IMPACT EVALUATION OF COCOA RESUSCITATION PROGRAMMES ON COCOA PRODUCTION AND SOCIO-ECONOMIC LIFE OF COCOA FARMERS IN SOUTH WEST NIGERIA

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INTRODUCTION

- Cocoa is an important crop to the economies of some countries such as Nigeria, Cote D'Ivoire, Ghana and Cameroon in West Africa.

- Production of cash crop suffered a reduction and unstable production in recent years in Nigeria owing to a number of factors.

- In 1999, the FGN established Cocoa Resuscitation Programme (CRP), executed by the National Cocoa Development Committee (NCDC).

The NCDC responsibilities

➤ Providing inputs such as pesticides, herbicides, fertilizers, cutlasses, harvesting hooks, jute bags, rain boots, and rain coats to cocoa farmers;

➤ Organizing trainings on cocoa rehabilitation techniques, cocoa fermentation and nursery management practices of cocoa; and

➤ Distributing improved variety seedlings and pods from CRIN through CDUs / TCUs to all cocoa producing states in Nigeria

Introduction cont'd . . .

- Process whereby unproductive cocoa farms can be made productive by extending the economic life of a cocoa plantation by replanting old trees with improved younger cocoa seedlings or using various methods, such as coppicing, etc

Introduction cont'd . . .

□ CRTs include:

- ➢ Coppicing or chupon regeneration
- ➢ Phase replanting
- ➢ Selective tree replanting or gapping up
- ➢ Complete farm replacement
- ➢ Planting of young cocoa seedlings under old trees

Institutions involved

- CRIN

- CDUs

- ADPs

- NCDC

- STCP of the IITA

- NGOs such as Olam Nigeria Limited, Saro Agro-Allied Limited

Table 1: Nigeria cocoa production trends between 1967 and year 2009

Period	Production level (metric tons)
1967 – 1969	227,660
1970 – 1974	239,000
1975 – 1979	203,000
1980 – 1984	152,000
1985 – 1989	135,200
1990 – 1994	141,000
1995 – 1999	150,200
2000 – 2004	175,600

Sources: Gill and Duffus in Adeogun (2008); ICCO (2004 & 2005)
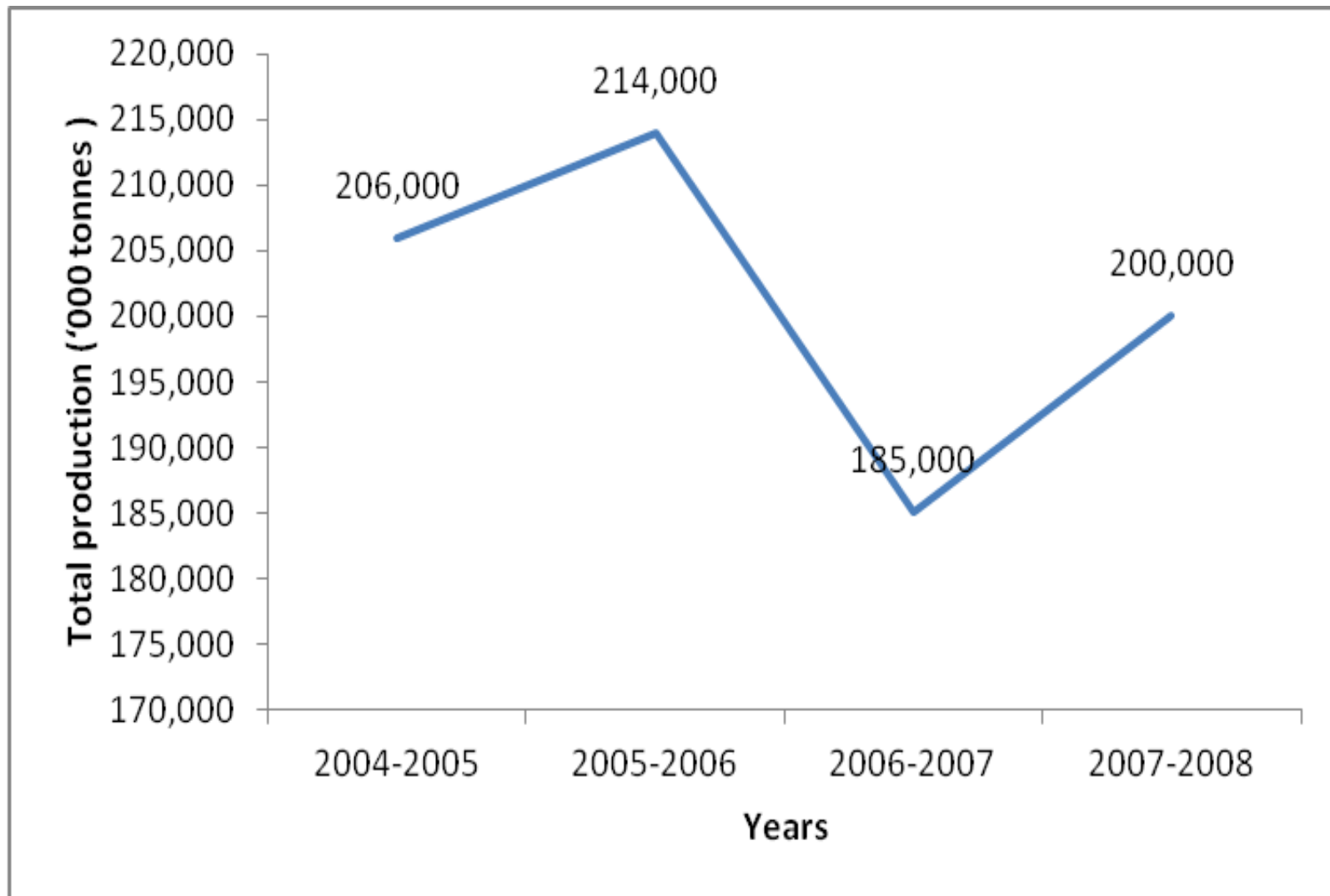
Fig. 1: Cocoa production in Nigeria between 2004 & 2008

Pertinent question

- What impact do these programmes have on cocoa production and socio-economic life of the cocoa farmers?

Purpose of the study

☐ To assess the impact of cocoa resuscitation programmes on cocoa production and socio-economic life of cocoa farmers in south west Nigeria

METHODOLOGY

- The study was carried out in South west Nigeria.

- Presently, 5 out of the 6 states in south west Nigeria produce cocoa

- All cocoa farmers in South west Nigeria constituted the population for this study.

- The study covered the cocoa resuscitation programmes of both government and non-governmental agencies.

Methodology cont'd . . .

- For governmental agency, ADP was purposively chosen because it is the major arm of the government extension services in Nigeria.

- For the non-governmental agency, Olam Nig. Ltd (ONL) was specifically chosen because its programme has similar objectives with that of the government.

Methodology cont'd …

- Data for the study were collected from cocoa farmers through the use of interview schedule and FGD.

- Multistage sampling technique was used in selecting respondents.

Methodology cont'd

- 3 out of 6 states (Ondo, Osun & Ekiti) – Purposive

- 2 cocoa producingLGAs from each state selected - Purposive

- 4 out of 10 villages from each LGAs = Simple RT

- 5 cocoa farmers from a list of 10 registered cocoa farmers organisations - Simple RT

- In all, the total sample size of 360 cocoa farmers, made up of 120 GBCFs, NGBCF & NBCFs (Table 1).

Methodology cont'd

☐ In the process of data analysis, it was discovered that there were some cocoa farmers who benefitted from government and non-governmental agencies; hence, the need to sort them accordingly

Methodology – models used

☐ Before and After evaluation model

☐ Participants and non-participant model

➢ Casley and Lusy (1982) and Ladele (1991) maintained that any memory-recall data, collected as satisfactory as possible, are valid for use in social research.

Methodology cont'd …

☐ Content and face validity were carried out to ensure that the instruments collect the data they were meant to collect.

☐ The instruments were pre-tested

☐ Data were analyzed using percentage, charts, mean statistic, t-test, chi-square, analysis of variance (ANOVA) and Duncan's multiple range test.

RESULTS

- ✓ Socio-economic characteristics
- ✓ Impact of CRPs on farm size, yields and income
- ✓ Impact of CRPs on farm inputs possessed

Table 2: Percentage distribution of respondents according to their socio-economic characteristics

Variable	GBCFs (n=120)		NGBCFs (n=120)		NBCFs (n=120)	
	%	**Mean**	**%**	**Mean**	**%**	**Mean**
Sex						
Male	75.8		79.2		70.0	
Female	24.2		20.8		30.0	
Age (years)	26.7	57.1	31.7	56.3	30.0	56.8
Household size (number)	65.0	5	50.0	6	79.2	4
Age of cocoa plantation (years)	44.2	32.0	38.3	32.1	45.0	31.7
Cocoa farming experience (years)	28.4	23.7	19.1	28.1	33.3	22.9

Table 3: Impact of CRPs on farm size, yields and income of cocoa farmers

Variable	CRPs beneficiary farmers									CRPs non-beneficiary farmers		
	GBCFs (n=100)			NGBCFs (n=92)			GNGBCFs (n=48)			NBCFs (n=120)		
	1999	2009	T-value	1999	2009	T-value	1999	2009	T-value	1999	2009	T-value
Average farm size (ha)	2.53	2.56	-0.169	2.54	2.55	-0.054	2.54	2.58	-0.140	2.53	2.53	0.000
Output/yield (kg)	568.43	725.00	-2.845*	567.93	635.35	-1.502	565.10	671.22	-1.490	569.01	541.40	0.715
Yield per hectare	254.69	305.55	-2.740*	233.27	265.76	-3.087*	235.81	272.41	-2.578*	253.14	243.36	0.927
Price of per bag (₦)	10645	25645	-71.130*	10555.71	26126.36	-56.345	10596.35	25927.08	-49.653*	10583.33	22842.71	-59.337*
Total variable cost per annum (₦)	25261	46972	-7.770*	22173.91	44190.22	-7.781*	23650	47004.54	-6.585*	26143.33	38678.16	-7.363*
Gross Revenue per annum(₦)	98073.75	294848	-10.471*	95949.73	264279.89	-11.464*	94958.33	279614.58	-7.698*	96044.79	197602.08	-9.229*
Gross margin per annum (₦)	72812.75	247876.75	-9.643*	73775.82	220087.67	-10.791*	71308.33	232610	-7.265*	69901.45	158923.91	-8.103*
Return on investment per ha (GM/TVC)	4.03	7.88	-3.334*	4.27	5.86	-2.818*	3.27	5.16	-3.608*	3.76	5.04	-2.239*

*Significant ;   Figure in parenthesis = bag;   I bag = 62.5kg

Table 4: Comparism of mean of farm size, and cocoa yield after the commencement of CRPs in 2009

Socio-economic variables	CRPs Beneficiary farmers			Non-beneficiary farmers	F-value
	GBCFs	**NGBCFs**	**GNGBCFs**	**NBCFs**	
Farm size, yield and income					
Average farm size (ha)	2.56[a]	2.55[a]	2.58[a]	2.53[a]	0.021
Average cocoa output/yield (kg)	725.00[b]	635.35[ab]	671.22[b]	541.40[a]	4.961*
Gross Revenue per annum(₦)	294848[b]	264279.89[b]	279614.58[b]	197602.08[a]	9.572*

Note: Means not followed by the same letter along the row are significantly different (P ≤ 0.05)

* Significant (P ≤ 0.05)

Table 5: Impact of CRPs on farm inputs possessed by the respondents

Farm tools possession	CRPs beneficiary farmers									CRPs non-beneficiary farmers		
	GBCFs (n=100)			NGBCFs (n=92)			GNGBCFs (n=48)			NBCFs (n=120)		
	1999 (M)	2009 (M)	T-value	1999 (M)	2009 (M)	T-value	1999 (M)	2009(M)	T-value	1999 (M)	2009(M)	T-value
Farm tools												
Knapsack sprayers	1.00	2.00	-5.962*	1.00	1.00	-0.851	1.00	2.00	-2.663*	1.00	1.00	-0.941
Harvesting hooks (Go-to-hell)	1.00	2.00	-2.929*	1.00	3.00	-3.303*	1.00	2.00	-3.152*	1.00	2.00	-2.275*

*Significant at p≤ 0.05 ; M = mean

Table 6: Comparism of mean of farm tools possessed after the commencement of CRPs in 2009

Socio-economic variables	CRPs Beneficiary farmers			Non-beneficiary farmers	F-value
	GBCFs	NGBCFs	GNGBCFs	NBCFs	
Farm tools					
Knapsack sprayers	2.0^c	1.0^{ab}	2.0^b	1.0^a	14.516*
Harvesting hooks (Go-to-hell)	2.0^b	3.0^{bc}	2.0^c	2.0^a	8.350*

* Significant ($P \leq 0.05$)

Means not followed by the same letter along the row are significantly different ($P \leq 0.05$) as determined by Duncan's test

Table 7: Comparism of mean of households' possession after the commencement of CRPs in 2009

Variables	CRPs Beneficiary farmers			Non-beneficiary farmers	F-value
	GBCFs	NGBCFs	GNGBCFs	NBCFs	
Households possession					
car	1.00^a	1.00^a	1.00^a	1.00^a	0.769
Motorcycle	1.00^a	1.00^a	1.00^a	1.00^a	0.660
Bicycle	1.00^a	1.00^a	1.00^a	1.02^a	0.254
Radio	1.00^{ab}	1.00^b	1.00^b	1.00^a	0.465
Television	1.04^{ab}	1.10^c	1.00^{ab}	1.00^a	2.234
Telephone set (GSM)	1.00^b	1.00^a	0.00^b	0.00^a	0.375
Wall clock	1.00^a	1.00^a	1.00^a	1.00^a	0.340
Furnished wooden bed	3.00^{bc}	2.00^a	2.00^c	2.00^{ab}	4.399*
Furnished chair (set)	2.00^a	1.00^a	2.00^a	1.00^a	0.866
Refrigerator	2.00^a	1.00^a	1.00^a	1.00^a	0.465
Grinding machine	1.00^a	1.00^a	1.00^a	1.00^a	0.108
Kerosene stove	1.00^a	1.00^a	1.00^a	1.00^a	1.060
Personal water well	2.00^b	1.00^a	2.00^b	1.00^a	47.750*
Personal house	2.00^b	1.00^a	2.00^b	1.00^a	4.490*
Chieftaincy title (no)	2.00^a	2.00^a	2.00^a	1.00^a	2.014
Seedlings spot familiar with (no)	2.00^b	1.00^a	2.00^b	1.00^a	5.512*
Number of association belonged to	2.00^c	2.00^{ab}	2.00^{bc}	1.00^a	11.518*
Proportion of income saved (%)	3.93^b	2.78^{ab}	3.29^b	1.80^a	5.410*

CONCLUSION AND RECOMMENDATIONS

- ☐ The CRPs of government and non-governmental agencies had made an appreciable impact in improving the average yield of cocoa beans produced.

- ☐ The programmes also led to increased in gross revenue, gross margin accruable to the farmers and number of farm tools purchased.

- ☐ The study recommends that to improve on the achievement recorded so far, the activities of both organizations in CRPs should be review regularly.

Appreciation

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Thanks for listening