

# Enhancing Africa's Agricultural Exports to China



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# Enhancing Africa's Agricultural Exports to China

## About the paper

Agricultural and food products from Ethiopia, Kenya, Madagascar, Mauritius, Mozambique, Rwanda, Uganda and Zambia have export potential for China, as consumer demand continues to grow. This report highlights areas of greatest potential and also looks at both sides to seal more sanitary agreements to boost cooperation along the value chain.

The report is part of the ITC project, Partnership for Enhancing Export Capacity of Africa to China.

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## Foreword

Africa's remarkable progress over the past two decades has been seriously hindered by the COVID-19 pandemic. While the virus reversed development gains around the world, countries in Africa were especially hard hit. The United Nations estimates that 30 million Africans were pushed into extreme poverty due to the pandemic.

Trade provides a crucial path to overcome the setbacks caused by the pandemic and lead Africa towards growth, sustainable development and better livelihoods. For many developing countries, farm exports play an important role in their economic success. However, with 17% of the world's population, Africa accounts for only about 3% of world trade. While trade isn't yet acting as an engine for development on the continent, the potential is enormous.

A recent McKinsey study predicted that China will have 400 million households with upper-middle and higher incomes by 2030. That's roughly as many as in Europe and the United States combined. This growing middle class and its voracious demand present an opportunity for Africa.

China has been Africa's largest trading partner since 2009. In 2021, bilateral trade rose to \$254 billion, up 35% from the year before. African exports jumped 45%, to \$109 billion in the same period.

China has committed to taking steps to maintain that growth. These measures include 'green lanes' for African farm exports, as well as faster inspection and quarantine procedures. China aims for its total imports from Africa to reach \$300 billion over the next three years.

The International Trade Centre has been working with China since 2017 to help small companies access its market. This work runs alongside the Belt and Road Initiative to upgrade infrastructure in nearly 70 countries.

ITC has helped around 200 small companies attend the China International Import Expo in Shanghai, one of the biggest events of its kind in the world. ITC also works in other ways to help small businesses in developing countries find opportunities in China, working with the entities such as the Ministry of Commerce of the People's Republic of China, the China Council for the Promotion of International Trade, and the Alibaba Group.

This report is meant to guide African farm businesses as they seek to trade with China. Using ITC's trade tools and data, this report is a blueprint for success for African businesses, setting out in detail which products have the best chance of competing in China.

We hope that this is a solid step toward building new jobs across the region.



Pamela Coke-Hamilton  
Executive Director  
International Trade Centre

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## Acronyms

Unless otherwise specified, all references to dollars (\$) are to United States dollars, and all references to tons are to metric tons.

COMESA	Common Market for Eastern and Southern Africa
ECX	Ethiopia Commodity Exchange
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross domestic product
ITC	International Trade Centre
KTDA	Kenya Tea Development Agency
MOFCOM	Ministry of Commerce of the People's Republic of China
NCE	Nairobi Coffee Exchange
nes	not elsewhere specified
SPS	Sanitary and phytosanitary measures
UN	United Nations
USAID	US Agency for International Development
WTO	World Trade Organization

## Executive summary

The added value of African agriculture has nearly tripled over the past two decades, from about \$140 billion in 2000 to \$400 billion in 2019. Not only did the value increase, but African farming also accounted for a growing share of global agricultural output – from 8% to 12% over the same period.

Africa has many advantages and great potential for agricultural development. The continent has the youngest labour force in the world, and 11 million more young people enter the labour market every year. The continent's arable land, relative to its population, is higher than the global average.

Up to 70% of the population depends on agriculture for their livelihood, and yet food insecurity is a major challenge. About 19% of Africans suffer from hunger due to food shortages, a situation that is expected to worsen. Based on current trends, by 2030 more than one-half of the world's population suffering from hunger will reside in Africa. The resilience of African farms is relatively weak, in part due to highly volatile outputs and growth rates of some countries.

Sustainable development in Africa depends on development of better farming methods. Agriculture accounts for 15% of sub-Saharan Africa's GDP; reducing poverty – especially in rural areas – and boosting industrialization depend on increasing agricultural production.

Despite its reliance on farming, Africa is a net importer of agricultural products – and has been for decades. Africa imports nearly twice as much as it exports. For example, in 2020, farm imports to the continent totalled \$112.4 billion, while exports were just \$60.7 billion. The numbers have quadrupled since 2000.

What Africa buys is very different from what Africa sells. The continent imports basic foodstuffs: starches, proteins, grains and cooking oils. Exports are dominated by cash crops: cocoa, nuts, coffee, tea and sesame.

Just 10 countries account for nearly three-fourths of the continent's farm exports: Côte d'Ivoire, Egypt, Ethiopia, Ghana, Kenya, Morocco, South Africa, Tanzania, Tunisia and Uganda.

Because of historical factors and geography, Europe is the largest buyer of African agricultural products, accounting for nearly 19% of the total.

African farm exports to China have strong momentum and even greater potential. Overall exports to China increased from \$59 million in 2001 to \$32 billion in 2020. For most individual products, exports to China are growing faster than to other parts of the world. In 2001, about 40% of Africa's exports to China were live animals. In 2020, plant products grew to 65% of the total, driven by Chinese demand.

However, farm products remain a small portion, only 5.5%, of Africa's exports to China. Nuts, cocoa, coffee and tea, which have comparative advantages in the global market, have a relatively low market share in China. These have broad development prospects.

As the Belt and Road Initiative steadily progresses, agricultural development is a priority for Sino-African cooperation. Africa is endowed with excellent natural resources and has huge potential to improve capacity. Growing Chinese consumption means buyers are rapidly forming new habits, creating an opening for African products, including for high-end buying. Chinese companies are investing more in African agriculture.

Key hurdles remain, including weak infrastructure, low-tech farming, long distances, expensive transport and logistics, and a lack of bilateral trade agreements. Some export gains could come rapidly with better cooperation on agricultural inspections and quarantines. Food security in Africa remains a restraint.

None of these challenges can be met by the blind pursuit of technology. Technology transfers must be relevant and appropriate. The existing Sino-African agricultural cooperation mechanism and e-commerce platform should be used fully. New agreements could remove bottlenecks, especially for animal and plant inspections and quarantines.

Agricultural cooperation between China and Africa should adhere to the UN Sustainable Development Goals, balancing environmental protections and agricultural development. Over-dependence on single crops also



causes vulnerability. And, while vigorously developing cash crops will increase farmers' incomes, it will lead to improvement of investment in the agricultural sector, which will also help to ensure the food security of African countries.

Based on the ITC Trade Map, we have analysed the actual exports and the export potential of agricultural products to China from eight countries: Ethiopia, Kenya, Madagascar, Mauritius, Mozambique, Rwanda, Uganda and Zambia. Below are the products that are majority exports or that have export potential.

**Ethiopia:** Coffee, kidney beans, dried vegetables, dried beans, soya beans, fresh cut flowers and buds, goat meat and sesame

**Kenya:** Black tea and related products, coffee, fresh cut flowers, avocado, pineapple, goat meat and spices

**Madagascar:** Vanilla, frozen shrimp, essential oils, unshelled beans, vegetable saps and extracts

**Mauritius:** Tuna, frozen toothfish, fish flour and raw cane sugar

**Mozambique:** Sesame, cashew nuts, dried leguminous vegetables and soya beans

**Rwanda:** Coffee, black tea and palm oil

**Uganda:** Coffee, dried shelled beans, maize and sesame

**Zambia:** Raw cane sugar, soya beans and oilcake

## Chapter 1 Africa's agricultural development

### Overview

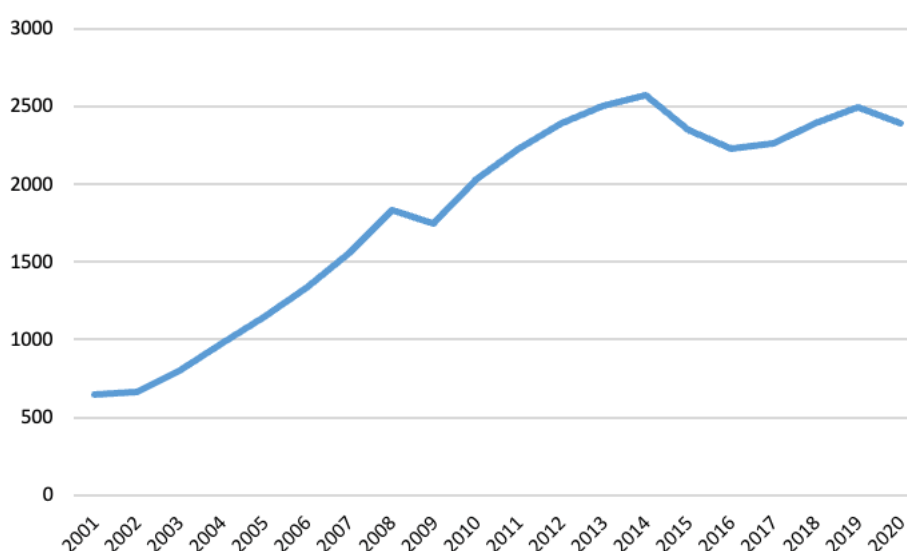
#### Economic development

Africa's GDP has increased threefold over the past two decades, from \$648 billion in 2001 to \$2.4 trillion in 2020. Sub-Saharan Africa's per capita GDP contracted by 4.5% in 2020 due to the effects of the COVID-19 pandemic. Indeed, the world's per capita GDP also declined that year by 4.3%.

However, African incomes remain far below global levels, at just \$1,501.20 in 2020, compared to the world average of \$10,918.70.

As social restrictions eased and commodity prices rebounded, the region returned to growth of 3.5% in 2021, according to the World Bank publication *Global Economic Prospects*. Growth in 2022 and 2023 is projected at 3.6% and 3.8%, respectively. While welcome, these gains are not enough to reverse increases in poverty and losses in per capita income. Economic recovery remains vulnerable to new COVID-19 outbreaks and possible social restrictions.

**Figure 1 Gross GDP of Africa from 2001 to 2020 (\$ billion) <sup>1</sup>**



Source: World Bank

#### Population

Africa has more than 1.3 billion people, accounting for 17.2% of the global population, making it the second-most populous continent in the world.<sup>2</sup> The world's population is expected to keep growing this century. By 2100, Africa is expected to become the fastest-growing continent. In densely populated West and East Africa, and in many individual countries, populations will double by 2050.<sup>3</sup>

Africa is also the world's youngest continent. More than 40% of Africans are 14 or younger. Only 5% of the population is over 60. Women slightly outnumber men, but the sex ratio is largely balanced. The population

<sup>1</sup> In gross GDP of Africa from 2001 to 2020, the following data are missing: Somalia 2001–2012, South Sudan 2001–07 and 2016–2020 and Eritrea 2012–2020.

<sup>2</sup> UN Statistical Yearbook-World Population Data. May 2021.

<sup>3</sup> UN World Population Prospects. 2019.

is moderately dense across the continent, with larger hubs close to coasts, rivers and lakes. About 40% of Africans live in urban areas, and this share is expected to exceed 60% by 2050. And 200 million people, or about 60% of the urban population, live in slums.<sup>4</sup>

## Land

With a land area of 30.3 million square kilometres, Africa is the second-largest continent in the world.<sup>5</sup> The Food and Agricultural Organization's *Statistical Yearbook 2021* shows that Africa has 280 million hectares of arable land, or 18% of the world total. That figure has grown from 230 million hectares in 2000, as the percentage of forest land has declined. Forests covered 23.9% of the continent in 2000, and 21.6% in 2018.

Per capita cropland area in Africa is also on the decline, from 0.28 hectares in 2000 to 0.21 hectares in 2019. That figure is higher than the global average of 0.2 hectares, and much higher than the average of 0.13 hectares in Asia.

## Climate and disasters

Floods and droughts are common. Almost every country in Africa has a high risk and frequency of floods. Droughts are concentrated in the Sahel, the Horn of Africa, East Africa and Southern Africa.<sup>6</sup>

Locust plagues, which were listed by the Food and Agricultural Organization (FAO) as one of its top priorities in 2020, are considered an unprecedented threat to food security. Five of the nine species of locusts that can produce plagues are found in Africa. Highly dense and mobile swarms can gather up to 80 million adults in just one square kilometre and have the capacity to consume the food rations of 35,000 people in a single day.<sup>7</sup>

## Food security

Africa has the highest prevalence of undernourishment of all the regions in the world. In 2020, 21% of Africans were undernourished, up from 18% the year before.<sup>8</sup>

According to FAO 2021 *Global Report on Food Crises*, 155 million people in 55 countries and territories experienced a severe food crisis at the end of 2020.<sup>9</sup> Up to 132 million of them suffered from chronic hunger. The Horn of Africa and the Sahel are among the most affected regions. In Somalia, three times as many people are hungry, compared to pre-COVID times. Sudan's food crisis affected a record 9.6 million people between July and September 2020.<sup>10</sup>

## Agricultural development in Africa

### Agricultural output

Global GDP and agricultural output are projected to keep growing,<sup>11</sup> with agriculture accounting for a stable share of 4% of the world economy.<sup>12</sup> But in sub-Saharan Africa, agriculture accounts for 15% of GDP. The added value of agriculture rose from \$170 billion in 2000 to \$404 billion in 2019. During that time, African farming took a greater share of the global output, from 8% to 12%.

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<sup>4</sup> United Nations Economic and Social Council. 2018.

<sup>5</sup> UN Statistical Yearbook-World Population Data. May 2021.

<sup>6</sup> United Nations *World Water Development Report*. 2019.

<sup>7</sup> *Desert locust crisis 2020-2021*. UN Food and Agriculture Organization. 2020.

<sup>8</sup> UN Food and Agriculture Organization, *Statistical Yearbook 2021*.

<sup>9</sup> European Commission, *Global Report on Food Crises 2021*.

<sup>10</sup> Q&A: COVID-19 pandemic – impact on food and agriculture. UN Food and Agriculture Organization. 2020.

<sup>11</sup> UN World Economic Situation Prospects 2021. 2020.

<sup>12</sup> UN Food and Agriculture Organization, *Statistical Yearbook 2020*.

In some countries, farming is particularly fragile and risky, as evidenced in volatile output and growth rates. For example, in Namibia, farm output rose 6.3% in 2014, only to plunge 11.3% the following year.<sup>13</sup>

**Table 1 GDP, GDP growth, GDP per capita growth and agriculture value 2020**

Country	GDP (current \$ billion)	GDP growth (annual %)	GDP per capita growth (annual %)	Agriculture (% of GDP)
Algeria	145.01	-5.1	-6.8	14.1
Angola	58.38	-5.4	-8.4	9.5
Benin	15.65	3.8	1.1	27.1
Botswana	15.06	-8.5	-10.4	2.1
Burkina Faso	17.93	1.9	-0.9	18.4
Burundi	2.84	0.3	-2.7	28.5
Cabo Verde	1.70	-14.8	-15.7	4.9
Cameroon	40.80	0.5	-2.0	17.4
Central African Republic	2.38	0.8	-0.9	32.1
Chad	10.83	-0.9	-3.8	46.3
Comoros	1.24	-0.1	-2.3	36.7
Congo	10.19	-7.9	-10.2	9.6
Congo, Democratic Republic of the	48.72	1.7	-1.4	20.9
Côte d'Ivoire	61.35	2.0	-0.6	21.4
Djibouti	3.38	0.5	-1.0	1.3
Egypt	365.25	3.6	1.6	11.6
Equatorial Guinea	10.02	-4.9	-8.1	3.0
Eritrea	2.07 (2011)	8.7 (2011)	7.2 (2011)	14.1 (2009)
Eswatini	3.97	-1.9	-2.9	8.4
Ethiopia	107.65	6.1	3.4	35.5
Gabon	15.32	-1.8	-4.2	6.7
Gambia	1.87	-0.2	-3.1	20.6
Ghana	68.53	0.4	-1.7	19.3
Guinea	15.68	7.0	4.0	23.7
Guinea-Bissau	1.43	-2.4	-4.7	30.9
Kenya	101.01	-0.3	-2.5	23.0
Lesotho	1.88	-9.6	-10.3	6.3
Liberia	3.20	-3.0	-5.3	39.0
Libya	25.42	-31.3	-32.2	1.8
Madagascar	13.06	-7.1	-9.6	25.1
Malawi	12.18	0.8	-1.8	22.7
Mali	17.47	-1.2	-4.1	36.2
Mauritania	7.91	-1.8	-4.4	20.2
Mauritius	10.92	-14.9	-14.9	3.4
Morocco	114.73	-6.3	-7.4	11.7

<sup>13</sup> World Bank. 2021.

Mozambique	14.02	-1.2	-4.0	25.6
Namibia	10.62	-8.5	-10.2	9.2
Niger	13.74	3.6	-0.3	38.4
Nigeria	432.29	-1.8	-4.3	24.1
Rwanda	10.33	-3.4	-5.8	26.3
Sao Tome and Principe	0.47	3.1	1.2	14.0
Senegal	24.64	1.5	-1.2	17.0
Seychelles	1.06	-10.8	-11.5	1.9
Sierra Leone	4.06	-2.0	-4.0	59.5
Somali	6.97	2.4	-0.5	62.7 (1990)
South Africa	335.44	-6.4	-7.6	2.5
South Sudan	12 (2015)	-10.8 (2015)	-12.1 (2015)	9.6
Sudan	21.33	-3.6	-5.9	20.4
Tanzania	62.41	2.0	-1.0	26.7
Togo	7.57	1.8	-0.7	18.8
Tunisia	41.62	-9.2	-10.1	10.1
Uganda	37.60	3.0	-0.4	23.9
Zambia	18.11	-2.8	-5.6	3.0
Zimbabwe	18.05	-6.2	-7.6	7.6

**Source:** World Bank World Development Indicators<sup>14</sup>

According to FAO, Africa's production of wheat, maize and rice has fluctuated but grown this century. The continent's output still lags behind global output. Major cereals account for one-half of the calories consumed in Africa. Between 2009 and 2018, their production increased by 30%. Wheat production grew by a fluctuating 13%, or an average of 2.4% a year. Rice production fell 11%, but maize was up 31%. Trade figures from the ITC Trade Map indicate that Africa imports these cereals from within the continent and from other parts of the world. However, African countries only export cereals within the continent – none are sold to other regions.

According to FAO, Africa's cooking oil crop production rose from 690 million tons in 2007 to 970 million tons in 2017 at a rate similar to global growth.

Beef production grew by an average of 2.5% from 2009 to 2018, although each head of cattle yielded less meat due to difficulties with infrastructure, feed and storage. During that period, chicken production grew, and Africa took a larger share of the global egg industry. Yet, cattle and poultry production remain the lowest in the world, one-half that of North America.

According to FAO, global fisheries production increased from 2000 to 2018, with the fishing industry remaining stable and aquaculture increasing its share by a remarkable 20%. In 2018, 5.4 million people worked in the primary sector.

Africa's fishery production grew an average 4% from 2009 to 2018, slightly higher than the world's growth rate. The largest fishing countries in Africa are Egypt (14% of the continent's fishing in 2018), Morocco (12.1%), Nigeria (9.4%), South Africa (5.5%), Uganda (4.9%) and Mauritania (4.6%). The top five fish-producing countries account for more than one-half of Africa's total production. Among them, Egypt is the world's third-largest tilapia farmer; Nigeria is also a major aquaculture country in Africa.

<sup>14</sup> The data was updated on 15 February 2022.

The world has brewed more beer this century, rising from 137 million tons in 2000 to 187 million tons in 2018, according to FAO data. African beer production more than doubled from 6.32 million tons to 14.04 million tons, much faster than the global average.

World sugar production is also up, from 133 million tons in 2000 to 182 million tons in 2018, an increase of 37%. African production grew slightly slower, with an increase of 24% from 9.44 million tons to 11.69 million tons.<sup>15</sup>

## Agricultural employment

The FAO *Statistical Yearbook 2021* showed that, globally, fewer people work in agriculture, with 1.047 billion farm jobs in 2000 but only 874 million in 2020, a 16.5% decline. Africa bucked that trend, as farm jobs grew from 162 million to 224 million. Those two trends mean that, while Africa held 15% of the world's farm jobs in 2000, its grew to 25.6% in 2020. Almost one-half of Africans with a job work in agriculture, the highest share globally.

In 2019, 44.9% of African farm workers were women. In some sub-Saharan countries, that figure reaches 80%.

In 2018, 60% of Africa's population was under 25 years old, and most lived in rural areas.<sup>16</sup>

## Output per capita and farmers' income

The Alliance for a Green Revolution in Africa reported in 2017 that per capita output varies among regions. East Africa is the lowest, followed by Central Africa, West Africa and Southern Africa (except South Africa). South Africa has the highest output per capita. In terms of output per hectare, Southern Africa (except South Africa) is the lowest, while other regions' outputs are similar. This is an important consideration for agricultural investment.<sup>17</sup>

The UN Economic and Social Council's latest report in February 2021 showed that extreme poverty is predominantly rural and more likely to occur in farm communities. Sub-Saharan Africa has the highest rates of extreme rural poverty in the world. In 24 of the region's 49 countries, more than one-half of people live in extreme rural poverty, earning less than \$1.90 a day. In 35 countries, more than 30% of people face that situation. A related FAO survey indicates that, in countries like Tanzania, Ethiopia and Kenya, both large and small farms earn significantly lower incomes than their counterparts in countries like Bolivia and Nepal.

## Agricultural infrastructure

### Water resources

Africa's water resources are unevenly distributed. Outside of the Sahara, Africa has enough water, according to the *UN World Water Development Report 2019*. Five of the world's 20 most water-stressed countries are African, all of them in North Africa: Algeria, Egypt, Libya, Sudan and Tunisia. The report predicts that North Africa and Southern Africa will receive less rain by 2050 with drought trends intensifying, while precipitation will increase in the other regions.

Irrigation expanded by 5% from 2000 to 2019, reaching 16 million hectares, according to FAO *Statistical Yearbook 2021*. Despite stable growth, Africa has only 5% of the world's irrigated land. That figure masks important national distinctions. For example, Egypt has the highest proportion of irrigation facilities per unit area in the world (99.7% in 2018), with farmland mainly concentrated in the Nile Basin and Delta.

<sup>15</sup> Alliance for a Green Revolution in Africa. 2020.

<sup>16</sup> UN News. 2018.

<sup>17</sup> AGRA. (2017). *Africa Agriculture Status Report 2017: The Business of Smallholder Agriculture in Sub-Saharan Africa* (Issue 5). Nairobi, Kenya: Alliance for a Green Revolution in Africa (AGRA).

## Power

Rapid population growth and economic development have increased demand for energy. However, the electrical grid isn't up to the task, especially in sub-Saharan Africa where most people have no access to electricity. The region has less access to electricity than anywhere else in the world, a rate that is one-half the global average. In 2018, 78% of people in Nigeria, 77% in the Democratic Republic of the Congo, 59% in Ethiopia, 37% in Tanzania and 34% in Uganda had no electricity.<sup>18</sup>

## Farm machinery

Across most of Africa, farm machinery is either non-existent or outdated, creating opportunities to expand mechanization. Farmers in North Africa and South Africa have more machines and tools. The World Bank uses an index to compare levels of mechanization. In sub-Saharan Africa, the average level is 1.48, compared to 1.57 in Asia.<sup>19</sup> Again, the data hide major regional differences. South Africa has 6,775,000 tractors, more than one-half of all tractors in Africa. Djibouti has only 8,000.

Tanzania's farms are the fifth-most mechanized on the continent, but more than 60% of its tractors are more than 15 years old and over 40% are more than 25 years old.

## Agricultural chemicals

The world uses about 4 million tons of pesticides a year, according to FAO. African uses only 2% of that amount. South Africa and Morocco use pesticides at levels similar to developed countries. Some countries use few pesticides and have low agricultural yields.

In recent years, the UN has promoted green and organic agriculture through the Integrated Production and Pest Management programme in West Africa. The region has practiced it well, and yields have improved.<sup>20</sup>

## Agricultural SMEs

Small and medium-sized enterprises (SMEs) are an important driving force in African agriculture. Enhancing their operations and competitiveness, especially by strengthening their links with larger agribusinesses, will directly drive the growth of local farms. African smallholders will also benefit since they often rely on SMEs to supply their own farms and to reach consumers.

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<sup>18</sup> *Africa Energy Outlook 2019*. International Energy Agency. 2019.

<sup>19</sup> *Enabling the Business of Agriculture 2019*. World Bank. 2019

<sup>20</sup> FAO. 2009.



## Chapter 2 African agricultural trade

### Africa's agricultural trade with the world

#### Key findings

In the past two decades, Africa imported more farm goods than it exported. In 2001, African imports totalled \$18.5 billion, against exports of \$16.1 billion. In 2020, imports reached \$84.4 billion, while exports were \$60.7 billion. During that period, some trends emerged:

- Imports more than quadrupled, with a compounded annual growth rate of 8.3%.
- Most imports fall into a few categories. The four largest categories by volume are cereals; animal and vegetable oil; sugar; and dairy produce, bird eggs or natural honey. Together, these accounted for 52.3% of agricultural imports.
- Agricultural imports formed a stable portion of total imports, fluctuating around 15%.
- The 10 biggest import source markets were Brazil (7.2%), India (6.3%), France (6.2%), the United States (5.8%), Russian Federation (5.0%), South Africa (4.6%), Argentina (4.1%), Indonesia (3.8%), China (3.7%) and Ukraine (3.5%). These 10 countries account for 50.3% of all agricultural imports.

Export trends included:

- Exports grew rapidly, from \$16 billion to \$61 billion.
- Cash crops are the main exports, and are often concentrated in a few countries. For example, cocoa and cocoa products are concentrated in Côte d'Ivoire and Ghana. Côte d'Ivoire alone accounts for 60% of Africa's cocoa exports.
- Vegetable products have grown in importance. Vegetable products rose from 29% of farm exports in 2001, to 43% in 2020, while animal products decreased from 17% to 10%. Exports of rawhide, cotton, animals, and vegetable oils were relatively stable.
- Agricultural exports as a portion of total exports dipped in the early 2000s but then rebounded. By 2020, they accounted for 16.4% of all exports.
- Europe remains the main export market, due to historical and geographical factors.
- China is buying more African farm goods and has surpassed Europe to become the largest buyer of some products, including oil-bearing seeds.

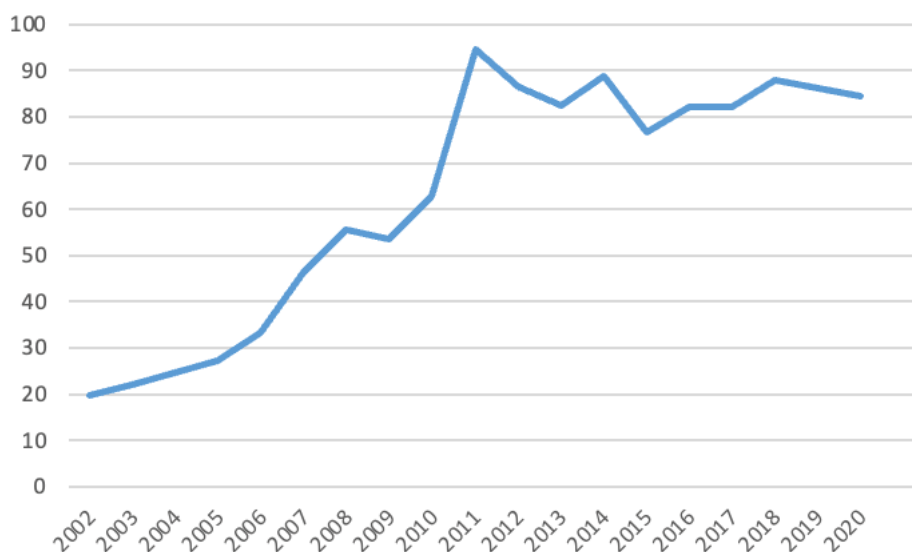
#### Africa's imports of agricultural products

##### *General trade structure and import structure of Africa*

Agricultural imports have remained stable, at around 15% of all imports to Africa. In 2001, agricultural imports comprised \$18.5 billion of a total import bill of \$115.83 billion. In 2020, agricultural imports were \$84.4 billion, from a total of \$494.2 billion. The compound annual growth rate was 8.3%.

The import curve and Africa's GDP curve are highly correlated.

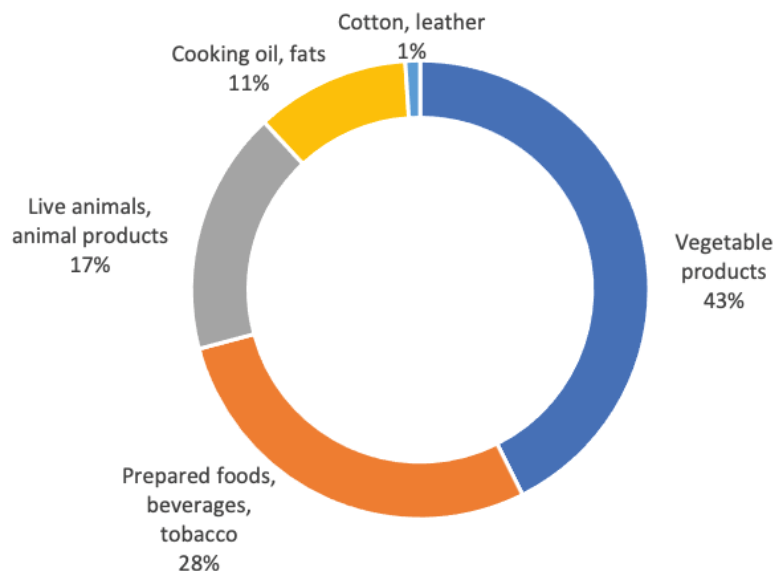
**Figure 2 Africa's agricultural imports (2001–2020, \$ billion)**



Source: ITC Trade Map

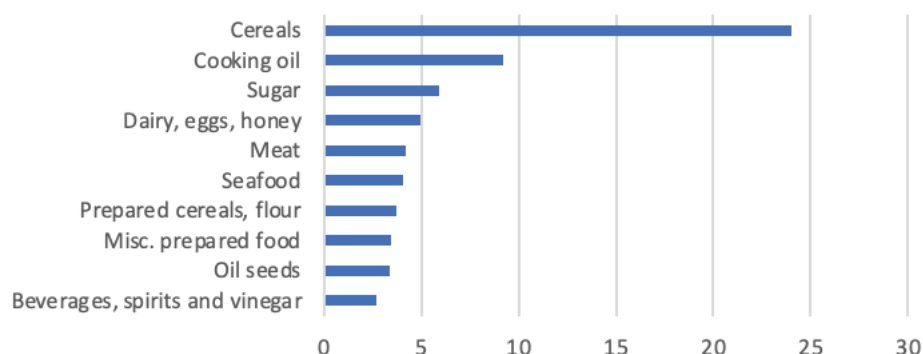
As populations and economies grew since 2001, so did agricultural imports. Yet, the general pattern of imports has remained stable, with vegetables taking the largest share followed by animal products and then processed foods, beverages and tobacco. In 2020, vegetables accounted for 43%; food, beverages, tobacco and other processed agricultural products accounted for 28%; animal products accounted for 17%; animal or vegetable fats and oils accounted for 11%; and raw hides, cotton and others accounted for 1%.

**Figure 3 African import structure of agricultural products in 2020**



Source: ITC Trade Map

In dollar terms, Africa spent \$24 billion importing cereal, \$9.2 billion on animal and vegetable oils, \$5.9 billion on sugar and confectionery and \$5 billion on dairy, bird eggs and honey. These products reflect basic foodstuffs across the continent.

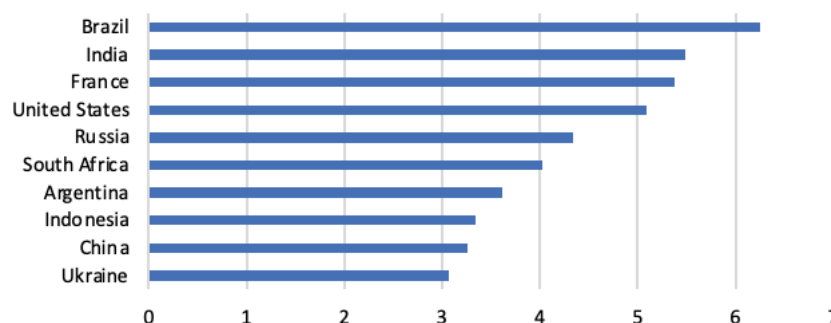
**Figure 4 Top 10 agricultural imported products of Africa in 2020 (\$ billion)**

Source: ITC Trade Map

The top 10 imports show a certain degree of concentration. Just 10 countries bought most of the imports. Those 10 countries bought 69% of the continent's imported cereals; 65% of vegetable fats and oils; 69% of sugar; 78% of birds' eggs and natural honey; 83% of meats; 81% of seafood; 55% of prepared starches; 59% of prepared foods; 94% of oil seeds; and 61% of beverages.<sup>21</sup>

### Source countries, importing countries and main imported agricultural products

In 2020, about one-half of Africa's agricultural imports came from 10 countries: Brazil (7.2%), India (6.3%), France (6.2%), the United States (5.8%), Russian Federation (5%), South Africa (4.6%), Argentina (4.1%), Indonesia (3.8%), China (3.7%) and Ukraine (3.5%).

**Figure 5 Top 10 exporters of agricultural products to Africa in 2020 (\$ billion)**

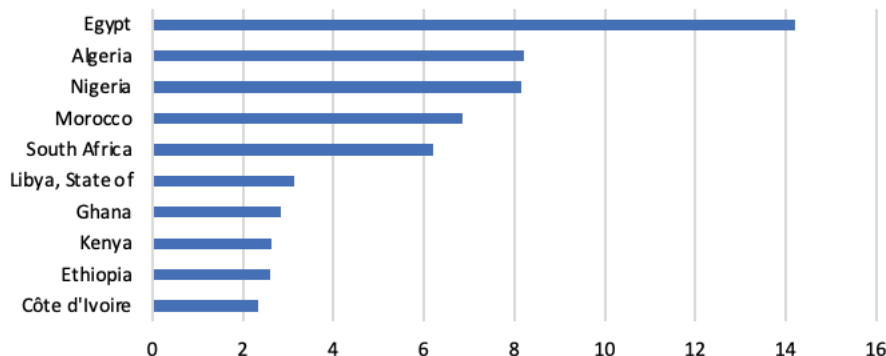
Source: ITC Trade Map

Africa's biggest importers are Egypt (16%), Algeria (9.3%), Nigeria (9.2%), Morocco (7.7%), South Africa (7%), Libya (3.6%), Ghana (3.2%), Kenya (3%), Ethiopia (3%) and Côte d'Ivoire (2.6%). Egypt is the top importer of cereals, vegetable fats and oils, meats and oil seeds. Nigeria is the biggest importer of sugar, seafood, prepared starches and other prepared foods. Algeria is the biggest buyer of dairy, birds' eggs and natural honey. South Africa buys the most beverages, spirits and vinegar.<sup>22</sup>

<sup>21</sup> For more detailed information, see Appendix II.

<sup>22</sup> For details on each product, see Appendix II.

**Figure 6 Africa's top 10 importers of farm products, 2020 (\$ billion)**



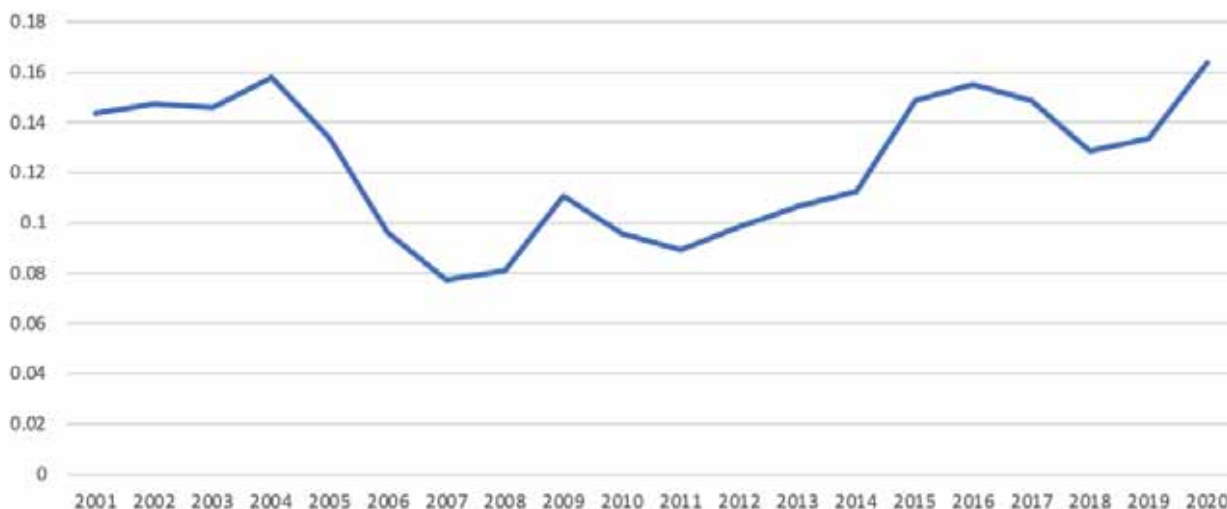
Source: ITC Trade Map

### Africa's exports of agricultural products

#### General trade structure and export structure of Africa

Over the past 20 years, agricultural exports fell but then rose as a proportion of Africa's total exports. In 2001, agricultural exports were 14.3% of the total. In 2007, they fell to a low of 7.7%, but then rose again to reach 16.4% of the total in 2020.

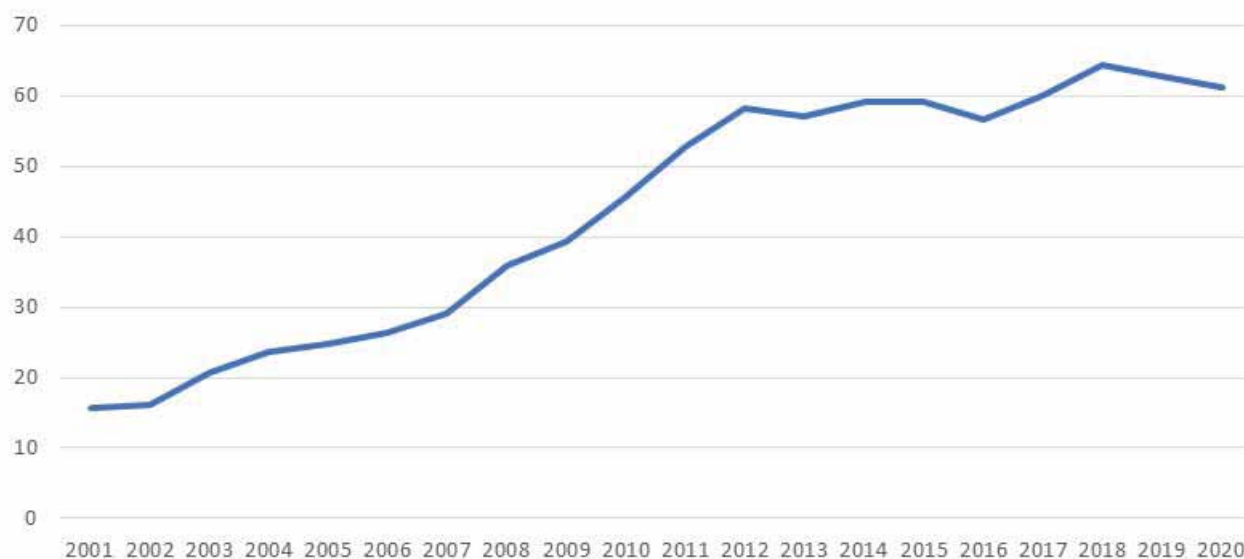
**Figure 7 Farm goods as a percentage of Africa's total exports (2001–2020)**



Source: ITC Trade Map

In 2001, Africa exported \$15.7 billion worth of agricultural products. In 2020, the figure reached \$61.2 billion. The export curve and Africa's GDP curve are highly correlated.

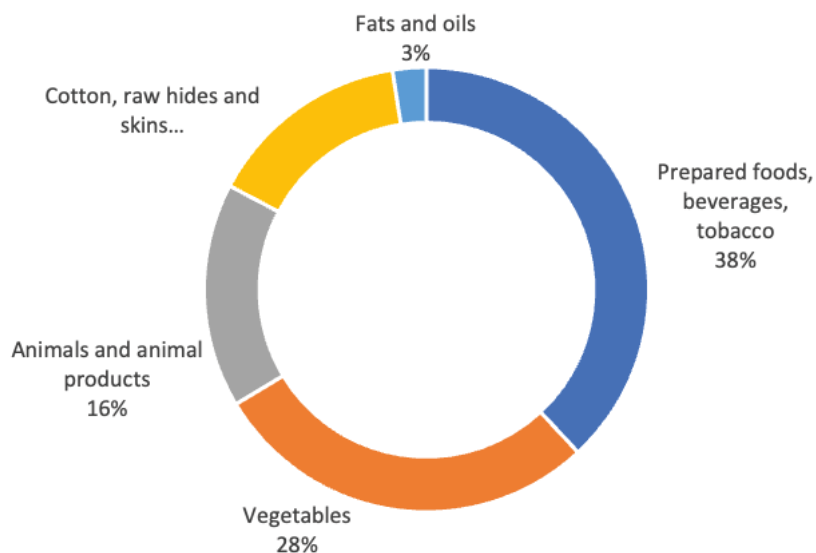
**Figure 8 Africa's agricultural exports 2001–2020 (\$ billion)**



Source: ITC Trade Map

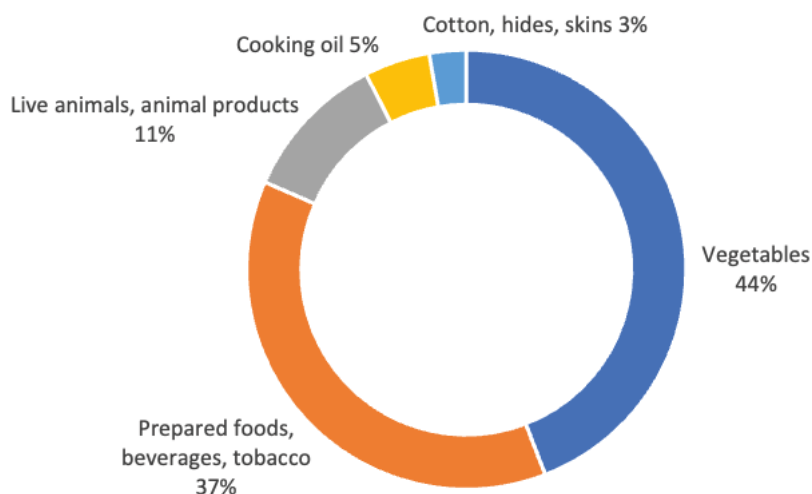
The exports are mainly cash crops. Vegetables comprised a growing proportion, while the share of live animals and animal products decreased. In 2020, vegetables accounted for 44% of exports, up from 28% in 2001. Prepared foodstuffs, beverages and tobacco held steady at 37%. Live animal and animal products decreased to 11%, from 18%. Exports of raw hides, skins and cotton fell to 3% from 15%. Exports of cooking oils rose to 5% from 3%.

**Figure 9 Export structure of African agricultural products in 2001**



Source: ITC Trade Map

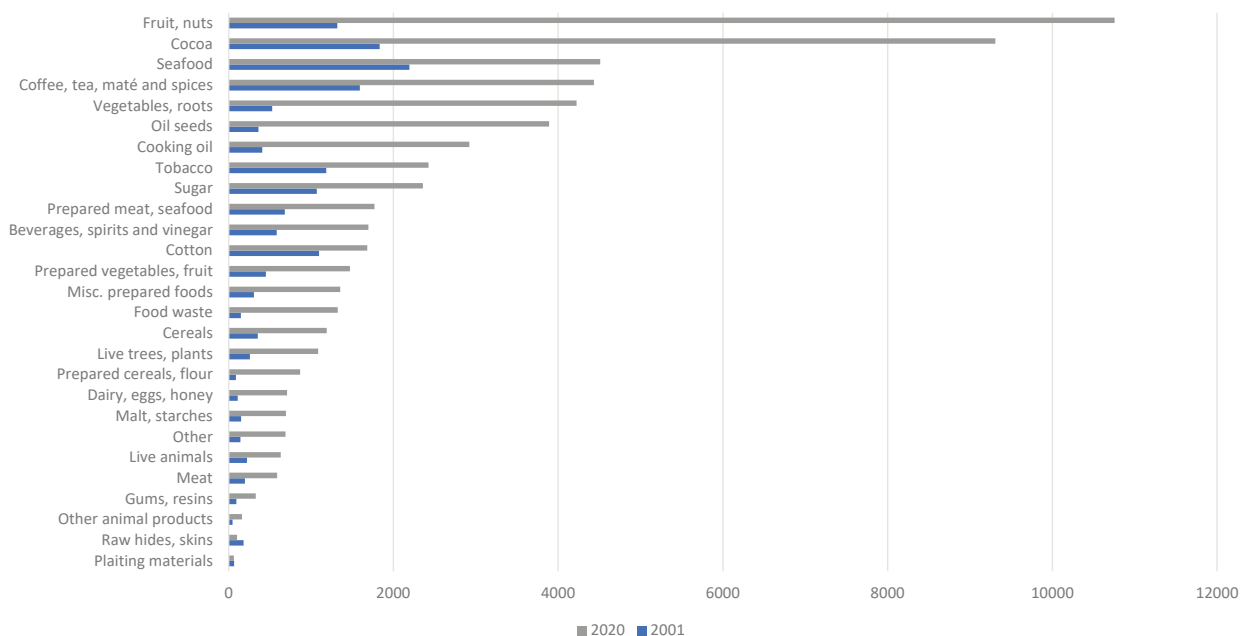
**Figure 10** Export structure of African agricultural products in 2020



Source: ITC Trade Map

Cash crops make up the bulk of Africa's agricultural products, including nuts, cocoa, coffee, tea and sesame. Except for raw hide skins and vegetable plaiting materials, exports grew since 2001. In 2020, Africa's top agricultural exports were fruit and nuts (\$10.8 billion), cocoa (\$9.3 billion), seafood (\$4.5 billion), coffee, tea, maté and spices (\$4.4 billion), oil seeds (\$3.9 billion), and vegetables and roots (\$4.2 billion).

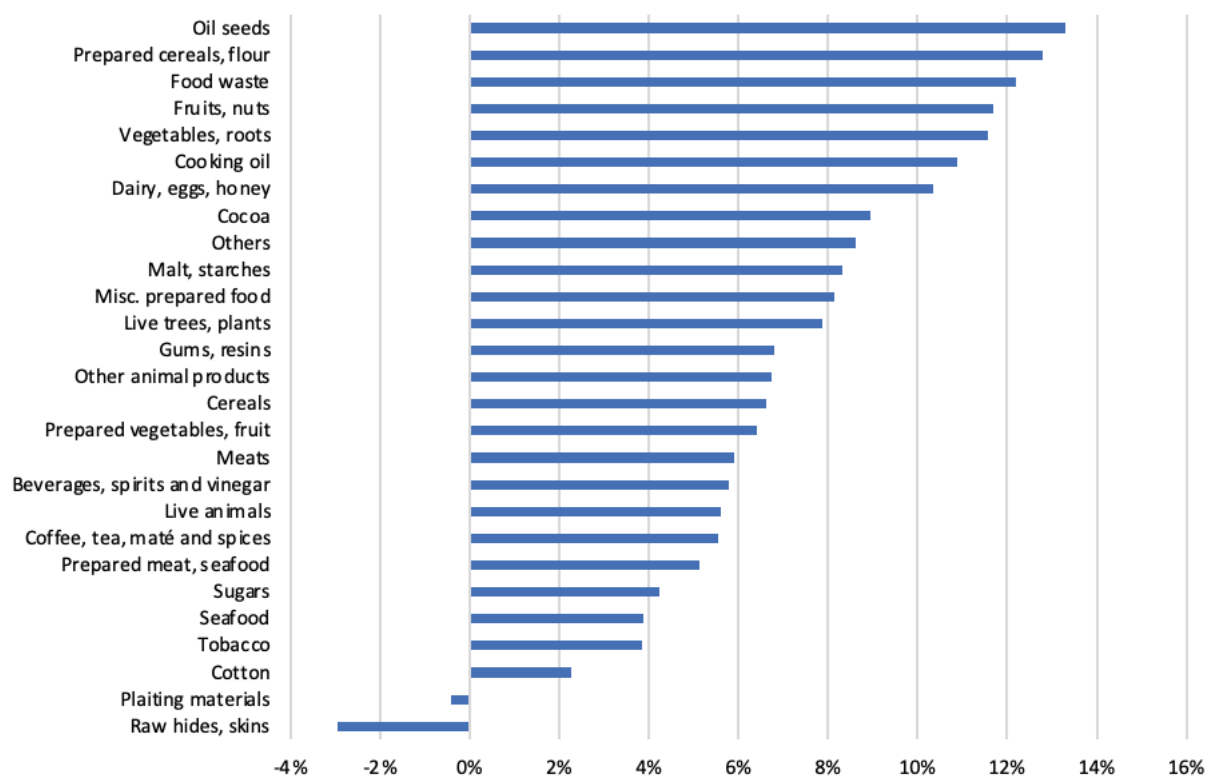
**Figure 11** Export of African agricultural products 2001–2020 (\$ million)



Source: ITC Trade Map

The compound annual growth rate attained 8.6%, with striking differences among products. It is highest for oil seeds (13.3%), which reflects how Chinese demand can boost African exports. In 2020, China bought 34% of these exports from Africa. In 2001, this figure was only 0.1%.

Figure 12 Growth rate of African agricultural exports (2001–2020)



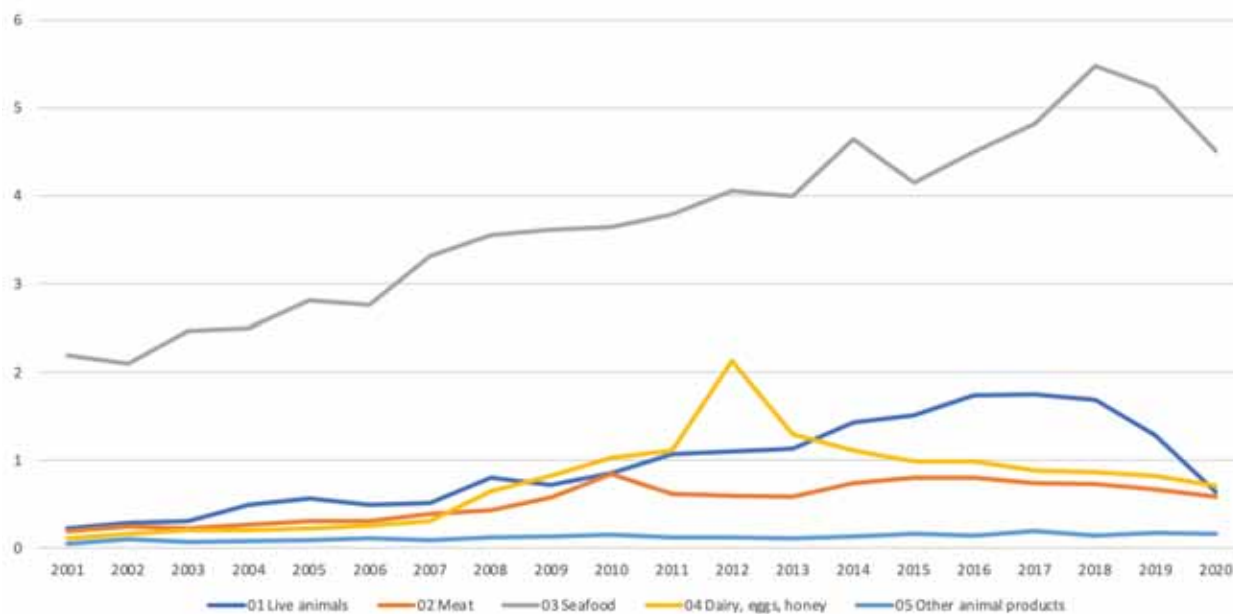
Source: ITC Trade Map

Among live animals and animal products, Africa's exports of seafood increased significantly, with a compound annual growth rate of 3.9% – the strongest growth in this category.

Seafood exports reached \$4.5 billion in 2020, up from \$2.2 billion in 2001. The export value of other products shows a trend of first rising and then falling.



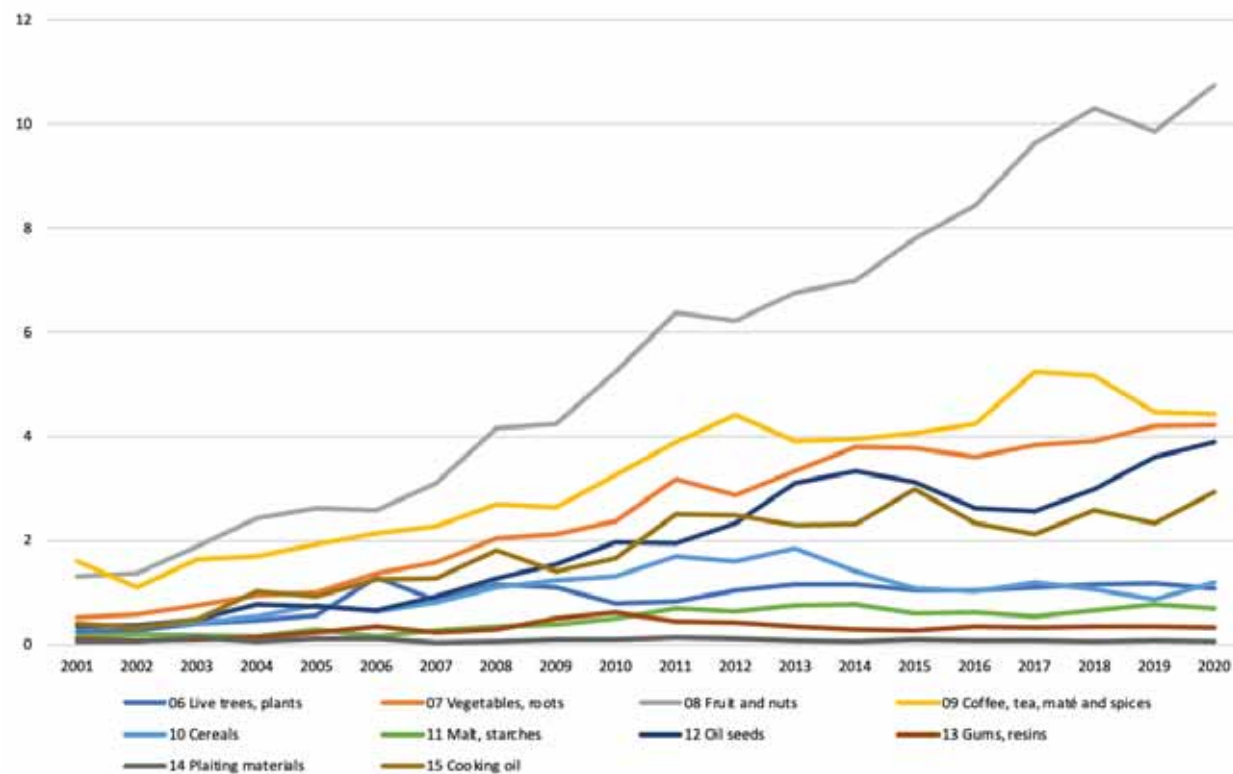
**Figure 13 Africa's exports of animals and animal products, 2001–2020 (\$ billion)**



Source: ITC Trade Map

Among plant products, fruits and nuts increased to \$10.8 billion in 2020, with a compound annual growth rate of 11.6%. Other products that posted strong growth include coffee, tea, maté and spices (\$4.33 billion), edible vegetables and roots (\$4.4 billion) and oil seeds (\$3.9 billion).

**Figure 14 Africa's vegetable exports, 2001–2020 (\$ billion)**

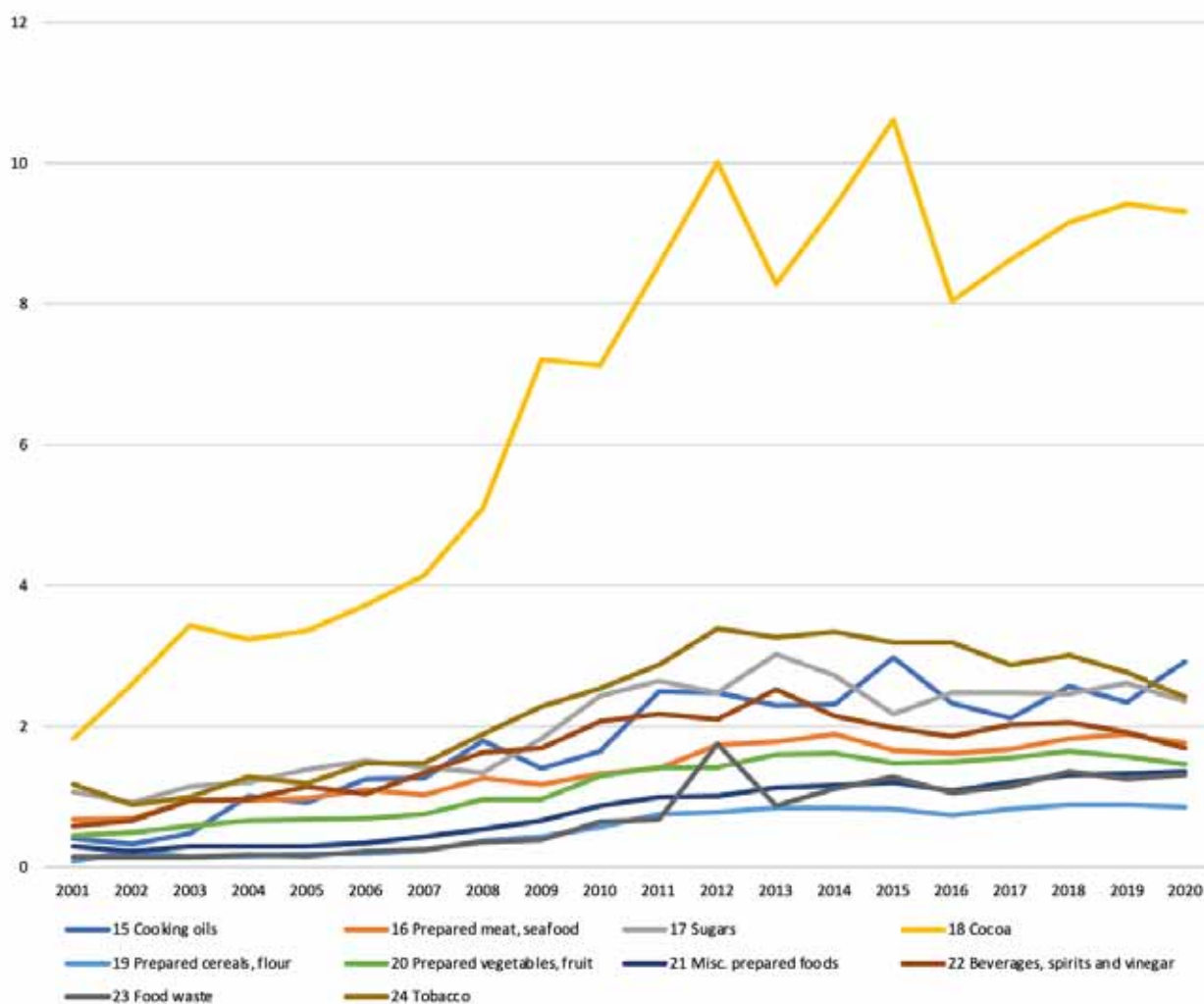


Source: ITC Trade Map

Exports of animal and vegetable fats and oils increased significantly, up from about \$400 million to \$2.9 billion.

In the prepared foodstuffs, beverages and tobacco section, cocoa achieved substantial growth, with a compound annual growth rate of 8.9%. Cocoa exports rose from \$1.8 billion to \$9.3 billion. For beverages (\$1.7 billion in 2020) and sugar (\$2.4 billion in 2020), exports rose and then fell.

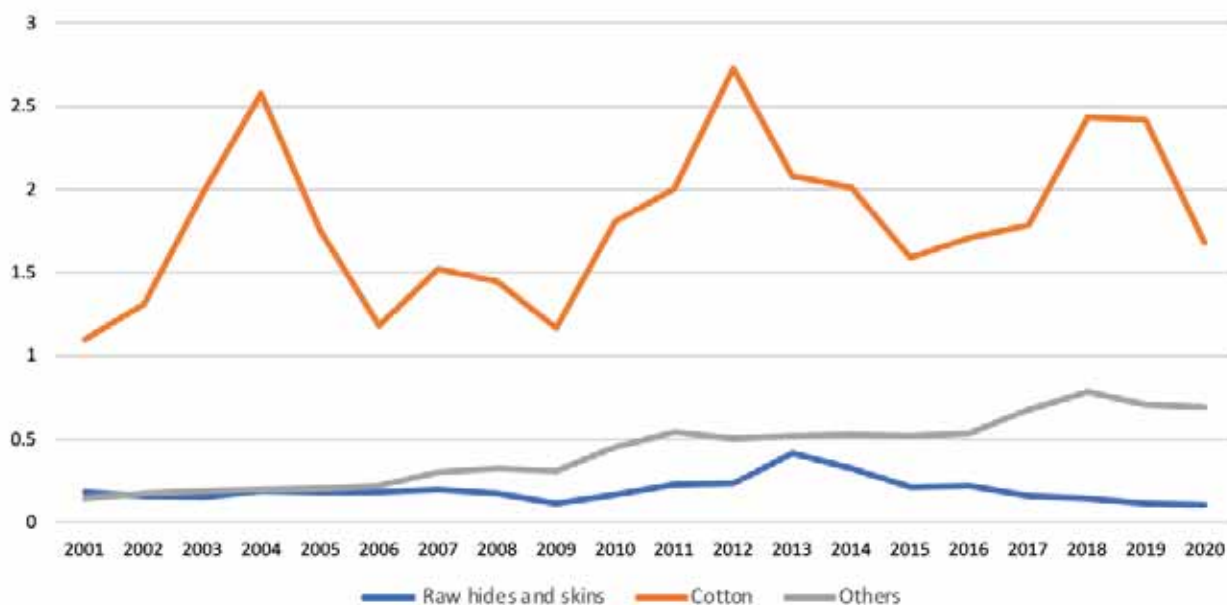
**Figure 15** Africa's exports of prepared foodstuffs, 2001–2020 (\$ billion)



Source: ITC Trade Map

Raw cotton exports fluctuated greatly due to variations in Africa's production (according to WTO data) and unstable global prices.

**Figure 16** Africa's export of hides, cotton, and other skins, 2001–2020 (\$ billion)



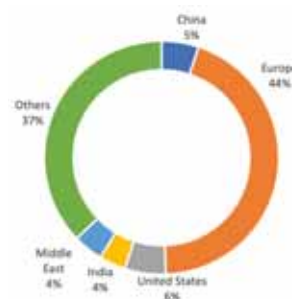
Source: ITC Trade Map

### Main export markets of African agricultural products

According to the ITC Trade Map, Europe, the United States, China, the Middle East and India accounted for 63% of African agricultural exports. With historical links and geographic proximity to Africa, European countries were the main export markets. Europe bought 44% of African exports.

Europe buys most African exports, valued over \$2 billion: Cocoa, seafood, vegetables and roots, fruits and nuts. China buys the most oil seeds and fruits.

**Figure 17** Africa's main markets for agricultural products in 2020



Source: ITC Trade Map

*Live animals and animal products*

China, the United States, Europe, India, and the Middle East accounted for 62% of Africa's exports in live animals and animal products. More than one-half went to Europe (56%), with seafood the main products.

**Figure 18 Africa's main seafood markets in 2020**



Source: ITC Trade Map

*Vegetable products*

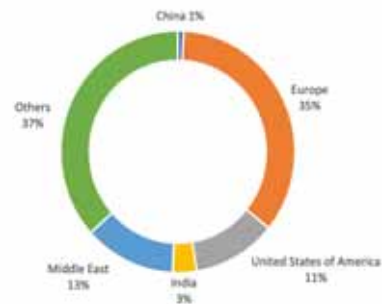
The Middle East, India, the United States, Europe and China bought 70.2% of exported African vegetable products. Europe bought the most fruits and nuts, vegetables, roots and tubers, and live trees and other live plants. China now buys the most plant oils. Europe is also an important buyer of coffee, tea, maté and spices, and plant oils.

**Figure 19 Africa's main markets for vegetables, roots, 2020**



Source: ITC Trade Map

**Figure 21 Africa's main markets for coffee, tea, maté and spices in 2020**



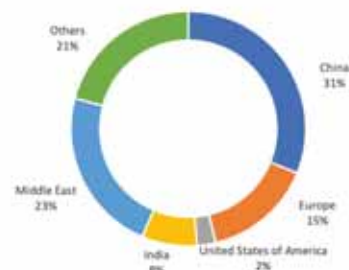
Source: ITC Trade Map

**Figure 20 Africa's main markets for fruit and nuts in 2020**



Source: ITC Trade Map

**Figure 22 Africa's main oil seed markets in 2020**



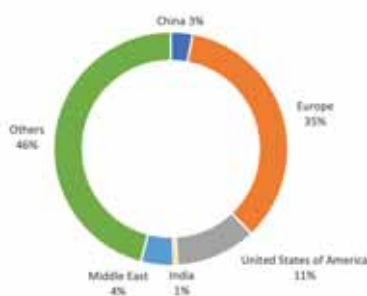
Source: ITC Trade Map

*Animal and vegetable oils and fats, prepared foodstuff, beverages and tobacco*

The Middle East, India, the United States, Europe and China bought 60% of exports in animal and vegetable oils and fats, prepared foodstuff, beverages and tobacco. Europe bought the most cocoa, meat, seafood, animal and vegetable oils, vegetables, fruits, nuts, tobacco, beverages, spirits and vinegar.

For raw cotton, raw hides and skin, 40% of these products was exported to China, Europe, the United States, India and the Middle East. Among them, China is the biggest buyer.

**Figure 23 Africa's main cooking oil markets in 2020**



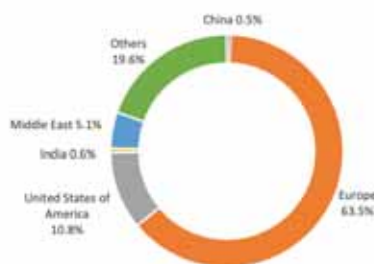
Source: ITC Trade Map

**Figure 24 Africa's main sugar markets in 2020**



Source: ITC Trade Map

**Figure 25 Africa's main cocoa markets in 2020**



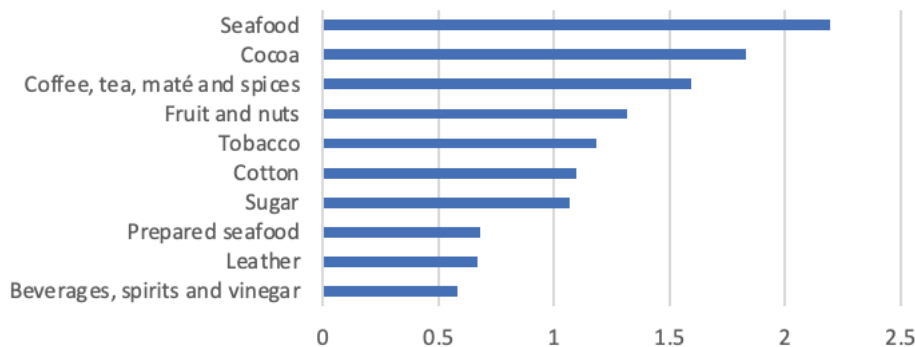
Source: ITC Trade Map

### African agricultural products: Exporting countries and main products

In general, vegetable products and cash crops grew in importance in the past 20 years. Africa's export structure has changed: Cocoa, edible fruits, nuts and other cash crops have surpassed seafood as Africa's most important exports. Oil seeds and oleaginous fruits, edible vegetable and roots are also among Africa's top 10 agricultural exports.

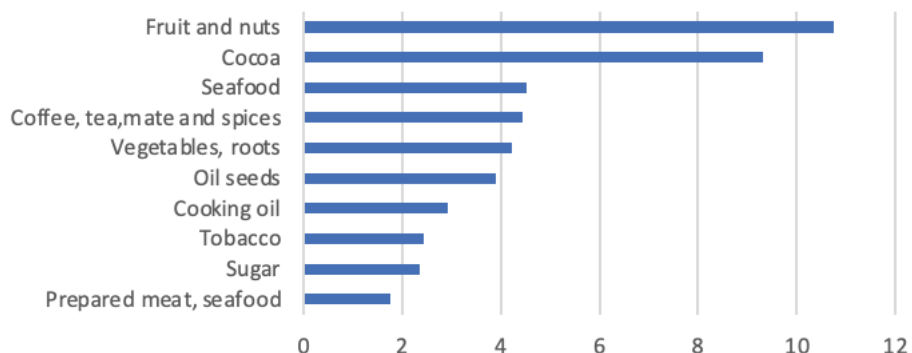
Others in the top 10 include edible fruits and nuts (\$10.8 billion), followed by cocoa (\$9.3 billion), seafood (\$4.5 billion); oleaginous kernels and fruits (\$4.5 billion), and coffee, tea, maté and spices (\$4.4 billion).

**Figure 26 Top 10 agricultural exports in 2001 (\$ billion)**



Source: ITC Trade Map

**Figure 27** Top 10 agricultural exports in 2020 (\$ billion)



Source: ITC Trade Map

Most of the top 10 export products are cash crops such as cocoa, fruits, nuts, fish, coffee and tea, which are competitive in global agricultural markets. These come from a handful of countries.

Exports of edible fruits and nuts are concentrated in South Africa, Morocco, Egypt and Côte d'Ivoire. The 10 biggest exporters of fruits and nuts accounted for 98.5% of the export value of these product from Africa.

**Figure 28** Main fruit and nuts exporters in 2020



Source: ITC Trade Map

Cocoa exports are concentrated in Côte d'Ivoire and Ghana. The top 10 cocoa exporters accounted for 98% of Africa's total cocoa exports. Côte d'Ivoire alone accounts for 55%.

**Figure 29 Main cocoa exporters in 2020**



Source: ITC Trade Map

Exports of coffee, tea, maté and spices were concentrated in Kenya, Ethiopia, Uganda and Madagascar. These four countries accounted for 78% of the total, and the exports of the top 10 exporting countries accounted for 94% of the total exports of Africa.

**Figure 30 Main seafood exporters in 2020**



Source: ITC Trade Map

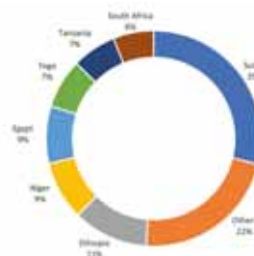
**Figure 31 Main coffee, tea, maté and spices exporters in 2020**



Source: ITC Trade Map

Exports of oil seeds and oleaginous fruits were concentrated in Sudan, Ethiopia, Nigeria, and Mauritania. The top 10 exporters accounted for nearly 84% of the export value.

**Figure 32 Main oil seed exporters in 2020**



Source: ITC Trade Map

Exports of vegetables and roots were concentrated in Morocco, Egypt and Ethiopia. They accounted for 71% of the total exports. The top 10 countries accounted for 94% of the total.

**Figure 33 Main exporters of vegetables, roots and tubers in 2020**



Source: ITC Trade Map

Exports of animal and vegetable fats and oils were concentrated in Tunisia, South Africa, Ghana, Egypt, and Morocco. They accounted for 75% of Africa's total exports. The top 10 exporters accounted for 88% of Africa's exports.

**Figure 34 Main cooking oil exporters in 2020**



Source: ITC Trade Map

Sugar and confectionery exports were concentrated in South Africa, Eswatini, Morocco, Egypt and Algeria, accounting for 70% of Africa's total. The top 10 exporters accounted for 92% of Africa's total.

**Figure 35 Main sugar exporters in 2020**



Source: ITC Trade Map

Top exporters of prepared meats and seafood were Morocco, Seychelles and Mauritius, accounting for 75% of the total. The top 10 countries accounted for 98% of African exports.

**Figure 36 Main exporters of prepared meats and seafoods in 2020**



Source: ITC Trade Map



## Africa's agricultural trade with China

### Key findings

In 2022, Africa had a \$600 million trade deficit in agricultural products with China. In the past 20 years, African agricultural exports to China have grown rapidly.

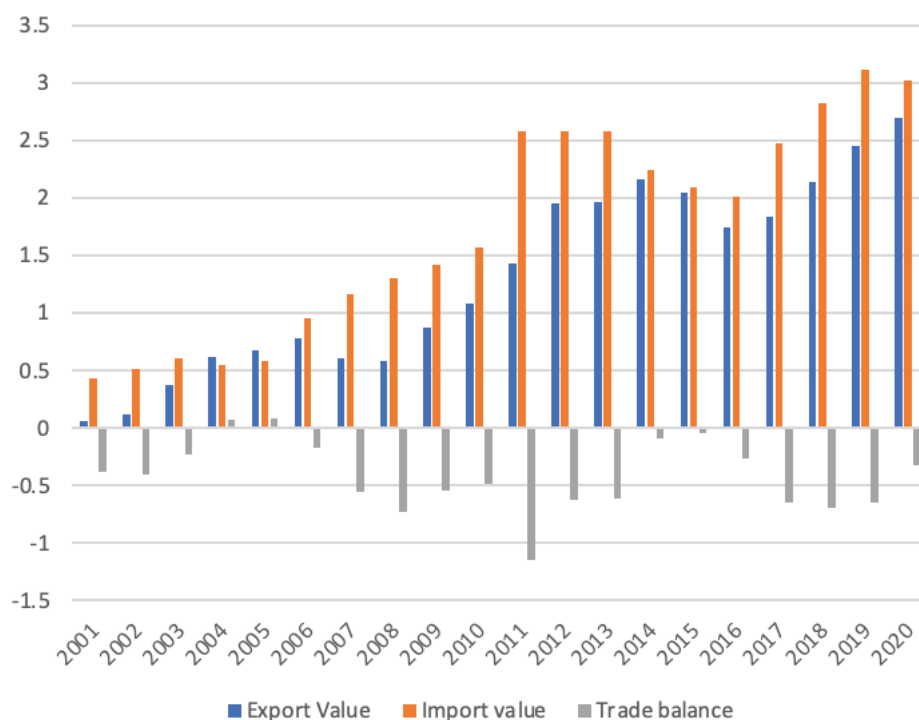
- Exports of agricultural products to China have grown very fast, from \$59 million in 2001 to \$3.1 billion in 2020.
- The shape of that trade has changed dramatically. Vegetable products accounted for 6% of African agricultural exports to China in 2001, but for 65% in 2020. Live animal and animal products fell from 40% of the total to 5%. This trend is in sync with changes in China's overall imports of agricultural products.
- What Africa sells to China is significantly different from what it sells to the rest of the world. In 2020, food, beverages and tobacco accounted for 39% of African agricultural exports to the world, but for only 13% of exports to China. Vegetable products accounted for 43% of Africa's exports to the world, but for 65% of exports to China. This is mainly due to differences in demand between the Chinese market and the global market.
- Africa does not have a large share of China's imports for most products, Africa sells only a small portion to China. Products for which Africa has a comparative advantage globally – such as edible fruits and nuts, cocoa, coffee, tea, maté and spices – still present great opportunities in China.
- Africa's current agricultural exports are based generally on market demand in Europe, and somewhat so in the Middle East. As trade with China grows, Chinese demand may change the mix of farm products that Africa exports.

### Export data and structure

In 2001, China joined the World Trade Organization and agreed to open and liberalize its regime to integrate with the world economy. Since then, trade between China and Africa has grown significantly.

During the past 20 years, trade with China has contributed to African economic growth. Most of the time, Africa has had a trade deficit in agricultural goods with China. In 2020, Africa reported imported \$3 billion in agricultural goods from China, but exported only \$2.7 billion, resulting in a trade deficit of \$318 million.

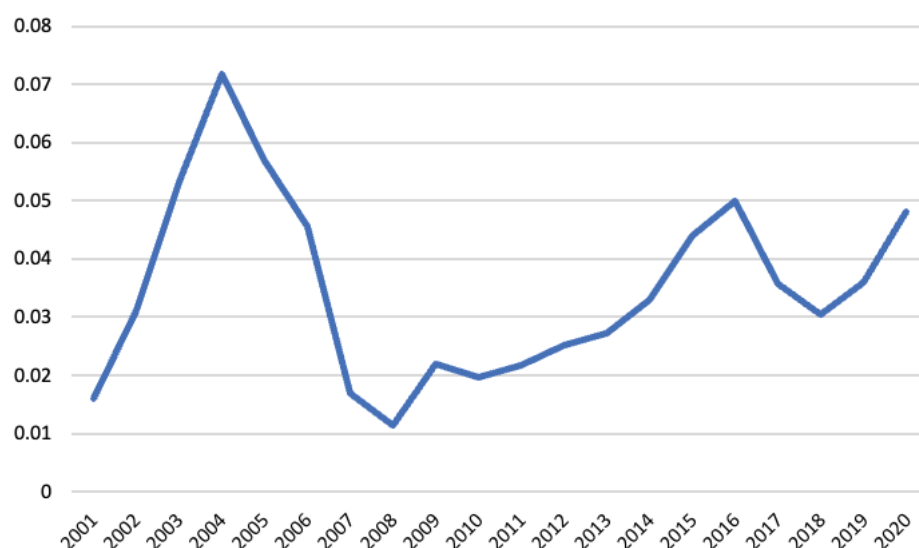
**Figure 37** Africa's agricultural trade balance with China, 2001–2020 (\$ billion)



Source: ITC Trade Map

African exports to China have steadily increased over the past 20 years. In 2020, Africa's agricultural exports to China accounted for 5.5% of its total exports to China. However, exports of other African products to China declined in 2007 due to the financial crisis and falling commodity prices, and have been fluctuating ever since. In 2020, Africa's agricultural exports to China accounted for 5.5% of its total exports to China.

**Figure 38** African farm exports, as a percentage of total exports to China, 2001–2020

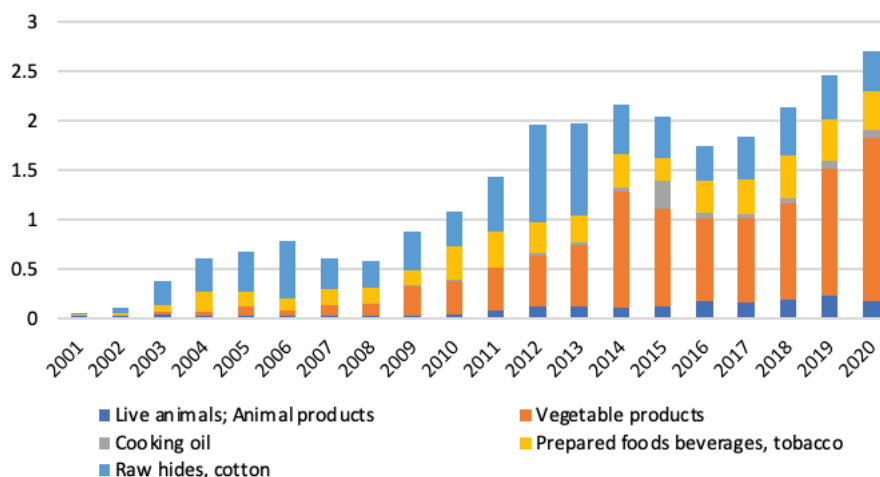


Source: ITC Trade Map

In 2005, China implemented a zero-tariff policy from some African products, which could explain the rapid growth of African agricultural exports to China. Research by Sun Zhina showed that China's tariff policy had

limited impact. Yet, some products clearly benefitted.<sup>23</sup> Take sesame as an example. In 2002, China imported a small amount of sesame, which incurred a 10% tariff for most African producers. Since the zero-tariff policy, China's sesame imports from Africa have grown rapidly.

**Figure 39** Africa's total agricultural exports to China, 2001–2020 (\$ billion)



Source: ITC Trade Map

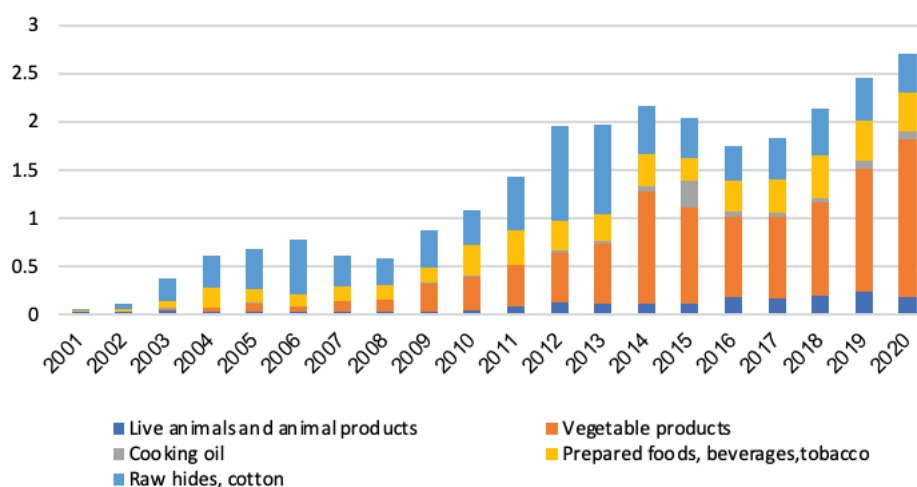
Changes in exports to China reflect changing Chinese habits. For example, 20 years ago, Chinese consumers didn't buy much coffee or many nuts. As Chinese consumers have become richer and their purchasing power has improved, demand for these two products has grown greatly.

In 2001, African farm exports were mainly live animals and animal products, which accounted for 40% of total agricultural exports. Vegetable products only accounted for 6%.

By 2020, vegetable exports accounted for 61%; prepared foodstuffs, beverages and tobacco accounted for 14%; raw leather, raw cotton, and other products accounted for 15%; live animal and animal products accounted for 7%; and animal and vegetable oils and fats each accounted for 3%.

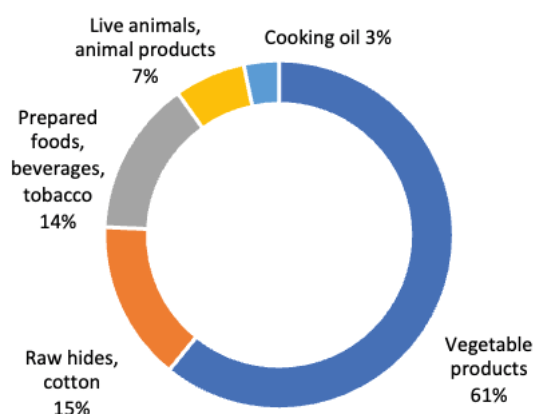
<sup>23</sup> 'Effect of China's Zero-Tariff Treatment under Forum on China-Africa Cooperation (FOCAC) on Export Diversification in Beneficiary Countries in Africa', *Journal of African Trade*, December 2021.

**Figure 40** Structure of Africa's agricultural exports to China, 2001 (\$ billion)



Source: ITC Trade Map

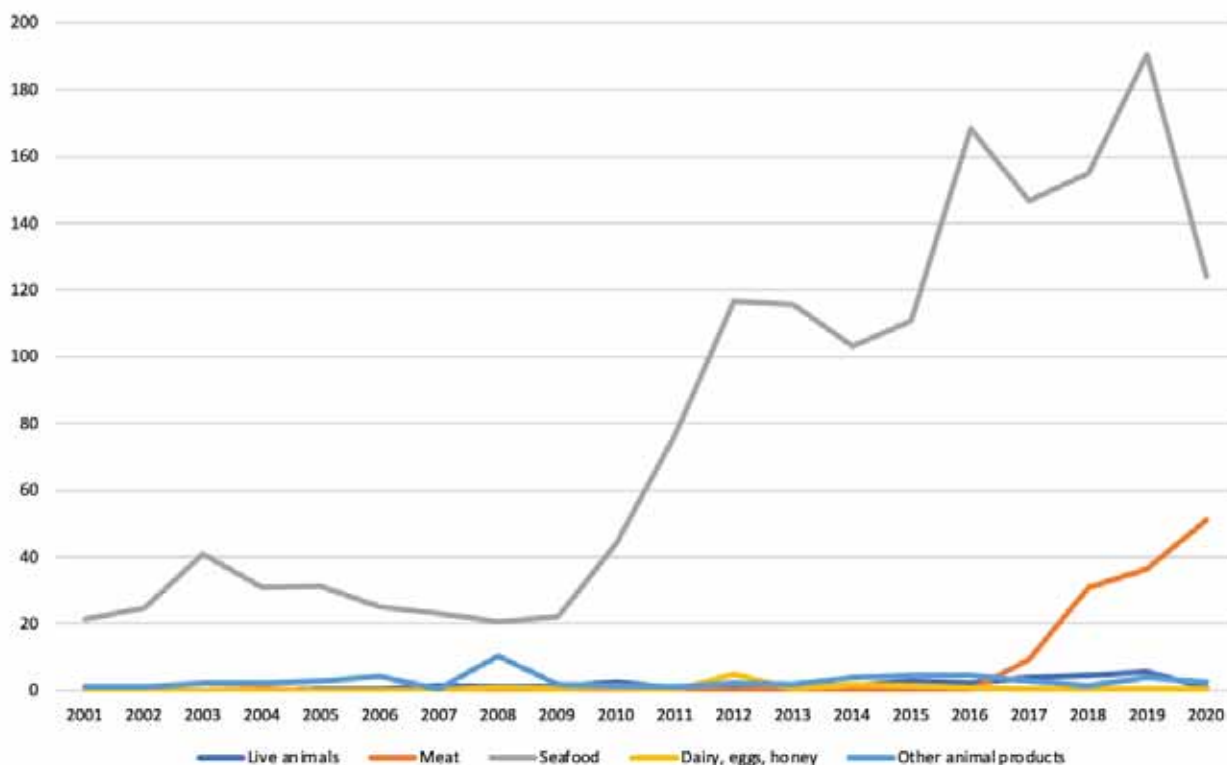
**Figure 41** Structure of agricultural exports from Africa to China in 2020



Source: ITC Trade Map

Of the animal exports, most are seafood. In 2020, the export value of live animals was \$124 million, accounting for 70% of live animals and animal products. Exports jumped after South Africa and Namibia signed sanitary agreements with China for frozen beef. In 2020, the export value of meats increased to \$51 million, accounting for 29% of live animals and animal products.

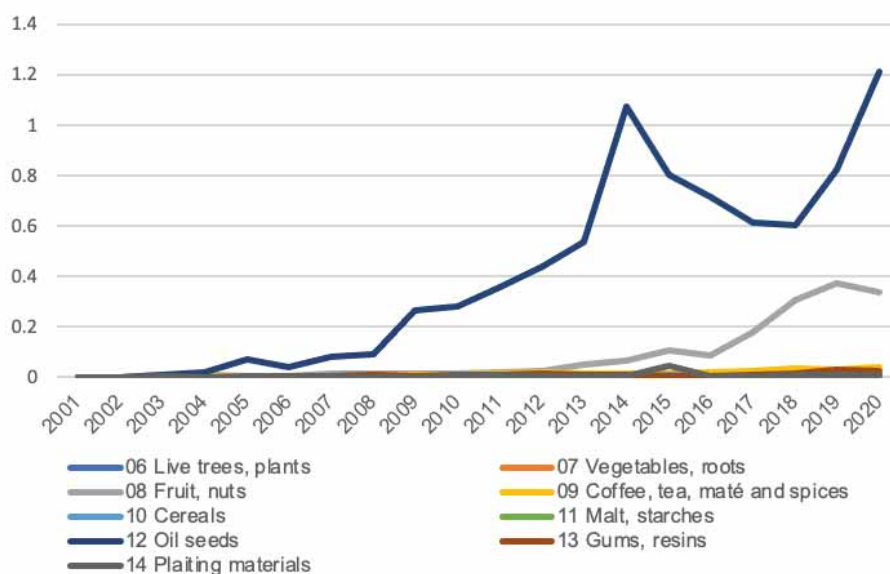
**Figure 42 African exports of live animals and animal products, 2001–2020 (\$ million)**



Source: ITC Trade Map

In the past 20 years, Africa’s exports of oil seeds and oleaginous fruits to China have increased significantly, and the export volume in 2020 reached \$1.2 billion. This increase was mainly driven by strong demand from Chinese side. The export volume of edible fruit and nut also increased significantly, reaching \$337 million.

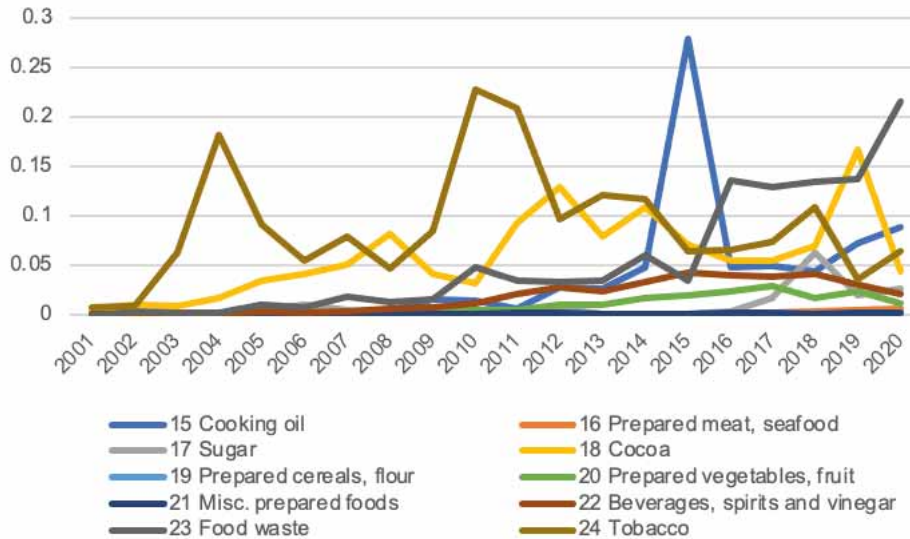
**Figure 43 African exports of vegetable products to China, 2001–2020 (\$ billion)**



Source: ITC Trade Map

African exports of residues and waste from the food industries and prepared animal fodder to China have increased significantly, to \$214 million. Food oils and cocoa exports fluctuated significantly with oil reaching \$88 million and cocoa at \$44 million.

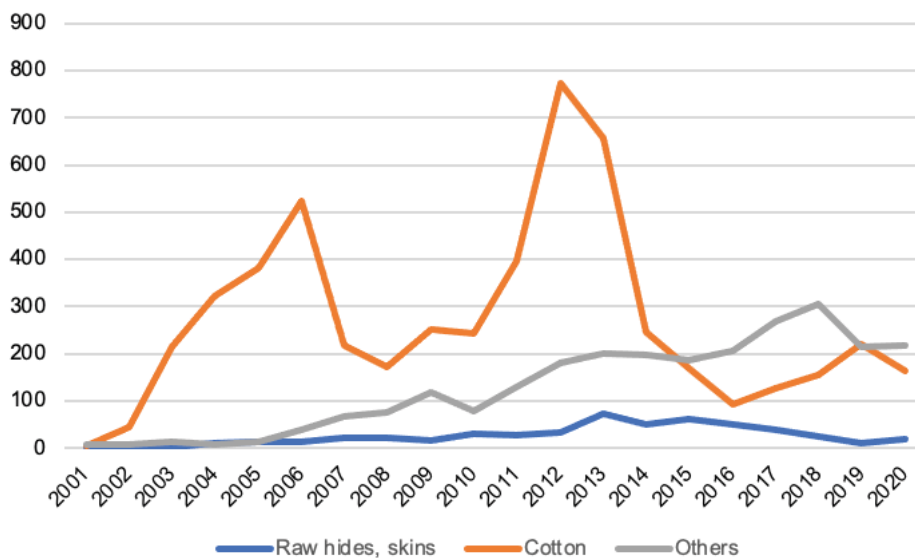
**Figure 44 African exports of cooking oil, prepared foods, beverages and tobacco, 2001–2020 (\$ billion)**



Source: ITC Trade Map

Africa's wool exports to China are relatively high. In 2020, wool exports to China reached \$199 million (in 'other' category). Due to the instability of African cotton production and global cotton prices, African cotton exports to China have fluctuated dramatically over the past 20 years; and cotton exports were \$164 million in 2020.

**Figure 45 African exports of hides, cotton and others, 2001–2020 (\$ million)**

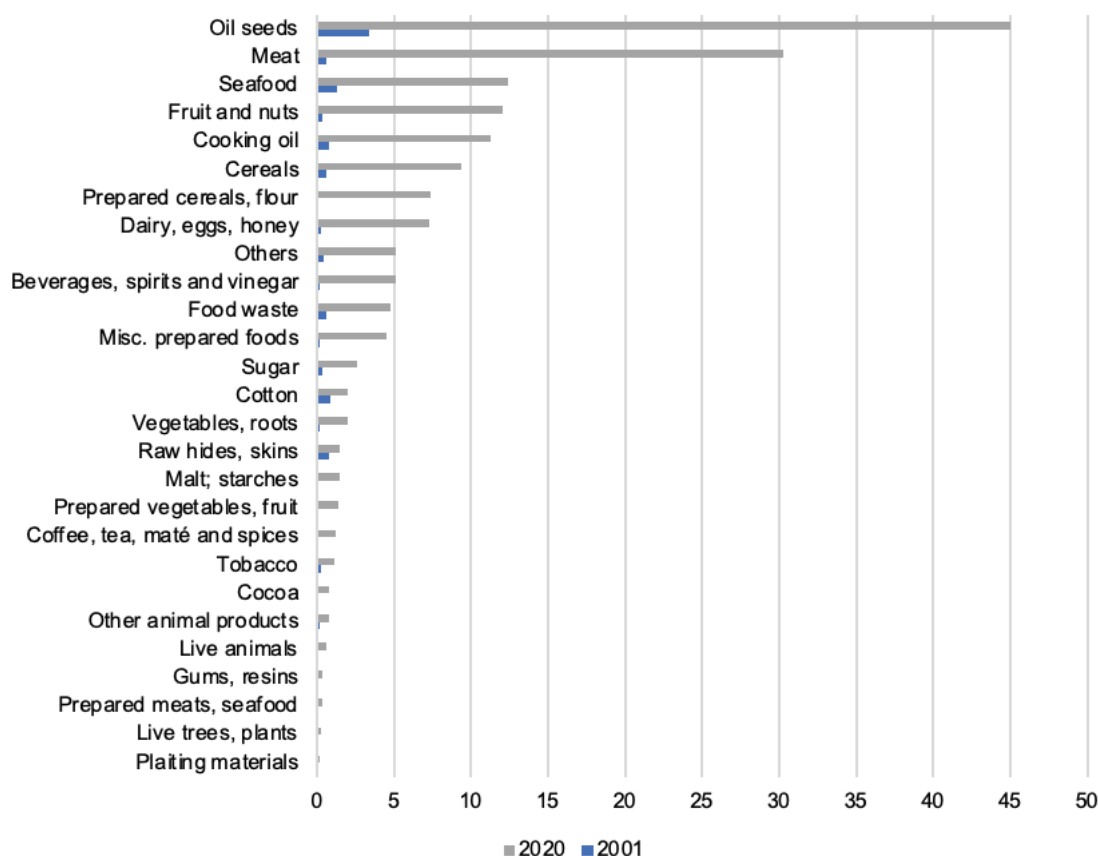


Source: ITC Trade Map

### Export opportunities of African agricultural products to China

China's imports of farm goods have soared over the last two decades. China imported \$45 billion in oil seeds, \$30 billion in meats, \$12.4 billion in seafood, \$12 billion in fruits and nuts, \$11.3 billion in cooking oil and \$9.3 billion in cereals. Africa's exports reflect this market demand to a certain extent.

**Figure 46** China's agricultural imports, 2001 versus 2020 (\$ billion)



Source: ITC Trade Map

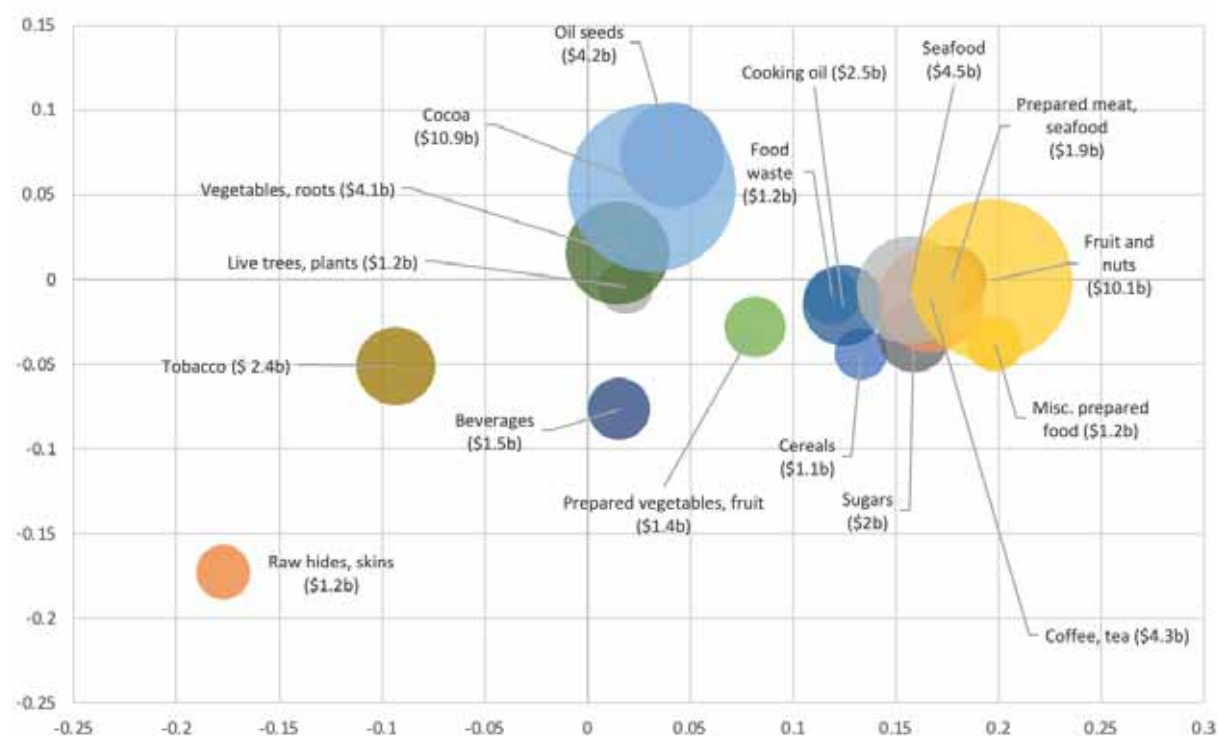
In Figure 47, we have analysed the growth of Africa's agricultural exports and China's imports. The horizontal line represents the compound annual growth rate of Africa's world market share in the past five years. This captures the extent to which Africa's exports of each product have grown faster than world exports.

The vertical axis is the compound annual growth rate of China's global imports of the product in the past five years. The higher the bubble, the stronger China's demand growth.

Bubbles in the top right corner of the graph represent African products that have taken a larger market share and enjoyed greater Chinese demand over the last five years. The size of the bubble represents the value of that product's exports.<sup>24</sup> Bigger bubbles mean that product earned more money.

To make the results more meaningful, we focused on 17 African products whose exports topped \$1 billion in 2020.

<sup>24</sup> Bubble chart methodology is described in Chapter 3.

**Figure 47 Africa's export potential analysis (\$ billion)**

Source: ITC Trade Map

China's demand for imported agricultural products is huge and growing strongly, so the future market space is still very large. Except for a few categories such as raw hides and skins, other animal products, plaiting plant materials and tobacco, the compound annual growth rate has topped 10% for most agricultural products imported by China.<sup>25</sup>

There is still enormous room for growth in Africa's agricultural exports to China. For all categories except live animals and other animal products, the compound annual growth rate of Africa's exports to China is higher than the global rate, reflecting the great potential of Africa's exports to China, notably for vegetables, processed food and beverages. Food waste and oil seeds have had a compound annual growth rate of more than 50% in the past 20 years. Exports of vegetables, sugars, fruits, nuts and meats have a compound annual growth rate of more than 40%. For beverages, fats and oils, the rate is more than 30%. In general, the growth rate of most African agricultural products to China is higher than 10%.<sup>26</sup>

According to the ITC Trade Map, African exports have a small market share in China, generally less than 10%.<sup>27</sup> Exports to China account for a low proportion of Africa's total exports, especially for products that give Africa a global comparative advantage, such as edible fruits and nuts, cocoa, coffee, tea and spices. These all present opportunities for development in the Chinese market.

In 2020, Chinese demand for oil seeds was a strong driver of African exports. Fruit and nuts, coffee and tea, and cocoa could also see strong growth in China. The ITC Trade Map data show that, in 2020, fruit and nut exports to China accounted for 3% of Africa's total exports. Coffee and tea were only 0.9%, with cocoa at 0.5%. These three categories, which are highly competitive in the global market, have a lot of room for growth in China.<sup>28</sup>

<sup>25</sup> For more details, see Figure 104 in Appendix II

<sup>26</sup> For more details, see Figure 105 in Appendix II

<sup>27</sup> For more details, see Figure 107 in Appendix II

<sup>28</sup> For more details, see Figure 107 in Appendix II



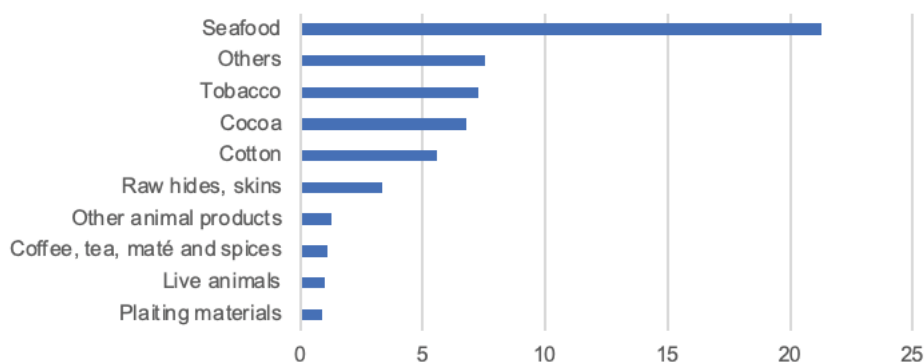
### What Africa exports, and from where

In 2001, Africa's top export to China was seafood.

In 2020, Africa's top export to China was oil seeds, valued at \$1.2 billion. Fruits and nuts were second, at \$337 million. Food waste and animal fodder reached \$214 million. Wool and animal hair accounted for a relatively high proportion, with exports reaching \$199 million in 2020. The export value of cotton was \$207 million. Such changes in the export structure reflect the rapid growth of African cash crops in China.

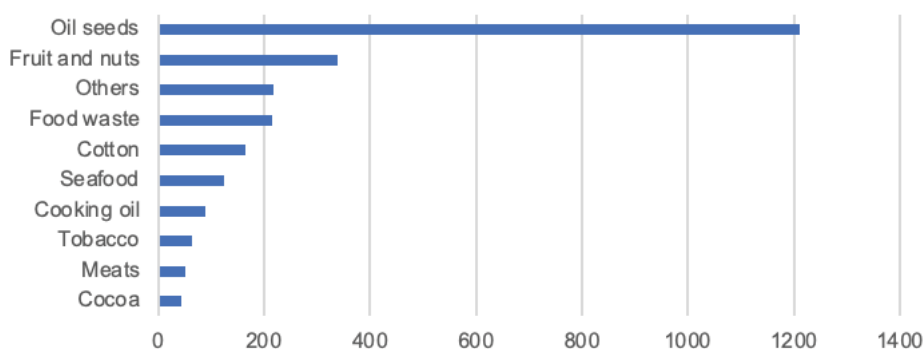
Several factors could explain the big difference between Africa's export structure to China compared to the world. Current exports reflect market demand in Europe and the Middle East. As trade with China grows, Chinese demand will further drive African exports. This can be seen in the growth of oil seeds. African farm exports to China are still somewhat restricted because sanitary agreements are not yet in place for many countries and products. These and other challenges explain why Africa has almost \$150 billion of unrealized potential in farm export potential.

**Figure 48 Africa's top 10 agricultural exports to China, 2001 (\$ million)**

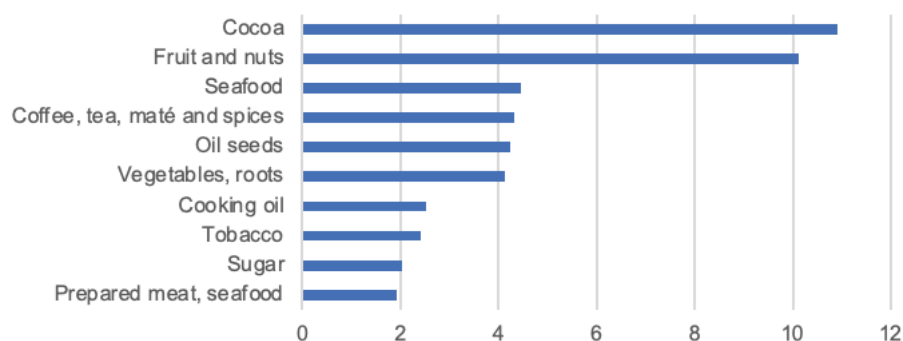


Source: ITC Trade Map

**Figure 49 Africa's top 10 agricultural exports to China in 2020 (\$ million)**



Source: ITC Trade Map

**Figure 50 Africa's top 10 agricultural exports to the world, 2020 (\$ billion)**

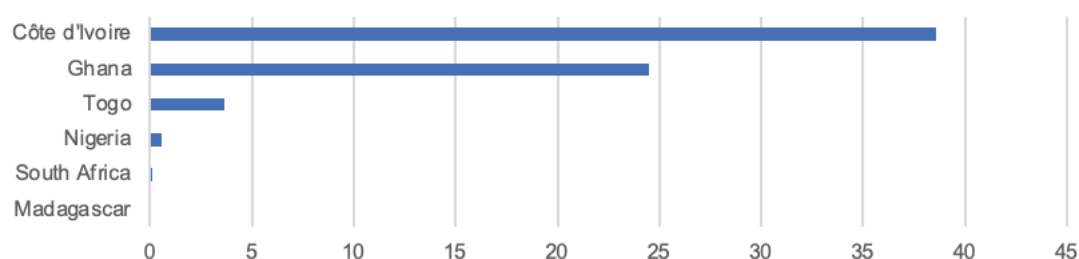
Source: ITC Trade Map

### Cocoa

There is ample space for African cocoa exports to China. In 2001, China imported \$6.8 million of cocoa products from Africa. That figure grew to \$67.7 million in 2020. In 2020, Africa's overall cocoa exports were \$9.3 billion, meaning only 0.6% of the exports went to China. Africa now accounts for 5.7% of China's cocoa imports.

In recent years, China's cocoa market has developed rapidly, with a compound annual growth rate of more than 20%. But China's per capita cocoa consumption is about 50 grams, far below the world average, and even lower than in many developing countries. Africa exports mainly cocoa beans, cocoa paste and cocoa powder to China. Considering the potential huge increase in cocoa consumption in China, Africa could dramatically increase its exports.

Côte d'Ivoire, Ghana, Togo and Nigeria are Africa's biggest cocoa exporters to China. Africa accounts for about 21% of the world's total cocoa exports. Côte d'Ivoire alone accounts for 12.6%, with Ghana at 4.7% and Cameroon at 1.9%. Cameroon's export potential deserves further analysis.

**Figure 51 Major cocoa exporters to China, 2020 (\$ million)**

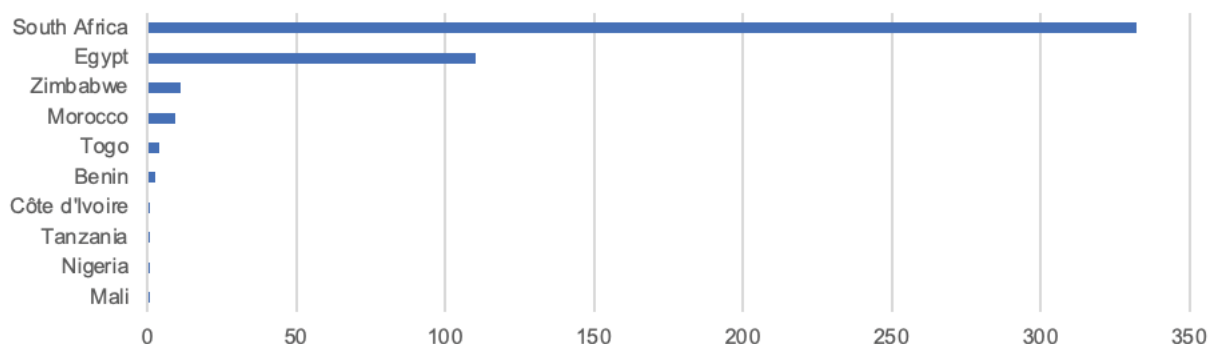
Source: ITC Trade Map

### Fruit and nuts

In 2001, China imported \$0.43 million of fruits and nuts from Africa. By 2020, that figure was \$340 million. That year, Africa's overall fruit and nut exports had reached \$10.1 billion, with China representing 3.4%. Africa supplied just 2.8% of the fruits and nuts that China imported. The export potential remains high.

Africa accounts for 8.1% of the world's fruit and nut exports. South Africa accounts for 2.9% of global exports, with Morocco at 1.2%, Egypt 1.1% and Côte d'Ivoire 0.9%. The export market distribution of Africa to the world is different from that of Africa to China. The export potential of Morocco and Côte d'Ivoire to China should be further analysed.

**Figure 52 Major fruit and nuts exporters to China, 2020 (\$ million)**

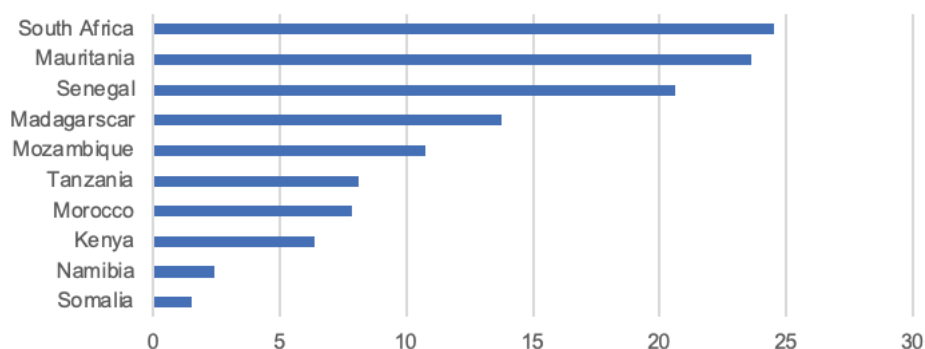


Source: ITC Trade Map

### Seafood

In 2020, Africa accounted for 4% of the world's seafood exports. Morocco accounted for 1.1% of global exports, Mauritania 0.6%, Namibia 0.5%, South Africa 0.4% and Senegal 0.4%. The export potential of Morocco and Namibia to China deserves more analysis.

**Figure 53 Major seafood exporters to China, 2020 (\$ million)**

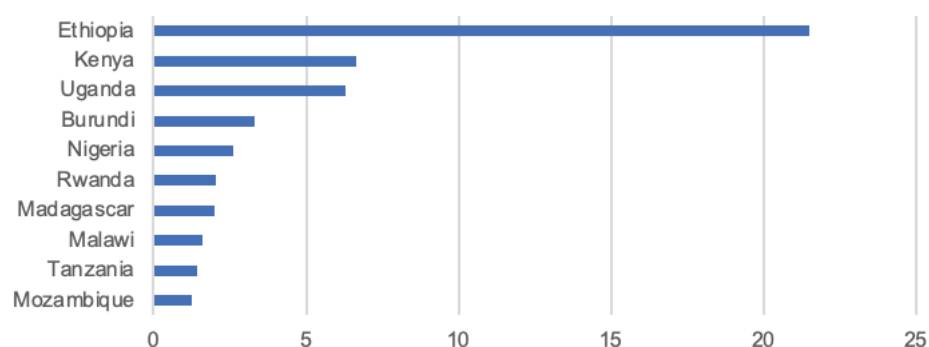


Source: ITC Trade Map

### Coffee, tea, maté and spices

In 2001, China imported \$1.1 million of coffee, tea, maté and spices from Africa. By 2020, that figure had risen to \$44.3 million – a 40-fold increase, but still just 1% of what Africa exported globally. However, Africa supplied 3.6% of China's imports, showing these products still have huge export potential.

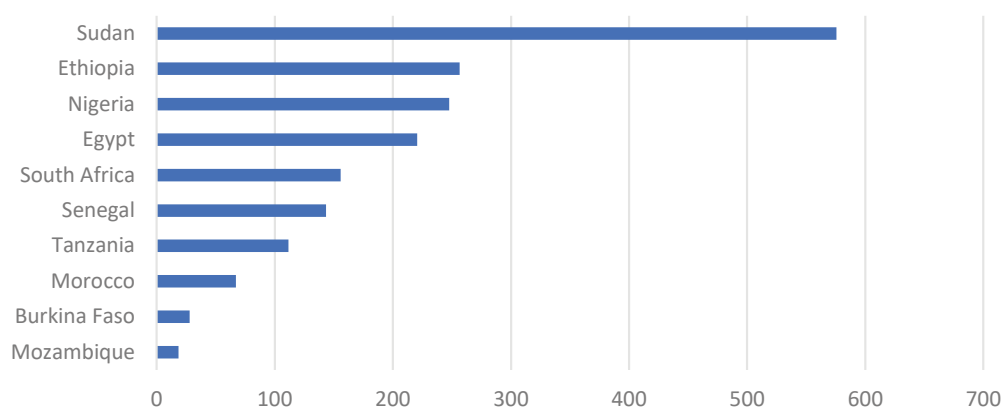
In 2020, Africa's exports of coffee, tea, maté and spices accounted for 8.6% of the global total. Kenya accounted for 2.9% of global exports, Ethiopia 1.6%, Uganda 1.2%, Madagascar 1.2%, Tanzania 0.4% and Rwanda 0.2%. Kenya, Uganda and Madagascar deserve more analysis of their export potential to China.

**Figure 54 Major coffee, tea, maté and spices exporters to China, 2020 (\$ million)**

Source: ITC Trade Map

### Oil seeds

In 2020, Africa's exports of oil seeds accounted for 3.5% of the world's exports. Sudan accounted for 1% of global exports, Ethiopia 0.4%, Nigeria 0.3%, Egypt 0.3%, South Africa 0.2%, Senegal 0.2%, Tanzania 0.2%, Morocco 0.2%. Taking into account the comparable economic scale and product capacity, Nigeria and Egypt may have more potential for exporting to China and deserve more analysis.

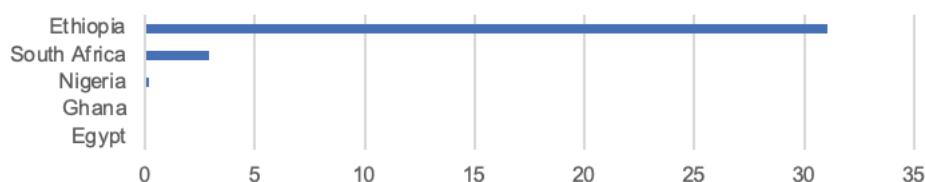
**Figure 55 Major oil seed exporters to China, 2020 (\$ million)**

Source: ITC Trade Map

### Vegetables, roots and tubers

In 2020, Africa's exports of edible vegetables and certain roots and tubers accounted for 5.5% of the global total. Morocco accounted for 1.8% of global exports, Egypt 1.4%, Ethiopia 0.7%, Kenya 0.4%, Tanzania 0.3%, and South Africa 0.3%. Morocco, Egypt, Kenya and Tanzania deserve more analysis of their export potential to China.

**Figure 56 Major exporters of vegetables, roots and tubers to China, 2020 (\$ million)**

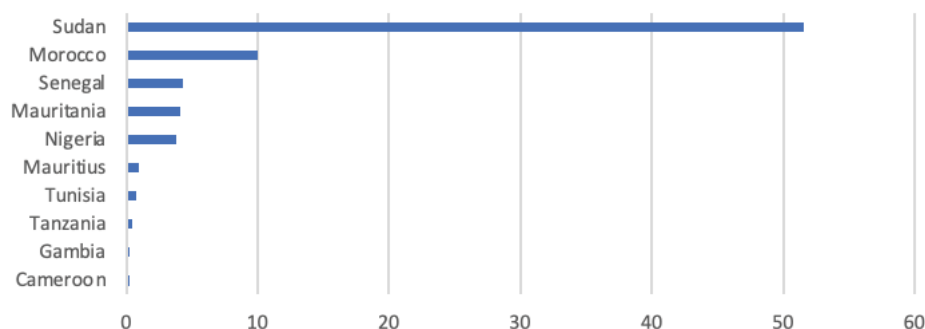


Source: ITC Trade Map

### Cooking oil

In 2020, Africa exported 2.7% of the world's cooking fats and oils. Tunisia took 0.9% of global exports, South Africa 0.3%, Ghana 0.2%, Egypt 0.2%, Morocco 0.2% and Kenya 0.2%. The main African exporters to China are Sudan, Morocco, Senegal, Mauritania and Nigeria. Tunisia, South Africa, Ghana, Egypt and Kenya deserve further analysis.

**Figure 57 Major cooking oil exporters to China, 2020 (\$ million)**

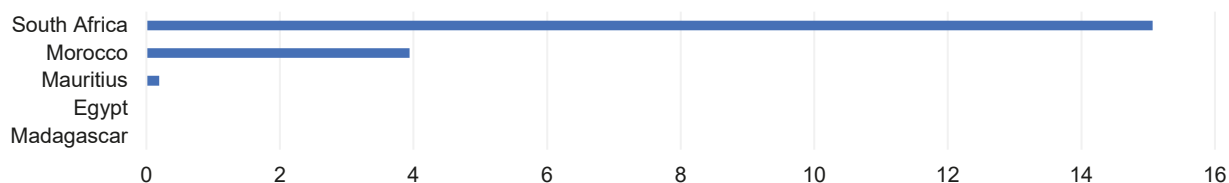


Source: ITC Trade Map

### Sugar

In 2020, Africa accounted for 5.5% of the world's sugar exports. South Africa accounted for 1.1% of global exports, Eswatini 1%, Morocco 0.7%, Egypt 0.5%, Algeria 0.5%, Mauritius 0.4% and Zambia 0.3%. The main African sugar exporters to China are South Africa, Morocco and Mauritius. The export potential of South Africa and Zambia needs further analysis.

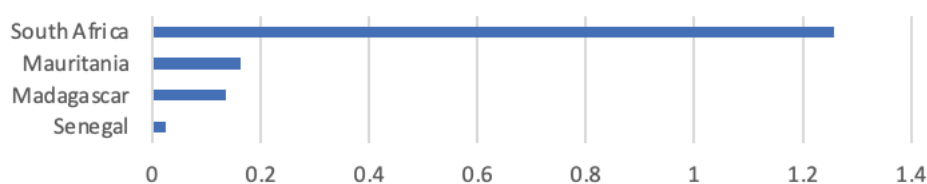
**Figure 58 Major sugar exporters to China, 2020 (\$ million)**



Source: ITC Trade Map

### Prepared meats and seafood

In 2020, Africa accounted for 3.6% of the world's exports of prepared meat and seafood. Among its countries, Morocco accounted for 1.6% of global exports, Seychelles 0.5%, Mauritius 0.4%, Ghana 0.3%, South Africa 0.3%, and Côte d'Ivoire 0.2%. The main exporters to China are South Africa, Mauritania, Madagascar and Senegal. Export potential of Morocco, Seychelles, Mauritius and Ghana need further study.

**Figure 59 Major exporters of prepared meats and seafood to China, 2020 (\$ million)**

Source: ITC Trade Map

## Opportunities and challenges for African agricultural exports to China

### Africa's advantages

#### *With the Belt and Road Initiative, agriculture is a priority for China-Africa cooperation*

China and Africa have made progress in agricultural cooperation, including trade and investment deals and technology exchanges. The Beijing Summit of the Forum on China-Africa Cooperation in 2018, followed by the first Forum on China-Africa Agricultural Cooperation in 2019, aided this progress.

At the 2018 Beijing Summit, China announced its decision to expand imports of African goods, especially non-resource products. To facilitate this, China agreed to hold the China-Africa Economic and Trade Expo in Changsha, Hunan Province, every two years.

In November 2021, President Xi Jinping pledged that China would open 'green lanes' for African agricultural exports to China to speed up inspection and quarantine procedures. China also aimed for imports from Africa to reach \$300 billion in the next three years.

#### *Africa has excellent natural resources and massive potential to enhance productivity*

Africa is rich in natural resources and grows distinct products, such as cocoa, coffee, tropical fruits and nuts. In particular, the later development of African farming gives the continent an advantage because pesticide use remains low. This means the region retains its natural resources for green and ecologically conscious production.

#### *China's market is growing as consumer tastes change and move to high-end choices*

As Chinese consumers expand their buying and their tastes, they are moving to high-quality and uniquely African agricultural products. By offering diverse options and more ecological products, Africa can meet the gradually escalating high-end consumption demand in China.

#### *Chinese enterprises increasingly invest in African farms, helping trade grow rapidly*

Enthusiasm is growing among Chinese enterprises to invest in African farming. Han Changfu, Chinese Minister of Agriculture and Rural Affairs, pointed out that, at the end of 2018, Chinese companies had invested more than RMB 5 million (about \$750,000) in 115 farm projects spread over two-thirds of African countries. At the time, China had been Africa's top trading partner for 11 consecutive years.<sup>29</sup>

Increased investment in African farming has further promoted African agricultural products in China. Agricultural imports from Africa grew an average of 11.4% in five years.<sup>30</sup> China has become the second-largest importer of agricultural products from Africa.

<sup>29</sup> By the end of 2018, Chinese enterprises had invested more than RMB 15 billion in Africa, and there were 115 agricultural projects with an investment of more than 5 million yuan, covering more than two-thirds of African countries. See [http://www.gov.cn/xinwen/2019-12/09/content\\_5459824.htm](http://www.gov.cn/xinwen/2019-12/09/content_5459824.htm)

<sup>30</sup> Ministry of Commerce of the People's Republic of China (MOFCOM), 2021.

## Challenges for African agricultural exports to China

### *Weak infrastructure and low technology*

Africa's agricultural infrastructure needs strengthening, including drainage, irrigation, rural electricity, better supply systems and storage facilities. Without access to better agricultural inputs, African farms will struggle to produce at scale or to extend the value chain. This makes it challenging to meet the large-scale market demand.

### *Lack of bilateral trade agreement arrangements, especially for inspections and quarantines*

China has signed 21 free trade agreements, but the only one with an African country is with Mauritius, according to the Chinese Ministry of Commerce. Eighteen more free trade agreements are being negotiated or studied, but none are with African countries.

With the further development of China-Africa economic and trade relations, more free trade arrangements are needed to provide institutional safeguards. In addition, because levels of trade were once so small, inspection and quarantine cooperation has lagged. While tariffs and quotas have been lifted, inspection and quarantine rules still prevent African agricultural products from entering China within a viable time frame.

### *Food security*

The World Food Programme *Global Hotspots 2020* report looked at 15 'hotspots' where food security is deteriorating and needs urgent attention. Ten of them are in Africa.

African Union experts say Africa is the most food-insecure continent, with about one in four people suffering from malnutrition. With a population expected to reach 2.5 billion by 2050, food security will be an even more demanding challenge.

The causes of food insecurity include natural factors, such as climate disasters, but also socio-economic factors, such as poverty, underemployment, economic instability, and conflict and unrest. Efforts to promote agricultural trade with China must avoid worsening food security, especially in North African countries with little farmland and in countries that rely on food aid.

## Key issues to improve African agricultural exports to China

China and Africa have different natural endowments and face different challenges in agricultural development. When helping Africa to improve infrastructure and upgrade agricultural technology, it should be noted that many Chinese agricultural high-tech systems are not suitable for the situation in African countries. For example, some crop varieties that perform well in China may not adapt to Africa's natural environment.

Small farm machinery that has been gradually replaced in China may be more adapted to the real needs of Africa. Therefore, in transferring technologies to African countries, appropriate farming technologies need to be properly tested under actual local conditions. High technology may not work best.

African farming has obvious late-developing advantages. Other countries' and regions' development experiences offer lessons that can help formulate a practical, strategic plan. African agricultural development must balance environmental protection and agricultural development, looking at both short-term and long-term interests.

China has promised new 'green lanes'<sup>31</sup> for African agricultural exports. To accelerate inspection and quarantine cooperation, African countries should work closely with relevant agencies and enterprises to propose products with particular export potential. They must communicate with the General Administration of Customs of China (GACC) to take action on these products as soon as possible.

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<sup>31</sup> China-Africa Cooperation Dakar Action Plan (2022-2024), 2021.

COVID-19 travel restrictions prevent GACC experts from conducting on-site inspections. But cooperation can still be accelerated by maintaining smooth communication and making full use of remote communication tools for video inspections.

As Africa develops the unique advantages of its agriculture, countries need to avoid over-reliance on a particular crop. Single industrial patterns bring particular problems. While vigorously developing cash crops and rapidly raising farmers' incomes, attention should also be paid to subsistence crops that can improve security. The African Union aims to eliminate hunger by 2025 through the Comprehensive Africa Agriculture Development Programme and the Malabo Declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods.

To reach this ambitious objective, the African Union proposed the Common African Agro-Parks Programme in October 2019. This would establish six agricultural parks focused on rice, maize, tubers (mainly cassava and yam), livestock, poultry and horticulture. The African Union will promote free trade in agricultural products within the African Continental Free Trade Area. The goal is to reach zero food imports with full production capacity.

Chinese agricultural enterprises should align their business development with African countries' stated strategies to realize the UN Sustainable Development Goals while investing in Africa and promoting exports to China.





## Chapter 3 Country analysis of African agricultural trade with China

### Methodology

Promising products for African export to China were identified using two complementary methodologies.

The first approach combines the growth rate of an African country's global market share, the growth rate of China's imports and the African country's export values in a bubble chart.

The second approach is the Export Potential methodology of the International Trade Centre. It identifies potential export values based on supply, demand and the ease of trade between the exporting and importing countries. Both approaches are described in further detail below.

### Evolution of a country's exports and China's imports

The first method highlights the growth performance of an African country's agricultural exports and China's imports. For each agricultural export product, it computes the compound annual growth rate of the African country's exports between 2016 and 2020, the compound annual growth rate of China's imports between 2016 and 2020, and the value of the African country's exports in 2020.

These three values are then presented in a bubble chart. The product's position on the horizontal axis represents the compound annual growth rate of the African country's share in world exports. It captures the extent to which the country's exports of each product have grown faster than world exports.

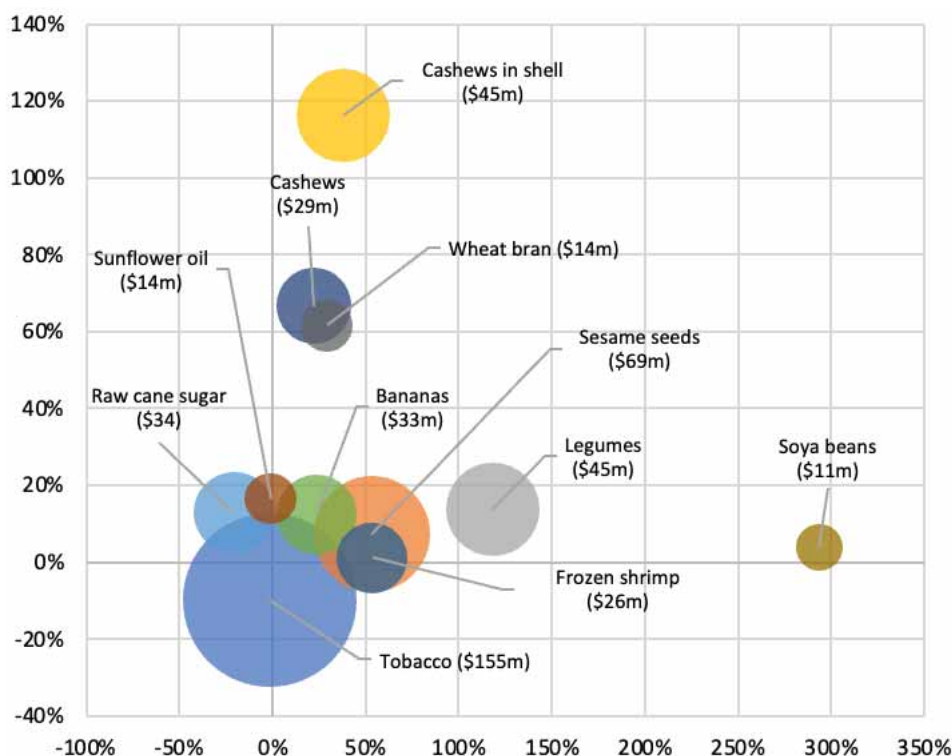
The product's position on the vertical axis represents the compound annual growth rate of China's imports. The higher the position, the stronger China's demand growth. Products located in the top right corner of the bubble chart are those in which both the country's market share and China's demand have increased over the last five years.

Finally, the size of each bubble represents the value of the African country's exports to the world. Large products that combine important supply and demand growth are of particular interest as exports to China.

Figure 60 uses Mozambique as an example. To make products comparable around the world, the World Customs Organization has developed the Harmonized System (HS) of codes. The charts use common names for products for ease of reading, but the text also includes the HS codes for precision.

Over the five years studied, Mozambican market share for soya beans (HS Code 120190) and dried leguminous vegetables (HS Code 071390) grew fastest. China's demand for these products grew as well, albeit more slowly. Products with high growth rates as China's imports include cashews, both in shell (HS Code 080131) and unshelled (HS Code 080132). Mozambican market share in these products has increased as well. So, these four products may present opportunities for increasing Mozambican exports to China.

**Figure 60 Mozambican export potential analysis**



*Note: The products' position on the horizontal axis represents the compound annual growth rate of the African country's share in world exports. It captures the extent to which the country's exports of each product have grown faster than world exports. The product's position on the vertical axis represents the compound annual growth rate of China's imports. The higher the position, the stronger China's demand growth. Products located in the top right corner of the bubble chart are those in which both the country's market share and China's demand have increased over the last five years.*

Source: ITC Trade Map

### Export potential indicator

The export potential and product diversification methodology, developed by the International Trade Centre, quantifies a country's export potential across products and markets through an assessment of detailed trade and market access information. It identifies potential export values based on supply capacity in the exporting country, demand conditions in the target market, and bilateral linkages between the two.

The export potential indicator (EPI) is computed for each supplier-partner-product combination. Total export potential captures the potential exports of a country in a specific product to a specific market as a dollar value. Three components of export potential can be distinguished analytically:

1. **Realized export potential** is the part of total export potential that is already fulfilled through current exports.
2. **Frictions-based unrealized (untapped) export potential** captures opportunities for increasing exports that are caused by exporter-importer-product-specific frictions. To tap into these opportunities, it is necessary to identify and address these frictions.
3. **Growth-based unrealized (untapped) export potential** captures opportunities for increasing exports that are driven by expected GDP growth in the exporting and importing country, which increases supply

and demand for the good. Leveraging these opportunities mainly requires ensuring investment in additional production.<sup>32</sup>

The graph for Mozambique is shown in Figure 61 as an example. The product with the largest overall export potential is sesame seeds, with \$105 million. About two-thirds of this export potential are already realized (as captured by the blue part of the bar).

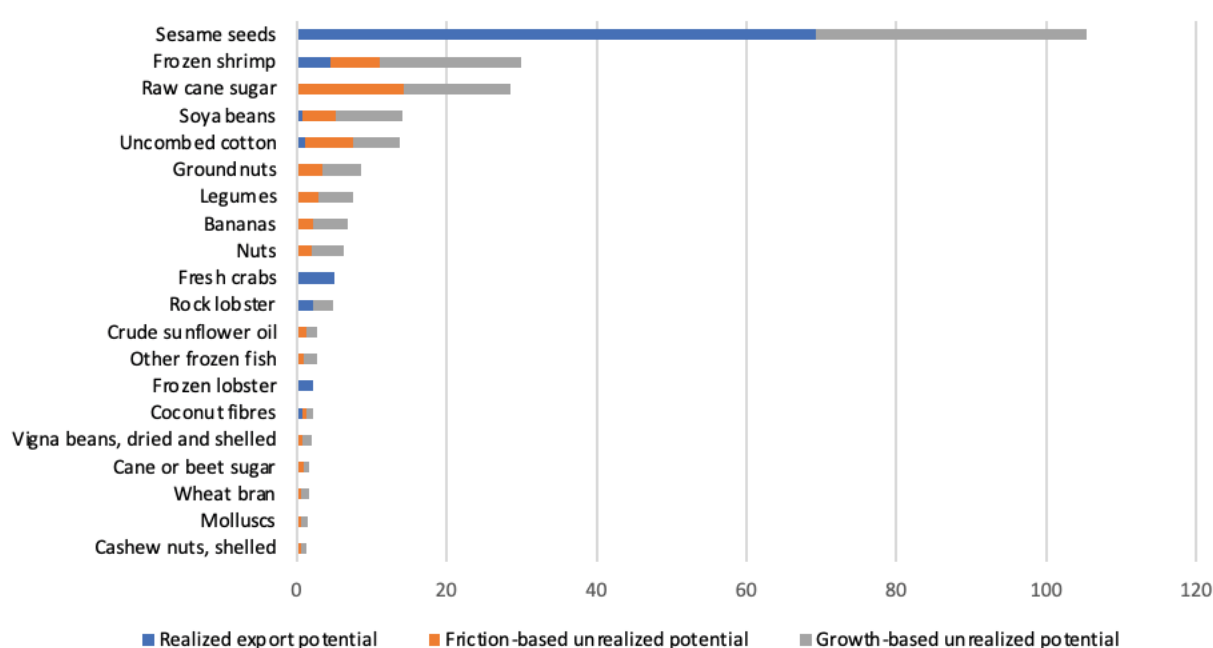
The remaining one-third (\$36 million) remains untapped. This implies that Mozambique could potentially increase its sesame exports to China by \$36 million over the next five years. This unrealized export potential is fully driven by expected growth in Mozambican supply and China's demand. It is indicated by the grey part of the bar.

For frozen shrimp, Mozambican current exports are relatively low, leaving 85% of potential untapped. A large share of that potential is driven by growth. Frictions cause a significant share, which is captured by the orange part of the bar. All products with high untapped potential present opportunities for Mozambique to increase its exports to China.

Products can present important opportunities even if they are not captured by one or the other methodology. For example, cashew nuts do not appear in the export potential methodology because Mozambique has a geographic disadvantage compared to Asian exporters. However, the fast growth in Chinese demand, as shown in the bubble chart, may still offer opportunities.

Some products may have export potential but face practical hurdles, for example, if no sanitary agreement is in place. This underlines the importance of the qualitative research that complements the quantitative approaches in this report.

**Figure 61 Mozambican export potential to China (\$ million)**



Source: ITC calculations using data from ITC Trade Map

<sup>32</sup> Decreux and Spies (2016): Export Potential Assessments. A methodology to identify export opportunities for developing countries. ([https://umbraco.exportpotential.intracen.org/media/1089/epa-methodology\\_141216.pdf](https://umbraco.exportpotential.intracen.org/media/1089/epa-methodology_141216.pdf))

## Ethiopia

### General agricultural development

Ethiopia covers 1,136,300 km<sup>2</sup>, making it the 10th largest country in Africa.<sup>33</sup> Although Ethiopia is located on the East African Plateau, its annual average temperature is higher than 20°C due to its low latitude, which is suitable for agricultural production. Ethiopia has 7,900 square kilometres of irrigated arable land (2019), accounting for 4.4% of its total arable land. According to FAO, suitable soil types, such as Nitisol and Calcisol, are widely distributed in Ethiopia. The country has high development potential if the soil can be properly irrigated.<sup>34</sup>

With a population of 115 million in 2020, it is the second most populous country in Africa. More than 56 million people live in rural areas, accounting for over 49% of the total population.

Ethiopia has been one of the best-performing economies in sub-Saharan Africa in recent years. In 2020, Ethiopian GDP was \$107.7 billion, ranking seventh in Africa, compared to \$8.2 billion in 2000. The country's gross agricultural production in 2020 was \$38.2 billion, accounting for 35% of its GDP, compared to \$3.7 billion in 2000. In 2020, Ethiopian GDP per capita was \$936.30. Despite being listed among the least developed countries by the UN, its GDP per capita has increased 6.5 times when compared to \$124.50 in 2000.<sup>35</sup>

**Table 2 Ethiopian agricultural facts**

		2019	2000	Growth rate
Land	Country land (km <sup>2</sup> )	1 136 300		-
	Arable land (km <sup>2</sup> )	179 000	106 100	69%
	Irrigated arable land (km <sup>2</sup> )	7 900	700	1077%
		2020	2000	
Population	Population	114 963 583	66 224 809	74%
	Labour force	52 799 277	28 473 853	85%
	Rural population	56 463 272	90 022 234	59%
Economy	GDP	\$107.65 billion	\$8.2 billion	1 206%
	Agricultural value	\$38.2 billion	\$3.68 billion	936%
	GDP per capita	\$936.34	\$124.46	652%

Source: FAOSTAT, World Bank Database

Agriculture is the pillar of Ethiopian economy. The agricultural sector is dominated by small-scale farmers, and it contributes more than one-third to Ethiopian GDP. Farming provides livelihoods for about three-fourths of the population, creating most of the country's foreign exchange income and providing valuable inputs for the development of Ethiopia.<sup>36</sup>

Under the leadership of the Ethiopian Ministry of Agriculture and Natural Resources, the Ethiopian Agricultural Business Corporation is primarily in charge of fertilizer procurement and seed reproduction. The Ethiopian Agricultural Transformation Agency provides technical assistance to 16.8 million farmers across the country. The Ethiopian Investment Commission promotes investment in agriculture and works with regional investment promotion bureaux to jointly boost farming.<sup>37</sup>

<sup>33</sup> FAO database, 2020.

<sup>34</sup> World reference base for soil resources. FAO. 1998, 2015.

<sup>35</sup> World Bank Database, 2021.

<sup>36</sup> Ethiopia Country Programming Framework. FAO. 2015.

<sup>37</sup> Political economy analysis of the Ethiopian food system. FAO. 2021.

According to FAO, the Ethiopian food system is transforming due to population and income growth, urbanization and improved infrastructure. Traditional, self-sufficient farming and localized value chains are yielding to a 'transitional' system with greater marketization that meets urban demand. This change is reflected in the growth and transformation of food trade and transport, processing, distribution and retail, and the longer and larger value chain of agriculture.

## Export structure

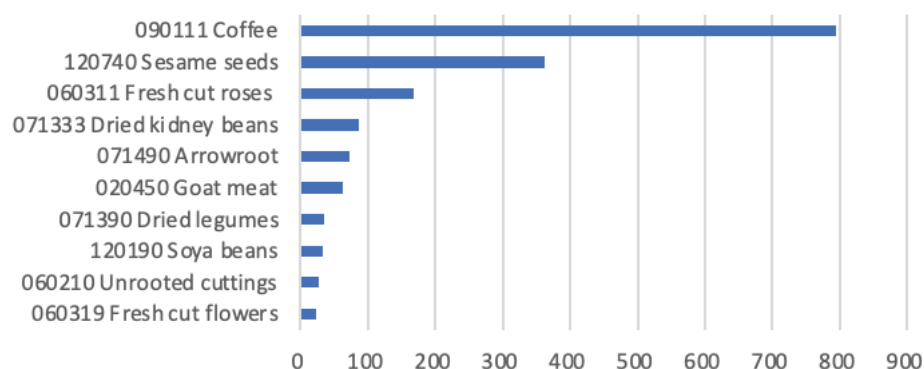
### General export structure

Ethiopia has a strong agricultural foundation, and its exports come mainly from farming. Exports of Ethiopian farm products have increased rapidly in the past 20 years, with a compound annual growth rate of 10.5%. In 2001, Ethiopian agricultural exports amounted to \$0.3 billion, accounting for 84.9% of the country's total exports. In 2020, they rose to \$2.2 billion, accounting for 86.6% of exports.

Within farm exports, vegetable products account for 81%, reaching \$2 billion. The leading products are coffee, sesame seeds, fresh cut flowers and beans. According to the International Food Policy Research Institute and the Ethiopian Development Research Institute in 2019, the industry chains of coffee, fruits/trees, beans, tobacco, cotton and tea have been remarkably effective in alleviating poverty, improving food security, and promoting employment and economic growth.<sup>38</sup>

In 2020, the country's top 10 agricultural exports added up to \$1.7 billion, accounting for 76% of its total agricultural exports. Coffee was the top export, earning \$790 million. It was followed by sesame seeds, at \$360 million.

**Figure 62 Top 10 Ethiopian agricultural exports, 2020 (\$ million)**



Source: ITC Trade Map

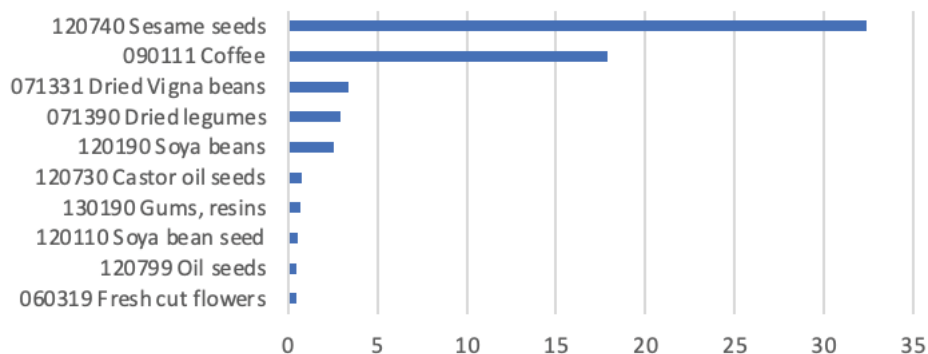
### Ethiopian exports to China

Farm products accounted for nearly one-half of Ethiopian exports to China in 2001, rising to 70.3% in 2020. In 2001, agricultural exports to China were \$4.8 million. In 2020, the figure reached \$91.2 million, with a compound annual growth rate of 16.7%.

The top 10 Ethiopian agricultural exports to China totalled \$62 million in 2020, accounting for 68% of the total. The two biggest exports have seen enormous growth. Sesame exports totalled \$68,000 in 2001 but reached \$32 million in 2020. The compound annual growth rate of sesame exports to China reached 38%. Coffee exports were \$19,000 in 2001, and \$18 million in 2020. The compound annual growth rate of coffee exports was 43%.

<sup>38</sup> Political economy analysis of the Ethiopian food system. Thurlow & Benfica. 2017.

**Figure 63 Top 10 Ethiopian agricultural exports to China, 2020 (\$ million)**



Source: ITC Trade Map

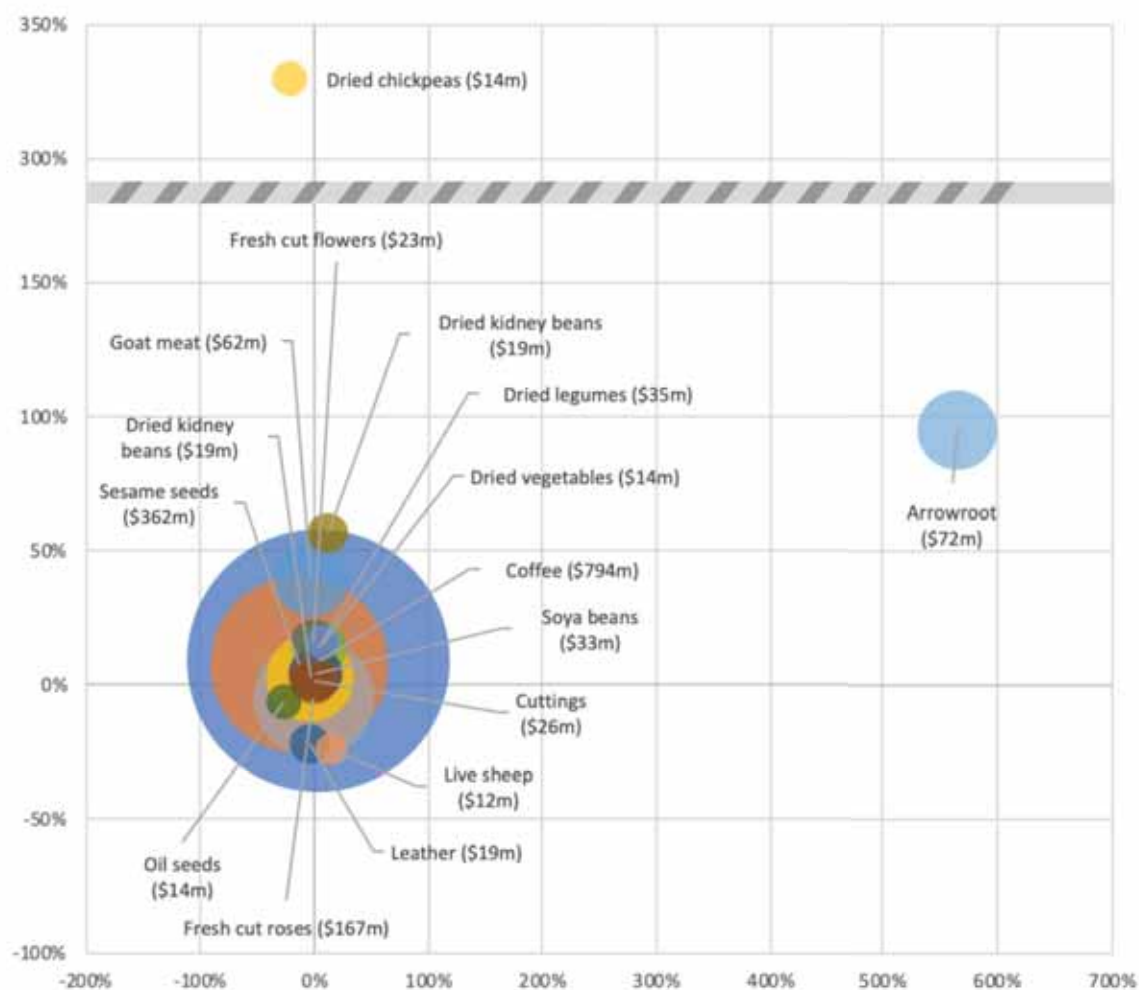
*Evolution of Ethiopian exports and China's imports*

Based on our analysis, Ethiopian coffee, kidney beans, dried vegetables, dried beans and soya beans are among the products with the most potential for export to China. Also deserving attention are fresh cut flowers and buds, goat meat and sesame seeds.

To make the research results more commercially meaningful, the analysis focuses on the 16 agricultural products whose exports exceeded \$10 million in 2020.

Based on the bubble chart in Figure 64, dried shelled kidney beans experienced high growth rates in Ethiopian exports and Chinese imports. Coffee, dried shelled leguminous vegetables and dried vegetables also experienced important, albeit lower, growth. Sesame seeds showed more mixed growth, with high growth in Chinese imports but a decrease in Ethiopian exports. However, sesame is still important in Ethiopian agricultural exports.

Figure 64 Ethiopian exports and China's imports



Source: ITC Trade Map

### Export potential indicator

Figure 65 displays the export potential of Ethiopian products to the Chinese market. The product with by far the largest overall export potential is sesame seeds, with \$284.6 million. Of this export potential, 46.6% remains untapped, meaning that Ethiopia could potentially increase its sesame seed exports to China by \$132.5 million over the next five years. The 42% of unrealized export potential in sesame seeds is driven by expected growth in Ethiopia and China, while the remaining 8% is driven by frictions.

The second product in terms of total export potential is soya beans, with an export potential of \$37 million. Eighty-eight per cent of this export potential is unrealized, which means that Ethiopia could increase its soya bean exports to China by \$32.3 million. Of this untapped export potential, \$18.3 million is driven by expected growth, and the remaining \$14 million by frictions.

The remaining top agricultural products with export potential to China can be classified into two categories.

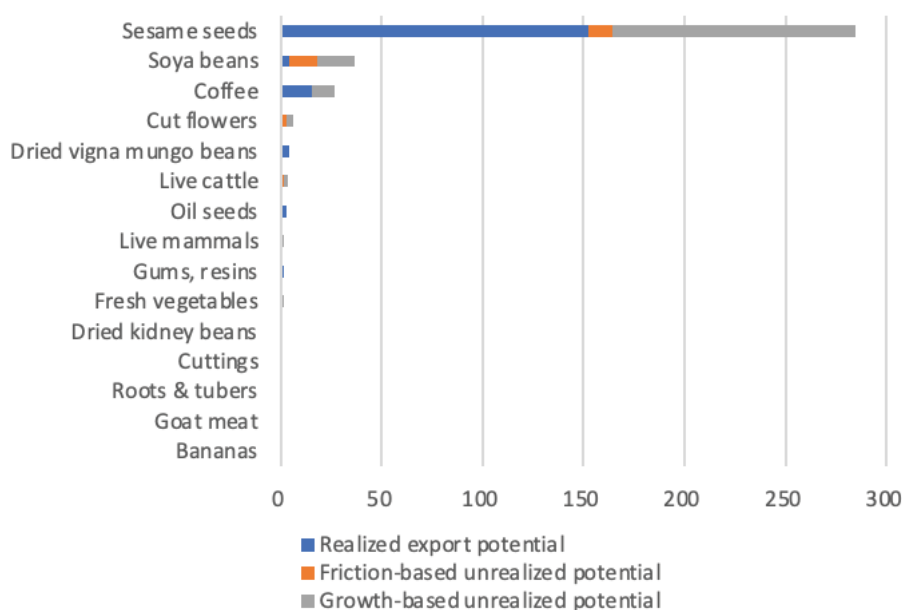
The first category comprises products already exported to China but with only growth-driven unrealized potential or no unrealized potential at all. These include coffee, *Vigna mungo* or *Vigna radiata* beans, oil seeds, lac, unrooted cuttings and slips. For these products, Ethiopian exports already fulfil or exceed



expectations. Where growth-driven untapped potential exists, exports are likely to grow if investments are made to expand production and no major changes occur in the sector.

The second category comprises products that are not yet exported to China, or only in very small quantities: bananas, live cows, vegetables, kidney beans, roots and tubers, and goat meat. For these products, significant friction-driven export potential exists. Identifying and addressing the frictions would be necessary to allow Ethiopia to take advantage of this export potential.

**Figure 65 Ethiopian products with export potential to China (\$ million)**



Source: ITC calculations using data from ITC Trade Map

Both methods of analysis identify coffee, soya beans, kidney beans, cut flowers and sesame seeds as potential growth products.

*Coffee, excluding roasted and decaffeinated (090111)*

Coffee originated in Ethiopia. Coffee is the traditional pillar industry and a main source of foreign exchange in Ethiopia. Ethiopia is the world’s sixth, and Africa’s largest exporter of coffee. In 2020, Ethiopian exports of coffee accounted for 4.5% of the world’s total. The country’s main markets are Saudi Arabia (17.2%), the United States (15.1%), Germany (13.3%), Belgium (9.6%), Japan (8.6%) and Republic of Korea (7.1%). China accounted for 2.3% of its total exports, ranking 11th.

According to the National Bank of Ethiopia, the export volumes of the six major coffee-producing regions in the year ending in July 2020 are Sidamo at \$250 million (27%), Nekemte at \$150 million (26%), Djimma at \$100 million (19%), Yirgacheffe at \$84 million (6%), Limmu at \$63 million (6%) and Harar at \$64 million (5%). Among the six regions, coffee from Yirgacheffe is particularly popular in East Asian markets such as Japan, the Republic of Korea and China.

In addition to the increasing demand for Ethiopian coffee in world markets, the Ethiopian government has eased coffee export policies by encouraging coffee processing plants and coffee plantations to apply for export licences. Meanwhile, non-coffee enterprises and industries operating in Ethiopia are trying to increase foreign exchange through coffee trade. All these factors have facilitated the growth of Ethiopian coffee exports.

In the past five years, the Ethiopian world market share in coffee attained a compound annual growth rate of 4.25%, and China’s imports a compound annual growth rate of 9.93%. The top 10 markets for Ethiopia are mainly advanced economies, which fully reflects the competitiveness of Ethiopian coffee in high-end

markets. As more Chinese people drink coffee, China's import demand for Ethiopian coffee will greatly increase.

**Table 3 Coffee**

HS code	Product	Export of Ethiopia 2020	Import of China 2020	Export of Ethiopia to China 2020	Unrealized export potential
090111	Coffee (excluding roasted and decaffeinated)	\$790 million	\$160 million	\$18 million	\$11 million

Source: ITC Trade Map

### Sesame seeds (120740)

Ethiopian sesame seeds are mainly produced by small enterprises owned by local farmers. Ethiopia is the world's third-largest exporter of sesame seeds, accounting for up to 20% of world exports. Although exports have declined in recent years, it still accounted for 10.6% of the world in 2020.

In recent years, the main export markets of Ethiopian sesame seeds were the United Arab Emirates (28%), Israel (22%), Singapore (12%), Viet Nam (10.8%) and China (9%). Although China is only the fifth-largest export market of Ethiopian sesame seeds, according to the research of ITC experts, more than one-half of Ethiopian exports of sesame seeds are destined for China (including re-exports through entrepot trade).

The Chinese market still has growth potential. The compound annual growth rate of imported sesame seeds in the Chinese market is 7.34%. Despite competition from Sudan and other countries, and the influence of domestic political instability, Chinese demand means that Ethiopia could still export more sesame seeds to China.

**Table 4 Sesame seeds**

HS code	Product	Export of Ethiopia 2020	Import of China 2020	Export of Ethiopia to China 2020	Unrealized export potential
120740	Sesame seeds	\$362 million	\$1.3 billion	\$32 million	\$133 million

Source: ITC Trade Map

According to the field work of the Foreign Economic Cooperation Center of China's Ministry of Agriculture and Rural Affairs,<sup>39</sup> China's import volume of sesame seeds ranked first in the world, with an external dependence over 65%, up to 75% at one point. With the improvement of sesame plant efficiency in China, the external dependence has decreased.

In 2019, China imported 810,000 tons of sesame seeds, accounting for 47.3% of global imports. Thanks to the tariff-free access to China, African countries such as Ethiopia, Sudan, Nigeria, Togo, United Republic of Tanzania, Mozambique and Uganda have become the major source of China's imports. China imported 790,000 tons of sesame seeds from Africa in 2019, which accounted for 98% of China's total.

Ethiopia was the largest exporter of sesame seeds to China until 2018, accounting for 48% of China's imports of sesame seeds in 2012. At the peak of its trade, Ethiopia exported 300,000 tons of sesame seeds to China at \$330 million in 2016. However, due to the high price of Ethiopian sesame seeds, China slowed down its buying rate. At the same time, Ethiopian foreign exchange controls made it harder to export to China.

According to the ITC Trade Map, China's imports of sesame seeds totalled \$1.3 billion in 2020. The top three suppliers were Sudan (23.3%), Niger (17.3%) and Ethiopia (16.4%). Nevertheless, Ethiopia remains a key source of China's imports. Compared with other sesame-producing areas, Ethiopian prices have been high

<sup>39</sup> *Research on China-Ethiopia Agricultural Value Chain Cooperation – Case Study of Beef Cattle and Sesame*, Foreign Economic Cooperation Center, Ministry of Agriculture and Rural Affairs of People's Republic of China, 2021.

in recent years. For sesame seeds meant to be eaten, the price–quality ratio in Ethiopia is low compared to Sudan.

For oil-producing sesame seeds, Ethiopian price–performance ratio is comparatively low to that of the United Republic of Tanzania, Mozambique and Uganda. This has helped those three countries, as well as West Africa, to expand sales to China. However, Ethiopia can improve its competitiveness if it strengthens cooperation with China, improves the unit yield, and reduces the planting cost through improving varieties and introducing relatively advanced small planting machines.

### *Soya beans (120190)*

One-half of Ethiopian soya beans come from large-scale farms, while the rest are produced through the intercropping of soya beans and other crops. Soya beans are produced mainly in Oromia, Benishangul, Gumuz and Amhara in western Ethiopia. These areas have fertile land and suitable weather.

When China and Ethiopia signed a sanitary protocol in 2018, Chinese customs approved market access for Ethiopian soya beans. In 2020, the main export markets of Ethiopian soya beans were India (38.4%), Viet Nam (12.5%), Israel (11.7%), Singapore (9.7%) and China (7.6%). The compound annual growth rate of the Ethiopian world market share in soya beans is 0.81% over the past five years.

Although the growth of China's imports has slowed down, it still has a compound annual growth rate of 3.9%. Considering that China is seeking to reduce its dependence on soya bean imports from the United States and Brazil, Ethiopian soya bean exports have great growth potential in China.

**Table 5 Soya beans**

HS code	Product	Export of Ethiopia 2020	Import of China 2020	Export of Ethiopia to China 2020	Unrealized export potential
120190	Soya beans	\$33 million	\$39.5 billion	\$2.53 million	\$32.31 million <sup>40</sup>

Source: ITC Trade Map

### *Fresh cut roses, fresh cut flowers and buds (060311, 060319)*

Ethiopia has a thriving flower industry, with fresh cut roses accounting for 90% of the industry. Ethiopia started to export roses in the mid-twentieth century and other flowers in 2010. Exports go mainly to Europe, where export potential is already exceeded, limiting future growth opportunities. According to the Ethiopian Investment Commission, the industry consists of large enterprises such as Sher Ethiopia PLC (with more than 10,000 employees) and 200 to 300 medium-sized enterprises.<sup>41</sup>

Ethiopia is the world's 11th- and Africa's second-largest exporter of fresh cut flowers and buds. In 2020, it accounted for 0.7% of global exports. The main markets are the Netherlands (74.5%), Saudi Arabia (7.2%), Japan (7.1%), the United States (3.7%), Germany (2.3%) and China (2%). In the past five years, the Ethiopian market share had a compound annual growth rate of -0.78%, while China's imports attained a compound annual growth rate of 16.1%.

For fresh cut roses, Ethiopia is the world's fifth- and Africa's second-largest exporter. In 2020, its exports of fresh roses accounted for 5.7% of global exports. The main markets are the Netherlands (82.5%), Saudi Arabia (6.5%), the United Kingdom (3.6%), Norway (2.8%) and the United Arab Emirates (1.3%). In the past five years, Ethiopia's world market share declined, with a compound annual growth rate of -0.9%, while Chinese imports grew with a compound annual growth rate of 5%.

Fresh cut roses have a short shelf life. With better flower-planting technology and mechanization in China, fresh cut flowers from Yunnan and other domestic areas have a lower logistics cost and shorter shelf cycle. These have sold well in the domestic market recently, creating fierce competition with imported flowers.

<sup>40</sup> According to EPI data, the above unrealized potential numbers represent the potential of HS code 1201.

<sup>41</sup> *Export Potential of Ethiopia, Kenya, Mozambique and Zambia*, report of ITC Partnership for Investment and Growth in Africa.

**Table 6 Fresh cut flowers**

HS code	Product	Export of Ethiopia 2020	Import of China 2020	Export of Ethiopia to China 2020	Unrealized export potential
060311	Fresh cut roses	\$167 million	\$4.8 million	\$6,000	\$5.3 million <sup>42</sup>
060319	Fresh cut flowers and buds	\$23 million	\$23 million	\$45,500	

Source: ITC Trade Map

### Dried, shelled kidney beans (071331)

Ethiopian exports of kidney beans ranked 11th in the world, accounting for 1.1% of total world exports. The main markets are Indonesia (24.5%), Viet Nam (17.9%), China (17.9%), India (10.5%), Pakistan (6.8%), the United Arab Emirates (4.8%) and Belgium (2.8%). In November 2019, China and Ethiopia signed a sanitary pact that resolved the biggest bottleneck for kidney bean exports to China.

In the past five years, the Ethiopian world market share attained a compound annual growth rate of 11.97%, while Chinese imports grew with a compound annual growth rate of 56.62%. This suggests growth opportunities for Ethiopian kidney beans in China.

Ethiopian exporters identified three major challenges in exporting kidney beans to China: Ethiopian kidney beans are easily infested when shipped to China without fumigating them first; prices fluctuate widely, but are often high at the beginning of harvest, so managing trading time is important; and only Ethiopian Trading Businesses Corporations can export to China, which limits the transactions of other exporters. If these challenges can be addressed, kidney bean exports could experience important growth in China.

**Table 7 Dried kidney beans**

HS code	Product	Export of Ethiopia 2020	Import of China 2020	Export of Ethiopia to China 2020
071331	Dried, shelled kidney beans <i>Phaseolus vulgaris</i>	\$19 million	\$183 million	\$3.3 million

Source: ITC Trade Map

### Others

Bamboo has great potential to help develop the green economy and promote sustainable development. Ethiopia has one of Africa's largest bamboo supplies. However, it has not been used efficiently.

Ethiopia has two major native species: *Yushania alpina* and *Oxytenanthera abyssinica*, both located in Amhara, Benishangul-Gumuz, Gambelle, Oromiyaa, Tigray and regions in southern Ethiopia. More than 40 other species have been introduced by the Ethiopian Environment and Forest Research Institute, the International Network for Bamboo and Rattan, and other development organizations. They are verifying the growth, yield and performance of these species. Bamboo contributes \$23 million a year to Ethiopian GDP and provides nearly 750,000 livelihoods (EEFCCC, 2017).

<sup>42</sup> According to EPI data, the above unrealized potential numbers represent the potential of HS code 0603X.X.

## Agricultural practitioners' perspectives

### Box 1 About the Ethiopia Commodity Exchange

The Ethiopian government established the Ethiopia Commodity Exchange (ECX) 10 years ago to control the coffee trade and, to some degree, the trade in sesame seeds and soya beans. To export a product, it must be traded through ECX at least once. ECX has warehouses all over the country. If traded through ECX, both storage and transport can be guaranteed.

The ECX price for non-compulsory goods will be lower than outside prices. Prices for non-compulsory goods are determined at 11:00 when big traders receive the goods and transport them to market in Addis Ababa. This relatively stable mechanism is trusted by many parties. Ethiopia's transaction market has a unique pricing mechanism, which is relatively closed. It is not an open market, and people there can transact more conveniently and tend to have more trust in the brokers, as both buyers and sellers talk through brokers.

*Source: Interview conducted by ITC with trade experts of Ethiopia, 2021*

### Box 2 Adopting best investment practices

An Israeli biotechnological agricultural company breeds bananas in Ethiopia. These high-quality bananas attract high prices. The company invested \$45 million and now has an annual turnover of tens of millions of dollars. Chinese companies could adopt a similar system, hiring scientific and technological staff to breed plants in Ethiopia. By providing seed-selling and on-site guidance and service, yields will improve, maximizing export volume.

Ethiopia has a lot of unused land. While increasing yield is important, planting these unused lands and improving the country's agricultural infrastructure is even more important. Chinese agricultural enterprises could introduce and adapt China's agricultural technology and planting experience, based on the local conditions in Ethiopia. The key lies in popularizing applicable technology and varieties.

*Source: Interview conducted by ITC with trade exports of Ethiopia, 2021*

## Kenya

### General agricultural development

Kenya covers 580,367 km<sup>2</sup>, making it the 23rd-largest country in Africa. With a population of 53.8 million in 2020, it is the continent's seventh-most populous country. More than 38.7 million people, or 72% of the population, live in rural areas. The low-lying, Kenyan coastal region gradually rises to the savannah and then to a plateau more than 3,000 metres above sea level. Most people live in the highlands, where the majority of economic activities take place. The highland climate is cool and mild all year.

Kenya has 55,400 km<sup>2</sup> of arable land (2019), which comprises 11% of the country's land area. Arable land has expanded from 47,644 km<sup>2</sup> in 2000, an increase of 14%. FAO data show only 2.38% of the arable land was irrigated in 2017, up from 1.6% in 2000. In terms of soil types, FAO reports that Kenya has a wide distribution of Nitisols, Lixisols and Calcisols with a high potential for development with appropriate irrigation and fertilization.

Through political and economic reforms, Kenya has experienced sustained economic growth and political stability, making it one of the fastest-growing economies in sub-Saharan Africa.<sup>43</sup> In 2020, the Kenyan GDP was \$98.9 billion, ranking sixth in Africa, compared to \$12.7 billion in 2000. The country's gross agricultural value in 2020 was \$34.8 billion, accounting for 35% of GDP, compared to \$3.7 billion in 2000. Per capita GDP was \$1,838 in 2020, compared to \$398 in 2000.<sup>44</sup>

**Table 8 Kenyan agricultural facts**

		2019	2000	Growth rate
Land	Country land (km <sup>2</sup> )	580 367		-
	Arable land (km <sup>2</sup> )	55 400	47 644	14%
	Irrigated arable land (km <sup>2</sup> )	-	1 200	-
		2020	2000	
Population	Population	53 771 300	31 964 557	68%
	Labour force	23 738 918	12 432 852	91%
	Rural population	38 718 025	25 606 167	51%
Economy	GDP	\$98.8 billion	\$12.7 billion	678%
	Agricultural value	\$34.74 billion	\$3.64 billion	852%
	GDP per capita	\$1 838.21	\$397.48	362%

Sources: FAOSTAT, World Bank Database

Agriculture provides livelihoods for more than 80% of the population. However, rural Kenya experiences widespread poverty, making agriculture essential to improving incomes, according to FAO. Strengthening and improving farms, with the participation of the poorest and most vulnerable farmers, is necessary for sustainable economic growth in Kenya.

In 2013, Kenya consolidated three ministries into the Ministry of Agriculture, Livestock and Fisheries and decentralized its powers. County governments now perform services on the ground, while the central government coordinates and develops public policies and institutional frameworks.

In June 2008, Kenya adopted its Vision 2030 roadmap for economic and social development over the next 20 years. Agriculture was identified as a critical sector for achieving the targeted growth. The government aims to shift from smallholder subsistence farming to modern, innovative and market-oriented businesses.

<sup>43</sup> Kenya country overview. World Bank. 2021.

<sup>44</sup> World Bank Database. 2021.

Agricultural governance in Kenya is gradually improving. The Agricultural Sector Development Strategy and Agriculture and Fisheries Act provide the overall legal structure for agricultural governance. The cross-departmental and regional Agricultural Coordination and Communication Forum seeks to make Kenyan farms more competitive through better production management, and national planning and budgeting. The forum is chaired by the national cabinet minister and co-chaired by a member selected from county agricultural departments.

Kenya has also developed a Country Programming Paper that aims to end drought emergencies. Led by the National Drought Management Authority, the document is the core plan for developing northern Kenya and other drought-prone areas. FAO believes this plan is important for sustainable growth in the country's arid and semi-arid regions.

## Export structure

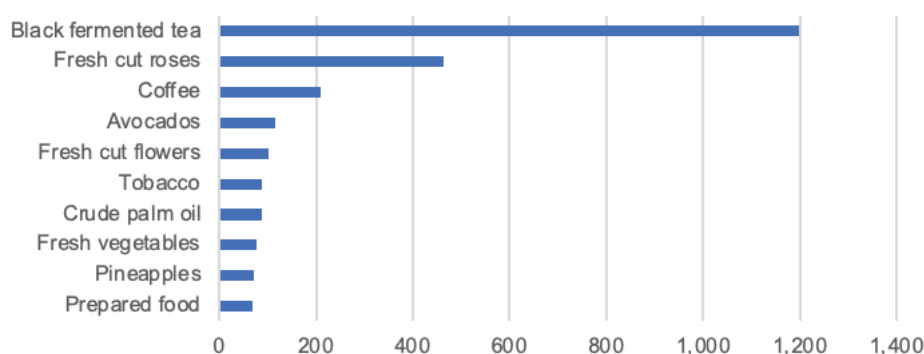
### General export structure

Kenya is more diversified than other East African economies. With 37% of all exports being fully processed, Kenya possesses the most sophisticated export basket among its neighbours. However, 70% of labour in the country is absorbed by the agricultural sector. Compared with suppliers from least-developed countries, Kenyan products need to pay relatively higher tariffs to enter the Chinese market.

The export value of Kenyan agricultural products has increased significantly in the past 20 years, with a compound annual growth rate of 6.5%. In 2001, Kenyan agricultural exports amounted to \$1.1 billion, accounting for 72% of the country's total exports. In 2020, Kenyan agricultural exports were \$3.6 billion, or 60% of the total.

In 2020, the top 10 agricultural exports were worth \$2.5 billion, accounting for 69% of all agricultural exports. Vegetable products reached \$2.7 billion, accounting for 44.8% of total Kenyan exports. More than one-half of Kenyan exports are agriculture-related, including traditional crops like tea, coffee, pulses and cut flowers. Raw products constitute the bulk of these exports but Kenya also exports some processed foods and beverages, such as confectionery, processed fruits and vegetables, and malt beer.

**Figure 66 Top 10 Kenyan agricultural exports, 2020 (\$ million)**



Source: ITC Trade Map

### Kenyan agricultural exports to China

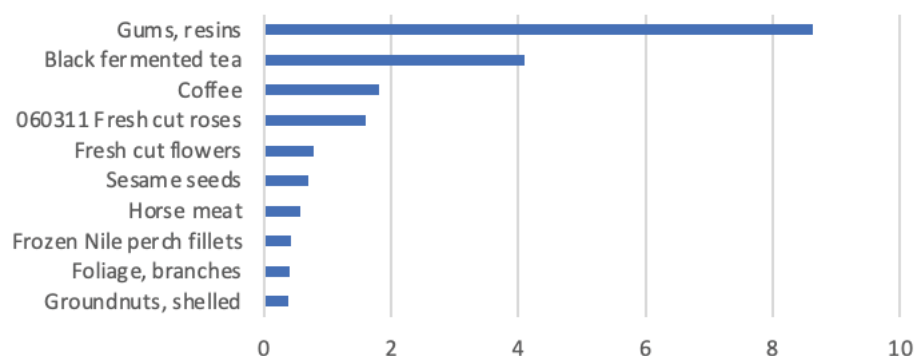
China now receives a small share of Kenyan farm exports, dropping from 3.8% in 2001 to 1.6% in 2020. But the value of those exports has increased, from \$1.2 million in 2001 to \$21.7 million in 2020, with a compound annual growth rate of 16.7%.

The top 10 Kenyan agricultural products account for almost all of its exports to China. Those goods were worth \$19.4 million in 2020, accounting for 98.7% of its total agricultural exports to China. In 2020, Kenya exported \$8.6 million of natural gum to China, up from just \$65,000 in 2001, for a compound annual growth



rate of 29.4%. During that period, black tea exports went from about \$800,000 to \$4.1 million. Another important product of Kenya is coffee. The compound annual growth rate of coffee exports to China reached 9%.

**Figure 67** Top 10 Kenyan agricultural exports to China, 2020 (\$ million)



Source: ITC Trade Map

### *Evolution of Kenyan exports and China's imports*

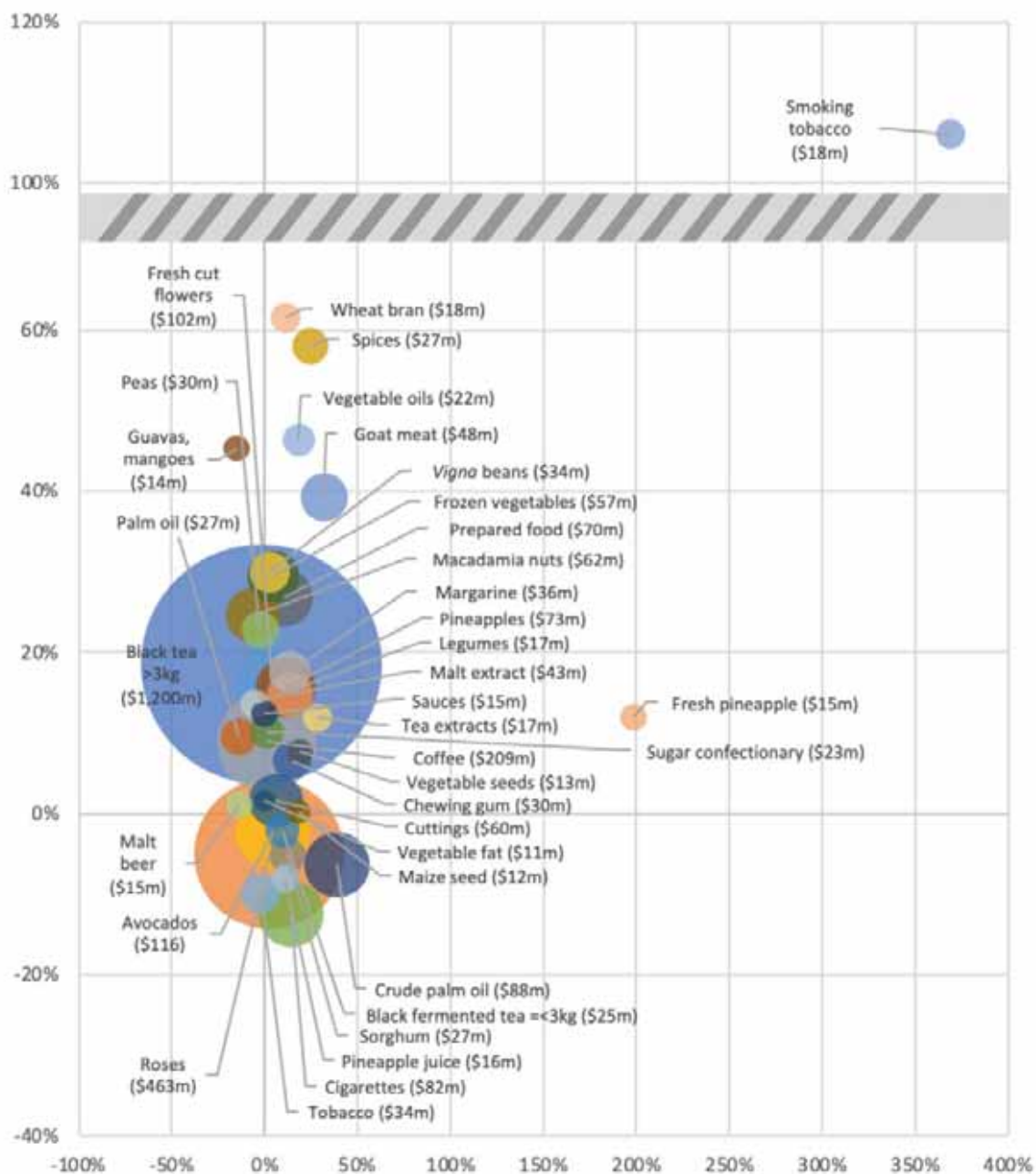
We focused on the 37 agricultural products whose exports to China topped \$10 million in 2020.

Figure 68 illustrates the growth of the Kenyan global market share and China's global imports between 2016 and 2020. The bubble chart analysis, combined with factors such as transport and consumption habits, found that black tea, coffee, fresh cut flowers, avocado, pineapple, goat meat and spices hold the most potential in China.

Spices and goat meat experienced particularly high growth rates in Kenyan exports and Chinese imports. Preserved pineapples experienced important, albeit lower, growth. Coffee, black tea and fresh cut flowers show a more mixed performance, with high growth in Chinese imports but stable in Kenyan exports. However, they are key due to their importance in Kenyan agricultural exports.



Figure 68 Kenya's exports and China's imports



*Note: Full category names are: 090230 Black fermented tea (in immediate packings); 080440 Fresh or dried avocados; 090111 Coffee (excluding roasted and decaffeinated); 090240 Black fermented tea (in immediate packings); 230230 Bran, sharps and other residues of wheat; 200559 Unshelled beans Vigna spp., Phaseolus spp.; 151590 Fixed vegetable fats and oils; 190190 Malt extract; 210120 Extracts, essences and concentrates, of tea or mate; 020450 Fresh, chilled or frozen meat of goats; 151710 Margarine (excluding liquid); 200820 Pineapples, prepared or preserved; 071090 Mixtures of vegetables, frozen*

Source: ITC Trade Map

## Export potential indicator

Figure 69 displays the Kenyan products with the highest export potential. Black tea in large packings has the most potential, at \$21 million. The untapped potential sits at 81%, meaning that Kenya could increase tea exports to China by \$17 million over the next five years. Two-thirds of this unrealized potential is driven by expected growth in Kenya and China, while the remaining one-third is driven by frictions.

Nuts – including macadamia, kola and areca nuts – have the second-highest potential. Kenya exports to China are very low, which is why 95% of the export potential of \$11 million is untapped.

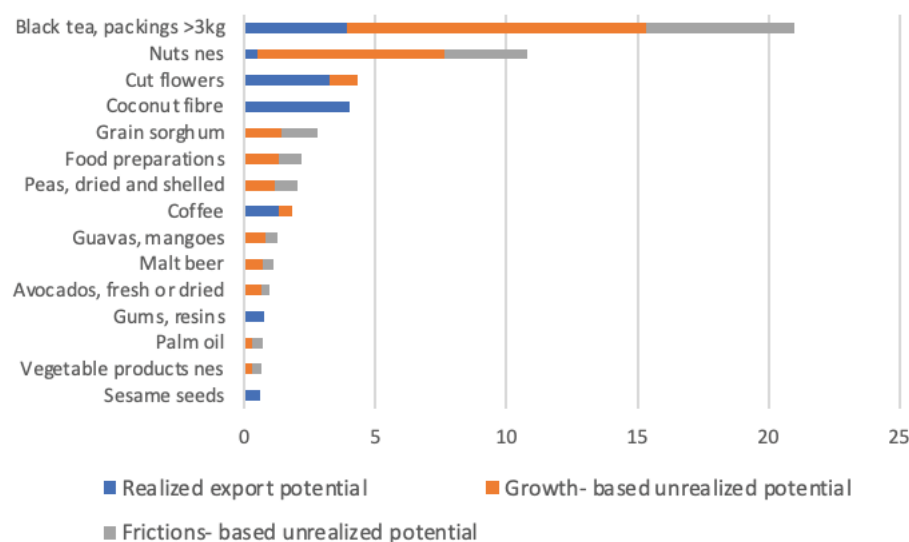
Other potential exports include cut flowers and vegetable fibres (coconut and others), with an export potential of around \$4 million. The analysis implies that Kenya currently realizes its full export potential to China, but that potential could expand as the two economies grow. For vegetable fibres, Kenya exceeds its export potential, implying that exports in this category may not grow over the next five years.

Except for tea, products with the most potential can be classified into two categories.

The first category comprises products already exported to China in significant quantities, with only growth-driven unrealized potential or no unrealized potential. These include cut flowers, vegetable fibres, coffee, lac and natural gums, and sesame. For these products, Kenya already fulfils or exceeds expectations. Where growth-driven untapped potential exists, exports are likely to grow if investments are made to increase production and no major changes occur in the sector.

The second category comprises products that are not yet exported to China, or only in very small quantities. These include nuts, sorghum, food preparations, peas, mangoes and guavas, beer, avocados, palm oil and other vegetable products. These products have significant frictions-driven potential. Identifying and addressing the frictions will allow Kenya to exploit that potential.

**Figure 69 Kenyan products with export potential to China (\$ million)**



Source: ITC calculations using data from ITC Export Potential Map

Looking at both analysis methods, black tea, cut flowers, coffee and avocado have the most export potential.

### Black tea and related products (090240, 090230, 210120)

Kenya is the largest tea producer in Africa, with exports accounting for 32.9% of the global total. That makes black tea an important source of foreign exchange. With a pleasant tropical climate, Kenyan tea plantations are located between 1,200 and 2,400 metres above sea level. In 2020, the main export markets were Pakistan (41.4%), Egypt (12.3%), the United Kingdom (10.6%) and the United Arab Emirates (5.1%). China

(0.3%) ranked 25th. In the past five years, the compound annual growth rate of imported black tea products (090240) in the Chinese market has reached 18.6%. Therefore, Kenyan black tea has great potential in the Chinese market.

According to FAO forecasts, China, India and other emerging markets will increase their tea consumption at an exceptionally rapid rate. Meanwhile, the production of China, Kenya and Sri Lanka will also increase significantly.

The Kenya Tea Development Agency (KTDA) predicts that the country's black tea production will increase by about 20% in the next decade. Established in 1965, the mission of the KTDA is to support and promote black tea sales for approximately 600,000 small-scale tea farmers. It has more than 50 tea processing plants that handle over 60% of the tea planted by its members.

To encourage production, Kenya helps SMEs to participate in international exhibitions. According to KTDA, more than 30 SMEs exported 50,000 tons of tea, representing 10% of the agency's shipments. One-fifth of SMEs sell 80% of their tea to multinational companies including Unilever, which is known for its Lipton brand, at the Mombasa Auction.

Kenyan tea producers are made up of small farms and large tea plantations. Tier-one multinational operators include James Finlay and Williamson Tea from the United Kingdom. In eastern Kenya, some large local tea planters are promoted by the Kenya Tea Growers Association.

**Table 9 Black tea**

HS code	Product	Export of Kenya 2020	Import of China 2020	Export of Kenya to China 2020	Unrealized export potential
090240	Black fermented tea (In immediate packings of >3kg)	\$1.2 billion	\$125 million	\$4.1 million	\$17.1 million
090230	Black fermented tea (In immediate packings of ≤3kg)	\$24 million	\$34 million	0 (with import permit)	\$0.18 million
210120	Extracts, essences, and concentrates, of tea or mate	\$17 million	\$19 million	\$0.27 million	NA

Source: ITC Trade Map

### *Coffee, excluding roasted and decaffeinated (090111)*

The main coffee-producing areas are located on the acidic volcanic soils of the Kenyan highlands at an altitude of 1,400 to 2,000 metres above sea level. These areas produce high-quality Arabica coffee, known for its rich aroma. Coffee-growing areas include parts of the Mount Kenya area; eastern regions of Embu, Meru and Machakos; the western Bungoma area, Mount Elgon and parts of the Rift Valley.

Since most Kenyans prefer tea to coffee, most coffee is exported. In 2020, the main export markets were the United States (21.8%), Germany (16.7%), Belgium (14%), Republic of Korea (8.6%), Sweden (6.3%) and Switzerland (4.3%). China (0.9%) ranked 17th. Imported coffee (090111) had a compound annual growth rate of 9.93% in the Chinese market. Coffee has a great growth potential for the Chinese market.

Kenyan coffee exports are mainly controlled by the Nairobi Coffee Exchange (NCE). According to NCE's 2020 data, six major traders exceeded 70% of the total coffee transactions.

**Table 10 Coffee**

HS code	Product	Export of Kenya 2020	Import of China 2020	Export of Kenya to China 2020	Unrealized export potential
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090111	Coffee (excluding roasted and decaffeinated)	\$209 million	\$158 million	\$1.8 million	\$540,000
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Source: ITC Trade Map

### Fresh cut flowers (060311, 060319)

Kenya accounts for 2.9% of global exports of cut flowers (060319), making it the fourth-largest exporter in the world and the largest in Africa. The main export markets are the Netherlands (52%), the United Kingdom (15.1%), the United Arab Emirates (6.4%), Saudi Arabia (6%) and Norway (5.2%). China ranked 13th at 0.8%. Imports of fresh cut flowers have grown rapidly in China, with a compound annual growth rate of 16.1%.

Given the long distance between the two countries, flowers take more than one week from picking to arrive for sale in China. Improvements in Yunnan mean that flowers grown domestically have a lower logistics cost and a shorter shelf cycle, creating competition for Kenyan imports. More value-adds, differentiation and special varieties are needed to compete in China.

Kenya is the world's third-largest exporter of fresh cut roses (060311), accounting for 15.9% of the global market in 2020. Kenyan roses face the same domestic competition as other flowers in China. The compound annual growth rate of China's imports of roses was -5%.

**Table 11 Fresh cut flowers**

HS code	Product	Export of Kenya 2020	Import of China 2020	Export of Kenya to China 2020	Unrealized export potential
060311	Fresh cut roses	\$462 million	\$4.8 million	\$2.9 million	\$1 million <sup>45</sup>
060319	Fresh cut flowers	\$102 million	\$23 million	\$1.3 million	

Source: ITC Trade Map

### Fresh or dried avocados (120740)

Kenya started growing avocados commercially only 40 years ago, but they are already the country's fourth-biggest cash crop, behind bananas, mangoes and pineapple. In 2020, Kenya was the world's eighth-largest exporter of avocados, accounting for 1.8% of global exports. The main export markets are the Netherlands (23.8%), France (14.7%), the United Arab Emirates (14.6%), Spain (11.5%), the United Kingdom (9.4%), Saudi Arabia (6.1%) and Russian Federation (5.4%). The Kenyan share of the world market attained a compound annual growth rate of 4.3%, while Chinese imports declined, with a compound annual growth rate of -2.2%.

Avocados account for 4.2% of Kenya's exports of vegetable products. Avocados are produced commercially in seven different provinces, with production dominated by smallholders. Some 70% of avocados are grown by smallholders with five to 20 trees per homestead, with another 20% by medium-scale farmers who have over 100 trees. Commercial plantations with 10 hectares or more in production produce the remaining 10%.<sup>46</sup>

Since June 2019, China has allowed imports of frozen avocados from Kenya that comply with the sanitary rules. Market access for fresh avocados was granted in January 2022.

<sup>45</sup> According to EPI data, the figure represents the unrealized export potential of 0603X.X

<sup>46</sup> Data comes from the NTF III Kenya Avocado Project. See <https://legacy.intracen.org/itc/projects/ntf-3/KENYA-AVOCADO/>

**Table 12 Fresh or dried avocados**

HS code	Product	Export of Kenya 2019 <sup>47</sup>	Import of China 2020	Export of Kenya to China 2020	Unrealized export potential
080440	Fresh or dried avocados	\$116 million	\$72 million	N.A.	\$1 million

Source: ITC Trade Map

### Preserved pineapples (200820)

Pineapple is one of the biggest Kenyan cash crops. In 2020, Kenya was the world's fourth-largest exporter and Africa's largest exporter of preserved pineapples (200820), accounting for 6.8% of global exports. The main export markets are European countries: Germany (20.7%), the United Kingdom (17.2%), Spain (13.5%), the Netherlands (11.7%), Italy (6.7%), France (6.4%) and Portugal (4.4%).

The compound annual growth rate of Kenya's market share in pineapples is 11.2%. The growth rate of China's imports is also relatively high, with a compound annual growth rate of 15.6%.

**Table 13 Pineapples**

HS code	Product	Export of Kenya 2020	Import of China 2020	Export of Kenya to China 2020	Unrealized export potential
200820	Pineapples, prepared or preserved	\$73 million	\$0.3 million	\$80,000	\$0.4 million

Source: ITC Trade Map

### Fresh, chilled or frozen meat of goats (020450)

Kenya is the second-largest exporter of African goat meat after Ethiopia. At present, the main export market is the Middle East, including the United Arab Emirates (55.1%), Saudi Arabia (16.8%), Bahrain (13.4%), Kuwait (4.8%), Qatar (4.7%) and Oman (3.4%).

The compound annual growth rate of the Kenyan world market share in goat meat is 32.1%. The growth rate of Chinese imports is also relatively high, with a compound annual growth rate of 39.3%. Currently, Kenya and China have no sanitary agreement for this product.

<sup>47</sup> The ITC Trade Map only showed the export data of Kenya in 2019.

Table 14 Goat meat

HS code	Product	Export of Kenya 2020	Import of China 2020	Export of Kenya to China 2020	Unrealized export potential
020450	Fresh, chilled or frozen meat of goats	\$48 million	\$1.5 million	0	\$75 000

Source: ITC Trade Map

### Spices (091099)<sup>48</sup>

Kenya is the world's sixth-largest and Africa's largest exporter of spices that fall under HS code 091099, with exports accounting for 3.2% of the world's total exports. The main export markets are the Netherlands (46.1%), the United Kingdom (28.6%), Uganda (7.3%) and Denmark (3.1). In the past five years, the Kenyan world market share attained a compound annual growth rate of 24.7%. The growth rate of China's imports was also relatively high, with a compound annual growth rate of 58%. China and Kenya do not have a sanitary agreement on these spices.

Table 15 Spices

HS code	Product	Export of Kenya 2020	Import of China 2020	Export of Kenya to China 2020	Unrealized export potential
091099	Spices (excluding pepper of the genus <i>Piper</i> )	\$27 million	\$17 million	0	\$0.1 million

Source: ITC Trade Map

## Agricultural practitioners' perspective

### Box 3 Kenya: Agricultural infrastructure and market opportunities

- **Land:** In Kenya, company owners possessing Kenyan nationality can purchase land, while non-Kenyan nationals can only lease land. Before land leases, soil tests should be carried out to determine suitable products.

**Agricultural infrastructure:** In rural Kenya, electricity is not widely available. Investments should be close to the grid. If no cold storage is needed, solar energy is a good option as it's not expensive and easily available. Companies with green energy facilities get credits when applying for agricultural production planning and organic certification. Cold chain logistics, such as storage and refrigerated transport, are relatively advanced, benefiting from the investment of European and American companies. Therefore, fresh produce is easier to trade in Kenya.

- **Information sources:** Most business associations are private-sector, non-governmental organizations. Farm business associations provide marketing and industry information services.
- **Market opportunities:** Agricultural processing offers great investment opportunities. As Chinese diets shift towards healthier food, the demand for dried fruit increases price premiums. Abundant raw materials, such as mango, avocado, cocoa and passionfruit, can be processed into primary products, such as concentrated fruit juice. These products are rare in Kenya, so investments in dried fruit and concentrated fruit juice processing plants would create opportunities to export these products to China. Compared with the fresh farm products, there are more encouraging policies for processed products to enter Chinese market.

Source: Interview conducted by ITC with entrepreneurs in Kenya, 2021

<sup>48</sup> 091099 Spices (excluding pepper of the genus *Piper*, fruit of the genus *Capsicum* or of the genus *Pimenta*, vanilla, cinnamon, cinnamon tree flowers, clove 'whole fruit', clove stems, nutmeg, mace, cardamom, seeds of anise, badian, fennel, coriander, cumin and caraway, and juniper berries, ginger, saffron, turmeric 'curcuma' and mixtures of various types of spices)

## Madagascar

### General agricultural development

Madagascar, the largest island in Africa and the fifth-largest in the world, is in the Indian Ocean. It is separated from Africa's south-eastern coast by the Mozambique Channel. The country extends 1,600 kilometres from north to south and is up to 570 kilometres wide. It covers a land area of 587,300 km<sup>2</sup>, ranking 21st in Africa.<sup>49</sup>

Madagascar suffers routinely from tropical cyclones, experiencing an average of three per year. It is also the third-most vulnerable country to climate change in the world, with one-quarter of the population living in areas highly vulnerable to disaster. Madagascar had only 36,000 km<sup>2</sup> of arable land in 2019. According to FAO, Oxisol and Podsol soils are widespread in Madagascar, with great development potential if properly irrigated, fertilized and improved. These soils are suitable for rice and tropical cash crops, such as cocoa and rubber.<sup>50</sup>

With 27.7 million people in 2020, Madagascar is the 15th most populous country in Africa. More than 17 million people, or 61% of the population, live in rural areas.

Despite its considerable natural resources, Madagascar has one of the highest poverty rates in the world, with four-fifths of its population living below the international poverty line.<sup>51</sup> In 2020, its GDP was \$13.7 billion, ranking 26th in Africa, compared with \$4.6 billion in 2000.

In 2020, agriculture was valued at \$3.3 billion, or 24.1% of GDP, up from \$1.4 billion in 2000. Major industries include tourism, low-value-added commodity processing and mining financed by foreign investment. In 2020, GDP per capita was \$495.50, up 69% from \$293.60 in 2000; even so, it is ranked by the United Nations as among the least developed countries.<sup>52</sup>

In the 2020 Global Hunger Index, Madagascar ranks 105th out of 107 countries, with an alarming level of hunger.<sup>53</sup> The income of more than one-half of the country is less than the cost of a minimum nutritious diet, and 47% of children under five years of age are stunted.<sup>54</sup>

**Table 16 Malagasy agricultural facts**

		2019	2000	Growth rate
Land	Country land (km <sup>2</sup> )	587 300		-
	Arable land (km <sup>2</sup> )	36 000	35 000	3%
	Irrigated arable land (km <sup>2</sup> )	-	-	-
		2020	2000	
Population	Population	27 691 019	15 766 806	76%
	Labour force	13,850,442	7,491,550	85%
	Rural population	17 020 562	11 490 691	48%
Economy	GDP	\$13.7 billion	\$4.63 billion	196%
	Agricultural value	\$3.3 billion	\$1.43 billion	132%
	GDP per capita	\$495.49	\$293.61	69%

Sources: FAOSTAT, World Bank Database

<sup>49</sup> FAO Database. 2020.

<sup>50</sup> World reference base for soil resources. FAO. 1998, 2015.

<sup>51</sup> Overview of Madagascar. World Bank. 2021.

<sup>52</sup> World Bank Database. 2021.

<sup>53</sup> GHI Score for Madagascar. GHI. 2021.

<sup>54</sup> Madagascar Country Strategic Plan (2019-2024). World Food Programme. 2019.



Agriculture is the pillar of the Malagasy economy, accounting for one-third of its GDP and contributing 70% of export earnings. Some 2.5 million farms employ 80% of the population. Especially in rural areas, people's livelihood heavily depends on subsistence agriculture, pastures and small-scale fisheries. However, due to its mountainous terrain, only 5% of Malagasy land is farmed.

The chief food crop is rice, grown on more than one-half of the farmland and supporting 10 million people (86% of households). Other important food crops include cassava, sweet potatoes, fresh vegetables, bananas, maize and beans. Leading export crops are vanilla, cloves, fruits, cocoa, sugar cane, coffee, sisal and cotton.<sup>55</sup> Currently, one-quarter of the country's food crops, 45% of its industrial crops and 90% of cash crops are grown for commercial purposes and have great trade potential.

In 2015, the government put forward three goals of improving social governance, promoting economic recovery (especially agricultural recovery), and expanding basic social services. In the past five years (before the pandemic), Madagascar was in a period of accelerated growth and its GDP reached a decade-high growth rate of 4.8% in 2019.

The Ministry of Agriculture, Livestock and Fisheries wants to make the country self-sufficient for food and to modernize the agricultural sector. The country's plan encourages national direct investment and foreign direct investment, while seeking to better organize farmers through new collective laws.

According to FAO, as most of Malagasy population (95% in the south) live on agriculture, animal husbandry and fisheries, investment, cash transfers and technical guidance will help the local areas to rapidly produce food, generate income and strengthen their resilience, enabling them to achieve food security and economic development amid frequent natural disasters and locust threats.

## Export structure

### *General export structure*

The export value of Malagasy agricultural products has increased greatly in the past 20 years, with a compound annual growth rate of 4.3%. In 2001, agricultural exports were \$0.45 billion, accounting for 47.6% of total exports. In 2020, they reached \$0.99 billion, accounting for 50.8% of total exports.

In 2020, the top 10 agricultural export products stood at \$0.8 billion, representing 80.2% of total agricultural exports.

Exports of vegetable products reached \$0.7 billion, accounting for 35.7% of Malagasy total exports. Of these, vanilla earns the most foreign exchange, with an export volume of \$0.52 billion (090510, 090520), followed by frozen shrimp and prawns, and cloves.

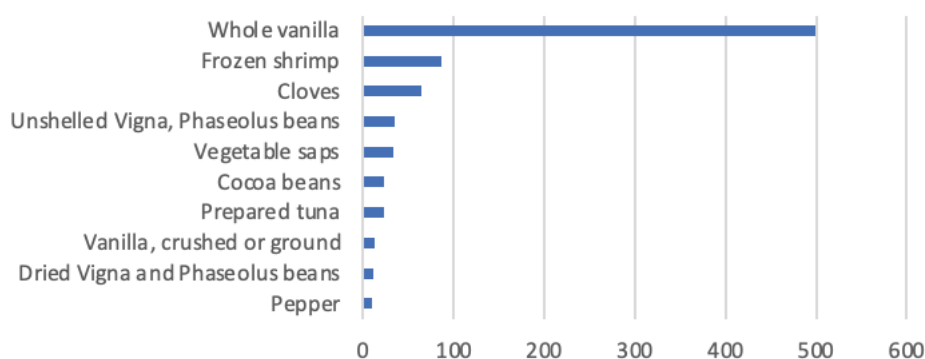
Madagascar joined WTO in 1995. It also belongs to the Southern African Development Community (SADC) and the Common Market for Eastern and Southern Africa (COMESA). In July 2017, Madagascar signed the Tripartite Free Trade Agreement between SADC, COMESA and the East African Community, a market that covers 57% of the African population.

Madagascar also has bilateral investment agreements with 10 countries, including China, France, Germany and Switzerland.

<sup>55</sup> Country Profile Madagascar. ITC. 2021. <https://www.intracen.org/exporters/organic-products/country-focus/Country-Profile-Madagascar/>



**Figure 70 Top 10 Malagasy agricultural exports, 2020 (\$ million)**



Source: ITC Trade Map

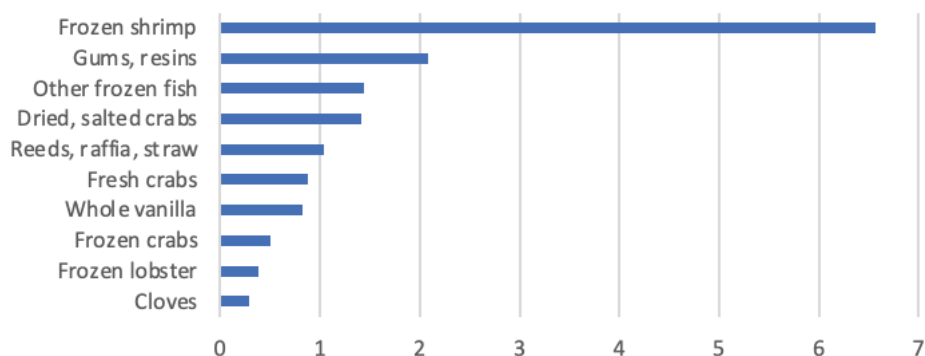
### Malagasy agricultural exports to China

Farm products accounted 19.2% of Madagascar’s exports to China in 2001, falling to 15.5% in 2020. In 2001, those products were worth \$1.24 million. In 2020, they reached \$18.2 million, with a compound annual growth rate of 15.2%.

The top 10 Malagasy agricultural exports to China totalled \$15.4 million, or 84.63% of its agricultural exports to China. Although vanilla is the biggest export crop, sales to China were only \$0.8 million in 2020. The largest agricultural export products to China are seafood, natural gum and spices.

In 2020, Madagascar exported \$6.6 million of frozen shrimp and prawns to China. Madagascar started selling frozen shrimp to China in 2012, when the export value was \$2.9 million. In 2020, Madagascar exported \$2.1 million of natural gum to China. When the first natural gum sales to China took place in 2013, the export value was \$0.17 million.

**Figure 71 Top 10 Malagasy agricultural exports to China, 2020 (\$ million)**



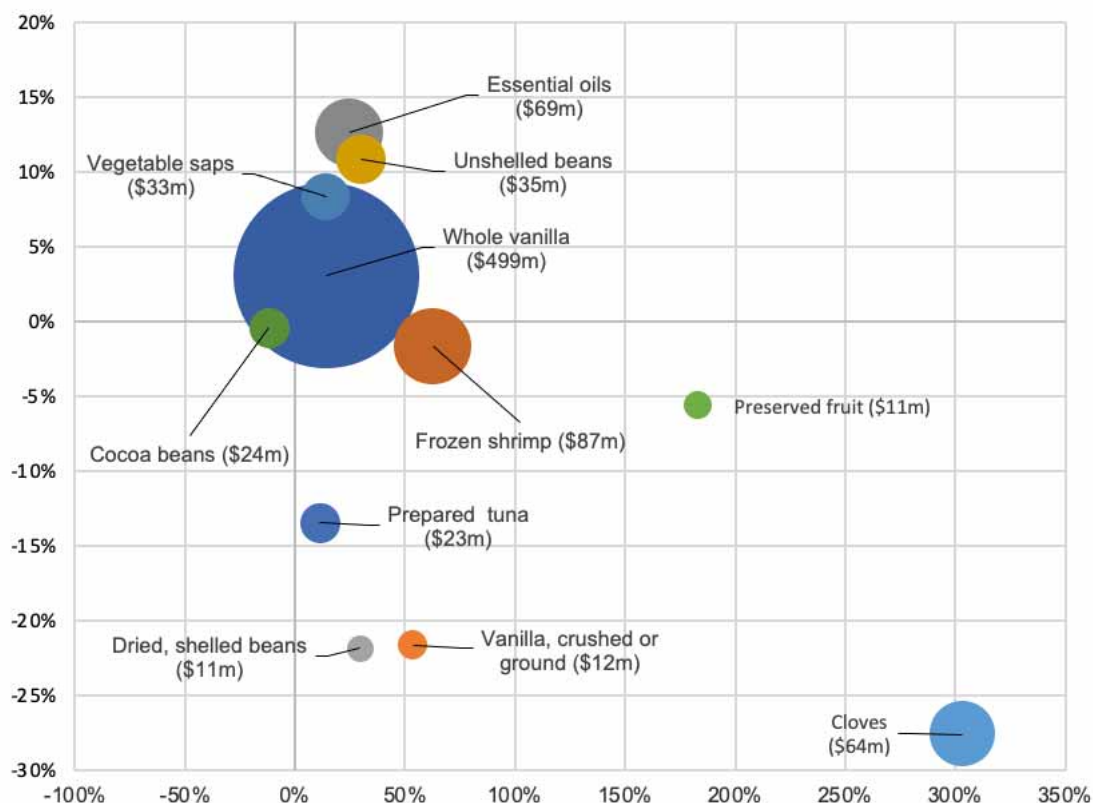
Source: ITC Trade Map

### Evolution of Malagasy exports and China’s imports

The analysis focuses on the 11 agricultural products whose exports exceeded \$10 million in 2020.

The bubble chart analysis in Figure 72 found that vanilla, frozen shrimp, essential oils, unshelled beans, and vegetable saps and extracts have potential as exports to China.

Essential oils and unshelled beans have experienced particularly high growth rates in Malagasy exports and Chinese imports. Vanilla and vegetable saps also experienced important, albeit lower, growth. Frozen shrimp showed a more mixed growth performance, with high growth in Chinese imports but stable in Malagasy exports. However, they are an important Malagasy agricultural export.

**Figure 72** Malagasy exports and China's imports

**Note:** Full category names are: 160414 Prepared or preserved tuna; 130219 Vegetable saps and extracts; 030617 Frozen shrimp and prawns; 090510 Vanilla, neither crushed nor ground

**Source:** ITC Trade Map

### Export potential indicator

Figure 73 displays the agricultural products with the highest export potential. Frozen shrimp has the most potential, with \$21.8 million. Of this potential, 77.3% remains untapped, meaning that Madagascar could increase its frozen shrimp exports to China by \$16.8 million over the next five years. About three-fourths of the unrealized potential is driven by expected growth in Madagascar and China, while the remaining quarter is driven by frictions.

Essential oils are next, with \$15.2 million of export potential. Some 62% remains untapped, meaning that Madagascar could potentially increase its essential oils exports to China by \$9.4 million over the next five years. Expected growth accounts for 77% of this unrealized potential in essential oils, with the remainder driven by frictions.

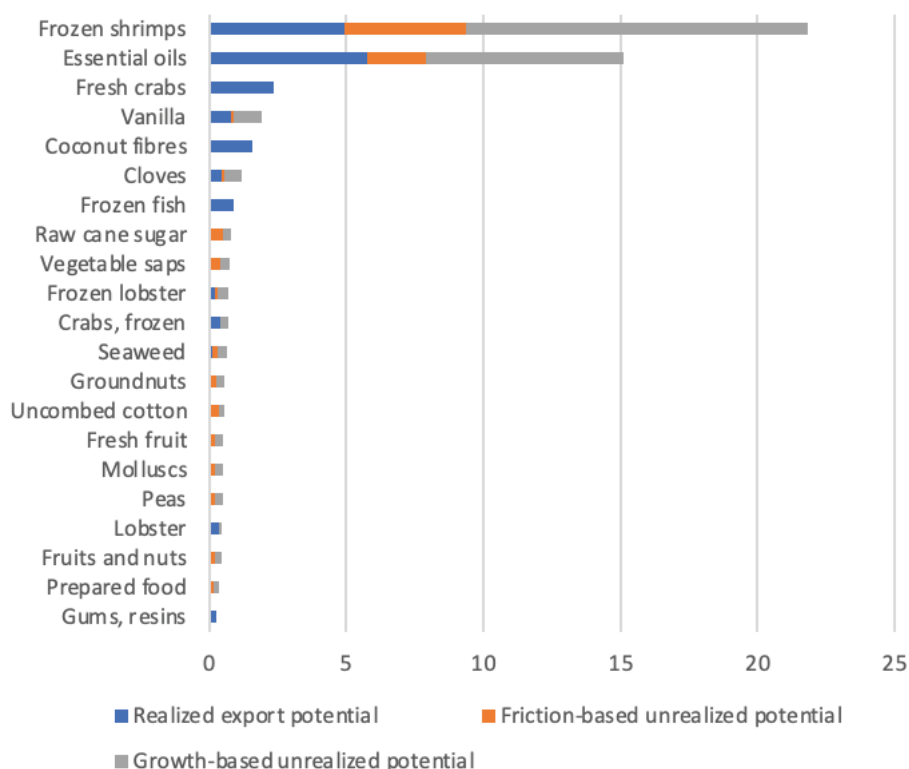
The third product in terms of total export potential is crabs. But Malagasy crab exports exceed its export potential, implying that sales may not grow over the next five years. The fourth product is vanilla, where 42.3% of its potential has been realized. For cloves, Madagascar could increase its exports to China by \$0.73 million (62.4%) over the next five years.

Products with export potential to China can be classified into two categories.

The first category comprises products already exported to China in certain quantities, with only growth-driven unrealized potential or no unrealized export potential at all. These are crabs, coconut, abaca Manila hemp, ramie, agave and other vegetable fibres, whole frozen fish, and frozen shellfish. For these products, exports to China already fulfil or exceed expectations. The exports could grow with investments that increase production if no major changes occur in the sector.

Except for frozen shrimp and essential oils, the second category comprises products not yet exported to China or exported only in very small quantities. These include raw cane sugar, vegetable saps and extracts, groundnuts, uncombed cotton, fresh fruit, molluscs and dried peas. Frictions hinder these exports. The frictions must be addressed for Madagascar to take advantage of existing export potential.

**Figure 73 Malagasy products with potential to China (\$ million)**



Source: ITC calculations using data from ITC Trade Map

Looking at both methods of analysis, frozen shrimp, essential oils, vanilla, and vegetable saps and extracts are the most promising products.

### Vanilla (090510, 090520)

Madagascar is an important spice producer in Africa, especially for vanilla. Madagascar is the world's largest exporter of vanilla (090510), accounting for 61.9% of world's total exports. In 2020, the main markets were the United States (46.5%), France (20.5%), Germany (13.7%), the Netherlands (6%), Canada (4.3%), Switzerland (2.5%), Pakistan (41.4%), Egypt (12.3%), the United Kingdom (10.6%) and the United Arab Emirates (5.1%). China (0.2%) ranks 15th.

The Malagasy share of world vanilla exports have a compound annual growth rate of 3.1%. Its exports to China have a compound annual growth rate of 14.2%. Vanilla prices are relatively high, serving high-end markets in Europe and the United States. Due to limited demand for high-priced products, China's import volume is not high.

Small-scale farmers in north-eastern Madagascar produce 40% of world's vanilla, making it the most important cultivation centre in the world.<sup>56</sup> Vanilla is grown in five regions along the east coast and the Sofia region in the north-west. The Sava region is the most important cultivation area, producing about 70% of the country's output. In the mid-nineteenth century, French colonists introduced vanilla from Mexico to Madagascar. However, since the production of vanilla is hard to mechanize, cultivation methods have not

<sup>56</sup> <https://onlinelibrary.wiley.com/doi/epdf/10.1111/btp.12859>

changed much for over a century. Unit outputs remain almost the same as in the 1960s. Factors such as the weather affect the output and lead to large fluctuations in price. This affects farmers' incomes, which are not stable.

**Table 17 Vanilla**

HS code	Product	Export of Madagascar 2020	Import of China 2020	Export of Madagascar to China 2020	Unrealized export potential
090510	Vanilla, neither crushed nor ground	\$0.5 billion	\$1.4 million	\$0.82 million	\$1.1 million <sup>57</sup>
090520	Vanilla, crushed or ground	\$12 million	\$50 000	\$36 000	

Source: ITC Trade Map

### Essential oils (330129)

Madagascar is known for its biodiversity and is the source of many plants that produce essential oils. Madagascar is the world's 10th-largest and Africa's largest exporter of essential oils, accounting for 3% of global exports. Essential oil products are mainly exported to Indonesia (24.1%), France (19.4%), India (14.2%), the United States (8.8%), Singapore (7.6%), Kenya (7%), Belgium (4.7%) and Spain (3.8%). China (2.8%) ranks 10th.

The Malagasy share of world essential oil (330129) exports attained a compound annual growth rate of 12.7%, and its exports to the Chinese market a compound annual growth rate of 24.68%. Essential oil exports to China are projected to keep growing.

**Table 18 Essential oils**

HS code	Product	Export of Madagascar 2020	Import of China 2020	Export of Madagascar to China 2020	Unrealized export potential
330129	Essential oils	\$69 million	\$0.12 billion	\$1.9 million	\$9.4 million

Source: ITC Trade Map

### Frozen shrimp and prawns (030617)

China is the second-largest export market for Malagasy frozen shrimp and prawns. In 2020, the main markets were France (86.5%), China (7.5%), Spain (2.2%) and Portugal (1.7%). The Malagasy share of world exports experienced a compound annual growth rate of -1.6%, while exports to China grew at a compound annual growth rate of 62.5%.

**Table 19 Frozen shrimp and prawns**

HS code	Product	Export of Madagascar 2020	Import of China 2020	Export of Madagascar to China 2020	Unrealized export potential
030617	Frozen shrimp and prawns	\$87 million	\$3.1 billion	\$6.6 million	\$16.9 million

Source: ITC Trade Map

<sup>57</sup> According to EPI data, the above unrealized potential numbers represent the potential of HS code 0905.

### Vegetable saps and extracts (130219)

The main export markets of Malagasy vegetable saps and extracts are Germany (56.6%), Morocco (20.5%), the Netherlands (14.4%), France (5.7%) and the United States (2.3%).

The Malagasy share of world exports of vegetable saps (130129) attained a compound annual growth rate of 8.4%, and its exports to the Chinese market a compound annual growth rate of 14.2%.

**Table 20 Vegetable saps and extracts**

HS code	Product	Export of Madagascar 2020	Import of China 2020	Export of Madagascar to China 2020	Unrealized export potential
130219	Vegetable saps and extracts	\$33 million	\$82 million	0	\$0.7 million

Source: ITC Trade Map

### Agricultural practitioners' perspective

#### Box 4 Madagascar: Cooperating with local governments

An agricultural expert in Madagascar mentioned that some Chinese enterprises have invested in farming with support from FAO, China's Ministry of Agriculture and Rural Affairs, and Madagascar's Ministry of Agriculture, Livestock and Fisheries. These businesses have cooperated with local governments to increase farms' added value. Chinese enterprises provide technology, fertilizers and seeds. They also work with the Malagasy Ministry of Finance to develop contract farming, further exploring and participating in the development of local farming. This method is also used by Middle Eastern companies that grow white beans and French companies that produce corn.

Another expert said lack of funding held back rice cultivation for years. Because Madagascar has only one rice planting season, growing ordinary rice cannot guarantee an ideal income for farmers. Chinese enterprises promoted hybrid rice, increasing the yield 15%-20% and doubling farmers' income to \$5,000 per acre. Hybrid rice is now planted on more than 50,000 hectares using a sustainable operation model. However, more financial and resource support is needed to expand hybrid rice across the country.

Source: Interview conducted by ITC with agricultural investment enterprises in Madagascar, 2021

## Mauritius

### General agricultural development

Located off the south-east coast of Africa, Mauritius is a small island nation in the Indian Ocean and one of the smallest countries in Africa. With an area of 2,040 km<sup>2</sup>, Mauritius ranks 53rd in Africa.<sup>58</sup> The main island is 1,870 km<sup>2</sup>, consisting of an undulating central plateau, with steep and rugged cliffs in the south and coastal plains in the north and east.

Mauritius has 800 km<sup>2</sup> of arable land, which covers 39% of the country's land area. Compared with 900 km<sup>2</sup> in 2000 it has decreased by 11%. According to FAO, soils in Mauritius are derived mainly from weathered basaltic lava. Reddish tropical latosols are the most widespread and cover around 70% of the main island. They have a thin and very fertile humus layer which requires proper conservation tillage.<sup>59</sup>

<sup>58</sup> FAO Database. 2020. <http://www.fao.org/faostat/en/#data/RL>

<sup>59</sup> Country profile – Mauritius. FAO. 2005. <http://www.fao.org/3/CA2145EN/ca2145en.pdf>

With a population of 1.27 million in 2020, Mauritius ranks 47th in Africa. More than 749,800 people live in rural areas, accounting for 59% of the population.

Despite its limited population and land resources, Mauritius has a high level of economic development, with good ports and maritime transportation. Since its independence in 1968, the country's economy has made great progress.

Since July 2020, Mauritius has been listed as a high-income country.<sup>60</sup> In 2020, Mauritian GDP was \$10.91 billion, ranking 30th in Africa, up from \$4.66 billion in 2000. Its gross agricultural production was \$372 million in 2020, accounting for 3.41% of its GDP, up 40% from 2000. In 2020, Mauritian GDP per capita was \$8,623, more than doubling from \$3,929 in 2000.<sup>61</sup>

**Table 21 Mauritian agricultural facts**

		2019	2000	Growth rate
<b>Land</b>	Country land (km <sup>2</sup> )	2 050		-
	Arable land (km <sup>2</sup> )	800	900	-11%
	Irrigated arable land (km <sup>2</sup> )	-	-	-
		2020	2000	
<b>Population</b>	Population	1 265 740	1 186 873	7%
	Labour force	593 317	519 719	14%
	Rural population	749 824	680 434	10%
<b>Economy</b>	GDP (billion)	\$109.14	\$46.63	134%
	Agricultural value (billion)	\$3.72	\$2.66	40%
	GDP per capita	\$8 622.68	\$3 929.08	119%

Sources: FAOSTAT, World Bank Database

Agriculture represents about 3.7% of GDP, of which sugar cane contributes nearly one-third. Sugar cane accounts for 90% of the planting area in Mauritius and 20% of its exports. Given the importance of sugar, Mauritian agriculture is often classified by sugar sector and non-sugar sector. The latter comprises fishery, livestock, horticulture and forestry. The sugar sector is facing a harsh reality as the EU sugar reforms have caused falling export prices. Nevertheless, the sector is striving to increase its competitiveness to remain viable.

In 2008, rising global food prices drove up food import costs, which prompted Mauritius to adopt a strategy to increase local food production. The first phase achieved good results: food production increased by 23.7%. Potato production increased by 45%. The government also allocated land to farm groups and launched a programme to improve tillage and modernize production.

In the sugar industry, the Mauritius Cane Industry Authority, established in March 2012, encourages farmers to shift from raw sugar production to high value-added refined sugar and energy production. It also helps sugarcane growers reduce production costs.

Mauritius has developed into a seafood and fishing hub in the western Indian Ocean. It integrates shipping, reefer charter, terminal space, refrigeration and processing, marketing and distribution of seafood into one special area. In 2017, the country's fleet had 1,731 vessels, most of which had no decks. Fisheries employ 29,055 people, with 291 people working in deep-sea fishing and the rest in marine and coastal fisheries. About 4% of them are women.

Aquaculture employs 129 people, 18% of whom are women. Although aquaculture started three decades ago, production was negligible until 2004. Since then, production increased from fewer than 50 tons to

<sup>60</sup> Overview of Mauritius. World Bank. 2021. <https://www.worldbank.org/en/country/mauritius/overview>

<sup>61</sup> World Bank Database. 2021. <https://www.worldbank.org/en/country/mauritius/overview>

350 tons, due to the development of marine cage culture for red drum. In 2017, aquaculture production reached about 1,250 tons, mainly for red drum and European sea bass.<sup>62</sup>

According to the World Bank, Mauritius is focused on transforming agriculture services. National goals include strengthening legislation, monitoring and evaluation, expanding capacity, boosting unit output and expanding organic farming. The goal is to reduce poverty, employ more women, attract new investment and provide jobs training.

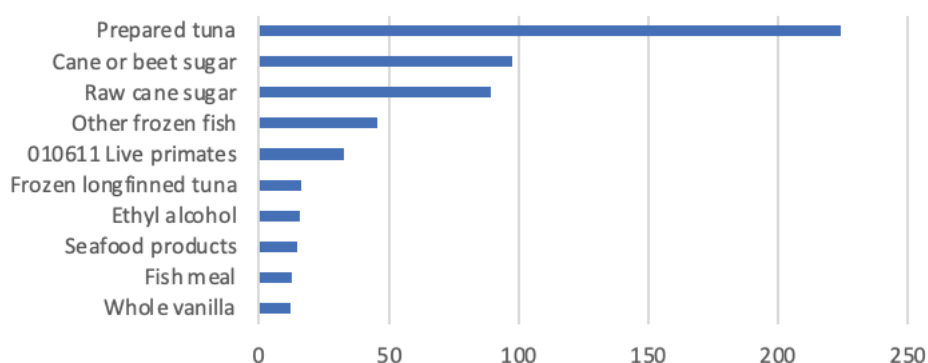
## Export structure

### General export structure

Overall exports in 2020 hardly changed in value from 2001. However, agricultural exports increased greatly, with a compound annual growth rate of 13.3%. Farm goods are also taking a growing share of overall exports. In 2001, Mauritian agricultural exports amounted to \$393 million, or 24.8% of all exports. In 2020, they were \$648 million, accounting for 41.8% of the total.

In 2020, the top 10 Mauritian agricultural exports earned \$561 million, accounting for 86.6% of its total agricultural exports.

**Figure 74 Top 10 Mauritian agricultural exports, 2020 (\$ million)**



Source: ITC Trade Map

### Mauritian exports to China

In October 2019, China and Mauritius signed a free trade agreement, which entered into force on 1 January 2021. China and Mauritius will eventually achieve zero tariffs on almost all products. They also agreed to open up more than 100 service sub-sectors. This is the first time that China has upgraded an investment protection agreement with an African country. The two sides also reached agreements in economic and technological cooperation, rules of origin, trade remedies and technical barriers to trade. Mauritian exports of seafood and other products to China are expected to increase.

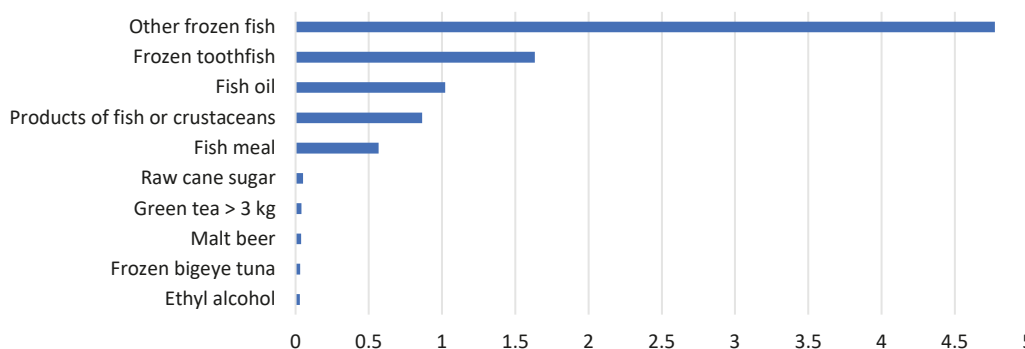
In 2020, China bought 38.5% of Mauritian agricultural exports, up from 0.3% in 2001. The value of those exports in 2001 was only \$6,000. In 2020, the figure reached \$9.2 million, with a compound annual growth rate of 47.1%.

The export value of the top 10 Mauritian farm products is \$9 million, accounting for 98.6% of its total agricultural exports to China. Seafood dominates exports. In 2020, Mauritius exported \$4.8 million of frozen fish to China. Mauritius first exported frozen toothfish to China in 2020, at a value of \$1.6 million.

<sup>62</sup> <http://www.fao.org/fishery/facp/MUS/en>



**Figure 75 Top 10 Mauritian agricultural exports to China, 2020 (\$ million)**



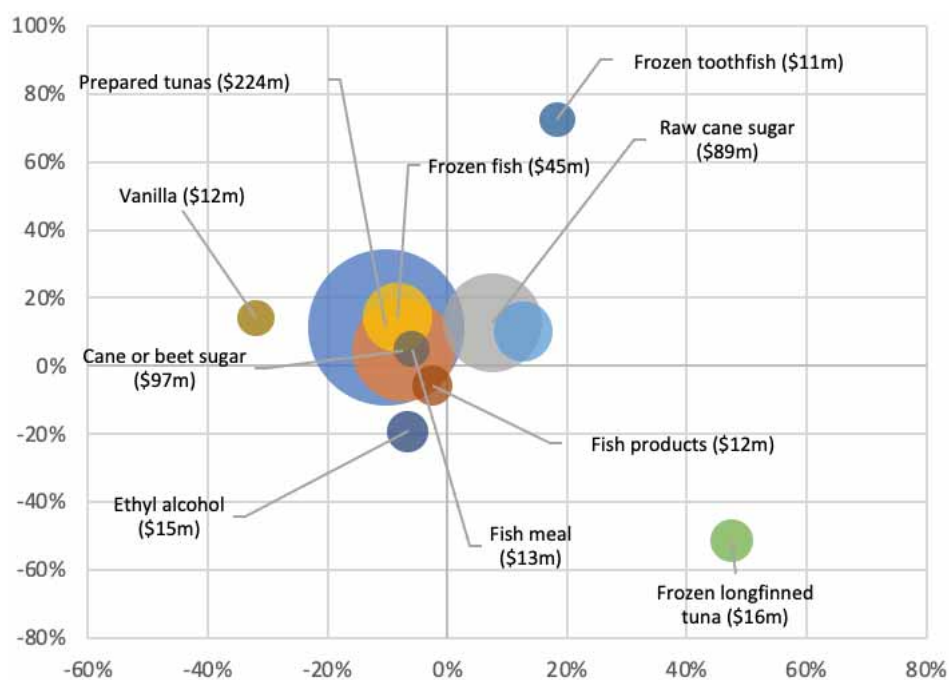
Source: ITC Trade Map

*Evolution of Mauritian exports and China's imports*

We focused on the 11 agricultural products whose exports topped \$10 million in 2020.

In addition to analysing the bubble chart in Figure 76 and the export potential indicator, we considered factors such as transport, supply, demand, ease of trade and consumption habits. This analysis revealed that the products with the most export potential to China are tuna, toothfish and raw cane sugar.

**Figure 76 Mauritian export potential analysis**



Source: ITC Trade Map

**Export potential indicator**

Figure 77 displays the agricultural products with the highest export potential to China. Frozen fish has the most potential, at \$9.9 million. Of this, 50.6% remains untapped, meaning that Mauritius could potentially increase its frozen fish exports to China by \$5 million over the next five years. This is mostly due to expected growth in both countries.

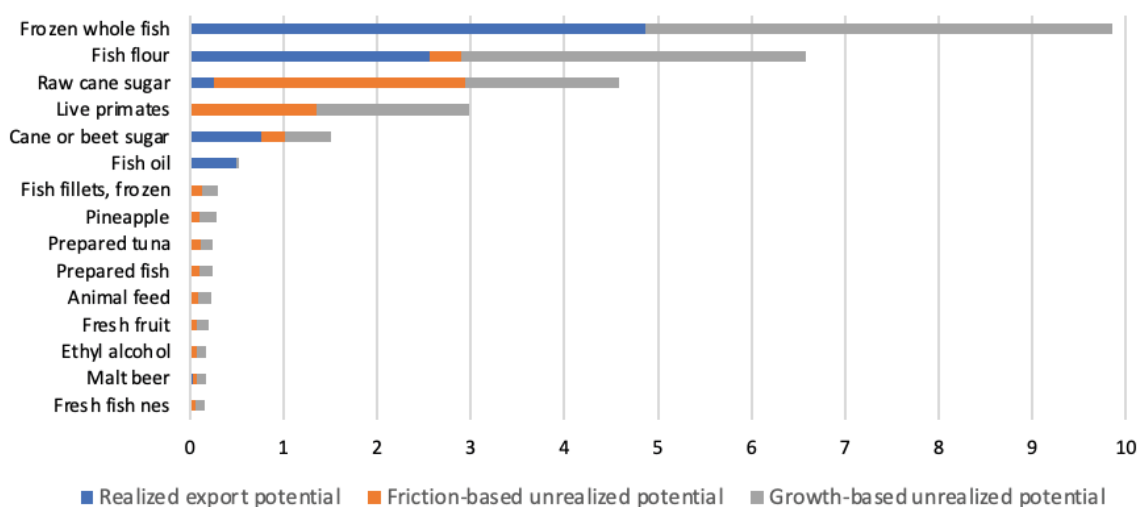


The second product in terms of total export potential is flours of fish or crustaceans. Currently, these exports are \$2.6 million, and 61% of the total export potential of \$6.6 million is still untapped. For raw cane sugar, 94.3% of the export potential is untapped, including 35.6% growth-driven potential.

Of the 10 products with the most potential, Mauritius only exports four of them in significant values. These are frozen fish and fish flours, as well as raw cane sugar and fish fats. While some export potential remains untapped in sugar, export potential in fish fats and oil is already fully realized.

The other six in the top 10 are not yet exported to China or exported only in very small quantities. These are frozen fish fillets, pineapples, prepared or preserved tuna, prepared or preserved fish, preparations used in animal feeding, fresh fruits, ethyl alcohol, malt beer and whole fresh fish. For these products, significant frictions need to be addressed to allow Mauritius to take advantage of existing export potential.

**Figure 77 Mauritian products with export potential to China (\$ million)**



Source: ITC calculations using data from ITC Trade Map

Based on both methods of analysis, frozen fish and raw cane sugar have the most export potential.

**Prepared or preserved tuna (160414)**

Mauritius is the world's 12th-largest exporter of prepared or preserved tuna, skipjack and Atlantic bonito (160414), accounting for 2.8% of the world's total exports. In 2020, the main markets were Italy (26.5%), the United Kingdom (22%), the Netherlands (19.9%), Spain (12.3%), Finland (3.8%), Sweden (3.1%), the United States (2.9%) and France (2.1%). The country's world market share in tuna (160414) decreased with a compound annual growth rate of -10.21%, while China's imports grew with a compound annual growth rate of 11.4%. So far, Chinese customs authorities have not approved market access for tuna from Mauritius.

**Table 22 Tuna**

HS code	Product	Export of Mauritius 2020	Import of China 2020	Export of Mauritius to China	Unrealized export potential
160414	Prepared or preserved tuna, skipjack and Atlantic bonito	\$224 million	\$18 million	0	\$0.2 million

Source: ITC Trade Map

### Raw cane sugar (170114)

Mauritius is the world's 11th- and Africa's third-largest exporter of raw cane sugar, accounting for 0.8% of the global exports. The main markets are Kenya (27.9%), the United Kingdom (18.7%), the United States (10.2%), Belgium (7%), Singapore (4%) and Poland (4%). Since 2010, Mauritius has exported small amounts of cane sugar to China, mainly through the Hong Kong Swire Group, a Coca-Cola franchisee with the Taikoo Sugar Refinery in Hong Kong.

The Mauritian world market share of raw cane sugar attained a compound annual growth rate of 7.6%, and China's imports attained a compound annual growth rate of 12.8%. The sugar industry is a traditional pillar industry in Mauritius, with a history of more than 200 years. The Mauritius Sugar Syndicate says the industry still accounts for more than 10% of GDP.<sup>63</sup> With new government policies, the sugar industry has moved from white sugar to special sugar products.

**Table 23 Sugars**

HS code	Product	Export of Mauritius 2020	Import of China 2020	Export of Mauritius to China	Unrealized export potential
170114	Raw cane sugar	\$89 million	\$1.54 billion	\$49 000	\$1.64 million <sup>64</sup>

Source: ITC Trade Map

### Frozen toothfish, *Dissostichus* spp. (030383)

Mauritius is the world's eighth-largest exporter of frozen toothfish, accounting for 5.7% of the global exports in 2020. China is the third-largest importer (14.5%), behind the United States (67.2%) and Singapore (14.7%).

The Mauritian world market share attained a compound annual growth rate of 18.37%, and Chinese imports had a compound annual growth rate of 72.55%. Mauritius has a lot of space for growth in toothfish exports to China.

**Table 24 Frozen toothfish**

HS code	Product	Export of Mauritius 2020	Import of China 2020	Export of Mauritius to China	Unrealized export potential
030383	Frozen toothfish, <i>Dissostichus</i> spp.	\$11 million	\$122 million	\$1.63 million	\$4.99 million <sup>65</sup>

Source: ITC Trade Map

<sup>63</sup> <https://mauritiussugar.mu/the-millers/>

<sup>64</sup> According to EPI data, the above unrealized potential numbers represent the potential of HS code 170114.

<sup>65</sup> According to EPI data, the above unrealized potential numbers represent the potential of HS code 0303Xa and included 030383.

**Box 5      Mauritius: Free trade agreement to promote agricultural exports**

- **Advantageous products:** For historical reasons, Mauritius has a relatively concentrated economic structure. Sugar cane is the main crop. Rice, wheat and most vegetables need to be imported. Other products with export potential to China include tea, rum, tuna and pineapples.
- **Chinese investment:** At present, few Chinese enterprises invest in agriculture and fishery in Mauritius.
- **Trade opportunities:** The free trade agreement will promote agricultural exports, including cane sugar and seafood.

*Source: Interview conducted by ITC with trade experts of Mauritius, 2021*

## Mozambique

### General agricultural development

Mozambique covers 799,400 km<sup>2</sup> and is the 16th-largest country in Africa.<sup>66</sup> Mozambique lies in an important strategic position on the south-east coast of Africa. Four of its six neighbours are landlocked and rely heavily on Mozambique to access the global market. Mozambique has a long coastline of 2,780 kilometres, a 50-200 kilometre wide continental shelf, and abundant river and freshwater lake resources. This makes fisheries an important part of the country's exports and GDP. The fishery sector represents 3% of GDP and 8% of foreign exchange.

With a population of 31.3 million in 2020, Mozambique is the 13th most populous country in Africa. More than 19.7 million people, or over 63% of the population, live in rural areas.

With favourable weather, arable land and plentiful water, energy and labour resources, Mozambique is well-suited for farming. Mozambique has 59,500 km<sup>2</sup> of arable land (2019) covering 7.4% of the country's land area. Arable land has expanded by 43%, from 41,500 km<sup>2</sup> in 2000.<sup>67</sup> Farmland relies on rainwater; less than 5% of Mozambican farmland is irrigated. Modern technology can transform most Mozambican farms into high-yield farmland. According to FAO, good farming soils like Podzols and Alfisol are widely distributed in Mozambique, and have great development potential if properly irrigated and improved.<sup>68</sup>

In 2020, the Mozambican GDP was \$14.1 billion, ranking 25th in Africa, compared to \$5.7 billion in 2000. The country's gross agricultural value in 2019 was \$4 billion, accounting for 26% of its GDP, up from \$1.1 billion in 2000. In 2020, GDP per capita was \$448.6, up 40% from 2000. Mozambique is still among the world's least developed countries.<sup>69</sup>

**Table 25 Mozambican agricultural facts**

		2019	2000	Growth rate
<b>Land</b>	Country land (km <sup>2</sup> )	799 400		-
	Arable land (km <sup>2</sup> )	59 500	41 500	43%
	Irrigated arable land (km <sup>2</sup> )	-	-	-
		2020	2000	
<b>Population</b>	Population	31 255 435	17 711 925	76%
	Labour force	13 310 127	8 380 476	59%
	Rural population	19 667 795	12 558 109	57%
<b>Economy</b>	GDP	\$14 billion	\$5.7 billion	148%
	Agricultural value	\$4 billion (2019)	\$1.1 billion	269%
	GDP per capita	\$448.61	\$319.36	40%

Sources: FAOSTAT, World Bank Database

### Export structure

Agriculture is the main income-generating activity in Mozambique and consists of mostly low-yield subsistence farming. Agriculture contributes about 25.6% of GDP. Mozambique has severe food shortages, making it a net food importer. Its biggest food imports are corn, wheat and rice. Its main agricultural exports

<sup>66</sup> FAO Database. 2020.

<sup>67</sup> 2019 FAO Mozambique Annual Report. FAO. 2020.

<sup>68</sup> World Reference Base for Soil Resources. FAO. 1998, 2015.

<sup>69</sup> World Bank Database. 2021. <https://data.worldbank.org/country/mozambique>

are cash crops such as cashews, sesame seeds, almonds, sugar, bananas and cotton. Mozambican cashew nuts are of particularly good quality.<sup>70</sup>

Even though farming is common, so is malnutrition. More than 40% of children under the age of five suffer from chronic malnutrition and dysplasia. Agricultural investment would meet the growing domestic demand, driven by rapid growth of population, urbanization, income and tourism. Better local production would also improve food security, nutrition and job creation.<sup>71</sup>

Land rights are granted by the state on 50-year leases through the Ministry of Agriculture and Food Security. The ministry has 12 departments that jointly implement the National Agricultural Investment Plan and license food safety and agricultural services.<sup>72</sup> To address its hunger problem, Mozambique places great importance on agricultural development and cooperation.

Mozambique is seeking foreign investment to boost farming and rural development. Under its Investment Law, foreign investors are encouraged to invest in currency, machinery, equipment and imported materials, as well as in technology transfers. Investments in agriculture enjoy preferential tax and land use. Most agricultural projects in Mozambique are foreign investment operated, and the Mozambican government transfers land as a shareholding.<sup>73</sup>

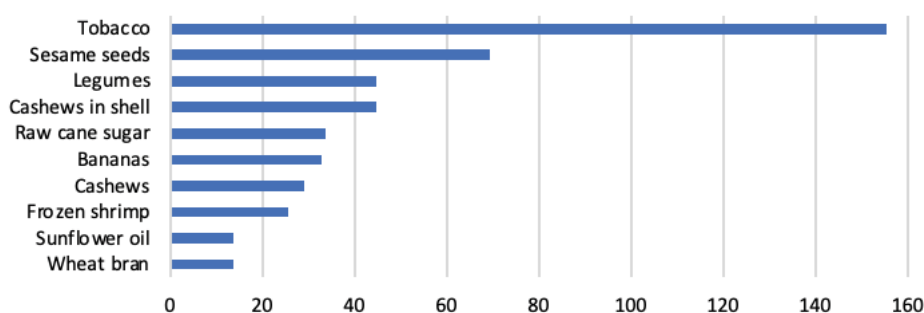
The World Bank believes that continuing structural reforms will help Mozambique to gradually recover from the pandemic and weather disasters of 2021.<sup>74</sup> Farming plays a crucial role in growing the economy and creating jobs, especially for young people and women.

### General export structure

Mozambican exports of agricultural products grew at a compound annual growth rate of 6.7% in the past 20 years. In 2001, agricultural exports totalled \$176 million, accounting for 25% of total exports. In 2020, they reached \$607 million, accounting for 17.6% of total exports.

In 2020, the top 10 agricultural exports of Mozambique amounted to \$462 million, representing 66.2% of total agricultural exports. Tobacco had the largest export volume with a value of \$155 million. Sesame ranked second at \$69 million.

**Figure 78 Top 10 Mozambican agricultural exports, 2020 (\$ million)**



Source: ITC Trade Map

<sup>70</sup> Foreign Economic Cooperation Center, Ministry of Agriculture and Rural Affairs, People's Republic of China.

<sup>71</sup> Mozambique: Country Programming Framework for Mozambique 2016-2020. FAO. 2017.

<sup>72</sup> Mozambique National Agricultural Rural Investment Plan. Ministry of Agriculture and Food Security, Mozambique. 2017.

<sup>73</sup> Foreign Economic Cooperation Center, Ministry of Agriculture and Rural Affairs, People's Republic of China.

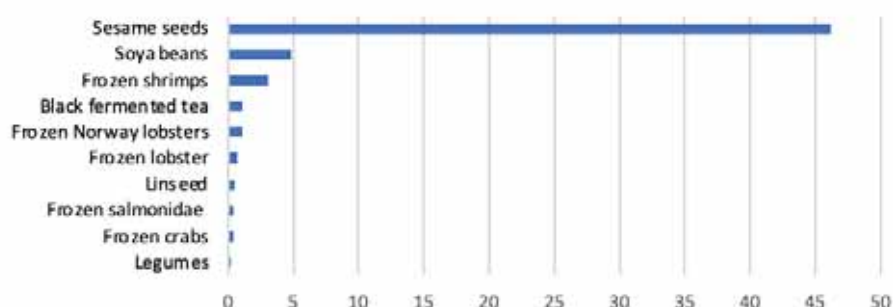
<sup>74</sup> According to the World Meteorological Organization, Tropical Cyclone Eloise near Mozambique's city of Beira caused widespread damage and flooding on a long swathe of coastline and impacted an area still recovering from Cyclone Idai.

### Mozambican exports to China

Agricultural products accounted for 0.08% of Mozambican exports to China in 2001, rising to 23.6% in 2020. In 2001, their value was only \$1,000. In 2020, the figure reached \$60.4 million, for a compound annual growth rate of 78.5%.

In 2020, the value of the top 10 Mozambican agricultural products to China reached \$58.6 million, accounting for 97% of its total agricultural exports to China. The biggest was sesame seeds. In 2005, when Mozambique first exported them to China on a large scale, the export value was only \$3.6 million. In 2020, it was \$41.6 million.

**Figure 79** Top 10 Mozambican agricultural export to China, 2020 (\$ million)



Source: ITC Trade Map

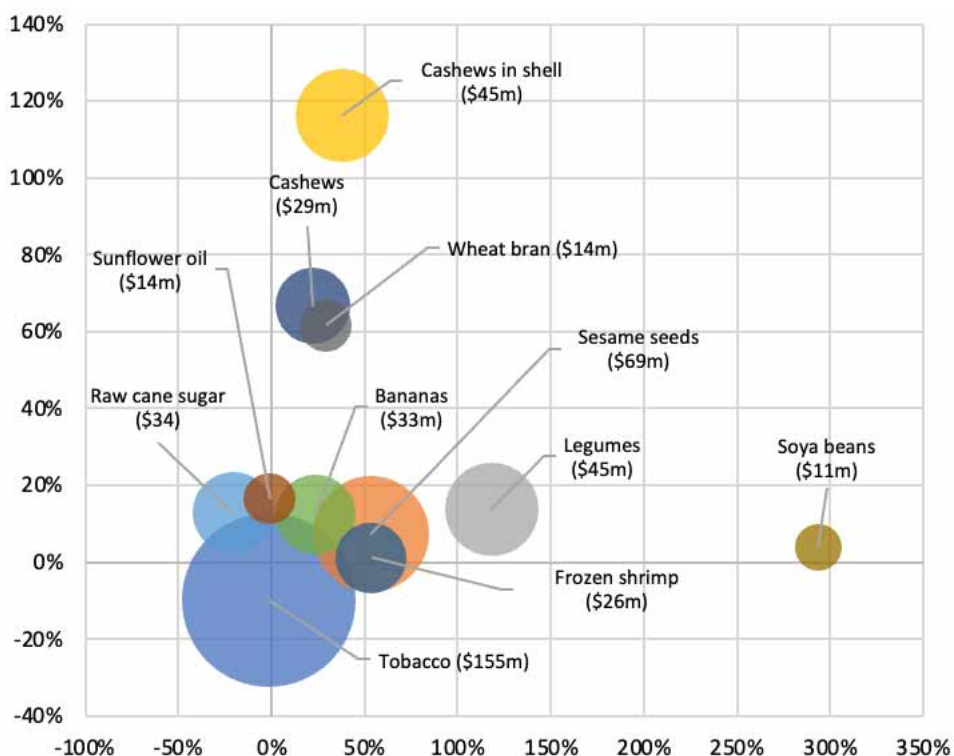
### Evolution of Mozambican exports and China's imports

We focused on the 11 agricultural products whose exports topped \$10 million in 2020. Based on our analysis, cashew nuts, sesame seeds, dried leguminous vegetables and soya beans have the most potential for export to China.<sup>75</sup>

Figure 80 shows that exports of cashew nuts experienced particularly high growth rates. Soya beans and dried, shelled leguminous vegetables and sesame seeds experienced particularly high growth rates in Chinese imports.

<sup>75</sup> China and Mozambique use different HS codes for frozen shrimp and prawns. Mozambique continues to use the code 030613, which was split into 030616 and 030617 in the 2012 revision of the HS, while China uses the two new codes. In this chapter, we add the export value of 030616 and 030617 in the Chinese data to make it comparable to the Mozambican data.

**Figure 80 Mozambican export potential analysis**



Source: ITC Trade Map

### Export potential indicator

Figure 81 displays the products with the highest export potential. Sesame seeds have the largest export potential, at \$105.4 million. Of this, 34.3% remains untapped, meaning that Mozambique could increase its sesame exports to China by \$36 million over the next five years. The unrealized potential is driven by expected growth in Mozambique and China.

Frozen shrimp have the second-greatest potential. Mozambique exports these to China in very low amounts, and 85% of the total export potential of \$29 million is still untapped. Raw cane sugar has \$28 million of unrealized potential, and no export potential is realized yet.<sup>76</sup> For soya beans, only 5.8% of the total export potential has been realized, with 62.6% of its potential (\$6.3 million) growth-based. For cotton, only 8.1% of potential has been realized, with 45.3% (\$8.9 million) growth-based. Tapping this potential requires investments to increase production.

The top agricultural products with export potential to China fall into two categories.

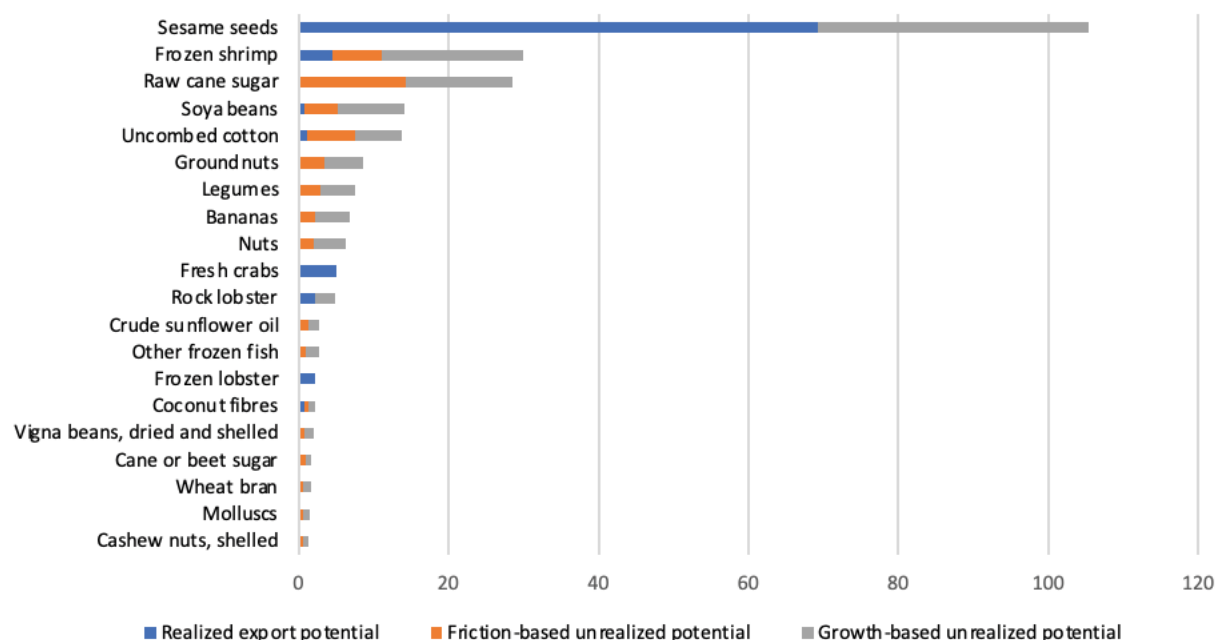
The first comprises products already exported to China in significant quantities, and with either no unrealized export potential or only growth-driven potential. These include sesame seeds, crabs and rock lobster. Sesame and rock lobster exports could increase due to GDP growth. But for crabs, exports already exceed expectations.

The second category comprises products that are not yet exported to China or exported only in small quantities. These include frozen shrimp, raw cane sugar, soya beans, cotton, groundnuts, legumes, bananas, nuts, sunflower seeds and safflower oil, coconut, *Vigna mungo* beans, cane or beet sugars, bran,

<sup>76</sup> In China, raw cane sugar is a product that needs to apply for a quota before it can be imported.

sharps and other residues of wheat, molluscs and cashew nuts.<sup>77</sup> These products face significant frictions that must be addressed to allow Mozambique to take advantage of existing export potential.

**Figure 81 Mozambican products with potential in China (\$ million)**



Source: ITC calculations using data from ITC Trade Map

Given the evolution of Mozambican exports and China's imports, and the results of the export potential analysis, sesame seeds, soya beans and dried leguminous vegetables have potentially promising export opportunities.

### Fresh or dried cashew nuts (080131, 080132)

Mozambique is one of the largest cashew nut producers in the world. Cashew nuts play an indispensable role in the Mozambican economy, especially in the northern provinces of Nampula and Zambezia. In Nampula, cashew nuts account for nearly one-fifth of household income and about two-thirds of total cash income. Over 40% farmers in Mozambique (more than 1 million households) plant and sell cashew nuts, and 8,000 people are engaged in the work related to cashew nuts processing.<sup>78</sup>

Mozambican cashew nuts once accounted for over 30% of world exports. Since independence in 1975, the area growing cashews has been greatly reduced. But Mozambique maintains an important export advantage.

Mozambique is the world's 10th-largest exporter of cashew nuts in shell (080131), accounting for 2.2% of global exports. Almost all Mozambican cashew nuts in shell are exported to India (56.3%) and Viet Nam (43.3%). The Mozambican world market share attained a compound annual growth rate of 38%, and China's imports attained a compound annual growth rate of 116%.

Mozambique is the world's eighth-largest exporter of shelled cashew nuts (080132), accounting for only 0.7% of global exports. The main markets are Viet Nam (29.7%), the United States (20.2%), South Africa (15.9%), Canada (9.3%), Sweden (4.3%) and the Netherlands (3%). The Mozambican world market share attained a

<sup>77</sup> Mozambique's law export potential for cashew nuts is driven by how the methodology views geography. China imports most of its cashews from close-by Asian countries, leaving Mozambique at a relative disadvantage. This challenge can likely be overcome once a sanitary agreement is in place, making Mozambican cashews more competitive.

<sup>78</sup> MozaCajú website. See <http://www.mozambicancashew.com/>



compound annual growth rate of 22.2%. The growth rate of China's imports was also relatively high, at 66.7%.

Viet Nam is the largest exporter of shelled cashew nuts, accounting for 66.8% of the world's total exports. Its products are mainly exported to the United States (32.8%), the Netherlands (13.7%), China (12.7%) and Germany (4.5%). Interviews with cashew industry personnel in Mozambique revealed that cashew nuts from Viet Nam are very competitive in China. Mozambican cashew nuts in shell are sold to the United States, Europe, and China after being processed in Viet Nam. This shows that Mozambique may have opportunities to increase value addition in the cashew nut exports to China.

**Table 26 Cashew nuts**

HS code	Product	Export of Mozambique 2020	Import of China 2020	Export of Mozambique to China 2020	Unrealized export potential
080131	Fresh or dried cashew nuts, in shell	\$45 million	\$16 million	\$1,000	\$1.3 million
080132	Fresh or dried cashew nuts	\$29 million	\$151 million	0	\$1.3 million

Source: ITC Trade Map

### *Sesame seeds, whether or not broken (120740)*

Nampula, Zambezia and Manica provinces in northern Mozambique are the main producers of sesame seeds. Mozambique sesame exports rank 12th in the world, accounting for 2% of global exports. As Mozambique has no restrictions on sesame exports, production has expanded rapidly in recent years. In 2020, China became the largest buyer of Mozambican sesame seeds. In 2020, the main markets were China (66.3%), Japan (17.1%), India (5%), Turkey (4%) and Greece (2.2%). In the past five years, Mozambique sesame seeds had compound annual growth rate of 53.1% of the world's total exports, with a compound annual growth rate of 7.3% in the Chinese import market.

According to the US Agency for International Development, Mozambican sesame seeds are mainly exported by industry traders: ETG is the market leader, with a 65% market share. Other industry traders include OLAM, Indo Africa, GANI and Casa Modi.<sup>79</sup>

In recent years, more medium-sized traders buy directly from farmers on behalf of Chinese importers, introducing a degree of competition with industry traders. Some organizations, such as IKURU, gather farmers together to sell their products to major traders. Products sold in this collective mode account for about 23% of total output.

<sup>79</sup> Mozambique Agricultural Value Chain Analysis, ACDI/VOCA, 2016.

**Table 27 Sesame seeds**

HS code	Product	Export of Mozambique 2020	Import of China 2020	Export of Mozambique to China 2020	Unrealized export potential
120740	Sesame seeds, whether or not broken	\$69 million	\$1.27 billion	\$46 million	\$36.1 million

Source: ITC Trade Map

### *Soya beans (excluding seed for sowing) (120190)*

In 2020, the main markets for Mozambican soya beans, excluding seed for sowing, were India (46.6%), China (43.3%), South Africa (5.2%), Turkey (2.8%) and Indonesia (1.1%). In the past five years, Mozambique soya beans had a compound annual growth rate of 294%, with a compound annual growth rate of 3.8% in China's import market.

Growing international demand has pushed rapid growth in Mozambican soya beans. In 2013-14, 30,000 farmers produced about 50,000 metric tons of soya beans on 39,000 hectares. Zambezia province, especially Alta Zambezia, accounted for more than 60% of that production. The town of Gurùè alone accounts for 50% of national production. Tete province accounts for about 24% of the national output.

In general, large and medium-sized producers grow about one-half of the Mozambican soya crop. About 5% of soya fields are exploited by farmers who rely on mechanization, seeds and fertilizers and are 20-50 hectares. Most soya fields belong to small-scale farmers. About three-fourths of them belong to farmers' groups that promote access to inputs and markets. These producers typically manage four hectares or less, with an average yield of 1.2 tons per hectare. These farms account for one-half of soya bean output.<sup>80</sup>

**Table 28 Soya beans**

HS code	Product	Export of Mozambique 2020	Import of China 2020	Export of Mozambique to China 2020	Unrealized export potential
120190	Soya beans, excluding seed for sowing	\$11 million	\$39.5 billion	\$4.8 million	\$13.4 million <sup>81</sup>

Source: ITC Trade Map

### *Dried, shelled leguminous vegetables (071390)*

In 2020, the main Mozambican markets for dried, shelled leguminous vegetables were South Africa (21.1%), India (12.2%), the United Kingdom (10.8%), China (7.4%), Italy (6.9%) and the Netherlands (6.7%). In the past five years, the Mozambican compound annual growth rate was 119%, and China's imports had a compound annual growth rate of 13.7%.

<sup>80</sup> Mozambique Agricultural Value Chain Analysis, ACDI/VOCA, 2016.

<sup>81</sup> According to EPI data, the above unrealized potential numbers represent the potential of HS code 1201.

**Table 29 Shelled leguminous vegetables**

HS code	Product	Export of Mozambique 2020	Import of China 2020	Export of Mozambique to China 2020	Unrealized export potential
071390	Dried, shelled leguminous vegetables	\$45 million	\$35 million	\$0.2 million	\$7.38 million <sup>82</sup>

Source: ITC Trade Map

## Others

### Rice

In recent years, rice consumption in Mozambique increased by an average of 8.6% per year, outpacing the consumption growth of traditional food crops such as corn (5.5%), wheat (7.4%) and sorghum (4.7%). Demand for rice averages about 0.75 million tons. Mozambique can only meet 28% of that demand, leaving it to rely heavily on imports. However, Mozambique has great potential in rice cultivation. Some 0.9 million hectares of land are suitable for rice cultivation but only 0.3 million hectares have been developed.

About 97% of existing rice paddies are cultivated by small farmers. Compared with large rice-producers, there is a lot of room efficiency gains. The Wanbao Agricultural Park in Mozambique is a success story. The average unit yield of local rice cultivation is only about 1.2 tons per hectare; in local trials with Chinese technical experts, yields can reach 11 tons per hectare. With technological improvements, conservative estimates predict yields of five tons per hectare in a short period.

## Agricultural practitioners' perspective

### Box 6 Mozambique: A comprehensive agricultural industrial park

Chinese enterprises in Mozambique have largely invested in plantations that grow food crops (mainly rice) and cash crops (mainly cotton). These investments include large-scale leased land planting, company and farmer contract planting, and cooperative operations.

Mozambique Wanbao Agricultural Park is China's largest rice cultivation project in Africa, and one of 13 joint projects. Since opening in July 2011 in Xai-Xai district of Gaza province, new rice fields and other food crops have been planted. A silkworm project has also been introduced.

This comprehensive agricultural industrial park integrates farmland development, food production, storage, processing and sales. The park was financed by the China-Africa Development Fund. It is managed and operated by China Railway 20th Bureau, a construction company. After years of construction, wastelands and shrublands are now rice paddies. The park covers 300,000 hectares, of which 36,000 hectares are planted with rice. According to estimates by experts on China's aid to Africa, rice cultivation there has achieved a quarterly profit.

Source: Interview conducted by ITC with the leader of the Chinese agricultural team in Mozambique, 2021

<sup>82</sup> According to EPI data, the above unrealized potential numbers represent the potential of HS code 0713Xb.

## Rwanda

### General agricultural development

Rwanda is a small, landlocked country in East Africa with a large population, wide mountains and fertile soils. With a land area of 26,300 km<sup>2</sup>, it is one of the smallest countries in Africa.<sup>83</sup> Rwanda had 14,000 km<sup>2</sup> of arable land in 2019, which accounts for 53.2% of the country's land area. Arable land has increased by 22%, from 11,500 km<sup>2</sup> in 2000. Although Rwanda has a large amount of cultivated land and a rich ecosystem, food insecurity is prominent.

Major factors hindering Rwandan farming are crop diseases and climate change. Other constraints include small land scale, difficult access to credit, low value-chain development, a low degree of market connection and farmer specialization. According to FAO, the soil types suitable for agricultural production such as Podzol and Nitisol are widespread in Rwanda. Rwanda has great development potential if the land is properly irrigated and improved.<sup>84</sup>

Rwanda has a large population and a high birth rate. With 13 million people in 2020, it is the 28th most populous country in Africa. More than 10.7 million people live in rural areas, or over 82% of the population.

In the past decade, Rwanda has maintained a high growth rate through key economic and structural reforms.<sup>85</sup> In 2020, Rwandan GDP was \$10.33 billion, ranking 32nd in Africa, up from \$2.07 billion in 2000. In 2020, Rwandan gross agricultural production was \$2.7 billion, or 26.3% of GDP, compared with \$640 million in 2000. In 2020, per capita GDP was \$797.9. Although listed among the least developed countries by the United Nations, its per capita GDP has more than tripled, up from \$260.6 in 2000.<sup>86</sup>

**Table 30 Rwandan agricultural facts**

		2019	2000	Growth rate
<b>Land</b>	Country land (km <sup>2</sup> )	26 300		-
	Arable land (1,000 km <sup>2</sup> )	1.4	1.15	22%
	Irrigated arable land (km <sup>2</sup> )	-	-	-
		2020	2000	
<b>Population</b>	Population	12 952 209	7 933 688	63%
	Labour force	6 296 625	3 782 154	66%
	Rural population	10 694 380	6 749 506	58%
<b>Economy</b>	GDP	\$10.33 billion	\$2.07 billion	400%
	Agricultural value	\$2.71 billion	\$0.65 billion	321%
	GDP per capita	\$797.9	\$260.6	206%

Sources: FAOSTAT, World Bank Database

The Rwandan economy depends on agriculture, with coffee and tea the main cash crops. Farming provides livelihoods for about 90% of the country's labour force, especially in rural areas. However, farms are small and scattered, and mostly semi-subsistent.<sup>87</sup> Rwanda relies heavily on foreign aid, which accounts for almost one-third of its national budget. Inadequate transport and electricity hold back agricultural development.

In the past few decades, Rwanda has become a model of development, known for good governance, zero tolerance for corruption, and gender equality. Since 2000, Rwandan farm policy goals have been 'to increase

<sup>83</sup> FAO Database. 2020.

<sup>84</sup> World reference base for soil resources. FAO. 1998, 2015.

<sup>85</sup> Overview of Rwanda. World Bank. 2021.

<sup>86</sup> World Bank Database. 2021.

<sup>87</sup> Country Fact Sheet on Food and Agriculture Policy Trends. FAO. 2016.

rural household incomes, to provide incomes from diversified sources and increase food security'. In the government's current seven-year strategy, running 2017–2024, the country has made improving farming and ranching a top economic objective.

The strategy includes:

1. Developing the agricultural value chain, especially in processing, meat, dairy and horticulture;
2. Promoting professional research and development;
3. Expanding the role of the private sector in the domestic market;
4. Expanding the agricultural export bases.

By 2024, the programme aims to double yields of maize, Irish potato, beans and fruits. It targets an increase of at least 30% in rice, wheat, cassava, sweet potatoes, soybean and vegetables. Production targets for meat and dairy for 2024, from 2017 bases, include: milk, from 776,284 to 925,748 tons; meat, from 138,231 to 175,164 tons; and eggs, from 7,475 to 11,211 tons.

Rwanda aims to become a middle-income country by 2035, with high-income status by 2050. FAO says links between farm policies and social security will help to promote rural transformation, inclusive growth, nutrition and industrial development.

## Trade structure of Rwanda

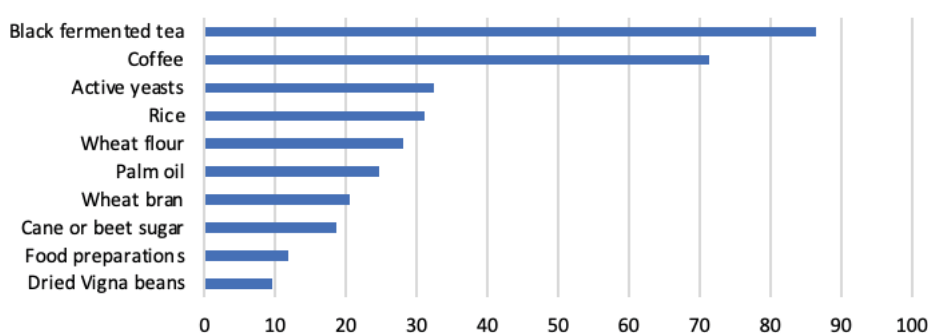
### General trade structure of Rwanda

Agriculture is the economic lifeline of Rwanda, accounting for 29% of GDP and more than two-thirds of jobs in 2018. Local exports consist mainly of traditional products such as tea and coffee. Cassava, potato and beans are the most important crops for local consumption, while tea and coffee are important export earners. Over the past decade, exports of non-traditional products, such as peppers, have also increased.

According to ITC statistics, the export value of Rwandan agricultural products has increased greatly in the past 20 years, with a compound annual growth rate of 8.6%. In 2001, exports amounted to \$34 million, or 18% of total exports. In 2020, they amounted to \$161 million, or 47.6% of exports.

In 2019, Rwanda's top 10 agricultural exports amounted to \$334.4 million, accounting for 76.5% of its total agricultural exports. Exports of vegetable products amounted to \$264 million, accounting for 60.4% of total exports. Black tea is the largest single export and biggest foreign-exchange-earning farm product, at \$86.4 million in 2019. Coffee ranks second, at \$71.3 million in 2019.

**Figure 82 Top 10 Rwandan agricultural exports, 2019 (\$ million)**



Source: ITC Trade Map

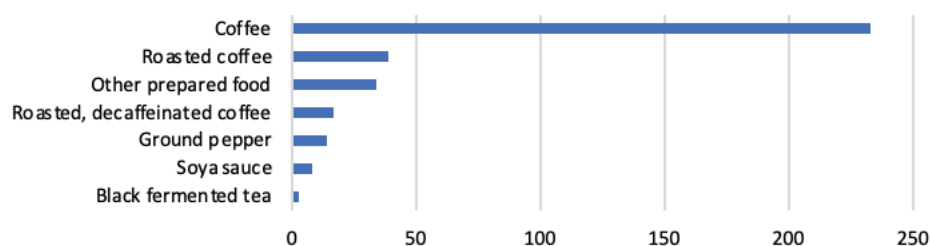
### Rwandan agricultural exports to China

Rwanda only exports a few agricultural products to China. In 2019,<sup>88</sup> farm products made up 5.3% of Rwandan exports to China, valued at about \$350,000. In 2001, Rwanda did not export any agricultural products to China.

In 2019, Rwanda exported about \$233,000 of coffee to China. The first coffee exports were in 2008, valued at about \$376,000.

Rwanda attaches great importance to all-round economic and trade cooperation with China, especially in e-commerce, where cooperation has a good foundation. In 2018, Rwanda signed a contract with Chinese e-commerce enterprise Alibaba to jointly build the first electronic world trade platform (eWTP) in Africa.

**Figure 83 Top seven Rwandan agricultural exports to China, 2019 (\$ thousand)**



Source: ITC Trade Map

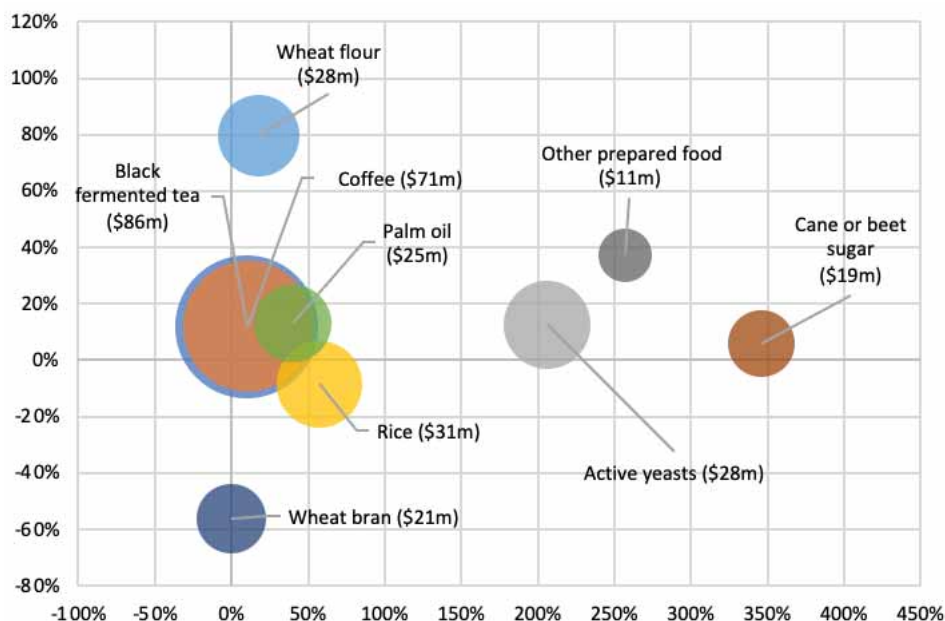
### Evolution of Rwandan exports and China's imports

We focused on the four agricultural products that topped \$10 million in exports to China in 2019. Our analysis found that coffee and black tea have the most potential as exports to China.

Figure 84 shows that black fermented tea and coffee experienced high growth rates in Rwandan exports and Chinese imports. Palm oil experienced particularly high growth rates in Rwandan exports and in Chinese imports.

<sup>88</sup> Not all of the Rwandan export data for 2020 was available at the time of writing.

**Figure 84 Rwandan exports and China's imports, 2016–19<sup>89</sup>**



Source: ITC Trade Map

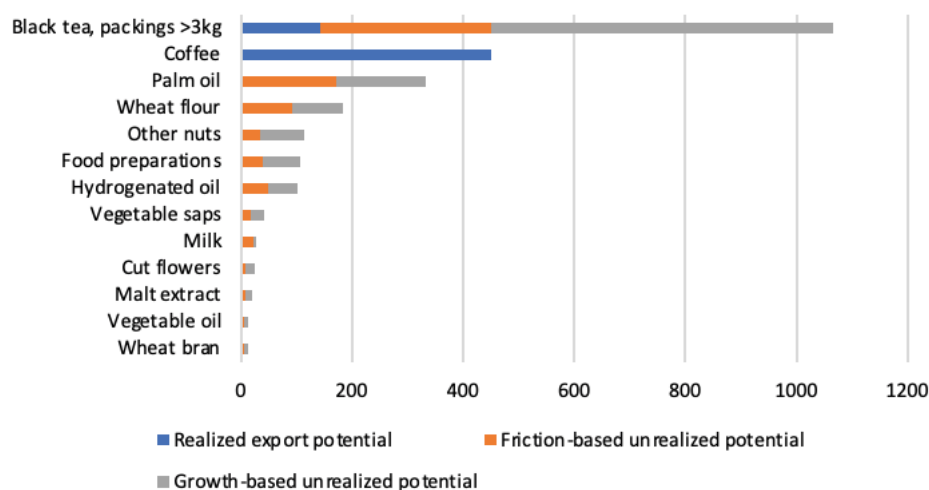
### Export potential indicator

Figure 85 displays Rwandan farm products with the most export potential. Black tea tops the list at \$1.1 million. Of this potential, 86.7% remains untapped, meaning that Rwanda could increase tea exports to China by \$0.9 million over the next five years. Some 58% of this unrealized potential is driven by expected growth in Rwanda and China, while the remaining one-third is driven by frictions.

Second on the list is coffee. Currently, Rwandan coffee exceeds its export potential, implying that exports may not grow over the next five years.

The other products identified are not yet exported to China, or only in very small quantities. These include palm oil, wheat or meslin flour, nuts, food preparations, vegetable fats, vegetable saps, milk, cut flowers, malt extract, fixed vegetable fats and wheat residues. For all of these products, significant frictions must be addressed to allow Rwanda to take advantage of existing export potential.

<sup>89</sup> Rwandan data on exports to the world in 2020 is not available in the ITC trade map.

**Figure 85** Rwandan products with export potential to China (\$ thousand)

Source: ITC calculations using data from ITC Trade Map

According to both analysis methods, black tea, palm oil and coffee have export potential.

#### *Black fermented tea in immediate packings (090240)*

Rwandan climate and soil are suitable for growing high-quality tea, which is popular in the international market. Tea exports have become one of Rwanda's most important foreign exchange earners.

Rwanda is the world's ninth- and Africa's third-largest exporter of black fermented tea, accounting for 1.5% of global exports. In 2020, the main markets were Pakistan (45.3%), the United Kingdom (14.7%), Kazakhstan (8.6%), Egypt (7.5%), Ireland (5.4%), Russian Federation (3.6%), Sudan (3.3%) and United Arab Emirates (2.3%). In the past five years, Rwandan world market share declined with a compound annual growth rate of -5.9%, while China's imports grew with a compound annual growth rate of 7.7%.

Tea cultivation in Rwanda began in 1952 and has greatly contributed to its foreign exchange earnings. Rwandan tea is planted on hillsides at an altitude of 1,900–2,500 metres and in marshlands at an altitude of 1,550–1,800 metres. According to the Rwandan government, tea production has grown steadily from 60 tons in 1958 to about 30,000 tons per year today.<sup>90</sup>

Rwandan tea is known for its high quality and is thought to be one of the best teas in the world. Some of the best teas in Rwanda include black tea, orthodox tea, white tea, green tea, organic tea and spicy tea. Rwandan tea is highly praised in the weekly auction of the East Africa Tea Trade Association in Mombasa and has set record prices in the past few years.

<sup>90</sup> The website of Rwanda Development Board.



**Table 31 Fermented tea**

HS code	Product	Export of Rwanda 2020	Import of China 2020	Export of Rwanda to China 2020	Unrealized export potential
090240	Black fermented tea in immediate packings	\$56 million	\$158 million	\$3 000	\$0.9 million

Source: ITC Trade Map

### Coffee, excluding roasted and decaffeinated (090111)

Coffee plays an important role in the Rwandan economy, both as a foreign exchange earner and as a boost to the rural economy. Rwanda's high altitude and fertile volcanic soil are favourable for coffee production. Rwandan coffee trees bloom from September to October and are harvested between March and July, with an annual output of 20,000 to 22,000 tons.

The types of coffee grown in Rwanda include Caturra, Catuai, Bourbon (Arabica) and Harar. Fertile volcanic soil, abundant rainfall and suitable temperatures all year give Rwanda unique conditions for growing high-quality Arabica coffee. Arabica accounts for 20% of coffee outputs and is very popular internationally.

Rwandan coffee exports accounts for 0.4% of the global total. In 2020, the main markets were Switzerland (33.1%), the United Kingdom (26.9%), the United States (10.7%), Belgium (9.5%), Singapore (5.1%), Japan (3%) and South Sudan (1.9%). The Rwandan world market share grew at a compound annual growth rate of 5.79% in the past five years, while China's imports grew at 8.9%. Rwandan coffee exports to China remain small in quantity, at 0.3% of total Rwandan exports to the world. The market still has great potential.

**Table 32 Coffee**

HS code	Product	Export of Rwanda 2020	Import of China 2020	Export of Rwanda to China 2020	Unrealized export potential
090111	Coffee (excluding roasted and decaffeinated)	\$68 million	\$158 million	\$0.2 million	0

Source: ITC Trade Map

### Palm oil and its fractions (151190)

Rwanda is not a big palm oil exporter in Africa. The main export market of Rwandan palm oil and its fractions is the Democratic Republic of the Congo (99.8%), with Canada buying the remaining 0.2%. The Rwandan world market share grew at a compound annual growth rate of 40% in the past five years, while China's imports grew at 13%.

**Table 33 Palm oil**

HS code	Product	Export of Rwanda 2020	Import of China 2020	Export of Rwanda to China 2020	Unrealized export potential
151190	Palm oil and its fractions	\$24.7 million	\$4.1 billion	0	\$0.3 million

Source: ITC Trade Map

## Agricultural practitioners' perspective

### **Box 7** Rwanda: A new model of cross-border e-trade cooperation

Chili peppers are an emerging product with trade potential for Rwanda and China. In 2021, the countries signed a protocol on inspection and quarantine of dried chili pepper. Rwandan dried chili pepper has now entered the Chinese market, although the initial trade volume was not very large.

Rwanda is the first country in Africa to win permission to export dried chili to China. According to Chinese traders, Rwandan dried red peppers are strong in aroma and high in spiciness. It is an excellent variety of hot pepper. Rwandan chili peppers rate 80,000 on the Scoville scale for spiciness, about four times spicier than ordinary peppers. They are suitable for hotpot seasoning and sauces.

Rwandan companies have exported chili sauce to Alibaba's Freshhema, which promotes the local planting of chilis through contract agriculture. This new model of cross-border electronic trade industry chain cooperation is the result of the in-depth cooperation between Chinese and Rwandan companies. When the peppers are mature, they are processed by local factories in Rwanda into semi-finished products. After they are transported to China, they are further processed to suit Chinese tastes and then sold to consumers on China's e-commerce platforms. Thanks to stable bulk purchase and processing contracts, local farmers earn more than before.

*Source: Interview conducted by ITC with agricultural investment enterprises in Rwanda, 2021*

## Uganda

### General agricultural development

Uganda is a landlocked country in East Africa, covering 241,600 km<sup>2</sup> and ranking 34<sup>th</sup> in size in Africa.<sup>91</sup> Uganda shares borders with South Sudan, Kenya, Tanzania, Rwanda and the Democratic Republic of the Congo. Ugandan climate, land and hydrological conditions are ideal for farming. The temperature fluctuates only a few degrees around 23°C. Most areas have ample rainfall and two farming seasons per year. Year-round farming is possible. Livestock farming can be developed in areas with low and uncertain rainfall.

Uganda has 91,000 km<sup>2</sup> of arable land, which accounts for 37.7% of its land area. That is up 23% from 74,000 km<sup>2</sup> in 2000. However, only one-third of the country's arable land has been cultivated. Uganda also has a large amount of surface water, with 15% of its surface composed of lakes and rivers. These provide important fishery resources, with considerable aquaculture potential.

Uganda has several irrigation projects, mainly for rice and vegetables. Nevertheless, yields remain very low, and its development potential is far from being realized. According to FAO, fertile Podzol and Nitisol soils are widely distributed and will benefit from irrigation.<sup>92</sup>

Uganda is the eighth most populous country in Africa, with a population of 45.7 million in 2020. More than 34.3 million people live in rural areas, accounting for over 75% of the population. With a growth rate of 3%, Uganda has one of the world's highest population growth rates. Uganda hosts the largest number of refugees in Africa, the third-largest in the world.<sup>93</sup>

In 2020, Ugandan GDP was \$37.6 billion, ranking 15th in Africa, compared with \$6.2 billion in 2000. In 2020, gross agricultural production was \$9 billion, accounting for 24% of GDP, up from \$1.7 billion in 2000. Per capita GDP was \$817 in 2020, up from \$261.90 in 2000.<sup>94</sup> Uganda is one of the least developed countries by UN standards.

**Table 34 Uganda agricultural facts**

		2019	2000	Growth rate
<b>Land</b>	Country land (km <sup>2</sup> )	241 600		-
	Arable land (km <sup>2</sup> )	91 000	74 000	23%
	Irrigated arable land (km <sup>2</sup> )	-	-	-
		2020	2000	
<b>Population</b>	Population	45 741 000	23 650 159	93%
	Labour force	16 514 595	8 366 076	97%
	Rural population	34 326 791	20 153 246	70%
<b>Economy</b>	GDP	\$37.6 billion	\$6.2 billion	503%
	Agricultural value	\$9.0 billion	\$1.7 billion	427%
	GDP per capita	\$817.04	\$261.87	212%

Sources: FAOSTAT, World Bank Database

Agriculture provides livelihoods for 70% of the country's population and jobs for 66% of the labour force, generating 50% of Uganda's foreign exchange. In addition to meeting household food demand, the sector supplies key raw materials for local industries.

<sup>91</sup> FAO Database. 2020. <http://www.fao.org/faostat/en/#data/RL>

<sup>92</sup> World Reference Base for Soil Resources. FAO. 1998, 2015. <http://www.fao.org/soils-portal/data-hub/soil-classification/world-reference-base/en/>

<sup>93</sup> Overview of Uganda. World Bank. 2021. <https://www.worldbank.org/en/country/uganda/overview>

<sup>94</sup> World Bank Database. 2021. <https://data.worldbank.org/country/zambia>

Important documents guiding farm policy include Uganda Vision 2040, the National Development Plan, and the Agriculture Sector Development Strategy and Investment Plan. The prime minister's office oversees the broad goals in those documents. The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) is responsible for agricultural policies. The Ministry of Water and Environment, the Ministry of Trade Industry and Cooperatives, the Ministry of Gender, Labour and Social Development, the Ministry of Local Government, and the Ministry for Karamoja Affairs work with MAAIF on farming, rural development, food security and environmental protection.

According to the World Bank, heavy reliance on low-yield farming in Uganda has resulted in fluctuations and stagnation of its income. To keep up with the growth of its labour force, the country's agriculture-led economy must create at least 700,000 jobs every year – far more than the current 75,000 jobs.

In 2021, China and Uganda signed a customs agreement granting each other Authorized Economic Operator (AEO) status. This is the first such arrangement signed between China and an African country. Uganda attaches great importance to exports to China.

## Export structure

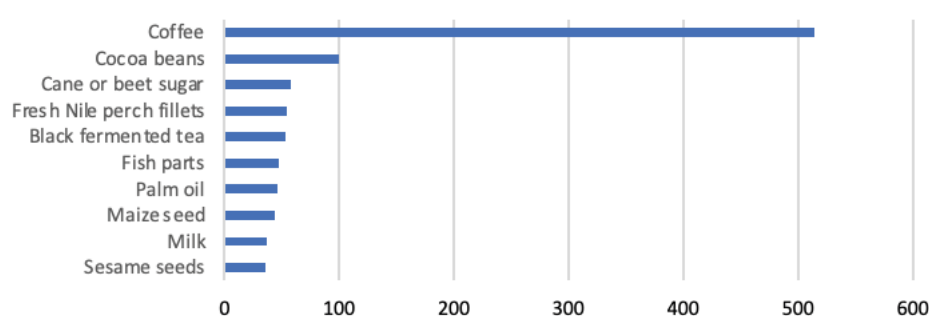
### General export structure

Agricultural exports are an important source of foreign exchange. The export value of agricultural products has increased significantly in the past 20 years, with a compound annual growth rate of 8.9%. In 2001, Ugandan agricultural exports amounted to \$335 million, or 74.4% of total exports. In 2020, they totalled \$1.7 billion, or 41% of exports.

Plant products account for 57.4% of total agricultural exports, amounting to \$976 million. Coffee, sesame seeds and maize are the most important exports.

In 2020, the top 10 agricultural exports from Uganda reached \$987 million, representing 58.6% of its total agricultural exports. Coffee is the largest foreign exchange earner, valued at \$514 million in 2020. Cocoa beans ranked second, with an export volume of \$99 million in 2020.

**Figure 86 Top 10 Ugandan agricultural exports, 2020 (\$ million)**



Source: ITC Trade Map

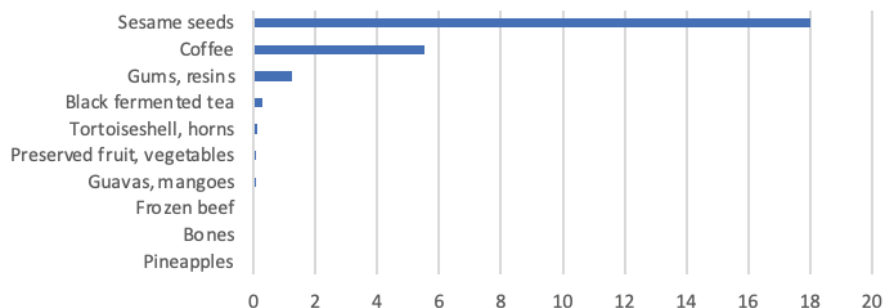
### Ugandan exports to China

Ugandan coffee beans and sesame seeds are popular in China. In recent years, trade between China and Uganda has developed rapidly, but on a small scale. Most Ugandan exports to China are agricultural. In the past 20 years, farm products have taken a growing share of exports to China, rising from 63% in 2001 to 84% in 2020. From about \$150,000 in 2001, their value has risen to \$33 million, with a compound annual growth rate of 33%.

In 2020, Uganda's top 10 agricultural products to China amounted to \$25.4 million, for 76.8% of the total. The most important exports are sesame seeds and coffee. In 2020, Uganda exported \$18 million in sesame seeds to China. Uganda first sold sesame seeds to China in 2005 for only about \$300,000. The compound

annual growth rate of sesame exports has reached 32.4%. In 2020, Uganda exported \$5.5 million worth of coffee to China, from only \$8,000 in 2001, for a compound annual growth rate of 42%.

**Figure 87 Top 10 Ugandan agricultural exports to China, 2020 (\$ million)**



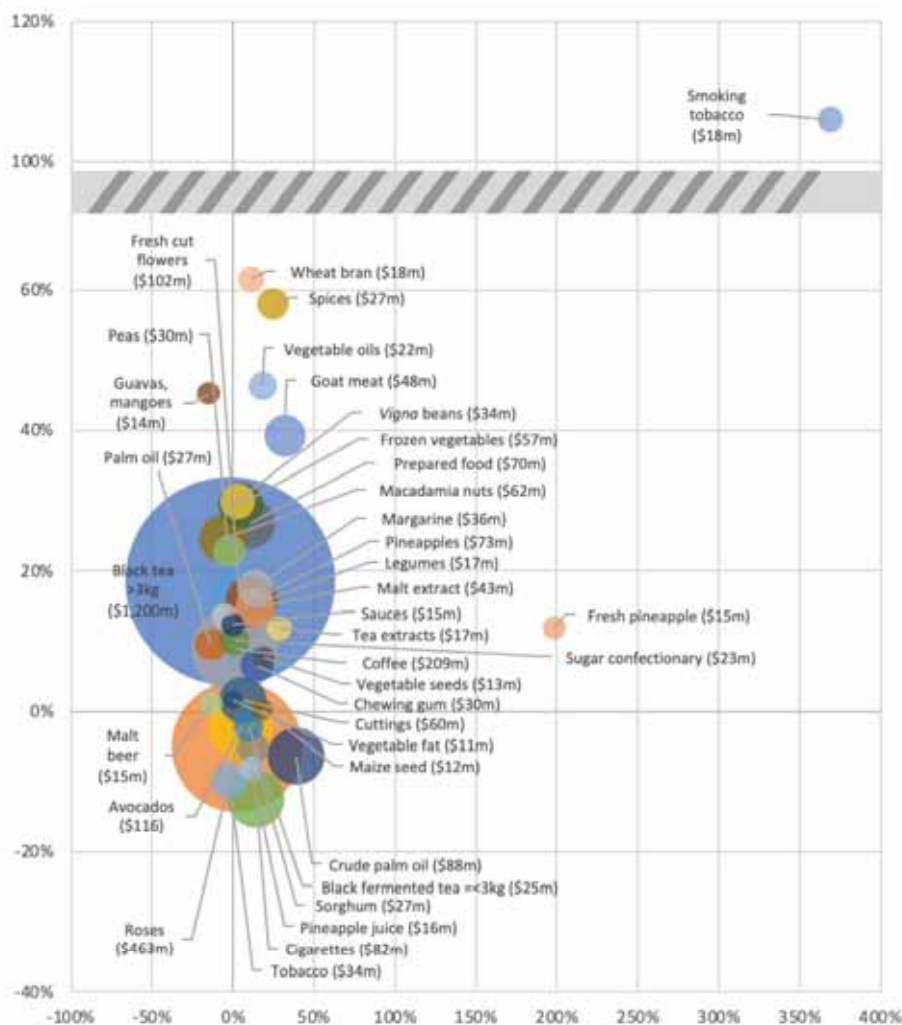
Source: ITC Trade Map

*Evolution of Ugandan exports and China's imports*

We focused on the 32 agricultural products that topped \$10 million in 2020.<sup>95</sup> Figure 88 finds that coffee, sesame seeds and dried, shelled beans have potential for export to China.

<sup>95</sup> Because China does not import (030433) fresh or chilled fillets of Nile perch *Lates niloticus* from any country in the world, the product is not analysed here, although Uganda's exports of it exceeded \$10 million.

Figure 88 Ugandan export potential analysis



Source: ITC Trade Map

### Export potential indicator

Figure 89 displays Ugandan agricultural products with the highest export potential to the Chinese market. Leading the chart are sesame seeds, with \$8.2 million. However, exports already exceed this potential, implying that exports of this product are not necessarily expected to grow over the next five years.

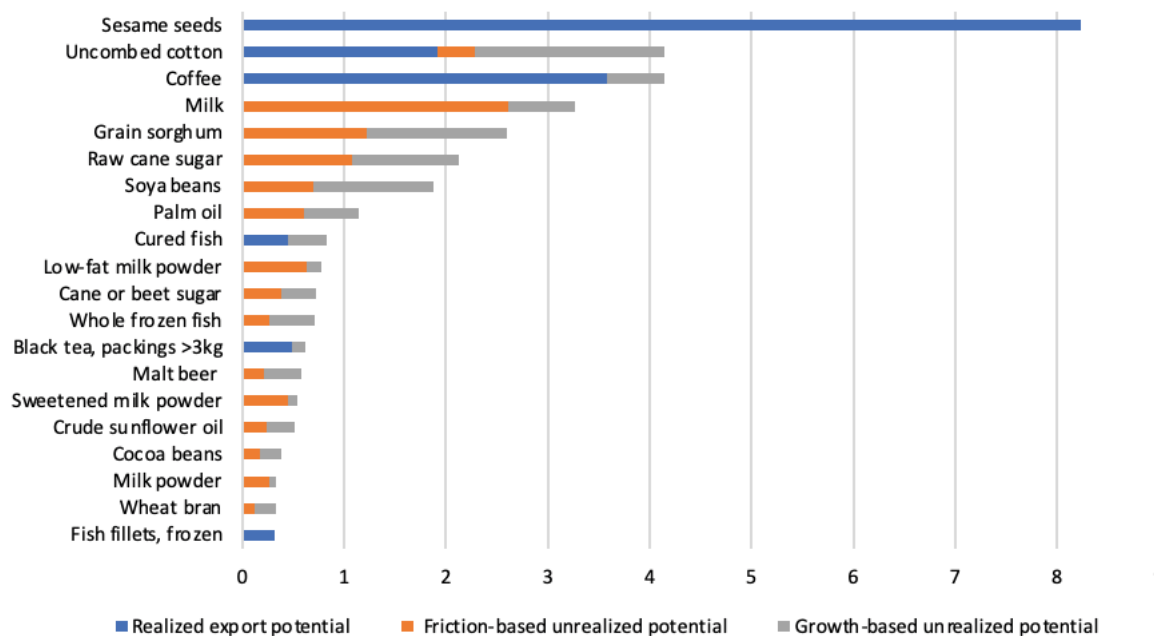
Next on the list is cotton, with \$4.2 million. Of this export potential, 53.8% remains untapped, meaning that Uganda could increase cotton exports to China by \$2.2 million over the next five years. Some 84% of this unrealized potential is driven by expected growth in Uganda and China, while the rest is driven by frictions. Coffee comes next, with 13.7% (\$0.6 million) in untapped export potential.

Except for cotton, the top products fall into two categories.

The first category comprises products already exported to China and that have only growth-driven unrealized potential or no unrealized export potential at all. These include sesame seeds, coffee, cured fish, black tea, and frozen fish fillets. For these products, exports already fulfil or exceed expectations. Where growth-driven untapped potential exists, investments are needed to increase production if no major changes occur in the sector.

The second category comprises products not yet exported to China or exported only in very small quantities. These include palm oil, soya beans, raw cane sugar, grain sorghum, milk, wheat bran, whole frozen fish, cane or beet sugar, low-fat milk powder, cocoa beans, sunflower-seed or safflower oil, and malt beer. For all these products, significant frictions must be addressed so Uganda can take advantage of existing export potential.

**Figure 89 Ugandan products with potential to China (\$ million)**



Source: ITC calculations using data from ITC Trade Map

Based on both methods of analysis, coffee, sesame seeds and dried, shelled beans (*Vigna mungo*) have export potential.

### Coffee (090111)

Coffee is the most important agricultural export of Uganda, accounting for up to 30% of annual foreign exchange income for the past 20 years. Before 2008, output stagnated at 3 million bags a year but it has greatly improved over the past decade. Annual output stands at nearly 4.5 million bags, valued at more than \$0.5 billion.<sup>96</sup> In 2020, coffee accounted for 12.4% of total export revenue.

Uganda is the world's 10th- and Africa's second-largest coffee exporter. In 2020, Ugandan coffee exports accounted for 2.9% of global exports. Its main markets were Italy (23.9%), Sudan (17.1%), Germany (14.5%), the United States (6.5%), Japan (6.3%) and India (6.1%). China (1.1%) ranked 14th.

According to the latest data from the Uganda Coffee Development Authority (UCDA), during the 2017-18 fiscal year, the country had 88 coffee export companies. Around 1.7 million households grew coffee, which provided more than one-half of their cash income every year.

Uganda's annual coffee output is 0.3 million tons, including 39% grown in the central area, 18.6% in the east, 2.4% in the north, 25.5% in the west, and 14.4% in the south. There are 112 coffee producing areas in Uganda, of which 88 produce only Robusta coffee, 15 produce only Arabica coffee, and the other nine produce both.

In the past five years, the Ugandan world market share attained a compound annual growth rate of 10%, while China's imports had a compound annual growth rate of 8.9%. The export markets are mainly advanced

<sup>96</sup> United Nations Food and Agriculture Organization (FAO), <http://www.fao.org/3/cb0918en/CB0918EN.pdf>

economies, which reflects the competitiveness of Ugandan coffee in the high-end markets. As Chinese consumers drink more coffee, Ugandan coffee has great potential in China.

The coffee industry in Uganda is still in the primary stage of processing, such as planting and drying. More than 10,000 intermediaries buy coffee beans from small-scale coffee farms, accounting for 99% of national production.

**Table 35 Coffee**

HS code	Product	Export of Uganda 2020	Import of China 2020	Export of Uganda to China 2020	Unrealized export potential
090111	Coffee (excluding roasted and decaffeinated)	\$514 million	\$158 million	\$5.5 million	\$0.6 million

Source: ITC Trade Map

### Sesame seeds (120740)

Climate conditions, especially northern Uganda, are favourable for sesame seeds. Sesame is planted in two seasons. The first season runs from February to March and with harvest in June or July. The second runs from July to August, with harvest in November or December. In 2014, Uganda was Africa's seventh- and the world's 12th-largest producer. More than 300,000 Ugandan farmers grow sesame.

Thanks to its cost performance, exports to China have increased rapidly in recent years. China is the largest importer of Ugandan sesame seeds, buying more than one-half of the export crop. In 2020, the main markets were China (50.7%), Germany (13.9%), Turkey (12.4%), the Netherlands (5.9%) and Belgium (3.9%). In the past five years, the Ugandan world market share attained a compound annual growth rate of 12.82%, and China's imports a compound annual growth rate of 7.34%. Ugandan sesame seeds still possess great potential in China.

According to a survey sponsored by the UK government,<sup>97</sup> one bottleneck in the sesame industry is a lack of coordination along the value chain. Coordination should begin from variety and seed selection to farm operation, harvest, processing, storage and transport. Better coordination will help meet buyers' requirements for quality, timely delivery, price and contract compliance.

**Table 36 Sesame seeds**

HS code	Product	Export of Uganda 2020	Import of China 2020	Export of Uganda to China 2020	Unrealized export potential
120740	Sesame seeds, whether or not broken	\$36 million	\$1.3 billion	\$18 million	0

Source: ITC Trade Map

### Dried, shelled beans (Vigna mungo) (071331)

In 2020, Uganda was Africa's largest exporter of dried beans, accounting for 1.3% of global exports. The main markets are Kenya (62.3%), South Sudan (22.8%), Tanzania (4.5%), Democratic Republic of the Congo (2.9%), United Arab Emirates (2.8%) and Viet Nam (2.5%). In the past five years, the Ugandan world market share attained a compound annual growth rate of 35.8%, and China's imports a compound annual growth rate of 56.6%.

<sup>97</sup> Sesame Sector Strategy – Uganda, Commercial Agriculture for Smallholders and Agribusiness Country Team, 2020.



Most Ugandan beans are grown in the south-west, contributing about 44% of the national output. The main producing areas include Isingiro, Kabale, Kamwenge, Kisoro, Ntungamo and Ibanda. These areas, especially Kabale and Kisoro, are densely populated with a high degree of land fragmentation.

**Table 37 Shelled beans**

HS code	Product	Export of Uganda 2020	Import of China 2020	Export of Uganda to China 2020	Unrealized export potential
071331	Dried, shelled beans of species <i>Vigna mungo</i> [L.] Hepper or <i>Vigna radiata</i> [L.] Wilczek	\$21 million	\$183 million	\$18 million	0.196million

Source: ITC Trade Map

#### Maize and related products (100590, 110220)

The main markets for Ugandan maize are United Arab Emirates (44.5%), Kenya (11.2%), South Sudan (8.6%), Democratic Republic of the Congo (6.4%), Italy (3.3%), United Republic of Tanzania (2.3%) and Germany (2.2%). In the past five years, the Ugandan world market share attained a compound annual growth rate of 60.62%, and China's imports a compound annual growth rate of 40.71%.

According to FAO, maize contributes to the livelihood of more than 3.6 million farm households, 1,000 traders and agents, and 600 millers<sup>98</sup>. Maize is mainly planted by small-scale farmers.

**Table 38 Maize**

HS code	Product	Export of Uganda 2020	Import of China 2020	Export of Uganda to China 2020	Unrealized export potential
100590	Maize (excluding seed for sowing)	\$22 million	\$2.49 billion	0	\$0.25 million
110220	Maize 'corn' flour	\$26 million	\$1.42 million	0	\$37 000

Source: ITC Trade Map

<sup>98</sup> FAO-MAFAP, 2012 ; UBOS, 2014

## Agricultural practitioners' perspective

### Box 8 Uganda: Appropriate use of land and agricultural machinery

Land ownership in Uganda is 99 years, and the land cost is low. Most land has been burned for years, giving it high levels of nitrogen, phosphorus and potassium; this means that, in the first two years of planting, chemical fertilizers are not used. More machinery is being used but still at low levels. As most local farmers plant only a few hectares, small machinery is more suitable.

#### Advantages

- Uganda has very a favourable, sunny equatorial climate, with a dry season and a rainy season;
- The dominant crops grown locally are maize, rice, cassava, coffee and sesame seeds;
- Uganda's farms have great potential, and with the implementation of appropriate policies, could become the 'African granary'.

#### Challenges

- Infrastructure for agricultural development is incomplete, e.g. it takes two years for some agricultural programmes to be powered;
- Seed imports and cultivation take time, due to the need to identify suitable imported seeds for cultivation;
- Uganda's agricultural foundation and technical capabilities are weak;
- The pandemic caused logistical problems for local trade in maize and other products;
- Although some crops have obvious planting advantages, most of the land is raw and requires large agricultural investment, a long investment recovery period and a high cost for land transformation.

*Source: Interview conducted by ITC with agricultural investment enterprises in Uganda, 2021*

### Box 9 Uganda: Ensuring food security and reducing household poverty

Uganda's high altitudes and abundant water are suitable for farming. Rice cultivation is considered a strategic sector to improve food security and reduce household poverty. Zhongyi Agricultural Park, located at Lukaya near Lake Victoria, reclaims wastelands and sets up industrial production. Each part of rice production is organized and completed by block managers, with an agricultural assembly line mode of sowing, harvesting and sales throughout the year.

After three years of exploration, rice cultivation at Zhongyi Agricultural Park made a profit in late 2018. In 2019, 1,600 hectares of rice were planted, with over 30 large-scale agricultural machines, and more than 1,200 locals were employed. The average rice yield per acre is about 1,340 kg, with daily sales of 40 tons. The project demonstrates one approach to ensuring food security in Uganda and promoting local employment.

*Source: Interview conducted by ITC with agricultural investment enterprises in Uganda, 2021*

## Zambia

### General agricultural development

Zambia is a large landlocked country, rich in resources and sparsely populated. It is in the centre of southern Africa, bordering eight countries – Angola, Botswana, Democratic Republic of the Congo, Malawi, Mozambique, Namibia, United Republic of Tanzania and Zimbabwe. Those neighbours are expanding markets for its commodities. Zambia covers 752,600 km<sup>2</sup>, making it the 17th-largest country in Africa.<sup>99</sup> Arable land covers 38,400 km<sup>2</sup>, or 5.1% of the country's land area. This is a 35% increase from 28,500 km<sup>2</sup> in 2000.

Although Zambia has abundant arable land, only 14% is cultivated. It has the second-largest water resources in Africa per capita, with nearly 6,000 m<sup>3</sup> per inhabitant. Yet, less than 30% of land suitable for irrigation has been developed. Due to its dependence on seasonal rainfall, crop yields fluctuate greatly. Staples such as corn and cassava, as well as other crops such as sugar cane, vegetables, rice, cottonseed, soya beans, peanuts, wheat and sweet potatoes are not irrigated effectively.<sup>100</sup>

According to FAO, soil types suitable for agricultural production, such as Podzol and Durisol, are widely distributed. With proper irrigation and improvements, Zambia has great development potential.<sup>101</sup>

In 2020, Zambia was the 22nd most populous country in Africa, with a population of 18.4 million. More than 10.2 million people live in rural areas, accounting for over 55% of the population. Zambia is also one of the youngest countries in the world, with an annual growth rate of 2.8%, resulting in a population that doubles nearly every 25 years. Zambia has a low population density of 18 people per square kilometre, compared with 164 in neighbouring Malawi, 35 in Zimbabwe, and 31 in Mozambique.

Zambia has achieved low middle-income status. In 2020, the Zambian GDP was \$19.3 billion, ranking 19th in Africa. That was up from \$3.6 billion in 2000, a fourfold increase.

Since the beginning of the century, Zambian farm production has soared and crashed. In 2012, it reached a peak of \$2.4 billion, accounting for 9.3% of GDP. In 2020, it fell to \$528 million, for 2.7% of GDP. Compared to \$582 million in 2000, it has dropped 9%. From the peak in 2012, farm production is down 77.8%. In 2020, per capita GDP was \$1,051. While it is still a least developed country by UN standards, its per capita GDP has more than tripled from \$346 in 2000.<sup>102</sup>

**Table 39** Zambian agricultural facts

		2018	2001	Growth rate
<b>Land</b>	Country land (km <sup>2</sup> )	752 600		-
	Arable land (km <sup>2</sup> )	38 400	28 500	35%
	Irrigated arable land (km <sup>2</sup> )	-	-	-
		2020	2000	
<b>Population</b>	Population	18 383 956	10 415 942	76%
	Labour force	13 310 127	8 380 476	59%
	Rural population	10 179 380	6 790 986	50%
<b>Economy</b>	GDP	\$19.3 billion	\$3.6 billion	437%
	Agricultural value	\$0.528 billion	\$0.582 billion	-9%
	GDP per capita	\$1 050.92	\$345.69	204%

<sup>99</sup> FAO Database. 2020.

<sup>100</sup> Zambia: Irrigation market brief. FAO, IFC. 2014.

<sup>101</sup> World Reference Base for Soil Resources. FAO. 1998, 2015.

<sup>102</sup> World Bank Database. 2021.

Sources: FAOSTAT, World Bank Database

In Zambia, especially in rural areas, the agriculture sector contributes most to job creation. Nearly one-half of the population works in farming.<sup>103</sup> Agriculture is a driver of Zambian economic development and poverty reduction. Crops such as corn, sugar, tobacco, cotton, wheat flour and horticultural products have created about 12% of foreign exchange.

Since 2001, Zambia has been focusing on agriculture as the centre of national development, with poverty reduction as the main goal. Agricultural policy is formulated by the Ministry of Agriculture and Livestock, the Ministry of Agriculture and Co-operatives, and the Ministry of Lands, Natural Resources and Environmental Protection. The government reintroduced fertilizer subsidies and expanded the Food Reserve Agency as the de facto marketing board. At present, the guiding documents of Zambian agricultural sector are the National Development Plan and Vision 2030, with its aspiration to be 'a prosperous middle-income country by 2030'.

According to FAO, promoting efficiency, transparency and benign competition between the public and private sectors in a market-driven system will help to commercialize Zambian farming. At the same time, changes in rainfall remain a key risk.

## Export structure

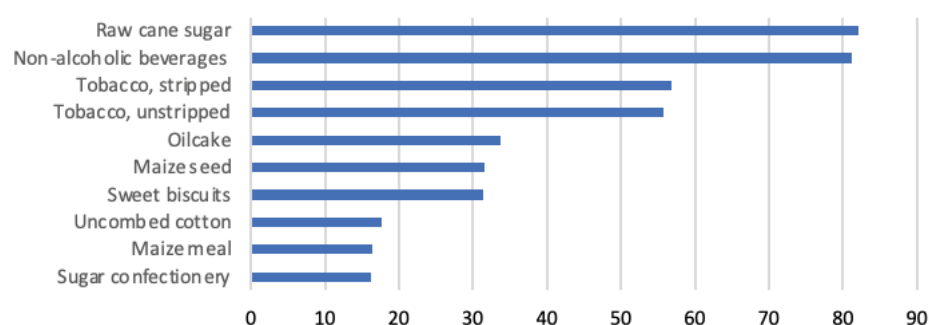
### General export structure

Although Zambia is trying to diversify its economy, it remains heavily dependent on copper exports. The export value of agricultural products has increased greatly in the past 20 years, with a compound annual growth rate of 8.8%. In 2001, the value was \$128 million, accounting for 13% of the country's exports. By 2020, the export value amounted to \$636 million, accounting for 8.2% of the total.

Tobacco, sugar and cotton earn the most foreign exchange, complemented by corn and flowers. Vegetable products accounted for 19% of total agricultural exports, amounting to \$121 million. Zambia borders eight countries and could become a regional trade hub by reducing trade costs.

In 2020, Zambia's top 10 agricultural export products reached \$423 million, accounting for 66.4% of total farm exports. Tobacco is the largest foreign exchange earner. In 2020, tobacco exports reached \$112 million, followed by sugar at \$82 million.

Figure 90 Top 10 Zambian agricultural exports, 2020 (\$ million)



Source: ITC Trade Map

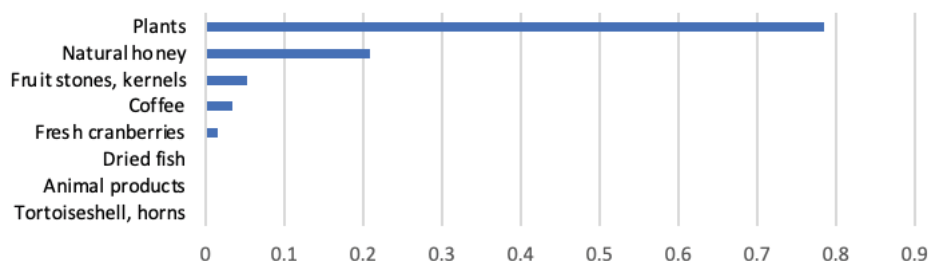
### Zambian exports to China

In 2001, Zambia did not export any agricultural products to China. In 2020, although the export value of Zambian agricultural products to China has increased significantly, amounting to \$28.2 million, it still accounted for only 1.9% of the country's total exports to China.

<sup>103</sup> International Labour Organization, ILOSTAT Database. Data retrieved on 29 January 2021.

In 2020, Zambia exported eight agricultural products to China, mainly tobacco, with an export volume of \$27.1 million. Tobacco is excluded from Figure 91, as its value is more than 20 times higher than that of the other exports. It was followed by plants used in perfumery and pharmacy, with an export value of \$0.8 million.

**Figure 91 Top nine Zambian agricultural exports (excluding tobacco) to China, 2020 (\$ million)**

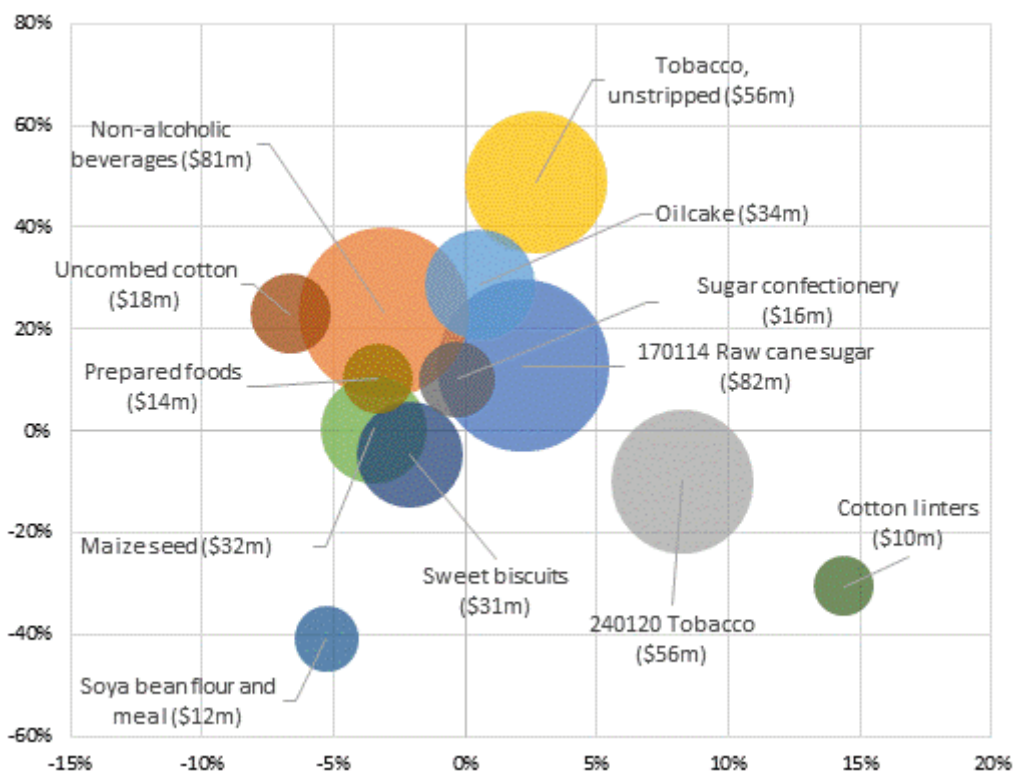


Source: ITC Trade Map

*Evolution of Zambian exports and China's imports*

We focused on the 12 agricultural products whose exports exceeded \$10 million in 2020. Figure 92 shows sugar has potential as an export. Raw cane sugar experienced important, albeit lower, growth. Oilcake's growth was mixed, with high growth in Chinese imports but stable in Zambian exports.

**Figure 92 Zambian exports and China's imports**



Note: 240110 Tobacco unstemmed or unstripped; 230400 Oilcake and other solid residues; 520100 Cotton, neither carded nor combed; 100510 Maize seed for sowing; 120810 Soya bean flour and meal

Source: ITC Trade Map

## Export potential indicator

Figure 93 displays the products with the highest export potential. The product with the largest overall export potential is cotton in large packing, with potential of \$13.7 million. Of this, 74.5% remains untapped, meaning that Zambia could increase its cotton exports to China by \$10.2 million over the next five years. Some 32% of this unrealized export potential is driven by expected growth in Zambia and China, with 68% driven by frictions.

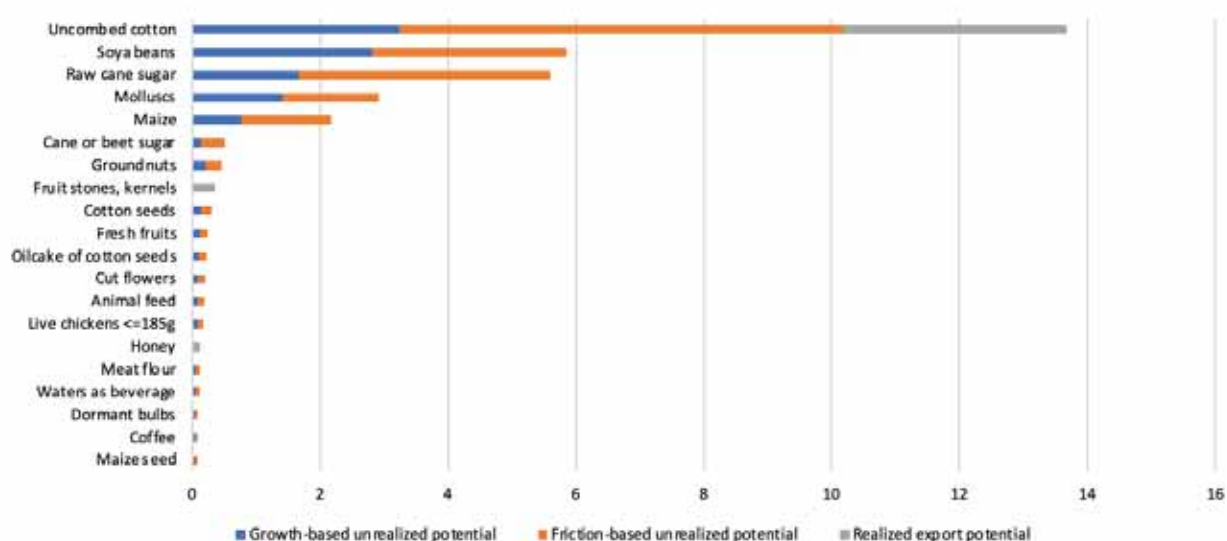
Soya beans have the second-largest export potential. Zambian whole soya beans have not entered the Chinese market yet. Zambian whole soya bean exports were below \$10 million in recent years and are not depicted in the bubble chart (see Figure 92). According to ITC estimates, whole soya beans have \$5.9 million in unrealized export potential.

The third-largest product with export potential is raw cane sugar, at \$5.6 million, followed by molluscs at \$2.9 million. Neither raw cane sugar nor molluscs are exported to China.

Except for cotton, only stone fruits, honey and coffee have realized some export potential. The realized potential of stone fruits was \$0.36 million in 2020, with honey at \$0.12 million. Those Zambian products' export performance to China already fulfils or exceeds expectations, which implies that exports may not grow over the next five years.

The other products with export potential are not yet exported to China or exported only in very small quantities. These include maize, cane or beet sugar, groundnuts, cotton seeds, fresh fruits, cotton seed oilcakes, fresh cut flowers, preparations used in animal feeding, live chickens, meal flours, drinking water, dormant inedible bulbs, coffee and maize seeds. For all of these products, significant frictions need to be addressed to allow Zambia to take advantage of existing export potential.

**Figure 93** Zambian exports with potential to China (\$ thousand)



Source: ITC calculations using data from ITC Trade Map

According to the export potential analysis based on the ITC Trade Map and the ITC Export Potential Map, raw cane sugar and soya beans are potential exports.

### Raw cane sugar and sugar confectionary (170114, 170490)

Zambia is the world's 12th-largest exporter of raw cane sugar (170114), accounting for 0.7% of global exports. In 2020, the main markets were Democratic Republic of the Congo (62.8%), Kenya (16.2%), Rwanda (8.1%), South Africa (7.2%) and Burundi (9.7%). In the past five years, the Zambia's world market share attained a compound annual growth rate of 2.2% and China's imports a compound annual growth rate of 12.8%.

In 2020, the main markets for sugar confectionery were the Democratic Republic of the Congo (43.1%), South Africa (39.8%), Malawi (9%) and Zimbabwe (4.1%). In the past five years, the Zambian world market share declined with a compound annual growth rate of -0.3%, while China's imports grew with a compound annual growth rate of 10.1%.

The three main sugarcane growing areas in Zambia are Nakambala, Kafue and Kalungwishi. The industry is dominated by three sugar companies: Zambia Sugar Plc, Kafue Sugar (Consolidated Farming Ltd) and Kalungwishi Kasama Sugar. Zambia Sugar Plc is by far the most important company, with 92.5% of the total sugar production in Zambia. Its largest shareholder is Illovo Sugar Pty Ltd.

Zambia exports sugar to European markets based on the EU's Everything Except Arms arrangement, which removes tariffs and quotas for all imports from least developed countries. Zambia does not benefit from the US Raw Sugar Tariff Quota (TRQ).<sup>104</sup>

**Table 40 Sugar**

HS code	Product	Export of Zambia 2020	Import of China 2020	Export of Zambia to China 2020	Unrealized export potential
170114	Raw cane sugar	\$82 million	\$1.5 billion	0	\$5.59 million <sup>105</sup>
170490	Sugar confectionery	\$16 million	\$265 million	0	\$72 000

Source: ITC Trade Map

#### *Oilcake and other solid residues (230400)*

In 2020, the main markets for oilcake (230400) were Zimbabwe (39.1%), United Republic of Tanzania (19.6%), Namibia (17.4%), Kenya (12.3%) and South Africa (9.8%). In the past five years, the Zambian world market share attained a compound annual growth rate of 0.6% and China's imports a compound annual growth rate of 28.8%.

**Table 41 Oilcakes (soybean meal)**

HS code	Product	Export of Zambia 2020	Import of China 2020	Export of Zambia to China 2020	Unrealized export potential
230400	Oilcake and other solid residues	\$34 million	\$37 million	0	\$66 000

Source: ITC Trade Map

<sup>104</sup> The supply and demand for sugar in Zambia, USDA, 2017.

<sup>105</sup> According to EPI data, the above unrealized potential numbers represent the potential of HS code 1701.

## Agricultural practitioners' perspective

### **Box 10**      **Zambia: Consider water and climate when choosing crops**

Zambian land leases last for 99 years and, currently, most cash-crop farms are owned by Europeans.

The biggest limitation to Zambian farming is irrigation. Without irrigation, crops are less resilient to disasters. Land close to lakes can be selected for reclamation. Wells can also be dug if there is electricity for pumps: solar energy might be a solution.

Fruit cultivation is not a developed industry in Zambia. Fruits sold locally are imported from South Africa. Chinese agricultural experts believe the country could grow oranges, tangerines, bananas, mangoes, pitaya and avocados. Water demands would be relatively low. These fruits are planted locally but have not reached large-scale development.

Considering its high average temperature, Chinese experts believe that Zambia could also grow silkworms. Some estimate that silkworm production in Zambia could be three times as high as in China. The specific mulberry and silkworm varieties need to be further tested.

*Source: Interview conducted by ITC with agricultural investment enterprises in Zambia, 2021*





## Appendices

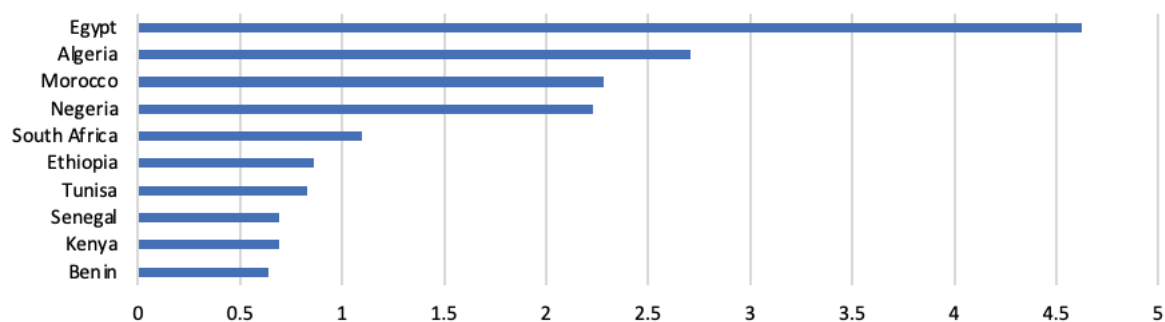
### Appendix I Agricultural product definition

<b>Live animals, products of animals</b>	01 Live animals
	02 Meat and edible meat offal
	03 Fish and crustaceans, molluscs and other aquatic invertebrates
	04 Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included
	05 Products of animal origin, not elsewhere specified or included
<b>Vegetable products</b>	06 Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage
	07 Edible vegetables and certain roots and tubers
	08 Edible fruit and nuts; peel of citrus fruit or melons
	09 Coffee, tea, maté and spices
	10 Cereals
	11 Products of the milling industry; malt; starches; inulin; wheat gluten
	12 Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder
	13 Lac; gums, resins and other vegetable saps and extracts
14 Vegetable plaiting materials; vegetable products not elsewhere specified or included	
<b>Animal or vegetable fats and oils</b>	15 Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes
<b>Food, beverage, tobacco</b>	16 Preparations of meat, of fish or of crustaceans, molluscs or other aquatic invertebrates
	17 Sugars and sugar confectionery
	18 Cocoa and cocoa preparations
	19 Preparations of cereals, flour, starch or milk; pastrycooks' products
	20 Preparations of vegetables, fruit, nuts or other parts of plants
	21 Miscellaneous edible preparations
	22 Beverages, spirits and vinegar
	23 Residues and waste from the food industries; prepared animal fodder
	24 Tobacco and manufactured tobacco substitutes

<b>Raw hides and skins, cotton and others</b>	<b>Raw hides and skins</b>	41.01–41.03 Raw hides and skins
	<b>Cotton</b>	52.01–52.03 Cotton, neither carded nor combed; Cotton waste; Cotton, carded or combed
	<b>others</b>	2905.44 D-glucitol 'sorbitol'
		3301 Essential oils, whether or not terpeneless, including concretes and absolutes; resinoids; extracted oleoresins; concentrates of essential oils in fats, fixed oils, waxes or the like, obtained by enfleurage or maceration; terpenic by-products of the deterpenation of essential oils; aqueous distillates and aqueous solutions of essential oils
		35.01–05 Casein, caseinates and other casein derivatives, albumins, gelatine, peptones and their derivatives, dextrin and other modified starches
		380910 Finishing agents, dye carriers to accelerate the dyeing or fixing of dyestuffs and other products and preparations such as dressings and mordants of a kind used in the textile, paper, leather or like industries, n.e.s., based on starch or derivatives thereof
		382460 Sorbitol (excluding D-glucitol [sorbitol])
		43.01 Raw fur skins
		50.01–50.03 Silkworm cocoons suitable for reeling, Raw silk 'non-thrown', Silk waste
		51.01 - 51.03 Wool, fine or coarse animal hair, waste of wool or of fine or coarse animal hair
52.01 - 52.03 Cotton, neither carded nor combed; cotton waste; cotton, carded or combed		
5301 Flax, raw or processed, but not spun; flax tow and waste, including yarn waste and garnetted stock		
5302 True hemp <i>Cannabis sativa L.</i> , raw or processed, but not spun; tow and waste of true hemp, including yarn waste and garnetted stock		

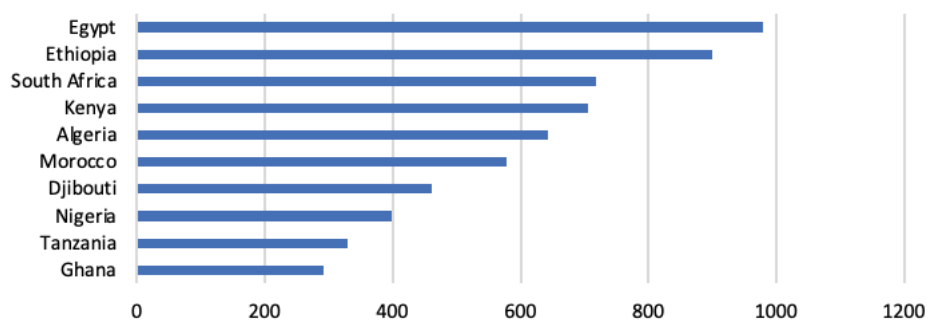
## Appendix II Additional trade data

Figure 94 Africa's top 10 importers of cereals, 2020 (\$ billion)



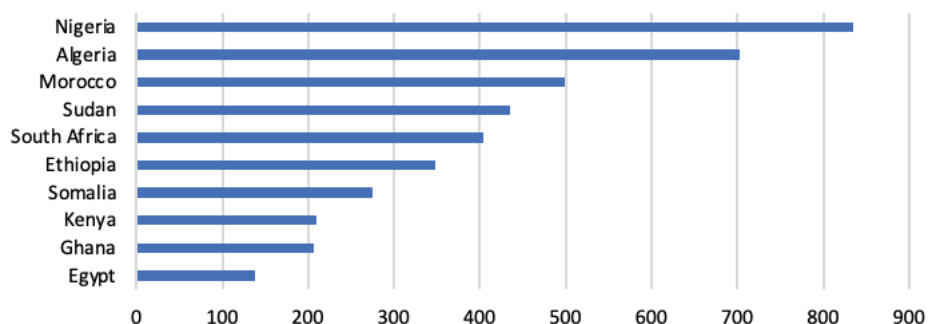
Source: ITC Trade Map

Figure 95 Africa's top 10 importers of cooking oils 2000 (\$ million)



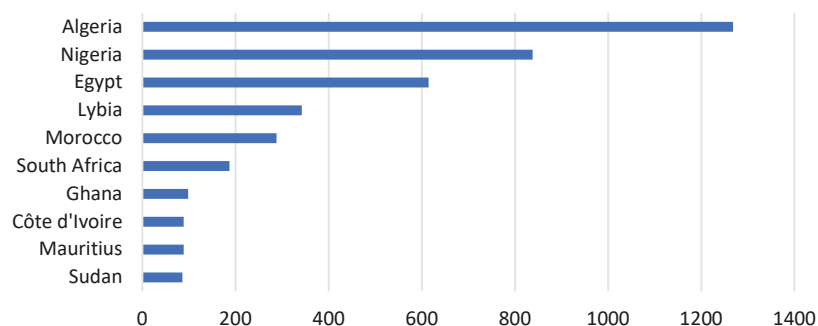
Source: ITC Trade Map

Figure 96 Africa's top 10 sugar importers, 2020 (\$ million)



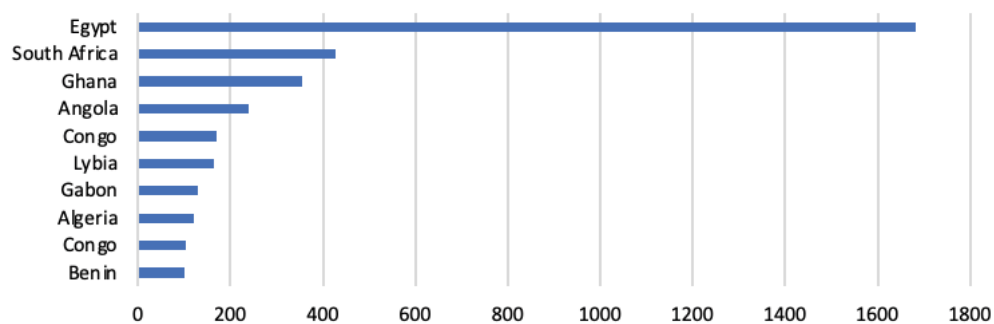
Source: ITC Trade Map

**Figure 97 Africa's top 10 dairy, egg and honey importers, 2020 (\$ million)**



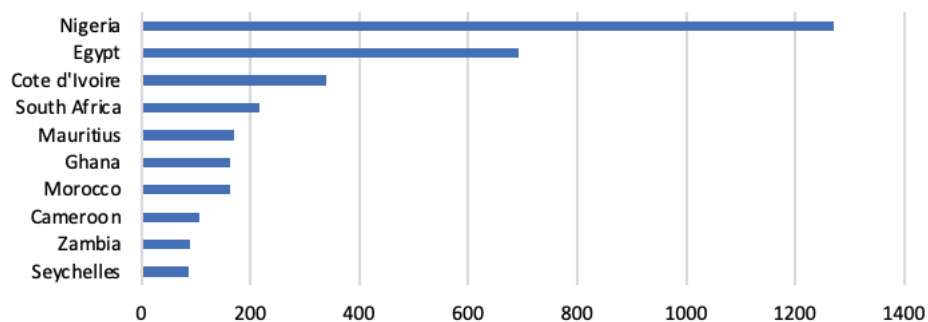
Source: ITC Trade Map

**Figure 98 Africa's top 10 meat importers, 2020 (\$ million)**



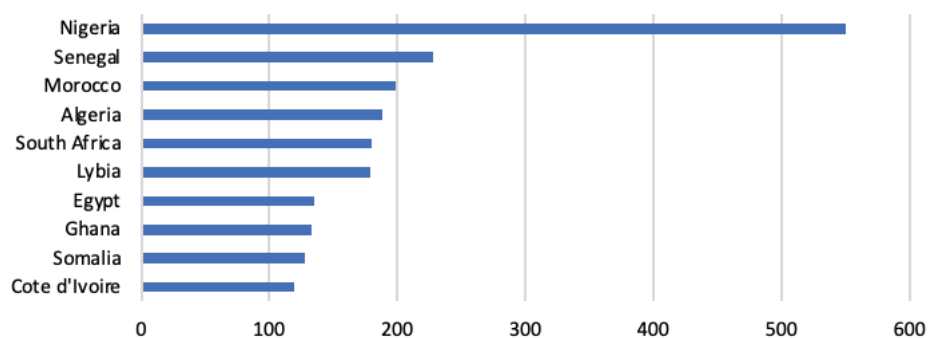
Source: ITC Trade Map

**Figure 99 Africa's top 10 seafood importers, 2020 (\$ million)**



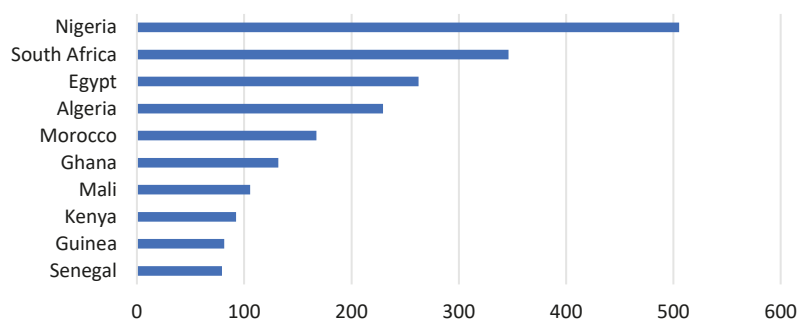
Source: ITC Trade Map

**Figure 100 Africa's top 10 prepared cereal and flour importers, 2020 (\$ million)**



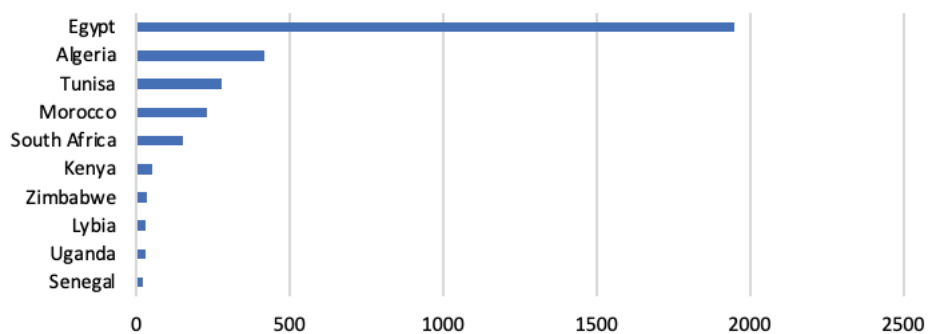
Source: ITC Trade Map

**Figure 101 Africa's top 10 miscellaneous prepared food importers, 2020 (\$ million)**



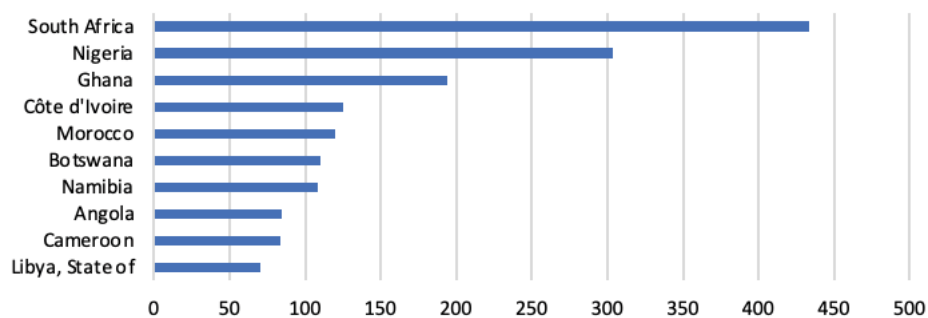
Source: ITC Trade Map

**Figure 102 Africa's top 10 oil seed importers, 2020 (\$ million)**



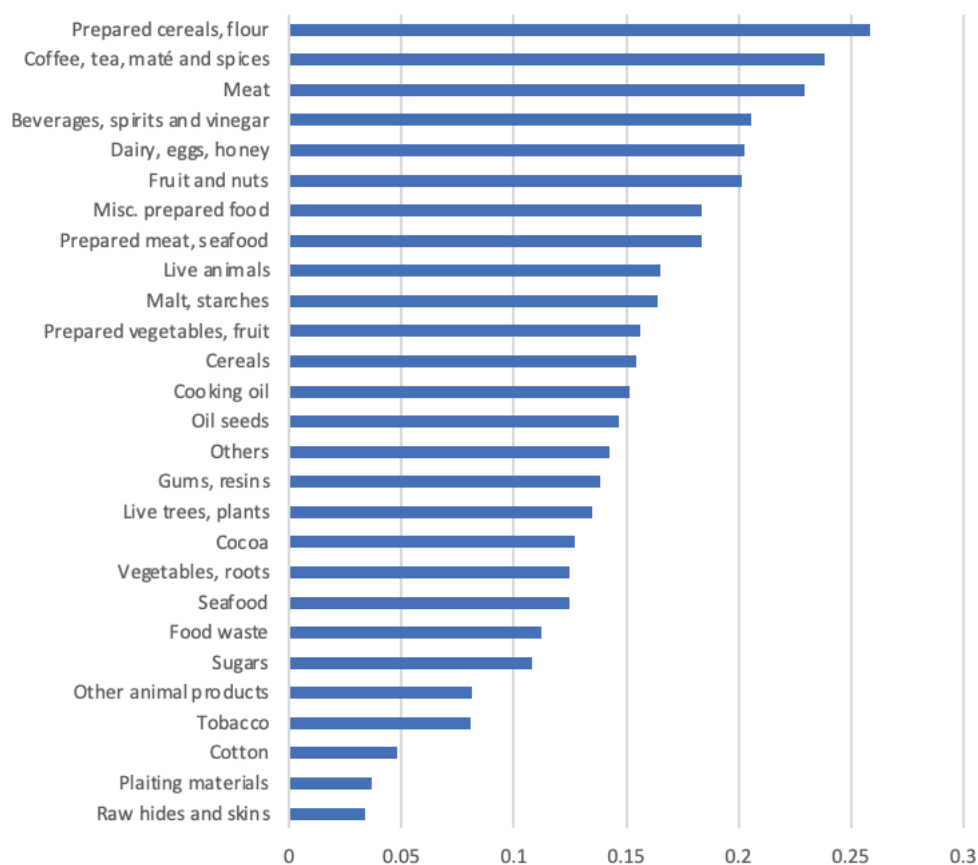
Source: ITC Trade Map

Figure 103 Africa's top 10 beverage importers, 2020 (\$ million)



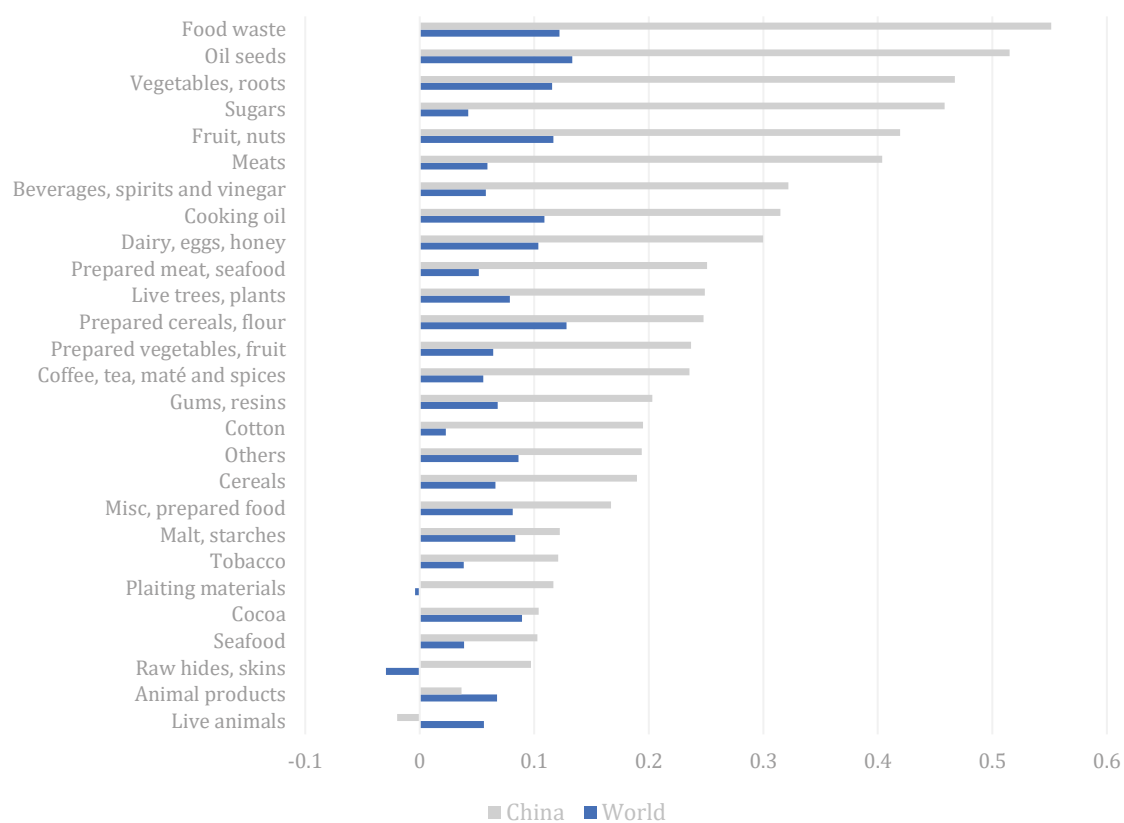
Source: ITC Trade Map

Figure 104 Compound annual growth rate of China's agricultural imports, 2001–2020



Source: ITC Trade Map

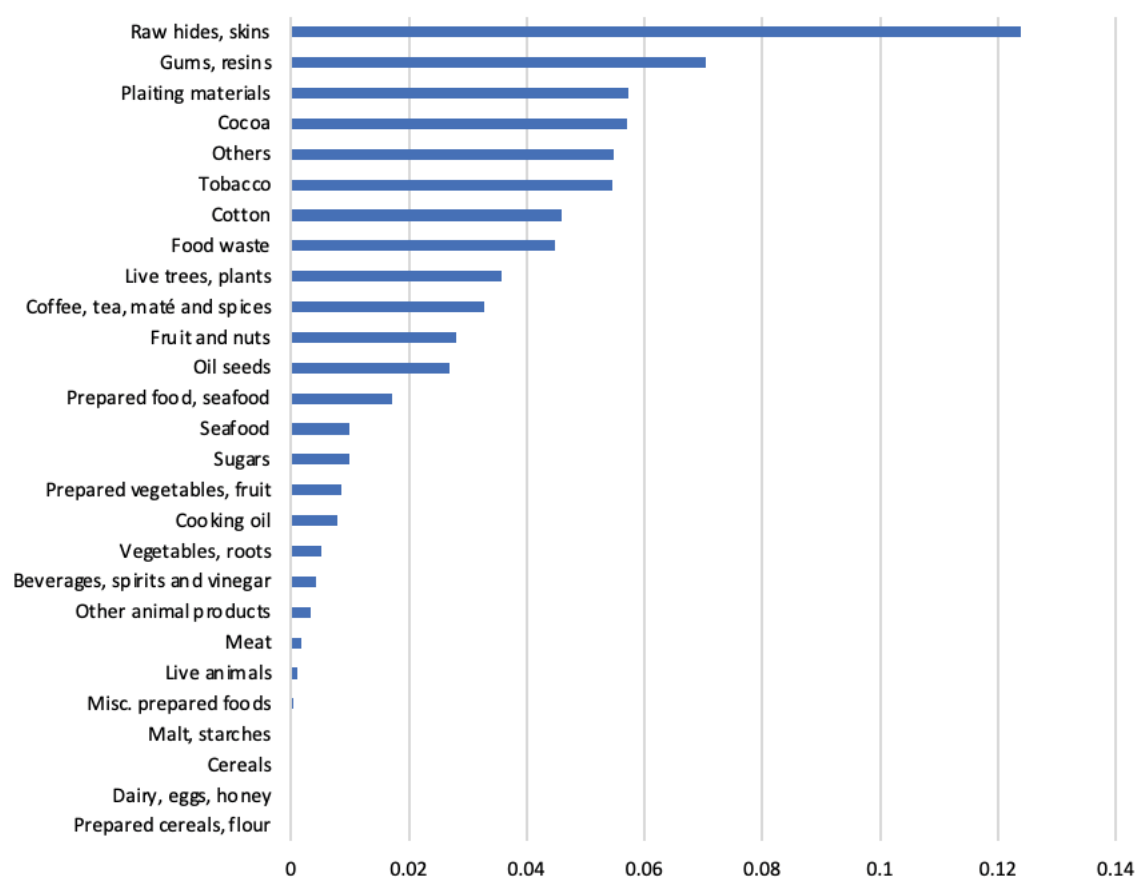
**Figure 105 Compound annual growth rate of African agricultural exports to China and the world**



Source: ITC Trade Map

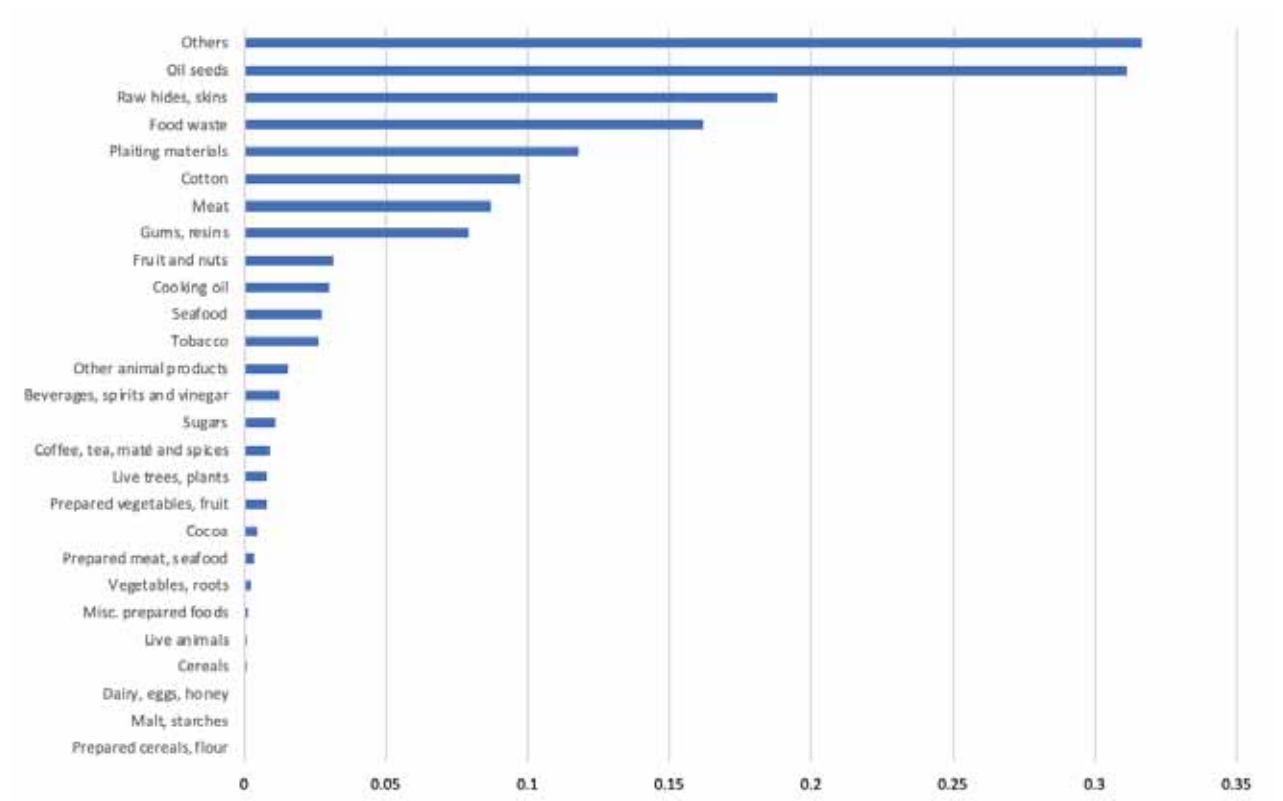


Figure 106 Africa's share of Chinese agricultural imports, 2020



Source: ITC Trade Map

Figure 107 China's share of Africa's agricultural exports, 2020



Source: ITC Trade Map

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