

6 AGRICULTURE

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6 AGRICULTURE

CHAPTER 1 PRESENT CONDITION OF AGRICULTURE

1.1 Agricultural Land and Major Crops in Cote d'Ivoire

Total agricultural farmland is estimated at about 7,248,430 ha in 1995, which is equivalent to 22.5% of total area of Cote d'Ivoire, as shown as in Table below. Among agricultural lands, food crops share 51.3% of the farmland, and perennial crops 44.7% and industrial crops 4.0% in 1995.

Agricultural farmland increased to 7,248,430 ha from 6,070,630 ha with an annual growth ratio of 1.37% for 13 years from 1982. The growth ratio of that period was much lower than population growth ratio of about 3.7%. In this period, cultivation areas of cotton, sweet banana, vegetables and paddy rice have been increased rapidly with an high annual growth ratio than 3%. On the other hand, sugarcane and coffee have been decreased due to disadvantage of price in international market.

Table 2.2-1-1 Cropped Area and Production in Cote d'Ivoire in 1982 and 1995

Crops	Year 1995				Year 1982		Growth Ratio of Area (%/yr)
	Cropped Area (ha)	Production (t)	Yield (t/ha)	Area Ratio (%)	Cropped Area (ha)	Area Ratio (%)	
Food Crops							
Paddy	592,000	868,430		8.2%	363,500	6.0%	3.82%
Rainfed Paddy	570,000	798,020	1.4	7.9%	350,000	5.8%	3.82%
Irrigated Paddy	22,000	70,410	3.2	0.3%	13,500 *1	0.2%	3.83%
Maize	669,100	552,040	0.825	9.2%	520,000	8.6%	1.96%
S.F.M.	136,400	90,980	0.667	1.9%	92,500	1.5%	3.03%
Yam	264,900	2,868,850	10.83	3.7%	230,000	3.8%	1.09%
Cassava	316,200	1,608,220	5.086	4.4%	233,000	3.8%	2.38%
Ground nut	136,200	143,040	1.05	1.9%	93,000	1.5%	2.98%
Plantain Banana	1,203,000	1,335,320	1.11	16.6%	1,207,000	19.9%	-0.03%
Taro	376,900	352,050	0.934	5.2%	334,000	5.5%	0.93%
Vegetables	27,000 *2	540,000	20	0.4%	15,600 *2	0.3%	4.31%
Total	3,721,700			51.3%	3,088,600	50.9%	1.44%
Perennial Crops							
Cocoa	1,723,400	915,670	0.5313	23.8%	1,338,400	22.0%	1.96%
Coffee	1,250,000	236,660	0.1893	17.2%	1,273,900	21.0%	-0.15%
Oil Palm	150,700	274,900	1.824	2.1%	100,600	1.7%	3.16%
Coconut	53,140	23,020	0.433	0.7%	51,550	0.8%	0.23%
Rubber	64,680	69,320	1.072	0.9%	41,850	0.7%	3.41%
Total	3,241,920			44.7%	2,806,300	46.2%	1.12%
Industrial Crops							
Sugarcane	21,310	140,410	6.589	0.3%	31,390	0.5%	-2.94%
Cotton	242,400	233,320	0.9625	3.3%	124,610	2.1%	5.25%
Sweet Banana	5,600	232,000	41.43	0.1%	3,210	0.1%	4.37%
Pineapple	15,500	210,020	13.55	0.2%	16,520	0.3%	-0.49%
Total	284,810			3.9%	175,730	2.9%	3.78%
Grand Total	7,248,430			100.0%	6,070,630	100.0%	1.37%

(Source) Statistic Agricole, MINAGRA 1982-1995, and FAO Yearbook 1998 (Vol.52) (Details are in Table 2.2-1-7 to 19.)

(Notes) S.F.M.: Sorghum, Fonio, Millet *1: assumption (3.9% of rainfed paddy as same ration as in 1995.)

*2: estimated based on consumption of vegetables (36kg/capita/yr) and Population in 1995 (15,368,000) and in 1982 (8,684,000).

*3: estimated based on projection data using unit yield presented in above table.

Cocoa and coffee share extensive area of agricultural farmland. Cocoa shares 23.8% and coffee 17.2%, totally 41% of the farmland in 1995. Cocoa and coffee have been expanded as main export crop for the country. Plantain banana, one of staple food crops, follows cocoa and coffee

and shares 16.6% of the farmland. Maize and paddy rice comes into 4th and 5th position in area of about 9.2% and 8.2% of the farmland. Taro, cassava and yam are also important food crop for Cote d'Ivoire, which share 5.2%, 4.4% and 3.7% respectively. Palm and rubber tree are also important perennial tree crops for domestic oil supply and export. They are grown by companies like as SODEPALM and SOGB, or a group of farmers in large scale plantation in the tropical rainforest climate zone in the southern area, and share 2.1% for palm and 0.9% for rubber in the farmland.

Cotton is also important industrial crop and is grown mainly northern area of the country. Intensive cotton cultivations are controlled by CITD, a textile development company, and cotton cultivation has been introduced into all the northern regions for the past 25 years. All the villages of the region have been organized into GVCs, an agricultural vocational group, that are affiliated to the CITD. Main activities of GVCs are cultivation of cotton on large portions of land by use of mechanical devices, ploughs and nitrogenous fertilizers and chemicals.

Sugarcane is grown in the northern area of the country, and it is also important crop for sugar industry for export and domestic consumption. Sugar farms are operated by the sugar companies like SODESUCRE, and mostly irrigated. The cultivation area of sugarcane is decreased recently due to disadvantage of price in international market.

1.2 Agricultural Statistics and Analysis

Agricultural statistics are generally poor both for crop area and production due to budgetary shortage for enough accuracy and quantity since 1982. Food crop statistics are especially poor while industrial crops are sounded periodically in market system and ordinal business activities. It is, therefore, difficult to analyze the agricultural statistics accurately especially for food crops.

Present availability of agricultural statistics are as follows:

(A) Availability of Food Crop Statistics

- (a) Department level statistics are only available before 1982. There are no statistics after 1982. (see Table 2.2-1-9)
- (b) National level statistics are available in MINAGA up-to-date, but it is only estimation of national level production. There are no crop area and yield statistics. (see Table 2.2-1-11)
- (c) Estimation of food crop area, yield and production are available in national level by FAO Yearbook. (see Table 2.2-1-10)
- (d) Paddy rice was surveyed for its area and production including irrigated paddy rice by CIDV in 1993. This survey was carried out by sample method on farmers selected among rice cultivation farmers. (see Table 2.2-1-12) The results are much different from the trend of statistics of 1982. It is considered that the difference is caused by shortage of samples on survey. It is, therefore, avoided the results of this survey except

irrigation area information. Irrigation area information is used for estimation of irrigated paddy rice as a reference.

(B) Availability of Industrial Crop Statistics

- (a) Department level or agro-industry level data are periodically available up-to-date. (see Table 2.2-1-13 to 20)
- (b) Trend analysis can be made using above data.

In order to obtain department level crop statistics for 1982 and 1995 in this study, the complicated procedures shown in Figure 2.2-1-2 and Figure 2.2-1-3 have been applied for industrial crops and food crops, so that the results will include some error and uncertainties.

Figure 2.2-1-2 Procedure of Industrial Crop Analysis on Department Level

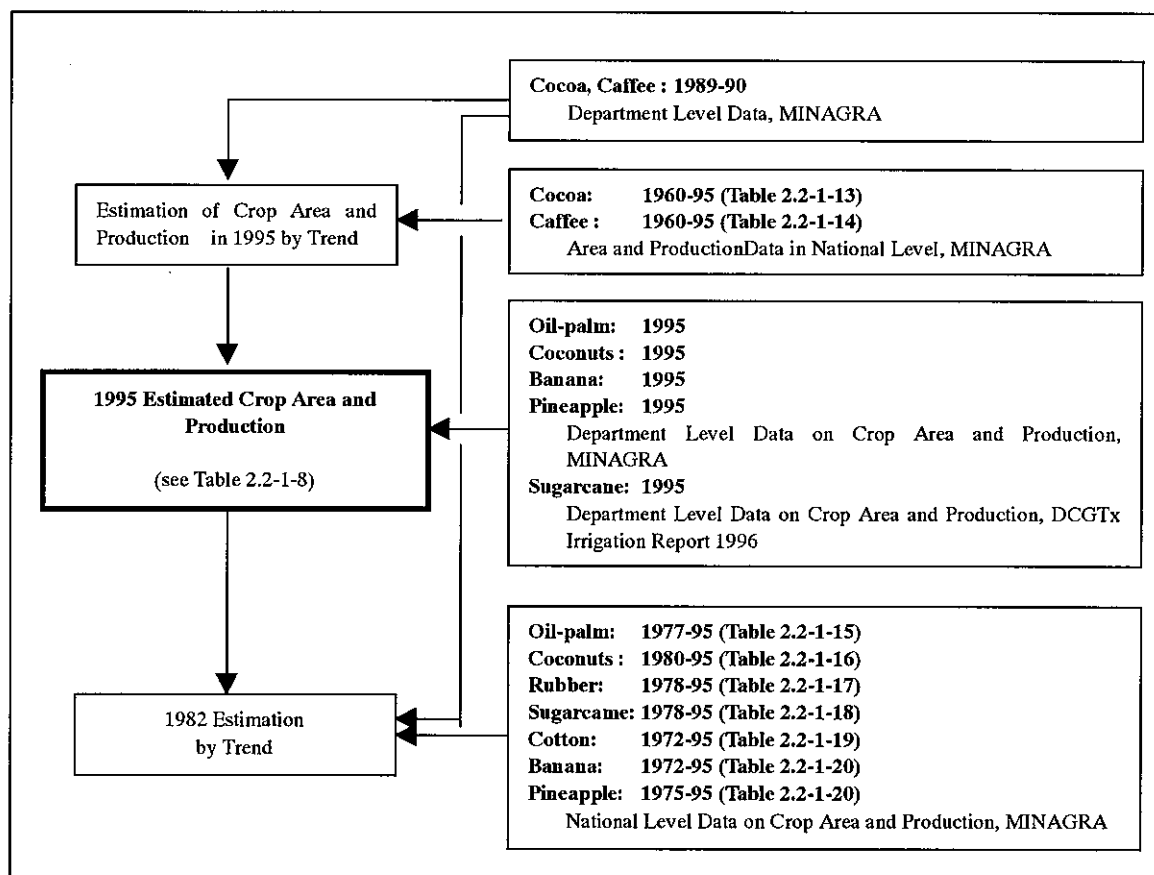
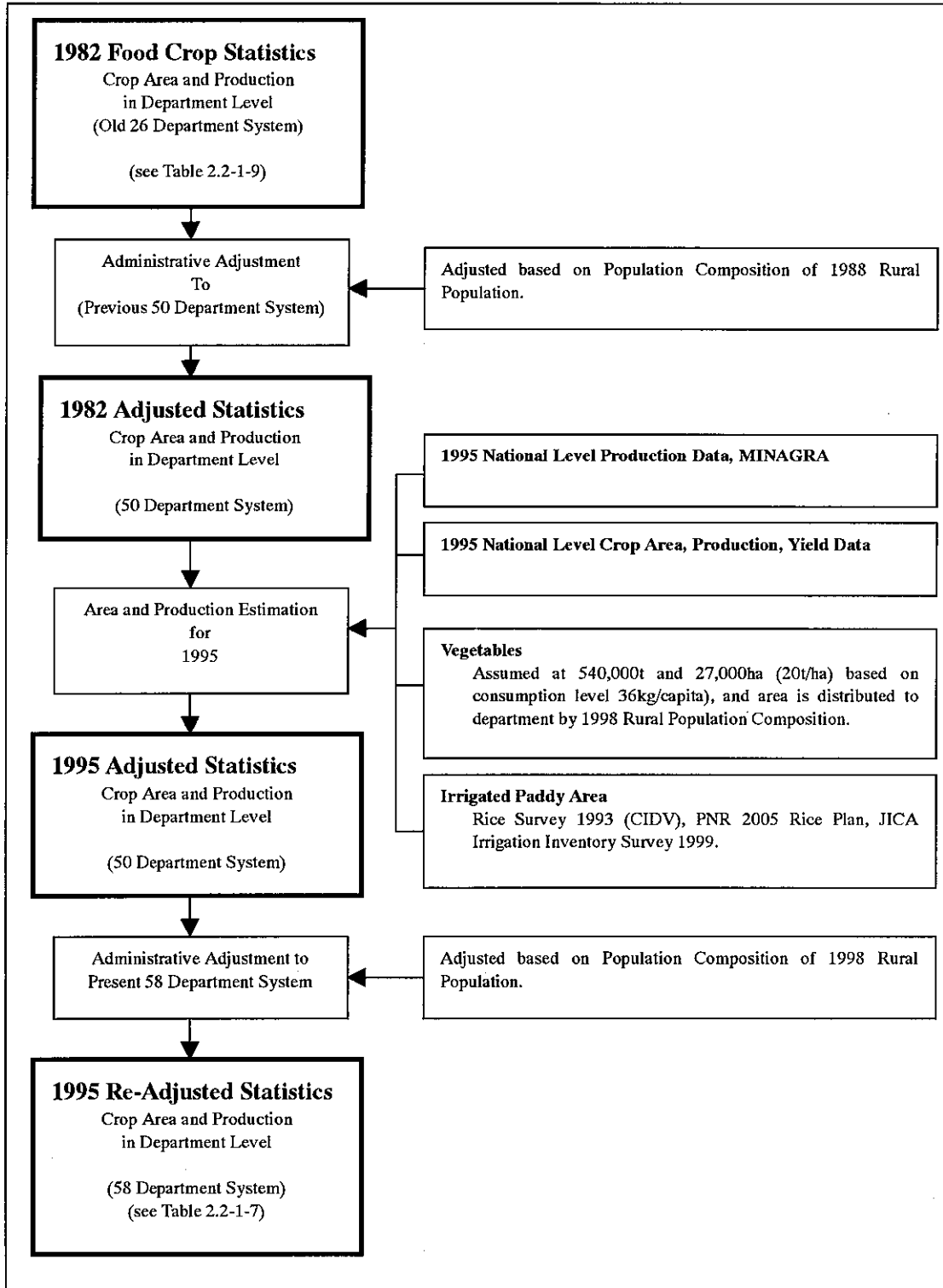


Figure 2.2-1-3 Procedure of Food Crop Analysis on Department Level



1.3 Agricultural Population and Farming Size by One Agricultural Household

Agricultural population is estimated as the population of rural area (non communal population). Growth and changes of agricultural population have been analyzed based on Censuses in 1988 and 1998. National population for 10 years between 1988 and 1998 grew from 10,813,000 to 15,358,000 with an annual growth ratio of 3.6% as shown in Table below. In this period, urban population increased very rapidly with a extremely high growth ratio of 7.0%, but agricultural population grew very slowly with a very low growth ration as 0.6%.

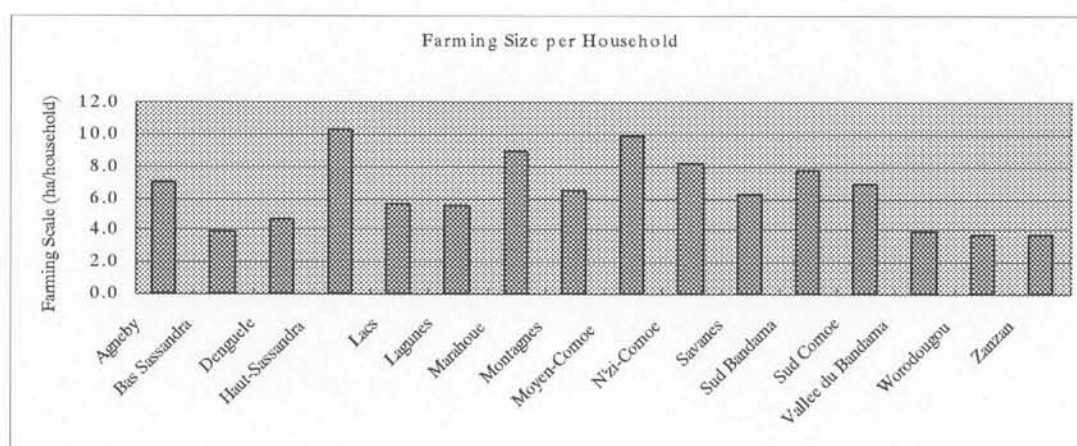
Population by River Basins

Items	Urban		Rural		Total	
	1988	1998	1988	1998	1988	1998
Population	4,228,037	8,354,504	6,584,744	7,004,008	10,812,781	15,358,512
Growth Rate (%/yr)	7.0%		0.6%		3.6%	
Households		1,534,053		1,132,004		2,666,057
Family Size (persons/family)		5.4		6.2		5.8

Agricultural population is estimated at 7,004,000 and agricultural households are 1,132,000 in 1998. Total farmland in the country is 7,248,430ha as of 1995, so that average farming size of one agricultural household is estimated at about 6.4 ha as shown in Table 2.2-1-6.

Figure 2.2-1-4 shows the farming size of one agricultural household by regions. As shown in the Figure, farming size in Haut-Sassandra and Moyen-Comoe regions is extremely large, more or less 10 ha per household. In these regions, industrial crops like cocoa and coffee are extensively planted.

Figure 2.2-1-4 Farming Size per Agricultural Household by Regions



(Note) Derived from Table 2.2-1-6

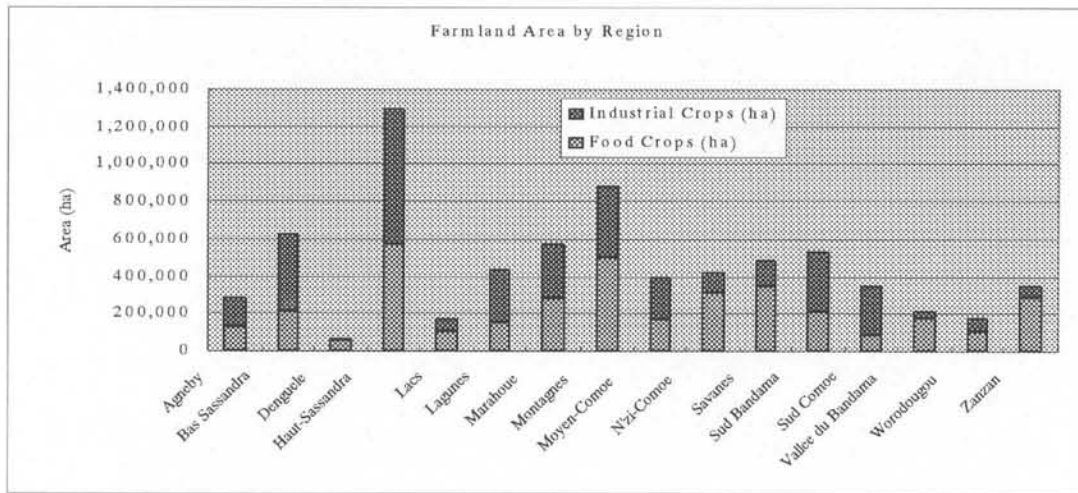
On the other hand, in Bas Sassandra, Vallee du Bandama, Worodougou and Zanzan regions, farming sizes are extremely small as less than 4ha. In these regions, industrial crop intensity is

extremely lower than former two regions.

1.4 Agricultural Scale by the Regions

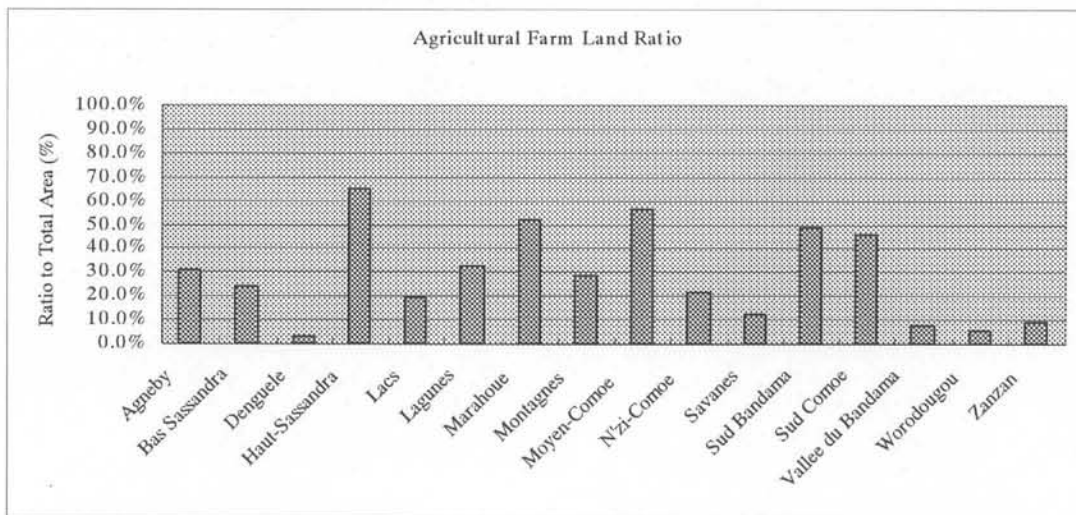
Agricultural scales are much different by the regions as shown in Figure 2.2-1-5 and 2.2-1-6. In Haut-Sassandra and Moyen-Comoe, agriculture is extensively carried out, and farmland areas reach 65% and 57% of total regional area. Marahoue, Sud Bandama and Sud Comoe regions are grouped in second active region in agriculture. In these regions, industrial crops such as cocoa and coffee are extremely cultivated.

Figure 2.2-1-5 Farmland Scale by Regions



(Note) Derived from Table 2.2-1-6

Table 2.2-1-6 Ratio of Farmland Area by Regions



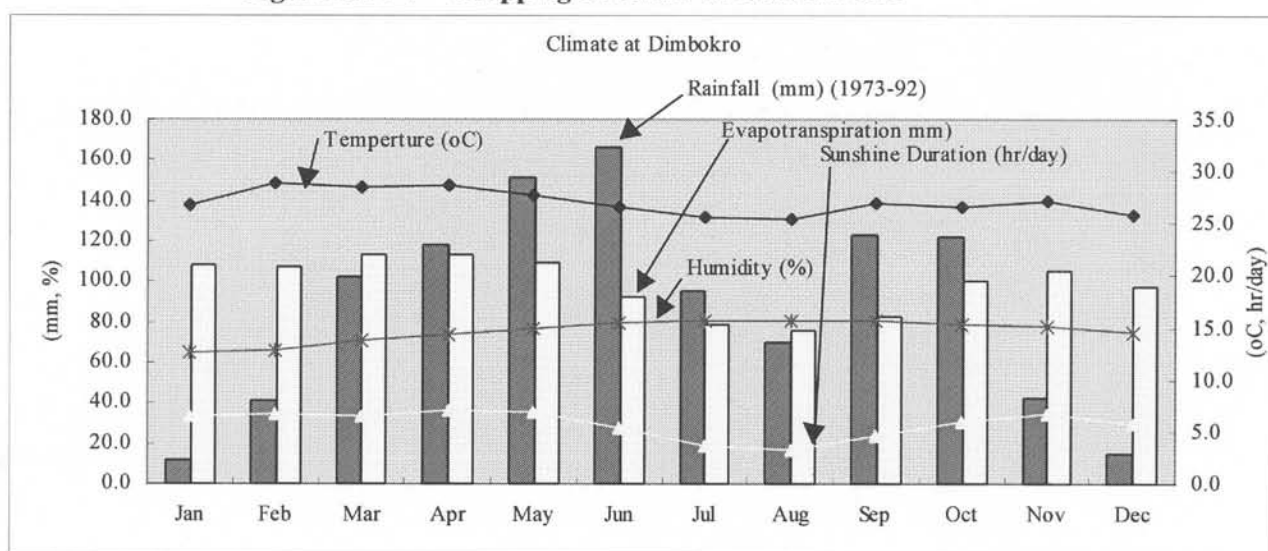
(Note) Derived from Table 2.2-1-6

1.5 Cropping Calendar in Cote d'Ivoire

Most food crops are grown in wet season from April to September, and perennial crops like coffee and cocoa are grown through the year. Almost crops are rainfed without any irrigation. Irrigate crops are rice in food crops, sugarcane in industrial crops, sweet banana and pineapples in fruit crops. Figure 2.2-1-7 shows general cropping in Cote d'Ivoire.

As shown in Figure 2.2-1-7, Evapotranspiration exceeds rainfall from April to October so that rainfed crops can be grown in this period. Rainfed rice, maize, groundnuts and cotton are grown in this period.

Figure 2.2-1-7 Cropping Calendar in Cote d'Ivoire



Crops	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Irrigated Rice												
Rainfed Rice												
Maize												
Inyame			Sowin							Harvesting		
Cassava			Sowin									
			Harvesting									
Groundnuts												
Cotton					Sowin							
Coffee	Flowerin											
		Harvesting										

(Source) Etude du Projet de Development Rural Integre de la Moyenne Vallee du N'Zi, August 1995, JICA

1.6 Per Capita Consumption and Staple Food

Staple food of Cote d'Ivoire depends on cereal and starchy crops. As shown in Table 2.2-1-2, percapita staple food consumption is composed of 109kg of cereals and 240kg of starchy crops. Rice is main crop of cereals, and yam and cassava are main starchy crops. Rice is consumed at 61.6 kg/capita/year in 1992-94, that is little lower than in Japan, because of large consumption of starchy crops.

Meat and fish consumption are estimated at 10.9 and 13.0 kg/capita/year respectively. These consumption levels are lower than in Japan, but large portion of them are imported. Import meat and fish share 88% and 67% of consumption respectively.

Table 2.2-1-2 Per-Capita Food Balance in Cote d'Ivoire in 1992 - 94

Nutrients and Food	(unit)	Cote d'Ivoire	comparison	Japan
Calory	(cal)	2,356	<	2,890
Protein	(g/capita/day)	48.6	<	95.0
Fat	(g/capita/day)	43.4	<	78.9
Cereales	(kg/capita/year)	108.7	<	146.1
Wheat	(kg/capita/year)	15.1		46.0
Rice	(kg/capita/year)	61.6		75.4
Maize	(kg/capita/year)	27.0		23.2
others	(kg/capita/year)	5.0		1.5
Starchy Roots	(kg/capita/year)	240.1	>>	36.1
Potatoes	(kg/capita/year)	0.6		27.7
Sweet potatoes	(kg/capita/year)	2.3		4.8
Yams	(kg/capita/year)	120.2	(>>)	1.2
Cassava	(kg/capita/year)	99.6	(>>)	0.1
others	(kg/capita/year)	17.4		2.3
Sweeteners	(kg/capita/year)	9.9	<	31.6
Oil Crops	(kg/capita/year)	6.4	<	10.5
Soyabeans	(kg/capita/year)	0.3		9.0
Goundnuts	(kg/capita/year)	5.9		1.0
Others	(kg/capita/year)	0.2		0.5
Vegetables	(kg/capita/year)	36.2	<	106.5
Tomates	(kg/capita/year)	8.2		7.7
Onions	(kg/capita/year)	0.0		10.6
Vegetables	(kg/capita/year)	28.0		88.2
Fruits	(kg/capita/year)	86.5	>	58.7
Stimulants	(kg/capita/year)	4.7	<	7.7
Spices	(kg/capita/year)	1.0	>	0.7
Alcoholic, Beverages	(kg/capita/year)	16.1	<	74.7
Meat	(kg/capita/year)	10.9	<	39.7
Bovine Meat	(kg/capita/year)	3.4		9.6
Mutton & Goat Meat	(kg/capita/year)	0.7		0.4
Pig Meat	(kg/capita/year)	1.2		15.2
Poultry Meat	(kg/capita/year)	3.6		14.1
Other Meat	(kg/capita/year)	2.1		0.3
Milk	(kg/capita/year)	12.7	<	68.2
Egg	(kg/capita/year)	0.9	<	19.9
Fish and Seafood	(kg/capita/year)	13.0	<	66.7

(Source) FAO (average food balance in 1992 - 94)

1.7 Application of Chemicals for Agriculture

Application of agricultural chemicals is about 6,000 t in Cote d'Ivoire in a year. Among crops, Cotton and banana are major crops to use large amount of chemicals. Cotton is prevailing in the North and banana is in the South. Chemicals are selected and resolved quickly not to affect environment and ecology. But some effects are not avoidable in the area where these crops are prevailing.

On the other hand, chemical application is recommended for new rice development scheme in order to develop effectively with new high yielding varieties. It is, therefore, careful attention will be necessary not only to present but to the future development.

1.8 Irrigation Projects and System

(A) Irrigation Area in Cote d'Ivoire

Total irrigation area is estimated at about 52,400 ha in Cote d'Ivoire in 1995 based upon the results of Irrigation Inventory Survey and PNR and DCGTx information. Out of total irrigation area, paddy rice and sugarcane share a large portion of irrigation, 22,000ha and 21,310ha or 42.0% and 40.6% of irrigation area respectively. Sweet banana and pineapple are also irrigated but irrigation area is rather smaller than former two crops. Irrigation area of sweet banana and pineapple is 5,600ha and 3,500ha or 10.7% and 6.7% of irrigation area. Most sweet banana is irrigated to ensure harvest, but pineapple is irrigated only 22.6% of total pineapple farm. Yield of pineapple, therefore, differs greatly by the condition of rainfed and irrigation.

Table 2.2-1-3 Estimations of Irrigated Area in Cote d'Ivoire in 1995

Irrigated Crops	Irrigated Area (ha)	Area Composition (%)	Remarks
Paddy Rice	22,000	42.0%	Crop intensity = 125%
Sugarcane	21,310	40.6%	
Banana	5,600	10.7%	
Pineapple	3,500	6.7%	22.6% of total pineapple area (15,500ha).
Total	52,410	100.0%	

(Note) estimated based on Irrigation Inventory Survey 1999 and PNR and DCGTx information

Among irrigated crops, sugarcane, banana and pineapple are cultivated and irrigated by agro-industries or by large commercial farmers, but paddy rice is irrigated by small farmers. Irrigation of sugarcane is recently decreased from 29,310ha to 21,310ha due to disadvantage of sugar price in international market although having an irrigation potential of about 37,650ha from an aspect of sugarcane farm and factory expansion plan.

Table 2.2-1-4 Existing Sugarcane Farms and Sugar Factories

Sugar Farm	Department	Location		River Basin		Water Source	1999 present	Farm Size (ha)			Factory Capacity (t/yr)		
		Latitude	Longitude	River	Area			Previous	Present	Future	Previous	Present	Future
Ferkessedougou	Ferkessedougou	9°26'00"N	5°19'00"W	Bandama	II-A6	dam	Operated	6,200	6,200	6,200	60,000	60,000	60,000
Ferkessedougou	Ferkessedougou	9°26'00"N	5°19'00"W	Bandama	II-A6	dam	Operated	5,720	5,720	5,720	50,000	50,000	50,000
Benoufla	Vavoua	7°44'14"N	6°14'28"W	Bandama	II-A3	dam	Operated	3,560	3,560	6,000	4,100	4,100	40,000
Borotou	Touba	8°44'00"N	7°30'00"W	Sassandra	I-A5	pump	Operated	5,830	5,830	5,830	24,000	24,000	24,000
Maradiassa	Katiola	8°05'40"N	5°25'55"W	Bandama	II-A5	pump		3,000		6,800	15,000		47,500
Serebou	MBahiakro	7°56'40"N	3°56'40"W	Comoe	III-A3	pump		5,000		7,100	32,000		50,000
Total								29,310	21,310	37,650	185,100	138,100	271,500

(Data Source) Factory Capacity: Agriculture in Cote d'Ivoire, AICAF1985, Others: Irrigation and Water Problems, DCGTx 1996

(Note) Future farm size of Maradiassa and Serebou is estimated by future factory capacity based on sugarcane productivity of about 7 tons/ha.

(B) Type of Irrigation in Cote d'Ivoire

There are five typical irrigation systems in Cote d'Ivoire, namely 1) storage reservoir and overhead irrigation (sprinkler, rain-gun, center-pivot etc.), 2) storage reservoir and border irrigation, 3) weir and border irrigation, 4) pump irrigation, and 5) lowland inundation or flooding irrigation.

Type-1 is most advanced system and employed by agro-industrial companies for irrigating industrial crops and fruits such as sugarcane, banana and pineapple. Type-2 to 5 are common irrigation system for paddy rice. Type-2 is the most reliable irrigation from a respect of water resources security and Type-5 is the most unsteady irrigation. Double cropping of rice is ensured in the case of Type 2, and Type 3 and 4 depend on the availability of water in rivers. Only one cropping is available for Type-5 in wet season and suffered from drought frequently.

Table 2.2-1-5 Type and Typical Irrigation Systems in Cote d'Ivoire

Type of Irrigation	Typical System and Size	Typical Location
1) Storage reservoir and overhead irrigation (sprinkler, rain-gun, center-pivot etc.)	Plantation of sugarcane and fruits (banana) by agro-business.	Sugarcane in Ferkessedougou. Banana nearby Abidjan.
2) Storage reservoir and border irrigation	Typical irrigation project for paddy rice.	Local paddy irrigation Most case of rice irrigation belongs to this type.
3) Weir and border irrigation	Applicable for steady stream flow area as in southern and south-western area where rainfall is comparatively plenty, but scale is not large. Dry season rice growing is sometimes restricted.	Local paddy irrigation BAD-Ouest
4) Pump irrigation	Downstream of large reservoir where stream flow is regulated.	Tiassale (35ha) San Pedro (expired) Very few in the country, and Tiassale is only one pump irrigation for rice.
5) Lowland inundation or flooding irrigation	Large portion of paddy cultivation.	Typical lowland paddy cultivation.

Table 2.2-1-6 Farmland Area and Farming Scale by Region in 1995

(unit: ha)

Region	Department	Area (km ²)	Agr. House holds	Food Crops (ha)	Industrial Crops (ha)	Total (ha)	Farming Scale (ha/household)	Area Ratio in the Area (%)
1 Agneby	5 Adzope	5,218	17,376	73,700	94,760	168,460	9.7	32.3%
1 Agneby	6 Agboville	3,887	23,161	59,120	54,890	114,010	4.9	29.3%
2 Bas Sassandra	43 San-Pedro	6,848	45,034	39,860	107,140	147,000	3.3	21.5%
2 Bas Sassandra	44 Sassandra	4,966	27,144	38,210	68,870	107,080	3.9	21.6%
2 Bas Sassandra	47 Soubre	8,540	68,454	111,790	232,830	344,620	5.0	40.4%
2 Bas Sassandra	48 Tabou	5,851	18,626	20,290	6,200	26,490	1.4	4.5%
3 Denguele	40 Odiene	20,892	14,161	55,970	9,960	65,930	4.7	3.2%
4 Haut-Sassandra	21 Daloa	5,388	36,978	196,200	238,610	434,810	11.8	80.7%
4 Haut-Sassandra	28 Gagnoa	4,545	35,752	118,330	128,840	247,170	6.9	54.4%
4 Haut-Sassandra	32 Issia	3,722	23,216	136,710	224,490	361,200	15.6	97.0%
4 Haut-Sassandra	56 Vavoua	6,228	29,820	124,700	122,980	247,680	8.3	39.8%
5 Lacs	52 Tiebissou	2,307	7,203	24,000	13,990	37,990	5.3	16.5%
5 Lacs	55 Toumodi	2,698	7,304	27,260	22,780	50,040	6.9	18.5%
5 Lacs	571 Yamoussoukro1	2,108	6,964	22,970	12,340	35,310	5.1	16.8%
5 Lacs	572 Yamoussoukro2	1,698	9,305	30,370	17,990	48,360	5.2	28.5%
6 Lagunes	2 Abidjan	2,702	14,788	28,280	45,920	74,200	5.0	27.5%
6 Lagunes	8 Alepe	2,176	15,250	34,040	53,570	87,610	5.7	40.3%
6 Lagunes	20 Dabou	2,195	18,783	41,460	65,270	106,730	5.7	48.6%
6 Lagunes	30 Grand Lahou	2,036	10,257	15,230	37,920	53,150	5.2	26.1%
6 Lagunes	33 Jacqueville	745	2,836	6,390	10,070	16,460	5.8	22.1%
6 Lagunes	51 Tiassale	3,442	18,105	32,050	66,200	98,250	5.4	28.5%
7 Marahoue	15 Bouaflé	4,185	20,361	87,890	69,270	157,160	7.7	37.6%
7 Marahoue	41 Oume	2,358	14,303	71,350	77,260	148,610	10.4	63.0%
7 Marahoue	46 Sinfra	1,643	14,037	58,690	87,880	146,570	10.4	89.2%
7 Marahoue	58 Zuenoula	2,938	15,592	64,460	58,450	122,910	7.9	41.8%
8 Montagnes	9 Bangolo	2,127	17,941	45,770	18,520	64,290	3.6	30.2%
8 Montagnes	11 Biankouma	5,020	12,664	73,800	32,290	106,090	8.4	21.1%
8 Montagnes	22 Danane	4,601	32,978	149,960	95,210	245,170	7.4	53.3%
8 Montagnes	26 Duekoue	3,017	17,342	34,940	62,370	97,310	5.6	32.3%
8 Montagnes	31 Guiglo	10,557	23,406	54,280	71,940	126,220	5.4	12.0%
8 Montagnes	37 Man	4,808	26,429	129,210	92,100	221,310	8.4	46.0%
8 Montagnes	54 Toulepleu	811	4,800	10,880	14,420	25,300	5.3	31.2%
9 Moyen-Comoe	1 Abengourou	5,143	29,301	122,370	225,510	347,880	11.9	67.6%
9 Moyen-Comoe	7 Agnibilekrou	1,853	10,509	47,280	560	47,840	4.6	25.8%
10 N'zi-Comoe	12 Bocanda	3,262	9,929	60,160	10,570	70,730	7.1	21.7%
10 N'zi-Comoe	14 Bongouanou	5,593	18,981	139,710	60,030	199,740	10.5	35.7%
10 N'zi-Comoe	23 Daoukro	3,958	6,925	52,730	19,820	72,550	10.5	18.3%
10 N'zi-Comoe	24 Dimbokro	1,564	3,619	19,630	3,430	23,060	6.4	14.7%
10 N'zi-Comoe	39 M'bahiakro	5,220	12,254	42,230	16,440	58,670	4.8	11.2%
11 Savanes	18 Boundiali	7,956	13,453	54,880	20,610	75,490	5.6	9.5%
11 Savanes	27 Ferkesedougou	17,224	20,560	72,950	49,530	122,480	6.0	7.1%
11 Savanes	35 Korhogo	12,696	39,489	201,330	62,180	263,510	6.7	20.8%
11 Savanes	50 Tengrela	2,270	3,363	17,170	7,670	24,840	7.4	10.9%
12 Sud Bandama	25 Divo	8,139	50,640	162,000	258,190	420,190	8.3	51.6%
12 Sud Bandama	36 Lakota	2,734	18,533	50,500	60,150	110,650	6.0	40.5%
13 Sud Comoe	3 Aboisso	4,474	29,231	50,500	161,630	212,130	7.3	47.4%
13 Sud Comoe	4 Adlake	1,714	13,335	22,490	71,830	94,320	7.1	55.0%
13 Sud Comoe	29 Grand Bassam	1,426	7,839	15,520	24,430	39,950	5.1	28.0%
14 Vallee du Bandama	10 Beoumi	2,609	12,523	35,860	10,280	46,140	3.7	17.7%
14 Vallee du Bandama	16 Bouake	4,709	9,883	52,540	4,870	57,410	5.8	12.2%
14 Vallee du Bandama	19 Dabakala	9,761	13,130	26,380	1,520	27,900	2.1	2.9%
14 Vallee du Bandama	34 Katiola	9,440	11,957	37,200	7,760	44,960	3.8	4.8%
14 Vallee du Bandama	42 Sakassou	1,874	6,348	23,540	9,220	32,760	5.2	17.5%
15 Worodougou	38 Mankono	10,603	20,604	36,230	45,030	81,260	3.9	7.7%
15 Worodougou	45 Seguela	11,460	12,717	29,570	12,110	41,680	3.3	3.6%
15 Worodougou	53 Toubou	8,707	13,756	39,980	13,240	53,220	3.9	6.1%
16 Zanzan	13 Bondoukou	9,844	43,531	78,730	11,850	90,580	2.1	9.2%
16 Zanzan	17 Bouna	21,846	18,702	106,410	1,340	107,750	5.8	4.9%
16 Zanzan	49 Tanda	6,390	30,522	105,650	41,600	147,250	4.8	23.0%
1 Agneby		9,105	40,537	132,820	149,650	282,470	7.0	31.0%
2 Bas Sassandra		26,205	159,258	210,150	415,040	625,190	3.9	23.9%
3 Denguele		20,892	14,161	55,970	9,960	65,930	4.7	3.2%
4 Haut-Sassandra		19,883	125,766	575,940	714,920	1,290,860	10.3	64.9%
5 Lacs		8,811	30,776	104,600	67,100	171,700	5.6	19.5%
6 Lagunes		13,296	80,019	157,450	278,950	436,400	5.5	32.8%
7 Marahoue		11,124	64,293	282,390	292,860	575,250	8.9	51.7%
8 Montagnes		30,941	135,560	498,840	386,850	885,690	6.5	28.6%
9 Moyen-Comoe		6,996	39,810	169,650	226,070	395,720	9.9	56.6%
10 N'zi-Comoe		19,597	51,708	314,460	110,290	424,750	8.2	21.7%
11 Savanes		40,146	76,865	346,330	139,990	486,320	6.3	12.1%
12 Sud Bandama		10,873	69,173	212,500	318,340	530,840	7.7	48.8%
13 Sud Comoe		7,614	50,405	88,510	257,890	346,400	6.9	45.5%
14 Vallee du Bandama		28,393	53,841	175,520	33,650	209,170	3.9	7.4%
15 Worodougou		30,770	47,077	105,780	70,380	176,160	3.7	5.7%
16 Zanzan		38,080	92,755	290,790	54,790	345,580	3.7	9.1%
Total		322,365	1,132,004	3,721,700	3,526,730	7,248,430	6.4	22.5%

(Note) derived from Table 2.2-1-7 and 8.

Table 2.2-1-7 Food Crop Area and Production in Cote d'Ivoire in 1995

Cropped Area												(Unit: ha)
Department	Rainfed Paddy	Irrigated Paddy	Maize	S.F.M.	Yam	Cassava	Ground nut	Plantain Banana	Taro	Vegetables	Total	
1 Abengourou	4,690	30	13,920	0	6,480	1,300	2,210	58,230	35,000	510	122,370	
2 Abidjan	530	10	2,080	0	870	4,280	190	14,170	4,700	1,450	28,280	
3 Aboisso	1,810	10	4,450	0	1,520	9,100	610	26,200	6,400	400	50,500	
4 Adiake	800	10	1,980	0	670	4,060	270	11,670	2,850	180	22,490	
5 Adzope	3,260	20	14,150	0	690	9,770	440	30,200	14,670	500	73,700	
6 Agboville	4,890	40	9,010	0	2,760	5,560	590	25,910	9,930	430	59,120	
7 Agnibilekrou	1,820	0	5,380	0	2,500	500	860	22,500	13,530	190	47,280	
8 Alepe	640	10	2,500	0	1,050	5,150	230	17,050	5,660	1,750	34,040	
9 Bangolo	12,780	290	5,380	0	150	10,570	190	16,170	0	240	45,770	
10 Beoumi	1,940	240	9,190	0	7,330	5,650	1,860	6,560	2,880	210	35,860	
11 Biankouma	22,800	350	19,300	0	0	7,330	880	22,920	0	220	73,800	
12 Bocanda	7,200	0	11,660	0	7,900	4,940	1,620	19,830	6,790	220	60,160	
13 Bondoukou	1,380	120	16,470	0	14,740	11,290	810	19,430	14,050	440	78,730	
14 Bongouanou	16,720	50	27,100	0	18,330	11,490	3,760	46,070	15,760	430	139,710	
15 Bouaflé	13,570	140	16,070	0	5,760	7,230	2,260	36,950	5,500	410	87,890	
16 Bouake	2,800	410	13,250	0	10,560	8,140	2,700	9,460	4,150	1,070	52,540	
17 Bouna	4,070	100	32,180	42,910	15,200	2,170	8,790	0	680	310	106,410	
18 Boundiali	9,920	1,710	16,650	11,240	3,690	0	11,380	0	0	290	54,880	
19 Dabakala	3,910	250	6,430	0	8,520	350	6,740	0	0	180	26,380	
20 Dabou	770	10	3,050	0	1,280	6,260	280	20,780	6,900	2,130	41,460	
21 Daloa	13,960	280	17,640	0	6,420	6,110	3,140	113,590	34,140	920	196,200	
22 Danane	34,200	780	21,870	0	0	37,060	290	48,340	6,880	540	149,960	
23 Daoukro	6,300	70	10,200	0	6,910	4,330	1,420	17,360	5,940	200	52,730	
24 Dimbokro	2,340	100	3,790	0	2,560	1,610	520	6,440	2,200	70	19,630	
25 Divo	21,110	30	18,630	0	3,950	5,280	560	84,320	27,180	940	162,000	
26 Duekoue	14,770	300	5,380	0	0	4,680	0	9,040	430	340	34,940	
27 Ferkessedougou	3,260	2,180	27,020	32,590	2,530	540	4,390	0	0	440	72,950	
28 Gagnoa	25,390	220	13,640	0	3,240	3,720	1,100	51,580	18,790	650	118,330	
29 Grand Bassam	290	10	1,140	0	480	2,350	100	7,770	2,580	800	15,520	
30 Grand Lahou	290	10	1,170	0	500	2,400	100	7,970	2,640	150	15,230	
31 Guiglo	22,970	470	8,380	0	0	7,290	0	14,050	670	450	54,280	
32 Issia	9,740	190	12,310	0	4,480	4,260	2,180	79,270	23,820	460	136,710	
33 Jacqueville	120	0	470	0	200	970	40	3,200	1,060	330	6,390	
34 Katiola	4,890	320	9,010	5,600	9,210	560	7,320	0	0	290	37,200	
35 Korhogo	66,760	4,750	59,200	29,930	16,120	340	23,440	0	0	790	201,330	
36 Lakota	6,580	10	5,820	0	1,230	1,640	180	26,310	8,470	260	50,500	
37 Man	36,070	810	15,210	0	430	29,880	540	45,630	0	640	129,210	
38 Mankono	10,760	580	9,210	0	5,390	2,430	7,500	0	0	360	36,230	
39 Mbahiakro	2,280	280	10,850	0	8,640	6,660	2,200	7,730	3,400	190	42,230	
40 Odienne	13,030	730	16,730	10,620	6,680	1,490	6,300	0	0	390	55,970	
41 Oumé	15,320	130	8,240	0	1,950	2,250	660	31,150	11,340	310	71,350	
42 Sakassou	1,270	280	6,010	0	4,780	3,690	1,220	4,290	1,880	120	23,540	
43 San-Pedro	13,500	240	8,480	0	1,430	2,890	130	9,860	2,600	730	39,860	
44 Sassandra	13,060	220	8,210	0	1,380	2,800	130	9,540	2,510	360	38,210	
45 Seguela	8,780	480	7,510	0	4,400	1,980	6,120	0	0	300	29,570	
46 Sinfra	9,050	90	10,730	0	3,850	4,830	1,510	24,660	3,670	300	58,690	
47 Soubre	38,190	650	24,000	0	4,050	8,170	400	27,890	7,330	1,110	111,790	
48 Tabou	6,920	120	4,350	0	740	1,480	70	5,050	1,330	230	20,290	
49 Tanda	1,870	150	22,130	0	19,800	15,170	1,100	26,120	18,900	410	105,650	
50 Tengrela	3,110	510	5,220	3,510	1,150	0	3,560	0	0	110	17,170	
51 Tiassale	620	10	2,460	0	1,040	5,060	220	16,770	5,560	310	32,050	
52 Tiebissou	1,290	210	6,120	0	4,880	3,760	1,240	4,370	1,920	210	24,000	
53 Touba	17,910	480	12,870	0	2,070	2,310	4,100	0	0	240	39,980	
54 Toulepleu	4,600	90	1,680	0	0	1,460	0	2,820	140	90	10,880	
55 Toumodi	1,470	380	6,920	0	5,520	4,260	1,410	4,940	2,170	190	27,260	
56 Vavoua	8,880	170	11,220	0	4,080	3,880	1,990	72,260	21,710	510	124,700	
571 Yamoussoukro1	1,660	1,480	5,400	0	4,300	3,320	1,090	3,850	1,690	180	22,970	
572 Yamoussoukro2	1,140	290	7,880	0	6,280	4,840	1,600	5,620	2,460	260	30,370	
58 Zuenoula	9,950	100	11,800	0	4,230	5,310	1,660	27,110	4,040	260	64,460	
Total	570,000	22,000	669,100	136,400	264,900	316,200	136,200	1,203,000	376,900	27,000	3,721,700	

(Sources) Agricultural Statistics 1982, 85, 89, 91, 93, 95, MINAGRA, FAO Yearbook 1998, PNR rice 2005 report, DCGTx Irrigation Report 1996, and Irrigation Inventory 1999 by JICA.

Yield (t/ha)	1.400	3.200	0.825	0.667	10.830	5.086	1.050	1.110	0.934	20.000
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(continued)

Production Present Department	(unit t)									
	Rainfed Paddy	Irrigated Paddy	Maize	S.F.M.	Yam	Cassava	Ground nut	Plantain Banana	Taro	Vegetables
1 Abengourou	6,570	100	11,480	0	70,180	6,610	2,320	64,640	32,690	10,200
2 Abidjan	740	30	1,720	0	9,420	21,770	200	15,730	4,390	29,000
3 Aboisso	2,530	30	3,670	0	16,460	46,280	640	29,080	5,980	8,000
4 Adiake	1,120	30	1,630	0	7,260	20,650	280	12,950	2,660	3,600
5 Adzope	4,560	60	11,670	0	7,470	49,690	460	33,520	13,700	10,000
6 Agboville	6,850	130	7,430	0	29,890	28,280	620	28,760	9,270	8,600
7 Agnibilekrou	2,550	0	4,440	0	27,080	2,540	900	24,980	12,640	3,800
8 Alepe	900	30	2,060	0	11,370	26,190	240	18,930	5,290	35,000
9 Bangolo	17,890	930	4,440	0	1,620	53,760	200	17,950	0	4,800
10 Beoumi	2,720	770	7,580	0	79,380	28,740	1,950	7,280	2,690	4,200
11 Biankouma	31,920	1,120	15,920	0	0	37,280	920	25,440	0	4,400
12 Bocanda	10,080	0	9,620	0	85,560	25,120	1,700	22,010	6,340	4,400
13 Bondoukou	1,930	380	13,590	0	159,630	57,420	850	21,570	13,120	8,800
14 Bongouanou	23,410	160	22,360	0	198,510	58,440	3,950	51,140	14,720	8,600
15 Bouafle	19,000	450	13,260	0	62,380	36,770	2,370	41,010	5,140	8,200
16 Bouake	3,920	1,310	10,930	0	114,360	41,400	2,840	10,500	3,880	21,400
17 Bouna	5,700	320	26,550	28,620	164,620	11,040	9,230	0	640	6,200
18 Boundiali	13,890	5,470	13,740	7,500	39,960	0	11,950	0	0	5,800
19 Dabakala	5,470	800	5,300	0	92,270	1,780	7,080	0	0	3,600
20 Dabou	1,080	30	2,520	0	13,860	31,840	290	23,070	6,440	42,600
21 Daloa	19,540	900	14,550	0	69,530	31,080	3,300	126,080	31,890	18,400
22 Danane	47,880	2,500	18,040	0	0	188,490	300	53,660	6,430	10,800
23 Daoukro	8,820	220	8,420	0	74,840	22,020	1,490	19,270	5,550	4,000
24 Dimbokro	3,280	320	3,130	0	27,720	8,190	550	7,150	2,050	1,400
25 Divo	29,550	100	15,370	0	42,780	26,850	590	93,600	25,390	18,800
26 Duekoue	20,680	960	4,440	0	0	23,800	0	10,030	400	6,800
27 Ferkessedougou	4,560	6,980	22,290	21,740	27,400	2,750	4,610	0	0	8,800
28 Gagnoa	35,550	700	11,250	0	35,090	18,920	1,160	57,250	17,550	13,000
29 Grand Bassam	410	30	940	0	5,200	11,950	110	8,620	2,410	16,000
30 Grand Lahou	410	30	970	0	5,420	12,210	110	8,850	2,470	3,000
31 Guiglo	32,160	1,500	6,910	0	0	37,080	0	15,600	630	9,900
32 Issia	13,640	610	10,160	0	48,520	21,670	2,290	87,990	22,250	9,200
33 Jacquerville	170	0	390	0	2,170	4,930	40	3,550	990	6,600
34 Katiola	6,850	1,020	7,430	3,740	99,740	2,850	7,690	0	0	5,800
35 Korhogo	93,460	15,200	48,840	19,960	174,580	1,730	24,610	0	0	15,800
36 Lakota	9,210	30	4,800	0	13,320	8,340	190	29,200	7,910	5,200
37 Man	50,500	2,590	12,550	0	4,660	151,970	570	50,650	0	12,800
38 Mankono	15,060	1,860	7,600	0	58,370	12,360	7,880	0	0	7,200
39 Mbahiakro	3,190	900	8,950	0	93,570	33,870	2,310	8,580	3,180	3,800
40 Odiene	18,240	2,340	13,800	7,080	72,340	7,580	6,620	0	0	7,800
41 Oume	21,450	420	6,800	0	21,120	11,440	690	34,580	10,590	6,200
42 Sakassou	1,780	900	4,960	0	51,770	18,770	1,280	4,760	1,760	2,400
43 San-Pedro	18,900	770	7,000	0	15,490	14,700	140	10,940	2,430	14,600
44 Sassandra	18,280	700	6,770	0	14,950	14,240	140	10,590	2,340	7,200
45 Seguela	12,290	1,540	6,200	0	47,650	10,070	6,430	0	0	6,000
46 Sinfra	12,670	290	8,850	0	41,700	24,570	1,590	27,370	3,430	6,000
47 Soubre	53,470	2,080	19,800	0	43,860	41,550	420	30,960	6,850	22,200
48 Tabou	9,690	380	3,590	0	8,010	7,530	70	5,610	1,240	4,600
49 Tanda	2,620	480	18,260	0	214,430	77,150	1,160	28,990	17,650	8,200
50 Tengrela	4,350	1,630	4,310	2,340	12,450	0	3,740	0	0	2,200
51 Tiassale	870	30	2,030	0	11,260	25,740	230	18,610	5,190	6,200
52 Tiebissou	1,810	670	5,050	0	52,850	19,120	1,300	4,850	1,790	4,200
53 Touba	25,070	1,540	10,620	0	22,420	11,750	4,310	0	0	4,800
54 Toulepleu	6,440	290	1,390	0	0	7,430	0	3,130	130	1,800
55 Toumodi	2,060	1,220	5,710	0	59,780	21,670	1,480	5,480	2,030	3,800
56 Vavoua	12,430	540	9,260	0	44,190	19,730	2,090	80,210	20,280	10,200
571 Yamoussoukro1	2,320	4,740	4,460	0	46,570	16,890	1,140	4,270	1,580	3,600
572 Yamoussoukro2	1,600	930	6,500	0	68,010	24,620	1,680	6,240	2,300	5,200
58 Zuenoula	13,930	320	9,740	0	45,810	27,010	1,740	30,090	3,770	5,200
Total	798,020	70,410	552,040	90,980	2,868,850	1,608,220	143,040	1,335,320	352,050	540,000

Table 2.2-1-8 Industrial Crop Area and Production in Cote d'Ivoire in 1995

Planted Area										(Unit: ha)
Department	Cocoa	Coffee	Oil Palm	Coconut	Rubber	Sugarcane	Cotton	Banana	Pineapple	Total
1 Abengourou	136,620	57,450	0	0	31,150	0	0	290	0	225,510
2 Abidjan	13,020	16,600	8,370	4,460	860	0	0	1,420	1,190	45,920
3 Aboisso	29,470	92,800	31,380	7,130	0	0	0	400	450	161,630
4 Adiake	13,130	41,340	13,980	3,180	0	0	0	0	200	71,830
5 Adzope	52,620	41,830	0	0	0	0	30	30	250	94,760
6 Agboville	24,840	24,880	0	0	0	0	60	2,960	2,150	54,890
7 Agnibilekrou	0	0	0	0	0	0	60	500	0	560
8 Alepe	15,670	19,980	10,080	5,370	1,030	0	0	0	1,440	53,570
9 Bangolo	6,260	12,260	0	0	0	0	0	0	0	18,520
10 Beoumi	0	6,730	0	0	0	0	3,550	0	0	10,280
11 Biankouma	920	31,370	0	0	0	0	0	0	0	32,290
12 Bocanda	2,220	8,170	0	0	0	0	180	0	0	10,570
13 Bondoukou	6,160	5,530	0	0	0	0	160	0	0	11,850
14 Bongouanou	44,340	15,020	0	0	0	0	670	0	0	60,030
15 Bouaffle	36,060	27,400	0	0	0	0	5,810	0	0	69,270
16 Bouake	0	1,080	0	0	0	0	970	0	2,820	4,870
17 Boua	0	0	0	0	0	0	1,340	0	0	1,340
18 Boundiali	0	0	0	0	0	0	20,610	0	0	20,610
19 Dabakala	0	720	0	0	0	0	800	0	0	1,520
20 Dabou	19,090	24,350	12,280	6,530	1,270	0	0	0	1,750	65,270
21 Daloa	146,280	89,060	0	0	0	0	3,270	0	0	238,610
22 Danane	21,530	73,680	0	0	0	0	0	0	0	95,210
23 Daoukro	13,520	6,010	0	0	0	0	290	0	0	19,820
24 Dimbokro	720	2,650	0	0	0	0	60	0	0	3,430
25 Divo	189,340	48,680	17,180	2,180	0	0	0	0	810	258,190
26 Duekoue	30,910	31,370	0	0	0	0	90	0	0	62,370
27 Ferkessedougou	0	0	0	0	0	11,920	37,610	0	0	49,530
28 Gagnoa	103,500	22,600	0	0	2,470	0	270	0	0	128,840
29 Grand Bassam	7,140	9,110	4,600	2,450	470	0	0	0	660	24,430
30 Grand Lahou	19,410	7,090	0	11,370	0	0	0	0	50	37,920
31 Guiglo	42,610	27,130	0	0	2,200	0	0	0	0	71,940
32 Issia	127,690	96,630	0	0	0	0	170	0	0	224,490
33 Jacqueville	2,950	3,760	1,890	1,010	190	0	0	0	270	10,070
34 Katiola	0	120	0	0	0	0	7,640	0	0	7,760
35 Korhogo	0	0	0	0	0	0	62,180	0	0	62,180
36 Lakota	38,270	21,880	0	0	0	0	0	0	0	60,150
37 Man	12,050	80,050	0	0	0	0	0	0	0	92,100
38 Mankono	0	2,520	0	0	0	0	42,510	0	0	45,030
39 M'bahiakro	1,010	15,140	0	0	0	0	290	0	0	16,440
40 Odiene	0	0	0	0	0	0	9,960	0	0	9,960
41 Oume	67,620	9,620	0	0	0	0	20	0	0	77,260
42 Sakassou	0	8,650	0	0	0	0	570	0	0	9,220
43 San-Pedro	47,200	16,350	18,990	0	24,600	0	0	0	0	107,140
44 Sassandra	19,960	19,710	19,740	9,460	0	0	0	0	0	68,870
45 Seguela	0	1,080	0	0	0	0	11,030	0	0	12,110
46 Sinfra	60,070	27,160	0	0	0	0	650	0	0	87,880
47 Soubre	189,250	31,370	12,210	0	0	0	0	0	0	232,830
48 Tabou	4,880	1,320	0	0	0	0	0	0	0	6,200
49 Tanda	23,640	17,430	0	0	0	0	530	0	0	41,600
50 Tengrela	0	0	0	0	0	0	7,670	0	0	7,670
51 Tiassale	45,080	17,430	0	0	0	0	230	0	3,460	66,200
52 Tiebissou	6,270	7,170	0	0	0	0	550	0	0	13,990
53 Toubra	0	5,530	0	0	0	5,830	1,880	0	0	13,240
54 Toulepleu	8,540	5,440	0	0	440	0	0	0	0	14,420
55 Toumodi	21,800	840	0	0	0	0	140	0	0	22,780
56 Vavoua	55,200	55,050	0	0	0	3,560	9,170	0	0	122,980
571 Yamoussoukro1	5,530	6,330	0	0	0	0	480	0	0	12,340
572 Yamoussoukro2	8,070	9,220	0	0	0	0	700	0	0	17,990
58 Zuenoula	2,940	45,310	0	0	0	0	10,200	0	0	58,450
Total	1,723,400	1,250,000	150,700	53,140	64,680	21,310	242,400	5,600	15,500	3,526,730

(Sources) Agricultural Statistics 1982, 85, 89, 91, 93, 95, MINAGRA, FAO Yearbook 1998, PNR rice 2005 report, DCGTx Irrigation Report 1996, and Irrigation Inventory 1999 by JICA.

Yield of Industrial Crops (t/ha)									
Yield (t/ha)	0.5313	0.1893	1.824	0.4330	1.072	6.589	0.9625	41.43	13.55

(continued)

Production									
	(unit: t)								
Department	Cocoa	Coffee	Oil Palm	Coconut	Rubber	Sugarcane	Cotton	Banana	Pineapple
1 Abengourou	72,590	10,880	0	0	33,390	0	0	12,010	0
2 Abidjan	6,920	3,140	15,270	1,930	920	0	0	58,830	16,120
3 Aboisso	15,660	17,570	57,240	3,090	0	0	0	16,570	6,100
4 Adiake	6,980	7,830	25,500	1,380	0	0	0	0	2,710
5 Adzope	27,960	7,920	0	0	0	0	30	1,240	3,390
6 Agboville	13,200	4,710	0	0	0	0	60	122,630	29,130
7 Agnibilekrou	0	0	0	0	0	0	60	20,720	0
8 Alepe	8,330	3,780	18,390	2,330	1,100	0	0	0	19,510
9 Bangolo	3,330	2,320	0	0	0	0	0	0	0
10 Beoumi	0	1,270	0	0	0	0	3,420	0	0
11 Biankouma	490	5,940	0	0	0	0	0	0	0
12 Bocanda	1,180	1,550	0	0	0	0	170	0	0
13 Bondoukou	3,270	1,050	0	0	0	0	150	0	0
14 Bongouanou	23,560	2,840	0	0	0	0	640	0	0
15 Bouaflé	19,160	5,190	0	0	0	0	5,590	0	0
16 Bouake	0	200	0	0	0	0	930	0	38,210
17 Bouna	0	0	0	0	0	0	1,290	0	0
18 Boundiali	0	0	0	0	0	0	19,840	0	0
19 Dabakala	0	140	0	0	0	0	770	0	0
20 Dabou	10,140	4,610	22,400	2,830	1,360	0	0	0	23,710
21 Daloa	77,720	16,860	0	0	0	0	3,150	0	0
22 Danane	11,440	13,950	0	0	0	0	0	0	0
23 Daoukro	7,180	1,140	0	0	0	0	280	0	0
24 Dimbokro	380	500	0	0	0	0	60	0	0
25 Divo	100,600	9,220	31,340	940	0	0	0	0	10,980
26 Duekoue	16,420	5,940	0	0	0	0	90	0	0
27 Ferkessedougou	0	0	0	0	0	78,540	36,200	0	0
28 Gagnoa	54,990	4,280	0	0	2,650	0	260	0	0
29 Grand Bassam	3,790	1,720	8,390	1,060	500	0	0	0	8,940
30 Grand Lahou	10,310	1,340	0	4,920	0	0	0	0	680
31 Guiglo	22,640	5,140	0	0	2,360	0	0	0	0
32 Issia	67,840	18,290	0	0	0	0	160	0	0
33 Jacqueline	1,570	710	3,450	440	200	0	0	0	3,660
34 Katiola	0	20	0	0	0	0	7,350	0	0
35 Korhogo	0	0	0	0	0	0	59,850	0	0
36 Lakota	20,330	4,140	0	0	0	0	0	0	0
37 Man	6,400	15,150	0	0	0	0	0	0	0
38 Mankono	0	480	0	0	0	0	40,920	0	0
39 Mbahiakro	540	2,870	0	0	0	0	280	0	0
40 Odiéne	0	0	0	0	0	0	9,590	0	0
41 Oumé	35,930	1,820	0	0	0	0	20	0	0
42 Sakassou	0	1,640	0	0	0	0	550	0	0
43 San-Pedro	25,080	3,100	34,640	0	26,370	0	0	0	0
44 Sassandra	10,600	3,730	36,010	4,100	0	0	0	0	0
45 Seguela	0	200	0	0	0	0	10,620	0	0
46 Sinfra	31,920	5,140	0	0	0	0	630	0	0
47 Soubre	100,550	5,940	22,270	0	0	0	0	0	0
48 Tabou	2,590	250	0	0	0	0	0	0	0
49 Tanda	12,560	3,300	0	0	0	0	510	0	0
50 Tengrela	0	0	0	0	0	0	7,380	0	0
51 Tiassalé	23,950	3,300	0	0	0	0	220	0	46,880
52 Tiebissou	3,330	1,360	0	0	0	0	530	0	0
53 Touba	0	1,050	0	0	0	38,410	1,810	0	0
54 Toulepleu	4,540	1,030	0	0	470	0	0	0	0
55 Toumodi	11,580	160	0	0	0	0	130	0	0
56 Vavoua	29,330	10,420	0	0	0	23,460	8,830	0	0
571 Yamoussoukro1	2,940	1,200	0	0	0	0	460	0	0
572 Yamoussoukro2	4,290	1,750	0	0	0	0	670	0	0
58 Zuenoula	1,560	8,580	0	0	0	0	9,820	0	0
Total	915,670	236,660	274,900	23,020	69,320	140,410	233,320	232,000	210,020

Table 2.2-1-9 Food Crop Area and Production in Cote d'Ivoire in 1982

Area										(ha)
Department	Paddy	Maize	Millet	Sorghum	Fonio	Yam	Cassava	Groundnut	Plantain Banana	Taro
1 ABENGOUROU	4,000	15,000				7,800	1,330	2,100	81,000	43,000
2 ABIDJAN	2,000	10,000				4,700	19,500	800	88,000	25,800
3 ABOISSO	1,600	5,000				1,900	9,700	600	38,000	8,200
4 ADZOPE	2,000	11,000				600	7,200	300	30,300	13,000
5 AGBOVILLE	3,000	7,000				2,400	4,100	400	26,000	8,800
9 BIANKOUA	14,000	15,000					5,400	600	23,000	
10 BONDOUKOU	2,000	30,000				30,000	19,500	1,300	45,700	29,200
12 BOUAFLE	20,000	30,000				12,000	12,800	3,700	89,000	11,700
13 BOUAKE	8,500	51,000				45,400	29,700	9,100	47,000	18,200
14 BOUNA	2,500	25,000	9,400	19,700		13,200	1,600	6,000		600
15 BOUNDIALI	8,000	17,000	6,000	3,200	800	4,200		10,200		
17 DALOA	20,000	32,000				13,000	10,500	5,000	266,000	70,600
16 DABAKALA	2,400	5,000				7,400	260	4,600		
18 DANANE	21,000	17,000					27,300	200	48,500	6,100
20 DIMBOKRO	20,000	41,000				31,000	16,500	5,000	90,000	27,200
21 DIVO	17,000	19,000				4,500	5,100	500	111,000	31,600
23 FERKE	2,000	21,000	18,800	3,300		2,200	400	3,000		
24 GAGNOA	25,000	17,000				4,500	4,400	1,200	83,000	26,700
26 GUIGLO	26,000	12,000					9,900		26,000	1,100
28 KATIOLA	3,000	7,000	1,800	2,000		8,000	410	5,000		
29 KORHOGO	41,000	46,000	19,000	1,300		14,000	250	16,000		
31 MAN	30,000	16,000				500	29,800	500	62,000	
34 ODIENNE	8,000	13,000	1,000	5,000	1,200	5,800	1,100	4,300		
38 SASSANDRA	44,000	35,000				6,600	11,300	500	52,500	12,200
39 SEGUELA	12,000	13,000				8,500	3,250	9,300		
46 TOUBA	11,000	10,000				1,800	1,700	2,800		
TOTAL	350,000	520,000	56,000	34,500	2,000	230,000	233,000	93,000	1,207,000	334,000

(Source) Statistique Agricoles 1981, Direction des Statistiques Rurales et des Enquetes Agricoles, Ministere de l'Agriculture des Eaux et Forets

Production										(tons)
Department	Paddy	Maize	Millet	Sorghum	Fonio	Yam	Cassava	Groundnut	Plantain Banana	Taro
1 ABENGOUROU	5,700	17,000				75,000	10,800	1,600	131,000	66,800
2 ABIDJAN	2,100	10,000				29,500	230,000	650	140,000	13,100
3 ABOISSO	1,400	5,000				14,500	87,000	500	57,000	3,200
4 ADZOPE	2,000	10,000				3,500	68,600	200	74,000	12,300
5 AGBOVILLE	3,500	4,000				25,500	39,600	250	57,000	8,300
9 BIANKOUA	13,800	7,000				-	9,800	500	24,000	-
10 BONDOUKOU	2,400	29,000				247,000	56,100	970	25,000	20,400
12 BOUAFLE	19,000	31,000				159,000	79,000	4,400	98,000	5,600
13 BOUAKE	6,400	51,000				443,000	116,300	8,700	38,000	10,700
14 BOUNA	2,000	23,000	3,000	10,800		134,000	7,500	2,500	-	700
15 BOUNDIALI	11,800	21,000	4,170	2,700	400	26,000	-	9,100	-	-
17 DALOA	22,000	38,000				234,000	44,600	3,900	128,000	65,000
16 DABAKALA	1,700	7,000				100,000	1,400	5,400	-	-
18 DANANE	30,700	7,500				-	91,000	230	41,000	1,000
20 DIMBOKRO	16,500	31,000				327,000	108,000	5,500	95,000	20,000
21 DIVO	20,500	16,000				50,000	30,500	450	180,000	31,100
23 FERKE	2,700	24,000	7,900	1,900		30,000	1,600	2,600	-	-
24 GAGNOA	23,600	8,000				38,500	32,700	1,000	70,000	25,600
26 GUIGLO	32,300	6,000				-	30,400	-	54,000	800
28 KATIOLA	2,400	10,000	6,700	1,400		124,000	2,200	6,000	-	-
29 KORHOGO	49,000	46,000	11,000	800		149,000	600	14,100	-	-
31 MAN	47,000	7,000				11,500	80,600	450	48,000	-
34 ODIENNE	11,000	15,000	530	3,900	600	61,000	4,500	3,300	-	-
38 SASSANDRA	64,500	21,000				51,000	58,100	400	60,000	15,400
39 SEGUELA	13,400	18,000				180,000	29,000	11,000	-	-
46 TOUBA	12,600	7,000				27,000	10,000	2,300	-	-
TOTAL	420,000	469,500	33,300	21,500	1,000	2,540,000	1,229,900	86,000	1,320,000	300,000

(Source) Statistique Agricoles 1982, Direction des Statistiques Rurales et des Enquetes Agricoles, Ministere de l'Agriculture des Eaux et Forets

Table 2.2-1-10 Cropping Area, Unit Yield and Production in Cote d'Ivoire by FAO

Crops	Area harvested (1000ha)				Yield (kg/ha)				Production (1000t)			
	1989-91	1996	1997	1998	1989-91	1996	1997	1998	1989-91	1996	1997	1998
Cereals (Total)	1,401	1,504	1,671	1,641	886	993	1,175	1,140	1,241	1,494	1,963	1,870
Rice (Paddy)	581	650	800	800	1,138	1,282	1,609	1,529	661	833	1,287	1,223
Coarse Grain (Total)	821	854	871	841	706	774	776	769	580	661	676	647
Maize	683	690	700	670	731	825	823	816	499	569	576	547
Millet	77	90	94	94	610	667	691	691	47	60	65	65
Roots & Tubers (Total)	764	852	877	872	5,616	5,838	5,810	5,609	4,291	4,974	5,095	4,891
Sweet Potatoes	12	12	12	12	2,917	3,000	3,000	3,000	35	36	36	36
Cassava	260	325	335	335	5,392	5,086	5,072	5,075	1,402	1,653	1,699	1,700
Yams	275	270	275	275	9,324	10,830	10,858	10,182	2,564	2,924	2,986	2,800
Pulses (Total)	12	12	12	12	667	667	667	667	8	8	8	8
Soybeans	3	3	3	3	1,000	1,000	1,000	1,000	3	3	3	3
Groundnuts in shell	133	140	140	135	977	1,050	1,021	1,007	130	147	143	136
Seed Cotton	204	230	235	240	1,294	943	1,128	1,125	264	217	265	270
Coconuts												
Coconuts									320	205	221	221
Copra									54	30	34	34
Palm												
Kernels									41	30	28	28
Oil									236	267	229	274

(Source) FAO Yearbook Production 1998 (Vol. 52)

Table 2.2-1-11 Evolution of Food Crop Production in Recent Years

Year	Yam	Cassava	Taro	Plantain Banana	Maize	Paddy	Fonio	Sorghum	Millet	Sorghum /Millet	Groundnuts (shelled)
1975	2,172	939	263	1,168	264	496	2.025	30.2	45.3	75.5	48.8
1976	2,032	990	257	1,118	247	460	2.025	30.7	40.4	71.1	49.0
1977	1,893	977	260	1,058	258	477	2.085	30.8	41.5	72.3	48.8
1978	1,984	1,056	275	1,123	264	504	2.150	31.7	44.6	76.3	49.8
1979	2,068	1,112	287	1,178	275	534	2.150	32.9	45.8	78.7	51.7
1980	2,340	1,253	297	1,223	380	350	1.200	21.0	41.6	62.6	77.0
1981	2,220	1,218	304	1,278	415	390	0.980	21.7	39.5	61.2	81.0
1982	2,540	1,230	300	1,320	470	420	1.000	21.5	33.3	54.8	86.0
1983											
1984 - 85	2,500	1,250	260	1,000	480	540	7	22	40	62	108
1985 - 86	2,300	1,250	263	1,010	420	560	7	22	40	62	112
1986 - 87	2,400	1,300	272	1,045	435	580	7	23	41	64	116
1987 - 88	2,500	1,400	290	1,100	460	610	7	24	43	67	121
1988 - 89	2,474	1,349	276	1,067	472	654	8	25	49	74	127
1989 - 90	2,528	1,393	282	1,086	484	687	8	26	50	76	134
1990 - 91	2,690	1,465	312	1,185	497	657	8			73	130
1991 - 92	2,758	1,502	323	1,226	514	660	9			73	133
1992 - 93	2,771	1,509	331	1,233	517	676	9			76	133
1993 - 94	2,824	1,564	343	1,276	536	701				80	138
1994 - 95	2,869	1,608	352	1,335	552	764	9			82	143
Growth (75-95)	1.48%	2.87%	1.55%	0.71%	3.96%	2.30%	8.17%			0.44%	5.82%
Growth (85-95)	1.39%	2.55%	3.08%	2.93%	1.41%	3.53%	2.54%			2.84%	2.85%

(Source) Statistiques Agricoles 1982, 85, 89, 91, 93, 95 MINAGRA

Table 2.2-1-12 Paddy Rice Survey by CIDV in 1993 and Trend to 1995

Region	Department	Pop-1988 Rural	Rice Survey 1993 (ha)		Estimated Paddy Area in 1995 (ha)	
			Rainfed	Irrigated	Rainfed	Irrigated
1 Nord Ouest	32 Mankono	112,897	11,450 1)	826 1)	16,840 3)	690 3)
1 Nord Ouest	34 Odienné	141,167	14,317 1)	1,032 1)	21,060 3)	870 3)
1 Nord Ouest	39 Seguela	92,117	9,342 1)	674 1)	13,740 3)	570 3)
1 Nord Ouest	46 Touba	93,562	9,489 1)	684 1)	13,960 3)	570 3)
2 Nord	15 Boundiali	105,189	2,321 1)	2,322 1)	3,420 3)	1,950 3)
2 Nord	23 Ferkessedougou	137,695	3,039 1)	3,039 1)	4,470 3)	2,550 3)
2 Nord	29 Korhogo	278,292	6,141 1)	6,142 1)	9,040 3)	5,170 3)
2 Nord	44 Tengrela	32,983	728 1)	728 1)	1,070 3)	610 3)
3 Nord Est	10 Bondoukou	142,581	694 1)	164 1)	1,030 3)	140 3)
3 Nord Est	14 Boua	121,096	590 1)	139 1)	880 3)	120 3)
3 Nord Est	43 Tanda	191,699	933 1)	220 1)	1,390 3)	180 3)
4 Centre Nord	08 Beoumi	77,992	4,143 1)	330 1)	6,080 3)	280 3)
4 Centre Nord	13 Bouake	112,492	5,976 1)	476 1)	8,780 3)	390 3)
4 Centre Nord	16 Dabakala	74,317	3,948 1)	315 1)	5,800 3)	270 3)
4 Centre Nord	28 Katiola	97,408	5,175 1)	412 1)	7,600 3)	350 3)
4 Centre Nord	33 M'bahikro	91,992	4,887 1)	389 1)	7,170 3)	330 3)
4 Centre Nord	36 Sakassou	50,951	2,707 1)	216 1)	3,970 3)	180 3)
5 Ouest	07 Bangolo	70,332	7,827 1)	405 1)	11,510 3)	340 3)
5 Ouest	09 Biankouma	86,466	9,623 1)	498 1)	14,160 3)	420 3)
5 Ouest	18 Danané	191,539	21,317 1)	1,103 1)	31,360 3)	930 3)
5 Ouest	22 Duekoué	74,692	8,313 1)	430 1)	12,230 3)	360 3)
5 Ouest	26 Guiglo	139,480	15,523 1)	803 1)	22,840 3)	670 3)
5 Ouest	31 Man	198,566	22,099 1)	1,143 1)	32,500 3)	960 3)
6 Centre Ouest	12 Bouaflé	129,355	8,619 1)	202 1)	12,680 3)	170 3)
6 Centre Ouest	17 Daloa	238,539	15,895 1)	373 1)	23,350 3)	320 3)
6 Centre Ouest	24 Gagnoa	183,195	12,207 1)	287 1)	17,940 3)	240 3)
6 Centre Ouest	27 Issia	166,449	11,091 1)	260 1)	16,300 3)	220 3)
6 Centre Ouest	35 Oumé	110,645	7,373 1)	173 1)	10,830 3)	150 3)
6 Centre Ouest	40 Sintra	86,330	5,752 1)	135 1)	8,450 3)	110 3)
6 Centre Ouest	48 Vavoua	151,737	10,111 1)	237 1)	14,860 3)	200 3)
6 Centre Ouest	50 Zuenoula	94,917	6,325 1)	148 1)	9,290 3)	120 3)
7 Centre	11 Bongouanou	168,890	7,664 1)	0 1)	11,250 3)	0 3)
7 Centre	19 Daoukro	63,648	2,888 1)	0 1)	4,240 3)	0 3)
7 Centre	20 Dimbokro	96,336	4,372 1)	0 1)	6,420 3)	0 3)
7 Centre	47 Toumodi	58,795	2,668 1)	0 1)	3,920 3)	0 3)
7 Centre	49 Yamoussoukro	164,615	7,470 1)	0 1)	10,970 3)	0 3)
8 Est	01 Abengourou	155,188	14,841 1)	0 1)	21,780 3)	0 3)
8 Est	06 Agnibilekrou	59,991	5,737 1)	0 1)	8,420 3)	0 3)
9 Sud Ouest	37 San-Pedro	97,573	8,756 1)	317 1)	12,860 3)	270 3)
9 Sud Ouest	38 Sassandra	94,421	8,473 1)	307 1)	12,450 3)	260 3)
9 Sud Ouest	41 Soubre	276,145	24,780 1)	896 1)	36,400 3)	740 3)
9 Sud Ouest	42 Tabou	49,994	4,486 1)	162 1)	6,590 3)	140 3)
10 Sud	02 Abidjan	369,892	12,396 1)	50 1)	18,220 3)	40 3)
10 Sud	03 Aboisso	188,180	6,306 1)	25 1)	9,270 3)	20 3)
10 Sud	04 Adzopé	164,830	5,524 1)	22 1)	8,120 3)	20 3)
10 Sud	05 Agboville	157,371	5,274 1)	21 1)	7,760 3)	20 3)
10 Sud	21 Divo	302,485	10,137 1)	41 1)	14,910 3)	30 3)
10 Sud	25 Grand Lahou	46,821	1,569 1)	6 1)	2,310 3)	10 3)
10 Sud	30 Lakota	94,373	3,163 1)	13 1)	4,650 3)	10 3)
10 Sud	45 Tiassalé	98,524	3,302 1)	13 1)	4,860 3)	10 3)
1 Nord Ouest (Odienné)		439,743	44,597	3,216	65,600 2)	2,700 2)
2 Nord (Korhogo)		554,159	12,229	12,231	18,000 2)	10,280 2)
3 Nord Est (Bondoukou)		455,376	2,217	523	3,300 2)	440 2)
4 Centre Nord (Bouake)		505,152	26,836	2,138	39,400 2)	1,800 2)
5 Ouest (Man)		761,075	84,701	4,381	124,600 2)	3,680 2)
6 Centre Ouest (Daloa)		1,161,167	77,372	1,816	113,700 2)	1,530 2)
7 Centre (Yamoussoukro)		552,284	25,063	0	36,800 2)	0 2)
8 Est (Abengourou)		215,179	20,578	0	30,200 2)	0 2)
9 Sud Ouest (San-Pedro)		518,133	46,495	1,682	68,300 2)	1,410 2)
10 Sud (Abidjan)		1,422,476	47,669	191	70,100 2)	160 2)
TOTAL		6,584,744	387,757	26,178	570,000	22,000

(Notes)

1): Paddy area is distributed to department in proportion to the rural population size of each department in each region.

2): Paddy area is distributed to each region in proportion to the area size of 1993.

3): Paddy area is distributed to each department in proportion to the area size of 1993.

(Source) Fundamental Survey on Rice Production in Cote d'Ivoire, April 1993, CIDV

Table 2.2-1-13 Evolution of Planted Area and Productin of Cocoa

Year	Planted Area (ha)	Production (t)	Yield (t/ha)
1960 - 61		93,605	
1961 - 62		80,998	
1962 - 63		103,038	
1963 - 64		98,219	
1964 - 65		147,529	
1965 - 66		113,298	
1966 - 67		149,662	
1967 - 68		146,640	
1968 - 69		144,476	
1969 - 70		180,706	
1970 - 71		179,156	
1971 - 72		225,814	
1972 - 73		185,445	
1973 - 74		208,522	
1974 - 75		241,511	
1975 - 76		231,136	
1976 - 77		223,370	
1977 - 78		303,621	
1978 - 79		318,381	
1979 - 80		401,024	
1980 - 81	1,259,300	417,160	0.331
1981 - 82	1,338,400	464,751	0.347
1982 - 83	1,398,900	360,445	0.258
1983 - 84	1,347,200	411,081	0.305
1984 - 85	1,418,000	565,042	0.398
1985 - 86	1,470,200	555,115	0.378
1986 - 87	1,478,000	610,680	0.413
1987 - 88	1,489,600	664,031	0.446
1988 - 89		823,952	
1989 - 90		703,615	
1990 - 91		804,249	
1991 - 92		747,725	
1992 - 93		701,969	
1993 - 94		868,969	
1994 - 95		915,589	
Average	1,399,950	382,586	0.360

(Source) Statistique Agricole 1982, 85, 91, 93, 95 MINAGRA

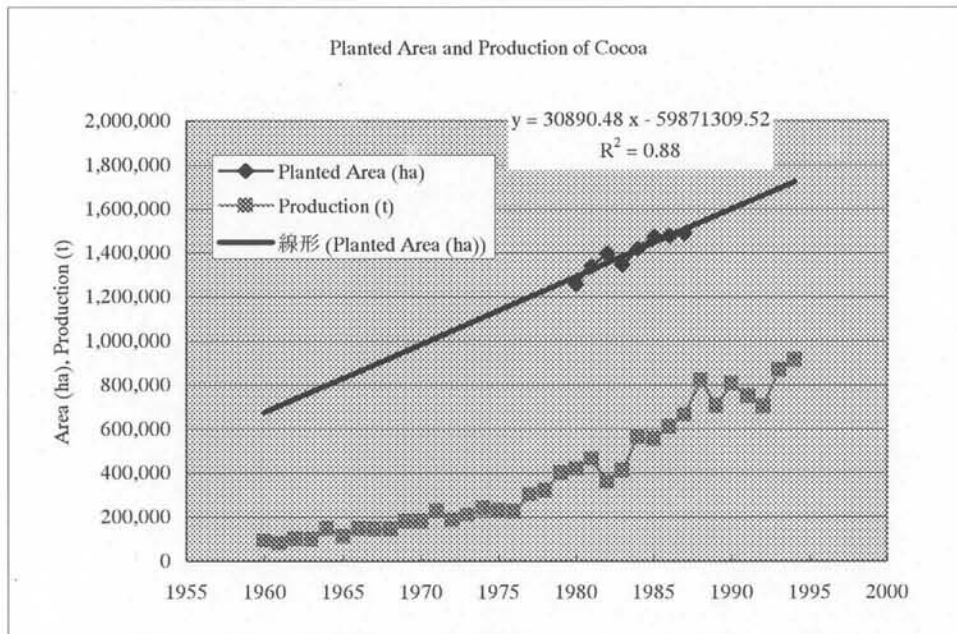


Table 2.2-1-14 Evolution of Planted Area and Production of Coffee

Year	Planted Area (ha)	Production (t)	Yield (t/ha)
1960 - 61		185,500	
1961 - 62		97,071	
1962 - 63		194,639	
1963 - 64		260,698	
1964 - 65		202,105	
1965 - 66		272,566	
1966 - 67		130,759	
1967 - 68		287,760	
1968 - 69		210,124	
1969 - 70		279,610	
1970 - 71		239,706	
1971 - 72		268,836	
1972 - 73		301,804	
1973 - 74		195,935	
1974 - 75		270,397	
1975 - 76		308,126	
1976 - 77		291,340	
1977 - 78		195,565	
1978 - 79		277,048	
1979 - 80		249,608	
1980 - 81	1,250,100	366,839	0.293
1981 - 82	1,273,900	247,708	0.194
1982 - 83	1,292,100	270,581	0.209
1983 - 84	1,214,100	85,203	0.070
1984 - 85	1,212,500	277,082	0.229
1985 - 86	1,233,400	265,199	0.215
1986 - 87	1,239,800	270,130	0.218
1987 - 88	1,247,300	186,705	0.150
1988 - 89		221,350	
1989 - 90		285,164	
1990 - 91		198,909	
1991 - 92		257,000	
1992 - 93		138,937	
1993 - 94		145,576	
1994 - 95		194,968	
Average	1,249,871	236,628	0.215

(Source) Statistique Agricole 1982, 85, 91, 93, 95 MINAGRA

(Note) 1) Production is in green coffee.
2) Average is calculated excluding data of 1883.

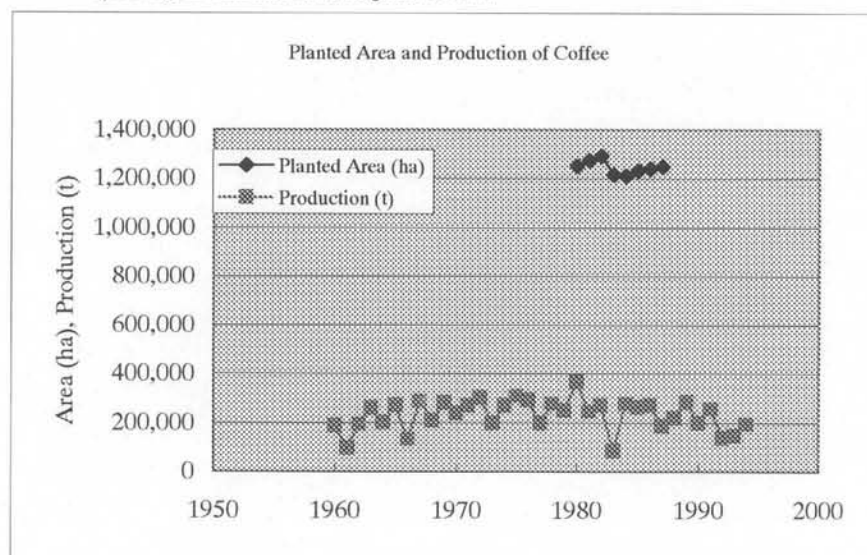


Table 2.2-1-15 Evolution of Planted Area and Production of Oil-palm

Year	Planted Area (ha)	Production (t)	Yield (t/ha)	Oil (t)	Oil (t/ha)
1977 - 78	100,530				
1978 - 79	100,258				
1979 - 80	100,131				
1980 - 81	100,563	714,833	7.11	145,191	1.44
1981 - 82	100,597	791,036	7.86	160,800	1.60
1982 - 83	104,329	769,403	7.37	160,079	1.53
1983 - 84	98,206	756,079	7.70	158,632	1.62
1984 - 85	106,841	709,667	6.64	152,886	1.43
1985 - 86	120,459	930,824	7.73	203,232	1.69
1986 - 87	133,186	989,304	7.43	212,807	1.60
1987 - 88	147,308	851,066	5.78	186,542	1.27
1988 - 89	143,174	844,213	5.90	193,272	1.35
1989 - 90	150,201	1,078,439	7.18	241,868	1.61
1990 - 91	149,598	1,130,131	7.55	255,267	1.71
1991 - 92	149,299	1,265,660	8.48	281,108	1.88
1992 - 93	152,427	1,266,005	8.31	274,401	1.80
1993 - 94	152,947	1,272,991	8.32	275,887	1.80
1994 - 95	148,096	1,190,751	8.04	267,889	1.81
Average	125,453	970,693	7.43	211,324	1.61
Average(92-95)	150,692	1,248,852	8.29	274,821	1.82

(Source) Statistique Agricole 1982, 85, 91, 93, 95 MINAGRA

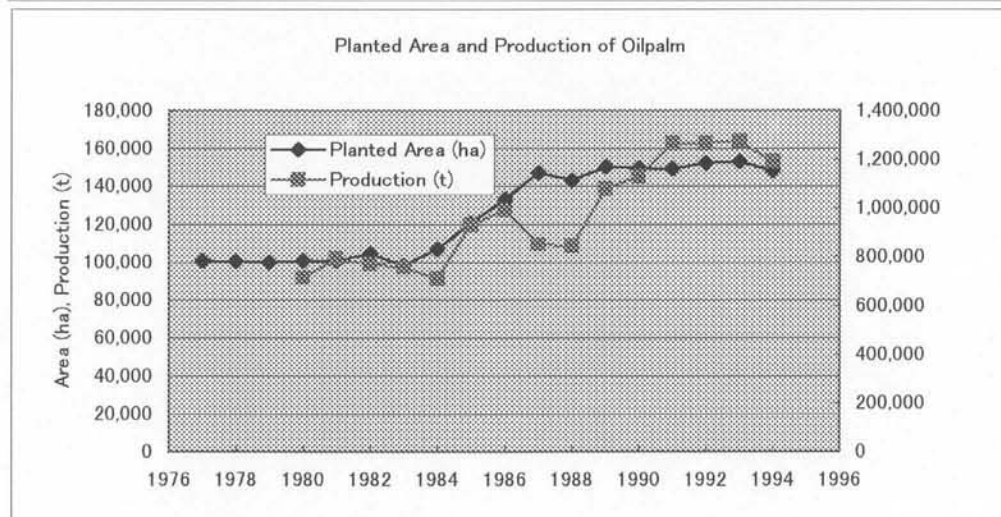
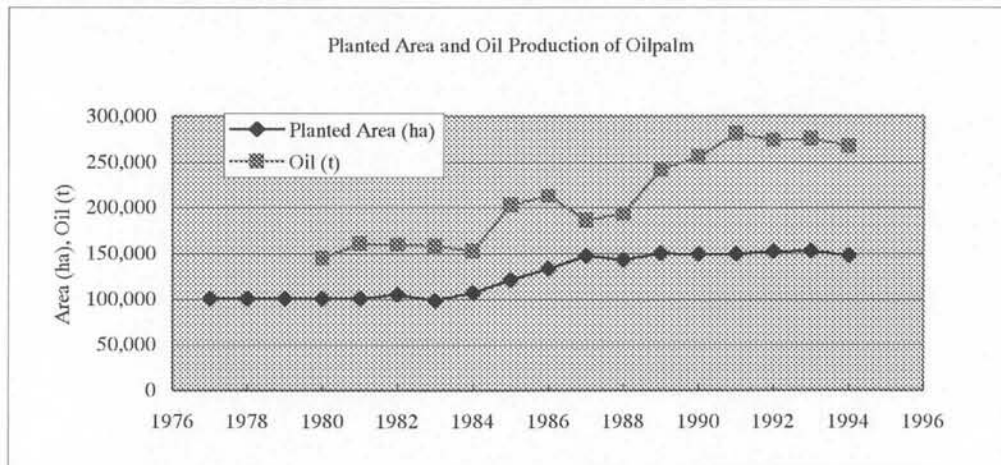


Table 2.2-1-16 Evolution of Planted Area and Coprah Production of Coconuts

Year	Planted Area (ha)	Coprah (t)	Yield (t/ha)	Oil (t)	Oil (t/ha)
1980 - 81	51,480	24,467	0.475	16,624	0.323
1981 - 82	51,547	30,529	0.592	19,230	0.373
1982 - 83	51,540	37,433	0.726	23,601	0.458
1983 - 84	49,532	39,066	0.789	24,626	0.497
1984 - 85	50,203	52,941	1.055	33,224	0.662
1985 - 86	50,247	51,353	1.022	32,314	0.643
1986 - 87	50,191	48,772	0.972	30,423	0.606
1987 - 88	50,137	49,110	0.980	29,638	0.591
1988 - 89	49,274	42,263	0.858	26,047	0.529
1989 - 90	50,140	62,146	1.239	31,206	0.622
1990 - 91	50,140	59,254	1.182	37,346	0.745
1991 - 92	50,047	60,374	1.206	27,959	0.559
1992 - 93	53,140	43,782	0.824	21,743	0.409
1993 - 94	53,140	33,345	0.627	20,702	0.390
1994 - 95	53,140	25,972	0.489	16,134	0.304
Average	50,927	44,054	0.869	26,054	0.514
Average (92-95)	52,367	40,868	0.787	21,635	0.416

(Source) Statistique Agricole 1982, 85, 91, 93, 95 MINAGRA

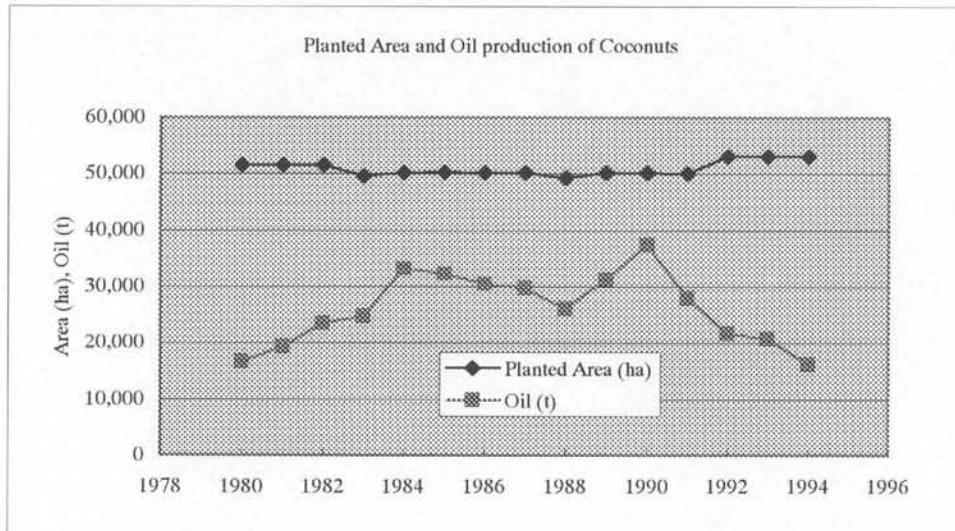


Table 2,2-1-17 Evolution of Planted Area and Production of Rubber

Year	Planted Area (ha)	Production (t)	Yield (t/ha)
1978 - 79	30,418	19,284	0.634
1979 - 80	34,869	21,626	0.620
1980 - 81	39,937	23,464	0.588
1981 - 82	41,846	26,728	0.639
1982 - 83	42,052	28,899	0.687
1983 - 84	43,263	34,056	0.787
1984 - 85	45,055	38,789	0.861
1985 - 86	46,931	46,814	0.998
1986 - 87	50,169	51,577	1.028
1987 - 88	53,609	60,957	1.137
1988 - 89	59,152	66,960	1.132
1989 - 90	67,809	74,034	1.092
1990 - 91	66,484	71,482	1.075
1991 - 92	65,905	72,053	1.093
1992 - 93	65,905	71,678	1.088
1993 - 94	63,495	62,601	0.986
1994 - 95	58,490	64,251	1.098
Average	51,493	49,133	0.9143
Average (90-95)	64,681	69,350	1.0720

(Source) Statistique Agricole 1982, 85, 91, 93, 95 MINAGRA

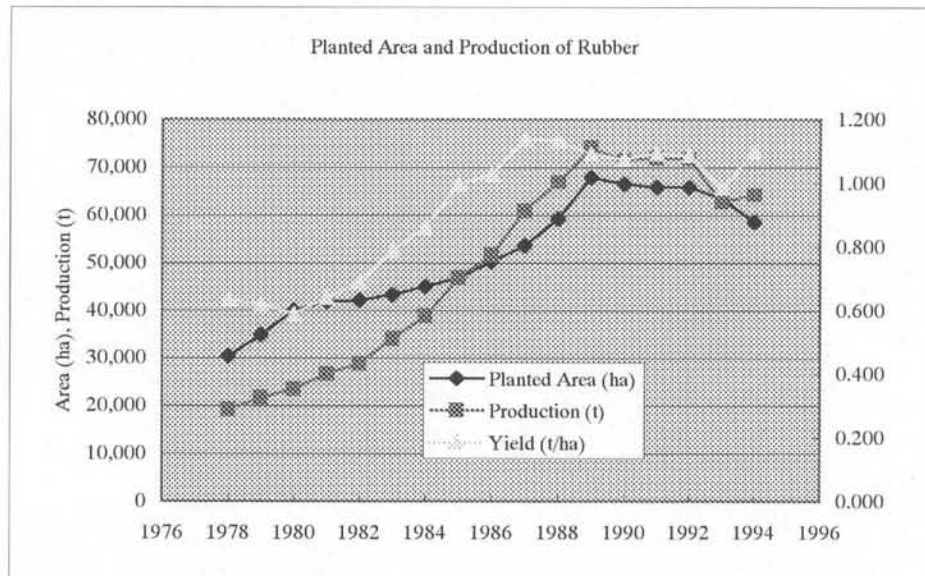


Table 2.2-1-18 Evolution of Planted Area and Production of Sugarcane

Year	Planted Area (ha)	Harvested Area (ha)	Production (t)	Yield (t/ha)	Sugar (t)	Sugar (t/ha)
1978 - 79	12,038	9,587	687,081	72	52,423	5.47
1979 - 80	22,476	20,516	1,418,900	69	102,596	5.00
1980 - 81	30,464	25,369	1,652,256	65	134,688	5.31
1981 - 82	31,389	29,570	1,784,890	60	165,735	5.60
1982 - 83	31,655	31,520	1,820,360	58	186,624	5.92
1983 - 84		31,441	1,261,251	40	125,513	3.99
1984 - 85		20,064	1,138,761	57	111,480	5.56
1985 - 86		21,248	1,285,405	60	132,499	6.24
1986 - 87		21,575	1,346,398	62	144,713	6.71
1987 - 88		21,714	1,372,988	63	139,380	6.42
1988 - 89		21,672	1,335,183	62	145,558	6.72
1989 - 90		21,398	1,362,612	64	141,229	6.60
1990 - 91		21,525	1,400,883	65	150,311	6.98
1991 - 92		20,529	1,361,030	66	150,745	7.34
1992 - 93		20,519	1,274,173	62	141,433	6.89
1993 - 94		19,985	1,200,345	60	128,201	6.41
1994 - 95		18,118	1,172,179	65	119,141	6.58
Average		22,138	1,345,570	62	133,663	6.10
Average (85-95)		20,759	1,295,451	62	136,790	6.59

(Source) Statistique Agricole 1982, 85, 91, 93, 95 MINAGRA

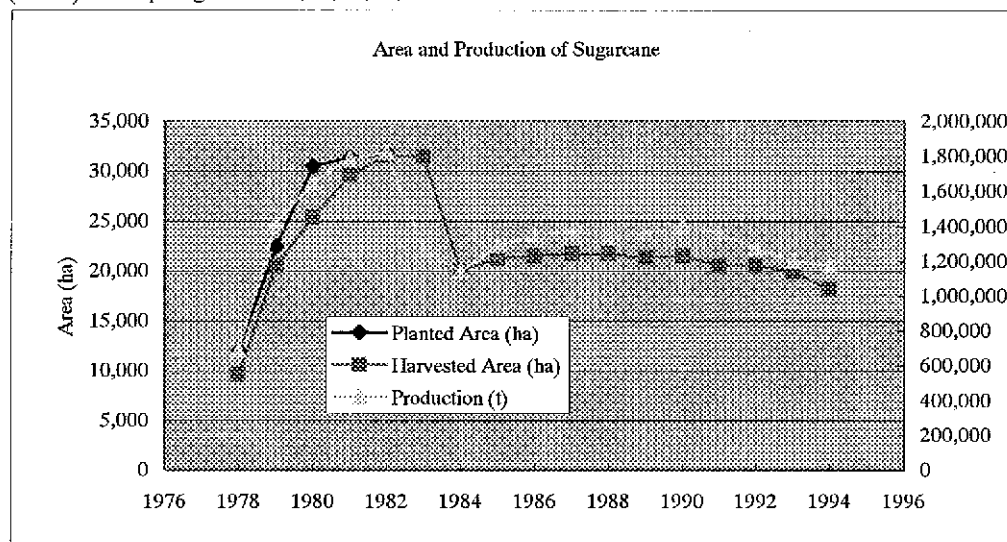


Table 2.2-1-19 Evolution of Planted Area and Production of Cotton

Year	Planted Area (t)	Production (t)	Yield (t/ha)
1972 - 73	56,425	52,798	0.936
1973 - 74	58,178	58,465	1.005
1974 - 75	58,756	59,939	1.020
1975 - 76	65,475	65,042	0.993
1976 - 77	64,767	75,413	1.164
1977 - 78	87,549	102,929	1.176
1978 - 79	107,254	114,886	1.071
1979 - 80	122,983	142,975	1.163
1980 - 81	126,310	136,613	1.082
1981 - 82	124,609	135,370	1.086
1982 - 83	128,384	156,983	1.223
1983 - 84	136,353	142,347	1.044
1984 - 85	145,825	212,070	1.454
1985 - 86	153,054	189,314	1.237
1986 - 87	159,296	213,532	1.340
1987 - 88	180,391	255,784	1.418
1988 - 89	213,375	290,593	1.362
1989 - 90	201,390	241,682	1.200
1990 - 91	198,516	261,139	1.315
1991 - 92	194,123	193,768	0.998
1992 - 93	203,607	235,120	1.155
1993 - 94	219,298	258,343	1.178
1994 - 95	242,408	209,584	0.865
Average	141,232	165,421	1.152
Average (85-90)	170,388	232,259	1.362
Average (90-95)	209,890	233,273	1.119

(Source) Statistique Agricole 1982, 85, 91, 93, 95 MINAGRA

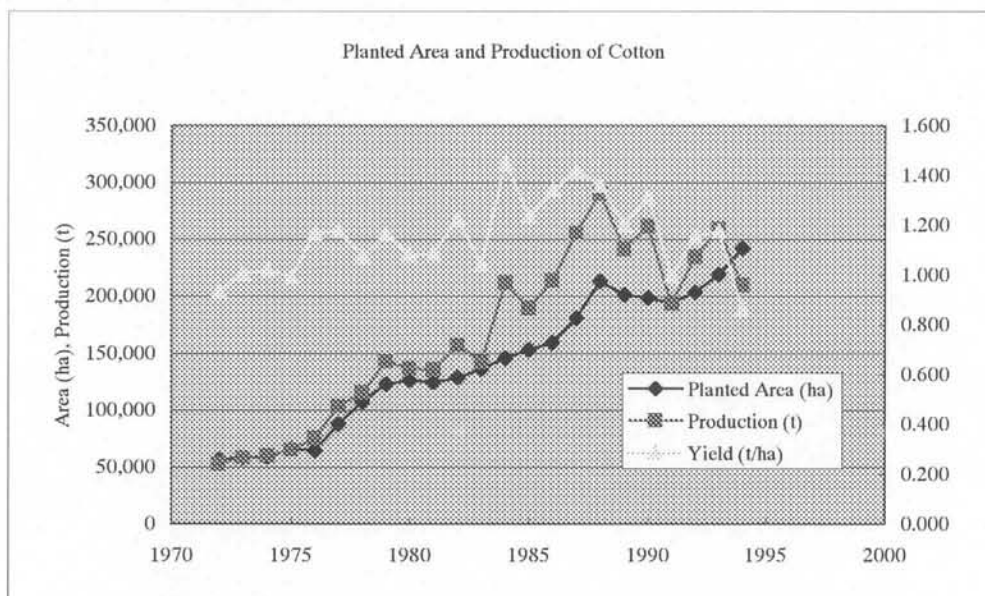
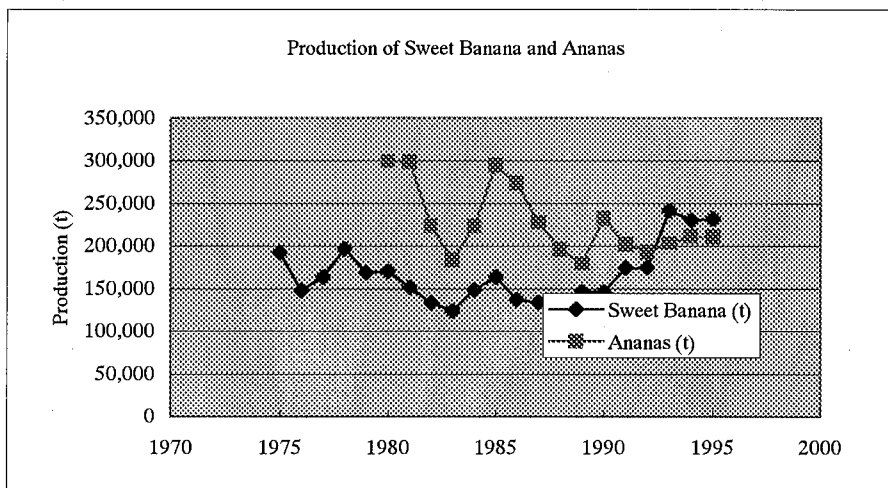


Table 2.2-1-20 Evolution of Production of Sweet Banana and Pineapple

Year	Sweet Banana (t)	Ananas (t)
1975	192,275	
1976	147,190	
1977	163,669	
1978	196,773	
1979	168,365	
1980	170,204	299,759
1981	151,144	299,056
1982	132,968	223,861
1983	123,716	182,853
1984	148,246	223,293
1985	163,014	293,997
1986	136,680	273,453
1987	134,297	227,178
1988	132,890	195,918
1989	146,090	179,480
1990	146,071	232,543
1991	173,589	201,571
1992	174,812	193,033
1993	241,638	202,949
1994	230,448	211,686
1995	231,612	209,628

(Source) Statistique Agricole 1982, 85, 91, 93, 95 MINAGRA



CHAPTER 2 PRESENT CONDITION OF LIVESTOCK

2.1 General Features of Livestock

In Cote d'Ivoire, 1,346,000 heads of cattle, 2,246,000 heads of sheep and goats, 278,000 heads of pigs, and 30,840,000 heads of poultry are reared in 1998 as shown in Table 2.2-2-1. Number of cattle, small ruminants and poultry increases constantly with annual growth rate of 3.4%, 2.4% and 2.4% respectively. However, number of pigs declined sharply in 1996 resulting in negative growth. Pigs are composed of two species, namely traditional pigs and modern pigs. Traditional pigs are raised extensively in free raising in surrounding the villages, but modern pigs are raised intensively in the cages. Traditional pigs are about 85% in total and modern ones are 15%. Both pigs decreased in number sharply in 1996.

Table 2.2-2-1 Number of Livestock in Cote d'Ivoire

Livestock	(Unit: 1,000heads)												Growth 1987-98 (%/yr)
	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
Cattle													
Bull	645	663	675	704	726	758	767	776	785	794	804	814	2.1%
Zebus	290	330	374	404	419	422	438	455	473	492	512	532	5.7%
Total	935	993	1,049	1,108	1,145	1,180	1,205	1,231	1,258	1,286	1,316	1,346	3.4%
Small Ruminants													
Sheep	1,064	1,090	1,115	1,134	1,161	1,190	1,219	1,251	1,282	1,314	1,347	1,381	2.4%
Goats	835	856	875	888	908	931	954	978	1,002	1,027	1,053	1,079	2.4%
Total	1,899	1,946	1,990	2,022	2,069	2,121	2,173	2,229	2,284	2,341	2,400	2,460	2.4%
Pigs													
Traditional Pigs	293	300	307	314	324	332	340	349	358	237	243	249	-1.5%
Modern Pigs	48	48	44	46	48	50	52	54	56	27	28	29	-4.5%
Total	341	348	351	360	372	382	392	403	414	264	271	278	-1.8%
Poultry													
Traditional Poultry	16,200	16,600	17,000	17,400	17,800	18,200	18,600	19,130	19,600	19,600	20,090	20,590	2.2%
Broiler	6,310	6,190	5,460	5,800	6,200	6,120	6,060	5,970	6,120	8,100	8,400	8,050	2.2%
Egg poultry	1,150	1,310	1,280	920	1,140	950	1,190	1,100	1,130	2,750	2,600	2,200	6.1%
Total	23,660	24,100	23,740	24,120	25,140	25,270	25,850	26,200	26,850	30,450	31,090	30,840	2.4%

(Source) Annuaire des Statistiques Agricoles (1991, 1993, 1995 and 1998), Direction de la Programmation, MINAGRA

Annual production and import of meat were 53,796 t and 51,638 t in 1990s as shown in Table 2.2-2-2. Meat production has been increased constantly since 1975, and import has been decreased after peak import in 1980s. Production and import are almost fifty-fifty in 1990s. In spite of increase of production, per-capita annual meat consumption has been decreased to 8.0 kg in 1990s from 10.4 kg in 1975 and 11.3 kg in 1980s. Main reason of consumption decrease was decline of import in 1990s. Among imported meat, beef shares extremely large portion as about 80% as shown in Table 2.2-2-5.

Table 2.2-2-2 Meat Production, Import and Consumption

Meat	1975		1980-89		1990-1998	
Production (t/yr)	22,980	33.0%	42,134	38.3%	53,796	51.0%
Import (t/yr)	46,690	67.0%	67,806	61.7%	51,638	49.0%
Total (t/yr)	69,670		109,940		105,434	
Consumption (kg/capita/yr)	10.4		11.3		8.0	

(Source) Statistiques Agricoles 1998, DP, MINAGRA

(Note) Details are in Table 2.2-2-5

Most products of milk are imported as shown in Table 2.2-2-3. In 1990s, 88% of milk products was imported and national production was only 12%. Consumption of milk is about 13kg/capita/year, that is decreased from 20kg/capita/year in 1980s. Main reason of the decline was decrease of import of milk in 1990s. On the other hand, eggs are produced in the country achieving self-sufficiency. Egg consumption is 1.6 kg/capita/year, that is increasing since 1975.

Table 2.2-2-3 Production, Import and Consumption of Milk and Eggs

Products	1975		1980-1989		1990-1989	
Milk						
Production (t/yr)	6,000	7.3%	14,370	7.0%	21,227	12.1%
Import (t/yr)	76,000	92.7%	190,727	93.0%	154,839	87.9%
Total (t/yr)	82,000	100.0%	205,097	100.0%	176,066	100.0%
Consumption (kg/capita/yr)	12.2		20.6		13.3	
Egg						
Production (t/yr)	3,800		12,569		22,061	
Consumption (kg/capita/yr)	0.57		1.30		1.60	

(Source) Statistiques Agricoles 1998, DP, MINAGRA

(Note) Details are in Table 2.2-2-5

2.2 Livestock Statistics and Analysis

Total number of livestock raised in the country is estimated by MINAGRA in national level as shown in Table 2.2-2-1 for all kinds of livestock, namely cattle, small ruminants (sheep and goats), pigs and poultry. Slaughtered number of livestock and import of meat and milk are obtained through slaughterhouses and custom office, and reported as shown in Table 2.2-2-5. Livestock number by department level is not obtained except cattle and small ruminants.

(A) Available Statistics

(a) Cattle and Small Ruminants

Cattle and small ruminants are surveyed every year through the activity of vaccination in national level. However, the survey is not able to cover whole number of cattle and small ruminants due to several difficulties to cover all. Surveyed number is always lower than estimation as below:

Difference between Estimation and Vaccinated Number					
Year	1991	1993	1995	1998	Remarks
Cattle					
Estimation (heads)	1,145,000	1,205,000	1,258,000	1,346,000	Table 2.2-2-1
Vaccinated (heads)	1,093,037	1,198,067	832,146	1,100,664	Table 2.2-2-7
Small ruminants					
Estimated (heads)	2,069,000	2,173,000	2,284,000	2,460,000	Table 2.2-2-1
Vaccinated (heads)	970,015	1,109,813	1,110,200	1,178,200	Table 2.2-2-7

(b) Pigs

There is no statistics of raising number for pigs by department level. Slaughtering number is only surveyed and reported to MINAGRA by department level..

(c) Poultry

There is no survey on poultry other than meat market statistics, but it is national level.

(B) Estimation of Raising Number of Livestock by Department Level

(a) Cattle and Small Ruminants

Number of raising in department level has been estimated based on total estimated number to distribute in same proportion as vaccinated number. (Table 2.2-2-7)

(b) Pigs

Although unable to avoid error, department level is estimated based on slaughtered number by department. (Table 2.2-2-7)

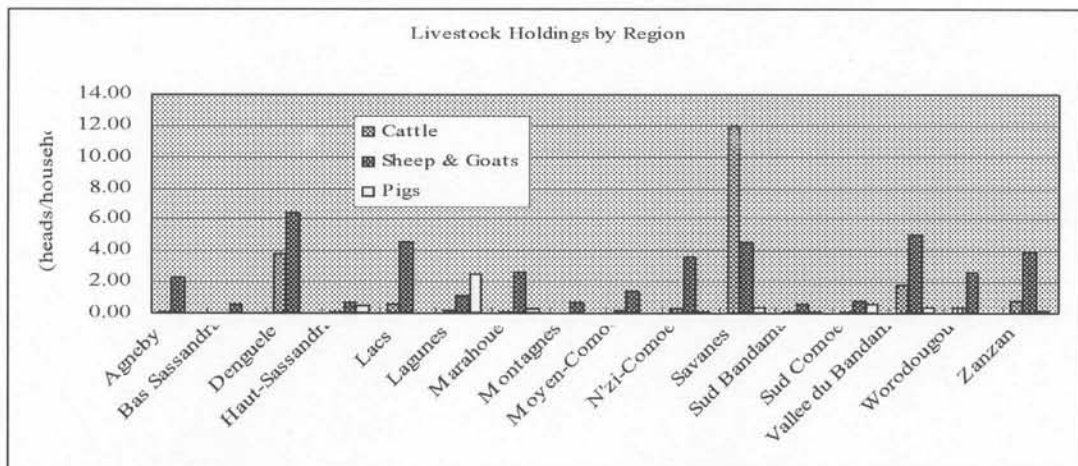
(c) Poultry

Raising number is estimated in same proportion of rural population distribution because no data at all. (Table 2.2-2-6)

2.3 Livestock Breeding Area and Production

Livestock distribution has been analyzed based on department level data estimated by the procedure mentioned above. Cattle and small ruminants (sheep and goats) are mostly grazed in natural grassland and forest so that their distribution and grazing density is very important for natural environment not only from an aspect of water resources but also from soil erosion. Cattle and small ruminants are grazed in savanna and forests in the northern area of the country. In dry season, cattle is grazed also from Mali and Burkina Faso beyond the international boundary, and number of cattle is estimated to increase to 1.4 times.

Figure 2.2-2-1 Livestock Holdings by Region



(Note) Derived from Table 2.2-2-4

livestock holdings are 1.1 heads of cattle, 2.0 small ruminants, and 0.4 pigs for one household as analyzed in Table 2.2-2-4. As shown in Figure 2.2-2-1, cattle holdings are quite high as 12 heads per household in Savanes Region.

There is no survey on poultry other than meat market statistics, but it is national level.

(B) Estimation of Raising Number of Livestock by Department Level

(a) Cattle and Small Ruminants

Number of raising in department level has been estimated based on total estimated number to distribute in same proportion as vaccinated number. (Table 2.2-2-7)

(b) Pigs

Although unable to avoid error, department level is estimated based on slaughtered number by department. (Table 2.2-2-7)

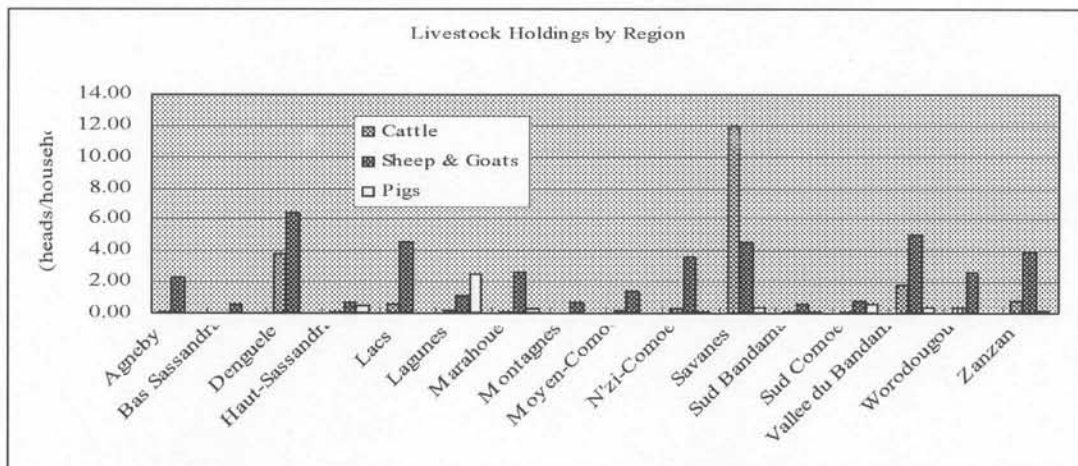
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Table 2.2-2-4 Livestock Holdings and Grazing Density

Region	Area (km ²)	Agri. House holds	Number of Livestock				Holdings (heads/household)			Grazing Density		
			Cattle (heads)	Sheep & Goats (heads)	Pigs (heads)	Poultry (1000) (heads)	Cattle	Sheep & Goats	Pigs	Poultry	Necessary Area (km ²)	Ratio to Total Area
1 Agneby	9,105	40,537	3,200	94,020	180	990	0.08	2.32	0.00	24	227	2.5%
2 Bas Sassandra	26,205	159,258	5,100	90,500	5,780	3,800	0.03	0.57	0.04	24	254	1.0%
3 Denguele	20,892	14,161	53,790	91,540	260	470	3.80	6.46	0.02	33	829	4.0%
4 Haut-Sassandra	19,883	125,766	8,730	91,980	59,120	3,430	0.07	0.73	0.47	27	407	2.0%
5 Lacs	8,811	30,776	19,500	138,040	410	780	0.63	4.49	0.01	25	511	5.8%
6 Lagunes	13,296	80,019	16,040	87,800	204,430	1,650	0.20	1.10	2.55	21	777	5.8%
7 Marahoue	11,124	64,293	6,860	169,330	16,650	1,730	0.11	2.63	0.26	27	454	4.1%
8 Montagnes	30,941	135,560	3,510	95,900	3,670	3,050	0.03	0.71	0.03	22	241	0.8%
9 Moyen-Comoe	6,996	39,810	7,500	58,200	1,930	910	0.19	1.46	0.05	23	210	3.0%
10 N'zi-Comoe	19,597	51,708	16,260	187,020	4,780	1,330	0.31	3.62	0.09	26	579	3.0%
11 Savanes	40,146	76,865	917,400	345,790	34,490	1,850	11.94	4.50	0.45	24	11,769	29.3%
12 Sud Bandama	10,873	69,173	4,920	42,380	10,640	1,720	0.07	0.61	0.15	25	165	1.5%
13 Sud Comoe	7,614	50,405	3,340	41,200	28,750	1,020	0.07	0.82	0.57	20	180	2.4%
14 Vallee du Bandama	28,393	53,841	99,240	269,140	22,650	1,120	1.84	5.00	0.42	21	1,774	6.2%
15 Worodougou	30,770	47,077	21,210	120,760	100	1,190	0.45	2.57	0.00	25	496	1.6%
16 Zanzan	38,080	92,755	71,400	360,400	20,160	1,810	0.77	3.89	0.22	20	1,618	4.2%
Total	322,365	1,132,004	1,258,000	2,284,000	414,000	26,850	1.11	2.02	0.37	24	20,492	6.4%

(Note) Analyzed in Table 2.2-2-6

In Cote d'Ivoire, acceptable grazing density is considered to be one cattle to 10,000m² (one cattle/1.0 ha) of savanna grassland according to MINAGRA. One cattle (250kg) is considered to be equivalent to five (5) small ruminants or five (5) pigs.

Livestock Unit and Acceptable Grazing Density

Livestock Unit	1 unit = One cattle (250 kg/head)
	1 unit = 5 small ruminants or 5 pigs
Acceptable Grazing Density	1 unit/ha in savanna grassland

Taking above acceptable grazing density into consideration, present grazing density is analyzed as shown in Table 2.2-2-4, and illustrated in Figure 2.2-2-2. As shown in Figure 2.2-2-2, grazing area reaches quite high ratio of about 30% in Savanes Region.

Figure 2.2-2-2 Present Grazing Area Ratio by Regions

