



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*Joint symposium on maize and peanut. Held in Suriname
on behalf of the 75th Anniversary of
The Agricultural Experiment Station of Paramaribo.*

November 13 – 18, 1978



Proceedings of the Caribbean Food Crops
Society. Vol. XV, 1978

ECONOMIC ASPECTS

THE ECONOMICS OF AGRICULTURE IN SURINAME

(the need for an alternative strategy)

W.R. Caldeira

Ministry of Agriculture, Animal Husbandry
and Fisheries, Paramaribo

A BIT OF HISTORY

Agriculture has played an important role in bringing the majority of the Suriname population (92%) together, especially from Africa and Asia, under the old colonial system. Since 1873 (abolition of slavery) the Negroes abandoned agriculture in great numbers and the descendants of immigrants from India and Indonesia (Java) who took their place did the same since 1950. The latter was mainly the result of the colonial power shifting its interests to the more and lucrative bauxite sector. After World War II Surinam also became an "Equal" partner within the Netherlands Kingdom opening emigration possibilities for approximately 150,000 ex-Surinamers now living in Holland, while around 400,000 remained Surinamers. Together with the absence of a development strategy for sustained growth and development of the agricultural sector, this resulted in a sharp decline of agricultural production except for paddy (rice) and oilpalm, especially in the years 1970-1977 (see tables 1 and 2).

Agriculture's share in domestic product fell from 14 to 9% from 1955-1974 and direct employment fell from 50% to 18% of the working population.

MAIN FEATURES AND RECENT TRENDS

1. Suriname's agricultural sector contributes only 9 to 10 percent to the Gross National Product and 12 percent to exports, with 18 percent of the population directly employed and around 10 percent indirectly in agro-industries, transport, petty trade and other services. Unemployment (disguised unemployment) is relative high due to most of the 16,000 peasant farms being too small (2 to 6 hectares) for mechanized operations (see tables 5 and 9) and other modernized farming systems saving labour.
2. Farmers are very progressive, willing and able in adopting modern technologies (applying new varieties, fertilizers, chemicals, mechanization and labour saving technologies especially in tillage, (heavy tractors), harvesting (combines) and even in applying fertilizers seed, pesticides etc. by airplane in rice, bananas).
3. Land is available as an abundant resource base, potentially over 4 million hectares of which less than 1 percent is under agricultural cultivation (see table 4). Irrigation water is no constraint except for rice, since rain fall amounts 2500 mm per year. Drainage is a severe problem for most crops, especially annual crops other than rice, making "bed culture" necessary. Suriname faces no calamities like floods, hurricanes, severe droughts and the like.

*Symposium on maize and peanut, Paramaribo
Nov. 13 - 18, 1978*

The economics of agriculture in Suriname

4. Only food crops are produced. Paddy (rice) dominates with 67% of total crops value, 81% of planted acreage and 60% of agricultural exports.
Oilpalm, sugarcane, bananas, vegetables and citrus take the second line.
Mays and peanut are still minor crops, though potentially important (see tables 1, 2, 3).
5. Agricultural production is mainly for marketing through agro-industries in rice, sugar, oilpalm, shrimps for exports (rice, oilpalm, bananas, sugar, shrimps, citrus) and local consumption (rice, oilpalm, sugar, citrus, vegetables, meat, milk, fish etc.).
Agriculture in Suriname is not a traditional way of life but highly commercial with an intensive use of modern systems (inputs). The organization of marketing however is rather poor and inefficient leaving small farmers at the mercy of brokers and middle-men, creating inefficiencies in the use of irrigation water and expensive imported machines (tractors, combines) because of time-peaks in paddy production, especially for small farmers.
6. Agricultural production except for oilpalm, is concentrated in the coastal area on clay soils with scattered fragments of ridges these heavy soils call for bed-cultivation, except for rice to meet drainage problems. The bed-system hampers mechanization. Oilpalm is grown in the southern areas on lighter soils. Rice production is concentrated in the Nickerie district (95% of production) in the North-West.
7. Land, Manpower and Capital are no constraints to agricultural development. The main constraint is the agricultural policy giving the agricultural sector a marginal role. The actual development strategy, emphasize capital intensive bauxite and related industries and hydro-electric power works. The employment needs were met by emigration to the Netherlands and expansion of the Government sector having 33% of employment (see tables 9 and 10).

PROBLEM AREAS AND NEEDED COUNTERS

1. Food imports (see table 7) amount over 10 percent of total imports with a negative agricultural balance of payments. Deficit in national balance of payments and government budget is yet solved by aid from the Netherlands and EEG 925% of total government budget). This will definitely come to an end around 1990. Import substitution in maize, meat products, fish products, milk products and vegetables have great possibilities. Still export promotion in rice, oilpalm, sugar, alcohol, citrus is of more importance.
2. Government participation (see table 6) in agricultural production mostly on large scale operations is frequently inefficient with bureaucratic constraints, in stead of supporting modern organized farmers to achieve economies of scale through cooperative systems, nucleus units with outgrower-systems, decentralizing away from the bureaucratic inefficient apparatus in Paramaribo. Governments normal budget allows for only 3.6 percent of funds for the agricultural department. Around 20-25% of development aid goes to agricultural projects.

Miscellaneous – Economic aspects

3. Diversification in crops (not only rice and oilpalm) and regional spreading of activities (also other districts than Nickerie) are urgently needed.
Maize, peanuts and other pulses are of great significance in both respects.
4. Urbanization needs a counter in approving living conditions in villages in rural areas by creating sufficient facilities (potable water, electricity, schools, health centres), guaranteed reasonable prices for products and more back up services to farmers (credit, nucleus service units) etc.
5. The urgent need for a development through people's involvement, with decentralized decision making per district by farmers, especially concerning land policies and the like.
6. Execution of the 15 years Long Range Agricultural Development Plan of over Sf 900 millions (US\$ 500 millions) running from 1977-1992, which has to get started but still meets ethnical and other political constraints (see table 8). Adaption of the Plan, in meeting the basic needs of farmers and consumers, is necessary in this respect.
For more information see tables 1-10.

Table 1: Acreage of principal crops 1970 – 1977

Table 2: Production of principal crops 1970 – 1977

Table 3: Value of agricultural production 1970 – 1977

Table 4: Land use pattern 1969

Table 5: Legal status of agricultural holders by size of holdings and by district in 1969

Table 6: Government participation in agricultural production, 1978.

Table 7: Imports of agricultural products also produced in Suriname 1969 – 1973

Table 8: Area increase in crops and livestock (15 year Plan 1977 – 1992)

Table 9: Gross domestic product per sector 1973 – 1975. Existing jobs, working force and unemployment 1975

Table 10: Development investment through aid from the Netherlands 1954 – 1974 and E.E.C.

The economics of agriculture in Suriname

Table 1. Suriname: Acreage of principal crops, 1970 – 1977 (hectares) (1970 = 100)

	1970	1971	1972	1973	1974	1975	1976	1977
Paddy								
Area planted (ha)	39,132	40,153	37,409	44,985	44,353	47,500	48,400	49,700
Index	100	103	96	115	113	121	124	127
Oilplam								
Area planted	50	330	840	1,215	1,435	1,640	1,710	1,880
Index	100	660	1,680	2,340	2,870	3,280	3,420	3,760
Other crops								
Area planted (ha)	10,051	9,263	9,390	9,584	9,444	9,684	9,398	9,540 ¹⁾
Index	100	92	93	95	94	96	94	95
All crops								
Area planted (ha)	49,683	49,746	47,639	55,784	55,232	58,824	59,508	61,120
Index	100	100	96	122	111	118	120	123
Small-scale farming								
Area planted (ha)	28,245	25,430	21,215	26,763	25,400	24,344	24,431	23,993
Index	100	90	75	95	90	86	86	85
Large-scale farming								
Area planted (ha)	21,438	24,316	26,424	29,021	29,832	34,480	35,071	37,127
Index	100	113	123	135	139	161	164	173

Source: Ministry of Agriculture, Animal Husbandry and Fisheries (LVV)

Agro-Economic Division

1) of which in 1977: mays

110 hectares

peanuts

282 hectares

sugarcane

2188 hectares

bananas

1870 hectares

citrus

2000 hectares

coconuts

1100 hectares

1 hectare = 2.54 acres

Miscellaneous – Economic aspects

Table 2. Suriname: Production of principal crops, 1970 – 1971
(Physical production in metric tons)

	1970	1971	1972	1973	1974	1975	1976	1977
Paddy								
Production	145,399	136,290	122,968	164,063	162,147	174,845	172,500	202,866
Index	100	94	85	113	112	120	119	140
Vegetables								
Production	3,370	2,740	2,966	3,106	2,016	2,230	2,704	3,165
Index	100	81	88	92	60	66	80	94
Sugar								
Production	12,011	10,075	11,082	8,961	8,535	9,577	8,391	6,370
Index	100	84	92	75	71	80	70	53
Alcohol								
Production	3,863	3,828	4,052	2,476	2,789	2,422	2,067	1,371
Index	100	94	105	64	72	63	54	34
Bananas								
Production	39,749	49,255	42,000	38,811	39,605	43,095	41,425	31,568
Index	100	124	106	98	100	108	104	79
Palmoil and rel. prod.								
Production	—	—	—	—	160	766	1,630	2,291
Index	—	—	—	—	100	479	1,018	1,432
Citrus								
Production	59,311	64,100	73,887	74,560	66,100	61,900	58,650	67,650
Index	100	108	125	126	111	104	99	115
Other crops								
Production	16,406	12,558	12,141	13,739	8,478	9,765	9,368	10,203 ¹⁾
Index	100	77	74	84	52	60	57	64
All crops								
Production	287,668	283,871	275,182	311,932	295,745	310,327	302,129	330,008
Index	100	99	96	108	103	108	105	115

Source: Ministry of Agriculture, Animal Husbandry and Fisheries (LVV)
Agro-Economic Division)1 of which

mays 230 metr. tons
peanuts 238 metr. tons

The economics of agriculture in Suriname

Table 3. Suriname: Value of agricultural production, 1970 – 1977 (In thousands of Suriname Guilders)

	1970	1971	1972	1973	1974	1975	1976	1977
Value of all crop production	30,626	29,334	31,272	44,156	49,106	58,547	60,038	78,775 ¹⁾
Value of all livestock and poultry production	15,263	17,897	19,340	20,967	24,583	32,349	33,558	34,541
Value of all fishery production	6,446	7,656	9,791	10,930	13,081	21,589	46,134	49,961
Total	52,335	54,887	60,403	76,053	86,770	112,485	139,730	160,277

Source: Ministry of Agriculture, Animal Husbandry and Fisheries (LVV)
Agro-Economic Division

US \$ 1.00 = Sf 1.77

1) of which in 1977:

paddy	Sf 52,542,000.—
bananas	Sf 5,976,000.—
citrus	Sf 6,734,000.—
mays	Sf 207,000.—
peanuts	Sf 1,301,000.—

Table 4. Suriname: Land use pattern, 1969

	Hectares	Percent
A. Land in farms, total	93,833	
1. Agricultural land	47,002	0.29
Areable land (crops)	38,172	
Natural grassland	6,470	
Cultivated grassland	2,360	
2. Yard and yard crops	2,062	0.01
3. Other land ¹⁾	44,769	0.27
B. All other land in Surinam	16,306,167	99.43
Total country area	± 16,400,000	100.0

Source: For A: Third Agricultural Census, Nov. 1969, pp. 44-45

For B: LVV estimates, Agro-Economic Division

1) other land for agricultural purpose but not in production mostly estates in private property or long lease.

Miscellaneous – Pests, diseases and weeds.

Table 5. Suriname: Legal status of agricultural holders, by size of holdings and by District in 1969

	Private person estates		Government		Private Corporation		Other ¹⁾	
	Number	Hectares	Number	Hectares	Number	Hectares	Number	Hectares
<u>A. By size of holdings</u>								
1. Holdings under 20.0 ha	15,702	44,283	15	31.9	–	–	10	20.2
Less than 0.48 ha	1,455	405	2	0.6	–	–	4	1.3
0.48 – 5.0 ha	11,884	24,869	12	25.8	–	–	5	6.1
5.0 – 20.0 ha	2,363	19,009	1	5.5	–	–	1	12.8
2. Holdings over 20.0 ha	309	18,344	13	6,211.8	15	13,836	14	11,105.5
20.0 – 50.0	252	7,073	2	67.0	–	–	3	81.0
50.0 – 100.0	27	1,738	1	60.0	–	–	–	–
100.0 – 200.0	15	1,738	3	384.8	2	1,243	2	218.7
200.0 – 500.0	11	3,644	3	875.0	5	1,613	1	206.0
500.0 – 1,000.0	2	1,300	3	1,645.0	6	4,556	2	1,331.8
1,000 and over	2	2,850	1	3,180.0	2	7,424	6	9,268.0
Total	16,011	62,627	28	6,247.7	15	13,836	24	11,125.7
<u>B. By District</u>								
Paramaribo	41	81.9	–	–	–	–	–	–
Nickerie	2,867	13,386.7	3	1,095.8	2	1,185	13	9,594.5
Coronie	525	2,060.1	1	0.6	1	100	–	–
Saramacca	1,561	10,899.1	6	726.5	–	–	–	–
Suriname	7,494	22,823.5	6	615.8	4	3,272	–	–
Para	925	3,962.4	2	3.4	–	–	3	16.8
Commnewijne	2,245	8,705.0	8	3,191.6	8	9,279	7	3.4
Marowijne	315	535.3	1	550.0	–	–	–	–
Brokopondo	38	173.4	1	60.0	–	–	1	1,511.0
Total	16,011	62,627.4	28	6,243.7	15	13,826	24	11,125.7

Source: Third Agricultural Census, Nov. 1969. pp. 36 – 37

1) Agricultural Societies, foundations, and cooperatives.

The economics of agriculture in Suriname

Tabel 6. Suriname: Government participation in agricultural production, 1978

Type and name of enterprise	Government participation	Area (ha)	Activity
A. COMPANIES (profit)			
1. Tropica N.V.	100% *	—	Processing of fruits
2. Dairy Factory N.V.	100% *	—	Production of dairy products
3. Agricultural Bank N.V.	100% *	—	Provision of agricultural credit
4. Victoria N.V.	72%	1.650	Oil palm production
5. Marienburg SOM B.V.	100%	2.200	Sugar production
6. SURLAND N.V.	100%	1.800	Bananas and rice production
7. SUGAM N.V.	51%		Shrimps fishing (19 vessels)
8. Phedra ¹⁾ N.V.	100%	800	Oil palm production
9. Patamacca N.V.	100%	5.000	Oil palm production
10. SUCA N.V.	100%		Processing fruit etc.
B. GOVERNMENT FOUNDATIONS (non-profit)			
1. SML Wageningen	100%	10,000	Rice production
2. SEL (Experimental Agric.)	100% (500	Rice production (comme)
)	300	Citrus & beef cattle production
3. Small Fishery Operation (STIVI)	100%		Fishing processing
4. STIPRIS	100%	60	Research facilities (several)
5. STICOS	100%	18	Research on coconut
C. GOVERNMENT ENTERPRISES			
1. Alliance	100% *	300	Citrus production
2. LAK (Landsbedrijf Agr. (Kern bedrijf)	100% *	250	Vegetable production
3. State Livestock Farm (Landsboerderij)	100% *	400	Livestock production

Source: Ministry of Agriculture, Animal Husbandry and Fisheries.

Agro-Economic Division

(August 1978)

Miscellaneous – Pests, diseases and weeds.

Table 7. Suriname: Imports of agricultural products also produced in Suriname, 1969 – 1973 (Metric tons)

	1969	1970	1971	1972	1973	1977
Maiza	11,000	11,500	12,000	13,000	28,030	23,000
Peanuts	n.a.	n.a.	n.a.	n.a.	203	446
Cabbage (sauerkraut)	130	80	110	100	170	n.a.
Tomatoes (processed)	390	410	340	520	60	n.a.
Other vegetables (processed)	1,020	870	550	860	880	n.a.
Sugar	110	2,070	1,790	2,440	1,900	
Cocca	120	90	110	90	90	n.a.
Beef	920	990	960	1,060	950	n.a.
Pork	n.a.	475	432	456	n.a.	n.a.
Chicken	636	581	513	647	191	n.a.

Source: Ministry of Agriculture Agro Economic Division
November 1978

The economics of agriculture in Suriname

Table 8. Suriname: Area increase in crops and livestock 1976 – 1992 (15 Year Plan)
(Hectares)

Crops	1976	1992		Total	Area increase 1992 over 1976
		"Autonomous farming"	"Planned farming"		
Rice	27,000	26,300	45,250	71,550	44,500
Dairy cattle	7,750	800	3,120	3,920	
Beef cattle		2,250	6,830	9,080	5,250
Fodder crops	100	100	6,900	7,900	6,900 ¹⁾
Citrus	850	1,400	830	2,230	1,380
Horticultures	1,820	700	2,220	2,920	1,100
Coconut	630		6,000	6,000	5,370
Oilpalm	1,600	2,000	5,800	7,800	6,200
Bananas	1,800				
Sugarcane	2,280	2,280	720	3,000	720
Other	560	560	—	560	
Total hectares	44,390	36,390	77,670	114,060	69,670
Index	100	82	175	257	(+ 157%)

Sources: Ministry of Agriculture, Long-range Agricultural
Development Plan. Several tables of main report.

1) of which located around:

Paramaribo	1800 hectares
Saramacca	2000 hectares
Commewijne	1600 hectares
Tibiti	1500 hectares
	6900 hectares

Miscellaneous – Pests, diseases and weeds.

**Table 9. Suriname: Gross domestic product and employment per sector
1973 – 1975**

(%) – percentage of employment	1973	1974	1975
Sectors:		(In millions of Surinam guilders)	
Agriculture and fisheries (18%)	51	62	72
Forestry and wood processing (2%)	11	11	12
Mining and bauxite processing (6%)	198	182	179
Manufacturing (10%)	44	34	45
Gas, water and electricity	16	15	18
Construction	12	13	15
Trade, restaurants and hotels (21%)	84	100	124
Transport and communications	20	21	32
Banking and other financial institutions	17	23	30
Housing	26	32	34
Government (33%)	117	136	159
Other social and personal services (10%)	13	15	18
Total GDP at factor cost	609	644	738
Total GNP at factor cost (Gross National Product)	545	597	724

Existing jobs, working force and unemployment 1975

	Year 1975 (december '31)	
Existing jobs	97,200	persons
Potential working force	117,500	persons
Actual working force	86,900	persons
Unemployed	30,600	persons
Percentage of unemployment	26%	

Source: General Bureau of Statistics (ABS)
National accounts 1975
Suriname in cijfers No. 79, July 1977

Miscellaneous – Economic aspects

Table 10. Development Investment through aid from the Netherlands and E.E.C.
1954 – 1974 (x Sf 1000)

Sector	1954 – 1964	1964 – 1974	Total
	Ten Year Plan	1st x 2nd 5-year Plan	
Agricultural sector	43,419 (24%)	42,383 (18%)	85,802 (21%)
Forestry sector	10,640 (6%)	29,303 (13%)	39,943 (10%)
Infrastructure ¹⁾	50,326 (28%)	57,556 (25%)	107,882 (26%)
Industry	16,828 (10%)	3,086 (1%)	19,914 (5%)
Surveys ¹⁾	21,656 (12%)	46,225 (20%)	67,881 (17%)
Social sector	19,471 (11%)	9,673 (5%)	29,144 (7%)
Education sector	8,107 (4%)	5,665 (3%)	13,772 (3%)
Electricity, water, gas	1,557 (1%)	1,381 (–)	2,938 (1%)
Govt. organization	6,428 (4%)	33,344 (15%)	39,772 (10%)
Total	178,432 (100%)	228,616 (100%)	407,048 (100%)

Source: Planning Bureau of Surinam (Stichting Planbureau Suriname)

1) Infrastructure and surveys were mostly allocated to the mining sector,
creating lucrative investment possibilities for foreign companies (bauxite etc.)

NAME OF PAPER: The Economics of Agriculture in Suriname
(W.R. Caldeira)

Questions by: Horacio Stagno
Country: Dominican Rep.

QUESTION: Why the 1977-92 Agricultural Sector Plan does not seem to be running very well? Is it a financial type problem?

ANSWER: Finance is not the problem, since the agreement with the Netherlands Kingdom allows for approximately Sf 750 millions of funds on a fonds perdu term for the agricultural sector until 1990.
The Long Range Agricultural Plan doesn't run well because of the actual policy with a development strategy giving agriculture a marginal role to play. Our development strategy emphasizes economic growth through the mining sector instead of a basic need approach with development through people's involvement.