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# Thematic analysis

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Labor & Mechanization

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## General

There are 10,234 farms in Suriname with a total area of 63,989.48 hectares. Most farms are found in the coastal plain, namely 6,886 (about 67%) with a total area of 61,197.23 hectares (approximately 96%). Four of these farms have no land. Of these farms:

- 10,188 are family farms
- 25 are corporate farms
- 9 are government farms
- 3 are institutes / institutions
- 9 are other

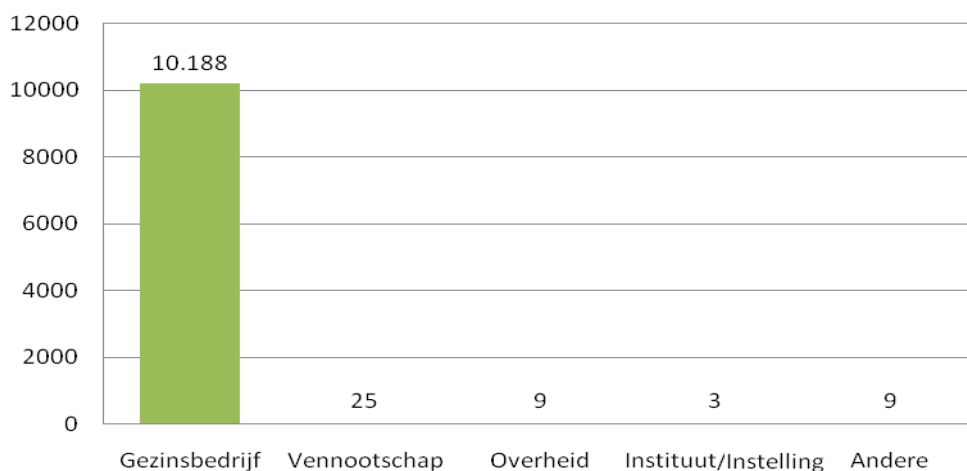


Figure 1.1 – Number of companies according to management structure

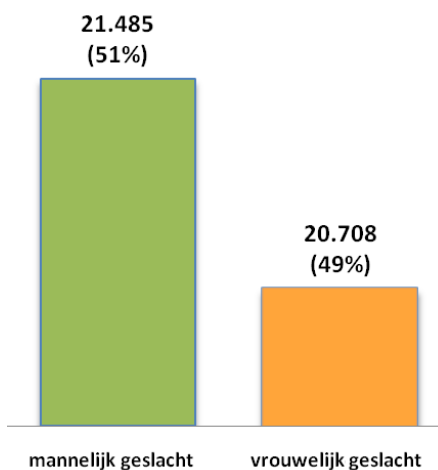


Figure 1.2 – Gender ratio within the household

The number of persons within the household of farmers is 42,193, of which:

- 21,485 (51%) men
- 20,708 (49%) women

# 1. Labor

The total number of contract labor is 8,656 of which 6,592 (76%) men and 2,064 (24%) women.

A division of men employed can be provided as follows:

- 46% permanently employed
- 5% semipermanently employed
- 49% temporarily employed

A division of women employed can be provided as follows:

- 60% permanently employed
- 8% semipermanently employed
- 32% temporarily employed.

The results of the census in the coastal plain and the interior in respect of labor are processed in tables. Below the data from these tables are analyzed. The analyses per table are elaborated in Chapters 1.1 and 1.2. This involves analyses about education, gender, number of hours worked, the contribution of household members and contracted labor.

## 1.1 The coastal plain

### 1.1.1 Farmers according to highest education and gender

Table 1 of Annex 1 indicates that in the coastal plain, most farmers (45%) enjoyed primary school education as the highest level of education.

It should be noted that of the farmers who have received a university education, the vast majority (41%) lives in the District of Paramaribo, followed by the District of Wanica (34%).

### 1.1.2 Number of hours worked per week

In this paragraph an analysis is made of the number of farmers according to the average number of hours worked per week on the farm in 2008 and according to gender per district. These figures are included in Table 1.

Table 1 -Number of farmers according to the average number of hours worked per week on the farm in 2008 and according to gender per district

DISTRICT	TOTAL FARMERS	AVERAGE NUMBER OF HOURS WORKED PER WEEK AND BY GENDER											
		TOTAL		<=7 HOURS/WK		8-20 HOURS/WK		>20 HOURS/WK		DOES NOT WORK ON THE FARM		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
PARAMARIBO	450	380	70	110	20	160	30	90	10	10	10	10	
WANICA	2,004	1,681	323	495	93	485	94	503	56	193	80	5	
NICKERIE	1,365	1,289	76	274	27	379	13	537	10	81	20	18	6
CORONIE	149	120	29	35	16	30	5	38	1	17	7		
SARAMACCA	886	801	85	197	22	296	27	287	24	21	12		
COMMEWIJNE	1,047	917	130	365	61	329	37	179	14	40	18	4	
MAROWIJNE	687	289	398	79	70	110	180	96	140	4	7		1
PARA	252	194	58	27	6	51	16	104	29	10	7	2	
TOTAL COASTAL PLAIN	6,840	5,671	1,169	1,582	315	1,840	402	1,834	284	376	161	39	7

Source : Statistic data Fifth Agricultural census

Table 1 shows that the majority of farmers, i.e. 33% of the total number of farmers, both men and women work 8-20 hours per week on the farm. Then 31% of the total number of farmers work more than 20 hours per week on the farm. Agriculture is thus mainly practiced as a part-time activity. It cannot be derived from the table what type of work is practiced. In the coastal plain more men are active in the agricultural sector.

Furthermore, an analysis of the number of farmers according to the average number of hours worked per week and according to gender per most important economic activity in 2008 is also important. This is provided in Table 2 below.

Table 2 - Number of farmers according to the average number of hours worked per week and according to gender per most important economic activity in 2008

MOST IMPORTANT ECONOMIC ACTIVITY	TOTAL FARMERS	AVERAGE NUMBER OF HOURS WORKED PER WEEK AND BY GENDER											
		TOTAL		<=7 HOURS/WK		8-20 HOURS/WK		>20 HOURS/WK		DOES NOT WORK ON THE FARM		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
AGRICULTURAL ACTIVITIES ON THE OWN FARM	5,193	4,290	903	1,085	250	1,443	366	1,730	280	28	7	4	
AGRICULTURAL ACTIVITIES ON ANOTHER FARM	165	158	7	74	1	49	3	23	1	12	2		
NO AGRICULTURAL ACTIVITIES	1,063	928	135	363	44	320	25	64	2	166	62	15	2
NONE	393	274	119	59	19	27	8	16	1	170	90	2	1
NOT MENTIONED	26	21	5	1	1	1		1				18	4
TOTAL FARMERS	6,840	5,671	1,169	1,582	315	1,840	402	1,834	284	376	161	39	7

*Source : Statistic data Fifth Agricultural census*

The table shows that the majority of farmers (33%), both men and women, work on average, between 8 - 20 hours per week. Of this group of farmers over 27% are men and less than 6% are women. As the second largest group are the farmers (about 31% of the farmers) that work more than 20 hours per week. This group of farmers is represented by about 27% men and about 4% are women. This table also shows that agriculture is largely practiced on a part time basis

### 1.1.3 Contribution of household members to the agricultural farm

Analysis of the contribution of household members to the agricultural farm is also important. This analysis can give an overview of the number of jobs in the own farm and or any other farm. These data are included in below Table 3.

Table 3 - Number of household members of a farmer according to most important economic activity in 2008 and according to gender per district

DISTRICT	TOTAAL HOUSEHOLD MEMBERS	TOTAL		MOST IMPORTANT ECONOMIC ACTIVITY AND GENDER									
				1		2		3		4		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
PARAMARIBO	1,780	990	790	400	220	30	10	250	240	310	320		
WANICA	7,312	3,837	3,475	1,898	1,180	71	34	915	746	943	1,503	10	12
NICKERIE	5,144	2,754	2,390	1,606	370	126	31	344	565	656	1,404	22	20
CORONIE	365	210	155	107	48	3		34	31	62	73	4	3
SARAMACCA	2,852	1,531	1,321	860	490	24	5	398	431	244	393	5	2
COMMEWIJNE	3,500	1,876	1,624	830	459	101	32	487	353	452	778	6	2
MAROWIJNE	2,379	1,141	1,238	887	960	4	6	96	91	154	179		2
PARA	868	464	404	339	238	6	2	45	41	71	122	3	1
TOTAL COASTAL PLAIN	24,200	12,803	11,397	6,927	3,965	365	120	2,569	2,498	2,892	4,772	50	42

#### ACTIVITIES IN 2008:

- 1 = AGRICULTURAL ACTIVITIES ON THE OWN FARM
- 2 = AGRICULTURAL ACTIVITIES ON ANOTHER FARM
- 3 = NO AGRICULTURAL ACTIVITIES
- 4 = NONE

*Source : Statistic data Fifth Agricultural census*

The table shows that most household members (45%), both men and women, have as main economic activity *agricultural activities on the own farm*. The relationship between men and women in this economic activity is respectively and 64% to 36%. It should be noted that about 22% does not report any economic activity and thus really depend on the farmers. However, it must be determined why so many household members are involved in the activities of the farm. This can possibly be explained by a shortage of workers in this sector. It is worth noting that a study on this subject should be done, to arrive at the right conclusions.

### 1.1.4 Contracted labor on the farms

Laborers are contracted to work on the farms. These can be divided in different categories according to district (see Table 4). This paragraph furthermore provides an overview of the number of contracted laborers according to time period contracted and gender per district and the number of contracted laborers according to nationality and gender per age group.

Table 4: Number of farms according to contracted laborers per category per district in 2008.

DISTRICT	TOTAL NUMBER OF FARMS	CONTRACTED LABOURERS BY CATEGORY								
		1-2	3-4	5-9	10-19	20-49	50-99	100-199	200-499	500
PARAMARIBO	40	10	30							
WANICA	135	99	23	9	4					
NICKERIE	685	252	219	173	36	2	1	1		1
CORONIE	10	6	2	2						
SARAMACCA	172	110	23	33	3	2				1
COMMEWIJNE	131	99	19	6	4	2		1		
MAROWIJNE	116	14	28	33	36	4	1			
PARA	28	22	1	3	2					
TOTAL COASTAL PLAIN	1317	612	345	259	85	10	2	2		2

*Source : Statistic data Fifth Agricultural census*

It appears that of the total of farms that contract laborers, 46% of farms hire between 1 and 2 laborers. Of the total number of farms 19% of the farms contract labor. The other farms apparently use household members for the activities.

Table 5: Number of contracted laborers according to time period contracted and gender per district in 2008

DISTRICT	TOTAL	TOTAL		TIME PERIOD CONTRACTED AND GENDER							
		CONTRACTED LABOR		PERMANENT		SEMI-PERMANENT		TEMPORARY		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
PARAMARIBO	130	130		90				40			
WANICA	310	283	27	159	22	17	2	103		4	3
NICKERIE	4152	3906	246	1395	175	196	68	2286	3	29	
CORONIE	26	26		12		2		10		2	
SARAMACCA	1601	1123	478	772	466	18	7	327	4	6	1
COMMEWIJNE	452	414	38	240	28	20		152	10	2	
MAROWIJNE	990	320	670	52	55	1	10	267	605		
PARA	73	59	14	41	13	8	1	10			
<b>TOTAL COASTAL PLAIN</b>	<b>7734</b>	<b>6261</b>	<b>1473</b>	<b>2761</b>	<b>759</b>	<b>262</b>	<b>88</b>	<b>3195</b>	<b>622</b>	<b>43</b>	<b>4</b>

*Source : Statistic data Fifth Agricultural census*

Of the total number of contract laborers 81% are men and 19% are women. Most of the contracted laborers are hired on a temporary basis. This group represents around 49% of the total number of contracted laborers. In the district of Nickerie occurs the largest number of contracted laborers, i.e. 54% of the total number of contracted laborers. In the District of Nickerie rice is cultivated which is strongly dependent on the growing seasons. This creates employment peaks which is solved by hiring temporary workers.

Table 6: Number of contracted laborers according to nationality and gender per age group

AGE GROUP	TOTAL	TOTAL CONTRACTED LABOR		NATIONALITY AND GENDER									
				SURINAMESE		HAITIAN		GUYANESE		OTHER		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MAL E	FEMAL E	MAL E	FEMALE
<25	857	547	310	532	306	7	4	5		1		2	
25-34	1,813	1,380	433	1,292	414	52	16	25	3	1		10	
35-44	3,316	2,776	540	2,559	450	47	16	154	73			16	1
45-54	938	798	140	726	117	31	13	25	7	5	1	11	2
55-64	206	177	29	151	25	8	1	14	3	3		1	
≥ 65	604	583	21	563	19	6	1	6	1			8	
<b>TOTAL CONTRACTED LABOR</b>	7,734	6,261	1,473	5,823	1,331	151	51	229	87	10	1	48	3

*Source : Statistic data Fifth Agricultural census*

The larger part of contracted laborers are Surinamese, more in particular 93% of the total. The average contracted labor is more than 1 laborer per agricultural farm. The table leads to the conclusion that Surinamese labor is preferred over foreign labor. However, it can also be indicated that the number of contracted laborers with Haitian and Guyanese nationality in total also forms an important portion for the sector.

## 1.2. The interior

### 1.2.1 Farmers according to highest education and gender

Table 2 in Appendix 2 demonstrates that most farmers in the interior did not follow any formal schooling. This group represents approximately 53% of the total number of farmers in the interior. Then the group of farmers who have as highest education Primary School come second (over 40%).

### 1.2.2 Number of hours worked per week

This paragraph provides an overview of the number of farmers according to the average number of hours worked per week on the farm in 2008 and according to gender per district (see Table 7) and the number of farmers according to average number of hours worked per week and according to gender per most important economic activity (see Table 8)

Table 7: Number of farmers according to the average number of hours worked per week on the farm in 2008 and according to gender per district

DISTRICT	TOTAL FARMERS	AVERAGE NUMBER OF HOURS WORKED PER WEEK AND BY GENDER											
		TOTAL		DOES NOT WORK ON THE FARM		<=7 HOURS/WK		8-20 HOURS/WK		>20 HOURS/WK		NOT MENTIONED	
		MAL E	FEMALE	MAL E	FEMAL E	MALE	FEMAL E	MAL E	FEMALE	MAL E	FEMAL E	MAL E	FEMALE
MAROWIJNE	892	373	519	4	2	18	31	36	37	315	449		
BROKOPONDO	129	22	107	2	3	20	94		8				2
SIPALIWINI	2,327	586	1,741	9	14	67	151	150	495	355	1,076	5	6
TOTAL INTERIOR	3,348	981	2,367	15	19	105	276	186	540	669	1,525	5	8

*Source : Statistic data Fifth Agricultural census*

The table demonstrates that most farmers, approximately 66%, in the interior work on average more than 20 hours per week. Followed by approximately 22% of the farmers who work on average between 8 and 20 hours per week. The medial group for the average hours is the category of more than 20 hours per week. This shows that farmers in the interior spend more labor time on their farm.

Table 8: Number of farmers according to the average number of hours worked per week and according to gender per most important economic activity in 2008

MOST IMPORTANT ECONOMIC ACTIVITY	TOTAL FARMERS	AVERAGE NUMBER OF HOURS WORKED PER WEEK AND BY GENDER											
		TOTAL		<=7 HOURS/WK		8-20 HOURS/WK		>20 HOURS/WK		DOES NOT WORK ON THE FARM		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
AGRICULTURAL ACTIVITIES ON THE OWN FARM	3,161	918	2,243	99	256	169	534	641	1,438	8	15	1	
AGRICULTURAL ACTIVITIES ON ANOTHER FARM	48	18	30	1	12	17	4		14				
NO AGRICULTURAL ACTIVITIES	11	3	8	1	3		2	2	3				
NONE	115	37	78	4	4	1		26	70	6	4		
NOT MENTIONED	13	5	8							1		4	8
TOTAL FARMERS	3,348	981	2,367	105	275	187	540	669	1,525	15	19	5	8

Source : Statistic data Fifth Agricultural census

The table shows that ± 66% of the farmers, that perform agricultural activities on their own farm, work on average more than 20 hours per week. Of this group of farmers approximately 46% is female and 20% male. According to the statistics in the interior more women than men are active in farming.

### 1.2.3 Contribution of household members to the agricultural farm

Table 9: Number of household members of a farmer according to most important economic activity in 2008 and according to gender per district.

DISTRICT	TOTAL HOUSEHOLD MEMBERS	MOST IMPORTANT ECONOMIC ACTIVITY AND GENDER											
		TOTAL		1		2		3		4		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
MAROWIJNE	2,823	1,398	1,425	1,223	1,332	25	17	33	26	116	50		
BROKOPONDO	364	162	202	88	127	1	2	4	3	65	63	4	7
SIPALIWINI	6,394	2,687	3,707	2,036	2,835	22	39	225	353	361	437	43	43
TOTAL INTERIOR	9,581	4,247	5,334	3,348	4,293	48	58	263	382	542	550	47	50

ACTIVITIES IN 2008:  
 1=AGRICULTURAL ACTIVITIES ON THE OWN FARM  
 2=AGRICULTURAL ACTIVITIES ON ANOTHER FARM  
 3=NO AGRICULTURAL ACTIVITIES  
 4=NONE

Source : Statistic data Fifth Agricultural census

Table 9 shows that the most important economic activity of the major part ( $\pm 80\%$ ) of the household members of the farmers perform farming activities on the own farm. Of this group of farmers approximately 45% is female and 35% male.

#### 1.2.4 Contracted labor on the farms

Table 10: Number of contracted laborers according to time period contracted and gender per district in 2008

DISTRICT	TOTAL	TOTAL CONTRACTED LABOR		TIME PERIOD CONTRACTED AND GENDER							
				PERMANENT		SEMI-PERMANENT		TEMPORARY		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
MAROWIJNE	652	304	348	246	246	24	68	34	34		
BROKOPONDO											
SIPALIWINI	270	27	243	23	239			4	4		
TOTAL INTERIOR	922	331	591	269	485	24	68	38	38		

Source : Statistic data Fifth Agricultural census

The table shows that of the total labor contracted in the interior approximately 64% is female and 36% male. Furthermore, the majority (almost 82%) of the contracted laborers appear to permanently perform work on the farms. In the interior more often laborers are contracted that are permanently employed by the farmer.

Table 11: Number of contracted laborers according to nationality and gender per age group

AGE GROUP	TOTAL	TOTAL CONTRACTED LABOR		NATIONALITY AND GENDER									
				SURINAMESE		HAITIAN		GUYANESE		OTHER		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MAL E	FEMAL E	MAL E	FEMAL E	MAL E	FEMAL E
<25	281	53	228	53	211		17						
25-34	227	87	140	87	140								
35-44	361	184	177	184	169		8						
45-54	31	8	23	8	23								
55-64	0												
≥ 65	22	.	22		22								
TOTAL CONTRACTED LABOR	922	332	590	332	565		25						

Source : Statistic data Fifth Agricultural census

Table 11 shows that of the total labor contracted in the interior, almost 97% has Surinamese nationality and over 3% has Haitian nationality. Of the contracted Surinamese labor more than 63% is female and 37% male. Most people with foreign nationalities look for a living in the more heavily populated areas such as Paramaribo and the adjacent districts. In the interior the supply of labor with foreign nationalities is for that reason smaller.

In general it can be stated that in the agricultural sector most laborers are Surinamese.

## **2. Mechanization**

The results of the census in the coastal plain and the interior in respect of mechanization are also processed in tables. Below the data from these tables are analyzed. The analyses per table are elaborated in the Chapter 2.1 and 2.2.

In total 4,044 agricultural machines of which 1,265 (31%) are less than five years old and 2,750 (68%) older or equal to five years old. The remainder is not listed.

The number of spraying machines is in total 1,478 of which 476 (32%) are less than five years old and 993 (67%) older or equal to five years old.

Of the 1,054 harvesting machines 32 (3%) are less than five years old and 1,014 (96%) older or equal to five years old.

Of the total number of machines and tools 67% is fully exploited and 33% partially.

### ***2.1 The coastal plain***

#### **2.1.1 The number of machines and utensils according to age and type**

Table 3 of Appendix 3 shows that the major part of the machines in the coastal plain is older than 5 years. The percentage of this group of machines is approximately 72% of the total. The machines younger than 5 years represent a little less than 18% of the machines in the coastal plain.

In Suriname 2<sup>nd</sup> hand machines imported from abroad are used more often. This is obviously done to keep the production costs low. Heavy investments by purchasing new machines can be difficult to be earned back because of the fluctuating market prices for agricultural products.

#### **2.1.2 The number of machines and utensils according to age and type**

Table 4 (Appendix 4) shows that of the total fleet in the coastal plain, almost 68% is used completely for agricultural purposes. More than 31% of the machines is partly used for agricultural purposes. For the remainder, (1%) of the machines, there is no indication of its use.

By using machines in other sectors extra money can be earned. Idle machines do not earn money. Surinamese farmers often rent earthmoving machines and other tillage operations.

#### **2.1.3 Number of machines / utensils according to title or origin per type**

Table 5 (Appendix 5) shows that the major part ( $\pm 60\%$ ) of the machines in the coastal plain are owned, followed by machines that are rented. The machines that are rented in the coastal plain represent around 36% of the machinery.

Most irrigation and drainage machines are owned by the farmers ( $> 90\%$ ). These machines are cheaper to buy. For as far as transportation means are concerned, we see that a high percentage (around 71%) of the total is owned by the farmers.

### 2.1.4 Number of operators according to gender per type of machine or utensil

Table 12: Number of operators according to gender per type of machine or utensil

TYPES OF MACHINES/ UTENSILS	TOTAL MACHINES	GENDER OF THE OPERATOR		
		MALE	FEMALE	NOT MENTIONED
TILLAGE EQUIPMENT				
TOTAL	3,488	3,419	35	34
SPRAYING MACHINES				
TOTAL	1,224	1,208	8	8
HARVESTING MACHINES				
TOTAL	1,054	1,045	1	8
IRRIGATION AND DRAINAGE MACHINES				
TOTAL	543	535	8	
TRANSPORTATION MEANS				
TOTAL	659	637	18	4
PROCESSING MACHINES FOR AGRICULTURAL PRODUCE				
TOTAL	4	2	2	
MACHINES AND UTENSILS FOR DAIRY CATTLE				
TOTAL	87	81	4	2
MACHINES AND UTENSILS FOR POULTRY				
TOTAL	18	15	3	
MACHINES AND UTENSILS FOR BEEKEEPING				
TOTAL	1	1		
MACHINES FOR AQUACULTURE				
TOTAL	1	1		
OTHER GROUPS OF MACHINES				
TOTAL	77	72	1	4
TOTAL COASTAL PLAIN	7,156	7,016	80	60

*Source : Statistic data Fifth Agricultural census*

Table 12 shows that there is an operator for every machine, and that only 1% of the operators belongs to the female sex. Operating most of the machines requires physical strength, which is apparently the reason for this low percentage of female operators.

In Suriname we also do not have a culture of women performing the work of operator.

### 2.1.5 The number of machines and utensils according to type per district

Table 6 (Appendix 6) shows that most tillage machines are found in the District of Nickerie (47%). These machines are used for tillage of rice growing areas.

In as far as harvesting machines are concerned 96% are found in the District of Nickerie.

Of the means of transportation used by agricultural enterprises 59% occurs in the District of Nickerie.

Of the spraying machines 77% are found in the District of Nickerie. In rice cultivation motor knapsack sprayers are used for controlling broadleaved weeds.

The Districts of Saramacca and Wanica respectively occupy the second and third position. These districts have a high degree of vegetable cultivation.

### 2.1.6 Number of machines and utensils according to use per district

Table 13: Number of machines and utensils according to use per district

DISTRICT	TOTAL	USE		
	MACHINES	FULL	PARTIAL	NOT MENTIONED
PARAMARIBO	200	150	50	
WANICA	972	694	262	16
NICKERIE	4,112	2,604	1,466	42
CORONIE	128	105	23	
SARAMACCA	998	818	180	
COMMEWIJNE	534	396	138	
MAROWIJNE	44	19	25	
PARA	168	125	43	
TOTAL COASTAL PLAIN	7,156	4,911	2,187	58

*Source : Statistic data Fifth Agricultural census*

The table shows that of the total number of machines/ utensils almost 68% is used completely for agricultural purposes (see below diagram). Of these machines 53% are found in the District of Nickerie. These machines are largely used for rice cultivation. These figures show that a lot of money is invested in the mechanization of the rice cultivation. Rice cultivation in Suriname is for a large part mechanized. The sowing is still done manually by some farmers.

The Districts of Saramacca and Wanica respectively occupy the second and third position. These districts have a high degree of vegetable cultivation.

## 2.2 The interior

### 2.2.1 The number of machines and utensils according to age and type

Table 14: The number of machines and utensils according to age and type

TYPES OF MACHINES/ UTENSILS	TOTAL MACHINES	AGE		
		< 5 YEARS	≥ 5 YEARS	NOT MENTIONED
TILLAGE EQUIPMENT				
Heavy disc harrows, plows/ disc plow	8	8		
Chainsaws	524	252	269	3
Brush cutters	16	14	2	
Other	8	5	3	
TOTAL	556	279	274	3
SPRAYING MACHINES				
Motor knapsack sprayer	118	8	110	
Airplanes				
Other	136	34	102	
TOTAL	254	42	212	
TRANSPORTATION MEANS				
Trucks, pick up	1	1		
Passenger car	16	8	8	
Motor cycle/ moped/ ATV				
Motor boat	164	46	117	1
Boat without motor	11	3	8	
TOTAL	192	58	133	1
PROCESSING MACHINES FOR AGRICULTURAL PRODUCE				
Grater	134	78	56	
Other	10	3	7	
TOTAL	144	81	63	0
OTHER GROUPS OF MACHINES				
Other groups of machines	18	4	14	
TOTAL	18	4	14	0
TOTAL INTERIOR	1,164	464	696	4

Source : Statistic data Fifth Agricultural census

Table 14 shows that the major part of machines/utensils that are used in the interior have an age over 5 years of age. The majority of the machines in the interior consists of chainsaws, i.e. approximately 45% of the total number of machines in the interior. Then the motor boat follows with about 14% and then follows the grater that represents approximately 11% of the total number of machines / utensils that shows that the major part of the machines in the interior is older than 5 years.

In Suriname 2<sup>nd</sup> hand machines imported from abroad are used more often. This is obviously done to keep the production costs low. Heavy investments by purchasing new machines can be difficult to be earned back because of the fluctuating market prices for agricultural products.

## 2.2.2 The number of machines and utensils according to use per type

Table 15: Number of machines and utensils according to use per type

TYPES OF MACHINES/ UTENSILS	TOTAL MACHINES	USE		
		FULL	PARTIAL	NOT MENTIONED
TILLAGE EQUIPMENT				
Heavy disc harrows, plows/ disc plow	8	8		
Chainsaws	524	332	190	2
Brush cutters	16	10	6	
Other	8	4	4	
TOTAL	556	354	200	2
SPRAYING MACHINES				
Motor knapsack sprayer	119	68	51	
Airplanes				
Other	135	59	76	
TOTAL	254	127	127	0
TRANSPORTATION MEANS				
Trucks, pick up	1		1	
Passenger car	16	8	8	
Motor cycle/ moped/ ATV				
Motor boat	164	122	41	1
Boat without motor	11	11		
Farm vehicles and other trailers				
Other transportation means				
TOTAL	192	141	50	1
PROCESSING MACHINES FOR AGRICULTURAL PRODUCE				
Grater	134	9	125	
Other	10	2	8	
TOTAL	144	11	133	0
OTHER GROUPS OF MACHINES				
Other groups of machines	18	3	15	
TOTAL	18	3	15	0
TOTAL INTERIOR	1,164	636	525	3

*Source : Statistic data Fifth Agricultural census*

The table shows that most of the machines / utensils in the interior are fully used for agricultural activities, i.e. about 55% of the total. 45% of the machines is partly used for agricultural purposes.

### 2.2.3 Number of machines and utensils according to title or origin per type

Table 16: Number of machines and utensils according to title or origin per type

TYPES OF MACHINES/ UTENSILS	TOTAL MACHINES	TITLE OR ORIGIN					
		OWNERSHIP	LEASE	RENTAL	BORROWED	OTHER	NOT MENTIONED
TILLAGE EQUIPMENT							
Heavy disc harrows, plows/ disc plow	8	8					
Chainsaws	525	403	1	57	60	2	2
Brush cutters	16	14		1	1		
Other	8	8					
TOTAL	557	433	1	58	61	2	2
SPRAYING MACHINES							
Motor knapsack sprayer	119	68			51		
Airplanes							
Other	135	110			25		
TOTAL	254	178	0	0	76	0	0
TRANSPORTATION MEANS							
Trucks, pick up	1	1					
Passenger car	16	8	8				
Motor cycle/ moped/ ATV							
Motor boat	163	141	1		12	8	1
Boat without motor	11	11					
TOTAL							
FARM VEHICLES AND OTHER TRAILERS							
Other transportation means	191	161	9	0	12	8	1
TOTAL	191	161	9	0	12	8	1
PROCESSING MACHINES FOR AGRICULTURAL PRODUCE							
Grater	134	95		27	12		
Other	10	2			8		
TOTAL	144	97	0	27	20	0	0
OTHER GROUPS OF MACHINES							
Other groups of machines	18	10				8	
TOTAL	18	10	0	0	0	8	0
TOTAL INTERIOR	1,164	879	10	85	169	18	3

*Source : Statistic data Fifth Agricultural census*

The table shows that most of the machines / utensils are owned representing about 75% of the total. It also appears that about 78% of the chainsaws are owned.

## 2.2.4 Number of operators according to gender per type of machine or utensil

Table 17: Number of operators according to gender per type of machine or utensil

TYPE OF MACHINE/ UTENSIL	TOTAL MACHINES	GENDER OF THE OPERATOR		
		MALE	FEMALE	NOT MENTIONED
TILLAGE EQUIPMENT				
Heavy disc harrows, plows/ disc plow	8	8		
Chainsaws	524	518	4	2
Brush cutters	16	15	1	
Other	8	8		
TOTAL	556	549	5	2
SPRAYING MACHINES				
Spraying machines				
Machines driven by a tractor				
Motor knapsack sprayer	118	110	8	
Airplanes				
Other	135	135		
TOTAL	253	245	8	0
TRANSPORTATION MEANS				
Trucks, pick up	1		1	
Passenger car	17	17		
Motor cycle/ moped/ ATV				
Motor boat	164	140	24	
Boat without motor	11	9	2	
TOTAL	193	166	27	0
PROCESSING MACHINES FOR AGRICULTURAL PRODUCE				
Grater	134	9	125	
Other	10	1	9	
TOTAL	144	10	134	0
OTHER GROUPS OF MACHINES				
Other groups of machines	18	18		
TOTAL	18	18	0	0
TOTAL INTERIOR	1,164	988	174	2

*Source : Statistic data Fifth Agricultural census*

The table shows that around 85% of the operators of the machines / utensils are men and about 15% are women.

Male operators are significantly more in the interior. Operating most of the machines requires physical strength, which is apparently the reason for this low percentage of female operators.

In Suriname we also do not have a culture of women performing the work of operator.

### 2.2.5 Number of machines and utensils according to type per district

Table 7 (Appendix 7) shows that of the total machines/ utensils 57% are found in the District of Marowijne, followed by Sipaliwini with 43%. Tillage equipment (Chainsaws) can be found in the Districts of Marowijne and Sipaliwini with each 50%. Spraying machines are only used in the District of Marowijne. Motor boats are in general used as transportation means.

### 2.2.6 Number of machines and utensils according to use per district

Table 18: Number of machines and utensils according to use per district

DISTRICT	TOTAL MACHINES	USE		
		FULL	PARTIAL	NOT MENTIONED
MAROWIJNE	667	415	252	
BROKOPONDO				
SIPALIWINI	497	223	271	3
TOTAL INTERIOR	1164	638	523	3

*Source : Statistic data Fifth Agricultural census*

The table shows that 57% of the machines / utensils in Marowijne are distributed over about 36% completely used and about 21% partly used for agricultural purposes. Of the machines in Sipaliwini around 20% is completely used and around 23% of the machines is partly used for agricultural purposes.

**Sources:**

- Report: Doorrekening Fiscale voorzieningen voor de agrarische sector (2008).
- Annual Reports LVV: 2005, 2006, 2007, 2008.
- Agricultural Statistics 2004-2009, Min LVV
- Second Agricultural Census Suriname 1959
- Tables Fourth Agricultural Census Suriname, 1981
- Statistical Analysis Fifth Agricultural Census Suriname, 2008

## Appendix 1:

Table 1: Number of farmers according to highest education completed and gender per district (Coastal Plain)

DISTRICT	TOTAL FARMERS	TOTAL		HIGHEST EDUCATION COMPLETED AND GENDER															
				PRIMARY SCHOOL		JUNIOR SECONDARY SCHOOL		SENIOR SECONDARY SCHOOL		POLYTECHNIC		UNIVERSITY		OTHER		NO EDUCATION		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
PARAMARIBO	450	380	70	170	30	110	10	10	10	20		30	10			40	10		
WANICA	2004	1681	323	648	130	488	75	145	22	67	16	30	3	21	1	280	76	2	
NICKERIE	1365	1289	76	680	34	287	12	54	4	22	2	5		1		231	23	9	1
CORONIE	149	120	29	68	21	45	7	3	1			1				3			
SARAMACCA	886	801	85	441	44	185	12	45	4	22	5	8			1	100	19		
COMMEWIJNE	1047	917	130	355	37	219	26	44	12	33	3	5		4		252	52	5	
MAROWIJNE	687	289	398	153	212	57	32	13	6	2	1	1		4		58	147	1	
PARA	252	194	58	49	16	67	13	25	8	14		3	1	13	1	20	19	3	
TOTAL COASTAL PLAIN	6840	5671	1169	2564	524	1458	187	339	67	180	27	83	14	43	3	984	346	20	1

## Appendix 2:

Table 2: Number of farmers according to highest education completed and gender per district (Interior)

DISTRICT	TOTAL FARMERS	HIGHEST EDUCATION COMPLETED AND GENDER																	
		TOTAL		PRIMARY SCHOOL		JUNIOR SECONDARY SCHOOL		SENIOR SECONDARY SCHOOL		POLYTECHNIC		UNIVERSITY		OTHER		NO EDUCATION		NOT MENTIONED	
		MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
MAROWIJNE	892	373	519	203	271	92	35	8						8		61	213		
BROKOPONDO	129	22	107	6	33	3	4		1							13	69		
SIPALIWINI	2,327	586	1,741	278	560	9	36	4	3	1					1	291	1135	3	6
TOTAL INTERIOR	3,348	981	2,367	487	864	104	75	12	4	1				8	1	365	1417	3	6

## Appendix 3:

Table 3: Number of machines and utensils according to age and type

TYPES OF MACHINES/ UTENSILS	TOTAL MACHINES	AGE		
		< 5 years	≥ 5 years	NOT MENTIONED
<b>TILLAGE EQUIPMENT</b>				
Tillage equipment	8	2	6	
Two-wheel tractor	355	49	306	
Four-wheel tractor/ more than four wheels	1,334	70	1,251	13
Heavy disc harrow, plows/ disc plow	183	20	163	
Rotavators (rotary cultivator)	8	2	6	
Trenching tools	1		1	
Excavators/ dragline (backhoe poclain, etc.)	353	32	320	1
Bulldozers/ tractor with caterpillar tracks	18		18	
Leveling tools (earthworks, graders, etc.)	10		10	
Chainsaws	115	83	32	
Brush cutters	766	579	186	1
Other	337	149	177	11
<b>TOTAL</b>	<b>3,488</b>	<b>986</b>	<b>2,476</b>	<b>26</b>
<b>SPRAYING MACHINES</b>				
Spraying machines	4	1	3	
Machines driven by a tractor	16	1	13	2
<b>MOTOR KNAPSACK SPRAYER</b>	<b>952</b>	<b>392</b>	<b>557</b>	<b>3</b>
Airplanes	125	4	121	
Other	127	36	87	4
<b>TOTAL</b>	<b>1,224</b>	<b>434</b>	<b>781</b>	<b>9</b>
<b>HARVESTING MACHINES</b>				
Harvesting machines	1,054	32	1,014	8
<b>TOTAL</b>	<b>1,054</b>	<b>32</b>	<b>1,014</b>	<b>8</b>
<b>IRRIGATION AND DRAINAGE MACHINES</b>				
Irrigation and drainage machines	5	1	4	
Electric water pumps	177	92	85	
Gasoline or diesel water pumps	290	158	131	1
Vadini pumps	4	1	3	
Sprayers/ drip equipment				
Other irrigation and drainage equipment	67	30	37	
<b>TOTAL</b>	<b>543</b>	<b>282</b>	<b>260</b>	<b>1</b>

<b>TRANSPORTATION MEANS</b>				
<b>Trucks. pick up</b>	335	43	290	2
Passenger car	82	26	56	
<b>Motor cycle/ moped/ ATV</b>	94	38	56	
<b>Motor boat</b>	8	2	6	
<b>Boat without motor</b>	2		2	
<b>Farm vehicle and other trailers</b>	16		16	
<b>Other transportation means</b>	122	7	114	1
<b>TOTAL</b>	659	116	540	3
<b>PROCESSING MACHINES FOR AGRICULTURAL PRODUCE</b>				
<b>Grater</b>	1		1	
<b>Pulper</b>				
<b>Cooling and refrigeration machines</b>	1		1	
<b>Mixers</b>	1		1	
<b>Filling, packaging, sealing machines</b>				
<b>Other</b>	1	1		
<b>TOTAL</b>	4	1	3	
<b>MACHINES AND UTENSILS FOR DAIRY CATTLE</b>				
<b>MILKING MACHINES</b>	20	8	12	
<b>Milk refrigeration facilities</b>	2	1	1	
<b>Other</b>	65	44	21	
<b>TOTAL</b>	87	53	34	
<b>MACHINES AND UTENSILS FOR POULTRY</b>				
<b>Equipment for automatic water supply</b>	3	2		1
<b>Equipment for automatic feed supply</b>	1			1
<b>Brooder</b>	1	1		
<b>Slaughter facilities</b>	4	1	3	
<b>Other</b>	9	2	7	
<b>TOTAL</b>	18	6	10	2
<b>MACHINES AND UTENSILS FOR BEEKEEPING</b>				
<b>Machines and utensils for beekeeping</b>	1		1	
<b>TOTAL</b>	1		1	
<b>MACHINES FOR AQUACULTURE</b>				
<b>Aerators</b>				
<b>Pumps</b>				
<b>Suction dredgers</b>				
<b>Other</b>	1		1	
<b>TOTAL</b>	1		1	
<b>OTHER GROUPS OF MACHINES</b>				
<b>Other groups of machines</b>	77	21	52	4

<b>TOTAL</b>	77	21	52	4
<b>TOTAL COASTAL PLAIN</b>	7,156	1,931	5,172	53

## Appendix 4:

Table 4: Number of machines / utensils according to use per type

TYPES OF MACHINES/ UTENSILS	TOTAL MACHINES	USE		
		FULL	PARTIAL	NOT MENTIONED
<b>TILLAGE EQUIPMENT</b>				
Tillage equipment	8	4	4	
Two-wheel tractor	355	259	96	
Four-wheel tractor/ more than four wheels	1,334	986	333	15
Heavy disc harrows, plows/ disc plow	183	156	26	1
Rotavators (rotary cultivator)	8	6	2	
Trenching tools	1	1		
Excavators/ dragline (backhoe poclain, etc.)	353	175	177	1
Bulldozers/ tractor with caterpillar tracks	18	15	3	
Leveling tools (earthworks, graders, etc.)	10	9	1	
Chainsaws	115	63	52	
Brush cutters	766	592	173	1
Other	337	258	68	11
<b>TOTAL</b>	<b>3,488</b>	<b>2,524</b>	<b>935</b>	<b>29</b>
<b>SPRAYING MACHINES</b>				
Spraying machines	4	2	2	
Machines driven by a tractor	16	7	9	
Motor knapsack sprayer	952	513	434	5
Airplanes	125	86	39	
Other	127	105	17	5
<b>TOTAL</b>	<b>1,224</b>	<b>713</b>	<b>501</b>	<b>10</b>
<b>HARVESTING MACHINES</b>				
Harvesting machines	1,054	743	301	10
<b>TOTAL</b>	<b>1,054</b>	<b>743</b>	<b>301</b>	<b>10</b>
<b>IRRIGATION AND DRAINAGE MACHINES</b>				
Irrigation and drainage machines	5	4	1	
Electric water pumps	177	151	26	
Gasoline or diesel water pumps	290	263	27	
Vadini pumps	4	3	1	
Sprayers/ drip equipment				
Other irrigation and drainage equipment	67	60	7	
<b>TOTAL</b>	<b>543</b>	<b>481</b>	<b>62</b>	

<b>TRANSPORTATION MEANS</b>				
Trucks. pick up	335	148	185	2
Passenger car	82	25	57	
Motor cycle/ moped/ ATV	94	27	67	
Motor boat	8	4	4	
Boat without motor	2	1	1	
Farm vehicles and other trailers	16	16		
Other transportation means	122	74	47	1
TOTAL	659	295	361	3
<b>PROCESSING MACHINES FOR AGRICULTURAL PRODUCE</b>				
Grater	1	1		
Pulper				
Cooling and refrigeration machines	1	1		
Mixers	1	1		
Filling, packaging, sealing machines				
Other	1	1		
TOTAL	4	4		
<b>MACHINES AND UTENSILS FOR DAIRY CATTLE</b>				
MILKING MACHINES	20	19	1	
Milk refrigeration facilities	2	2		
Other	65	52	13	
TOTAL	87	73	14	
<b>MACHINES AND UTENSILS FOR POULTRY</b>				
Equipment for automatic water supply	3	1	1	1
Equipment for automatic feed supply	1			1
Brooder	1	1		
Slaughter facilities	4	4		
Other	9	9		
TOTAL	18	15	1	2
<b>MACHINES AND UTENSILS FOR BEEKEEPING</b>				
Machines and utensils for beekeeping	1	1		
TOTAL	1	1		
<b>MACHINES FOR AQUACULTURE</b>				
Aerators				
Pumps				
Suction dredgers				
Other	1	1		
TOTAL	1	1		
<b>OTHER GROUPS OF MACHINES</b>				
Other groups of machines	77	61	12	4

TOTAL	77	61	12	4
<b>TOTAL COASTAL PLAIN</b>	7,156	4,911	2,187	58

## Appendix 5:

Table 5: Number of machines / utensils according to title or origin per type

TYPES OF MACHINES/ UTENSILS	TOTAL MACHINES	TITLE OR ORIGIN					
		OWNERSHIP	LEASE	RENTAL	BORROWED	OTHER	NOT MENTIONED
<b>TILLAGE EQUIPMENT</b>							
Tillage equipment	8	3		4	1		
Two-wheel tractor	355	235	3	107	10		
Four-wheel tractor/ more than four wheels	1,334	729	4	565	24	5	7
Heavy disc harrows, plows/ disc plow	183	94	2	81	6		
Rotavators (rotary cultivator)	8	6	1	1			
Trenching tools	1	1					
Excavators/ dragline (backhoe poclain, etc.)	353	85	5	260	2		1
Bulldozers/ tractor with caterpillar tracks	18	16		2			
Leveling tools (earthworks, graders, etc.)	10	5					5
Chainsaws	115	90	1	15	9		
Brush cutters	766	719	2	8	26		11
Other	337	301		20	6		10
<b>TOTAL</b>	<b>3,488</b>	<b>2,284</b>	<b>18</b>	<b>1,063</b>	<b>84</b>	<b>5</b>	<b>34</b>
<b>SPRAYING MACHINES</b>							
Spraying machines	4	4					
Machines driven by a tractor	16	10		5	1		
Motor knapsack sprayer	952	633	2	233	82	1	1
Airplanes	125	3	1	120		1	
Other	127	106		12	6		3
<b>TOTAL</b>	<b>1,224</b>	<b>756</b>	<b>3</b>	<b>370</b>	<b>89</b>	<b>2</b>	<b>4</b>
<b>HARVESTING MACHINES</b>							
Harvesting machines	1,054	106	8	926	10	2	2
<b>TOTAL</b>	<b>1,054</b>	<b>106</b>	<b>8</b>	<b>926</b>	<b>10</b>	<b>2</b>	<b>2</b>
<b>IRRIGATION AND DRAINAGE MACHINES</b>							
Irrigation and drainage machines	5	3		1	1		
Electric water pumps	177	169	1	5	2		
Gasoline or diesel water pumps	290	259		27	3	1	
Vadini pumps	4	4					
Sprayers/ drip equipment							
Other irrigation and drainage equipment	67	65			2		
<b>TOTAL</b>	<b>543</b>	<b>500</b>	<b>1</b>	<b>33</b>	<b>8</b>	<b>1</b>	
<b>TRANSPORTATION MEANS</b>							
Trucks. pick up	335	190	1	138	4	1	1

Passenger car	82	75	2		4	1	
Motor cycle/ moped/ ATV	94	92		2			
Motor boat	8	5		2	1		
Boat without motor	2	1		1			
Farm vehicles and other trailers	16	14			2		
Other transportation means	122	91	1	26	4		
TOTAL	659	468	4	169	15	2	1
<b>PROCESSING MACHINES FOR AGRICULTURAL PRODUCE</b>							
Grater	1	1					
Pulper							
Cooling and refrigeration machines	1	1					
Mixers	1	1					
Filling, packaging, sealing machines							
Other	1	1					
TOTAL	4	4					
<b>MACHINES AND UTENSILS FOR DAIRY CATTLE</b>							
MILKING MACHINES	20	19			1		
Milk refrigeration facilities	2	2					
Other	65	62	1	1	1		
TOTAL	87	83	1	1	2		
<b>MACHINES AND UTENSILS FOR POULTRY</b>							
Equipment for automatic water supply	3	2					1
Equipment for automatic feed supply	1						1
Brooder	1	1					
Slaughter facilities	4	4					
Other	9	9					
TOTAL	18	16					2
<b>MACHINES AND UTENSILS FOR BEEKEEPING</b>							
Machines and utensils for beekeeping	1	1					
TOTAL	1	1					
<b>MACHINES FOR AQUACULTURE</b>							
Aerators							
Pumps							
Suction dredgers							
Other	1	1					
TOTAL	1	1					
<b>OTHER GROUPS OF MACHINES</b>							
Other groups of machines	77	58		15			4
TOTAL	77	58		15			4

<b>TOTAL COASTAL PLAIN</b>	7,156	4,277	35	2,577	208	12	47
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## Appendix 6:

Table 6: Number of machines/utensils by type per district

DISTRICT	TOTAL MACHINES	TYPES OF MACHINES/ UTENSILS																					
		TILLAGE EQUIPMENT											SPRAYING MACHINES				HARVESTING MACHINES		IRRIGATION AND DRAINAGE MACHINES				
		1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	1	1	2	3	4	5	
PARAMARIBO	180	40	10	10							30	30		20					40				
WANICA	828	43	71	6			37			14	299	98	6	73		12	1	79	73	1		15	
NICKERIE	3,647	182	998	129	2		205	14	6	3	20	64	5	736	119	79	1,009	17	56			3	
CORONIE	87	2	9	5	1		3		1	2	5	50		2			2		2	1		2	
SARAMACCA	891	72	184	30	5	1	87	1	3	21	153	50	5	88	6	38	42	21	42	1		41	
COMMEWIJNE	486	11	53	1			17	2		27	183	29		22				59	70	1		11	
MAROWIJNE	38	1	1							33	2					1							
PARA	152	4	8	2			4	1		17	74	22		11		1		1	7				
TOTAL COASTAL PLAIN	6,309	355	1,334	183	8	1	353	18	10	115	766	345	16	952	125	131	1,054	177	290	4		72	

### TILLAGE EQUIPMENT:

- 1=Two-wheel tractor
- 2=Four-wheel tractor/ more than four wheels
- 3=Heavy disc harrows, plows/ disc plow
- 4=Rotavators (rotary cultivator)
- 5=Trenching tools
- 6=Hydraulic excavators
- 7=Bulldozers
- 8=Leveling tools
- 9=Chainsaws
- 10=Brush cutters
- 11=Other

### SPRAYING MACHINES:

- 1=Machines driven by a tractor
- 2=Knapsack sprayers
- 3=Airplanes
- 4=Other

### HARVESTING MACHINES:

- 1=Harvesting machines

### IRRIGATION AND DRAINAGE MACHINES:

- 1=Electric water pumps
- 2=Gasoline or diesel water pumps
- 3=Vadini pumps
- 4=Sprayers/ drip equipment
- 5=Other irrigation and drainage equipment

Continued: "Table 6: Number of machines/utensils by type per district

DISTRICT	TOTAL MACHINES	TYPES OF MACHINES/ UTENSILS																									
		TRANSPORTATION MEANS							PROCESSING MACHINES						MACHINES AND UTENSILS FOR DAIRY CATTLE			MACHINES AND UTENSILS FOR POULTRY					MACHINES FOR AQUACULTURE				OTHER GROUPS OF MACHINES
		1	2	3	4	5	6	7	1	2	3	4	5	6	1	2	3	1	2	3	4	5	1	2	3	4	1
PARAMARIBO	20	10						10																			
WANICA	144	44	32	6			4	10			1	1			15	1		3	1		4	8					14
NICKERIE	465	230	35	85	5	2	6	25									32		1								44
CORONIE	41	3		2				2									33										
SARAMACCA	107	30	1		1		6	62							1												6
COMMEWIJNE	48	13	14	1	1			9													1				1		8
MAROWIJNE	6				1			2	1					1													1
PARA	16	5						2							4	1											4
TOTAL COASTAL PLAIN	847	335	82	94	8	2	16	122	1		1	1		1	20	2	65	3	1	1	4	9				1	77

#### TRANSPORTATION MEANS:

1=Trucks. pick up  
2=Passenger car  
3=Motorcycle/ moped/ATV  
4=Motor boat  
5=Boat without motor  
6=Farm vehicles and other trailers  
7=Other transportation means

#### PROCESSING MACHINES:

1=Grater  
2=Pulper  
3=Refrigerators and freezers  
4=Mixers  
5=Filling, packaging machines, sealers  
6=Other processing machines

#### MACHINES AND UTENSILS FOR DAIRY CATTLE:

1=Milking machines  
2=Milk refrigeration facility  
3=Other

#### MACHINES AND UTENSILS FOR POULTRY:

1=Equipment for automatic water supply  
2=Equipment for automatic feed supply  
3=Brooders  
4=Slaughter facilities

#### MACHINES AND UTENSILS

##### FOR BEEKEEPING:

1=Machines and utensils for beekeeping

##### MACHINES FOR AQUACULTURE:

1=Aerators  
2=Pumps  
3=Suction dredgers  
4=Other

##### OTHER GROUPS OF MACHINES:

1=Other groups of machines

## Appendix 7:

Table 7: Number of machines/utensils by type per district

DISTRICT	TOTAL MACHINES	TYPE OF MACHINE/ UTENSIL																											
		TILLAGE EQUIPMENT											SPRAYING MACHINES					IRRIGATION AND DRAINAGE MACHINES					TRANSPORTATION MEANS						
		1	2	3	4	5	6	7	8	9	10	11	1	2	3	4		1	2	3	4	5	1	2	3	4	5	6	7
MAROWIJNE	667			8						263				118		136								16		102	8		
BROKOPONDO																													
SIPALIWINI	497									261	16	8											1			62	3		
TOTAL INTERIOR	1,164			8						524	16	8		118		136							1	16	0	164	11		

### TILLAGE EQUIPMENT:

- 1=Two-wheel tractor
- 2=Four-wheel tractor/ more than four wheels
- 3=Heavy disc harrows, plows/ disc plow
- 4=Rotavators (rotary cultivator)
- 5=Trenching tools
- 6=Hydraulic excavators
- 7=Bulldozers
- 8=Leveling tools
- 9=Chainsaws
- 10=Brush cutters

### SPRAYING MACHINES:

- 1=Machines driven by a tractor
- 2=Knapsack sprayers
- 3=Airplanes
- 4=Other

### IRRIGATION AND DRAINAGE MACHINES:

- 1=Electric water pumps
- 2=Gasoline or diesel water pumps
- 3=Vadini pumps
- 4=Sprayers/ drip equipment
- 5=Other irrigation and drainage equipment

### TRANSPORTATION MEANS:

- 1=Trucks. pick up
- 2=Passenger car
- 3=Motorcycle/ moped/ATV
- 4=Motor boat
- 5=Boat without motor
- 6=Farm vehicles and other trailers
- 7=Other transportation means

Continued: "Table 7: Number of machines/utensils by type per district"

DISTRICT	TYPE OF MACHINE/ UTENSIL																				
	PROCESSING MACHINES:						MACHINES AND UTENSILS FOR DAIRY CATTLE			MACHINES AND UTENSILS FOR POULTRY					MACHINES FOR BEEKEEPING		MACHINES FOR AQUACULTURE				OTHER GROUPS OF MACHINES
	1	2	3	4	5	6	1	2	3	1	2	3	4	5	1		1	2	3	4	1
MAROWIJNE	8																				8
BROKOPONDO																					
SIPALIWINI	126					10															10
TOTAL INTERIOR	134					10															18

**PROCESSING MACHINES:**

- 1=Grater
- 2=Pulper
- 3=Refrigerators and freezers
- 4=Mixers
- 5=Filling, packaging machines, sealers
- 6=Other processing machines

**MACHINES FOR AQUACULTURE:**

- 1=Aerators
- 2=Pumps
- 3=Suction dredgers
- 4=Other

**MACHINES AND UTENSILS FOR DAIRY CATTLE:**

- 1=Milking machines
- 2=Milk refrigeration facility
- 3=Other

**OTHER GROUPS OF MACHINES:**

- 1=Other groups of machines

**MACHINES AND UTENSILS FOR BEEKEEPING:**

- 1=Machines and utensils for beekeeping

**MACHINES AND UTENSILS FOR POULTRY:**

- 1=Equipment for automatic water supply
- 2=Equipment for automatic feed supply
- 3=Brooders