245.0	-0.9	0.9
Developing	212.4	206.1	229.2	-0.3	1.1
Africa	27.7	37.5	39.5	3.1	0.5
Algeria	0.9	2.2	2.4	8.9	1.1
Angola	0.4	0.6	0.6	3.9	-0.1
Egypt	0.9	1.2	1.4	2.6	1.3
Ethiopia	0.6	0.7	0.6	0.2	-0.1
Guinea	0.7	0.7	1.0	0.7	3.9
Kenya	4.9	3.1	3.5	-4.6	1.3
Madagascar	1.2	1.8	2.1	4.1	1.4
Morocco	3.0	4.7	5.3	4.8	1.1
United Republic of Tanzania	13.1	20.3	20.3	4.5	0.0
Other Africa	1.1	1.1	1.1	0.0	0.1
Latin America and Caribbean	110.8	62.4	69.6	-5.6	1.1
Brazil	82.7	44.1	50.0	-6.1	1.3
Haiti	5.5	9.0	10.1	5.1	1.2
Mexico	11.9	2.5	1.7	-14.4	-4.0
Venezuela (Bolivarian Republic of)	4.1	4.5	5.6	0.8	2.2
Near East	3.3	3.7	4.2	1.2	1.2
Saudi Arabia	2.3	3.4	3.9	3.9	1.3
Asia	70.6	102.6	116.0	3.8	1.2
China	67.3	96.4	109.8	3.7	1.3
India	0.9	3.0	3.0	12.4	0.0
Indonesia	1.1	2.4	2.4	8.0	0.0
Developed	32.8	17.5	15.8	-6.1	-1.0
European Union	28.2	15.2	13.4	-6.0	-1.3
South Africa	2.5	1.8	1.9	-3.3	0.4

Table 6.1 - Bananas exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	12 845	17 454	26 787	3.1	4.4
Central and South America	10 220	13 036	17 531	2.5	3.0
Colombia	1 488	1 759	1 661	1.7	-0.6
Costa Rica	1 853	2 032	2 429	0.9	1.8
Ecuador	4 488	5 395	7 387	1.9	3.2
Guatemala	1 024	1 952	3 699	6.7	6.6
Honduras	493	705	630	3.6	-1.1
Mexico	45	360	1 200	23.1	12.8
Panama	409	260	139	-4.4	-6.1
Other Central and South America	420	572	386	3.1	-3.9
Caribbean	233	467	1 851	7.2	14.8
Dominican Republic	116	453	1 850	14.6	15.1
Other Caribbean	117	14	1	-19.3	-22.3
Asia	1 845	3 294	6 546	6.0	7.1
Philippines	1 737	3 117	6 421	6.0	7.5
Other Asia	108	177	125	5.1	-3.4
Africa	548	657	859	1.8	2.7
Cameroon	286	249	283	-1.4	1.3
Côte d'Ivoire	250	343	530	3.2	4.5
Ghana	2	53	38	38.3	-3.2
Other Africa	10	13	8	2.1	-4.3

Table 6.2 - Bananas imports

Countries / Regions	Imports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	thousand tonnes			percent per year	
World	12 493	16 647	25 855	2.9	4.5
Argentina	540	692	872	2.5	2.3
Iran (Islamic Republic of)	231	397	837	5.6	7.7
Saudi Arabia	196	320	825	5.0	9.9
Turkey	89	222	473	9.6	7.8
China	440	816	1 836	6.4	8.4
Republic of Korea	205	347	527	5.4	4.3
Algeria	220	256	421	1.5	5.1
EU (28)	4 097	4 877	6 574	1.8	3.0
Russian Federation	758	1 283	2 578	5.4	7.2
Ukraine	78	241	357	12.0	4.0
Canada	427	552	801	2.6	3.8
United States of America	3 500	4 229	6 054	1.9	3.7
Japan	983	1 003	990	0.2	-0.1
Rest of World	730	1 411	2 710	6.8	6.7

Table 7.1 - Black tea production

Countries / Regions	Production				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
World	2 324 425	3 000 764	4 294 815	2.6	3.7
Africa					
Kenya	301 794	415 707	602 969	3.3	3.8
Malawi	43 656	44 936	47 585	0.3	0.6
Zimbabwe	21 080	8 500	11 442	-8.7	3.0
Rwanda	14 870	24 884	44 692	5.3	6.0
South Africa	7 769	2 104	5 089	-12.2	9.2
Uganda	35 775	61 424	103 645	5.6	5.4
United Republic of Tanzania	29 227	33 824	36 037	1.5	0.6
Other	34 993	39 602	53 305	1.2	3.0
Latin America and Caribbean					
Argentina	70 015	78 522	92 228	1.2	1.6
Brazil	8 054	7 267	6 568	-1.0	-1.0
Other	9 567	8 718	7 004	-0.9	-2.2
Near East					
Iran (Islamic Republic of)	52 617	26 000	25 978	-6.8	0.0
Turkey	171 667	232 665	258 076	3.1	1.0
Far East					
India	861 205	1 164 043	1 519 542	3.1	2.7
Sri Lanka	306 404	331 243	402 253	0.8	2.0
China	41 999	159 211	673 613	14.3	15.5
Viet Nam	71 047	92 832	108 002	2.7	1.5
Bangladesh	55 973	63 787	79 253	1.3	2.2
Malaysia	3 649	19 606	33 525	18.3	5.5
Nepal	9 122	17 300	21 255	6.6	2.1
Indonesia	125 077	112 131	115 821	-1.1	0.3
Other	34 213	42 377	41 294	2.2	-0.3
CIS					
Russian Federation	2 567	3 400	3 098	2.9	-0.9
Other CIS	5 192	4 200	5 167	-2.1	2.1
Oceania	6 867	6 467	5 927	-0.6	-0.9

Table 7.2 - Green tea production and exports

Countries / Regions	Production					Exports				
	Actual		Projected	Growth rates		Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year		tonnes			percent per year	
World	774 618	1 567 092	3 743 566	7.3	9.1	211 325	344 280	804 300	5.0	8.9
China	576 580	1 315 230	3 221 897	8.6	9.4	182 792	254 106	481 508	3.3	6.6
Japan	91 667	83 297	94 588	-1.0	1.3	841	2 936	8 394	13.3	11.1
Viet Nam	34 100	95 502	339 665	10.8	13.5	16 800	64 542	284 912	14.4	16.0
Indonesia	40 533	37 300	39 790	-0.8	0.6	4 252	11 810	19 370	10.8	5.1

Table 7.3 - Black tea exports

Countries / Regions	Exports				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
World	1 210 314	1 343 762	1 702 336	1.1	2.4
Africa					
Kenya	278 144	390 638	534 169	3.5	3.2
Malawi	42 666	40 700	36 829	-0.5	-1.0
Zimbabwe	16 513	5 900	6 703	-9.8	1.3
Rwanda	11 849	22 342	43 224	6.5	6.8
South Africa	7 704	4 635	4 781	-5.0	0.3
Uganda	33 381	55 656	93 316	5.2	5.3
United Republic of Tanzania	22 716	26 365	28 072	1.5	0.6
Other	21 382	22 500	20 287	0.5	-1.0
Far East					
India	187 238	197 380	215 859	0.5	0.9
Sri Lanka	289 097	307 016	355 750	0.6	1.5
China	39 310	32 159	100 397	-2.0	12.1
Viet Nam	57 075	71 625	81 024	2.3	1.2
Bangladesh	13 087	1 587	943	-19.0	-5.1
Malaysia	839	1 587	1 421	6.6	-1.1
Nepal	417	8 797	11 716	35.7	2.9
Indonesia	91 392	57 294	61 398	-4.6	0.7
Other	5 932	9 465	7 292	4.8	-2.6
Near East					
Turkey	5 708	4 134	2 191	-3.2	-6.2
Latin America and Caribbean					
Argentina	62 324	73 602	87 273	1.7	1.7
Brazil	3 715	497	2 119	-18.2	15.6
Other	1 909	911	994	-7.1	0.9
CIS	2 567	2 767	2 300	0.8	-1.8
Oceania	6 780	6 161	6 847	-1.0	1.1

Table 7.4 - Black tea consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
World	2 275 355	2 971 307	4 265 506	2.7	3.7
Far East					
Pakistan	110 107	130 575	157 472	1.7	1.9
India	706 967	976 663	1 313 191	3.3	3.0
Sri Lanka	23 995	31 730	49 520	2.8	4.6
China	4 997	140 371	584 379	39.6	15.3
Viet Nam	45	207	331	16.5	4.8
Bangladesh	40 772	62 370	93 679	4.3	4.2
Malaysia	14 445	36 481	59 942	9.7	5.1
Nepal	8 810	8 872	9 781	0.1	1.0
Indonesia	36 923	36 238	55 528	-0.2	4.4
Other	56 614	72 915	81 511	2.6	1.1
Africa					
Kenya	12 968	27 158	49 126	7.7	6.1
Malawi	1 281	4 236	10 873	12.7	9.9
Morocco	163	167	327	0.2	7.0
Zimbabwe	4 762	2 600	4 758	-5.9	6.2
Rwanda	1 287	1 541	1 069	1.8	-3.6
South Africa	17 052	22 140	30 453	2.6	3.2
Uganda	1 463	4 700	8 489	12.4	6.1
United Republic of Tanzania	6 545	5 684	7 884	-1.4	3.3
Other	59 029	76 764	100 489	2.7	2.7
Near East					
Iran (Islamic Republic of)	76 198	83 118	119 309	0.9	3.7
Turkey	168 248	234 037	262 856	3.4	1.2
Iraq	49 564	34 517	34 104	-3.6	-0.1
Saudi Arabia	21 162	30 843	46 767	3.8	4.3
Syria	30 041	30 333	31 547	0.1	0.4
United Arab Emirates	39 286	40 000	66 304	0.2	5.2
Egypt	70 016	97 425	139 675	3.4	3.7
Libya	10 294	13 227	11 628	2.5	-1.3
Sudan	14 667	25 900	50 715	5.9	7.0
Jordan	4 843	5 404	5 945	1.1	1.0
Israel	1 870	1 065	1 556	-5.5	3.9
Other	60 457	89 171	151 577	4.0	5.4

Table 7.4 - Black tea consumption

Countries / Regions	Consumption				
	Actual		Projected	Growth rates	
	2002-04	2012-14	2024	2002-04/ 2012-14	2012-14/ 2024
	tonnes			percent per year	
Latin America and Caribbean					
Argentina	7 950	5 056	5 120	-4.4	0.1
Brazil	4 478	6 961	10 527	4.5	4.2
Other	27 327	32 482	37 841	1.7	1.5
North America					
United States of America	83 086	107 511	144 155	2.6	3.0
Canada	15 113	13 030	12 598	-1.5	-0.3
Europe					
EU (28)	228 083	196 591	190 302	-1.5	-0.3
United Kingdom	128 987	112 174	100 375	-1.4	-1.1
Germany	19 310	21 942	28 901	1.3	2.8
Poland	26 797	15 343	11 821	-5.4	-2.6
Netherlands	13 867	7 854	12 641	-5.5	4.9
France	8 322	7 495	7 045	-1.0	-0.6
Other European Union	19 624	24 605	22 031	2.3	-1.1
Other Europe	4 151	3 037	2 292	-3.1	-2.8
CIS					
Russian Federation	154 391	151 905	139 379	-0.2	-0.9
Other CIS	64 019	97 154	160 739	4.3	5.2
Japan	15 567	15 910	17 243	0.2	0.8
Oceania	16 321	15 170	13 793	-0.7	-0.9

FAO often undertakes projections of production, demand, and trade for all major agricultural commodities as a basis for medium-term commodity analysis. These projections are an important input for FAO's commodity outlook work, for global perspective studies and as background for policy consultations on individual commodities. Outside FAO, these projections are used by national planning agencies, international research institutions and other national and international organizations requiring a base reference for strategies in national agricultural commodity planning and investment. This particular publication puts the focus on a set of selected Raw materials, Horticulture and Tropical Products, namely sugar, tea, banana, tropical fruits, citrus products, jute, and hard fibres. A medium-term outlook is generated for each of these products, and an analysis is undertaken to assess underlying market drivers and the factors likely to shape market performance over the next 10 years.

It is hoped that the discussion about some of the key issues covered in this publication will help government agencies, policy makers, national and international research institutions in the design and implementation of sector investment strategies. Also, the objective of this publication is to raise awareness of the problems and challenges facing the tropical beverage crops, fruits, sugar, and raw materials, given their vital role in many developing countries in the achievement of food and nutritional security in the context of the post-2015 sustainable development agenda.

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