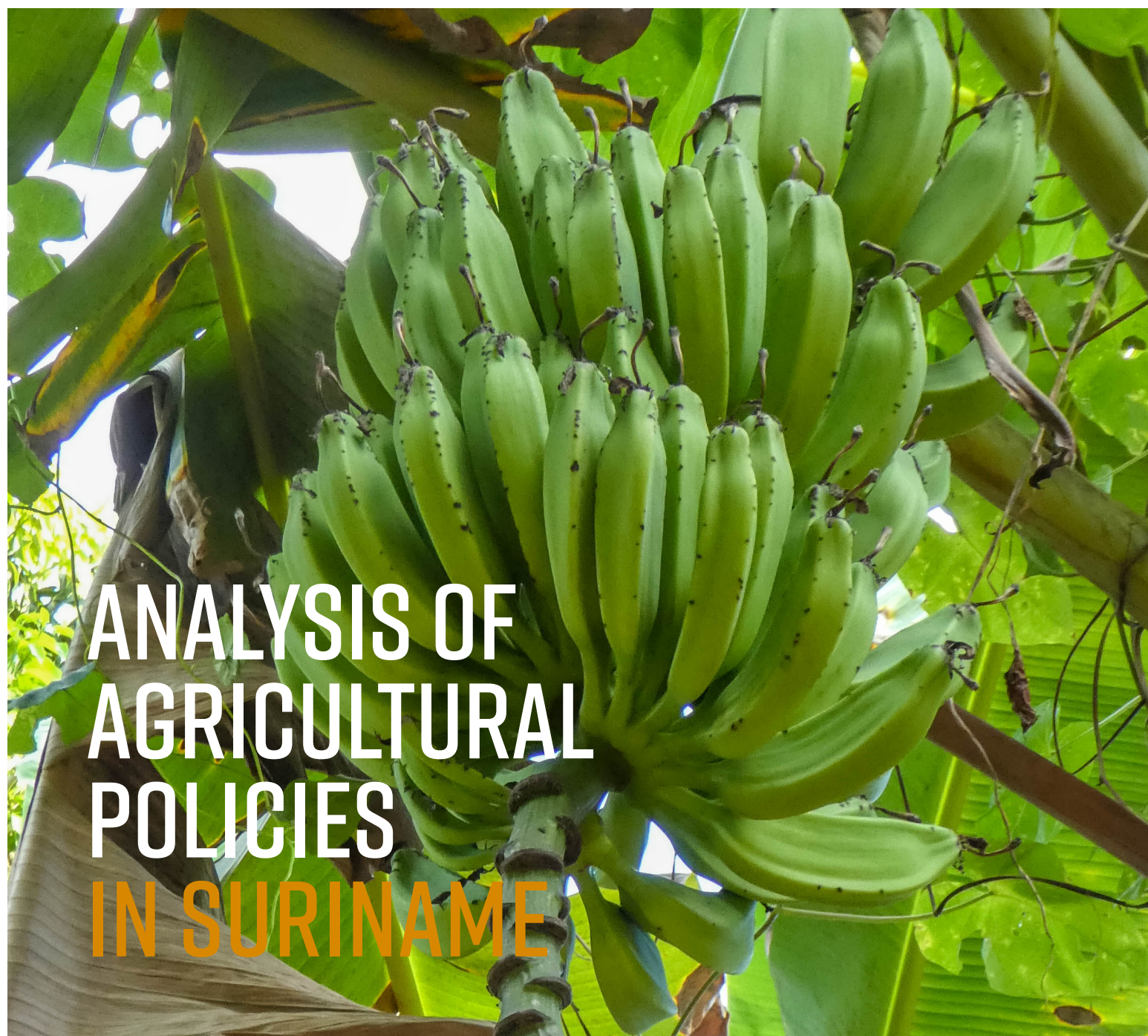


AGRICULTURAL POLICY REPORTS
JULY 2017

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Cataloging-in-Publication data provided by the Inter-American Development Bank Felipe Herrera Library.

Agricultural policies in Suriname / Christian Derlagen, Jelle Tas, Rachel Antoinette Boyce, Olga Shik, Carmine Paolo de Salvo.

p. cm. — (IDB Monograph ; 540)

Includes bibliographic references.

1. Agriculture-Suriname. 2. Agriculture and state-Suriname. 3. Farm produce-Suriname. I. Derlagen, Christian. II. Tas, Jelle. III. Boyce, Rachel Antoinette. IV. Shik, Olga. V. De Salvo, Carmine Paolo. VI. Inter-American Development Bank. Environment, Rural Development and Risk Management Division. VII. Series.

IDB-MG-540

Authors: Christian Derlagen, Jelle Tas, Rachel Antoinette Boyce, Olga Shik, Carmine Paolo De Salvo.

Keywords: Agriculture, Public Policy, Agricultural Policy, Agricultural Support, Agricultural commodities, Suriname.

JEL Codes: O54 Latin America; Q01 Sustainable Development; Q02 Commodity Markets; Q17 Agriculture in International Trade; Q18 Agricultural Policy.

Published July 2017

Design and Layout: Elena Sampedro | elena@lacasagrafica.com,

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Photo credits: Flickr photos (pages 8, 80 and front cover), Shutterstock photos (pages 11, 45, 78)

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ANALYSIS OF AGRICULTURAL POLICIES IN SURINAME

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ACKNOWLEDGMENTS

The authors would like to express their gratitude to César Falconi, Juan Jose Egas, Carmen Del Río, Peter Krupa, Elena Sampetro and Missael Godoy who provided feedback and supported the editing and publication of this document.

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LIST OF ABBREVIATIONS

AKF | Agricultural Credit Fund

ADEKUS | Anton de Kom University of Suriname

ADRON | Anne van Dijk Rice Research Centre

CARICOM | Caribbean Community

CELOS | Center for Agricultural Research in Suriname

CSE | Consumer support estimate

ERP | Effective rate of protection

FAI | Food and Agriculture Industries NV

FAO | Food and Agriculture Organization of the United Nations

GSSE | General services support estimate

IAP | Innovative Agro-Processing Industries NV

IMF | International Monetary Fund

MCP | Melk Centrale Paramaribo NV

MPS | Market price support

PSE | Producer support estimate

SBBS | Foundation for Conservation of Banana Production in Suriname

SCT | Single commodity transfers

LIST OF ABBREVIATIONS

TSE | Total support estimate

VSMB | Association of Surinamese Milk Farmers

WB | World Bank

WDI | World Development Indicators

WEF | World Economic Forum

WTO | World Trade Organization

1. INTRODUCTION



In 2012, the Inter-American Development Bank (IDB) conducted a study on overall support to the agricultural sector in Suriname based on the OECD's Producer Support Estimate Methodology (PSE), covering the period from 2006 to 2011.¹ This document provides an updated analysis of the public policy framework's effect on the agricultural sector.

The relative importance of agriculture in Suriname's economy has declined over the last two decades. Meanwhile, as agricultural output fluctuated, the country's economic growth was boosted by development in the mining and services sectors. However, agriculture is still socio-economically significant, as it is a major provider of employment in rural areas, accounts for 5% of the country's foreign exchange earnings, and is a key contributor to food security through the production of rice, the population's main staple food.

¹ See: Derlagen, C., Barreiro-Hurlé, J. and Shik, O. (2013). Agricultural Sector Support in Suriname, IDB/FAO, Rome, Italy.

The Government of Suriname recognizes the importance of developing the agricultural sector and has moved repeatedly to increase productivity and competitiveness. In its 2010 statement “Crossroads – to better times together,” the Government of Suriname states that it gives “high priority to a set of programs that aim to fulfil 85% of Suriname’s domestic food needs, and of which at least 40% of production is for export.” The government’s interest in the sector is also reflected in the support mechanisms it applies through its agricultural policy, which include trade protection, price policies, subsidies, and other instruments.

The PSE approach focuses on two main elements of support: (i) the impact of government policy on prices received by agricultural producers, and (ii) the support provided through budgetary transfers to the sector. The result of the analysis is a set of indicators that allows for comparison of support levels between years and by commodity; this can serve as a baseline for the measurement of the effects of agricultural policy reforms. The study also compares the level of agricultural support in Suriname to that of other countries in the region. The current report covers the period 2012–2014, as more recent production, price, and budget information was not yet available. The effects of Suriname’s recent economic and financial crisis are therefore not yet reflected in these indicators. Once the results are validated, these will be added to the IDB’s Agrimonitor platform, a country-level PSE indicator database for Latin American and Caribbean countries that enables policy makers and policy analysts to track agricultural policies and to assess and measure the composition of support for agriculture.

In 2011, revenues from the sale of oil, bauxite and gold accounted for 88% of exports and 40% of government revenue. In 2015, government revenue and foreign exchange generation had become perilously dependent on these three commodities. When commodity prices dropped in mid-2014 and Suriname’s aluminum refinery stopped operating in late 2015, the Surinamese economy weakened significantly, with low growth and large fiscal and trade deficits. Foreign exchange reserves declined and the Surinamese Dollar (SRD) depreciated from SRD 3.25 to SRD 6.8 to the US Dollar between June 2015 and June 2016.

To address the deficits, the Government of Suriname requested the support of the International Monetary Fund (IMF). In May 2016, the IMF signed a 2-year stand-by arrangement with the Government of Suriname of US\$478 million, based on the conditions set in the country’s Stabilization and Recovery Plan (“Stabilisatie – en Herstelplan”) prepared by the Government of President Bouterse. It should be noted that the depreciated exchange rate

THE GOVERNMENT OF SURINAME RECOGNIZES THE IMPORTANCE OF DEVELOPING THE AGRICULTURAL SECTOR AND HAS MOVED REPEATEDLY TO INCREASE PRODUCTIVITY AND COMPETITIVENESS.

and changed macroeconomic situation and outlook may significantly affect the indicators presented in this report.

Before presenting the results of this quantitative analysis, this report gives a brief overview of the policies applied by the Government of Suriname to specific agricultural subsectors as well as to the agricultural sector as a whole. The overview covers both the country's trade policy framework and its domestic policies related to prices, marketing, and taxation.

The last section of the report presents an overview of policy recommendations that are based on the analysis presented. These recommendations are meant to serve as inputs for evidence-based dialogue on potential policy changes that could strengthen the competitiveness of the agricultural sector in Suriname and render the policy framework more conducive to agricultural investment. This should result in agricultural growth and diversification of the economy, making it less dependent on the mining sector.

Updated descriptions of the key agricultural value chains of rice, bananas, and poultry are also provided. These analyses give a more in-depth overview of the incentives and disincentives faced by producers of these commodities and an indication of whether the observed distortions are the result of policies or specific value chain characteristics.

**BEFORE PRESENTING
THE RESULTS OF THIS
QUANTITATIVE ANALYSIS,
THIS REPORT GIVES A
BRIEF OVERVIEW OF THE
POLICIES APPLIED BY THE
GOVERNMENT OF SURINAME
TO SPECIFIC AGRICULTURAL
SUBSECTORS AS WELL AS TO
THE AGRICULTURAL SECTOR
AS A WHOLE.**

2. OVERVIEW OF AGRICULTURAL POLICIES



2.1 Economy of Suriname

Suriname experienced a long period of stability and growth

Suriname is a small middle-income country on the Northeast Coast of South America with an area of 164,000 sq. km, 80% of which is covered by tropical rainforest. About half of the country's population of 543,000 (WDI, 2016) live in Paramaribo, the capital city.

The country is well-endowed with natural resources, and its broadly open economy is largely dependent on the extractive industries, particularly gold and oil (and previously bauxite). The agricultural sector accounted for a relatively small 9% share of GDP in 2013, though it remains important because of its contribution to employment and foreign exchange generation.

THE AGRICULTURAL SECTOR ACCOUNTED FOR A RELATIVELY SMALL 9% SHARE OF GDP IN 2013, THOUGH IT REMAINS IMPORTANT BECAUSE OF ITS CONTRIBUTION TO EMPLOYMENT AND FOREIGN EXCHANGE GENERATION.

After a period of highly volatile growth and near hyper-inflation in the 1990s, the economic outlook of Suriname stabilized and the economy saw steady annual growth rates that averaged 4.1% between 2006 and 2012. In 2013, GDP growth dropped to 2.84%, slowing further in 2014 to 1.8% and in 2015 to 1.5%.

TABLE 1: KEY ECONOMIC INDICATORS OF SURINAME

INDICATOR	UNIT	2013	2014	2015
GDP (CONSTANT 2007 PRICES)	SRD BN	10.147	10.334	10.488
GDP GROWTH	%	2.84	1.8	1.5
GDP PER CAPITA (CONSTANT PRICES)	\$'000	15.7	15.9	16.0
POPULATION	'000 PERSONS	533.5	538.3	543.0
% POPULATION IN URBAN AREAS	%	66.14	N/A	N/A
SHARE OF AGRICULTURE IN GDP	%	9	10.1	N/A
SHARE OF AGRICULTURE IN EMPLOYMENT	%	3.20	N/A	N/A
FOOD EXPORTS (% OF MERCHANDISE EXPORTS)	%	2.34	3.3	N/A
FOOD IMPORTS (% OF MERCHANDISE IMPORTS)	%	11.32	13.7	N/A
AGRI-FOOD TRADE BALANCE	US\$000			
TRADE (% OF GDP)	% OF GDP	103.1	98.0	91.1
AGRICULTURAL LAND	SQ. KM	832	N/A	N/A
SHARE OF ARABLE LAND	% OF LAND AREA	38.46	N/A	N/A
SHARE OF IRRIGATED LAND	% OF AGRIC. LAND	N/A	N/A	N/A

Source: World Development Indicators.

In 2015, the economy went into a crisis because of falling commodity prices

As a result of high commodity prices, exports of natural resources such as oil, bauxite, and gold had become increasingly important for the generation of foreign exchange and revenues. Despite that, in 2015, mining revenues contributed 15% of total government revenue, compared to about 40% in 2011. Following the drop of commodity prices and shutdown of the country's alumina refinery in 2015, Suriname was faced with significant fiscal and trade deficits. In 2015, the fiscal deficit reached 8.8% of GDP, and in the first four months of 2016 foreign exchange reserves fell sharply, dropping by 30% compared to December 2015. In March 2016, consumer inflation reached 37% because of pass-through

from the fall in currency value and higher utility costs from the increase in electricity and water tariffs. At the same time, export revenue per capita decreased by 25.4% between 2010 and 2015, while per capita imports increased by 53.5%. The sustained low commodity prices and the closure of the alumina company in late 2015 pushed the economy into a severe recession, and the government embarked on an economic adjustment program through a 2-year IMF stand-by arrangement (SBA).²

Under the SBA, the IMF will provide Suriname with US\$478 million of balance of payments assistance over a 24-month period. The program aims to restore Suriname's macroeconomic stability and confidence and pave the way to economic recovery.

The program will have the following key components:

- Fiscal reforms, including the phasing out of electricity subsidies, wage restraints for the public sector, and increases in fuel taxes. This should bring down the fiscal deficit to 1.4% of GDP by 2018.
- Increased social cash transfers to ensure that the negative impacts of the adjustments are softened for low-income households.
- In the field of monetary and foreign exchange policy, a transition to a floating exchange rate. This should increase the country's foreign currency reserves and bring inflation down to single digits.
- Finally, structural reforms to improve the business environment, with a focus on enhancing the productivity and competitiveness of the agricultural sector.

The Stabilization and Recovery Plan refocuses on agricultural exports

The details of the reforms are set out in the Government's Stabilization and Recovery Plan, which was presented in the National Assembly on the June 1, 2016. The two-year (2016-2018) plan clearly recognizes the need for Suriname to adjust its economy by increasing production and changing the structure of imports from consumption to investment goods.

Table 1 provides an overview of the plan's key measures that may affect the agricultural sector in Suriname.

THE SUSTAINED LOW COMMODITY PRICES AND THE CLOSURE OF THE ALUMINA COMPANY IN LATE 2015 PUSHED THE ECONOMY INTO A SEVERE RECESSION, AND THE GOVERNMENT EMBARKED ON AN ECONOMIC ADJUSTMENT PROGRAM THROUGH A 2-YEAR IMF STAND-BY ARRANGEMENT (SBA).

² <https://www.imf.org/external/np/sec/pr/2016/pr16251.htm>

TABLE 2: KEY MEASURES OF THE 2016 - 2018 RECOVERY AND STABILIZATION PLAN

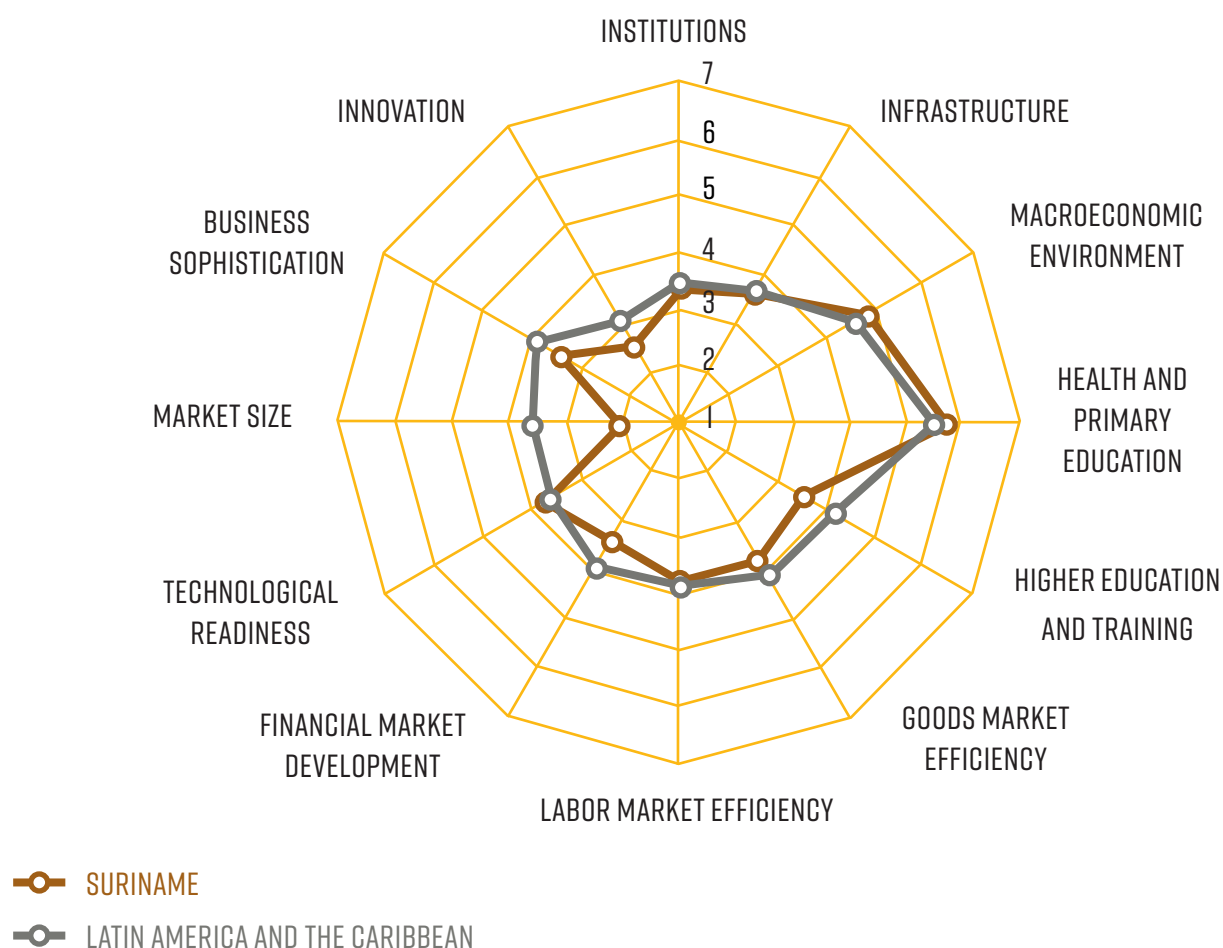
FISCAL MEASURES	
INTRODUCTION OF VALUE-ADDED TAX	
TERMINATION OF SUBSIDIES ON WATER, ENERGY AND GAS	
MONETARY MEASURES	
INTRODUCTION OF CURRENCY AUCTIONS STARTED IN MARCH 2016	
INTRODUCTION OF A FLOATING, MARKETED-DETERMINED EXCHANGE RATE	
URGENT INVESTMENT MEASURES	AMOUNT (SRD)
ANSFORMING THE COMPANY REGISTRATION AND LICENSING REGULATIONS TO IMPROVE THE INVESTMENT CLIMATE	35,750,700
INVESTMENT IN GROWTH AND DIVERSIFICATION OF EXPORT IN AGRO-PROCESSING, WOOD PROCESSING AND FISHERIES	3,575,000
REHABILITATION AND RESTRUCTURATION OF ALLIANCE	32,282,738
DEVELOPMENT OF THE LIVESTOCK SECTOR	289,347,500
REHABILITATION OF WAGENINGEN PUMPING STATION	197,632,500
SHORT TERM GROWTH INVESTMENT MEASURES	
RICE PARASTATAL SML (STICHTING MACHINALE LANDBOUW) WILL BE SOLD TO A PRIVATE INVESTOR THROUGH A TRANSPARENT PROCESS LED BY AN INTERNATIONAL FINANCIAL INSTITUTION	
MEDIUM TERM GROWTH INVESTMENT MEASURES	AMOUNT (SRD)
DEVELOPMENT OF COCOA PRODUCTION IN SURINAME	588,250,000
DEVELOPMENT OF COCO PRODUCTION IN SURINAME	568,831,227
ESTABLISHING 20 HA OF PRODUCTION OF ALOE BARBADENSIS TO BE PROCESSED TO ALOE GEL	12,969,476

Source: Republic of Suriname, Stabilisatie en Herstelplan 2016-2018.

Overall competitiveness remains low

Overall competitiveness of the economy of Suriname remains indeed a key issue limiting economic growth. On the Global Competitiveness Index of the World Economic Forum (WEF), Suriname ranks 110 out of 144 countries analyzed. As shown in Figure 1, the country scores below the average for Latin America and the Caribbean in areas such as financial market development, business sophistication, and innovation. According to the WEF, the biggest obstacles to doing business in Suriname include inefficient government bureaucracy, corruption, and limited access to finance.

FIGURE 1: COMPETITIVENESS IN SURINAME



Source: Global Competitiveness Index, World Economic Forum, 2014.

In the 2016 Doing Business Indicators of the World Bank, Suriname ranks 156 out of a total of 189 countries analyzed. The country is particularly notorious for its lengthy and numerous procedures necessary to start a business and its relatively slow judicial system. Nonetheless, the country also made progress in 2015 when its automated customs data management system (ASYCUDA) became fully operational. The system allows businesses to complete all customs procedures electronically, reducing the export cost of key agricultural commodities such as rice and bananas.

2.2 Role of the agricultural sector

Against the backdrop of a challenging macro-economic situation involving high levels of economic uncertainty, the prospects for the country's agricultural sector are mixed. In recent decades, agriculture's share of the economy fell significantly, from around 15% of GDP in the mid-1990s to 7% in 2013. Rice and bananas, Suriname's most important crops, face challenges to improving their cost structures and remaining competitive. The banana industry, which produces the second most important commodity in terms of value of production and the country's most important agricultural export, faces strong competition from other Latin American producers as a consequence of changes to the EU's preferential tariff regime, as well as with high production costs, low labor productivity, and crop diseases. At the same time, rice producers are increasingly calling for government support to reduce high input and transportation costs, which undermine their competitiveness in international rice markets.³

Still, Suriname remains a country with strong potential for agricultural development. Of the country's total 1.5 million ha considered suitable for agricultural production, only an estimated 120,000 ha are currently used for crop cultivation and pasture.⁴ Approximately 85% of the land suitable for agriculture is located in the country's coastal plains, which also boast the main production areas in the districts of Nickerie, Coronie, Saramacca, and Commewijne.⁵

Figure 1 provides an overview of the value of production of agricultural commodities in Suriname. Besides rice and bananas, other important crops produced in Suriname include vegetables, plantains, citrus, fruits, and cassava. The main livestock products include poultry meat, beef, and pork, as well as milk and eggs.

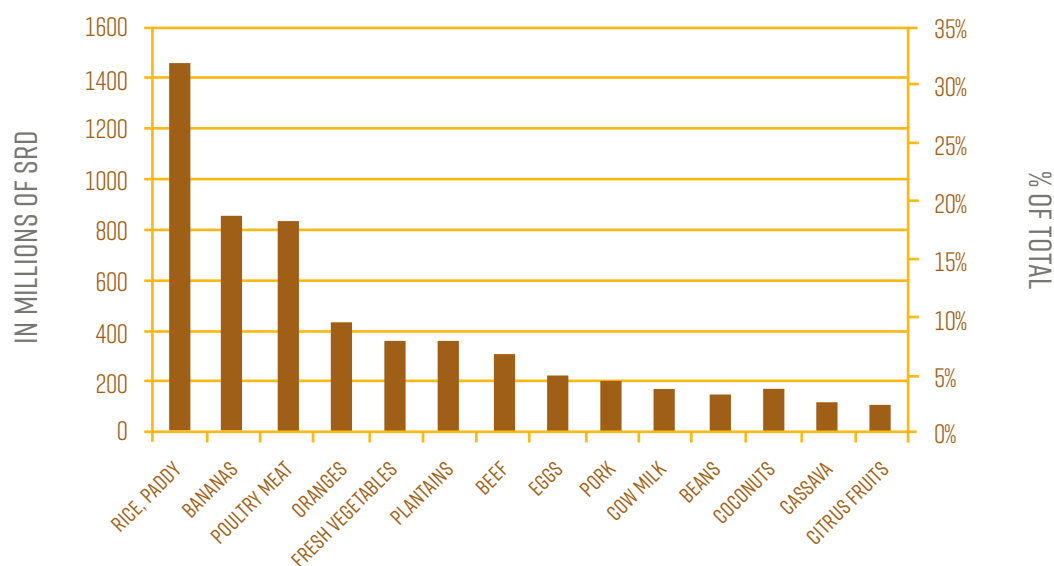
THE RICE AND BANANAS, SURINAME'S MOST IMPORTANT CROPS, FACE CHALLENGES TO IMPROVING THEIR COST STRUCTURES AND REMAINING COMPETITIVE.

³ Economist Intelligence Unit (2013).

⁴ World Trade Organization (2013).

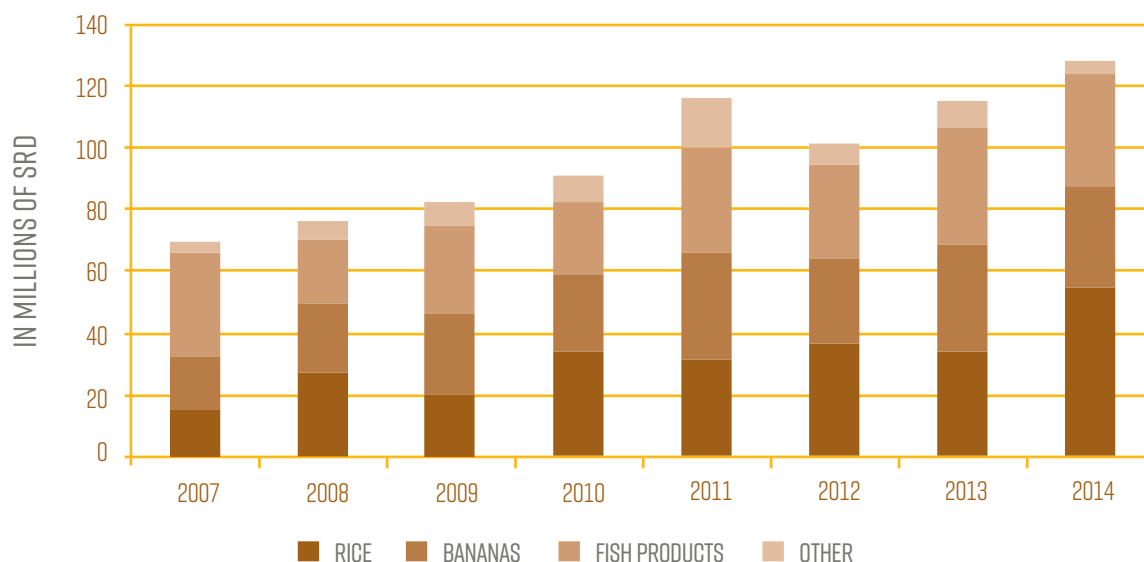
⁵ FAO (2005).

FIGURE 2: VALUE OF PRODUCTION OF MAIN AGRICULTURAL COMMODITIES IN SURINAME (IN MILLIONS OF SRD AND SHARE OF TOTAL), 2006-2014



Source: FAOSTAT (2006 – 2013), LVV (2014).

Although the relative importance of agriculture in the economy has decreased, agricultural exports have mostly trended upwards since 2007. As shown in Figure 3, total agricultural exports increased from US\$69 million in 2007 to US\$115 million in 2013. The total value of banana exports more than doubled from US\$16.6 million in 2007 to over US\$34 million in 2011. Nonetheless, banana production is now decreasing again. Together, rice and bananas are not only the major crops in terms of production, but also consistently represented over 50% of agricultural exports during the period under review.

FIGURE 3: VALUE OF MAIN AGRICULTURAL EXPORTS, 2007–2014, IN MILLIONS OF USD


Source: FAOSTAT and LVV.

2.3 Introduction to Agricultural Policy

In its 2010–2015 government statement “Crossroads – Together towards better times,” the Government of Suriname stated that increasing food production was among the key priorities of its policy agenda, and that the agricultural sector should focus on food production for both local consumption and international (and, in particular, regional) markets.⁶ In the same document, the government also announced it would prepare a number of white papers to set out its development and growth priorities for the country’s main agricultural subsectors.

The general government policy for the agricultural sector is set forth in Policy Note (“Beleidsnota”) LVV 2010–2015. That policy note builds on the 2005–2010 Agriculture Sector Programme (ASP), which focused on three main objectives: 1) food security and safety, 2) income generation, and 3) contribution to the economy.

⁶ Government of Suriname (2010).

The program was financed through an Agricultural Sector Fund that relied heavily on resources from the Netherlands, committed under the Dutch-Suriname Treaty on Development Assistance. Because of the treaty's phase-out in 2010, the ASP could not be extended beyond mid-2009.⁷

The Beleidsnota LVV 2010-2015 has been the principal policy document for the Ministry of Agriculture, Animal Husbandry, and Fisheries (LVV) and was drafted within just three months of the inauguration of President Bouterse's first administration.⁸ The note expands the number of agricultural policy strategic objectives from three to seven:

1. Guarantee the food security of the population of Suriname;
2. Secure agricultural health and food safety;
3. Develop a sustainable agricultural sector;
4. Transform the agricultural sector into the food producer and supplier of the Caribbean region;
5. Increase the agricultural sector's contribution to the national economy;
6. Create the spatial conditions necessary to sustainable development of the agricultural sector; and
7. Manage the preconditions and risks involved in the implementation of agricultural policy.

In addition to the sector-wide policy note, White Papers were drafted for the following subsectors: rice; bananas; Livestock; Horticulture; Fisheries and Aquaculture; Agribusiness; Agricultural Health and Food Safety; and Agricultural Development of the Interior.

Despite the fact that the Beleidsnota and the White Papers were initially prepared for a five-year period, a new five-year plan has not yet been drafted. The Ministry of LVV indicated that the Directorate of Planning is currently working on a new strategic policy plan for the agricultural sector for the period until 2020.

The new five-year plan will be based on the "National Master Plan for Agricultural Development in Suriname", which was prepared with support from the Government of Israel and adopted by the Ministry of LVV in December 2015.

THE NEW FIVE-YEAR PLAN WILL BE BASED ON THE "NATIONAL MASTER PLAN FOR AGRICULTURAL DEVELOPMENT IN SURINAME", WHICH WAS PREPARED WITH SUPPORT FROM THE GOVERNMENT OF ISRAEL AND ADOPTED BY THE MINISTRY OF LVV IN DECEMBER 2015.

⁷ Ministry of Agriculture, Animal Husbandry and Fisheries (2010).

⁸ Roseboom (2012).

The Master Plan includes a wide range of objectives and activities to be undertaken to accelerate Suriname's transition to a modern and knowledge-intensive agricultural system and increase the agricultural sector's contribution to GDP, the trade balance, employment, and food security.

The plan will require government support to the sector of US\$40 million per year and focus on 10 specific priorities:⁹

1. Developing agricultural risk insurance solutions (US\$5 million per year)
2. Credit for disadvantaged small farmers (US\$8 million per year)
3. Infrastructure construction, in particular drainage and irrigation networks (US\$4 million per year)
4. Establishing an extension framework (US\$4 million per year)
5. Agricultural Service & Training Center (ASTC), (US\$4 million per year)
6. Stimuli to encourage agricultural settlements, to increase the attractiveness of working in agriculture (US\$3 million per year)
7. Quality assurance and promotion of international standards (US\$2 million per year)
8. Export policy, to support export development (USD 3 million per year)
9. Construction of agri-processing factories, in collaboration with private sector (USD 4 million per year)
10. Applied research (US\$3 million per year)

To develop knowledge, research, and training for the agricultural sector, the Master Plan proposes:

- establishing a special chamber for the agricultural sector. This body will be the main platform for small farmers and co-operatives/farming groups to address constraints on primary production and marketing. In addition, extension services to farmers will be strengthened;
- introducing specialized agricultural education at the secondary and tertiary level;
- establishing a platform for applied agricultural research that integrates the research activities of the Ministry of LVV, CELOS, ADRON, and Anton de Kom University.

⁹ The National Master Plan for Agricultural Development in Suriname, LVV/IDCS, 2015).

LVV is the main implementer of agricultural sector support

The Ministry of Agriculture, Animal Husbandry, and Fisheries (LVV) is the main institution responsible for the administration of public sector programs and projects of Suriname's agriculture, fisheries, and livestock sectors. The ministry is politically directed by the Minister of Agriculture, while the civil service is headed by a Permanent Secretary. The Ministry consists of five departments: (i) crops, (ii) livestock, (iii) fisheries, (iv) research, marketing and processing and (v) administrative services. The directors of these departments, together with the Permanent Secretary, make up the ministry's management team.¹⁰

The ministry also has administrative responsibility for a series of foundations and state-owned companies that are active in the agricultural sector. The most important of these are listed in Table 3. In the ministry's budget, the profits (or losses) from these parastatals are recorded collectively, rather than individually. In 2014, parastatal enterprises contributed a mere SRD 230,000 on a total of SRD 7.071 million in non-tax income, which also includes income generated from the delivery of services by the ministry. The majority of non-tax revenue collected by the ministry therefore comes not from the parastatals but from slaughterhouse inspection and certification (in 2014: SRD 2.64 million) and commercial fishing licenses (in 2014: SRD 3.168 million).

The main subsidies provided to parastatals through the LVV budget are to Rice Research Institute ADRON and to citrus company ALLIANCE. In 2014, the contribution of LVV to Alliance was SRD 0.935 mln, while SRD 1.46 mln was provided to the national Rice Research Institute (ADRON).

THE MINISTRY ALSO HAS ADMINISTRATIVE RESPONSIBILITY FOR A SERIES OF FOUNDATIONS AND STATE-OWNED COMPANIES THAT ARE ACTIVE IN THE AGRICULTURAL SECTOR.

¹⁰ Roseboom (2012).

TABLE 3: OVERVIEW OF KEY PUBLIC SECTOR FOUNDATIONS AND ENTERPRISES UNDER ADMINISTRATIVE RESPONSIBILITY OF THE MINISTRY OF LVV

NAME	NACTIVITY	LEGAL STATUS	REMARKS
CENTRALE VOOR VISSERSHAVEN IN SURINAME (CEVIHAS)	CENTRAL FISHING PORT	JOINT STOCK	
INNOVATIVE AGRO PROCESSING INDUSTRIES (IAP NV)	CASSAVA PROCESSING	JOINT STOCK	CONTROLLED BY MINISTRY OF FINANCE. TRANSFER OF CONTROL TO LVV TO BE FINALIZED.
LANDSBEDRIJF ALLIANCE (ALLIANCE)	FRUIT PLANTATIONS	SPECIAL LAW	
STICHTING NATIONAAL RIJSTONDERZOEKS INSTITUUT (SNRI/ADRON)	RICE RESEARCH		
MELKGENTRALE INDUSTRIE	MILK PRODUCTION AND IMPORT	JOINT STOCK	
SURINAAMSE AMERIKAANSE INDUSTRIEMAATSCHAPPIJ (SAIL)	SHRIMP FISHING AND PROCESSING	JOINT STOCK	

Source: Roseboom (2012), World Trade Organization (2013) and LVV (2016).

Compared to the earlier analysis of agricultural sector support, two important changes to parastatals under the LVV should be noted. First, state-owned banana company Stichting Bananenbehoud Suriname (SBBS) was privatized, a process that concluded in 2014. Second, in 2015, cassava processing company Innovative Agro Processing (IAP) NV came under government control. The company is expected to pass to LVV control, but as of publication of this report, the transfer of ownership and control from the Ministry of Finance to the LVV had not yet been finalized.

The total budget of the Ministry of Agriculture, Animal Husbandry, and Fisheries has changed significantly. The total budget in 2014 was SRD 271.56 million, of which 15% (SRD 40.38 million) consisted of administrative costs, while the remaining 85% (SRD 231.18 million) was budgeted for program costs.

2.4 Commodity Specific Measures

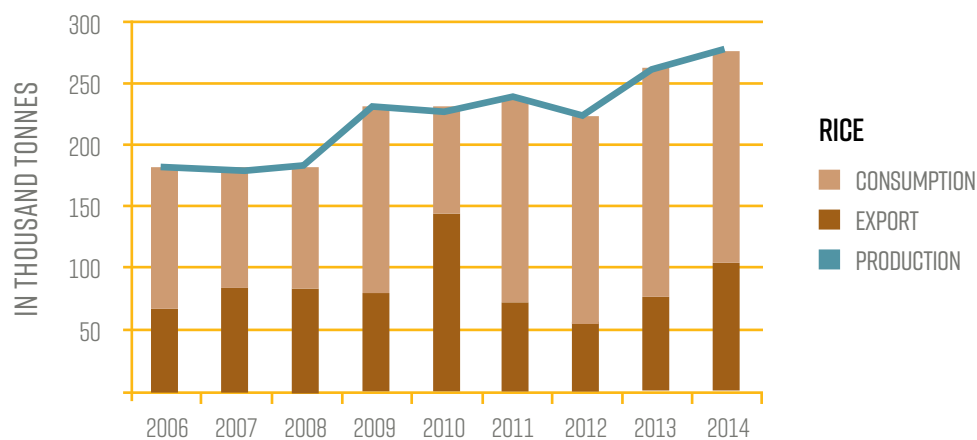
Rice¹¹

Rice is Suriname's most important agricultural crop, with the highest share in total value of agricultural production, as well as the population's main staple food. The importance of rice in the Surinamese diet is greater than in many other countries in the region, including Jamaica, Brazil, and Venezuela. In 2011, rice consumption in Suriname amounted to 69 kg per head, equivalent to 638 kcals of energy per day (just over 23% of total per capita calorie intake). It is also the second most important agricultural export in terms of value, after bananas. Since 1990, the subsector has witnessed significant variability in total production, mainly because of fluctuations in the area harvested. Total production reached a peak of 327,000 tons in 1985, before dropping to between 150,000 and 170,000 tons annually between 2000 and 2004. Higher input costs, poor infrastructure, and reduced access to finance were considered the main reasons for the decline in rice production.¹² Rice production is currently trending upward, with paddy production consistently above 200,000 tons since 2009 (see Figure 5). This growth is driven primarily by increases in domestic consumption, while exports have hovered between 50,000 and 100,000 tons over the last four years.

RICE IS SURINAME'S MOST IMPORTANT AGRICULTURAL CROP, WITH THE HIGHEST SHARE IN TOTAL VALUE OF AGRICULTURAL PRODUCTION, AS WELL AS THE POPULATION'S MAIN STAPLE FOOD.

¹¹ A more detailed analysis of the rice value chain and its cost structure is provided in annex I.

¹² World Trade Organization, 2013.

FIGURE 4: RICE PRODUCTION, CONSUMPTION AND EXPORT IN SURINAME, 2006-2014, IN THOUSANDS OF TONS


Source: Ministry of Agriculture, Agricultural Statistics, 2015.

Rice production is strongly concentrated in the western coastal districts of Nickerie, Coronie, and Saramacca. The Nickerie district alone represents approximately 80% of the area under cultivation.¹³

Given its key economic importance, the rice subsector is the main focus of Suriname's agricultural policy and has been the subject of various policy measures, including direct payments to producers, fuel subsidies, export taxes, and government support for irrigation, water management, input access, and rice research. The government's policy objectives for the rice sector include improving infrastructure and access to inputs, improving product quality, and increasing access to finance for producers and processors. The basic document establishing the government's policy priorities for rice is the rice subsector white paper.¹⁴

An export tax is levied on all rice exports

The tax on all rice exports of SRD 10 per ton is levied at the border. The tax is generally referred to as an inspection fee. Of the SRD 10 collected, SRD 6 is used to fund the Anne van Dijk Rice Research Centre. The remaining SRD 4 is collected by the Ministry of Agriculture and included in its budget as non-tax revenue.

¹³ Ministry of Agriculture, Animal Husbandry and Fisheries, 2010.

¹⁴ Ministry of Agriculture, Animal Husbandry and Fisheries, 2010.

In 2013, all rice farmers received an incentive based on output

In 2013, the Government paid rice farmers a subsidy (usually referred to as “incentive”) of SRD 2.13 per 79-kg bag of wet paddy rice, in order to compensate rice producers for the increased tax on fuel that was introduced by the new government in 2011—the so-called “Government Take.” Though the subsidy was initially planned as an area payment of SRD 130 per hectare planted, the Ministry of Agriculture decided to convert the payment to a production subsidy paid out on the basis of bags of paddy rice produced. This meant that farmers with higher productivity levels benefited more than less productive farmers. The subsidy was eventually paid out to farmers in March 2013 through the banking system to encourage—where applicable—use of the subsidy to settle overdue debts and improve producers’ credit.

The compensation payment for the high cost of fuel—which accounts for 10–15% of the total cost of rice production¹⁵—was not new; from 2003 to 2006, rice farmers benefited from the reimbursement of the Government Take on fuel up to a limit of 125 litres per hectare. The funds for this fuel subsidy were provided by the Ministry of Finance, while the Ministry of Agriculture implemented the measure by keeping the required records and arranging payments to farmers. For the year 2006, a total of SRDc4.72 million (US\$ 1.7 million) was paid in support to producers. Approximately 1,270 farmers benefited from this support, meaning an average payment of SRD 3,720 per farmer.¹⁶

In 2014 and 2015, small & medium-sized farmers received support based on land area

Though the payment to rice farmers was labelled by the government as an ad-hoc policy measure, assistance was provided repeatedly in consecutive years. In 2014, small and medium-sized farmers with 1 to 200 hectares in production received an area payment of SRD 480 per hectare. For this payment, no distinction was made between farmers based on productivity. The payment was funded from the “export promotion” budget line of the Ministry of LVV and the total cost of the support for the Government budget amounted to SRD 12 million.¹⁷ An area payment was suggested in the 2013 Agricultural Sector Support report as a more effective measure to reduce producers’ debt-burden than a payment based on output. Essentially, it argued that farmers with low

THE FUNDS FOR THIS FUEL SUBSIDY WERE PROVIDED BY THE MINISTRY OF FINANCE, WHILE THE MINISTRY OF AGRICULTURE IMPLEMENTED THE MEASURE BY KEEPING THE REQUIRED RECORDS AND ARRANGING PAYMENTS TO FARMERS.

¹⁵ Based on estimates from the United States, see Greer et al (2012).

¹⁶ Graanoogst, 2007.

¹⁷ See also: <http://www.gov.sr/actueel/akkoord-van-srd-480-per-hectare-bereikt-met-spba.aspx>

productivity levels need liquidity most for productivity-enhancing investments. However, payments based on output primarily benefit farmers whose productivity is already relatively high. Also, a direct income payment based on acreage was said to be less price distorting.

In 2015, the LVV reached an agreement with the Association of Surinamese Paddy Farmers and other farmer organizations to provide total support of SRD 431 per hectare. This support consisted of an area payment of SRD 230 (US\$60) per hectare, a bag of NPK, and a bag of Ureum. However, in September 2015, the LVV had to withdraw from this agreement when its budget did not allow for the US\$60 area payment.¹⁸ The total cost to the budget of these support payments is presented in Table 4.

Given LVV's budget cuts for 2016, support payments to rice farmers are not expected this year.

TABLE 4: OVERVIEW OF TOTAL BUDGET COSTS OF RICE SUB-SECTOR SUPPORT PAYMENTS, PER YEAR, 2013-2015

BUDGET COSTS OF RICE SUB-SECTOR INCENTIVES

YEAR	AMOUNT IN '000 SRD
2013	2,839
2014	12,397 (FROM THE BUDGET OF THE MINISTRY OF FINANCE)
2015	3,326
TOTAL	18,563

Another important element of the government's support for the rice subsector is the parastatal National Rice Research Foundation, in particular the Anne van Dijk Rice Research Centre (ADRON). Its budget is covered by the sector through the 60% share of the export tax, which is allocated to ADRON. The main focus of ADRON's research program is on seed development, pest and disease control and crop management.

¹⁸ See also: <http://www.starnieuws.com/index.php/welcome/index/nieuwsitem/28562>

Under the EU support program for the competitiveness of the rice subsector in African, Caribbean and Pacific (ACP) countries, €9.25 million was allocated to Suriname for the 2008–2013 period. These funds were used for capacity building, credit provision through the Rice Fund, and rehabilitation of infrastructure.

The various support measures consist of budget transfers in support of the rice sector and therefore are included in the PSE for rice as presented in Chapter 3 below.

Bananas

Bananas are Suriname's most important agricultural export product. However, the sub-sector is currently facing several major problems that threaten the long-term sustainability of banana production in Suriname.

Between 2002 and 2013, the banana sector was state-owned

Though the cultivation of bananas goes back to the 1960s, the subsector's production collapsed dramatically following the bankruptcy of state-owned banana company Surland N.V. in 2002. Before the collapse of Surland, production stood around 40,000 tons per year. Given the importance of the banana subsector for Suriname's economy in general and its foreign exchange earnings in particular, the government decided to implement a restructuring plan for viable long term development of a banana subsector that could compete in a liberalized world market. Surland's assets and activities were brought under the Stichting Behoud Bananen Sector (SBBS), a newly established state-owned banana company.

External stakeholders, SBBS management, and the government repeatedly stated that privatization of the SBBS was the only sustainable way to ensure the company's future. In 2005 and 2009, attempts to privatize SBBS were unsuccessful and the company remained under state ownership. In a letter to the European Union in June 2012, the Government of Suriname reaffirmed its commitment to privatization, and a third attempt to transfer SBBS' ownership to the private sector was launched.

Privatization was completed, but the banana company struggles

The takeover was finalized in 2014, when the Belgian group Univeg became the owner of SBBS under the new company name Food and Agriculture Industries (FAI) N.V. Since the privatization, production has dropped by 20% from 80,559 tons in 2013 to 62,937 tons in 2015. In addition, FAI recorded losses of up to

US\$10 million in 2014 and US\$13 million in 2015, for both internal and external reasons.

TABLE 5: KEY INDICATORS BANANAS

				2015	2014	2013
Nº		DESCRIPTION	UNIT	TOTAL FAI	TOTAL FAI/SBBS	TOTAL SBBS
I. PRODUCTION						
		PRODUCTION (TONS)	(TONS)	62.936,50	74.045,88	80.559,36
		EXPORT (TONS)	(TONS)	62.936,50	74.045,88	80.559,36
		TOTAL AMOUNT IMPORTED BANANA AT THE EU-28 MARKET (TONS)	(TONS)	58.660,78	72.047,88	79.440,52
		TOTAL AMOUNT EXPORTED BANANA TOWARDS NON-EU-28 COUNTRIES (TONS)	(TONS)	4.275,72	1.998,00	1.158,84
	A	TOTAL SALES IN NATIONAL MARKETS (TONS PEAR YEAR) > QUALITY B,C	(TONS)	3.956,74	5.221,46	5.231,05
	B	TOTAL SALES IN NATIONAL MARKETS (USD PEAR YEAR) > QUALITY B,C	USD	621.700,85	499.856,00	497.528,75
		PRODUCTIVITY TONNE PER HECTARE	TON/HA	34,77	37,44	40,91
		LABOUR PRODUCTIVITY INDICATOR (E.G. WORKERS PER DAY/PER HECTARE/ PER TON PRODUCED)	WORKERS/HA	1,06	1,30	1,29
	A	PRODUCTION COST FOB (FREE ON BOARD) AT THE EXPORTING HARBOR (USD/BOX)	USD	10,99	11,73	9,67
	B	PRODUCTION COST FOT (FREE ON TRUCK) IN EUROPE (USD/BOX)	USD	13,16	16,42	14,21
2. ENVIRONMENTAL PRACTICES AND STANDARS						
		TOTAL SURFACE OF THE PLANTATION	HA	2.365,00	2.365,00	2.365,00
		AVAILABLE PRODUCTION SURFACE	HA	2.236,38	2.236,38	2.236,38
		PLANTED AREA (HA)	HA	1.809,91	1.977,91	1.977,88
		PRODUCTION AREA (HA)	HA	1.809,91	1.977,91	1.969,31

Source: FAI, 2016.

Externally, FAI suffered from the relatively high value of the US dollar compared to the euro, as most of the company's costs are expressed in USD while its income is generated in euros (nearly the entire production is sold in the European Union). In addition, contrary to expectations, the price of bananas on the world market has gone down. As a small player in the global banana market, FAI is price taker.

Internally, a key factor affecting banana production is the fact that the plantation in Jarikaba—the largest of the two plantations—is affected by the banana crop disease moko. According to FAI, the government was aware of the disease before the privatization but did not report it during the due diligence period. As a result, FAI claims the price it paid for SBBS was too high.

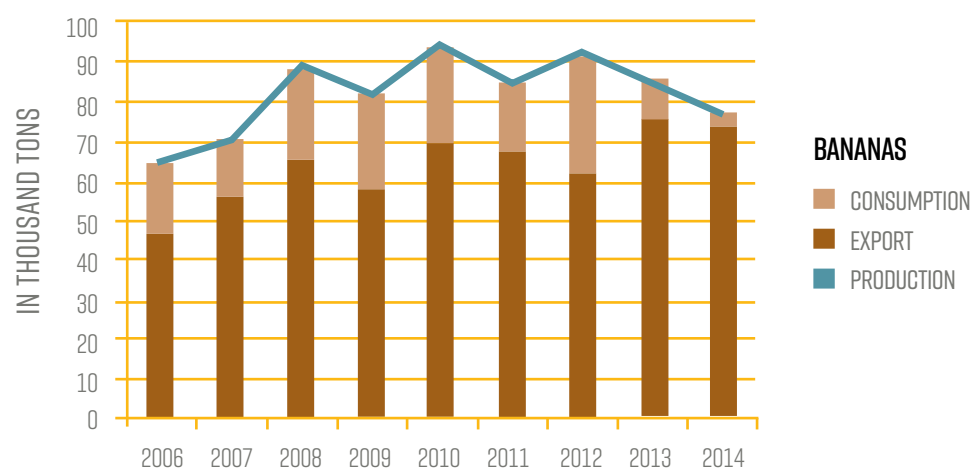
In order to lower labor costs, the company's total workforce was cut to fewer than 2000 workers in early 2016 (down from 2,600 at the time of the acquisition). Even so, FAI remains the second biggest employer in Suriname after the government.

To re-capitalize FAI, the company has asked the government to provide US\$9 million in shareholder loans, and/or to provide guarantees to commercial banks so that it could take out loans. This capital would be used to improve the efficiency of the company's operations and enhance its competitiveness by investing in new cableways and improving irrigation and drainage on the plantations. However, no support has yet been provided by the government. In 2015, FAI's petroleum import tax exemption was revoked, resulting in US\$250,000 to US\$300,000 in additional fuel costs.

Finally, the competitiveness of the second plantation, in Nickerie, also remains limited. Although it is not affected by moko disease, its distance from Paramaribo results in high transportation costs. These costs could be reduced if the mouth of the Nickerie River were to be dredged to allow banana boats access to the port of Nickerie. Estimates are that the additional trucking costs due to the lack of a functioning port in Nickerie that could be used to ship bananas amount to approximately US\$1 million per year.

As part of the 2010 Geneva Agreement on Trade in Bananas, Suriname received an additional €9.3 million over 2012–2016, allocated to investments in infrastructure as well as to improve social and environmental conditions on the estates. This should result in lower costs, increased productivity, and higher production quality to improve the sector's international market position and competitiveness. The additional multi-annual support compensates the Surinamese banana subsector for the reduction in margins for ACP country preferential access to the European banana market from €3.26/box in 2010 to €1.38/box in 2020. Under the EU's Banana Accompanying Measures, the company expects that of the total amount of €9 million that the EU allocated to Suriname to increase the competitiveness of the Surinamese banana sector, €7 million will be disbursed.

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FIGURE 5: BANANA PRODUCTION, CONSUMPTION AND EXPORT IN SURINAME, 2006-2011, IN THOUSANDS OF TONS

Source: Ministry of Agriculture, Agricultural Statistics, 2015.

Aside from state ownership up until 2014, there are no explicit export policies aimed at the banana subsector, and domestic (farm-gate) prices are not available, as the value chain for bananas is integrated and only FOB prices are recorded. As a result, the analysis assumes zero market price support (MPS) to bananas. Further detail can be found in the annexes to this report, which include a more specific overview of the characteristics and costs of the banana value chain in Suriname.

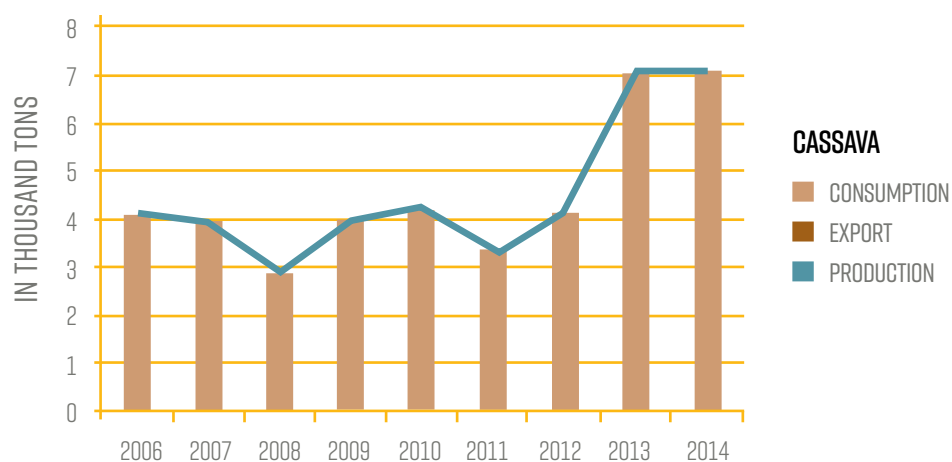
Cassava

Historically, cassava has been produced as a staple food mainly in the interior of Suriname. Currently, however, the Government of Suriname and private investors alike have been increasingly expressing interest in cassava production. In 2010, the Government launched a cassava initiative to boost production of cassava for processing into flour. Cassava flour could be used to produce bread, thereby reducing the wheat import bill. In addition, the 2010 Beleidswitboek Veeteelt (Policy White Paper for Livestock) mentions cassava as a crop that could be processed into animal feed to reduce Suriname's dependency on imported feed. Furthermore, private company Unifood Suriname has begun producing cassava for export as block and grated fresh cassava (frozen) to the European market. Finally, agricultural research institute CELOS is running a long-term cassava improvement program.

The main component of the cassava initiative was the establishment of a cassava flour factory near Zanderij—funded through a

government-backed loan—by Innovative Agro Processing Industries NV (IAP). The factory, which was opened in December 2012, can process up to 30 tons of raw cassava per day. It was announced that the fresh produce would be procured from small producers at a “guaranteed” price of US\$0.60 per kg, which is higher than the international market price. Also, reported farm-gate prices are significantly lower than US\$0.60 per kg, at SRD 1.22 (US\$0.37) on average in 2014. One year after the factory was completed, it was transferred from IAP to the government for a symbolic sale price of SRD 1. The factory was initially included in the budget of the Ministry of Foreign Affairs and then the Ministry of Finance. This goes against the government’s stated objective of reducing state ownership of agricultural enterprises. However, the Ministry of Finance said the decision was justified because “the Government had identified a chance and sought to promote it as part of its responsibility to enable revenue generation and increase employment.” In 2014, the Ministry of Finance provided an SRD 2.4 million loan to IAP for procuring and processing cassava. News reports repeatedly indicated that the factory was not or hardly operating. According to LVV, from 2013–2015, the plant procured a total of 328 tons of cassava at US\$0.60 per kg. However, this does not appear to be supported by the cassava production statistics presented in Figure 6. Although cassava production has doubled, the Ministry’s agricultural statistics indicate that in 2013 and 2014, total volume hovered around 7,000 tons per year.

FIGURE 6: CASSAVA PRODUCTION, CONSUMPTION, AND EXPORT IN SURINAME, 2006–2014, IN THOUSANDS OF TONS



Source: Ministry of Agriculture, Agricultural Statistics, 2015.

In September 2015, the processing plant was transferred to the LVV's budget and responsibility, with the minister announcing an investigation into IAP's operations. A key message was that the procurement price of US\$0.60 per kg was no longer feasible and that a more plausible price would be in the range of US\$0.48-0.50 per kg.¹⁹

Since it is not clear to what extent any subsidies have been provided to the cassava sector, neither the guaranteed purchasing price nor the loans to IAP have been included in the PSE calculations. However, a simulation indicates that if the producer price of US\$0.60 per kg of raw cassava were indeed implemented, farmers would have received a price nearly double the price based on the international reference (105% above the reference price). The total MPS for cassava farmers in 2014 would have been nearly four times higher (SRD 7 million instead of SRD 2 million).

Despite some contact between CELOS research center and the government's Cassava Initiative, surprisingly, Suriname's primary agricultural research institute has not been involved in the initiative in a structural manner. At the same time, private sector stakeholders noted to the research team that information from CELOS regarding its cassava breeding program was not readily available. Although LVV's initial role in coordinating the cassava initiative seems somewhat unclear and limited, it is now expected to become actively involved in IAP's operations and cassava farmer training. Already in 2012, approximately 50 officers of the ministry's agricultural extension department have been trained to disseminate of cassava planting material and information on cassava cultivation to guide small and medium growers in setting up cassava farms. In 2013, approximately 800 farmers nationwide received cassava cultivation training.

Oranges

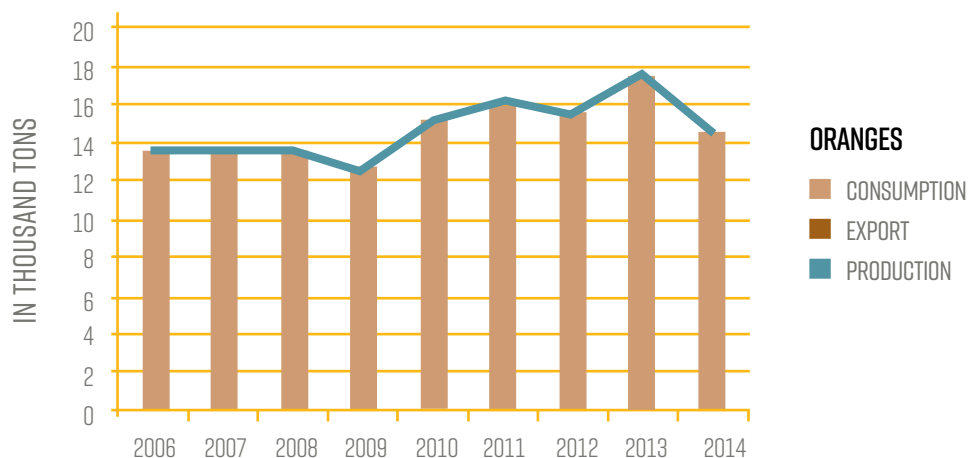
In general, fruits and vegetables are grown by small and part-time producers on a total of approximately 1,000 ha, with small farms ranging from 0.5–2 ha in size. Oranges and citrus fruits in general are produced in Suriname almost entirely for domestic consumption, as can be seen in Figure 7. During the period under review, production remained largely stable.

Citrus fruit production also takes place at Alliance, a former sugar cane plantation in the Commewijne district that is now owned by

¹⁹ See Starnieuws, 13 September 2015.

the government. Operated as a parastatal, it is entirely focused on citrus production. In early 2013, reports emerged that retail prices of oranges had spiked to almost 5 SRD per orange as a result of fruit shortages following years of citrus production neglect.²⁰

FIGURE 7: ORANGE PRODUCTION, CONSUMPTION, AND EXPORT IN SURINAME, 2006–2014, IN THOUSANDS OF TONS



Source: Ministry of Agriculture, Agricultural Statistics, 2015.

In January 2016, LVV announced that it had begun growing orange tree cuttings on 10 ha of the state farm in Wanica. In 2018, the “pera type” orange trees will start to bear fruit and will be sold to private farmers in an effort to boost citrus production.²¹ The Alliance plantation will be overhauled for the same purpose under the 2016–2018 Recovery and Stabilization Plan. No price policy or price intervention measures are in place in Suriname that distort the producer price of oranges.

²⁰ ‘Schaarste sinaasappel door verwaarlozing aanplant’, DB Suriname, viewed here: <http://www.dbsuriname.com/dbsuriname/index.php/schaarste-sinaasappel-door-verwaarlozing-aanplant/>

²¹ See Starnieuws, 16 January 2016, <http://www.starnieuws.com/index.php/welcome/index/nieuwsitem/33294>

Meat

In the early 1990s, Suriname's self-sufficiency rate for livestock products stood at near 100%; today, Suriname is a net importer of all livestock products, as current production levels do not meet the domestic demand for these products. Overall, the sector attracts low levels of investment compared to crops. In several subsectors, including beef cattle, dairy cattle and poultry, the number of farms has been decreasing. For the vast majority of farms, animal husbandry is a part-time economic activity. In addition, lack of domestic feed production has driven up production costs for most meat products, and the processing industry is poorly developed.²²

Poultry meat²³ is the most popular source of animal protein in Suriname. With a consumption rate of almost 50 kg per capita, the Surinamese have among the highest per-capita poultry consumption in the world.

The macro-economic imbalances and foreign exchange shortages of the 1980s and 1990s have had a significant effect on the Surinamese poultry subsector. With the sector dependent on imported feed, farmers in the early 90s faced limited availability of foreign exchange to purchase chicken feed and medicines, which together constitute the main cost component of poultry production. This led to a scarcity of poultry meat and high consumer prices. To ensure the availability of affordable chicken for the population, the government lifted the import ban on poultry meat and the first bulk shipment of leg quarters was imported in 1992. This resulted in benefits for consumers, who pay lower market prices for poultry compared to previously and to prices in other countries in the region that maintain high protection levels for poultry (such as Jamaica, which has a 260% tariff in place, while the tariff in Barbados is 184% and in neighboring Guyana, 100%). The growing demand for lower-priced imported chicken was reflected in solid growth in the share of imported poultry meat. Approximately 75%-80% of chicken demand is met by imports. As described in the value chain analysis on poultry in Annex IV, however, the poultry market in Suriname remains divided; imported products are not considered perfect substitutes for domestically raised chicken. Consumers have a strong preference for domestic chicken, which sells at a premium of around 100% over poultry meat imported from the United States.

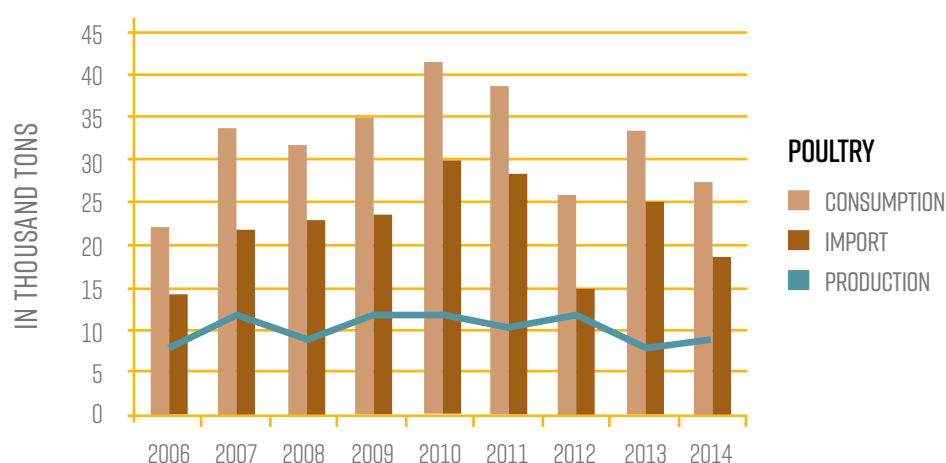
POULTRY MEAT IS THE MOST POPULAR SOURCE OF ANIMAL PROTEIN IN SURINAME. WITH A CONSUMPTION RATE OF ALMOST 50 KG PER CAPITA, THE SURINAMESE HAVE AMONG THE HIGHEST PER-CAPITA POULTRY CONSUMPTION IN THE WORLD.

²² Ministry of Agriculture, Animal Husbandry and Fisheries, 2011.

²³ A more detailed analysis of the poultry value chain and its cost structure is provided in annex III.

The low competitiveness of the sector vis-à-vis imports from Brazil and the US seems to be taking its toll on poultry production. In the period under review, overall poultry production dropped from 7 million animals slaughtered in 2012 to 5.2 million animals slaughtered in 2014. During the same period, poultry meat imports increased by nearly 50% from 12,408 tons to 17,960 tons. As a result of the current financial crisis and the decreasing exchange rate, local poultry farmers may be better able to compete with imports, which are becoming more expensive in the Surinamese market.

FIGURE 8: POULTRY PRODUCTION, CONSUMPTION, AND IMPORTS IN SURINAME, 2006-2014, IN THOUSANDS OF TONS



Source: Ministry of Agriculture, Agricultural Statistics, 2015.

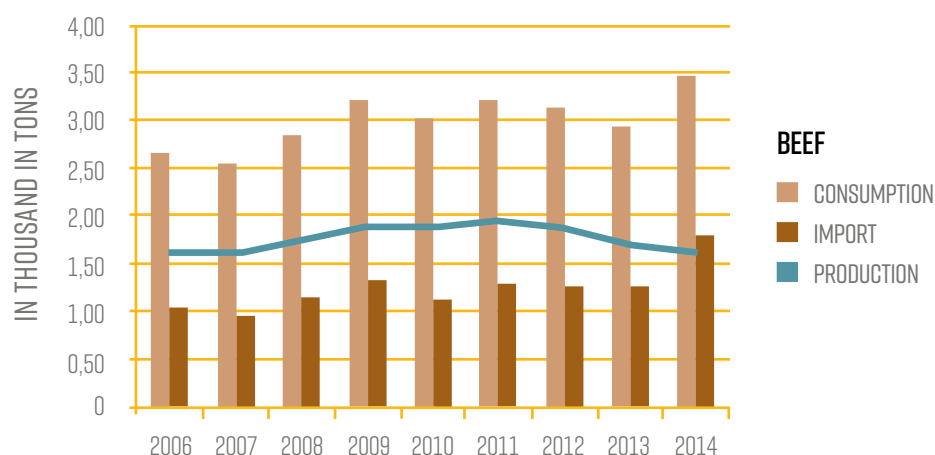
As can be seen in Figure 9, beef consumption in Suriname grew steadily until 2009 and then stabilized. The subsector is relatively small: although the Ministry of Agriculture lists around 1,000 cattle farms, only 24 of them have 50 or more head of cattle, and just six farms have a herd of more than 200 animals. Also, the total number of animals is decreasing gradually. In 2012, the total herd amounted to 57,136 head. By 2014, that number had fallen to 36,138 head. Pork production is even more concentrated, as pig breeding takes place in around 150 farms in the districts of Wanica, Saramacca and Coronie. The total number of animals is relatively stable at 32,000-36,000.

Overall, apart from dairy, for which an active minimum producer price and maximum retail price are set by government regulation, livestock value chains in Suriname are not distorted by any governmental price policy measures or interventions.

As shown in Figure 10, pork consumption is also growing steadily. Both pork and beef subsectors remain dependent on imported feed components that limit their competitiveness and capacity to compete with beef and pork imports. The dependency on imported feed components for cattle is related to the average farm size. In Suriname, cattle are mostly raised in a semi-intensive way in which the animals are provided with additional feed. Animals bought from other farms are typically fattened for beef production through supplementary feeding, while cattle raised on the farm are more often grass-fed.²⁴ Less dependence on imported feed through, for example, more extensive farming and pasture-based production would increase the competitiveness of the cattle subsector. Under the current depreciation of the local currency, the sector is becoming better able to compete with imports as they become more expensive. However, farmers will also be faced with increased feed costs.

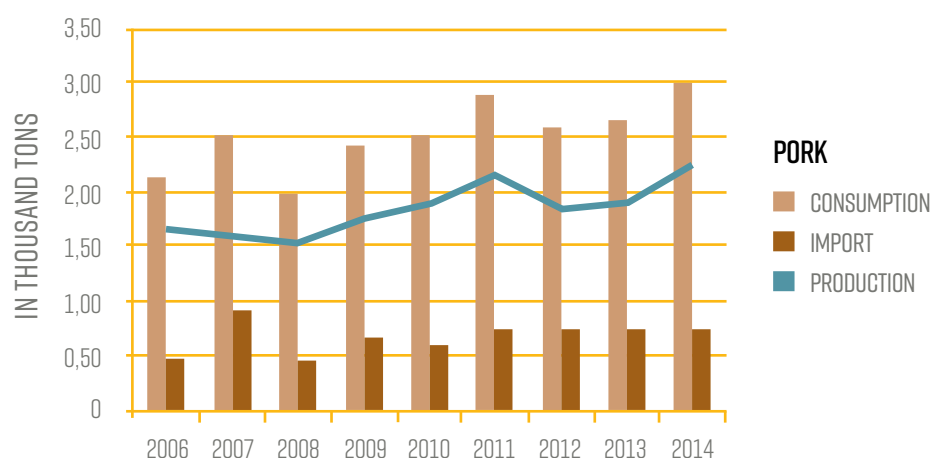
In both the pork and beef value chains, there are no specific government price policy interventions that distort the producer or retail price.

FIGURE 9: BEEF PRODUCTION, CONSUMPTION, AND IMPORT IN SURINAME, 2006-2015, IN THOUSANDS OF TONS



Source: Ministry of Agriculture, Agricultural Statistics, 2015.

²⁴ Ministry of Agriculture, Animal Husbandry and Fisheries (2011).

FIGURE 10: PORK PRODUCTION, CONSUMPTION, AND IMPORT IN SURINAME, 2006–2014, IN THOUSANDS OF TONS

Source: Ministry of Agriculture, Agricultural Statistics, 2015.

Milk

The milk subsector is the most regulated subsector of the Surinamese agriculture. The Melkcentrale Paramaribo (MCP) is a parastatal that is bound to buy all raw milk offered by farmers at a fixed price. It is estimated that approximately 580 producers, or almost 60% of all dairy farmers, sell to MCP, and the processing plant produces 80% of all domestically produced milk. The total raw milk sold to MCP has been steadily declining throughout the 2012–2014 period. The MCP purchased 4.07 million liters of farm milk in 2014, 4.80 million liters in 2012, and over 5 million liters in 2011.

Raw milk accounts for approximately 60%-70% of MCP's total production, while 30%-40% consists of imported milk powder, primarily from The Netherlands. However, the share of the latter segment is increasing. In 2014, 40% of MCP's production came from processed milk powder, while in 2012, the share was 30%. The other three non-state owned dairy processors are not required to buy raw milk from farmers and only process imported milk powder. The fixed price of milk has increased significantly in recent years, most recently in 2016, when the retail price per liter rose to SRD 4.95.

The price of milk, both at retail and farm gate levels, is set by the Ministry of Agriculture and the Ministry of Trade and Industry. The farm gate price is largely based on the cost price of milk. This cost price, on its turn, is determined by a committee

which has the above-mentioned ministries, as well as the Union of Dairy Cattle Farmers and the Association of Surinamese Dairy Farmers (VSMB) as its members. The official minimum price for farmers has been increased to SRD 2,75 in April 2016, after being set at SRD 2,5 per litre for several years including the entire 2011 – 2014 period.

In the medium term, the price policy in the milk subsector is unsustainable because it keeps unproductive and unprofitable farms in operation and reduces the need for producers to make productivity-enhancing investments. Poor productivity in the milk subsector has been confirmed by various reports and sector stakeholders.²⁵ Productivity of dairy farms is determined by the quality of grassland, the quality of feed, the genetic quality of the animals, and the climate. Representatives of the Association of Surinamese Milk Farmers (SVMB) indicate that public policy does not sufficiently address the three areas where government action can have an influence:

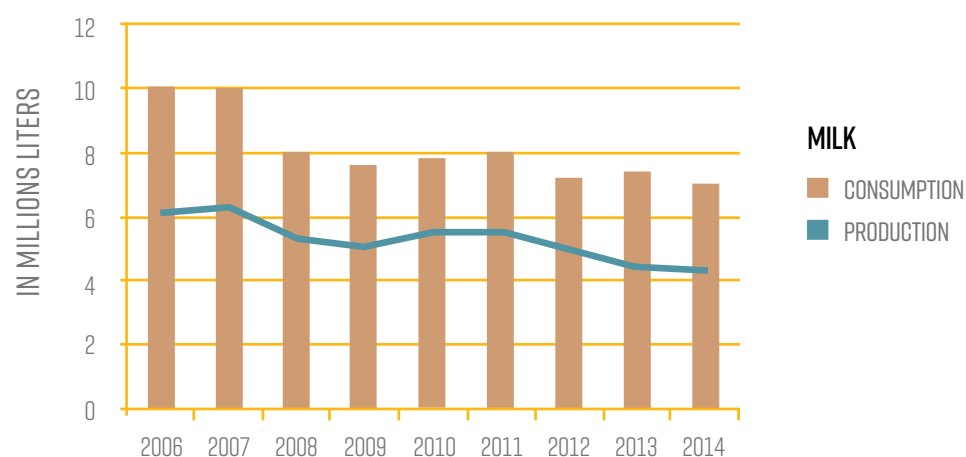
1. The government's quality control of feed is insufficient and should improve to ensure it meets the necessary quality standards;
2. Areas which have been designated for dairy cattle grazing (such as the Reeberg area) should be better protected to prevent it from being divided up for residential development. This is particularly important as most dairy farming is located near Paramaribo;
3. Animal quality remains sub-optimal due to the lack of breeding. In the past, the State Farm provided breeding cattle, but it is no longer in operation.

As a result, land, feed and animal quality constrain the productivity of the small dairy farms.

Despite government regulation of the subsector through price policies and state ownership of the Melkcentrale, experts have indicated that the subsector needs to modernize to survive, mainly by improving product quality through better feed, joint procurement of inputs by farmers, more efficient milk collection, and improved quality control. This should bring down milk production costs in Suriname and allow the government to abandon its price setting policies.²⁶

²⁵ Interviews with representatives of the Association of Surinamese Milk Farmers, 11 February 2016; Wouters (2010); Report of a mission to the Vereniging Surinaamse Melkveehoudersbedrijven Bond (VSMB), PUM Netherlands Senior Experts, 18 July 2012.

²⁶ Report of a mission to the Vereniging Surinaamse Melkveehoudersbedrijven Bond (VSMB), PUM Netherlands Senior Experts, 18 July 2012.

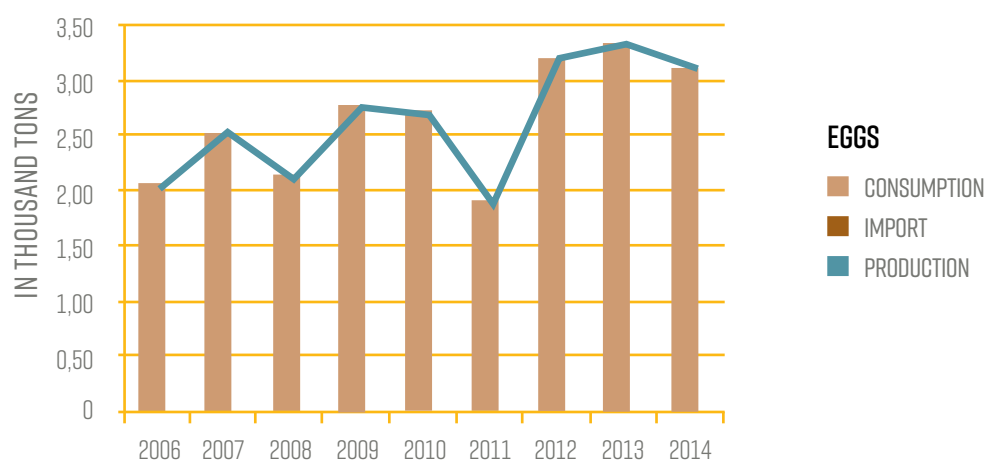
FIGURE 11: MILK PRODUCTION AND CONSUMPTION A IN SURINAME, 2006-2014, IN MILLIONS OF LITERS

Source: Ministry of Agriculture, Agricultural Statistics, 2015.

Eggs

All eggs consumed in Suriname are domestically produced, and Suriname was self-sufficient in egg production for all years in the period under review. The total number of broilers in the country was 214,000 in 2009. The main challenge for the production of eggs remains the high cost of feed for broilers, as most feed components for poultry are imported.²⁷ There are no explicit or implicit price policy interventions that distort the price of eggs in Suriname.

²⁷ Ministry of Agriculture, Animal Husbandry and Fisheries, Beleidswijtboek Veeteelt, 2011.

FIGURE 12: EGG PRODUCTION, CONSUMPTION, AND IMPORT IN SURINAME, 2006–2014, IN THOUSANDS OF TONS

Source: Ministry of Agriculture, Agricultural Statistics, 2015.

2.5 Trade Regulations

General orientation of trade policy

Suriname's general trade policy oriented toward liberalization is aimed at improving efficiency and identifying Suriname's key strengths as an open economy with vast natural resources. The government acknowledges that in a globalized and increasingly open market with less trade preferences and fierce competition, economic diversification and competitiveness are key. In order to benefit from economic opportunities in the international market, the country has recognized the need to increase the engagement of the private sector and shift the government's role in economic development from leadership to facilitation. These challenges are also valid for the country's agricultural sector. The Development Plan 2012–2016 highlights the importance of export growth as a crucial condition for development in the medium term.

Suriname's trade policy is strongly influenced by its membership of the Caribbean Community (CARICOM) and the World Trade Organization (WTO). Suriname joined CARICOM in 1995 and entered the group's single market one year later. The WTO indicates that Suriname appears to be well positioned to benefit from efforts to liberalize trade and to reduce international market distortions, given that for most of its exports it does not depend on non-reciprocal preferential treatment, as it sells its minerals mainly in competitive markets. Exceptions to this are

rice and bananas, which benefit from ACP trade preferences to enter the European market.

Measures affecting exports of agricultural products

All exports are subject to a consent fee of 0.1% and a statistical fee of 0.5%. These fees apply to exports to all destinations (including the CARICOM) and are calculated on the basis of FOB value.²⁸

Rice exports are subject to an implicit export tax in the form of an inspection fee. This tax amounts to SRD 10 per ton for the entire period under review. Of this amount, SRD 6 is used to fund the Anne van Dijk Rice Research Centre in Nickerie.

The Ministry of Trade and Industry has confirmed that the government does not grant any export subsidies to any sector.

Measures affecting imports of agricultural products

Under the Ministry of Finance, the Customs and Excise Department (CED) is responsible for implementation of customs and duty collection and processing. Suriname grants duty-free access to all imports from the CARICOM area.

A 20% tariff is applied to nearly all agricultural imports from non-CARICOM countries, including meat products such as poultry. In the WTO, Suriname did not reserve the right to use a special agricultural safeguard or apply export subsidies. The applied tariffs vary widely between products, but have a ceiling of 50% for certain prepared foodstuffs, while other products (mainly of basic need, such as wheat and maize flour) are duty-free.

Based on the 1997 Law on Turnover Tax, a turnover tax of 10% is applied to most domestically-produced and imported goods. For a number of food products, a rate of 0% applies. This includes all products under review, such as rice, meat products, milk, eggs, and fruits, as well as other agricultural commodities such as wheat and potatoes. The tax is levied at the point of sale by the manufacturer. For imports, the 10% tax is calculated on the basis of the import value of the goods (CIF) plus all other duties and charges.²⁹

**THE MINISTRY OF TRADE AND
INDUSTRY HAS CONFIRMED
THAT THE GOVERNMENT DOES
NOT GRANT ANY EXPORT
SUBSIDIES TO ANY SECTOR.**

²⁸ Information provided by Ministry of Trade and Industry, 2013.

²⁹ World Trade Organization, 2013.

Measures affecting production, trade and prices

A price control framework is in place for 44 products of basic necessity. This framework allows the Ministry of Trade and Industry to intervene and set prices of any good on the list if it rises by more than 15%.³⁰ During the food crisis in 2008, the government negotiated with the business sector to restrict profit margins for both importers and retailers to 7%.³¹ The authority of the Ministry of Trade and Industry to apply price controls (on an ad-hoc basis) is established in the 1996 Price Setting Law. Price controls as well as an allowable markup band at wholesale and retail levels can be enforced by the Economische Controle Dienst (Economic Inspection Service). The full list of products was not obtained during preparation of this report, but a 1999 report from ECLAC on trade policy in the CARICOM mentions cheese, peanut butter, onion, beans, peas, tea, and flour as among these products. During the research conducted for this study, no cases of price setting by the Government were detected. However, there have recently been some calls for more intensive price controls (by consumer organizations as well as labor unions) on retailers' mark-ups to lower the prices of basic food supplies.³²

2.6 Other Measures

Exchange rate policy

The local currency of Suriname is the Suriname Dollar (SRD). In 2011, the Central Bank of Suriname (CBvS) decided to carry through a devaluation of the local currency by 20%, from SRD 2.78 to SRD 3.35 per USD). In addition, a band of SRD 3.25–3.35 per USD was established within which all transactions have to take place. As a result, for the entire period under review (2012–2014), the official exchange rate used in the calculations is SRD 3.25 per US Dollar. As of the drafting of this report, the SRD had further depreciated to SRD 7.5 (December 2016) per US Dollar.

The impact of the depreciation of the Surinamese Dollar on the levels of support to the agricultural sector cannot be reliably estimated. The strong depreciation against the US Dollar (over 100%

³⁰ World Trade Organization (2013).

³¹ Cable US Embassy (2008), viewed at <http://www.cablegatesearch.net/cable.php?id=08PARAMARIBO177>

³² See Dagblad Suriname, 'Prijsstijgingen doen armoede toenemen' (27 July 2013), <http://www.dbsuriname.com/dbsuriname/index.php/prijsstijgingen-doen-armoede-toenemen/>

between 2014 and 2016) increases the competitiveness of Suriname's most important agricultural export commodities, in particular rice and bananas.

For the rice sector, the depreciation means that rice has become more competitive in the international market and reports indicate that rice exports may increase in 2016. However, the effects on farm profitability may be dampened by the growing production costs, as prices of fuel and fertilizer (which are both imported) have also increased.

For the banana sector, the depreciation of the SRD increases competitiveness but only to a limited extent; FAI exports all its bananas to Europe and payments are made in Euros. Over the last years, the Euro has also lost significant value against the US Dollar.

For the poultry sector, the depreciation means that imported chicken from Brazil and the United States has become more expensive, and local poultry producers are better able to compete against imported poultry products. However, given that feed costs represent 70% of total production costs of poultry and that nearly all feed is imported, it is difficult to assess the exact impact of the depreciation on the poultry sector.

Given the potentially strong impacts of the changes in the SRD exchange rate on support to the agricultural sector and to Suriname's main agricultural value chains, it is recommended that an update of PSE indicators is carried out in 2017 in order to track and monitor the incentives to agricultural production, in particular under the government's efforts to strengthen the agricultural sector as part of the Stabilization and Recovery Plan.

Subsidized credit

The Agricultural Credit Fund (AKF) was established in 2007 and was funded with EUR 2.3 million of capital from the Netherlands' development assistance resources. It operates as a revolving fund and is managed by the Landbouwbank (Agricultural Bank). The Landbouwbank is a financial institution fully owned by the Government of Suriname and is responsible for 5% of all credit in Suriname. An additional €1 million of capital was provided by the government to the AKF from the Fund for Economic and Social Structure Improvement (FESS), with a particular instruction to increase subsidized lending to the rice subsector. The maximum loan amounts for rice producers are SRD 500,000 and for non-rice

FOR THE RICE SECTOR, THE DEPRECIATION MEANS THAT RICE HAS BECOME MORE COMPETITIVE IN THE INTERNATIONAL MARKET AND REPORTS INDICATE THAT RICE EXPORTS MAY INCREASE IN 2016.

farmers SRD 200,000. The interest rate for all loans is 6.75%, against a current market rate of 11-13%.³³ The average grace period is 6 months. In July 2013, the portfolio of the AKF consisted of 191 loans for a total amount of SRD 19.4 million. Loans to the rice subsector represent 37%, or SRD 7.2 million of the total portfolio.

Tax Concessions

Companies in the agriculture, livestock, and fisheries sectors are eligible for a partial exemption of import duties (90%) for import of capital assets with a minimum value of USD 1,000. In addition to the import duty exemption, eligible goods are also exempted from turnover tax and partially exempt from the statistical fee of 0.5% over the CIF value of imports.

In accordance with the Raw Material Regulation (Grondstoffenbesluit), which was introduced in 1997 in response to the private sector's demands to bring Suriname's tax concession structure in line with other CARICOM member states, producers and manufacturers benefit from exemption of import duties on raw materials, inputs, semi-finished products and packing materials. The regulation states that these materials are only exempt from inputs if they are imported to be used in production processes in a number of sectors, including agriculture, livestock and fisheries.³⁴

Food subsidies

A baby food subsidy is in place to reduce the cost of baby food for consumers. The subsidy covers approximately 50% of the commercial retail price. In 2011, cans of subsidized baby food were priced at SRD 4.75 each. In 2014, the Ministry of Health announced that the subsidy would be abolished but this decision was reversed by the president.³⁵ However, for 2012–2014, this study was not able to track the total cost of the baby food subsidy in the Ministry of Health budget. Further analysis is needed to include the subsidies in the calculations for these years.

³³ Source: Interviews with Landbouwbank management, 2013.

³⁴ Coffeng, 2010.

³⁵ See <http://www.srherald.com/suriname/2014/04/10/president-besluit-babyvoeding-te-blijven-subsidieren/>

3. ESTIMATES OF SUPPORT TO AGRICULTURE



3.1 Methodology

The application of the PSE methodology by the OECD (OECD, 2010) provides a standardized quantitative method of measurement of support to the agricultural sector. It has officially been calculated by OECD for various countries since 1987. The IDB Agrimonitor initiative has applied the methodology since 2003 to 18 of its member countries in Latin America and the Caribbean.

Quantitative policy analysis is based on the comparison of the observed market conditions with the benchmark situation. The aggregated effect of the policy in the supply-demand model is measured by the price ratios in the “with” and “without program” situations. Thus, output producers’ prices (farm gate prices) are compared with prices expected without policy interventions, e.g. market equilibrium or reference prices. The effect of public policy is measured by the difference between market and reference

prices. If the difference between market and reference output prices is positive, policy causes benefits to producers. If negative, policy leads to implicit taxation of the farmers.

The methodology measures support to producers (PSE and related indicators), consumers (CSE, CSCT), to the sector as a whole (GSSE), and total policy transfers to the agricultural sector (TSE). For three commodities, the effective rate of protection (ERP) indicators were also calculated in order to take into account the support policy along the value chain. See Annex 1 for the glossary of the indicators used in this section.

Selection of commodities

This report updates and builds up on the IDB-FAO study of agricultural policy in Suriname carried out in 2013.³⁶ Since the PSE indicators are commodity-specific, a commodity selection was carried out to ensure Suriname's most important products are covered by the analysis and to maximize its policy relevance. The commodity selection attempted to include both pre-defined, standard MPS commodities, as well as the country's most potentially competitive commodities.

The methodology of the OECD prescribes that all commodities with a less than 1% share in total value of agricultural production are excluded from support estimates, with the goal of the commodity selection process being that the sum of the production values of the commodities included covers at least 70% of the total value of agricultural production over the previous three years.

Despite their recognized growth potential, fresh vegetables have not been included in the analysis, as the subsector includes a broad mix of different products that make it unsuitable for domestic and international price comparison. In addition, the share of the individual vegetable products in total value of agricultural production was relatively low and volatile across years. Therefore, no vegetable products were selected.

The commodities selected for the PSE in Suriname are the same as in the previous study and are listed in Table 6.

**THE COMMODITY
SELECTION ATTEMPTED
TO INCLUDE BOTH PRE-
DEFINED, STANDARD MPS
COMMODITIES, AS WELL
AS THE COUNTRY'S MOST
POTENTIALLY COMPETITIVE
COMMODITIES.**

³⁶ Derlagen (2013).

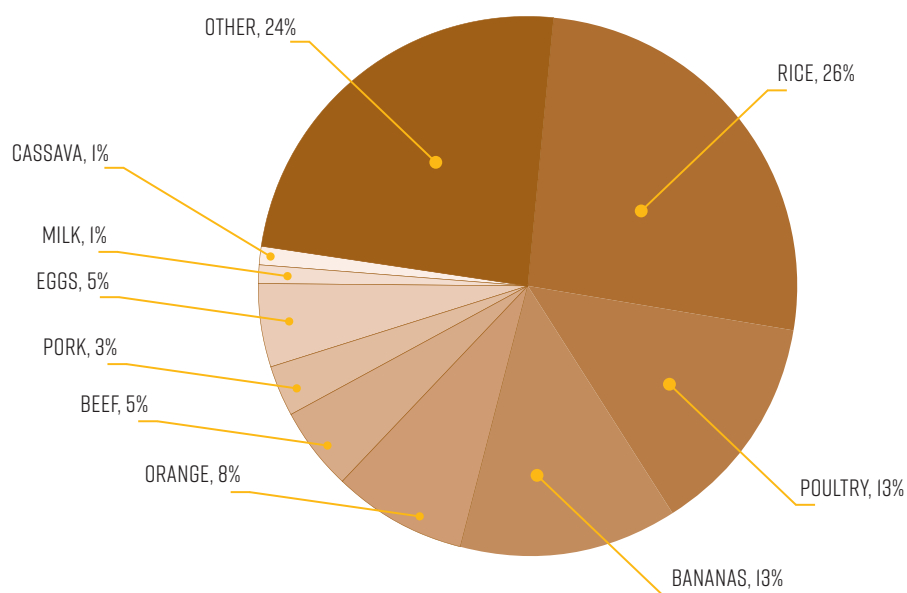
TABLE 6: OVERVIEW OF SELECTED COMMODITIES, ACCORDING TO TRADE STATUS

SELECTED EXPORT COMMODITIES	SELECTED IMPORT COMMODITIE
RICE	POULTRY
BANANAS	BEEF
ORANGES	PORK
CASSAVA	EGGS
	MILK

The average share of MPS commodities in the total value of Suriname's agricultural production of these commodities equaled 76% during the 2012–2014 period. Crops selected for MPS calculation averaged 72% of total crop production in 2012–2014, while livestock commodities covered 99% of total livestock production in Suriname.

FIGURE 13: SELECTION OF MPS COMMODITIES, SHARE IN TOTAL VALUE OF AGRICULTURAL PRODUCTION 2012-2014, IN %

COMMODITIES COVERED - SHARE IN TOTAL VALUE OF PRODUCTION



Source: Author's estimates based on LVV data.

As follows from Table 6, most of the selected crops are exported, while all livestock commodities are imported. Rice and bananas are the main agricultural commodity exports and each contribute around 40% to Suriname's total agricultural exports. However, their share in the total value of exports of the country represents only 1.3%-2% each, as the export sector has been dominated by gold and oil. The export of fruits and vegetables is emerging but not stable. Though the government has tried to pursue the development of the cassava subsector, this has not yet been successful and export of cassava is almost negligible.

All selected livestock commodities, including poultry, beef, pork, eggs, and milk, are net imported, meaning that domestic consumption exceeds production for poultry, beef, pork, eggs, and milk. Poultry is a particularly popular source of protein in Suriname, and per capita consumption of chicken ranks among the highest in the world. It is also the largest agricultural import, followed by non-locally produced products such as wheat, maize, wheat flour, processed foods, sugar, and non-alcoholic beverages. Import substitution remains one of the policy goals in this sector.

Description of data used

The main source of agricultural statistics in Suriname is the Ministry of Agriculture, Animal Husbandry, and Fisheries. The Ministry's Department of Planning and Development annually publishes a detailed compendium of production, trade and price data. The departments of livestock and fisheries each have their own unit in charge of data collection and analysis for their respective subsectors. International databases provide additional sources for statistics, particularly FAOSTAT and UN COMTRADE. The analysis covers the years 2006 to 2014. For the years 2006–2011, indicators were already available. This report used data from 2012, 2013, and 2014 to update the PSE indicator dataset for that period.

Domestic prices

Domestic prices for all commodities are farm-gate prices as collected and reported in the Agricultural Statistics Compendium of the Ministry of LVV.

Reference prices and margin adjustments

Reference prices are calculated in different ways depending on the trade status of the product. For exported commodities (rice, bananas, cassava, and oranges), the reference prices are average export unit values, adjusted for processing, transportation and handling costs to make them comparable with domestic farm gate prices.

Table 9 provides an overview of the data used to calculate the PSE indicators, including the source of the international reference price and the adjustments applied to obtain comparable prices.

TABLE 7: OVERVIEW OF DATA USED, EXPORTED COMMODITIES

COMMODITY (EXPORTS)	REFERENCE PRICE	MARGIN ADJUSTMENT	OTHER ADJUSTMENTS
RICE	AVERAGE EXPORT UNIT VALUE (FOB) PRICE FOR CARGO RICE. CARGO RICE WAS CHOSEN FOR BETTER COMPARABILITY WITH FARM-GATE COMMODITY. (SOURCE: AGRICULTURAL STATISTICS, LVV)	AS REPORTED BY THE ASSOCIATION OF RICE EXPORTERS (VRE), THE ASSOCIATION OF SURINAMESE PADDY FARMERS (SPBA), N.V. SUN RICE AND LOGISTICS COMPANY CMA CGM SURINAME N.V. ALL COSTS HAVE BEEN MODIFIED TO REFER TO PADDY RICE USING THE QUANTITY ADJUSTMENT FACTOR WHEN RELEVANT.	QUANTITY ADJUSTMENTS ARE MADE TO TAKE INTO ACCOUNT PRODUCTION OF PADDY RICE AND EXPORTS OF MILLED RICE. SALE OF BYPRODUCTS IN THE COUNTRY IS DISCOUNTED FROM REFERENCE PRICE.
BANANAS	AVERAGE EXPORT UNIT VALUE (FOB) PRICE OF BANANAS. (SOURCE: AGRICULTURAL STATISTICS, LVV AND FOOD AND AGRICULTURE INDUSTRIES N.V. (FAI))	NO ADJUSTMENT WAS MADE; DOMESTIC FARM-GATE PRICES FOR BANANAS ARE NOT AVAILABLE AND NO POLICY DISTORTIONS IN THE BANANA VALUE CHAIN WERE IDENTIFIED. FOR THAT REASON, THE SUPPORT WAS SET TO ZERO.	
CASSAVA	REFERENCE PRICE IS FOB EXPORT AVERAGE UNIT VALUE FOR CASSAVA ROOT (SOURCE: UN COMTRADE)	MARGIN ADJUSTMENT FOR CASSAVA INCLUDES 20% STORAGE, HANDLING, AND TRANSPORTATION COSTS AND 2% PORT EXPENSES.	THROUGH INTERVIEWS WITH STAKEHOLDERS IN THE CASSAVA SUBSECTOR IT WAS CONFIRMED THAT NO CASSAVA IS CURRENTLY USED FOR ANIMAL FEED. AS ALL CASSAVA PRODUCED

COMMODITY (EXPORTS)	REFERENCE PRICE	MARGIN ADJUSTMENT	OTHER ADJUSTMENTS
			IS USED FOR HUMAN CONSUMPTION, NO FEED ADJUSTMENTS HAVE BEEN APPLIED.
ORANGES	REFERENCE PRICE IS FOB AVERAGE EXPORT UNIT VALUE. (SOURCE: AGRICULTURAL STATISTICS, LVV)	ADJUSTED FOR 30% STORAGE, HANDLING, AND TRANSPORTATION COSTS (DATA FROM THE PSE REPORT FOR JAMAICA) AND 2% PORT EXPENSES.	

TABLE 8: OVERVIEW OF DATA USED, IMPORTED COMMODITIES

COMMODITY (IMPORTS)	REFERENCE PRICE	MARGIN ADJUSTMENT	OTHER ADJUSTMENTS
POULTRY	UNIT VALUE OF IMPORTS FROM BRAZIL FOR HS 02.07.12 "MEAT OF FOWLS OF SPECIES GALLUS DOMESTICUS, NOT CUT IN PIECES, FROZEN."	BASED ON THE MARKETING COSTS AS REPORTED BY THE ASSOCIATION OF SURINAMESE POULTRY FARMERS AND CONTAINER COMPANY CMA CGM SURINAME N.V.	QUALITY DIFFERENCES AND CONSUMER PREFERENCES FOR DOMESTIC CHICKEN TAKEN INTO ACCOUNT BASED ON RETAIL PRICE RATIOS BETWEEN DOMESTIC POULTRY AND IMPORTED POULTRY FROM BRAZIL.
PORK	AVERAGE IMPORT UNIT VALUE CIF PRICE, ADJUSTED FOR PROCESSING CALCULATED AS % OF BORDER PRICE (SOURCE: LVV)		
BEEF	THE REFERENCE PRICE IS BASED ON THE AUSTRALIAN SALEYARD COW PRICE, QUEENSLAND, MINUS BY-PRODUCT VALUE, PLUS PROCESSING COST, PLUS TRANSPORT COST. THIS REFERENCE WAS ALSO USED BY THE OECD FOR MEXICO AND BY THE IDB FOR SOME OF THE LAC COUNTRIES.	NO ADJUSTMENT NEEDED AS THE REFERENCE PRICE IS AT FARM-GATE LEVEL. TRANSPORTATION COSTS FROM AUSTRALIA TO THE USA WERE USED AS A PROXY OF TRANSPORTATION COSTS TO SURINAME.	REMARK: DUE TO LOW VOLUMES OF TRADE AND LACK OF RELIABLE TRADE STATISTICS, THE REFERENCE PRICE FOR BEEF AND EGGS WERE TAKEN FROM THE LARGEST WORLD PRODUCERS AND ADAPTED TO TAKE INTO ACCOUNT PROCESSING, TRANSPORT, AND MARGINS, IN ACCORDANCE WITH OECD AND IDB PRACTICE IN OTHER COUNTRIES IN THE REGION.

COMMODITY (IMPORTS)	REFERENCE PRICE	MARGIN ADJUSTMENT	OTHER ADJUSTMENTS
MILK	FRESH MILK IS NOT A TRADABLE COMMODITY. THEREFORE, THE BORDER PRICE OF MILK IS A CALCULATED IMPLICIT VALUE, CALCULATED FROM THE PRICES OF BUTTER AND SKIMMED MILK POWDER, USING THE COMPONENTS: MILK FAT NON-FAT-SOLIDS CONTAINED IN RAW MILK, BUTTER, AND SKIMMED MILK POWDER RESPECTIVELY (SOURCES: FAT CONTENT OF MILK – MINISTRY OF LVV, NON-FAT SOLIDS CONTENT – ESTIMATIONS FROM OTHER LAC COUNTRIES, IMPORT VALUES OF BUTTER AND MILK POWDER – MINISTRY OF TRADE AND INDUSTRY).	THE REFERENCE PRICE OF MILK AT FARM GATE IS THE IMPLICIT MILK BORDER PRICE ADJUSTED FOR PROCESSING COSTS (AVERAGE OF PROCESSING COSTS IN FOUR MAIN MILK PRODUCING COUNTRIES (AUSTRALIA, EU, NEW ZEALAND, US).	
EGGS	EGGS ARE CONSIDERED NON-TRADABLE. DOMESTIC PRODUCTION COVERS 99% OF CONSUMPTION. US FARM-GATE PRICE WAS TAKEN AS A REFERENCE, AND ADJUSTED SUBTRACTING PRODUCTION SUBSIDIES AND ADDING INSURANCE AND FREIGHT US-SURINAME (=30 USD/T (SOURCE: DATA FROM PERU). BECAUSE OF THE NON-TRADABLE STATUS, THE PRICE US FARMERS RECEIVE FOR THEIR OUTPUT WAS USED AS REFERENCE.		REMARK: DUE TO LOW VOLUMES OF TRADE AND LACK OF RELIABLE TRADE STATISTICS, THE REFERENCE PRICE FOR BEEF AND EGGS WERE TAKEN FROM THE LARGEST WORLD PRODUCERS AND ADAPTED TO TAKE INTO ACCOUNT PROCESSING, TRANSPORT AND MARGINS, IN ACCORDANCE WITH OECD AND IDB PRACTICE IN OTHER COUNTRIES IN THE REGION.

Excess feed costs

Through interviews with stakeholders in the cassava subsector, it was confirmed that no cassava is currently used for animal feed. As all cassava produced is used for human consumption, no feed adjustments have been applied.

Budget data

Government budgets are available for 2009–2016, for all ministries. These budgets contain the actual expenditures for 2009–2013 that were used in the analysis. The 2016 budgets of some Ministries (including LVV) did not include actual expenditures of 2014. In those cases, additional information on budget execution was requested. For earlier figures of 2006–2009, no budget data was available.

The following organizations' budgets were included in PSE/GSSE calculations: Ministry of Agriculture, Animal Husbandry and Fisheries; Ministry of Public Works; Ministry of Spatial Ordenation, Land and Forestry; Ministry of Regional Development; and the Ministry of Education.

The budgets include both administrative and development components. However, administrative costs—such as salaries of Ministry staff—are not included in the calculations.

The Suriname budget provides descriptions of the programs, however, the programs are generalized and most of them include various types of transfers in terms of PSE/GSSE classification. If the program is mostly designed to provide on-farm services to producers, it was included in PSE, even though part of budget costs of the program might include general services component. The budget expenditures on livestock programs was allocated 25% to PSE (small ruminants support, breeding cattle purchases, and on-farm inspections and training) and 75% to GSSE (Research and Development and Inspection Services).

It has been assumed that the budget is evenly spent during the year, and thus spending was redistributed to obtain calendar year data.

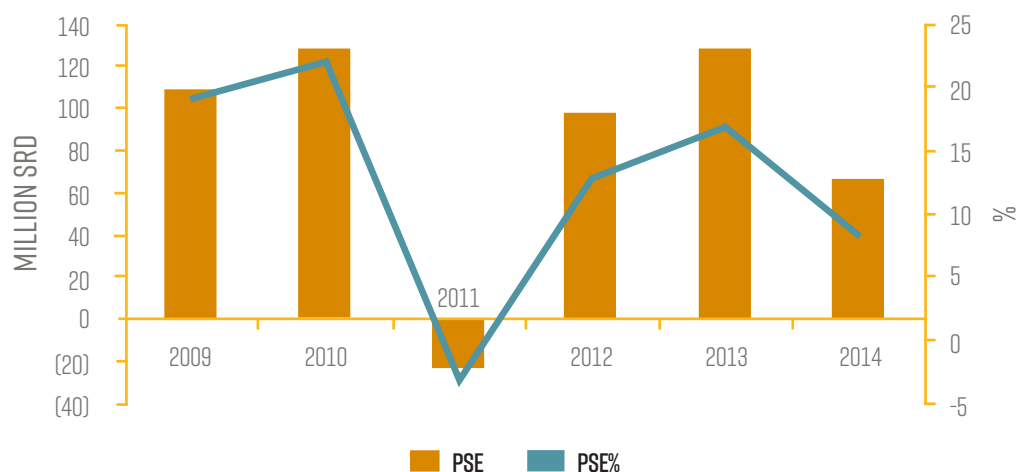
TABLE 9: COMPONENTS OF PSE INCLUDED FOR THE DIFFERENT YEARS

YEAR	MARKET PRICE SUPPORT	BUDGETARY TRANSFERS
2006	X	
2007	X	
2008	X	
2009	X	X
2010	X	X
2011	X	X
2012	X	X
2013	X	X
2014	X	X

3.2 Results: Level and structure of support to producers

PSE is the major indicator used by the OECD and other international organizations to estimate the effect of policy interventions on the welfare of agricultural producers, and it provides an indication of the level of public sector support for food and agriculture in a given country.

The annual national PSE in Suriname over the 2012-2014 period was SRD 98 million in 2012, SRD 128 million in 2013 and SRD 67 million in 2014. The PSE as a percentage of total farm receipts (PSE%) was 13% in 2012 and 17% in 2013. It declined to 8% in 2014.

FIGURE 14: NATIONAL PSE FOR SURINAME, 2009 -2014, IN MILLION SRD AND % OF GROSS FARM RECEIPTS


Source: Author's calculations.

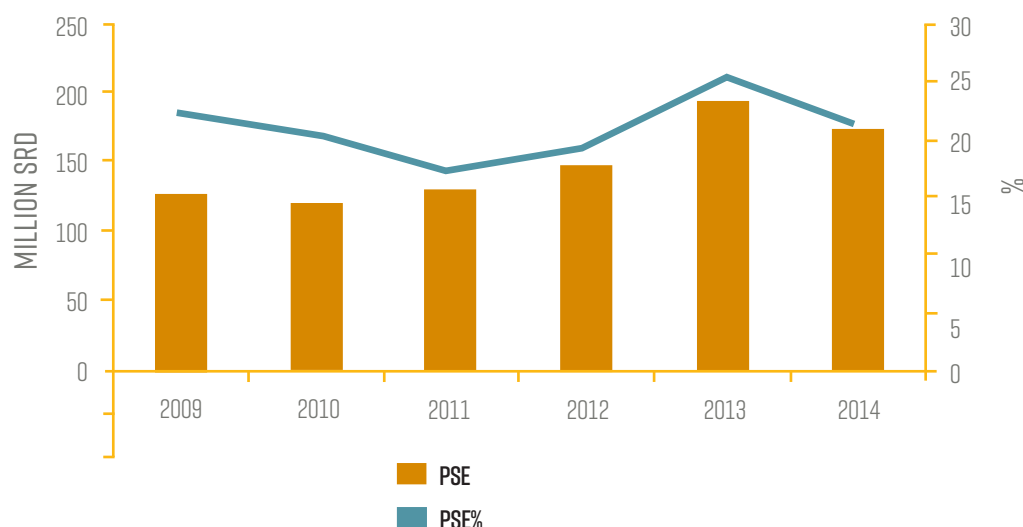
As in most developing countries, the main component of PSE in Suriname is market price support. Budget transfers generally represent between 2% and 10% of total PSE, with the exception of 2014. MPS represented 98% of PSE in 2012, 95% in 2013 and 77% in 2014, as is shown in Figure 17. This means that throughout the 2012–2014 period, producers were supported mainly because they received prices above the international reference (the price they would get in the absence of policies). However, MPS is decreasing as a total share of support, and direct support from the budget is increasingly important. Due to its importance in the value of agricultural production and in the agricultural sector in Suriname in general, changes in the results for rice have a relatively strong effect on national PSE. The negative support in 2011 is largely the result of the wide price gap between domestic farm-gate prices and reference prices for rice in that year.

When rice is omitted from the indicators, support to the agricultural sector is positive in all years and PSE is higher, both in terms of value and as a percentage of gross farm receipts (up to nearly SRD 200 million and 25% of gross farm receipts in 2013). The results of the simulation of PSE indicators excluding the rice sector are demonstrated in Figure 15 below.

This highlights the negative support to the rice sector in most years. This is surprising, as the rice sub-sector is generally considered to be supported by government policy. Indeed, there are no explicit policies that tax the rice sector, except an export

levy of SRD 10/ton, of which SRD 4 is re-invested in the rice sector through the Anne van Dijk Rice Research Centre (ADRON).

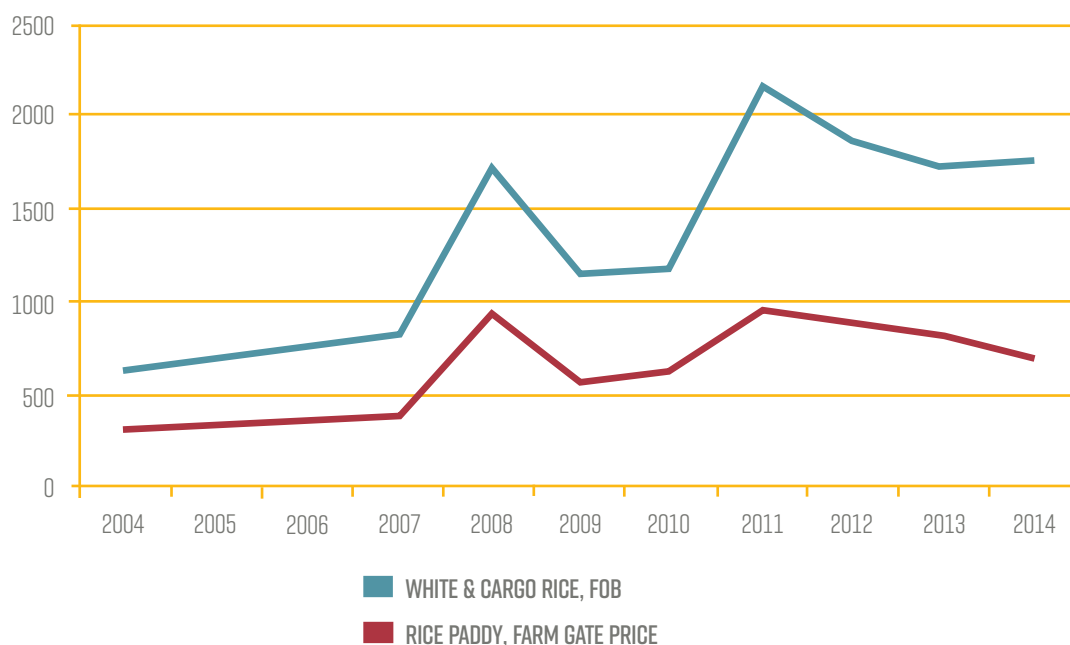
FIGURE 15: NATIONAL PSE FOR SURINAME WITHOUT RICE, 2009-2014, IN MILLIONS OF SRD AND % OF GROSS FARM RECEIPTS



Source: Author's calculations.

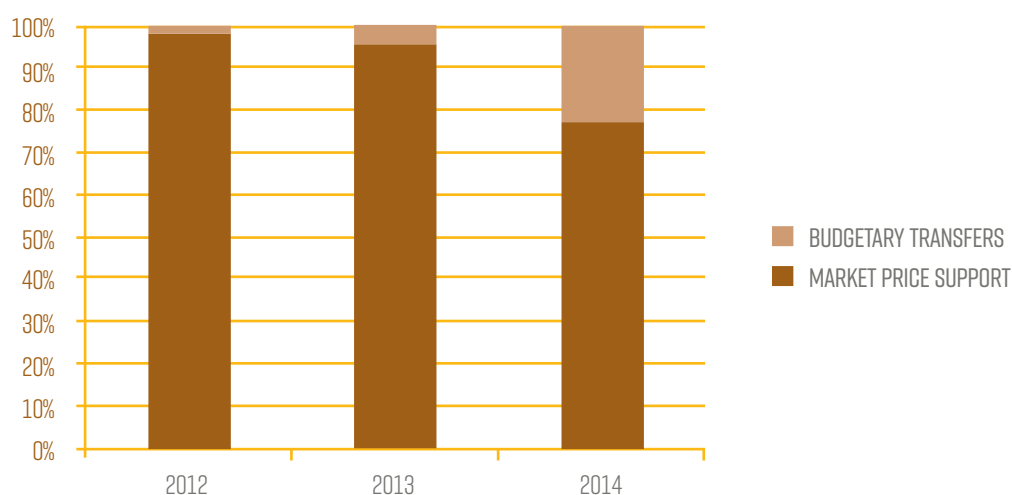
The negative support to rice is primarily the result of negative market price support, which indicates that farmers should be able to obtain a higher price for paddy than what is justified on the basis of prices in the international market. Historical paddy prices and FOB prices, shown in Figure 16 below, also confirm that the gap between the producer price and the international price is widening. The reasons for the negative market price support in the rice value chain can be multiple. First, the capacity usage of rice mills is relatively low and as a result, milling is relatively inefficient and costs are high. Second, transport costs from Nickerie to Paramaribo are significant and could be reduced if the renovation of the port of Nickerie could be finalized and the dredging of the Nickerie River completed. News reports³⁷ indicate that the Government has put these infrastructure improvements back on the agenda as part of an investment loan to be provided by the Islamic Development Bank (IsDB). Third, the widening gap between the international price of rice and the producer price could point to a relatively weak bargaining position of rice farmers vis-à-vis millers. If required, a more in-depth rice value chain study could deepen the understanding of the main factors driving the negative market price support.

³⁷ See <http://www.nickeriesuriname.com/nieuws/bouterse-geeft-overzicht-van-projecten-2017/>

FIGURE 16: PADDY PRICES AND FOB PRICES FOR RICE IN SURINAME, 2004 - 2014, IN SRD/TON


Source: Author, based on agricultural Statistics, LVV.

Overall, however, one has to take into account the relatively good price transmission observed for a number of commodities. While the PSE results show a rather significant price gap resulting from public policy interventions and market infrastructure deficiencies, domestic price patterns and movements follow those of world agricultural markets. Thus, most commodities, including bananas, cassava, beef, and poultry generally follow global price patterns. This is because the Government of Suriname mainly uses policy instruments for these commodities that do not affect price transmission.

FIGURE 17: SHARES OF BUDGETARY TRANSFERS AND MARKET PRICE SUPPORT IN TOTAL PSE, 2012-2014, IN %

Source: Author's calculations.

TABLE 10: OVERVIEW OF SECTOR SUPPORT IN SURINAME, 2012-2014

	CURRENCY	2012	2013	2014
I. TOTAL VALUE OF PRODUCTION (AT FARM GATE)	MN SRD	763.15	757.44	799.02
I.I. OF WHICH, SHARE OF MPS COMMODITIES (%)	%	78.52	81.03	68.18
II. TOTAL VALUE OF CONSUMPTION (AT FARM GATE)	MN SRD	841.58	974.26	974.26
VALUE OF CONSUMPTION (FARM GATE): STANDARD MPS COMMODITIES	MN SRD	660.82	789.43	655.14
III.I PRODUCER SUPPORT ESTIMATE (PSE)	MN SRD	94.49	131.98	60.06
A. SUPPORT BASED ON COMMODITY OUTPUTS	MN SRD	92.71	113.56	41.48
AI. MARKET PRICE SUPPORT	MN SRD	89.87	113.56	41.48
RICE	MN SRD	(44.91)	(60.51)	(81.50)
CASSAVA	MN SRD	8.33	5.38	1.81
BANANAS	MN SRD	-	-	-

	CURRENCY	2012	2013	2014
ORANGES	MN SRD	40.14	73.57	33.48
MILK	MN SRD	6.87	3.90	3.40
BEEF	MN SRD	18.58	20.07	20.87
PORK	MN SRD	12.51	11.95	8.21
POULTRY	MN SRD	(0.05)	14.23	14.04
EGGS	MN SRD	29.09	23.42	27.97
NON-MPS COMMODITIES	MN SRD	19.30	21.54	13.20
A2. PAYMENTS BASED ON OUTPUT	MN SRD	2.84	-	-
	MN SRD	2.84		
B. PAYMENTS BASED ON INPUT USE	MN SRD	1.78	6.03	15.25
BI. VARIABLE INPUT USE	MN SRD			
	MN SRD	-	-	0.13
B2. FIXED CAPITAL FORMATION	MN SRD	1.21	5.06	13.83
	MN SRD	0.90	1.09	1.60
		0.01	2.08	12.07
	MN SRD	0.30	1.89	0.16
B3. ON-FARM SERVICES	MN SRD	0.57	0.97	1.42
	MN SRD	0.15	0.28	0.40
	MN SRD	0.39	0.70	1.02
	MN SRD	0.03	-	-
	MN SRD			
C. PAYMENTS BASED ON CURRENT A/AN/R/I, PRODUCTION REQUIRED	MN SRD		12.397	3.326

	CURRENCY	2012	2013	2014
D. PAYMENTS BASED ON NON-CURRENT A/AN/R/I, PRODUCTION REQUIRED	MN SRD		12.397	3.326
E. PAYMENTS BASED ON NON-CURRENT A/AN/R/I, PRODUCTION NOT REQUIRED	MN SRD			
F. PAYMENTS BASED ON NON-COMMODITY CRITERIA	MN SRD			
F1. LONG-TERM RESOURCE RETIREMENT	MN SRD			
F2. A SPECIFIC NON-COMMODITY OUTPUT	MN SRD			
F3. OTHER NON-COMMODITY CRITERIA	MN SRD			
G. MISCELLANEOUS PAYMENTS	MN SRD			
III.2 PERCENTAGE PSE	%	12.31	17.29	7.38
IV. GENERAL SERVICES SUPPORT SSTIMATE (GSSE)	MN SRD	83.31	96.14	145.03
H. RESEARCH AND DEVELOPMENT	MN SRD	1.81	7.22	5.45
		1.57	2.78	4.08
		0.01	3.01	1.25
	MN SRD	0.23	1.44	0.12
	MN SRD			
I. AGRICULTURAL SCHOOLS	MN SRD			
J. INSPECTION SERVICES	MN SRD	0.45	4.33	0.86
	MN SRD	0.00625	1.5	0.625
	MN SRD	0.445	2.83	0.235
K. INFRASTRUCTURE	MN SRD	81.06	84.59	138.72
	MN SRD	8.8922	29.453	38.871
	MN SRD			
	MN SRD	0.5	0.651	0
	MN SRD	5	7.363	0
	MN SRD			

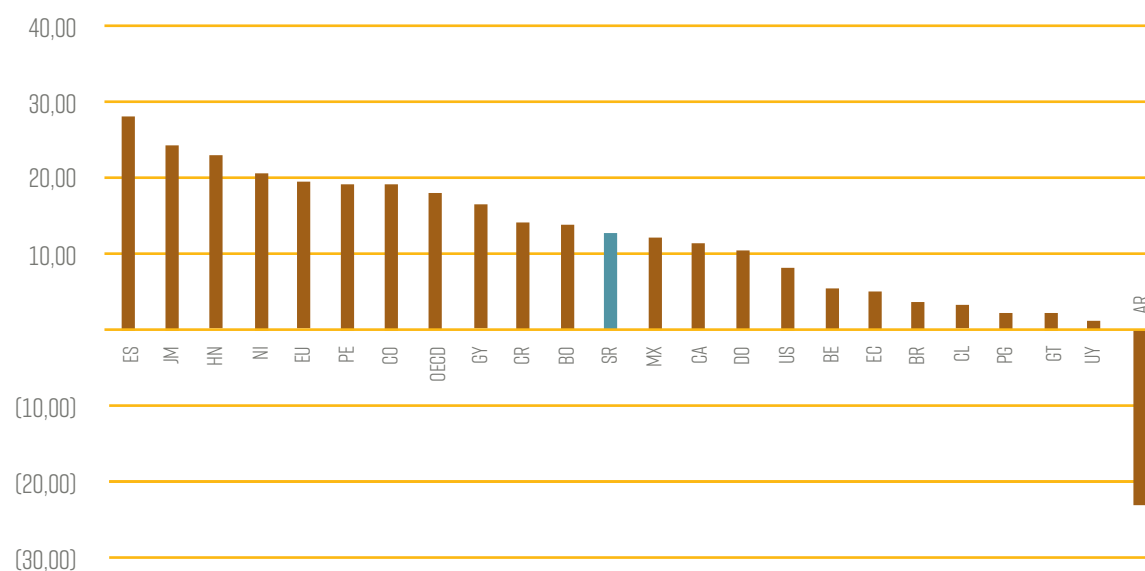
	CURRENCY	2012	2013	2014
	MN SRD	5.527	6.901	0
	MN SRD	54.602	38.438	90.25
	MN SRD	0	0	7.5
	MN SRD			
	MN SRD	6.535	1.782	2.1
L. MARKETING AND PROMOTION	MN SRD			
M. PUBLIC STOCKHOLDING	MN SRD			
N. MISCELLANEOUS	MN SRD			
	MN SRD			
	MN SRD	3.5	6.798	6.825
V.I CONSUMER SUPPORT ESTIMATE (CSE)	MN SRD	(120.60)	(197.85)	(157.07)
Q. TRANSFERS TO PRODUCERS FROM CONSUMERS (-)	MN SRD	(100.54)	(131.24)	(82.19)
TRANSFERS TO PRODUCERS FROM CONSUMERS OF WHICH, MPS COMMODITIES	MN SRD	78.95	106.34	56.04
P. OTHER TRANSFERS FROM CONSUMERS (-)	MN SRD	(29.69)	(78.06)	(82.09)
OTHER TRANSFERS FROM CONSUMERS OF WHICH, MPS COMMODITIES	MN SRD	23.32	63.25	55.97
Q. TRANSFERS TO CONSUMERS FROM TAXPAYERS	MN SRD	11.52	13.63	10.00
Q.1.COMMODITY-SPECIFIC TRANSFERS TO CONSUMERS	MN SRD			
Q.2.NON-COMMODITY-SPECIFIC TRANSFERS TO CONSUMERS	MN SRD	11.52	13.63	10.00
		7.633	7.633	10
		3.89	6	0
R. EXCESS FEED COST	MN SRD	(1.89)	(2.17)	(2.78)
V.2 PERCENTAGE CSE	%	(14.53)	(20.60)	(16.52)
V.3 CONSUMER NAC		1.17	1.26	1.20
VI. TOTAL SUPPORT ESTIMATE (TSE)		189.32	241.76	215.09

	CURRENCY	2012	2013	2014
S. TRANSFERS FROM CONSUMERS	MN SRD	130.23	209.31	164.29
T. TRANSFERS FROM TAXPAYERS	MN SRD	88.78	110.52	132.90
U. BUDGET REVENUES (-)	MN SRD	(29.69)	(78.06)	(82.09)

International comparison of PSE indicator levels

As can be seen in Figure 18, the average PSE level of Suriname in 2012-2014 (12.3%) was similar to the PSE percentage observed from 2009 to 2011, slightly lower than the average of OECD member countries, and close to that of Peru and Colombia. Several other countries in the region, such as the US, Ecuador and Brazil have much lower PSE levels, while Jamaica, the closest regional reference for Suriname, had significantly higher levels of support. The high PSE indicators for Jamaica are influenced by the country's high tariffs to shield its poultry subsector from cheap imports, resulting in strong MPS.

FIGURE 18. PSE (PERCENTAGE) IN SURINAME AND SELECTED COUNTRIES* IN 2012-2014, %



Source: Author's estimates.

Market price support

As mentioned above, the PSE indicator is composed of two elements: market price support (MPS) and direct support from the budget.

MPS is the support component that is based on the differences between domestic and international prices and, therefore, affects production decisions and terms of trade. Gaps between domestic farm gate prices and reference prices can emerge as a result of trade policies, including tariffs and non-tariff trade barriers, or as a consequence of excessive costs and inefficiencies along the value chain. Policy interventions that affect MPS are considered to be among the most trade distorting measures of support (OECD, 2011). They are also less effective means of support to producers compared to direct income payments, per hectare payments, and similar support measures, which are not related to production levels.³⁸

Negative MPS means that, as a result of policy or the structure of the value chain, prices received by producers are lower than they should be on the basis of the international market price of the commodity. This results in a disincentive for producers. Keeping prices low could be an implicit policy to maintain the competitiveness of Surinamese rice on the international market, for example, and to increase market shares. For an export commodity such as rice, the reasons for the disincentives could be explicit or implicit policies (such as export taxes or inspection fees) or value chain inefficiencies (such as monopsonies or excessive profit margins during processing, transport, or handling).

Most commodities in Suriname receive positive transfers resulting from the government's agricultural policy, which is demonstrated by positive levels of MPS (see Figure 19). However, MPS for rice has been negative for most recent years. Implicit taxation of rice means that in absence of policy interventions and value chain inefficiencies, producers would be able to receive higher prices for their output than they actually get.

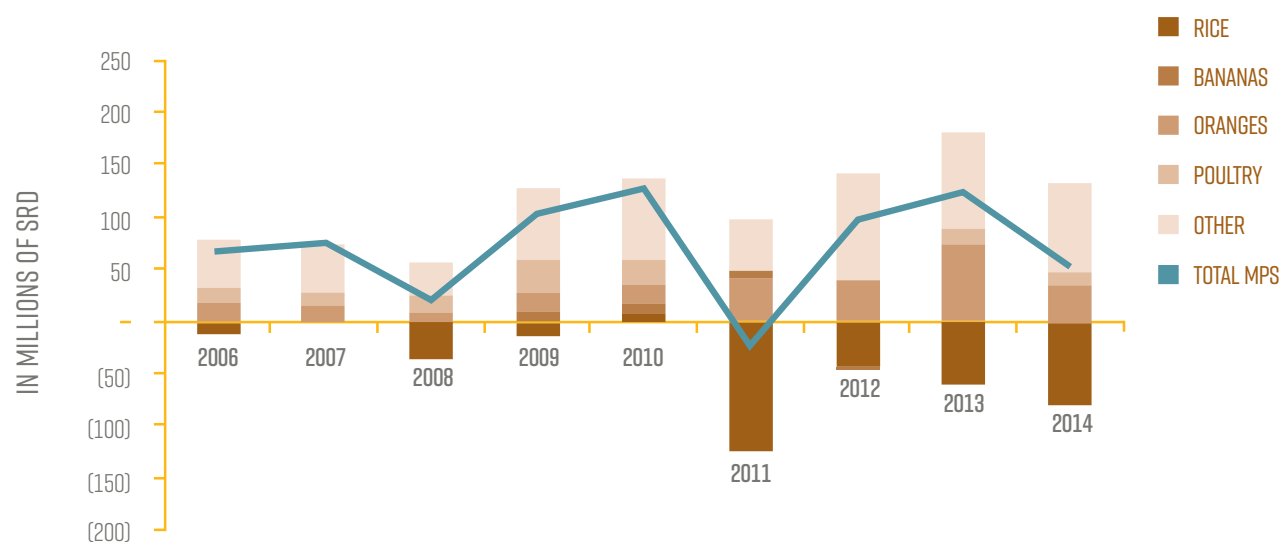
Poultry and oranges were the most supported commodities during the whole study period in absolute terms. However, producers of pork, eggs, and milk also received relatively high levels of positive MPS as share of their respective value of production. This means that producers for these commodities received higher prices than they would in the absence of policy and in an efficient value chain environment. It

POULTRY AND ORANGES WERE THE MOST SUPPORTED COMMODITIES DURING THE WHOLE STUDY PERIOD IN ABSOLUTE TERMS. HOWEVER, PRODUCERS OF PORK, EGGS, AND MILK ALSO RECEIVED RELATIVELY HIGH LEVELS OF POSITIVE MPS AS SHARE OF THEIR RESPECTIVE VALUE OF PRODUCTION.

³⁸ Anriquez et al (2016).

is not uncommon to observe high positive transfers for imports, as it is consistent with the policy objective of import substitution.

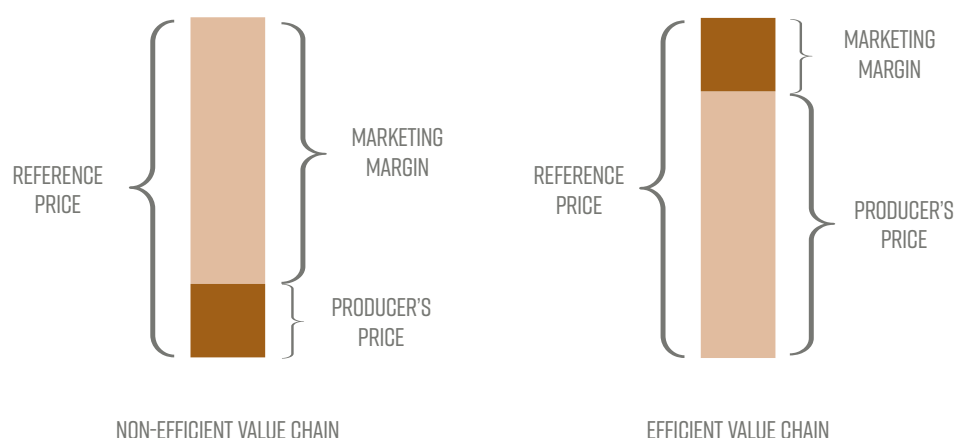
FIGURE 19. POSITIVE AND NEGATIVE MPS IN SURINAME, 2006–2014, IN MILLIONS OF SRD



Source: Author's estimations.

When markets are perfectly competitive and integrated, MPS is the exclusive result of direct and indirect policy interventions. In developing countries, however, this is not the case; MPS also captures the effect of market infrastructure deficiencies, asymmetric information, lack of storage, and excessive market power in the value chain (Barreiro-Hurlé and Witwer, 2013).

FIGURE 20. CONTRIBUTION OF VALUE CHAIN INEFFICIENCIES TO MPS LEVELS



Source: Author.

As is shown in Figure 20, at the same price levels, benefits are distributed differently between domestic producers and marketing margin, which includes processing inefficiency, market power of processors, and transportation losses due to poor road infrastructure or costs of overcoming bureaucratic obstacles. Given that the World Bank ranks Suriname among the lowest countries in terms of ease of doing business (ranked 164th in 2013), farmers are likely also affected by the high costs of complex administrative procedures. These costs increase the marketing margin and the PSE and result in overestimating producer support. If Suriname wishes to increase the competitiveness of its agricultural sector, it is therefore key to address the structural factors that increase marketing margins.

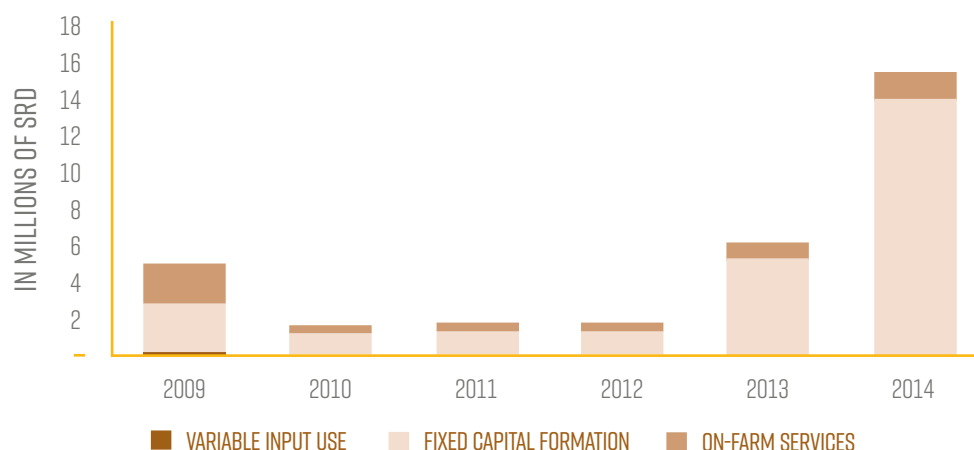
Budget transfers

The second component of producer support consists of transfers by the public sector to agricultural producers. Unlike MPS, which is provided by consumers who pay higher prices to producers (compared to prices without market distortions), these so-called budget transfers (BT) are financed by taxpayers—through the government budget or through contributions from international donors. The level of BT often depends on the countries' general fiscal policy and capacity. Budget transfers to agricultural producers also include subsidized loans to farmers, as well as transfers in the form of tax concessions, the foregone revenue from which goes to support the agricultural sector at the expense of taxpayers.

As demonstrated in Figure 21, budget transfers to individual producers mostly consist of transfers in the form of fixed capital formation, such as financing of state companies' capital, rice farmers' machinery park replacement, vegetables and fruit plant material supply, investment in breeding centers, greenhouses, and nurseries. Transfers based on on-farm services include veterinary inspection services, training, and extension. As no details were available on how the funds were split among individual commodities, they were allocated to All Commodity Transfers, excluding National Rice Research Foundation programs, 80% of which was allocated to GSSE (Research and Development) and 20% to PSE, as it also provides services to producers, such as information dissemination and seed distribution. The PSE part of this program was allocated to Single Commodity Transfer for rice.

The Agricultural Credit Fund, which was created in 2007, provides loans to farmers at reduced interest rates (6.75% per annum, while average regular loan interest rate was 11-13%). As the majority of loans are short term financing with an average maturity of 8 months, this interest rate subsidy was assumed to be used more for variable input purchases than for investments in on-farm capital assets. For that reason, the subsidy was allocated to transfers to producers for variable input use rather than fixed capital formation. It was, however, not allocated by specific commodity.

FIGURE 21. SURINAME: BUDGET TRANSFERS IN PSE, MILLIONS OF SRD



Source: Author's estimates.

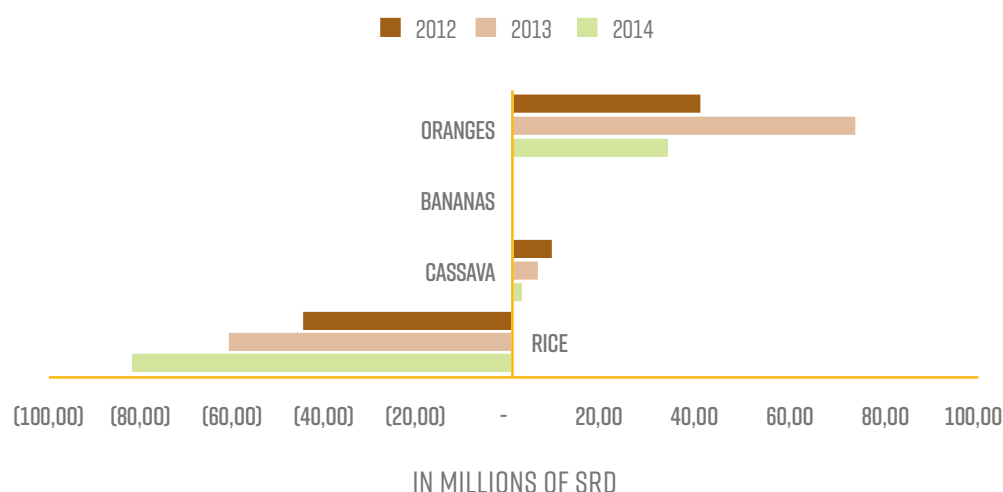
3.3 Indicators of support to individual commodities

The level of support per commodity is measured by so-called single commodity transfers (SCTs), in particular, by the producer SCT% (MPS plus transfers from taxpayers in the form of budget transfers as a share of gross farm receipts of a specific product). The producer SCT%s for Suriname are presented in Table 11.

TABLE 11: SINGLE COMMODITY TRANSFERS BY COMMODITY FOR SURINAME, IN PERCENTAGE OF GROSS RECEIPTS FOR EACH COMMODITY

	2009	2010	2011	2012	2013	2014
RICE	(11)	5	(55)	(23)	(28)	(41)
CASSAVA	40	39	51	70	43	21
BANANAS	10	10	0	0	0	0
ORANGES	60	58	70	75	85	74
MILK	50	59	70			
BEEF	43	38	41	50	58	60
PORK	67	60	75	64	61	36
POULTRY	28	22	7	0	15	14
EGGS	57	60	62	66	60	66

Source: Author's estimates.

FIGURE 22: SINGLE COMMODITY TRANSFERS FOR CROPS, 2012-2014, IN MILLIONS OF SRD

Source: Author's estimates.

Figure 22 shows the SCTs for crops in SRD terms. It shows that support to rice is increasingly negative. Though it is not uncommon for developing countries to tax their exported agricultural commodities as a source of revenue generation, in Suriname there are no policy measures in place that explain the levels of negative support observed. Though an SRD 10/ton export tax exists (1-2% of the producer price), the negative levels of SCT are explained by the inefficiencies of the value chain, which created negative MPS in 2012, 2013, and 2014. One of the main aspects is low capacity utilization in the processing industry. Millers transfer the high costs resulting from the under-utilization of capacity to farmers. This is also confirmed by the Stabilization and Recovery Plan which states that "pooling of production equipment is limited, reducing the competitiveness of the sector". As set out in section 3.2 above, other reasons for the negative SCT levels include the high transport costs between Nickerie and the port of Paramaribo, as well as the negotiating power of rice producers. Finally, over 90% of the budget support to the agricultural sector as a whole (so-called GSSE) consists of expenditure on infrastructure, including on irrigation and drainage systems. It can be assumed that rice farmers benefit most from these expenditures. Since rice producers do not pay for the operation and maintenance of public irrigation and drainage systems, these expenditures constitute an implicit subsidy to the rice sector.

During the period under review, the **banana** subsector was not taxed or supported by domestic policy that affected prices. Because the value chain is integrated, no domestic farm-gate prices exist. To determine its profitability, SBBS (in 2012 and 2013) and FAI (in 2014) aim to produce at a cost that is lower than the reference price (FOB price). During the literature review and interviews with sector stakeholders, no policies that affect international market price transmission were identified, and Market Price Support was zero. Regarding budget support, under the EU's Banana Accompanying Measures, a total of €9.3 million³⁹ were allocated to Suriname for increased investment in the banana sector. However, in 2016, these investments were not yet realized.

Cassava producers received support throughout the period of analysis, which is mainly the result of the procurement prices paid by the IAP processing factory (USD 0.60 per kg), which were higher than global market prices. This has served as an incentive for cassava production. At the same time, higher domestic prices for cassava could disadvantage the livestock producers, as it limits their ability to use cassava for animal feed at low prices. However, support levels may change now that IAP's owner, LVV, has indicated that high procurement prices are not expected to continue.

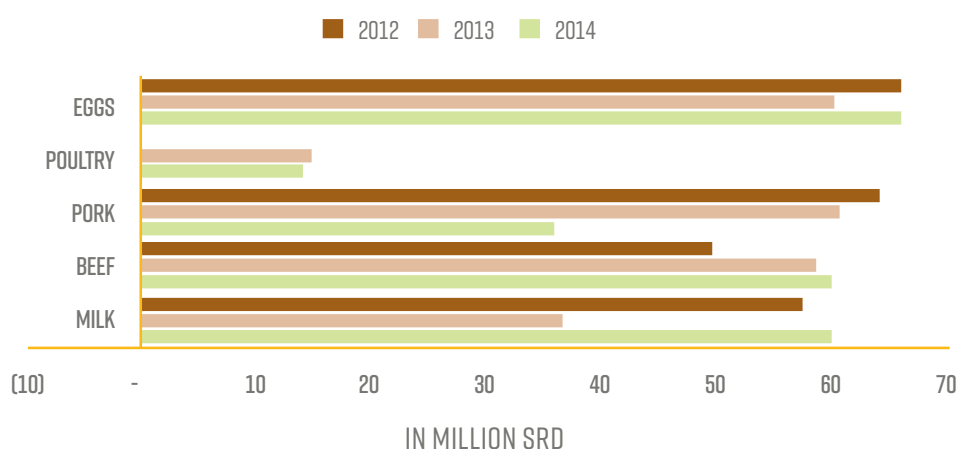
Oranges are produced almost entirely for the domestic market. Orange producers benefit from domestic prices that are significantly higher than reference prices. This is mainly due to the high cost structure for the orange market thanks to the low degree of the sector's professionalization. In addition, only slight budgetary support is provided through public funding for distribution of planting materials and establishment of nurseries.

Livestock

Producers of all types of livestock commodities benefit from agricultural policy, as is shown in Figure 23. These sectors produce potentially import-substituting commodities and therefore are protected by import duties. They are excluded from the tariff liberalization schedule in CARICOM.

³⁹ EU, 2012.

FIGURE 23: SINGLE COMMODITY TRANSFERS FOR LIVESTOCK, 2012-2014, IN MILLIONS OF SRD



Source: Author's estimates.

The **poultry** subsector is supported by government policy. Increased poultry demand over the last five years has been met by rising imports rather than increased domestic production. Although domestic prices in Suriname generally track with international poultry prices, a price gap exists in all years with the exception of 2012, when poultry support was neutral. The support observed can only be partially explained by the tariff that is in place. High import margins are identified as another source of the prevailing high domestic prices. This suggests that the government's objective of keeping poultry prices low for domestic consumers is not achieved, as consumers continue to pay relatively high prices for their chicken.

The **milk** market is the most regulated market among livestock commodities. The state-owned dairy processing plant Melkcentrale purchases milk from farmers at administratively fixed prices that are higher than the border price. As a result, the higher prices received by farmers are reflected in high SCT for milk. This policy supports farmers in the short run, but harms the sector in the longer term, as it reduces incentive to invest in improved productivity and more efficient production methods. In addition, the price consumers pay for milk is far above the price they should pay based on the price level observed in the international market. Still, according to LVV and the Association of Milk Farmers (VSMB) of Suriname, the cost of production is higher than the current fixed price of SRD 2.5 per liter established by the Milk Regulation. The price of milk is therefore expected to increase further.

For both pork and beef, farmers were supported throughout the period under review as they receive prices that are above the reference. For both milk and pork, SCTs decreased significantly between 2012 and 2014, mainly as a result of lower MPS. This indicates that international prices are better transmitted to farmers and that producers are getting a price closer to the international reference. However, the main reason for the reduction lies with the international price, which increased dramatically between 2012 and 2014 for both commodities, while the producer price increased only moderately. As a result, MPS for both commodities decreased.

Effective rate of protection for selected commodities

The Effective Rate of Protection (ERP) provides additional information regarding the level of policy support provided to specific agricultural commodities by incorporating the effects of support to farm inputs. A positive ERP means that returns on inputs are potentially higher than they would be without trade policies, subsidies, or other support measures. If the ERP is negative, that means that policies have a negative effect, as the potential returns on input would be higher in the absence of policy. The ERP methodology is limited because it does not take into account possible input substitution. However, it does provide a useful indicator of the effect of policy on input markets and agricultural producers.

For Suriname, ERPs have been estimated for the commodities for which detailed value chain studies were conducted, which are rice, bananas, and poultry. The set of inputs included in the analysis was determined by the information available on the farm gate cost structure. The following purchased inputs were included in the analysis:

- for rice: urea and NPK fertilizers, fungicide, insecticide and herbicide
- for bananas: agrochemicals
- for poultry: corn for chicken feed and concentrate as feed ingredient

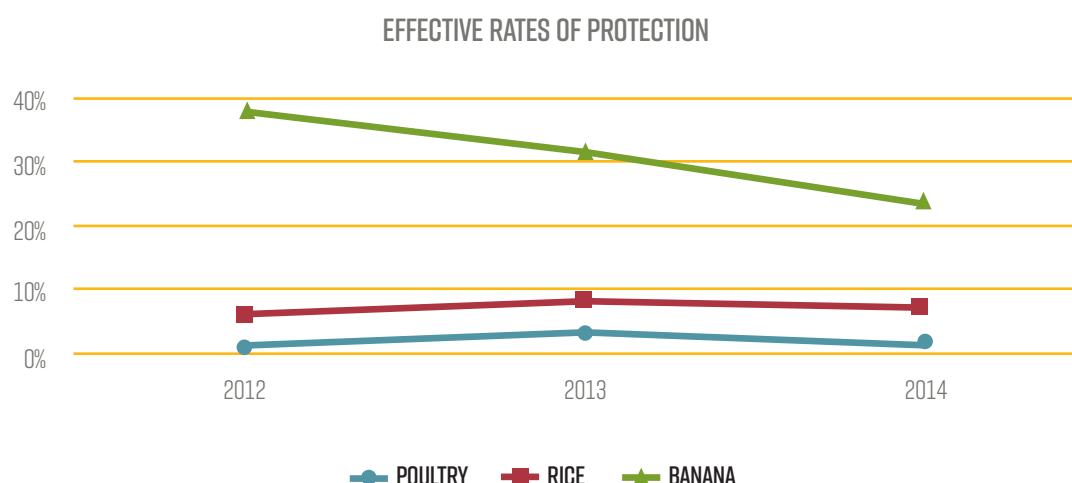
Suriname has a clear and fairly developed custom duty system that can be easily consulted and that lists the different import duties and levies per category. All products imported from CARICOM are at a zero percent import tax. However, the Customs Authorities of Suriname do impose levies and stamp duties of a total of 2% on all CARICOM import products.

Key assumptions. The following key assumptions are at the basis of the NRP and ERP calculations and interpretations:

- The FOB price per commodity is assumed equal to the global price and is calculated by dividing the total export value by the export volume. For poultry, CIF Brazil is used as the global reference price;
- The global price is assumed to be equal to the price of free trade;
- Information on the import and export values and volumes was sourced from the Agricultural Statistics of the LVV;
- Sales (or turnover) tax is applied on all items (local or imported) and therefore not included in the analysis. Furthermore, staple foods are tax exempt.
- Value added tax (VAT) is expected to be introduced in 2016 and is therefore not considered in this analysis.
- Data is based on secondary sources and field interviews for the years 2012, 2013, and 2014.
- The necessary agricultural inputs can be imported in sufficient volumes from CARICOM countries.

Taxes on inputs. No distinction is drawn between import duties and levies on the different agricultural inputs. As they are assumed to be imported from CARICOM, 2% is applied on inputs for rice, bananas, and chicken.

For rice, the inputs are estimated at 24% of the total cost price based on the detailed information provided by the Suriname Rice Farmers Association. For bananas, the total use of agrochemicals is estimated at 40% of the production cost price based on industry average for banana production in the tropics. For chicken, feed represents over 70% of the cost of producing chicken meat. In Suriname, approximately 50% of the total poultry feed mix consists of imported corn and concentrate.

FIGURE 24: EFFECTIVE RATE OF PROTECTION IN SURINAME FOR RICE, BANANAS AND POULTRY, 2012-2014

Source: Authors' calculations.

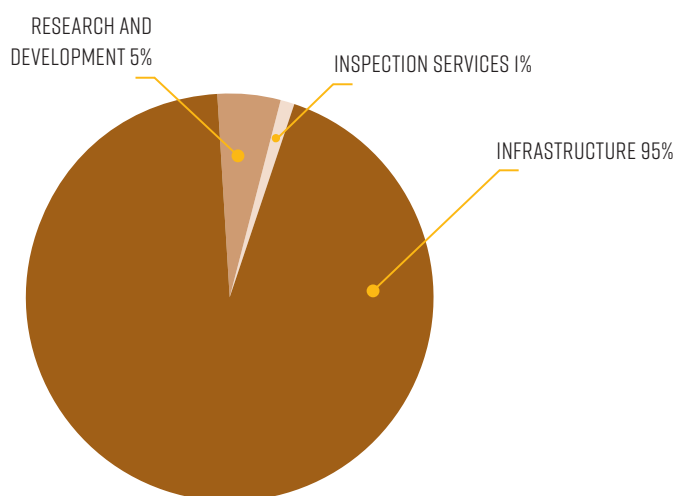
As can be seen from Figure 24, the ERP for both rice, bananas and poultry was positive, and in theory, these products are protected from imports from neighboring countries, which would be beneficial for supplying the domestic market. Domestic producers benefit by ultimately facing reduced competition in their home market, which leads to lower supply levels and higher prices for consumers. At the same time, the tariff is not beneficial for export oriented producers, because these commodities rely so heavily on imported inputs (for rice 24% and for banana 40% of the production cost price). The imposed duties are thus undermining their competitive position in the global commodity market. Finally, the sharp fall in ERP for bananas is directly related to the fall of the farm gate price from SRD 1.25 in 2012 to SRD 1.11 in 2014.

3.4 Estimates of support to general services

A major part of budget transfers to the agricultural sector in Suriname is allocated in a form that creates transfers not to individual producers but to the agricultural sector in general. However, as budget expenditures are not reported in detail but only at the program level, it has not been possible to analyze the data at a disaggregated level. Therefore, the GSSE results

for Suriname may overestimate support to general services. This is particularly true for expenditures related to irrigation and drainage infrastructure maintenance and rehabilitation financed by the Ministry of Public Works, as it is difficult to assess which drainage and irrigation expenditures specifically benefit the agriculture sector.

FIGURE 25. SURINAME: COMPONENTS OF GENERAL SERVICES SUPPORT, TOTAL FOR 2012-2014



Source: Consultant's estimate.

General services support provided to agriculture accounts for over 40% of total transfers to agriculture (including MPS), which is higher than in most Latin American countries and close to the levels of Chile and the US. Investment in general services, especially in market and rural infrastructure, enhances the competitiveness of domestic production, stimulates more efficient production decisions, and promotes long-term economic growth. However, in Suriname these areas still need more attention, as underdeveloped infrastructure (irrigation and drainage and roads, as well as soft infrastructure such as access to credit and information), lack of research and development, and issues in animal and plant health remain important constraints on agricultural growth.

3.5 Estimates of support to consumers

The CSE is the common indicator of support that quantifies how agricultural support policies affect the consumers of agricultural commodities. Negative national CSE means that there are transfers from consumers to producers of agricultural commodities. This is the case in most Latin American and Caribbean countries.

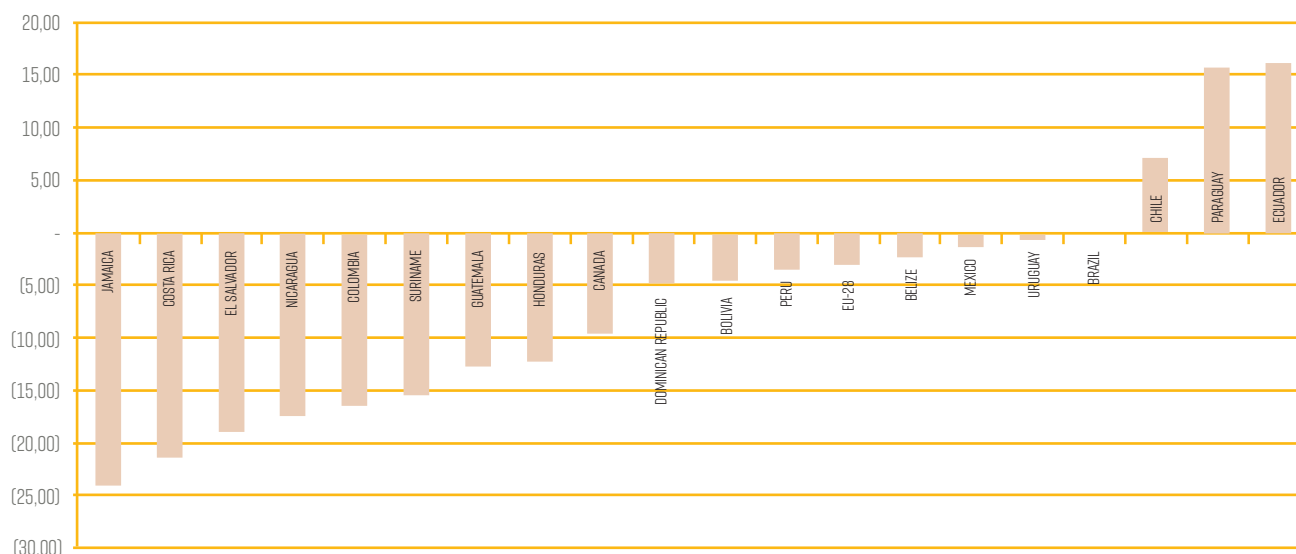
In Suriname, transfers from consumers to producers are in effect for all the livestock commodities. The negative CSCT indicators⁴⁰ for all these products mean that support to farmers in these sectors originated primarily from the transfers from consumers who pay higher prices for their products. The producers of these commodities are supported mainly at the expense of domestic consumers, who pay higher prices for milk, poultry meat, beef, pork, and eggs. This is reflected in the negative level of the country's national CSE.

Negative CSEs affect households' economic access to food, as consumers pay more for their food products than they should, based on prevailing international market prices. In Suriname, 8% of the population was food insecure during the 2014–2016 period (FAO, 2015 State of World Food Insecurity).

Negative consumer support is consistent with trends observed in other middle-income countries. In low-income countries, governments often tax their agricultural sectors by suppressing food prices, as concerns for the welfare and food security of (urban) consumers are considered more important than farm incomes. When incomes grow, however, middle income countries tend to provide more support to agricultural producers at the expense of consumers. In addition, middle-income countries have more financial resources to support their agricultural sector. Most emerging economies monitored by the OECD provide positive support to farmers.⁴¹

⁴⁰ CSCT is calculated as: the transfers to consumers from taxpayers – (transfers to producers from consumers + other transfers from consumers).

⁴¹ OECD (2012b).

FIGURE 26. CONSUMER SUPPORT ESTIMATE (PERCENTAGE) IN SURINAME AND SELECTED COUNTRIES* IN 2012-2014, %

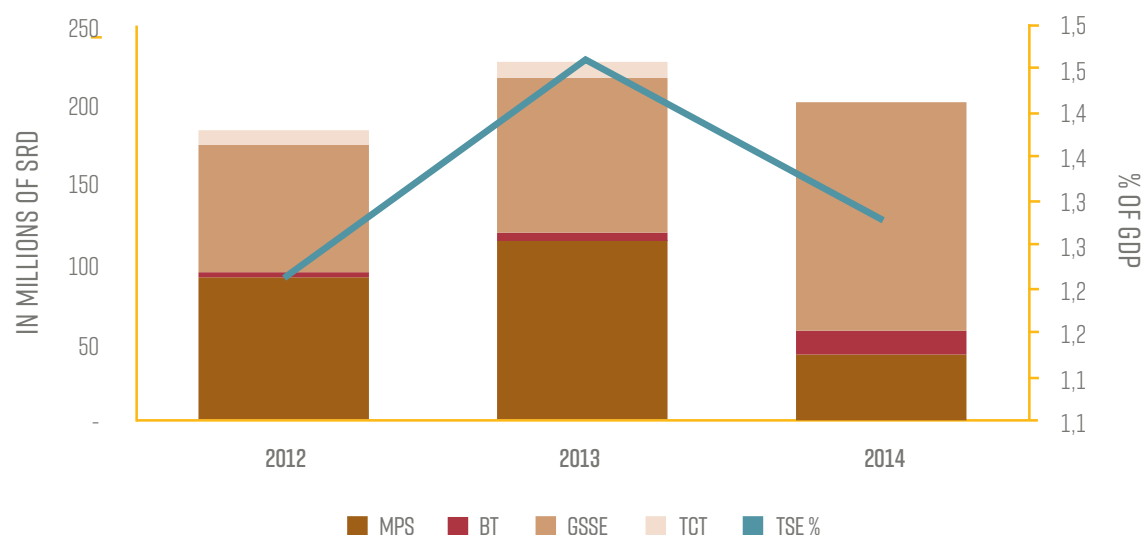
* Argentina, Costa Rica, Ecuador, El Salvador, Honduras, Paraguay 2010-2012, Nicaragua 2008-2010, Guatemala 2009-2011, Peru, Uruguay 2011-2013
Source: consultant's estimate, IDB database, OECD PSE database.

3.6 Estimates of Total Support to the Agricultural Sector

The total support estimate (TSE) is the sum of the support to producers, general services and consumers, and reflects all the transfers that result from agricultural policy. The TSE is usually estimated in percentage form as a share in GDP to demonstrate the burden of agriculture-related transfers on the economy.

In 2012, total support to agriculture in Suriname reached SRD 189 million, and increased to SRD 234 million in 2013 before decreasing again to SRD 211 million in 2014 (see Figure 25). The latest drop in TSE was primarily caused by a decrease in MPS in 2014.

FIGURE 27. SURINAME: TOTAL SUPPORT ESTIMATE, 2012-2014, MILLIONS OF SRD

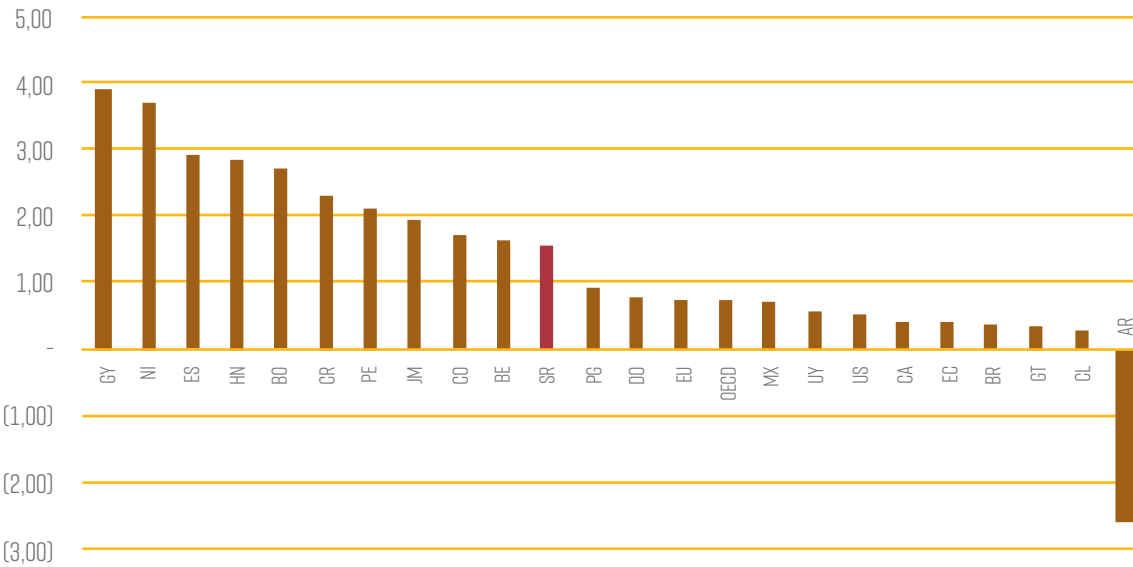


Source: Consultant's calculations.

Though MPS was the key driver of support for the sector in 2012 and 2013, in 2014 GSSE played a larger role. This is an indication of the efficiency way in which budget funds are distributed to support agriculture, as this kind of transfer has proven to be most effective in developing long-term competitiveness.

From an international perspective, TSE as a percent share of GDP in Suriname was 1.39% on average between 2012–2014 (up from 1.31% in the 2009–2011 period), which is higher than in OECD, EU, Brazil, USA, and Ecuador, and, as shown in Figure 26, close to Colombia.

FIGURE 28. TOTAL SUPPORT ESTIMATE (PERCENTAGE) IN SURINAME AND SELECTED COUNTRIES* 2012-2014, %



Source: Author's estimates.

4. CONCLUSIONS



The Government of Suriname employs various policy instruments to support the agricultural sector, including trade policies and supportive public expenditure measures. This results in overall levels of support to the agricultural sector in Suriname that were positive throughout the period under review and in line with the average for the Latin American and Caribbean region. In other words, agricultural policy in Suriname supports producers, who receive higher prices and budget transfers that increase their gross receipts.

As far as the composition of the PSE, most of it comes in the form of Market Price Support. Though overall support to producers exists, the differences between subsectors are significant.

Rice producers in Suriname received negative price support in all years under review, and the levels of disincentives for rice producers are deteriorating. Overall support to rice remains negative, even when budget transfers are taken into account. However, it should be made clear that much of the support that is classified as

support to general services actually primarily benefits the rice sector. In other words, the negative price gap that producers face is largely offset by government expenditure to the sector, particularly in areas that generate long-term effects and positively affect its competitiveness. In general, livestock products receive higher levels of support than crops do.

Support to general services, which involves transfers to the agricultural sector in general and not to individual farmers, is provided in the forms of infrastructure development (rural roads and irrigation and drainage, inspection services (food safety, phytosanitary, and veterinary health protection measures), and research and development, education, and training. The share of support provided to agriculture in the form of general services in the 2012–2014 period amounted to 48% of total transfers to agriculture, which is higher than in most Latin American and Caribbean countries. Investment in general services, especially in market and rural infrastructure, enhances competitiveness of domestic production, stimulates more efficient production decisions and promotes long-term economic growth. It must be noted, though, that irrigation infrastructure represents an extremely large share of the general services support, which may result in a misrepresentation of general sector support, as not all irrigation and drainage infrastructure works may be directly benefiting agriculture. In addition, the drainage and infrastructure expenditures that have been taken into account have not been allocated to a specific commodity. However, it can be assumed that rice farmers benefit more than other producers from these expenditures: It must be noted that rice producers do not make any service payments for the operation and maintenance of the drainage and irrigation systems. This constitutes an implicit subsidy that is not recorded in the PSE for rice.

The TSE, or overall value of the transfers created as a result of national agricultural policy, reached SRD 189 million in 2012, and increased to SRD 234 million in 2013 before falling back to SRD 211 million in 2014. The average annual level of support amounts to 1.37% of Suriname's GDP for the 2012–2014 period, which is in line with the average among the countries of the Latin American and Caribbean region, and which is similar as well to the level observed in Colombia.

THE TSE, OR OVERALL VALUE OF THE TRANSFERS CREATED AS A RESULT OF NATIONAL AGRICULTURAL POLICY, REACHED SRD 189 MILLION IN 2012, AND INCREASED TO SRD 234 MILLION IN 2013 BEFORE FALLING BACK TO SRD 211 MILLION IN 2014.

5. POLICY RECOMMENDATIONS



Suriname's agricultural sector is at a crossroads. Over the last decade, the country saw a period of robust economic growth and rising government revenues. Though agricultural development remained a stated policy objective throughout that period, public investment in product diversification and competitiveness of the agricultural sector remained modest and primarily focused on the rice sector. Also, several public investments were delayed or not completed, including the abattoir in Nickerie and the cassava processing plant in Para.

Now that the government is faced with contractions of GDP and revenue, it is re-valuating the agricultural sector as part of the solution to Suriname's narrow economic base. Through the Stabilization and Growth Plan, the government will seek to strengthen the rice sector, further develop citrus production, enhance livestock production systems, and establish production of coco and cocoa. In addition, the government has committed itself to improving the overall business environment and reducing bureaucracy.

During the period under review, the Government of Suriname used a variety of policy instruments that affected the country's agricultural sector. The instruments applied included traditional trade policy measures, such as import tariffs, but also area payments for rice producers, state ownership, tax exemptions for inputs, subsidized credit, price policies, and government support for rural infrastructure, irrigation, research, and training.

The following recommendations will help increase the coherence of Suriname's agricultural policies:

- the government should reduce the dependence of the rice sector on subsidies. If subsidies are provided, they should be clearly marked in the LVV budget and not be included under other budget lines such as "export promotion;"
- the government should develop a medium-term plan for the rice sector which focuses on better collaboration between stakeholders, more efficient allocation of production and processing equipment, increased access to credit for small- and medium-sized rice farmers and increased research capacity;
- the government should make improvements in ensuring animal and plant health in order to increase productivity levels;
- the government is advised to improve the enabling environment for the banana sector, which faces agronomic, economic, and market constraints, such as crop disease, low labor productivity, high rates of sick leave, and low prices;
- the government should avoid increasing the import tariff on poultry, as it plans to do. Rather, the government is advised to seek innovations to promote the emergence of local feed production to reduce dependence on (increasingly expensive) imports—for example, by using cassava for animal feed;
- the government should develop a strategy for the milk sector, working towards a more flexible milk price;
- the government should invest in diversification to reduce the sector's over-dependence on rice and bananas for agricultural exports.

TABLE 12. OVERVIEW OF APPLIED POLICY INSTRUMENTS AND SUGGESTED IMPROVEMENTS

COMMODITY	INSTRUMENT	PLANNED OBJECTIVE	RECOMMENDATIONS/ SUGGESTED CHANGES	POTENTIAL EFFECTS OR INTENDED BENEFIT	BENEFICIARIES	OTHER EFFECTS
RICE	SUBSIDY (AREA PAYMENT), SOMETIMES FOCUSED ON SMALL AND MEDIUM SIZED FARMERS.	COMPENSATION PAYMENT FOR HIGH PRODUCTION COSTS.	GRADUALLY REDUCE SUBSIDY PAYMENTS AND THE SECTOR'S DEPENDENCE ON GOVERNMENT. INVEST IN GENERAL SERVICES (IN PARTICULAR: SEED RESEARCH, WATER INFRASTRUCTURE AND IMPROVED ACCESSIBILITY OF PORT OF NICKERIE).	INCREASED COMPETITIVENESS IN MEDIUM AND LONG TERM.	RICE FARMERS	BETTER RESEARCH CAPACITY AND INFRASTRUCTURE ALSO BENEFITS OTHER SUBSECTORS.
BANANA	PRIVATIZATION	ENHANCE EFFICIENCY AND LONG-TERM SUSTAINABILITY OF THE BANANA SECTOR IN SURINAME.	PRIVATIZATION OF THE SBBS HAS BEEN COMPLETED. INVEST IN PORT OF NICKERIE TO LOWER TRANSPORT COSTS FROM THE NICKERIE ESTATE.	INCREASE COMPETITIVENESS AND LOWER COSTS IN BANANA SUBSECTOR; IMPROVE LONG TERM SUSTAINABILITY.	EMPLOYEES OF SBBS (2,000)	RURAL EMPLOYMENT; IMPROVED FISCAL POSITION; GENERATION OF FOREIGN EXCHANGE EARNINGS.
MILK	PRICE POLICY	COMPENSATE HIGH COST IN MILK PRODUCTION CHAIN AND FIERCE COMPETITION FROM MILK POWDER IMPORTS.	THE GOVERNMENT PLANS TO INCREASE THE MINIMUM MILK PRICES, WHICH SHOULD BE AVOIDED. RATHER, INVEST IN IMPROVING THE COLD CHAIN AND BREEDING FOR BETTER QUALITY PRODUCTS.	REDUCE SUBSECTOR INEFFICIENCIES; LOWER CONSUMER/ RETAIL PRICES; INCREASE MILK FARMERS' PRODUCTIVITY; REDUCE STAGNATION IN MILK PRODUCTION.	CONSUMERS TAX PAYERS MILK PRODUCERS IN THE LONG TERM	THIS SECTOR IS HIGHLY DEPENDENT ON GOVERNMENT INTERVENTION. REDUCE GOVERNMENT-DEPENDENCY; INCREASE THE SUBSECTOR'S INNOVATION CAPACITY
POULTRY	IMPORT TARIFF	PROTECT DOMESTIC PRODUCERS.	GOVERNMENT SHOULD AVOID INCREASING THE IMPORT TARIFF, AS PROPOSED BY PRODUCERS. INSTEAD, IT SHOULD INCREASE PUBLIC INVESTMENT IN RESEARCH FOR DOMESTIC PRODUCTION OF FEED COMPONENTS, E.G. IN PARTNERSHIP WITH INTERNATIONAL PARTNERS SUCH AS EMBRAPA, TO LOWER FEED COSTS; ENHANCE QUALITY CONTROL TO MAINTAIN CONSUMER PREMIUMS FOR (HIGH-QUALITY) LOCAL CHICKEN.	LOWER POULTRY FARMERS' COST OF PRODUCTION; STRENGTHEN QUALITY OF LOCALLY PRODUCED CHICKEN.	PRODUCERS CONSUMERS	
CASSAVA	STATE OWNERSHIP	DEVELOP A NEW AGRICULTURAL VALUE CHAIN; INCREASE CASSAVA PRODUCTION, PROCESSING AND CONSUMPTION; REDUCE WHEAT IMPORTS.	THE GOVERNMENT ACQUIRED PRIVATE PROCESSING COMPANY IAP IN 2013 AND BROUGHT IT UNDER THE RESPONSIBILITY OF LVV IN 2015. THE	CREATE INCREASED DEMAND FOR FRESH CASSAVA. CREATE A NEW SOURCE OF INCOME FOR RURAL FAMILIES.	CONSUMERS CASSAVA PRODUCERS	POSITIVE: INCREASED PRIVATE INVESTMENT AND ENTREPRENEURSHIP IN CASSAVA SUBSECTOR; GROWTH OF AGRIBUSINESS

COMMODITY	INSTRUMENT	PLANNED OBJECTIVE	RECOMMENDATIONS/ SUGGESTED CHANGES	POTENTIAL EFFECTS OR INTENDED BENEFIT	BENEFICIARIES	OTHER EFFECTS
			RECOMMENDATION IS TO DEVELOP AN EXIT STRATEGY FOR IAP, AS THIS REPORT ADVISES AGAINST LONG-TERM STATE OWNERSHIP OF AGRO-PROCESSING.			SECTOR. NEGATIVE: LOSSES OF IAP WILL NEED TO BE COVERED FROM THE BUDGET AND CAN DETERIORATE THE FISCAL POSITION.
	SUBSIDIZED CREDIT (GOVERNMENT-BACKED LOAN)	DEVELOP A NEW AGRICULTURAL VALUE CHAIN; INCREASE CASSAVA PRODUCTION, PROCESSING AND CONSUMPTION; REDUCE WHEAT IMPORTS.	SOURCES SUGGESTED THAT THE GOVERNMENT ACQUIRED OWNERSHIP OF CASSAVA-PROCESSOR IAP. THIS REPORT RECOMMENDS AVOIDING STATE-OWNERSHIP.	PROVIDE IAP WITH SUFFICIENT CASH TO PROCURE CASSAVA FOR PROCESSING.	CASSAVA PRODUCERS	SEE ABOVE
	INFORMAL PRICE POLICY	INCREASE CASSAVA PRODUCTION; INCREASE CASSAVA PRODUCERS' INCOMES.	AVOID ANY GUARANTEED FIXED PRICE FOR RAW CASSAVA.	ENSURE SUSTAINABILITY OF CASSAVA PRODUCTION AND PROCESSING. AVOID PENALIZATION OF CONSUMERS THROUGH HIGH CASSAVA-FLOUR PRICES.	CONSUMERS CASSAVA PRODUCERS (LONG TERM)	

Source: Author.

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ANNEX I: OVERVIEW OF PSE METHODOLOGY AND DEFINITIONS

General introduction to the methodology

The estimates of support to the agricultural sector in Suriname are calculated using the producer support estimates (PSE) methodology. The PSE methodology was developed by the OECD in the 1980s and has been applied in both OECD member and non-member countries since 1987. It serves as an instrument for estimating the level of domestic support for agriculture and comparing support internationally and over time. Due to the metric's quantitative nature, it can serve as evidence for monitoring and evaluating agricultural policy developments and as a common basis for policy dialogue. For that reason, the PSE methodology is also used by a wide range of international organizations and financial institutions (including the WTO, FAO, the World Bank, and the IDB).

To calculate the levels and composition of public sector support for agriculture, the PSE focuses on two main components:

- Market price support (MPS) measures the gap between domestic and reference prices.
- Budget transfers (BTs)

Positive PSE means that farmers are benefiting from government policy that provides support to agriculture, but, at the same time, also indicates that market distortions exist. Negative PSE mean that implicit taxation of domestic producers occurs as a result of agricultural policy or market distortions.

Box 1 includes a list of definitions for PSE, Consumer Support Estimate (CSE) and Total Support Estimate (TSE).

BOX 1. DEFINITIONS OF PRODUCER SUPPORT ESTIMATE, CONSUMER SUPPORT ESTIMATE, AND TOTAL SUPPORT ESTIMATE

Producer support estimate – PSE: The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level, arising from policy measures that support agriculture, regardless of their nature, objectives, or impacts on farm production or income.

Percentage PSE (PSE%) – PSE as a share of gross farm receipts.

General services support estimate – GSSE: The annual monetary value of gross transfers to general services provided to agricultural producers collectively (such as research, development, training, inspection, marketing, and promotion), arising from policy measures that support agriculture regardless of their nature, objectives, and impact on farm production, income, or consumption. The GSSE does not include any transfers to individual producers.

Consumer support estimate – CSE: The annual monetary value of gross transfers from (to) consumers of agricultural commodities, measured at the farm gate, arising from policy measures that support agriculture, regardless of their nature, objectives, or impacts on consumption of farm products.

Percentage CSE (CSE%) – CSE as a share of consumption expenditure (measured at farm gate) net of taxpayer transfers to consumers.

Total support estimate – TSE: The annual monetary value of all gross transfers from taxpayers and consumers arising from policy measures that support agriculture, net of associated budgetary receipts, regardless of their objectives and impacts on farm production and income, or consumption of farm products.

Percentage TSE (TSE%) – TSE as a share of the GDP.

Single commodity transfers – SCT: The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, measured at the farm gate level, arising from policies linked to the production of a single commodity such that the producer must produce the designated commodity in order to receive the transfer.

Percentage single commodity transfers – SCT%: The commodity SCT as a share of gross farm receipts for the specific commodity.

Market price support (MPS): The annual monetary value of gross transfers from consumers and taxpayers to agricultural producers, arising from policy measures that create a gap between domestic market prices and border prices of a specific agricultural commodity, measured at the farm gate level.

Source: OECD, 2010.

The value of budgetary support of general services to producers is measured by the GSSE indicator. The GSSE indicates the support provided to agricultural producers collectively, such as expenditures related to agricultural extension, research, technical assistance, and infrastructure. The support or taxation of consumers of agricultural commodities is measured by the consumer support estimate (CSE). Together, PSE, GSSE, and net transfers to consumers from taxpayers (TCT) compose the total support estimate (TSE), i.e. total transfers from consumers and taxpayers to agricultural producers associated with agricultural policy. The TSE can be used to indicate the total level of public sector support for agriculture in a given country.

PSE and CSE, and PSE components are often measured in a percentage form, as a share of total farm receipts (receipts from output and budget transfers). The market price support (MPS) component of the PSE is the difference between the observed domestic price received by farmers and the international reference price that represents the value of the commodity on the international market. The reference price is considered to be the price that domestic producers could have received for their products in the absence of any domestic or trade policy affecting this commodity's market. Usually, these reference prices are calculated based on border prices of imports (cost, insurance, and freight - CIF) and exports (free on board - FOB). If no reliable border prices are available, it is also possible to use specific border prices in close neighboring countries or in countries playing a major role in international trade of the commodity, or prices on international commodity exchanges.

Reference prices and producer prices for MPS calculations must be measured at the same point in the value chain. In order to make the two prices comparable, the reference (border prices) must be adjusted for marketing margins to make it comparable to farm-gate producer prices. This adjustment means that the costs of processing, handling and transportation the product to the market where the domestically-produced commodity meets the commodity from the foreign market must be deducted from the reference price. In addition, quantity or quality adjustments could be applied to ensure that the traded good is comparable with the product as it is sold by the farmer.

The price adjustments are carried out as follows:

For imported commodity:

CIF price + costs of transporting the product from the border to the internal wholesale market (T1) = price of imports at domestic market level - cost of transporting the product from the wholesale market to the farm gate (T2) - costs of processing farm product into imported product (S) = price of imports in farm gate equivalent.

For exported commodity:

FOB price - handling and transportation costs between border and domestic wholesale market (T1) - handling and transportation costs between wholesale market and the farm gate (T2) - costs of processing of farm product into exported product (S) = price of exports adjusted to the farm gate level.

The BT component of the calculations consists of the public expenditure in support of the agricultural sector. In general terms, these expenditures can be divided into three main groups:

6. Economic transfers from the government budget to agricultural producers (e.g. input subsidies)
7. Financing of general services that support agriculture collectively (e.g. extension services or spending on agricultural research)
8. Transfers to consumers (e.g. food aid or other food subsidies).

The transfers to agricultural producers are included in the PSE indicator, while public expenditure that benefits the sector as a whole is used in the GSSE. Finally, support to consumers is taken into account in the calculation of the CSE. A thorough analysis of the budget of the Government of Suriname has been carried out to obtain an understanding of the nature and characteristics of the public sector's spending in support of the sector and to distinguish the different types of budget support that the government provides.

Assumptions and general approach to budget support PSE component calculations

A number of assumptions are applied to ensure that the level of public sector support to the agricultural sector in Suriname is calculated correctly:

- Transfers to agricultural producers that benefit individual farmers or group of farmers must be included in the PSE. When the transfers benefit the agricultural sector as a whole, they are considered support to general services and are included in the GSSE.
- Budget transfers (BTs)
- Transfers to first consumers of agricultural production (agro-processors) and food aid programs are included in the consumer support indicator CSE. However, as primary agriculture is often the final beneficiary of the subsidies to the agro-processing sector, these subsidies can be included in the PSE.

The reasoning for attribution of those transfers to PSE or CSE is discussed below separately for each transfer, where this is applicable.

- BTs to producers, which are part of the PSE, are presented as a matrix structure where PSE categories are presented along the vertical axis and PSE labels along the horizontal axis. Categories and labels indicate the way the policy program is implemented. The classification and labels of BTs are given in Table 13.

As shown below, categories indicate the basis on which the transfer or subsidy is calculated, such as value of production, number of animals, input use, services provided, income or non-commodity criteria. Labels are used for each category and provide a more detailed understanding of the implementation of each policy measure.

TABLE 13: CLASSIFICATION OF BTS IN THE PSE ACCORDING TO OECD METHODOLOGY

CATEGORIES
A. SUPPORT BASED ON COMMODITY OUTPUT
A.1. MARKET PRICE SUPPORT
A.2. PAYMENTS BASED ON OUTPUT
B. PAYMENTS BASED ON INPUT USE
B.1. VARIABLE INPUT USE
B.2. FIXED CAPITAL FORMATION
B.3. ON-FARM SERVICES
C. PAYMENTS BASED ON CURRENT A (AREA) /AN (ANIMAL NUMBER) / R (RECEIPTS) /I (INCOME), PRODUCTION REQUIRED
C.1 BASED ON CURRENT RECEIPTS/INCOME
C.2 BASED ON CURRENT AREA/ANIMAL NUMBER
D. PAYMENTS BASED ON NON-CURRENT (HISTORICAL OR FIXED) A (AREA) /AN (ANIMAL NUMBER) / R (RECEIPTS) /I (INCOME), PRODUCTION REQUIRED
E. PAYMENTS BASED ON NON-CURRENT A (AREA) /AN (ANIMAL NUMBER) / R (RECEIPTS) /I (INCOME), PRODUCTION NOT REQUIRED
E.1. VARIABLE RATES (VARY WITH RESPECT TO LEVELS OF CURRENT OUTPUT OR INPUT PRICES, OR PRODUCTION/YIELDS AND/OR AREA)
E.2. FIXED RATES
F. PAYMENTS BASED ON NON-COMMODITY CRITERIA
F.1. LONG-TERM RESOURCE RETIREMENT

CATEGORIES

F.2. SPECIFIC NON-COMMODITY OUTPUT

F.3 OTHER NON-COMMODITY CRITERIA

G. MISCELLANEOUS PAYMENTS**LABELS**

WITH/WITHOUT L (CURRENT COMMODITY PRODUCTION LIMITS AND/OR LIMITS TO PAYMENTS)

WITH V/F RATES (VARIABLE OR FIXED PAYMENT RATES)

WITH/WITHOUT C (INPUT CONSTRAINTS)

WITH/WITHOUT E (COMMODITY EXCEPTIONS)

BASED ON A/AN/R/I (AREA/ANIMAL NUMBER/RECEIPTS/ INCOME)

BASED ON SC/GC/AC (A SINGLE COMMODITY, A GROUP OF COMMODITIES OR ALL COMMODITIES)

The second category of BTs includes those that benefit the agricultural sector collectively. This expenditure on so-called general services has been separated from the PSE and is instead being calculated as a separate indicator, the GSSE. As can be seen from Table 14, the spending on general services is divided into seven broad categories.

TABLE 14. CLASSIFICATION OF BUDGET TRANSFERS IN GSSE ACCORDING TO OECD METHODOLOGY**CATEGORIES**

H. RESEARCH AND DEVELOPMENT

I. AGRICULTURAL SCHOOLS

J. INSPECTION SERVICES

K. INFRASTRUCTURE

L. MARKETING AND PROMOTION

M. PUBLIC STOCKHOLDING

N. MISCELLANEOUS

ANNEX II: OVERVIEW OF THE RICE VALUE CHAIN

Background

Rice (dried paddy) is the leading crop in Suriname and its production increased steadily during the 2011–2014 period, to a total of 62,000ha, equivalent to 88% of the total agriculture production area (table 1). According to the Ministry of Agriculture, the yield per hectare increased slightly, from a 4.1 tons per hectare in 2011 to a 4.4 tons per hectare in 2015. The production is concentrated in the following districts: Saramacca, Coronie, and Nickerie with areas of 5,000 ha, 7,000 ha, and 43,000 ha respectively.

TABLE 1 : PADDY AREA UNDER PRODUCTION AND HARVEST

	UNIT	2011	2012	2013	2014
PRODUCTION AREA	HA	56,930	51,379	58,274	62,211
TOTAL AGRICULTURAL AREA	HA	62,916	57,371	65,910	70,728
QUANTITY HARVESTED	TON	235,298	224,127	262,029	275,851

Source: Ministry of Agriculture, Animal Husbandry and Fisheries.

Prices

The farm gate prices have been fluctuating over in the 2010–2015 period and were only slightly higher in 2014 compared to 2010 (Table 2).

TABLE 2 : PADDY PRICES

DESCRIPTION	AVERAGE YEAR PRICES (SRD/KG)				
	2010	2011	2012	2013	2014
FARM GATE WET PADDY	HA	56,930	51,379	58,274	62,211
CONSUMER PRICES	HA	62,916	57,371	65,910	70,728

Source: Ministry of Agriculture, Animal Husbandry and Fisheries.

Export

The export of rice products (white, broken, parboiled and cargo rice) has grown in volume and value from 90,000 ton in 2010 to 104,000 ton in 2014. (Table 4) The most important and reliable export destination for rice from Suriname is by far Jamaica. Rice exports to Jamaica have grown from 36,000 ton in 2011 to a 65,000 ton in 2014. Exports to the EU declined sharply since 2010. Suriname is not capitalizing on the introduction of the Economic Partnership Agreement (EPA), which since 2010 has allowed duty free and quota free exports to the EU. The decline in exports to the EU is partly because of the fierce competition from high-quality Asian rice.

TABLE 3: EXPORT QUANTITY AND VALUE OF RICE PRODUCTS

	UNIT	2010	2011	2012 *	2013	2014
QUANTITY	TON	89,412	46,109	56,317	77,161	103,755
VALUE	SRD1000	105,213	99,664	103,155	132,114	179,814

Source: Export figures - Customs (ASYCUDA).

Employment

Approximately, 1,400 farmers are employed in the rice sector. Approximately 8,000 families are directly dependent on the rice sector. The Nickerie district is the most important rice producing district and accounts for about 80% of all economic activity in the rice sector. An estimated 23 factories are involved in the processing of paddy rice.

Sector organization

The sector is fairly organized as a large portion of the farmers are members of the Suriname Rice Farmers Association (SPBA). The SPBA has approximately 1,200 rice farmers as members. The biggest producer has 1,000 hectares and the smallest 2 hectares. Production can be sub-divided between independent farmers, contract farmers, and corporate farmers.

The ministry consults regularly with representatives of stakeholders in the rice sector, including farmers, processors, exporters, traders, banks, and research institutes and the collaboration is enacted through the Implementation Unit Rice (IUR). Representatives of producers, processors/exporters, trade partners, banks,

ADRON (research institute) and the Ministry of Agriculture sit on the IUR. The Rice Board is responsible for meeting the rice sector's policy objectives. This body comes under the responsibility of the Ministry of Agriculture, Animal Husbandry, and Fisheries.

Information and research

Research institute Anne van Dijk Research Nickerie (ADRON) promotes improved seeds and provides training to producers and processors in the field of paddy drying and processing, quality management, administration and financial management, and crop management.

The rice commodity chain and key challenges

In describing the rice value chain, the information received from the Suriname Rice Farmers Association (SPBA) is used as a primary source, combined with the policy note of the Ministry of Agriculture 2010-2015 ("Beleidsnota"). Since the spring harvest is the most important one, information from this season is used to calculate the farm gate price. The rice value chain is not integrated. It is made up of a variety of active companies active, summarized by Figure 1 below. As can be seen in Figure 1, the Suriname rice value chain is long and lacks a strong market orientation or focus, resulting in inefficiencies and reduction in competitiveness.

FIGURE 1: SURINAME VALUE CHAIN



Source: The National Rice Conference, 2015.

Input dealers

The supply of some key inputs is not always reliable for farmers, which results in production delay or loss. The rice sector is dependent on the following key inputs: seeds, fertilizer, chemicals, diesel, parts, and machine services. Fertilizer is the costliest input, representing an average of 16% of the cost. According to the SPBA, to improve the sector's competitiveness, the priority lies in reducing input costs (more efficient use, lower prices). Furthermore, SPBA indicates that rice seeds continue to be more prone to diseases. ADRON needs to invest more in seed innovation to introduce better yielding and more disease resistant seed.

TABLE 4: FARM GATE PRICE CALCULATION

ACTIVITIES	ANNUAL COST IN SRD		
	2014	2015	2016
LAND PREPARATION	1100	1100	900
SLAG INSECTICIDE	31	31	45
BEETLE INSECTICIDE	15	15	17
INSECT CONTROL LABOR	10	10	10
SEED	260	260	210
SPROUT LABOR	35	35	35
TRANSPORT SEED	25	25	25
SOWING LABOR	90	90	90
PEELING	25	25	25
HERBICIDES	40	40	50
SPRAY LABOR	25	25	45
TRANSPORT	35	35	35
FERTILIZER UREA	623	630	625
FERTILIZER NPK		135	60
BUG INSECTICIDE	60	135	135
INSECT CONTROL LABOR	15	15	15
IRRIGATION PUMPS			400
CLEANING DRAINAGE	95	95	95
SUPERVISION	175	175	175
PROVISION	250	250	250
FUNGICIDE	175	175	210
INTEREST	210	210	210

FAMILY LABOR	175	175	195
COMBINED RENT	400	400	300
TOTAL PRODUCTION COST/HA	3869	4086	4157
PROFIT 15%	580	613	624
FARM GATE PRICE/HA IN SRD	4449	4699	4781
EXCHANGE RATE	3.35	3.35	4.15
FARM GATE PRICE/HA IN USD	1328	1403	1152

Source: Suriname Rice Farmers Association.

Key challenges in the rice value chain

- Infrastructure.** Maintenance of rice production infrastructure, like channels, pumps, and drainage is key and requires a lot of attention. Ministry of Agriculture, Animal Husbandry, and Fisheries policy has transferred the maintenance of agricultural infrastructure to water boards. According to Overliggend Waterschap MCP, OW MCP⁴² (the overarching water board of Nickerie) and Wereld Water Net, a total of 14 water boards have been established, of which 13 are in Nickerie district, the most important rice producing district. Directors for the water boards have been elected in 2013 for a period of 3 years.⁴³ Sufficient fresh water is essential for rice cultivation in Nickerie and the Overarching Water Board pumps the water requirements from the Corentyne River to the rice fields through a 66 km long canal.
- Water board functioning.** The water boards say they do not having the authority (legal framework) nor the (financial) resources to implement and enforce the maintenance commitments. Maintenance thus depends on the central authorities, resulting in delays. Also, the SPBA is not satisfied with the performance of the Water Boards. The problem according to the SPBA is the enforcement of the maintenance commitments, as farmers who do not follow the law are not penalized, given their unpopularity. A possible solution is to make the water boards directly responsible for the water infrastructure, giving them the appropriate powers and resources.
- Financing and credit.** The SPBA notes that the payment delays faced by rice farmers is one of the key issues in financing the agricultural season, and it puts unnecessary pressure on the farmers. The SPBA has calculated that some millers/processors

⁴² www.owmcp.org/

⁴³ www.wereldwaternet.nl/projecten/suriname/eu-project-owmcp-nickerie

have a combined debt of about SRD 3 million, owed by over a hundred rice farmers. The SPBA is obtaining legal counsel to force payment through the courts. Payment delays puts extra pressure on the farmers, while the banks require on-time repayment of their credit. So far, the agricultural credit (AKF) interest rate remains at 6.25%. The devaluation of the Suriname currency will lead to increase in the interest rate of at least 1-2%

- **Fuel.** Oil prices have dropped in the last year, lowering the cost of rice production. Lower oil prices, though, have not resulted in lower diesel prices in Suriname, hurting the farmers' competitiveness internationally. In September 2015, the Government of Suriname decided to introduce a per-liter solidarity levy on the price of gasoline and diesel (SRD 0.40). Also, the electricity and water rates have increased.

The ERP is estimated for rice. The ERP has been gradually decreasing, from 33% in 2012 to 31% in 2014. This decrease can be attributed to the decrease in farm gate prices. The NRP is consistent at 20% over the same period. More details on the ERP can be found in the main text, paragraph 3.3.

ANNEX III: OVERVIEW OF THE BANANA VALUE CHAIN

Background

Since the beginning of 2014, the banana production sector has been privatized and is now in the hands of the Belgium company Univeg, who took over 90% of the shares from the state-owned company, Stichting Behoud Bananen Sector (SBBS). SBBS will continue under the name Food and Agriculture Industries (FAI) as a fully-owned subsidiary of Univeg and is the single largest banana producer in the country. Small-scale banana farming does exist, but with a total of only 186 ha, it is insignificant compared to the FAI plantation of almost 2,000 ha. Small scale farming is growing and has more than doubled between 2011 and 2014. The area under production has been steadily growing from 1,963 hectares in 2009 to 2,160 hectares in 2014, when it stabilized (see Table 1). Production, however, has declined steadily since 2009 and stood at 77,000 tons in 2014, even less than in 2009. Consequently, productivity has fallen in the same period (2009–2014) by 25%, from 48 ton/ha in 2009 to 36 ton/ha in 2014.

Food and Agriculture Industries (FAI). After FAI took over SBBS operations in 2014, it reported a loss of approximately US\$10 million in 2014 and US\$13 million in 2015. According to FAI, there are both internal and external reasons for these huge losses. External reasons include: (i) the USD has gained strength against the EUR in the last 2 years. With the cost of production in USD and the revenues in EUR (since the entire production is sold in Europe), a stronger USD against the EUR is negative for FAI; (ii) continued price pressure in the competitive European market as explained in more detail in the paragraph on prices. Internal reasons for the losses are: (i) one of the two plantations (in Jarikaba) is struggling with the moko disease, which, according to FAI, was not revealed in the due diligence process and subsequent negotiations. As a result of the virus, this plantation has lost 20% of its production capacity; (ii) management and labor issues, with absenteeism as high as 50% of the work force. Since June 2014 there is new management and the workforce has shrunk from 2,600 staff in 2013 to currently below 2,000; (iii) the labor productivity in Suriname is low and the staff is difficult to motivate.

TABLE 1 BANANA SECTOR INDICATORS

DESCRIPTION	UNIT	2009	2010	2011	2012	2013	2014
PLANTED AREA	HA	1,963	2,081	2,044	2,051	2,173	2,164
QTY HARVESTED IN TONS	TON	82,267	94,272	85,017	92,391	85,584	77,014
FARM GATE PRICE	SRD/KG	1.27	0.97	1.18	1.25	1.20	1.11
EXPORT QUANTITY *	TON	58,132	70,239	68,138	62,213	76,585	75,261
EXPORT VALUE	SRD 1000	73,608	67,987	110,986	89,110	110,740	109,446
AV. CONSUMER PRICE	SRD/KG	1.13	1.13	1.97	2.28	2.18	2.02
PRODUCTION PER HA HARVESTED AREA	TON	47.9	45.7	41.6	45.4	39.5	35.7

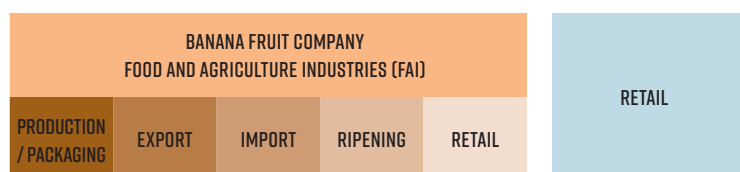
* Total export: SBBS for (2009-2013), FAI for 2014 + Small scale farming.
Source: Customs (ASYCUDA)

The Banana commodity chain and key challenges.

In describing the banana value chain, information from the field visits to FAI and SBBS is used as primary source combined with the Government Policy Note 2010-2015. The banana value chain in Suriname is traditionally vertically integrated. Companies control all operations along the chain—production, packing, shipping, importing, and ripening—to keep a handle on supply and influence in the downstream market (Figure 1). Until the 1980s, most fruit (banana) companies were organized in this (traditional) way.

Today, the key worldwide players in the banana value chain have cut production out of their core business. Chiquita sources less than 40% of its bananas from its own farms, Dole mainly owns farms in Ecuador and Costa Rica (and an organic farm in Colombia), and Del Monte grows approximately 40% of its volumes in company-controlled farms (in Guatemala, Costa Rica, Cameroon etc.).

FIGURE 2: FAI BANANA VALUE CHAIN



Source: own elaboration

Retail⁴⁴

The European Union (EU) is the biggest importer of bananas in the world with the majority being sourced from Latin America. The import industry in the EU was traditionally dominated by vertically integrated companies that controlled all operations along the chain—production, shipping, importing, and ripening. In the 1980s, five companies alone (Chiquita, Del Monte, Dole, Noboa, and Fyffes) traded 80% of the world’s bananas. However, a major divestment by these companies of directly owned plantations and ships has reduced the main barrier to entry for businesses at both ends of the banana chain. This process now sees Chiquita, Dole, Del Monte and Fyffes controlling only 39% of the banana trade in Europe. The retailers are now the ones increasingly controlling value banana chains, with integrated fruit companies competing to be their “preferred suppliers.” In Germany and the UK, retailers are beginning to source directly. And Univeg, being a logistic fruit & vegetable supplier to EU retail markets is strategically securing its supply by taking over SBBS.

Prices

Consumer prices have stagnated or increased very slightly since 2001, except in the UK, where a banana price war between retailers has halved consumer prices.⁴⁵ In stark contrast, wholesale prices have decreased by almost 25%, whilst retailers have increased their share of the banana value in most countries (except the UK) to between 36% and 43%. This decline in import prices has been transferred to all major countries supplying the EU, where the value at origin has fallen by 20% to

⁴⁴ Banana value chains in Europe and the consequences of Unfair Trading Practices, October 2015

⁴⁵ Banana value chains in Europe and the consequences of Unfair Trading Practices, October 2015

50% in real terms. This comes at a time of significant increases in both production and living costs. Inputs, such as fertilizers and pesticides, have risen by up to 130%, while the high costs of compliance with quality, sanitary and environmental standards for bananas entering the European market are incurred mainly by producers. For banana workers and farmers themselves, food, health, education, and other living costs have skyrocketed in the period since 2001.

Key challenges in the banana value chain

Consumer prices have stagnated or increased very slightly.

- **World market price pressure.** If retailers continue to capture an increasingly excessive share of banana values, and buying prices are forced down to unsustainable levels, suppliers will struggle to survive. Smaller producers will be more vulnerable to extinction as a consequence. Furthermore, as producers supply European retailers, there is an increase in piece rates, short-term contracts, and the use of sub-contracting, making work more precarious and with companies relying on vulnerable migrant workers.
- **Weaker competitive position.** The competitive position of the sector and of FAI is under pressure because of a number of government policies. These are: (i) FAI had negotiated an import duty exemption on petroleum. This exemption has been withdrawn, increasing the annual fuel cost for FAI by US\$250,000-US\$300,000; (ii) the Customs Tariffs and Levies (inspection of containers and the like) rose by 15%; and (iii) ahead of 2015 government elections, three new social bills were approved, increasing the cost of labor by 20% for enterprises like FAI.
- **Exchange rates.** Since the entire production of FAI is sold in Europe and the cost of production is in USD, a stronger USD is negative for FAI, reducing their margins.

The **effective rate of protection** (ERP) is estimated for the Banana commodity. The ERP is decreasing from 180% in 2012 to 98% in 2014. This sharp decrease can be attributed to the lower farm gate prices. The farm gate price decreased from US\$0.38 in 2012 to US\$0.33 in 2014, with more or less equal sales prices. The NRP is consistent at 28% over the same period. More detail on ERP is described in the main text, paragraph 3.3.

ANNEX IV: OVERVIEW OF THE POULTRY VALUE CHAIN

Background

The trend in the livestock sector including Poultry is an increasing presence of economies of scale in production through the creation of bigger companies. There is also a trend of vertical integration between the various stages of the chain (production, processing, wholesale) in order to have better control and fast and adequate response to market demand. At the same time, the number of smaller companies is decreasing.

Poultry is the only livestock sector where national demand exceeds production. The poultry sector remains reliant on the imported inputs, like maize for feed. The livestock sector has growth potential, but is currently not exporting. Better disease control should lead to higher production and, if combined with implementation of food safety measures, should open export possibilities.

The dominance of poultry in the livestock sector is clear from Table 1 below. This means that with the production of meat and eggs, the poultry sector supplies more than half of the animal protein and 68% of the meat supply. Poultry farming is highly dependent on imports of feed, medicines and hatching eggs, and is therefore sensitive to foreign exchanges fluctuations.

The subsector produces 70,000 to 90,000 broilers per week. A third of the hatching eggs for broiler chickens is imported. Hatching eggs for laying hens are produced in Suriname.

TABLE 1. LIVESTOCK SUB SECTOR

SUB-SECTOR	NO OF COMPANIES	ANIMAL STOCK	PRODUCTION	VALUE(SRD)
POULTRY (BROILER)	2200	500,000	8,140,000 KG	61,864,000
POULTRY (LAYER)	1500	240,000	45,000,000 PIECE	15,750,000
CATTLE	1000	36,000	1,882,000 KG	21,643,000
DAIRY	1000	18,000	6,500,000 LITER	12,350,000
PIGS	155	29,000	1,900,000 KG	13,680,000
SMALL LIVESTOCK	450	13,000	16,500 KG	577,500
TOTAL				125,864,000

Organization of the sector

The sector is organized to some extent by the Poultry Association of Suriname (APSS) representing the interests of the sector. Until 1990, Suriname was self-sufficient in terms of chicken meat. With imports of cheap chicken drumsticks, the local poultry industry has lost a large part of the domestic market. Suriname imports chicken legs from the United States and both chicken legs and whole chicken from Brazil. Also, whole chicken and chicken products enter the Suriname market from Caricom, Jamaica and Trinidad in particular.

As a result of this direct competition, the poultry sector has declined to a 40% market share. Since 2010 meat production is increasing gradually thanks to the domestic preference for locally produced chicken meat. However, to achieve further growth, the price difference between imported chicken and the locally produced chicken (which is more expensive) should be smaller (Table 2).

Employment

The number of direct and indirect jobs for commercial production is estimated at 2,000 FTE. Production takes place mainly in the district of Wanica. Nationally, there are about 4,200 poultry companies, of which about 2,200 companies raise broilers, 1,500 have laying hens, and approximately 500 companies raise other poultry such ducks and geese.

TABLE 2. POULTRY SECTOR INDICATORS

AVERAGE PRICE	UNIT	2010	2011	2012	2013	2014
FARMGATE CHICKEN	SRD/KG	9.80	10.77	9.85	11.45	11.16
FARMGATE EGGS	SRD/PIECE	0.51	0.69	10.81	0.69	0.80
CONSUMER PRICE CHICKEN	SRD/KG	13.77	14.85	15.80	14.63	14.46
CONSUMER PRICE EGGS	SRD/PIECE	0.75	0.80	0.94	0.80	0.90
GROSS PRODUCTION VALUE CHICKEN	SRD '000	117,443	113,494	112,162	96,558	99,335
GROSS PRODUCTION VALUE EGGS	SRD '000	23,438	22,303	44,079	38,914	42,350
PRODUCTION						
TOTAL CHICKEN AND OTHER POULTRY **	1000 PCS	6,150	5,694	6,333	4,955	5,098
EGGS	1000 PCS	45,956	32,323	54,418	56,397	52,937
SLAUGHTERED:						
ANIMALS	1000 PCS	6,863	5,854	7,004	4,958	5,251
WEIGHT	TON	11,984	10,538	11,387	8,433	8,901
IMPORTED:						
CHICKEN AND OTHER POULTRY - QTY	TON	16,848	14,869	12,408	19,558	17,960
CHICKEN AND OTHER POULTRY - VALUE	SRD1000	48,237	59,560	50,898	74,260	79,629
AVERAGE PRICE IMPORTED CHICKEN PRODUCT	SRD/KG	2.86	4.01	4.10	3.80	4.43

Source: Beleidsnota / policy note LVV 2010 – 2015.

Import

The poultry sector is reliant on the import of chicken feed or feed ingredients, medicines, and breeding eggs. As can be seen in Table 3, since 2010, the import of breeding eggs has fallen sharply because of increased prices. The sharp fall in the import of breeding eggs is only partly compensated by an increase of local breeding eggs.

Chicken feed is produced in Suriname by VESU. Maize is the most important ingredient in terms of volume, representing almost 50% of the feed mix. Maize is not grown in Suriname and thus fully imported. Other, imported ingredients that are not as important are soybean and premix concentrates.

TABLE 3 - INPUTS

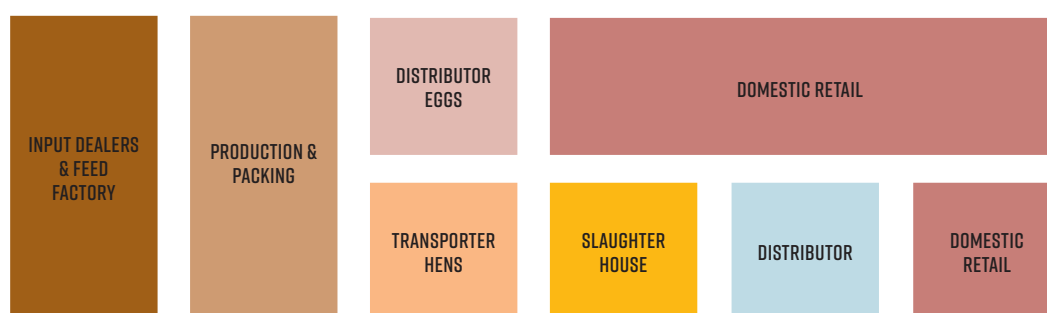
INPUT	UNIT	2010	2011	2012	2013	2014
BREEDING EGGS						
- IMPORT	1000 PCS	2,734	2,229	2,707	308	161
- LOCAL		6,148	6,133	6,366	6,611	7,001
IMPORT VALUE BREEDING EGGS	SRD 1000	2,679	2,786	3,384	706	328
IMPORT VALUE PER PIECE	SRD	0.98	1.25	1.25	2.29	2.04
FEED PRODUCTION						
BROILER CHICKEN FEED	TON	33,305	24,773	22,978	29,543	24,529
LAYER CHICKEN FEED	TON	7,110	9,428	8,765	11,270	10,781
FEED INGREDIENTS						
CORN***	TON	17,143	15,714	10,241	12,183	25,286
RICE/GRINDING MILL	TON	6,122	4,469	7,162	7,164	7,637
SOYBEAN	TON	5,485	5,748	8,066	7,180	5,359
CONCENTRATE	TON	10,199	9,895	9,987	8,691	8,213
OTHERS	TON	1,718	3,039	4,125	3,931	3,642
TOTAL	TON	40,667	38,865	39,581	39,149	50,137

Source: Beleidsnota / policy note LVV 2010 – 2015.

The poultry commodity chain and key challenges.

In describing the poultry value chain, the information gathered during the field visit at TOK NV is used as primary source and combined with Government Policy Note 2010-2015. The poultry value chain in Suriname is only partially vertically integrated, with the slaughterhouse also distributing the meat to retailers (Figure 1). As can be seen in Figure 1 the chain of eggs is shorter than the meat chain.

FIGURE 1: SURINAME POULTRY VALUE CHAIN



Source: own elaboration, 2016.

Key challenges

- **Overdependence on imported maize.** The sector is overdependent on the import of maize in USD as a key input for the chicken feed. This dependence involves risks when the price of maize rises and/or when the SRD devalues against the USD, making imports more expensive.
- **Disease control.** Better disease control should lead to higher production and lower production costs. These are the first steps to be taken if the sector wants to develop an export market.
- **Price competition.** Suriname is facing strong price competition from the United States, Brazil, and Caricom nations. Although local chicken is gaining in popularity, the price difference between the locally produced chicken and imported chicken pieces is too big for the sector to grow further.

The **effective rate of protection** (ERP) is estimated for poultry. With an ERP of 2%, it is slightly positive. The Nominal Rate of Protection (NRP) is consistent at 14% over the same period. More details on ERP can be found in the main text, paragraph 3.3.

Poultry is the only commodity (out of the three analyzed, rice, bananas, poultry) subject to an import tax: 22%. However, the competition from Brazil and the US for chicken parts is very strong. Both countries are able to offer chicken parts in Suriname's consumer markets at less than half the domestic farm gate price. True, chicken farmers in Suriname have a higher production cost price, partly because they rely for 50% of their chicken feed needs on imported corn and concentrate that have the standard 12% CARICOM levies, which is not beneficial for the sector. Other factors are possibly even more important to consider when evaluating the competitive position. The highly segmented nature of the US market and its preference for breast meat and wings forces the US to export at least 60% of leg quarters. Moreover, in the US and Europe, once meats including chicken have been frozen, there is a time limit after which they can no longer be sold for human consumption in their domestic markets, and they must be exported. The price for this kind of frozen meat gets progressively lower the longer the chicken remains frozen. These are factors which drive the supply of chicken up and consequently drive the price down.



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