

## Evaluation of the viability and sustainability of cassava micro processing centers established in Nigeria

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Cassava Enterprise Development Project  
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## Integrated Cassava Project



Preemptive Management of the Virulent Cassava Mosaic Disease in Nigeria

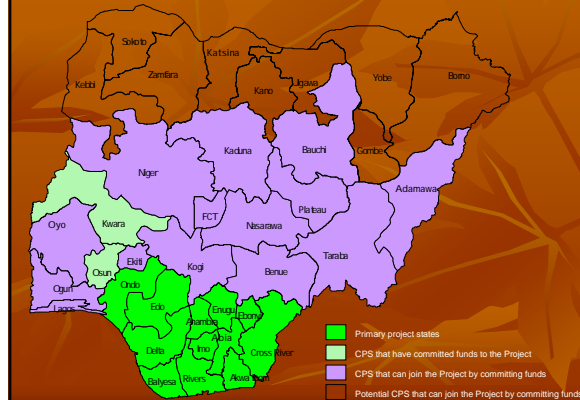
Cassava Enterprise Development Project



## Project Objectives

1. To mitigate the impact of Cassava Mosaic Disease and prevent its spread throughout Nigeria and West Africa through diversification, participatory evaluation, multiplication and distribution of CMD-resistant germplasm to farmers
2. To increase cassava productivity through deployment and promotion of improved germplasm, soil amendments, integrated pest management options and other proven 'best bet' practices
3. Develop and expand post-harvest processing and storage, and marketing outlets for cassava products to increase incomes and improve livelihoods in rural areas.

## Focal states



## Reduce the impact of CMD

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Participatory evaluation through a fast track approach

	Industrial	Food	Livestock
1	M98/0028	95/0289	97/2205
2	TME419	92/0057	M98/0040
3	97/4763	96/1632	99/6012
4	98/0505	TME419	98/0510
5	M98/0040	98/0505	96/1565
6	99/6012	97/2205	92/0325
7	96/0523	98/0581	M98/0028
8	92/0325	92/0326	TME419
9	97/2205	92b/00061	97/4763
10	M98/0068	98/0510	98/0581

Post harvest consideration in before release

National selection

92B/00061  
96/1632  
97/2205  
98/0505  
TME 419  
91/02324  
92/0057  
92/0326  
92B/00068  
95/0289  
97/3200  
97/4763  
98/0510  
98/0581  
M98/0068

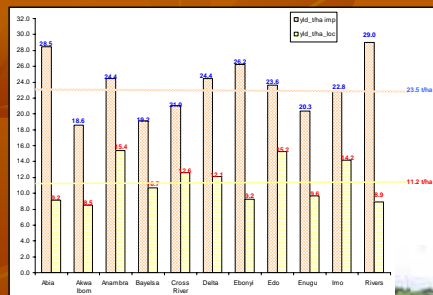
Top 5 varieties released in September 2005:

98/0505, TME 419, 97/2205, 98/0581, 98/0510

Nine varieties due for release in December 2006

## Increase Productivity of cassava

## Increase productivity of cassava



Yield of CMD resistant cassava varieties introduced in farmers fields exceeded existing varieties by 109%.

Yield of CMD Varieties in farmers fields; 2005/2006 (n=110)



## Develop and expand post harvest processing and marketing

Lessons learned in agro enterprise development

### Mobile graters for youths and women in remote areas



### Micro processing centers for women and vulnerable groups

Capacity <1 ton/day



### Small to medium scale enterprises >2tons/day



Mostly owned by individual entrepreneurs with means

## Status of development in cassava processing centres

Table 15: Distribution of cassava processing enterprises by status of development in the CEDP States, Sept 2006

Type	Mobile grater enterprise			Micro processing centers			Small/medium scale Enterprises			Total
	Construction	Distributed	Functional	Construction	Installation	Functional	Construction	Installation	Functional	
Abia	10	0	10	8	8	8	0	4	4	52
Akron	10	10	0	6	5	9	0	3	1	44
Anambra	10	10	0	4	2	0	2	0	0	28
Bayelsa	10	2	8	3	0	21	0	0	0	44
Cross River	10	10	0	13	4	13	6	2	1	59
Delta	10	7	3	7	10	9	0	1	1	48
Ebonyi	10	10	0	2	2	2	0	0	0	26
Edo	10	3	7	9	8	20	0	4	2	63
Enugu	10	10	0	7	3	2	0	0	0	32
Imo	10	10	0	7	7	1	0	0	0	35
Rivers	10	9	1	2	4	3	3	0	0	32
<b>Total</b>	<b>110</b>	<b>81</b>	<b>29</b>	<b>68</b>	<b>52</b>	<b>88</b>	<b>11</b>	<b>14</b>	<b>9</b>	<b>463</b>

Number of functional enterprises = 126

## Cassava Enterprise Development Process

- Needs Assessment
- Sensitisation
- Community analysis
- Construction
- Installation
- Training and other BDS
- Commission operations
- Sign agreement/MOU
- Follow up with monitoring of performance



## Ensuring that the partnership works

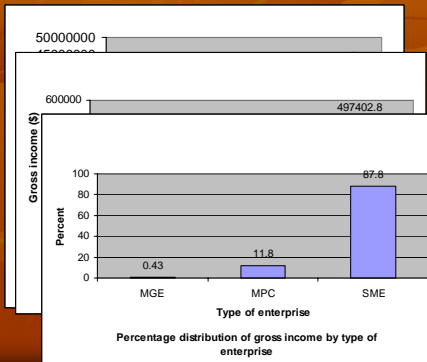
### Criteria

1. Ownership and commitment: No free lunch (land, construction of building, etc)
2. Availability of market for the proposed project
3. Working capital
4. Past experience in agro-enterprise (especially for SME entrepreneurs)
5. Stable sources of raw material (Large Farm)
6. Repayment ability
7. Social status in community, and ways of benefits to community

## Environmental mitigation and Hygiene



## Gross Income from cassava enterprises



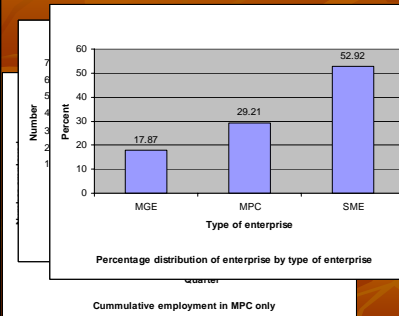
### Lessons

SME cassava enterprise generate more income than other types of enterprises

But benefits go to fewer persons

## Job Creation

Number employed in functional Enterprises (1181)



SME also employ more persons than other types of enterprises

## Viability Assessment of MPCs

### Capacity utilization or Output Gap

Output Gap Percentage is measured as:

$$\frac{\text{Actual Output} - \text{Potential Output}}{\text{Potential Output}} * 100\%$$

$$\text{Critical Qty at BEP} = \frac{\text{Fixed cost}}{\text{Proceeds per unit} - \text{variable cost}}$$

$$\text{Breakeven Yield} = \frac{\text{Total Cost}}{\text{Output Price per day}}$$

## Results

State	MPC	Date Sta.	Prod. Days	Down Time	Output/tonnes		Cap. Utilz (%) (Output Gap)
					Actual	Potential	
- Akwa Ibom	Ikot Eyo	2004	260	130	98.8	148.2	33.33
	Ikot Obioenso	2005	259	53	97.643	117.624	16.99
	Afa Nsit Udu	2006	18	60	2.016	8.736	76.92
- Cross River	Okop Ndua Erong	2006	71	7	8.52	9.36	8.97
	Kohi Farm	2005	120	10	30	32.5	7.69
	Ukpah Bekwarra	2005	69	87	0.552	1.248	55.77
	Okpona, Yala	2005	125	135	1.25	2.6	51.92
	Okurkang						
	Odukpai	2005	152	146	0.608	1.192	48.99
	Iyamoyong - Obubra	2005	182	104	546	858	36.36
	Kanyang, Boki	2005	111	107	27.75	54.5	49.08
	Ossah Ibeku	2005	197	115	137.9	218.4	36.96
- Abia	Umuohi, Umuahin	2005	80	2	40	41	2.44
	Otienna Ngwa	2005	34	44	4.25	9.75	56.41
	Amsogi, Isiala Ngwa	2005	112	96	16.8	31.2	46.15
- Delta	Okwke Elume	2006	32	32	19.2	38.4	50.00
	Abayo	2005	56	60	6.4064	13.2704	51.72
	Ozoro	2005	120	34	240	308	22.08
	Bomadi	2006	49	107	27.44	87.36	68.59
	Kpakama	2006	62	34	78.12	120.96	35.42
	Dreva Farms - Edjikota	2006	25	131	9.75	60.84	83.97
	Kokori	2005	22	40	1.1	3.1	64.52
Otor-Iyede	2005	39	161	19.5	100	80.50	

All MPC's are producing at excess capacity and have not been able to reach their installed capacity

Mean number of days without production per year = 77 days per plant

Only 44 percent of enterprises had a positive gross margin and are breaking even

## Reasons for excess capacity

Closures on market days, burials, and Sundays  
Frequent machinery break downs  
Misunderstandings within groups  
Turnover of machine operators



**MPC are service oriented**

## Conclusions

Intensify capacity and training activities to inculcate the enterprise culture among groups and eliminate group disaffection

Further improvements in machinery maintenance required to reduce downtime

Discourage dependency on project through an effective weaning and exit strategy process

Promote SME development to improve income and employment

