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**APPENDIX to**  
**Report of Baseline Study on**  
**Food Crop Diversification Support Project**

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## **1. Annexes**

### **Annex 1. Terms of Reference for the Baseline Study**

#### **1. Background**

The Ministry of Agriculture and Cooperatives (MACO) with support from Japan International Cooperation Agency (JICA) launched a Food Crop Diversification Support Project (FoDiS) in October 2006. The overall purpose of the Project is to enhance food security at regional and household levels in drought prone areas of Zambia by assisting small-scale farmers in increasing the production and consumption of drought tolerant food crops alternative to maize. The Project will be implemented for five years starting from October 30, 2006. In order to consolidate the detailed action plan and obtain baseline data/information on indicators that are to be used monitor the performance and impact of the Project, there is need to carry out a baseline survey on the areas of focus.

#### **2. Objectives of the Consultancy Work**

The overall objective of the consultancy work is to carry out a baseline survey on all the areas of focus in order to provide baseline data/information with which the Project shall formulate a detailed action plan for the next five years. The survey also intends to obtain empirical information that can be used to monitor and measure performance of the Project in the target areas.

Specific objectives are defined as follows:

- 1) To collect up-to-date data and information on the promotion activities (aspects of both production and consumption) of maize-alternative drought-tolerant crops, with a particular focus on root and tubers, implemented by government, donor and private sector organizations in the target districts<sup>1</sup> (e.g. target crops, target communities, number of beneficiary households, etc.), such as PAM, Care International/FAO, Africare/FAO, CLUSA, ASP, MATEP/USAID, Wildlife Conservation Fund/FAO<sup>2</sup>;
- 2) To identify possible organizations in each target district with which the Project/MACO can collaborate or contract to implement the planned activities such as distribution of planting materials and extension services for target communities;
- 3) To identify active community based organizations (CBOs) or groups such as seed associations that can be partners of the Project at the grassroots' levels;
- 4) To examine viability and suitability of tentatively selected districts as the project target areas;
- 5) To estimate required quantity of cassava and sweet potato planting materials in the respective target districts for the next few years, based on the anticipated distribution programs to be carried out by both government and private sector organizations in these areas;
- 6) To propose implementation mechanism and detailed action plans along with estimation of required budget with which the Project is to operate in each target district, in accordance with the Project Design Matrix (PDM) and tentative Plan of Operations (PO) (see Annex 1 and 2); and
- 7) To identify and collect empirical information that can be used to monitor and measure the impact of the Project in target districts.

#### **3. Scope of Work**

##### **(1) Expected tasks**

The survey shall be conducted by a team to be formed consisting of contracted Consultants and relevant MACO personnel. The Consultants are to be responsible for the overall management of the

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<sup>1</sup> Target districts were tentatively identified during the project formulation process in Agro-ecological Zone I and II. They include Sesheke and Shangombo in Western Province, Siavonga, Gwembe and Sinazongwe in Southern Province, Nyimba, Petauke and Mambwe in Eastern Province, Chongwe and Luangwa in Lusaka Province.

<sup>2</sup> Based on achievements and outcome that have so far been realized by other donors and projects, the present Project intends to identify gaps which are still existing in the areas of focus, and articulate what intervention and how the Project should particularly focus on while avoiding duplication of activities in the target areas.

survey activities and compiling the final report. It is envisaged that the following activities will be undertaken;

- a) Setting-up of a framework and schedule for the survey: Set-up a framework and determine tentative schedule for the survey based on consultations with the Project;
- b) Literature review: Collect and review relevant documents in order to understand the outline of the Project and identify the information gap to be filled up through the present survey;
- c) Development of survey methodology and instruments: Based on the survey framework, design a Survey Plan that includes sampling frame by category/type of respondents and target areas. Instruments for collecting necessary data and information from respondents should be indicated. The field schedule, roles and responsibility of each member of the survey team need to be clearly agreed on at this stage;
- d) Presentation of survey plan: Present the Survey Plan to the Project Team and incorporate feedback from the Project;
- e) Field visits and data/information collection: Undertake field visits to the target districts and collect necessary data and information according to the Survey Plan;
- f) Summarization and analysis of data: Summarize collected data/information and conduct preliminary analysis;
- g) Preparation of an interim report: Compile data and information collected from the field survey and compile an interim report that contains information to meet the objectives of the survey;
- h) Presentation on findings: Present the interim report to the Project Team and incorporate feedback from the team (In case additional information is required, the consultants need to obtain it.);
- i) Submission of the final report: Conduct final analysis of data/information and complete the final report.

#### (2) Target areas

The target areas of the survey are 10 districts that were tentatively identified. Alternative districts will need to be discussed at the beginning of the consultancy work.

#### (3) Methodology

The Consultants will be able to acquire a certain level of information concerning the areas of focus through discussions with the members of the Project Team and a desk review of available documents (those available for the survey are shown as Annex 3). After identifying information gaps, it is envisaged that the Consultants are going to conduct a questionnaire survey where individual and group interviews will be undertaken to collect necessary information from stakeholders in target districts.

#### (4) Expected outputs/results

The contracted Consultants are required to submit a comprehensive report with empirical data and information by the end of contract. The following contents will guide the Consultants to prepare the final report.

#### Contents of the Final Report

Executive summary

Background of the survey

Methodology and target areas

Survey results

Field visit reports

An overview of the promotion activities on drought-tolerant crops alternative maize (both aspects of production and consumption) in respective target districts (refer to the table below)

Identified NGOs and CBOs with which the Project/MACO may collaborate or contract to implement the planned activities such as multiplication, distribution of planting materials, extension services for farmers and farmer groups

Proposed implementation mechanism and detailed action plans along with estimation of required budget with which the Project is to operate in each target district

Proposed indicators and monitoring system to measure the performance and impact of the Project

Conclusion

Any other information obtained through the survey

Up-date information to be collected on crop diversification related activities in target districts (2004-2006) (example)

Province	District	Donor/NGOs in operation	Name of target communities	Crops promoted	Quantity of distributed materials/seeds	No. of beneficiary households
Western	Sesheke					
	Shangombo					
Southern	Sinazongwe	Care Int./FAO Africare/FAO				
	Gwembe	Africare/FAO				
	Siavonga	Care Int./FAO Africare/FAO				
Lusaka	Chogwe					
	Luangwa					
Eastern	Nyimba					
	Petauke					
	Mambwe					

#### 4. Duration and Schedule

Eight (8) weeks after commencement of the contract. The final report must be submitted to the Project Office and JICA on the last day of the contract.

ACTIVITY	Week							
	1st	2nd	3rd	4th	5th	6th	7th	8th
Contract								
Literature review								
Design of survey plan and instruments								
Consultation with the Project Team								
Conduct field survey								
Summarization and analysis of data								
Interim report preparation								
Presentation on the interim report								
Review of the report								
Submission of the final report								

#### 5. Qualifications and Experience

At least two (2) consultants need to be assigned to the survey, who have the following qualifications and experience:

Team leader/project management

A university degree, preferably with Masters or higher in the field of agriculture;

Knowledge and experience in team management

Experience in the formulation and management of development projects in the agricultural sector;

Good network with MACO staff and familiarity to the MACO structure;

Data collection experience in rural settings; and

Report writing and computer skills (spread sheets, statistical package and word processing).

Agronomist

A university degree, preferably with Masters or higher in the field of agriculture;

Knowledge and experience in drought-tolerant crops cultivation, particularly root and tuber crops (cassava and sweet potatoes);

Good network with MACO staff and familiarity to the MACO structure;

Data collection experience in rural settings; and

Report writing and computer skills (spread sheets, statistical package and word processing).

Number and areas of additional consultants assigned to the survey could be suggested in the proposal.

## Annex 2. Basic Statistics on Target Crops, Districts and Provinces

**Table 1 Target Crop growing households by Province, 2003/2004 (PHS, CSO)**

		Eastern	Lusaka	Southern	Western
Maize	% Growers	27.7%	2.9%	15.0%	11.9%
	Area	182,329	16,893	118,305	59,717
	Production (tons)	298,087	33,148	239,796	56,344
Sorghum	% Growers	8.9%	1.9%	21.4%	28.4%
	Area	3,053	396	12,866	12,158
	Production (tons)	1,801	239	7,246	6,908
Millets	% Growers	3.9%	0.1%	13.1%	17.2%
	Area	1,498	47	6,856	11,354
	Production (tons)	745	40	3,984	5,478
Groundnuts	% Growers	34.8%	1.8%	9.1%	2.0%
	Area	54,061	1,855	13,698	2,932
	Production (tons)	29,787	787	6,536	1,213
Cassava	% Growers	0.1%	0.0%	0.0%	9.9%
	Area	57	-	70	21,023
	Production (tons)	33	-	-	9,755
Sweetpotatoes	% Growers	4.8%	1.1%	5.4%	2.2%
	Area	847	265	1,722	591
	Production (tons)	2,386	776	2,407	2,341
Cowpeas	% Growers	0.0%	1.3%	80.8%	7.7%
	Area	-	117	3,468	353
	Production (tons)	-	19	803	88

**Table 2 Total Area under each crop across the 10 districts, (CFS, MACO)**

District	Cassava	Cowpeas	Groundnuts	Maize	Millet	Sorghum	Sweetpotato	Grand Total
Chongwe	1,128.0	645.1	8,976.0	112,192.7	224.9	868.0	7,657.8	131,692.4
Gwembe		1,034.5	1,521.7	20,205.7	9,357.4	11,043.2	478.2	43,640.8
Luangwa		101.0	831.2	11,268.6	54.4	507.0	188.0	12,950.3
Mambwe	503.0	28.8	8,637.5	42,427.5	85.4	3,937.7	2,423.3	58,043.2
Nyimba		30.8	21,039.2	92,877.7		268.4	2,442.0	116,658.0
Petauke	492.0	475.8	71,181.9	341,641.8	14.0	326.6	7,611.4	421,743.6
Sesheke	1,034.0	2,515.3	10,700.5	78,507.0	10,606.5	15,450.8	406.2	119,220.3
Shangombo	133.0	194.7	1,139.4	44,099.2	28,773.2	17,349.9	12.0	91,701.4
Siavonga		256.0	1,856.3	18,936.1	11,874.4	29,157.4	270.0	62,350.2
Sinazongwe	6.0	945.7	1,370.5	36,149.4	11,036.0	18,461.3	799.6	68,768.5
GrandTotal	3,296.0	6,227.7	127,254.2	798,305.7	72,026.3	97,370.3	22,288.5	1,126,768.6

**Table 3 Expected Production under each crop across the 10 districts Tons (CFS, MACO)**

District	Cassava	Cowpeas	Groundnuts	Maize	Millet	Sorghum	Sweetpotato	Grand Total
Chongwe	3,299.4	155.0	3,877.1	170,488.0	126.7	533.4	13,313.8	191,793.4
Gwembe		101.6	270.4	12,599.2	4,172.3	3,999.7	354.3	21,497.5
Luangwa		15.2	170.1	4,030.9	12.6	114.4	140.4	4,483.6
Mambwe	502.7	32.9	4,223.2	33,948.1	59.8	1,919.8	2,727.2	43,413.6
Nyimba		25.0	7,091.3	81,139.6		145.5	3,034.2	91,435.6
Petauke	486.2	298.3	36,831.8	323,423.8	6.0	269.5	8,478.1	369,793.7
Sesheke	2,037.2	352.8	3,983.2	28,510.4	2,252.2	4,625.4	305.4	42,066.6
Shangombo	389.0	53.7	152.4	23,766.1	8,538.1	4,579.1	10.8	37,489.2
Siavonga		11.9	468.3	8,571.1	2,251.5	6,904.9	243.0	18,450.6
Sinazongwe	17.6	51.1	377.3	19,805.0	2,495.6	4,547.1	596.8	27,890.5
Grand Total	6,732.0	1,097.6	57,445.1	706,282.1	19,914.9	27,638.8	29,204.0	848,314.5

## Total Area and Households Reporting under Each Crop in the Target Districts

**Table 4 Comparison of PHS (top) and CFS (bottom) Area Planted Data for 2003/04 Season**

District (PHS)	Cassava	Cowpeas	Groundnuts	Maize	Millet	Sorghum	Sweetpotato	Grand Total
Chongwe		65.3	1,253.7	7,735.2	47.4	148.7	242.1	9,492.4
Gwembe		53	175.6	1,666.9	218	917	4.2	3,034.7
Luangwa		26	254.5	772.8		216.7		1,270.0
Mambwe			1,729.1	4,293.8		1,310.6		7,333.5
Nyimba			1,700.2	9,789.9		180	43.3	11,713.4
Petauke			10,793.3	39,772			58.7	50,624.0
Sesheke	173.3	291.5	263.4	9,086.1	888.1	1,547.2		12,249.6
Shangombo		22.3	43.2	8,928.8	3,316.2	2,931.2		15,241.7
Siavonga		239.2	834.5	922	2,224.2	6,657.6		10,877.5
Sinazongwe		139.9	36.6	2,506	2,991.6	4,120.2		9,794.3
<b>Grand Total</b>	<b>173.3</b>	<b>837.2</b>	<b>17,084.1</b>	<b>85,473.5</b>	<b>9,685.5</b>	<b>18,029.2</b>	<b>348.3</b>	<b>131,631.1</b>
District (CFS)	Cassava	Cowpeas	Groundnuts	Maize	Millet	Sorghum	Sweetpotato	Grand Total
Chongwe		44.1	804.0	9,593.0	12.4	28.0	661.5	11,143.0
Gwembe		345.3	238.1	2,236.2	345.8	429.3		3,594.7
Luangwa			153.4	731.1	40.9	103.0		1,028.4
Mambwe		1.8	1,251.8	3,988.0	22.4	1,313.9		6,577.9
Nyimba		10.0	1,395.0	9,765.8		92.9	25.2	11,288.9
Petauke		183.4	9,184.9	36,271.3			18.2	45,657.8
Sesheke		101.5	976.8	9,867.4	933.1	1,962.0		13,840.8
Shangombo		71.4	570.0	8,092.7	10,257.1	7,406.0		26,397.1
Siavonga				477.5	1,725.1	3,339.5		5,542.1
Sinazongwe			15.4	1,813.5	1,112.0	3,992.8		6,933.7
<b>Grand Total</b>		<b>757.6</b>	<b>14,589.3</b>	<b>82,836.5</b>	<b>14,448.8</b>	<b>18,667.4</b>	<b>704.9</b>	<b>132,004.4</b>
CFS minus PHS (2003/04)	- 173.30	-79.65	-2,494.82	-2,637.03	4,763.29	638.21	356.58	373.28

**Table 5 PHS data on Target crops in 10 Districts, 2003/04**

Province	District	Data	Cassava	Cowpeas	Groundnuts	Maize	Millet	Sorghum	Sweetpotatoes	Grand Total	
Eastern	Mambwe	Total Planted (Ha)			1,729	4,294		1,311		7,334	
		Total Households			6,404	9,803		2,802		19,009	
	Nyimba	Total Planted (Ha)			1,700	9,790		180	43	11,713	
		Total Households			6,893	14,276		597	361	22,127	
	Petauke	Total Planted (Ha)			10,793	39,772				59	50,624
		Total Households			25,319	40,527				423	66,269
<b>Eastern Sum of Area Planted (Ha)</b>					<b>14,223</b>	<b>53,856</b>		<b>1,491</b>	<b>102</b>	<b>69,671</b>	
<b>Eastern Sum of Households Reporting</b>					<b>38,616</b>	<b>64,606</b>		<b>3,399</b>	<b>784</b>	<b>107,405</b>	
Lusaka	Chongwe	Total Planted (Ha)		65	1,254	7,735	47	149	242	9,492	
		Total Households		263	4,509	11,636	95	596	950	18,049	
	Luangwa	Total Planted (Ha)		26	255	773		217		1,270	
		Total Households		181	1,466	2,266		886		4,799	
<b>Lusaka Sum of Area Planted (Ha)</b>				<b>91</b>	<b>1,508</b>	<b>8,508</b>	<b>47</b>	<b>365</b>	<b>242</b>	<b>10,762</b>	
<b>Lusaka Sum of Households Reporting</b>				<b>444</b>	<b>5,975</b>	<b>13,902</b>	<b>95</b>	<b>1,482</b>	<b>950</b>	<b>22,848</b>	
Southern	Gwembe	Total Planted (Ha)		53	176	1,667		917	4	3,035	

			218							
		Total Households	195	713	3,128	812	2,274	17	7,139	
	Siavonga	Total Planted (Ha)	239	835	922	2,224	6,658		10,878	
		Total Households	682	1,135	2,541	5,617	8,752		18,727	
	Sinazongwe	Total Planted (Ha)	140	37	2,506	2,992	4,120		9,794	
		Total Households	690	89	6,628	6,371	5,974		19,752	
<b>Southern Sum of Area Planted (Ha)</b>			<b>432</b>	<b>1,047</b>	<b>5,095</b>	<b>5,434</b>	<b>11,695</b>	<b>4</b>	<b>23,707</b>	
<b>Southern Sum of Households Reporting</b>			<b>1,567</b>	<b>1,937</b>	<b>12,297</b>	<b>12,800</b>	<b>17,000</b>	<b>17</b>	<b>45,618</b>	
Western	Sesheke	Total Planted (Ha)	173	292	263	9,086	888	1,547	12,250	
		Total Households	315	603	867	12,248	1,734	2,557	18,324	
	Shangombo	Total Planted (Ha)	22	43	8,929	3,316	2,931		15,242	
		Total Households	357	173	12,135	6,133	5,308		24,106	
<b>Western Sum of Area Planted (Ha)</b>			<b>173</b>	<b>314</b>	<b>307</b>	<b>18,015</b>	<b>4,204</b>	<b>4,478</b>	<b>27,491</b>	
<b>Western Sum of Households Reporting</b>			<b>315</b>	<b>960</b>	<b>1,040</b>	<b>24,383</b>	<b>7,867</b>	<b>7,865</b>	<b>42,430</b>	
Total Sum of Area Planted (Ha)			173	837	17,084	85,474	9,686	18,029	348	131,631
Total Sum of Households			315	2,971	47,568	115,188	20,762	29,746	1,751	218,301

**Table 6 Area under Crops in Target districts from 2000 to 2006, from CFS (EWU)**

PROVINCE	DISTRICT	CROP	2000	2001	2002	2003	2004	2005	2006	Grand Total	
EASTERN	Mambwe	Cassava		349		154				503	
		Cowpeas					2		27	29	
		Groundnuts	600	1,327	1,255	1,201	1,252	2,165	838	8,638	
		Maize	4,208	7,400	6,041	8,875	3,988	6,529	5,386	42,428	
		Millet		63			22			85	
		Sorghum		140	447	17	1,314	1,191	829	3,938	
		Sweet potatoes		1,236	718	129			340	2,423	
		<b>Mambwe Total</b>		<b>4,808</b>	<b>10,515</b>	<b>8,461</b>	<b>10,376</b>	<b>6,578</b>	<b>9,885</b>	<b>7,420</b>	<b>58,043</b>
	Nyimba	Cowpeas				4		10		17	31
		Groundnuts	5,000	2,834	2,681	3,360	1,395	2,641	3,128	21,039	
		Maize	18,550	10,458	10,631	12,990	9,766	13,435	17,048	92,878	
		Sorghum			45		93		131	268	
		Sweet potatoes		1,368	411	464	25		174	2,442	
		<b>Nyimba Total</b>		<b>23,550</b>	<b>14,660</b>	<b>13,772</b>	<b>16,813</b>	<b>11,289</b>	<b>16,076</b>	<b>20,498</b>	<b>116,658</b>
	Petauke	Cassava		331		161					492
		Cowpeas			122		183		170		476
		Groundnuts	0	10,705	11,951	10,184	9,185	12,198	6,533	60,756	
		Maize	52,220	37,614	39,363	38,491	36,271	39,766	47,864	291,590	
		Millet							14	14	
		Sorghum		6		237			4	247	
Sweet potatoes			5,510	970	661	18		452	7,611		
	<b>Petauke Total</b>		<b>52,220</b>	<b>54,166</b>	<b>52,407</b>	<b>49,734</b>	<b>45,658</b>	<b>51,964</b>	<b>55,037</b>	<b>361,186</b>	
<b>EASTERN Total</b>			<b>80,578</b>	<b>79,341</b>	<b>74,640</b>	<b>76,923</b>	<b>63,525</b>	<b>77,925</b>	<b>82,955</b>	<b>535,887</b>	
LUSAKA	Chongwe	Cassava				1,128				1,128	
		Cowpeas	99		43		44		459	645	
		Groundnuts	976	1,393	1,173	1,382	804	1,751	1,497	8,976	

PROVINCE	DISTRICT	CROP	2000	2001	2002	2003	2004	2005	2006	Grand Total
		Maize	23,551	17,471	8,877	27,030	9,593	12,423	13,248	112,193
		Millet	1	189			12		23	225
		Sorghum	148	330	26	146	28	145	45	868
		Sweet potatoes	340	2,962	635	1,036	662		2,024	7,658
		<b>Chongwe Total</b>	<b>25,115</b>	<b>22,345</b>	<b>10,753</b>	<b>30,721</b>	<b>11,143</b>	<b>14,319</b>	<b>17,296</b>	<b>131,692</b>
	Luangwa	Cowpeas	30						71	101
		Groundnuts	55	62	56	115	153	348	42	831
		Maize	2,500	1,681	1,511	672	731	1,589	923	9,607
		Millet	4				41		10	54
		Sorghum	20	2			103	294	70	489
		Sweet potatoes	0	188						188
		<b>Luangwa Total</b>	<b>2,609</b>	<b>1,933</b>	<b>1,567</b>	<b>787</b>	<b>1,028</b>	<b>2,231</b>	<b>1,116</b>	<b>11,270</b>
		<b>LUSAKA Total</b>	<b>27,723</b>	<b>24,278</b>	<b>12,320</b>	<b>31,508</b>	<b>12,171</b>	<b>16,550</b>	<b>18,412</b>	<b>142,963</b>
SOUTHERN	Gwembe	Cowpeas	362		197		345		130	1,035
		Groundnuts	292	94	259	225	238	139	108	1,355
		Maize	2,032	2,365	2,515	3,107	2,236	1,873	3,002	17,131
		Millet	530	1,575		1,377	346	313	760	4,900
		Sorghum	1,154	1,950	2,347	1,316	429	809	1,087	9,092
		Sweet potatoes	0	228		214			36	478
		<b>Gwembe Total</b>	<b>4,370</b>	<b>6,212</b>	<b>5,319</b>	<b>6,239</b>	<b>3,595</b>	<b>3,134</b>	<b>5,123</b>	<b>33,991</b>
	Siavonga	Cowpeas	0						256	256
		Groundnuts	0	311	988	201		357		1,856
		Maize	0	3,233	5,997	3,457	477	2,855	642	16,662
		Millet	0	261		646	1,725	3,022	5,326	10,980
		Sorghum	0	983	785	3,360	3,340	10,785	8,989	28,242
		Sweet potatoes	0	270						270
		<b>Siavonga Total</b>	<b>0</b>	<b>5,058</b>	<b>7,771</b>	<b>7,665</b>	<b>5,542</b>	<b>17,019</b>	<b>15,213</b>	<b>58,267</b>
	Sinazongwe	Cassava				6				6
		Cowpeas	0		332				614	946
		Groundnuts	0	395	464	199	15	102	43	1,218
		Maize	0	5,526	5,383	5,314	1,813	6,967	4,055	29,058
		Millet	0	213		847	1,112	5,074	3,790	11,036
		Sorghum	0	1,782	640	980	3,993	6,845	2,658	16,898
		Sweet potatoes	0	504	271	25				800
		<b>Sinazongwe Total</b>	<b>0</b>	<b>8,420</b>	<b>7,090</b>	<b>7,370</b>	<b>6,934</b>	<b>18,988</b>	<b>11,160</b>	<b>59,963</b>
		<b>SOUTHERN Total</b>	<b>4,370</b>	<b>19,690</b>	<b>20,179</b>	<b>21,273</b>	<b>16,071</b>	<b>39,141</b>	<b>31,496</b>	<b>152,220</b>
WESTERN	Sesheke	Cassava		340		694				1,034
		Cowpeas	1,257		106		101		1,051	2,515
		Groundnuts	1,546	3,507	1,905	442	977	1,280	563	10,219
		Maize	15,589	9,071	6,158	6,671	9,867	16,976	8,820	73,152
		Millet	3,967	613		1,649	933	1,138	615	8,916
		Sorghum	128	1,565	1,208	1,328	1,962	2,653	2,116	10,960
		Sweet potatoes	4	330	73					406
		<b>Sesheke Total</b>	<b>22,491</b>	<b>15,426</b>	<b>9,449</b>	<b>10,784</b>	<b>13,841</b>	<b>22,047</b>	<b>13,165</b>	<b>107,202</b>
	Shangombo	Cassava				133				133
		Cowpeas	82		39		71		2	195
		Groundnuts	137	2	178	241	570	11		1,139
		Maize	1,757	5,674	8,733	4,934	8,093	11,005	3,903	44,099
		Millet	1,919	2,392		4,581	10,257	4,583	5,041	28,773
		Sorghum	1,097	978	2,045	641	7,406	2,574	2,610	17,350
		Sweet potatoes	0	12						12
		<b>Shangombo Total</b>	<b>4,991</b>	<b>9,058</b>	<b>10,996</b>	<b>10,530</b>	<b>26,397</b>	<b>18,173</b>	<b>11,556</b>	<b>91,701</b>
		<b>WESTERN Total</b>	<b>27,482</b>	<b>24,484</b>	<b>20,444</b>	<b>21,315</b>	<b>40,238</b>	<b>40,220</b>	<b>24,721</b>	<b>198,904</b>
		<b>Grand Total</b>	<b>140,153</b>	<b>147,793</b>	<b>127,583</b>	<b>151,020</b>	<b>132,004</b>	<b>173,836</b>	<b>157,584</b>	<b>1,029,974</b>

Total Production from Each Crop in the Target Districts

Table 7 Expected production Mtons, CFS data 2000 to 2006

PROVINCE	DISTRICT	CROP	2000	2001	2002	2003	2004	2005	2006	Grand Total
EASTERN	Mambwe	Cassava		52		450				503
		Cowpeas					1		32	33
		Groundnuts	3	1,174	535	825	572	706	409	4,223
		Maize	28	5,230	7,484	10,455	3,200	2,567	4,985	33,948
		Millet		57			3			60
		Sorghum		123	376	3	549	261	608	1,920
		Sweet potatoes		1,091	914	232			490	2,727
		<b>Mambwe Total</b>	<b>31</b>	<b>7,727</b>	<b>9,309</b>	<b>11,965</b>	<b>4,324</b>	<b>3,534</b>	<b>6,524</b>	<b>43,414</b>
	Nyimba	Cowpeas			3		6		16	25
		Groundnuts	15	2,551	597	1,311	1,045	795	778	7,091
		Maize	133	9,086	7,971	11,918	21,017	9,050	21,964	81,140
		Sorghum			11		82		52	145
		Sweet potatoes		1,231	334	877	38		554	3,034
	<b>Nyimba Total</b>	<b>148</b>	<b>12,867</b>	<b>8,916</b>	<b>14,106</b>	<b>22,188</b>	<b>9,846</b>	<b>23,364</b>	<b>91,436</b>	
	Petauke	Cassava		15		471				486
		Cowpeas			60		87		151	298
		Groundnuts		9,617	3,985	5,195	6,177	2,381	4,205	31,559
		Maize	447	29,036	51,822	39,033	53,459	28,861	57,920	260,578
		Millet							6	6
		Sorghum		5		153			6	165
		Sweet potatoes		4,959	1,664	875	57		923	8,478
<b>Petauke Total</b>		<b>447</b>	<b>43,632</b>	<b>57,531</b>	<b>45,727</b>	<b>59,781</b>	<b>31,242</b>	<b>63,211</b>	<b>301,570</b>	
<b>EASTERN Total</b>		<b>626</b>	<b>64,226</b>	<b>75,756</b>	<b>71,799</b>	<b>86,293</b>	<b>44,621</b>	<b>93,099</b>	<b>436,420</b>	
LUSAKA	Chongwe	Cassava				3,299				3,299
		Cowpeas	1		9		23		123	155
		Groundnuts	6	1,156	401	827	382	249	857	3,877
		Maize	187	13,323	5,050	94,015	28,100	5,863	23,950	170,488
		Millet	0	109			5		13	127
		Sorghum	1	297	32	135	25	19	24	533
		Sweet potatoes	308	2,558	450	2,659	2,089		5,251	13,314
		<b>Chongwe Total</b>	<b>502</b>	<b>17,442</b>	<b>5,942</b>	<b>100,936</b>	<b>30,623</b>	<b>6,131</b>	<b>30,217</b>	<b>191,793</b>
	Luangwa	Cowpeas	1						15	15
		Groundnuts	0	49	0	50	35	16	21	170
		Maize	20	633	136	524	554	554	1,082	3,503
		Millet	0				11		2	13
		Sorghum	0	2			33	25	54	114
		Sweet potatoes	0	140						140
<b>Luangwa Total</b>	<b>21</b>	<b>824</b>	<b>136</b>	<b>574</b>	<b>633</b>	<b>595</b>	<b>1,174</b>	<b>3,956</b>		
<b>LUSAKA Total</b>		<b>523</b>	<b>18,266</b>	<b>6,078</b>	<b>101,510</b>	<b>31,255</b>	<b>6,726</b>	<b>31,391</b>	<b>195,749</b>	
SOUTHERN	Gwembe	Cowpeas	3		29		60		10	102
		Groundnuts	2	85	5	39	54	14	47	246
		Maize	47	1,893	88	1,596	3,468	730	2,865	10,687
		Millet	4	1,365		531	339	5	66	2,311
		Sorghum	14	1,755	447	284	202	62	345	3,109
		Sweet potatoes		205		149			0	354

PROVINCE	DISTRICT	CROP	2000	2001	2002	2003	2004	2005	2006	Grand Total	
	<b>Gwembe Total</b>		70	5,303	569	2,599	4,124	811	3,333	16,809	
	Siavonga	Cowpeas							12	12	
		Groundnuts		275	59	58		76		468	
		Maize		2,077	228	2,505	771	354	494	6,428	
		Millet		108		204	293	484	1,029	2,118	
		Sorghum		697	38	2,124	611	1,294	1,965	6,728	
		Sweet potatoes		243						243	
		<b>Siavonga Total</b>			3,400	325	4,890	1,675	2,209	3,500	15,998
	Sinazongwe	Cassava				18				18	
		Cowpeas			7				44	51	
		Groundnuts		327	2	7	2	0	13	350	
		Maize		3,775	646	1,013	2,099	321	3,353	11,206	
		Millet		178		125	579	629	985	2,496	
		Sorghum		998	57	309	1,499	142	750	3,755	
		Sweet potatoes		454	138	5				597	
	<b>Sinazongwe Total</b>			5,731	850	1,477	4,178	1,091	5,145	18,472	
<b>SOUTHERN Total</b>			<b>70</b>	<b>14,434</b>	<b>1,744</b>	<b>8,965</b>	<b>9,977</b>	<b>4,111</b>	<b>11,979</b>	<b>51,279</b>	
WESTERN	Sesheke	Cassava		7		2,030				2,037	
		Cowpeas	1		45		23		284	353	
		Groundnuts	2	2,827	333	55	218	182	336	3,953	
		Maize	82	6,299	1,432	2,674	6,274	2,298	3,693	22,752	
		Millet	3	461		321	155	270	212	1,422	
		Sorghum	7	1,222	117	238	525	402	483	2,994	
		Sweet potatoes	8	297	0					305	
		<b>Sesheke Total</b>		105	11,113	1,927	5,317	7,195	3,151	5,008	33,816
	Shangombo	Cassava				389					389
		Cowpeas	0		12		41		0		54
		Groundnuts	1	2	36	38	76	0			152
		Maize	35	4,216	2,159	3,397	9,567	1,337	3,055	23,766	
		Millet	5	2,018		1,393	2,879	676	1,567	8,538	
		Sorghum	5	786	729	281	1,151	469	1,158	4,579	
Sweet potatoes		0	11							11	
<b>Shangombo Total</b>		46	7,032	2,936	5,498	13,715	2,483	5,780	37,489		
<b>WESTERN Total</b>			<b>151</b>	<b>18,145</b>	<b>4,863</b>	<b>10,815</b>	<b>20,910</b>	<b>5,634</b>	<b>10,788</b>	<b>71,305</b>	
<b>Grand Total</b>			<b>1,370</b>	<b>115,071</b>	<b>88,441</b>	<b>193,089</b>	<b>148,434</b>	<b>61,091</b>	<b>147,257</b>	<b>754,753</b>	

**Table 8** Energy Content per 100gm of edible portion

Food	Kilocalories	Food	Kilocalories
Cereals and grains		Grain legumes	
Maize, yellow immature on cob	166	Beans/peas, fresh, shelled	104
Maize, white whole kernel, dried	345	Beans, dried	320
Maize, flour, 60-80% extraction	334	Chickpea, whole seeds, raw, dried	327
Maize meal	341	Cowpea, mature pods, dried	318
Millet, finger, flour	315	Mung bean, dried	322
Millet, bullrush, whole grain	339	Pigeon pea, dried	309
Rice, milled	333	Nuts and seeds	
Sorghum, whole grain	343	Bambara groundnut, fresh	346
Sorghum flour	337	Cashew nut, dried	560
Wheat flour	340	Coconut, mature kernel, fresh	392
White bread	240	Groundnut, dry	572
Brown bread	233	Meat, poultry and eggs	
Starchy roots, tubers		Beef, moderately fat	234
Cassava meal	318	Egg, hen	140
Plantain, ripe, raw	128	Goat, moderately fat	171
Sweet potato, raw	109	Mutton, moderately fat	257
Taro/cocoyam	94	Poultry	138
Yam, fresh	111	Fish, dried	255
Yam, flour	310	Oils and fats	
Sugars		Butter from cow's milk	699
Sugar		Coconut oil	900
Milk and milk products		Ghee, clarified butter	884
Milk, cow, whole	79	Lard/animal fats	891
Milk powder, cow, whole	357	Margarine	747
Milk, goat	84	Red palm oil	892

Source: CTA/ECSA (1987).

### Annex 3. People Met

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<b>Name</b>	<b>Organization</b>	<b>Designation</b>	<b>Physical Address</b>	<b>Digital Contacts</b>
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## Annex 4. Instruments used

### CHECKLIST FOR USE IN INFORMAL DIAGNOSTIC SURVEY FOR FODIS

#### Overview

The purpose of the discussions with the key informants and projects is to define a road map for the project—to gain information of how best to engage individual districts in project activities. The second purpose is to obtain data by which the project may be monitored and evaluated. At this time we shall simply define the indicators. To construct the work plans for each district, we need to know which camps, which organizations, and which varieties of cassava and sweet potatoes will be included in the project.

#### General Orientation

This interview guide has been developed by the team in consultation with the FoDiS project staff to define the types of information to be collected from the study.

The two consultants will each lead a team to western and eastern provinces. Before that, the two teams will work together in Chongwe and Siavonga districts so that the approach to the data collection is fully understood by the team members before separating into east and west teams. The outline of the report (appended) will be firmed at the end of the survey of the two districts.

A min-survey to establish the adoption rates of the cassava and sweet potatoes complemented with **Key Informant interviews** and **Focus Group** discussions and **Community interviews** will tie up information on adoption and perceptions. A **mini survey** is most adequately suited for answering question “how many” of the farmers. The proportion of farmers may also be obtained through **community mapping with cards**.

#### Other Special Needs

- As approximately 40% of the camps are not manned, we shall actively seek out the CBOs that could double as camp extension committees or examine the possibilities of forming such committees with the help of the DACO. Such volunteer Community Agricultural Workers (CAWs) have performed well in other projects in Zambia.
- The number of farmers to be targeted per year and in the lifespan of the project will be established after determining the workable area under cassava for different district farming systems. However, the size of the plot should be one Lima so that the food security role of the cassava can be demonstrated.
- Seed growers from past projects will be sought for possible role as secondary site hosts in the districts.

#### Key Informant Interview I

Time: 1.5 hour each

PARTICIPANTS:

OBJECTIVES:

The objectives of this interview are two-fold. The first is to formulate an understanding of the nature of the particular organization. The second is to elucidate the layers of experience and any insights the respondent has into the promotion of cassava and sweet potatoes. The following are a list of primary aims:

1. To identify the roles of the organization represented, the services provided, and the location of targeted recipients.
2. To discuss how their initiatives/activities have been impacted by drought and resultant food insecurity and the perceived hindering factors in their own ability to provide support.
3. To understand some of the strengths of tailored programming and ways these initiatives could be bolstered (Expanded or Replicated)
4. To gain insight into their view of some of the primary survey questions in order to inform project activities at the household level

**PROCEDURES:**

Set up appointment with the representative of organization and arrive at predetermined place and time.

a. Start by introducing yourself, the purpose of the study, and some of the insights you hope to gain from the interview.

1. Discuss the function of the particular organization and the role it plays in promoting household food security in the district and detail the activities related to cassava and sweet potatoes.

- a. Describe the history of the organization in the community, its traditional roles and the services it has provided in the past. Who are the target beneficiaries?
- b. Find out whether or not the services they provide have changed in recent years. If it has changed, what is the change in response to? Have their targeted recipients changed?

**2. District Viability**

How widespread is cassava growing in this district? What advantages does the district offer to cassava promotion? *[On whether the district is viable for cassava and sweet potato promotion, detailed discussion should be held with the DACO and his staff, especially the SAO, and other organizations].*

**Table 1 Viability and Suitability of Tentatively Selected Districts**

<b>District</b>	<b>Strengths</b>	<b>Weakness</b>	<b>Opportunities</b>	<b>Threats</b>

3. *[In discussion with various key informants, determine where it would be suitable to establish secondary multiplication sites.]*

Where in the district could a secondary multiplication sites be established? Who could host and or manage such sites? How big can the secondary multiplication sites be?

*Candidate sites for secondary multiplication could be a church, a school, or good farmer. Currently the proposed size is 2 hectares per district.*

4. Which variety is best suited for this district. *[Obtain the answer from the key informants and focus group interviews. Consider the end-use of the crop; home consumption or industrial use? Budget for an adaptation trial of 5 cultivars at selected sites (3-5) in each district. The trial will be planted in year 2]*

5. Which areas in each district could be target for the project? Why? Which areas are not suitable? Why?

1. Where are the other programmes operating? Is it possible for them to expand the number of participants in the same area or replicate the operation into another area?

6. Determine how the project could work with the Organization (NGO/CBO)

1. First find out about the activities of the NGOs/CBOs.
2. *[Next, set the criteria by which we decide on which NGO to partner with.]*

7. *[Listen careful for possible need to provide training to partners or participants].* What type of training would be required at what stage, for what target group, in each year?

8. What processing facilities exist for cassava? How is cassava processed for sale? What are the marketing channels for cassava? Which is the most important channel in the district?

9. From your experience of cassava farming in this district, what size of cassava field could support a household? *[The plot size planned per farm is 1 lima or 2500 square meters. This space will contain from one to a maximum of five cultivars].*

10. In terms of working in drought prone community, what role does the organization play specifically relating to bolstering community and household responses to food insecurity?

11. Relating to the survey mandate of understanding community and household responses to the drought, are there any other issues they (KI) are concerned with?

What do they see as the greatest determinants of successful households and communities in coping with the impact of Drought?

What role do they see the State playing in responding to the chronic vulnerability? Thus far, have they been successful?

12. In terms of the above discussion and research questions, is there anything they would like to add? Are there any areas they think may be important to discuss with women /men who are food insecure within the community? When we come back to the community at the start of project activities, would they be interested in participating in project activities aimed at promoting cassava and sweetpotatoes?

### **13 Cutting distribution to promote production**

If the organization was involved in promotion of cassava, obtain the following data

**Table 2 Cuttings**

a) Interventions	Year 2004	Year 2005	Year 2006	Year 2007
No. of cuttings distributed				
# households targeted				
cuttings per household				
Variety?				
Certified?				
Timing of distribution Month				

Extension support provided?

Agronomic advice,

- o # courses

- # trainees

b) Impact

Number households growing cassava

- following distribution in 2005
- today

Area planted in cassava today by recipient households

Yield attained

- production per recipient household
  - following distribution
  - today
- % consumed
- % sold
- source of planting material tot recipient households growing cassava today

**14 Private sector trade and processing [processors, industrial users etc]**

a) Interventions

1. Demand

- What final product do you produce?
- Who do you sell to?
- Which are your key markets?
- How have your sales volume changed over time?
- Quantity sold each year
- Future growth potential of this market

2. Supply

- Source of cassava
- What varieties [do varieties matter to you?]
- Purchase price
- Transport cost
- Price seasonality
  - Does price vary throughout the year?
  - High month? Price?
  - Low month? Price?
  - Normal month? Price?
- Do you have any direct link with cassava farmers?

Impact

- Volumes of cassava purchased
  - Now
  - Potential

Thank them for their time and let them know that you will keep in touch.

## Annex 5. Detail of Promotional Activities in Target Districts

**Table 9 Detail of Promotional Activities in Target Districts**

DATE	PROVINCE	DISTRICT	DONOR NGO In COOPERATION	NAME OF TARGETED CAMP	CROPS GROWN	ESTIMATED CONSUMPTION	UNITS	NUMBER OF BENEFI CIARIES
Nov2004	Eastern	Chama	FAO/WCS		Cassava	5.00	ha	12
Nov2004	Eastern	Lundazi	FAO/WCS		Cassava	5.00	ha	16
Mar2006	Eastern	Mambwe	CTC	Mnkhanya	Cassava	428,550.00	kg	
Mar2006	Eastern	Mambwe	CTC	Nsefu	Cassava	428,550.00	kg	
Mar2006	Eastern	Mambwe	CTC	Kakambi	Cassava	428,550.00	kg	
Mar2006	Eastern	Mambwe	CTC	Malama	Cassava	428,550.00	kg	
Mar2006	Eastern	Mambwe	CTC	Mwanya	Cassava	428,550.00	kg	
Mar2006	Eastern	Mambwe	CTC	Msoro	Cassava	428,550.00	kg	
Mar2006	Eastern	Mambwe	CTC	Sandwe	Cassava	428,550.00	kg	
Jun2006	Eastern	Mambwe	CTC	Msoro	Soyabeans	11,750.00	kg	
Jun2006	Eastern	Mambwe	CTC	Msoro	Cowpeas	1,500.00	kg	
Jun2006	Eastern	Mambwe	CTC	Malama	Sorghum	520.00	kg	
Jun2006	Eastern	Mambwe	CTC	Sandwe	Sorghum	780.00	kg	
Jun2006	Eastern	Mambwe	CTC	Mnkhanya	Maize	15.00	kg	
Jun2006	Eastern	Mambwe	CTC	Nsefu	Maize	15.00	kg	
Jun2006	Eastern	Mambwe	CTC	Malama	Groundnuts	60,000.00	kg	
Jun2006	Eastern	Mambwe	CTC	Sandwe	Groundnuts	65,000.00	kg	
Nov2004	Eastern	Mambwe	FAO/WCS		Cassava	5.00	ha	10
Nov2006	Eastern	Mambwe	FSP		Cassava	603.00	Cuttings	
Nov2006	Eastern	Mambwe	FSP		Maize	5,525.00	kg	
Nov2006	Eastern	Mambwe	FSP		Cowpeas	1,742.50	kg	
Nov2006	Eastern	Mambwe	FSP		Sorghum	200.00	kg	
Mar2006	Eastern	Mambwe	PAM		Maize	3,100.00	kg	
Mar2006	Eastern	Mambwe	PAM		Soyabeans	2,500.00	kg	
Mar2006	Eastern	Mambwe	PAM		Cassava	386.00	Cuttings	
Mar2006	Eastern	Mambwe	PAM		Cowpeas	625.00	kg	
Mar2006	Eastern	Mambwe	PAM		Groundnuts	1,500.00	kg	
Mar2006	Eastern	Mambwe	PAM		Sorghum	304.00	kg	
Nov2006	Eastern	Nyimba	FSP		Cassava	45,864.00	Cuttings	
Nov2006	Eastern	Nyimba	FSP		Maize	1,470.00	kg	
Nov2006	Eastern	Nyimba	FSP		Cowpeas	92.50	kg	
Nov2006	Eastern	Nyimba	FSP		Soyabeans	1,375.00	kg	
Mar2006	Eastern	Nyimba	PAM		Maize	2,500.00	kg	
Mar2006	Eastern	Nyimba	PAM		Beans	622.50	kg	
Mar2006	Eastern	Nyimba	PAM		Soyabeans	1,837.50	kg	
Mar2006	Eastern	Nyimba	PAM		Cassava	250.00	Cuttings	
Mar2006	Eastern	Nyimba	PAM		Cowpeas	10.00	kg	
Mar2006	Eastern	Nyimba	PAM		Groundnuts	980.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kacholola	Maize	2,500.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kamalenge	Maize	750.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kazolwe	Maize	750.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kamono	Maize	750.00	kg	
Dec2006	Eastern	Nyimba	PAM	Mitobe	Maize	500.00	kg	
Dec2006	Eastern	Nyimba	PAM	Myulwa	Maize	50.00	kg	
Dec2006	Eastern	Nyimba	PAM	NyimbaCentral	Maize	850.00	kg	
Dec2006	Eastern	Nyimba	PAM	Chambula	Maize	750.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kacholola	Soyabeans	375.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kamalenge	Soyabeans	162.50	kg	
Dec2006	Eastern	Nyimba	PAM	Kazolwe	Soyabeans	162.50	kg	

Dec2006	Eastern	Nyimba	PAM	Kamono	Soyabeans	162.50	kg	
Dec2006	Eastern	Nyimba	PAM	Mitobe	Soyabeans	100.00	kg	
Dec2006	Eastern	Nyimba	PAM	Myulwa	Soyabeans	100.00	kg	
Dec2006	Eastern	Nyimba	PAM	NyimbaCentral	Soyabeans	150.00	kg	
Dec2006	Eastern	Nyimba	PAM	Chambula	Soyabeans	162.50	kg	
Dec2006	Eastern	Nyimba	PAM	Kacholola	Cowpeas	50.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kamalenge	Cowpeas	5.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kazolwe	Cowpeas	5.00	kg	
Dec2006	Eastern	Nyimba	PAM	Kamono	Cowpeas	5.00	kg	
Dec2006	Eastern	Nyimba	PAM	Mitobe	Cowpeas	5.00	kg	
Dec2006	Eastern	Nyimba	PAM	Myulwa	Cowpeas	5.00	kg	
Dec2006	Eastern	Nyimba	PAM	NyimbaCentral	Cowpeas	12.50	kg	
Dec2006	Eastern	Nyimba	PAM	Chambula	Cowpeas	5.00	kg	
Dec2006	Eastern	Petauke	AICA		Sorghum	319.00	Ha	1276
Dec2006	Eastern	Petauke	AICA		Millet	283.50	Ha	567
Dec2006	Eastern	Petauke	AICA		Cowpeas	15.63	Ha	104
Dec2006	Eastern	Petauke	AICA		Groundnuts	107.69	Ha	1723
Dec2006	Eastern	Petauke	AICA		Cassava	20.10	Ha	1005
Dec2006	Eastern	Petauke	AICA		Sweetpotatoes	71.56	Ha	706
Nov2005	Eastern	Petauke	AICA/CARE	Nyanje1	Cassava	220.00	Bundles	110
Nov2005	Eastern	Petauke	AICA/CARE	Mwanika	Cassava	180.00	Bundles	90
Nov2005	Eastern	Petauke	AICA/CARE	Mawanda	Cassava	178.00	Bundles	139
Nov2005	Eastern	Petauke	AICA/CARE	Chikalawa	Cassava	92.00	Bundles	46
Nov2005	Eastern	Petauke	AICA/CARE	Nyamtuma	Cassava	122.00	Bundles	61
Nov2005	Eastern	Petauke	AICA/CARE	Chilongozi	Cassava	174.00	Bundles	87
Nov2005	Eastern	Petauke	AICA/CARE	Wankhala	Cassava	270.00	Bundles	135
Nov2005	Eastern	Petauke	AICA/CARE	Muzumwa	Cassava	250.00	Bundles	125
Nov2005	Eastern	Petauke	AICA/CARE	Kapungwe	Cassava	252.00	Bundles	126
Nov2005	Eastern	Petauke	AICA/CARE	Nyanje2	Cassava	172.00	Bundles	86
Nov2005	Eastern	Petauke	AICA/CARE	Nyanje1	Sweetpotatoes	16,600.00	kg	83
Nov2005	Eastern	Petauke	AICA/CARE	Mwanika	Sweetpotatoes	13,000.00	kg	65
Nov2005	Eastern	Petauke	AICA/CARE	Mawanda	Sweetpotatoes	24,200.00	kg	121
Nov2005	Eastern	Petauke	AICA/CARE	Chikalawa	Sweetpotatoes	17,600.00	kg	88
Nov2005	Eastern	Petauke	AICA/CARE	Nyamtuma	Sweetpotatoes	15,200.00	kg	76
Nov2005	Eastern	Petauke	AICA/CARE	Chilongozi	Sweetpotatoes	15,200.00	kg	76
Nov2005	Eastern	Petauke	AICA/CARE	Wankhala	Sweetpotatoes	4,400.00	kg	22
Nov2005	Eastern	Petauke	AICA/CARE	Muzumwa	Sweetpotatoes	10,400.00	kg	52
Nov2005	Eastern	Petauke	AICA/CARE	Kapungwe	Sweetpotatoes	6,800.00	kg	34
Nov2005	Eastern	Petauke	AICA/CARE	Nyanje2	Sweetpotatoes	17,800.00	kg	89
Nov2004	Eastern	Petauke	FAO/WCS		Cassava	5.00	ha	2
Jul2001	Eastern	Petauke	FoodSecurityPackProgram	Luamphande	Sweetpotatoes	50.00	Bundles	46
Jul2001	Eastern	Petauke	FoodSecurityPackProgram	Miinga	Sweetpotatoes	375.00	Bundles	26
Jul2001	Eastern	Petauke	FoodSecurityPackProgram	Nyanje	Sweetpotatoes	375.00	Bundles	20
Nov2006	Eastern	Petauke	FSP		Cassava	110,136.00	Cuttings	
Nov2006	Eastern	Petauke	FSP		Maize	3,530.00	kg	
Nov2006	Eastern	Petauke	FSP		Cowpeas	220.00	kg	
Nov2005	Eastern	Petauke	IITA	Feni	Cassava	140.00	Bundles	39
Nov2005	Eastern	Petauke	IITA	Chiparamba	Cassava	140.00	Bundles	18
Nov2005	Eastern	Petauke	IITA	M'tenguleni	Cassava	130.00	Bundles	42
Nov2005	Eastern	Petauke	IITA	Chitasa	Cassava	130.00	Bundles	74
Dec2003	Eastern	Petauke	PAM	Mawanda	Maize	495.00	kg	99
Dec2003	Eastern	Petauke	PAM	Msanzala	Maize	750.00	kg	150
Dec2003	Eastern	Petauke	PAM	Makale	Maize	600.00	kg	120
Dec2003	Eastern	Petauke	PAM	Mwelwa	Maize	190.00	kg	38
Dec2003	Eastern	Petauke	PAM	UkwimiCDC	Maize	750.00	kg	150
Dec2003	Eastern	Petauke	PAM	Chiputula	Maize	430.00	kg	86
Dec2003	Eastern	Petauke	PAM	Chilimanyama	Maize	600.00	kg	120

Dec2003	Eastern	Petauke	PAM	Chimate	Maize	420.00	kg	84
Dec2003	Eastern	Petauke	PAM	Chimtanda	Maize	1,500.00	kg	300
Dec2003	Eastern	Petauke	PAM	SouthNI	Maize	500.00	kg	100
Dec2003	Eastern	Petauke	PAM	SouthNII	Maize	200.00	kg	40
Dec2003	Eastern	Petauke	PAM	NyamiaFarms	Maize	500.00	kg	100
Dec2003	Eastern	Petauke	PAM	Kapungwe	Maize	700.00	kg	140
Dec2003	Eastern	Petauke	PAM	Mwanawanthu	Maize	1,000.00	kg	200
Dec2003	Eastern	Petauke	PAM	Mando/Matonje	Maize	1,100.00	kg	220
Dec2003	Eastern	Petauke	PAM	Manjazi	Maize	500.00	kg	100
Dec2003	Eastern	Petauke	PAM	Chataika	Maize	750.00	kg	150
Dec2003	Eastern	Petauke	PAM	Mondola	Maize	500.00	kg	100
Dec2003	Eastern	Petauke	PAM	Chilimanyama	Groundnuts	500.00	kg	100
Dec2003	Eastern	Petauke	PAM	Chimate	Groundnuts	90.00	kg	18
Dec2003	Eastern	Petauke	PAM	SouthNII	Groundnuts	400.00	kg	80
Dec2003	Eastern	Petauke	PAM	NyamiaFarms	Groundnuts	640.00	kg	128
Dec2003	Eastern	Petauke	PAM	Mondola	Groundnuts	1,000.00	kg	200
Dec2003	Eastern	Petauke	PAM	Mawanda	Beans	742.50	kg	99
Dec2003	Eastern	Petauke	PAM	Msanzala	Beans	562.50	kg	75
Dec2003	Eastern	Petauke	PAM	Makale	Beans	900.00	kg	120
Dec2003	Eastern	Petauke	PAM	Mwelwa	Beans	285.00	kg	38
Dec2003	Eastern	Petauke	PAM	UkwimiCDC	Beans	1,125.00	kg	150
Dec2003	Eastern	Petauke	PAM	Chiputula	Beans	322.50	kg	43
Dec2003	Eastern	Petauke	PAM	Chilimanyama	Beans	450.00	kg	60
Dec2003	Eastern	Petauke	PAM	Chimate	Beans	315.00	kg	42
Dec2003	Eastern	Petauke	PAM	Chimtanda	Beans	3,022.50	kg	403
Dec2003	Eastern	Petauke	PAM	SouthNI	Beans	375.00	kg	50
Dec2003	Eastern	Petauke	PAM	SouthNII	Beans	150.00	kg	20
Dec2003	Eastern	Petauke	PAM	NyamiaFarms	Beans	375.00	kg	50
Dec2003	Eastern	Petauke	PAM	Kapungwe	Beans	525.00	kg	70
Dec2003	Eastern	Petauke	PAM	Mwanawanthu	Beans	1,500.00	kg	200
Dec2003	Eastern	Petauke	PAM	Mando/Matonje	Beans	825.00	kg	110
Dec2003	Eastern	Petauke	PAM	Manjazi	Beans	750.00	kg	100
Dec2003	Eastern	Petauke	PAM	Chataika	Beans	1,125.00	kg	150
Dec2003	Eastern	Petauke	PAM	Mondola	Beans	375.00	kg	50
Mar2006	Eastern	Petauke	PAM		Maize	6,000.00	kg	
Mar2006	Eastern	Petauke	PAM		Beans	1,125.00	kg	
Mar2006	Eastern	Petauke	PAM		Soyabeans	3,750.00	kg	
Mar2006	Eastern	Petauke	PAM		Cassava	600.00	Cuttings	
Mar2006	Eastern	Petauke	PAM		Cowpeas	225.00	kg	
Mar2006	Eastern	Petauke	PAM		Groundnuts	1,690.00	kg	
Nov2004	Southern	Gwembe	FAO/Africare		Cassava	5.00	ha	6
Mar2006	Southern	Kalomo	PAM	Chinkoyi	Cassava	1.00	lima	2
Mar2006	Southern	Kalomo	PAM	Luyaba	Cassava	4.00	lima	2
Mar2006	Southern	Kalomo	PAM	Sipatunyama	Cassava	0.50	lima	1
Nov2004	Southern	Namwala	FAO/Africare		Cassava	5.00	ha	5
Nov2004	Southern	Siavonga	FAO/Africare		Cassava	5.00	ha	12
Nov2005	Southern	Sinazongwe	FAO	Kafwimbila	Maize	50.00	kg	38
Nov2005	Southern	Sinazongwe	FAO	Muuka	Maize	25.00	kg	40
Nov2005	Southern	Sinazongwe	FAO	Muuka/Dengoza	Maize	25.00	kg	32
Nov2005	Southern	Sinazongwe	FAO	Maamba	Maize	50.00	kg	38
Nov2005	Southern	Sinazongwe	FAO	Muziyo	Maize	50.00	kg	41
Nov2005	Southern	Sinazongwe	FAO	Mwananjoke	Maize	50.00	kg	43
Nov2005	Southern	Sinazongwe	FAO	Munyati	Maize	50.00	kg	28
Nov2005	Southern	Sinazongwe	FAO	Malima	Maize	50.00	kg	33
Nov2005	Southern	Sinazongwe	FAO	Nkandabbwe	Maize	11.00	kg	31
Nov2005	Southern	Sinazongwe	FAO	Siameja/Nyanja	Maize	50.00	kg	33
Nov2005	Southern	Sinazongwe	FAO	Mwezya	Maize	50.00	kg	34

Nov2004	Southern	Sinazongwe	FAO/Africare		Cassava	5.00	ha	6
Mar2006	Southern	Sinazongwe	PAM	Kapumba	Cassava	3,432.00	Cuttings	83
Mar2006	Southern	Sinazongwe	PAM	Nalumino	Cassava	832.00	Cuttings	8
Mar2006	Southern	Sinazongwe	PAM	Mweru	Cassava	4,680.00	Cuttings	45
Mar2006	Southern	Sinazongwe	PAM	Bangweulu	Cassava	1,665.00	Cuttings	16
Nov2004	Western	Kalabo	FAO/WVZ		Cassava	6.67	ha	8
Nov2004	Western	Lukulu	FAO/WVZ		Cassava	6.67	ha	6
Nov2004	Western	Mongu	FAO/WVZ		Cassava	6.67	ha	6
Nov2007	Western	Sesheke	WFP/PUSH	Mulimambago	Cassava	2.00	lima	653
Nov2007	Western	Sesheke	WFP/PUSH	Kalobolelwa	Cassava	2.00	lima	410
Nov2007	Western	Sesheke	WFP/PUSH	Mwandi	Cassava	2.00	lima	436
Nov2007	Western	Sesheke	WFP/PUSH	Maondo	Cassava	2.00	lima	400
Nov2007	Western	Sesheke	WFP/PUSH	Simungoma	Cassava	2.00	lima	202
Nov2007	Western	Sesheke	WFP/PUSH	Magumwi	Cassava	2.00	lima	200
Nov2007	Western	Sesheke	WFP/PUSH	Luanja	Cassava	2.00	lima	434
Nov2007	Western	Sesheke	WFP/PUSH	Sankolonga	Cassava	2.00	lima	365
Nov2007	Western	Sesheke	WFP/PUSH	Mabumbu	Cassava	2.00	lima	395

## Annex 6. Record of Field Interviews

### Lusaka

#### 1. Wildlife Conservation Society HQ

Attendants	Mr. Moses Siachoono (Deputy Country Director), Ruth Nabuyanda (Programme Coordinator)		
Interviewer	Mr. Ndiyoi, Dr. Simwambana, Paul Kapapula (FASAZ)		
Date/Time	January 11, 2007 12:00 – 13:00	Venue	WCS Office, Rhodes Park, Lusaka
Points of discussion			
<ul style="list-style-type: none"> <li>• The society has activities in Lundazi, Chama and Mambwe</li> <li>• The interest for WCS has been to move households from Poaching to agriculture. Agriculture offers an alternative livelihood.</li> <li>• During the transition from a poacher to a farmer, the household is provided with food for assets by WFP.</li> <li>• The aerial surveys done yearly indicate an increase in wildlife numbers supporting the success in moving poachers to agriculture.</li> <li>• WCS has sponsored the establishment of CBO, Community Markets for Conservation (COMACO), to help in the marketing of produce.</li> <li>• Cassava was first introduced to the programme in 2004/05 through the FAO-RIACSO emergency programme. 1 Hactare was established in each chiefdom.</li> <li>• The 1 ha nurseries were hosted by one farmer who had demonstrated interest in agriculture in each chiefdom. The host was a member of a group.</li> <li>• A total of 20 ha were established in the first year (7ha in Mambwe, 3ha in Chama, 10 ha in Lundazi). Subsequently another 6 ha each were added to Mambwe and Lundazi.</li> <li>• Individual farmers could handle 1 lima plots</li> <li>• It was not yet established how much area of cassava would be needed to support an average household (of six).</li> <li>• Farmers were trained in utilization such as making nshima from cassava and other uses. There is need to hire support in cassava processing and utilization at household level.</li> <li>• The FRA is possible channel for marketing cassava</li> <li>• Cassava production is viable in the areas of operation. What is required is access to high yielding and early maturing varieties.</li> <li>• The Cost of running the programme would include items listed below. Details would be obtainable from the accounts department. <ul style="list-style-type: none"> <li>➤ Distribution of cuttings</li> <li>➤ Monitoring</li> <li>➤ Recoveries</li> <li>➤ Communications</li> <li>➤ Stationery</li> </ul> </li> <li>• Contacts with WCS (01 226082, 01-234286) <ul style="list-style-type: none"> <li>➤ Programme coordinator – Ruth Nabuyanda 096-433875</li> <li>➤ Deputy Country Director – Mr Moses Siachoono 097-485957</li> <li>➤ Luangwa Regional Coordinator – Mr Handsen Mseteka 097-707297</li> <li>➤ Chongwe Extension Officer in Charge – Mr Innocent Tembo 099-725112</li> <li>➤ Mambwe Regional Coordinator – Mr Whiteson Daka 097-193910</li> <li>➤ Lundazi Regional Coordinator – Mr Nemiah Tembo 095-435323</li> </ul> </li> <li>• The major problem for the farmers is the availability of planting materials.</li> <li>• Other Matters <ul style="list-style-type: none"> <li>➤ Discuss Possible entry mechanism <ol style="list-style-type: none"> <li>a. Establish what varieties were promoted in the programme</li> </ol> </li> </ul> </li> </ul>			

### Siavonga

#### 1. Siavonga Nutrition Group

Attendants	Ms Sara (Volunteer Nutritionist from Kenya)		
Interviewer	Mr. M. Ndiyoi, Dr. M. Simwambana (FASAZ), Mr. M. Chiona, Mr. M. Ndhlovu (ZARI)		
Date/Time	January 17, 2007	Venue	Siavonga Nutrition Group Office
Points of discussion			

- Generally people of the valley areas are malnourished
- Prevalent type of malnutrition is the protein/energy malnutrition
- Trying to address the problem through introduction of leguminous crops such as beans which are not very common in the area.

## 2. Department Community Development

Attendants	Mr Chrispin Ntalasha (Development Officer)		
Interviewer	Mr. M. Ndiyoi, Dr. M. Simwambana (FASAZ), Mr. M. Chiona, Mr. M. Ndhlovu (ZARI), Mr. Suzuki (JICA)		
Date/Time	January 17, 2007	Venue	Community Development Office
Points of discussion			
<ul style="list-style-type: none"> <li>• Hosts the PAM Food Packs programme that distributes inputs to vulnerable but viable farmers</li> <li>• Distributed cassava to farmers in the programme usually as the last crop to be given out.</li> <li>• Cassava cuttings delivered late and in most cases dry due to procurement procedures that do not take into account the behaviour of the crop.</li> </ul>			

## 3. MACO (Siavonga district)

Attendants	Mr Simulunda (DACO), Mr. Chanda Bwalya (SAO)		
Interviewer	Mr. M. Ndiyoi, Dr. M. Simwambana (FASAZ), Mr. M. Chiona, Mr. M. Ndhlovu (ZARI)		
Date/Time	January 18, 2007	Venue	DACO's Office
Points of discussion			
<ul style="list-style-type: none"> <li>• Most cassava is grown in Lufunsa</li> <li>• Manyopola variety is on demand for its maturity and sweetness. However, it is susceptible to cassava mosaic disease and produces small roots.</li> <li>• Other varieties distributed in the district are Nalumino, Kapumba and Mweru.</li> <li>• There is a good market for both cuttings and roots.</li> <li>• One farmer growing cassava to feed pigs in Kanakantapa.</li> <li>• Goats are major pests that need to be controlled.</li> <li>• Nyangwenya and Bundabunda block experience termite problems</li> <li>• Sweetpotato seed grown in Kanakantapa by five seed growers (one of them is Colonel Kalala) for sell. Sweetpotato is grown under irrigation during the dry season.</li> <li>• Sweetpotato seed is grown under irrigation; Variety is Chingovwa.</li> <li>• Several organizations operate in the area like Christian Children's Fund, World Vision Zambia, PAVIDEA, HEIFER International, LAND O LAKES and District Farmers Association</li> <li>• The District has 31 camps in five Blocks. All the camps are manned.</li> <li>• PAM has organized some workshops on processing and utilization.</li> </ul>			

## Chongwe

### 1. Chongwe District Farmers' Association (ZNFU)

Attendants	Mr Emack Kaoma (Agribusiness Manager)		
Interviewer	Mr. M. Ndiyoi, Dr. M. Simwambana (FASAZ), Mr. M. Chiona, Mr. M. Ndhlovu (ZARI)		
Date/Time	January 18, 2007	Venue	District Office
Points of discussion			
<ul style="list-style-type: none"> <li>• Association supported by ZNFU and MS Zambia.</li> <li>• Involved in capacity building, run information centres, provides organisational and leadership skills, encourage diversification and help look for markets and provide linkages through company and producer interactions.</li> <li>• Ms Zambia helps with governance issues targeted at councillors, chiefs, headmen and Members of Parliament.</li> <li>• Promoting paprika, soybean and sunflower. Have a paprika project with ZYOKO company and PROPHET (USAID) involving 75 farmers but intend to increase the number to 300 – 400. Mineland Agricultural Development Company is sunflower production with 160 farmers involved. Working with companies guarantees a market.</li> <li>• Collaborates with Heifer goat project since 2006. Also, collaborates with SHEMA on agribusiness issues.</li> </ul>			

- Have seed growers in the Association who are currently producing open pollinated maize.
- District population is 144,736 among which are 27,804 farm households with 16,500 being small scale farmers.
- District growth rate is 4.2%.

## 2. Christian Children's Fund

Attendants	Mr Malone Zulu (Agricultural Development Coordinator), Mr Victor Koyi (Director)		
Interviewer	Mr. M. Ndiyoi, Dr. M. Simwambana (FASAZ), Mr. M. Chiona, Mr. M. Ndhlovu (ZARI)		
Date/Time	January 18, 2007; 15:15hrs	Venue	Lusaka Main Office
Points of discussion			
<ul style="list-style-type: none"> <li>• CCF is a developmental agency established in 1983 and operates in Eastern, Central and Southern provinces.</li> <li>• Help communities to form CBO's which they help register. These are their running points for communities.</li> <li>• Help build capacity that help bring development in communities.</li> <li>• Areas of need that the organization has facilitated are Health (run nutritional programmes), Education (build schools, helped early childhood development) and economic livelihood areas (livestock restocking and food security).</li> <li>• In Lusaka operate in Chongwe, Luangwa and Lusaka where they are a lead NGO for the PAM's Food Security Pack programme.</li> <li>• Luangwa needs special attention because of challenges of floods, drought, hippos and elephants.</li> <li>• Issues that need dealing with in communities are <ul style="list-style-type: none"> <li>○ Marketing</li> <li>○ Change of culture (mind set of people)</li> <li>○ Need promotional messages (esp. on processing and utilization of crops being introduced)</li> <li>○ Issues of ownership</li> <li>○ Stakeholder involvement (this can create ownership)</li> <li>○ Management of partnerships</li> <li>○ Involvement of District Coordinating Committees, chiefs</li> </ul> </li> <li>• Conducted awareness training on processing and utilization in Chongwe District for cassava and sweetpotato in 2002 targeted at 800 households.</li> <li>• 6000 households supported with cassava cuttings in Chongwe, Mumbwa and Kafue.</li> <li>• Obtained Manyopola from Lufunsa and three other varieties from Kaoma (including Mweru).</li> <li>• Each household provided with three bundles to plant a Lima.</li> <li>• Sweetpotatoes have a high potential. In 2003, Kanakatapa had a bumper harvest that was difficult to handle.</li> <li>• Working with 10 cooperatives; have capacity to preserve planting materials but pigs and goats are problematic.</li> <li>• Need for training on cultural practices and water harvesting techniques</li> <li>• Willing to partner with FODIS and pilot some activities if required.</li> </ul>			

## 3. MACO (Nkomesha Block)

Attendants	Mr Phiri (Agricultural Camp Officer)		
Interviewer	Mr. M. Ndiyoi, Dr. M. Simwambana (FASAZ), Mr. M. Chiona, Mr. M. Ndhlovu (ZARI)		
Date/Time	January 19, 2007	Venue	Kampeketete Camp
Points of discussion			
<ul style="list-style-type: none"> <li>• Cassava is grown on a small scale. Farmers grow less than half-lima.</li> <li>• Cassava was introduced by PAM with the distribution of Manyopola.</li> <li>• CLUSA had brought in cassava and sweetpotato cuttings but are no longer in the area.</li> <li>• World vision Zambia has given five farmers to multiply sweetpotato.</li> <li>• Organizations bring cuttings and dump them at a school without prior arrangements with farmers. Materials end up drying before they are planted due to the poor delivery system.</li> <li>• Have had experience with Chingovwa which they claimed preserves poorly in the dry season, has problems with weevils and requires irrigation to maintain it. Because many farmers can not afford to irrigate, they depend on sprouts from indigenous varieties where available.</li> <li>• Fresh market is available in Chongwe for sweetpotato.</li> </ul>			

- Major problems: Pigs eat roots and cattle and goats eat leaves. There will be need for fencing the crop as animals are left to graze free-range during the dry season when cassava is the only green plant standing.
- Women groups have been introduced to processing and utilization
- Major crops grown in the area are maize and groundnuts. Others are soybean, sunflower, cowpea, sorghum (problem with birds) and cotton.
- Require training in the identification of pests and diseases and other crop cultural/agronomic aspects.

#### 4. A Farmer (Nkomesha Block-Kampeketete Camp)

Attendants	Mrs Unice Chimankamba (Farmer)		
Interviewer	Mr. M. Ndiyoi, Dr. M. Simwambana (FASAZ), Mr. M. Chiona, Mr. M. Ndhlovu (ZARI)		
Date/Time	January 19, 2007	Venue	Kampeketete Camp
Points of discussion			
<ul style="list-style-type: none"> <li>• Started growing cassava seriously in 2003 with 2 limas. Previously she was growing a few plants. She grew Manyopola which she got from Chinyunyi. She was the only one who managed to raise the plants in the area. Others complained of termite and drying problems which was the result of late delivery of cuttings in March.</li> <li>• World vision had been supplying cuttings in the area except the last two years.</li> <li>• She has never received any technical advice. There is need for some technical information to be provided prior to distribution of cuttings to ensure success.</li> <li>• The neighbour's pigs destroyed all the cassava in August.</li> <li>• Grew sweetpotato (variety Chingovwa) which she bought in Chongwe but also eaten by pigs.</li> <li>• Need to put a fine on pigs eating root crops to curb the destruction. Farmers need to find a solution themselves.</li> <li>• Uses sweetpotato for selling fresh to raise money for school children and for grinding maize.</li> <li>• Consumes sweetpotato by boiling and eating.</li> </ul>			

#### 5. MACO (Chongwe Block)

Attendants	Mr Simwami (Block Extension Officer)		
Interviewer	Mr. M. Ndiyoi, Dr. M. Simwambana (FASAZ), Mr. M. Chiona, Mr. M. Ndhlovu (ZARI)		
Date/Time	January 19, 2007; 15:00hrs	Venue	Kanakantapa Camp
Points of discussion			
<ul style="list-style-type: none"> <li>• The camp has 1500 farmers who have been sensitized to take farming as a business.</li> <li>• Minimum farm size is 4 ha and maximum is 15 ha</li> <li>• Small-scale farmers (rainfed mainly) grow maize, cowpea and sunflower.</li> <li>• Medium-scale farmers (irrigated) grow rape, impwa, green maize and tomato.</li> <li>• Farmers have been sensitized mostly for cassava in Kanakantapa Camp by PAM.</li> <li>• Need to train cassava and sweetpotato seed inspectors. Also need to train farmers in production and marketing.</li> <li>• The Food Security Pack brought Nalumino variety the previous day that was given to 30 farmers to plant have half a lima on average. Other farmers have only a few plants here and there.</li> <li>• Farmers require sweet varieties.</li> <li>• CLUSA distributed cassava cuttings previously and stopped last year.</li> <li>• There is good animal control in Kanakantapa due to strict rules made and enforced by the community.</li> <li>• Nurseries can be established along river banks.</li> <li>• Cassava production has not expanded much due to limited market.</li> <li>• Cassava mosaic disease is rampant in the area.</li> <li>• There are two sweetpotato seed growers who produced 500 x 50kg Chingovwa seed under irrigation. They sold each bag at K15,000/bag. Farmers were identified by extension and given 10 x 50kg bag to set up.</li> <li>• Moles are a problem in sweetpotato fields.</li> <li>• Transport is not a problem in the area as it is serviced by GRZ and the Smal Scale Irrigation Project.</li> <li>• There is a Kanakanapa Farmers' Association comprising 14 villages with a committee. It has organized cooperatives and women groups that are keeping dairy goats supported by HEIFER International. Women from each village are members of women's' groups.</li> <li>• The departments of Forestry, Community Development, Heifer project, MACO and the Department of Resettlement work as a team and share the office.</li> </ul>			

## 5. MACO (Rufunsa Block)

Attendants	Mr Kasuba Whiteson, Mrs B.W. Kasuba,		
Interviewer	Dr. M. Simwambana (FASAZ), Mr. M. Ndhlovu (ZARI)		
Date/Time	05/02/07 10.30 -11.30 hr	Venue	Rufunsa Block office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ 5 Agric camps- Rufunsa, Munsanya, Lukwipa, Mumpanshya and Shikabeta</li> <li>▪ Cassava is grown in Chimusanya, Mumpanshya and Rufunsa camps.</li> <li>▪ Cassava variety grown – maniopola, is sweet and early bulking.</li> <li>▪ 2006/07 season – production may drop due outbreak of CMD</li> <li>▪ More farmers adopted cassava because of good market in Lusaka</li> <li>▪ In 2002/03 PAM/SHAPES distributed cassava and sweetpotato planting material.</li> <li>▪ WVI also had also distributed only cassava.</li> <li>▪ Mumpashya has highest cassava hectarage and sweetpotato is commonly grown in Rufunsa and Chimusanya camps.</li> <li>▪ Only a few farmers have little sweetpotato vines because of poor maintenance of the material after harvesting.</li> <li>▪ Proposed nursery sites- Cassava and sweetpotato in Chimusanya and Mumpanshya. Lukwipa camp only sweetpotato.</li> <li>▪ Individual farmers could look after the nurseries.</li> <li>▪ In Chimusanya camp could use a communal nursery with CCF group of farmers.</li> <li>▪ A bundle of 100 sticks (1m) sells @ K5,000 amongst farmers and K10,000 to NGO.</li> <li>▪ Need to sensitize farmers in processing and utilization.</li> <li>• There are a lot of losses for cassava sold fresh on the market.</li> </ul>			

## 6. A farmer (Rufunsa camp)

Attendants	Mr and Mrs Chapula B., Mr Kasuba Whiteson		
Interviewer	Dr. M. Simwambana (FASAZ), Mr. M. Ndhlovu (ZARI)		
Date/Time	05/02/07 12.00 -13.00 hr	Venue	Chapula's farm
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Have about 2 ha. of cassava – maniopola</li> <li>▪ They harvested 99 x 25 kg bags of fresh tuberous roots cassava and some of it left in the field – 10 months old.</li> <li>▪ They prefer sweet cassava varieties.</li> <li>▪ Complained of market problem to sell their cassava. Soweto is has at times gluts and cassava just wasted.</li> <li>▪ The farmer is prepared to try new cassava varieties.</li> <li>▪ The field had about 70% infection of CMD.</li> </ul>			

## Choma

### 1. MACO – Southern Province

Attendants	PACO, Mrs Epi Chipopola (PAM Coordinator), Mr Collins Nkatiko (Former PACO)		
Interviewer	Mr. M. Ndiyoi (FASAZ), Mr. M. Chiona (ZARI), Mr A. Suzuki (JICA)		
Date/Time	January 22, 2007	Venue	PACO's Office
Points of discussion			
<ul style="list-style-type: none"> <li>• Project will need to address the distribution system for cuttings that is not there at the moment.</li> <li>• Sensitization need to be done properly. There will be need to create demand for cassava.</li> <li>• Training can organized and targeted at extension, farmers and civic leaders.</li> <li>• One Member of Parliament spoiled promotion activity by saying cassava was poisonous in his closing speech.</li> <li>• Promotion to target processing and utilization into products for daily use.</li> <li>• Goats are a problem – one farmer camps to protect his cassava.</li> <li>• There is good uptake of cassava in Sinazongwe than Gwembe.</li> <li>• Crop in Sinazongwe is infested with a whitish pest (later identified as scales).</li> <li>• Do not know the varieties being brought into the province by contractors.</li> <li>• Planting material is obtained from Itezhi-tezhi and Namwala.</li> <li>• Valley areas are prominent for cassava. Farmers get some income from sell of cuttings.</li> <li>• PAM has distributed cassava to 100 beneficiaries in each district for 2006/7 season.</li> <li>• Pricing for cuttings is a problem due to NGOs offering different prices for cuttings.</li> </ul>			

- Bangweulu is the most prominent variety though farmers would prefer sweet varieties that can be cooked or eaten raw.
- There is serious training need for field extension officers in production, processing and utilization.
- Choma Milling was selling blended flour of 60:40 cassava to maize at a price less than maize only.
- Several organizations work in the province. Some of the are WVI, CFU, Catholic Relief Service, Africare, Care International, Harvest Help, CELIM, PLAN, ARS, Red Cross and Monze Diocese.
- Project should get information on the new CFU-NORAD Project that will be promoting jatrofa, cassava and maize.

## 2. Choma Milling Company

Attendants	Marketing Manager		
Interviewer	Mr. M. Ndiyoi (FASAZ), Mr. M. Chiona (ZARI)		
Date/Time	January 23, 2007	Venue	Choma Milling Offices
Points of discussion			
<ul style="list-style-type: none"> <li>• The company has been producing cassava blended meal for GTZ project with 70% cassava and 30% maize meal.</li> <li>• The surplus from the project was off-loaded to the market.</li> <li>• The company cannot continue to produce the blended meal due to limited volumes of cassava. It takes while to get sufficient quantities from sources hence expensive to acquire cassava in terms of time and transport. In addition, it is not economical to run a mill with small quantities of either maize or cassava.</li> <li>• Cassava was bought from Itezhi-tezhi where farmers prefer selling the cassava by bucket rather than scale as required by the company.</li> <li>• Price of the blend was higher than maize alone.</li> </ul>			

## Sinazongwe

### 1. Kaluli Development Foundation

Attendants	Mr Nyambe Luhila (Foundation Manager), Mr Killian Muleya (Project Officer – Sustainable Agriculture)		
Interviewer	Mr. M. Ndiyoi (FASAZ), Mr. M. Chiona (ZARI)		
Date/Time	January 23, 2007	Venue	Foundation office
Points of discussion			
<ul style="list-style-type: none"> <li>• The foundation is concerned with the promotion and facilitation of economic, social, environmental and spiritual development of the inhabitants of the Gwembe Valley and outlying areas.</li> <li>• They embrace the Low External Input Sustainable Agriculture. Also, they are involved in soil and water conservation, Livestock management, Postharvest which they have merged with seed multiplication, construction of improved storage bins and small scale irrigation and fish farming.</li> <li>• The foundation uses a community based extension approach. They have 26 Community Agricultural Workers (identified literate farmers). Two of them are not active. The workers link with Camp Officers. This system has improved extension coverage in areas traditionally not covered by MACO staff.</li> <li>• Promote cassava through the diversification and sustainable agriculture project.</li> <li>• Promoted cassava with PAM-FSP in the current season. Materials were sourced from Itezhi-tezhi because the price locally was too high (K450/cutting). PAM was offering K200/cutting.</li> <li>• In the past, they got materials from NWP.</li> <li>• They were told Nalumino, Kapumba, Mweru, and Bangweulu were distributed but were not labelled.</li> <li>• Challenges faced were delivering dry cuttings and termite attack of the materials. The delivery of inputs was late and the quality of materials was questionable.</li> <li>• Growers prefer sweet varieties that they use as a breakfast food with tea.</li> <li>• Cassava is marketed fresh and leaves are widely eaten.</li> <li>• There is need for training on postharvest and utilization.</li> <li>• Generally farmers are given some agronomic training before cuttings are given.</li> <li>• The problem of animals is serious and fencing is required to protect the crop.</li> <li>• They received sweetpotato in 2003/4 season. Sweetpotato (Chingovwa) is preferred than cassava and has been used for Hunger Stop Gap.</li> <li>• In times of drought, farmers survive through selling of animals, gardening in wetlands, charcoal burning and production of millet and sorghum that are drought tolerant.</li> <li>• The Foundation has three extension officers one of whom is from government.</li> <li>• The Foundation has vehicles for mobility, tractor and a 7 ton truck.</li> </ul>			

- They are willing to partner with FODIS.

## 2. MACO – Sinazongwe District

Attendants	Mr Ntundu Koanga (SAO) Mr Stephen Chitila (DACO)		
Interviewer	Mr. M. Ndiyoi (FASAZ), Mr. M. Chiona (ZARI)		
Date/Time	January 23, 2007	Venue	MACO Offices
Points of discussion			
<ul style="list-style-type: none"> <li>• The district is one of the dry places in the country.</li> <li>• Last was a deficit year. It was the only district that failed to produce surplus maize to sell to FRA.</li> <li>• Farmers survive the hunger periods through handouts from WV, Red cross, WFP and Office of the Vice President. Others trade in fish while others get a job if they can find one.</li> <li>• Cassava production is non-existent; few farmers have it. Farmers have failed to combine cassava and livestock production. Why farmers do not herd their animals in the dry season is a mystery.</li> <li>• Farmers who have managed to maintain cassava plants have fenced their fields.</li> <li>• Framers with cassava sell to NGO's that buy planting materials, boil and eat roots and sell some on roadsides. Leaf consumption is also possible.</li> <li>• Root crops have been distributed in the area by PAM through the FSP. This year only cassava has been given out.</li> <li>• Committees under PAM-FSP train farmers in conservation methods and cassava production prior to distributing cuttings.</li> <li>• FAO has had some cassava promotional activities in the areas but not well organized.</li> <li>• Support for root crops comes as relief. There is need to have concentrated area of focus and spread slowly (start small and grow slowly).</li> <li>• Cassava has been sourced from LP, NWP and Itezhi-tezhi.</li> <li>• PAM-SHAPES has promoted the processing aspect.</li> <li>• Preserving sweetpotato vines is a challenge. The vines are always in short supply. Some manage to raise the vines along the lake shore.</li> <li>• Areas around Sinazeze are suitable for cassava production. The Framer Training Centre is also available.</li> <li>• Farm sizes are usually less than 2ha. For promoting cassava under FODIS half a lima may be ideal for fencing reasons.</li> <li>• The district has 17 camps in four blocks. Five camps are not manned to lack of houses. Every Camp Officer has a motorcycle.</li> </ul>			

## 3. World Vision Zambia – Area Development Project

Attendants	Mr Lutangu Lubasi (Project Manager), Ms Listy Kambwa (Agricultural Development Facilitator)		
Interviewer	Mr. M. Ndiyoi (FASAZ) and Mr. M. Chiona (ZARI)		
Date/Time	January 24, 2007	Venue	ADP Offices
Points of discussion			
<ul style="list-style-type: none"> <li>• The ADP was established in 1998 and will end in 2013.</li> <li>• The ADP undertakes activities in the following components: agriculture, gender, education (establish schools), advocacy, HIV/AIDS, Children sponsorship (health and school), Health (immunization and infrastructure) and capacity building.</li> <li>• The agriculture component aims at improving the food security of the area. The component deals with livestock, irrigation, food diversification and capacity building in conservation soil conservation.</li> <li>• The ADP has zonal committees at village level that hold meetings monthly.</li> <li>• The area has perennial dry spells.</li> <li>• The ADP supported cassava by providing half lima of material to farmers in 2003. However, no follow-up was made though there are indications that some farmers have increased their areas to a lima. Sweetpotato was not supported.</li> <li>• They have promoted maize, groundnut, sorghum, beans from PAM. Very few farmers have been given cassava.</li> <li>• Cassava is used for eating and sell.</li> <li>• Cassava is a new crop that require slow introduction. It needs close monitoring and provision of backup information.</li> <li>• Farmers need to be taught and appreciate how to utilize cassava.</li> <li>• Good agricultural areas are Malima and Syanakasikili. There is settled with some Bembas who can be used for introducing cassava.</li> </ul>			

- There is an irrigation project in Kandabwe that is promoting the use of treadle pumps.
- The best way to get into the area is through headmen who can help identify influential farmers to work with. Use of community structures as entry points advised.
- Schools can be used for nurseries and for promotional activities. Production units can also be useful.
- The problem of animals can be addressed by use of acacia or jatropa fencing.
- CARE had cleared 10ha at one time in the South for planting cassava but never delivered the cuttings.
- The ADP has potential for continuity since they will be available longer than FODIS.
- The ADP has linkages with other ADP's in the country and head office. This can facilitate replication of activities.
- There is need for consistency in the delivery of innovations in new areas.

#### 4. A Farmer – Sinazongwe

Attendants	Mr Imbua Lutangu (Farmer)		
Interviewer	Mr. M. Ndiyoi (FASAZ) and Mr. M. Chiona (ZARI)		
Date/Time	January 24, 2007	Venue	Farm House
Points of discussion			
<ul style="list-style-type: none"> <li>• Grew cassava 2 – 3 years ago but pigs destroyed the crop.</li> <li>• Was preparing land to plant fresh crop but had no seed. The Block Officer had promised to find seed for him but had not delivered.</li> </ul>			

#### 5. A Farmer-Sinazongwe

Attendants	Mrs Mbazima (Farmer)		
Interviewer	Mr. M. Ndiyoi (FASAZ) and Mr. M. Chiona (ZARI)		
Date/Time	January 24, 2007	Venue	Farm House
Points of discussion			
<ul style="list-style-type: none"> <li>• Has been growing both cassava and sweetpotato in a fenced area but somehow pigs managed to get in and destroyed the crop.</li> <li>• Was repairing the fence to make it pig-tight. Nevertheless, she has few plants of cassava and sweetpotato that she intends to multiply.</li> <li>• She irrigates her crops with tap water.</li> <li>• Processes cassava into flour by first soaking it in containers then drying it before taking to the mill.</li> </ul>			

#### 6. A Farmer-Sinazongwe – Mwezya Camp

Attendants	Mr Petrol Bule (Farmer), Mr George Munakango (BEO)		
Interviewer	Mr. M. Ndiyoi (FASAZ) and Mr. M. Chiona (ZARI)		
Date/Time	January 24, 2007	Venue	Syankwazi Village
Points of discussion			
<ul style="list-style-type: none"> <li>• Has a very good stand of Mweru in a fenced that he obtained as relief from FAO on 28/02/2004. Area under the crop is 45m x 75m.</li> <li>• The crop had scale insects that made the SAO reject the crop for sell to PAM and other organizations.</li> <li>• Advised to spray the scales or select clean materials for sell. Otherwise the crop was like nothing we have ever seen. The plants were more than three metres.</li> <li>• Farmer was preparing land to expand the areas to more than a hectare.</li> <li>• One other farmer (Ms Sikalulu – not present) in the same village had a good stand of Mweru. However, it was not properly managed and fire went through. The crop had just sprouted and was tender.</li> <li>• Another farmer (Mr Samson Siasumo – not present) of Siakabila village in Sinazeze Camp had mixed varieties most of which had CMD and was weedy.</li> </ul>			

### Monze

#### 1. World Vision Zambia - Monze

Attendants	Mr Fred Mazumba (Programme Manager)		
Interviewer	Mr. M. Ndiyoi (FASAZ) and Mr. M. Chiona (ZARI)		
Date/Time	January 25, 2007	Venue	Lumbo ADP Office
Points of discussion			
<ul style="list-style-type: none"> <li>• The manager is new in Monze but has worked in the promotion of cassava and sweetpotato in Kawambwa, Luapula Province. He can use the experience from Luapula to help in the promotion of root crops in Gwembe where they have activities.</li> </ul>			

- The organization is mainly concerned with promoting livestock. However, they are willing to partner with FODIS.

## 2. Monze Catholic Diocese

Attendants	Mr Mambo Mainza (Agriculture Programmes Coordinator)		
Interviewer	Mr. M. Ndiyoi (FASAZ) and Mr. M. Chiona (ZARI)		
Date/Time	January 25, 2007	Venue	Diocese Office
Points of discussion			
<ul style="list-style-type: none"> <li>• The Diocese operates in three Parishes where they target 30 households (HH) in three areas of each Parish. This translates into 90 HH targeted in each parish.</li> <li>• The organization is enhancing sustainable agriculture by promoting technologies that renew the resources. They use no chemicals in their agricultural production. They promote agroforestry, intercropping and use of organic manure.</li> <li>• They are lagging behind in processing, utilization and marketing of cassava.</li> <li>• Cassava and sweetpotato are grown as a snack.</li> <li>• Storage of fresh sweetpotato is a challenge for the growers and will need help.</li> <li>• Their entry point in communities is at family level.</li> <li>• They conduct cost sharing trainings where the Diocese pays the trainers and the recipients pay for food and other incidentals.</li> <li>• Use the pass on system to distribute inputs to communities.</li> <li>• Promote the crops at a small scale to avert drought when it occurs.</li> <li>• People's dignity should be restored through commercializing the crops.</li> </ul>			

## Gwembe

### 1. MACO (Gwembe District)

Attendants	Dr Chembe (DACO) and Mr Malambo (SAO)		
Interviewer	Mr. M. Ndiyoi (FASAZ) and Mr. M. Chiona (ZARI)		
Date/Time	January 25, 2007	Venue	DACO's Office
Points of discussion			
<ul style="list-style-type: none"> <li>• Cassava is just being introduced. Few farmers are growing the crop.</li> <li>• Out of the targeted 100 beneficiaries of cassava, PAM managed to provide to 75 beneficiaries only. Each beneficiary was given 105 x 1m cuttings.</li> <li>• Cassava cuttings were obtained outside the district.</li> <li>• Cassava requires labour for fencing against goats. Otherwise farmers are willing to diversify into cassava production.</li> <li>• Last year both sweetpotato and cassava were distributed. Sweetpotato has taken off and planting material unavailability is hampering expansion.</li> <li>• Farmers use residual moisture to raise their sweetpotatoes. They claim sweetpotato is easier to handle than cassava.</li> <li>• In 2003, GTZ promoted cassava in the area. A lady in Gunyeti got some cuttings from them and cannot grow maize anymore.</li> <li>• Cassava varieties brought in the area are Nalumino and Kapumba.</li> <li>• Problems encountered with cassava include damage by pigs, mealybugs and termites.</li> <li>• WVI is a lead NGO on behalf of PAM whereas DACO's office does the monitoring.</li> <li>• Activities under the DACO are land management (contour ridges, vetiver grass), conservation farming, on-farm storage (maize, sorghum, millet) in improved storage bins, demonstration on improved maize varieties and irrigation promotion (treadle pumps, residual moisture along lake shores) targeted at maize.</li> <li>• There is KAMANO outgrower scheme in the district with 113 seed growers producing legumes. Last year, sorghum and pearl millet was provided on loan.</li> <li>• The Evangelical Church of Zambia provides relief food. They have been involved in crop diversification (maize, cowpeas, groundnuts) and seed multiplication of maize (Obatampa variety). They target 500 farmers.</li> <li>• Agricultural Support Project is in the district to build capacity to improve production and incomes and to support MACO staff in terms of transport and training.</li> <li>• WVI has activities in Munyumbwe where they provide inputs (guar, cowpeas, maize, vegetables, sorghum).</li> <li>• Areas that should be considered for nursery sites include Munyumbwe, Chipepo and Bunyete. Uptake for the technology would be more assured in these areas.</li> </ul>			

- Hunger starts in the area.
- There is need to build capacity in wetland utilization that would include root crops.
- Both camp officers and farmers need training especially in utilization and processing.
- Unit land per HH is limited to about 3.8 ha. Land is owned by men. There is need to convince men to allocate land to women. At the moment women are given a portion for groundnuts.
- Arable land is limited in the district.
- Exposure visits would be a strategy for introducing the crops.
- Entry points can be Camp Agriculture Committees, women groups and traditional authorities.
- There 13 camps in the district with seven manned.

## Luangwa

### 1. MACO (Luangwa District)

Attendants	Mr Chola Cosmas, Mr Kubi Francis		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu.		
Date/Time	22/01/07- 10.00 to 12.00	Venue	Daco's Office, Kaunga
Points of discussion			
<ul style="list-style-type: none"> <li>▪ PAM food crop pack brought in 2004-2006 consisted of maize, groundnuts, cowpeas, and cassava.</li> <li>▪ Cassava planting material supplied by PAM was in dried condition and had poor establishment.</li> <li>▪ Local sweetpotato varieties are being grown by farmers. SCCI had at about the same time distributed vines of Chingovwa.</li> <li>▪ Adoption rate of cassava is poor in the district because the crop is new for the people and do not know how to process it for food.</li> <li>▪ Only about 14 ha of cassava is estimated in the district with an average of 1 lima/Household.</li> <li>▪ Cassava planting material (manyopola) was sourced by PAM from Rufunsa District which was highly infected by CMD.</li> <li>▪ The district prefers sweet cassava varieties since the crop is still new for the people.</li> <li>▪ Wild and domestic animals is a serious limiting factor for cultivation of cassava.</li> <li>▪ Main organizations operating in the district- PAM through DACO's office, WCS. Farmers' Association and Community based groups</li> <li>▪ Proposed sites for cassava/sweetpotato nurseries: Chafukula and Tiyeseke Solar Irrigation Areas at Kaunga and also Chitope dam.</li> </ul>			

### 2. Wildlife Conservation Society(WCS)

Attendants	Mr Handsen Mseteka , Whyson Banda		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu.		
Date/Time	22/01/07- 14.30 -16.00	Venue	WCS office.
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Objective of WCS is to conserve natural resources and fight hunger by involving farmers into crop production and diversifications</li> <li>▪ Crop diversification in 2003/04 included the following crop activities as follows: <ul style="list-style-type: none"> <li>○ Sorghum (targeted 110 h/hs), cassava (200h/h and each farmer given cuttings for half lima, this season target was for 120 h/h . var -manyopola), Rice ( 2005/06 500h/h and this season 1000 h/h), cowpea (1000h/h) groundnuts, beekeeping and fish ponds (21 ponds).</li> </ul> </li> <li>▪ For all agriculture activities WCS works jointly with the Dept of Agric</li> <li>▪ Manyopola preferred for being sweet and early maturing.</li> <li>▪ Cassava eaten raw or as snack</li> <li>▪ A total of 100 ha. Cassava is estimated around Mpasha with about 10% of population have benefited from cassava.</li> <li>▪ Community Market for Conservation (COMACO) is responsible for adding value to the farmer's product by processing and also creating a market for their produce.</li> <li>▪ Three solar fences erected to prevent elephants crossing to destroy farmers' crops.</li> <li>▪ Cassava planting material is limiting expansion</li> <li>▪ Selected possible sites- Mphuka, Kabboo and Kaunga.</li> <li>▪ WCS is also a potential partner to partner in planting material multiplication and distribution in this area.</li> </ul>			

### 3. Mphuka Farmers Group

Attendants	Mr Tembo, (WCS Field Officer)		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu.		
Date/Time	23/01/07 09.00 – 11.30 hr	Venue	Mphuka Area

Points of discussion			
<ul style="list-style-type: none"> <li>▪ Farmer group composed of five farmers organized by WCS.</li> <li>▪ In January 2006 the farmers had planted 2 limas of cassava</li> <li>▪ Cassava planting material was supplied by WCS (Maniopola).</li> <li>▪ By April in the same year, the crops were all destroyed by elephants.</li> <li>▪ The beasts were reported to be aggressive and charge the farmers from their fields.</li> <li>▪ As a result the farmers abandoned that area and could not plant cassava for lack of planting material and fear of the animals destroying the crop again.</li> </ul>			

#### 4. A farmer (WCS)

Attendants	Mr Sipholian Gossipan Tembo (Farmer), Mr Tembo, (WCS Field Officer), Tembo (Farmer)		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu.		
Date/Time	23/01/07 12.00 -13.00 hr	Venue	Mphuka Area
Points of discussion			
<ul style="list-style-type: none"> <li>▪ In Nov./ Dec 2005 the farmer had received cassava planting material supplied by PAM and planted about 0.2 ha .</li> <li>▪ By October 2006 the elephants destroyed all his cassava.</li> <li>▪ The animals destroy any crop planted in the field including tree crops.</li> <li>▪ If animals not scared, they come closer the houses. Scaring is by lighting flames and rattling noise.</li> <li>▪ The farmer knows how to process cassava for nshima and is aware of cassava toxicity if not well processed.</li> <li>▪ He has a wide crop diversification in his field such as groundnuts, rice, sorghum, maize, cashewnuts, citrus trees, cassava, sweetpotato, mango etc.</li> </ul>			

#### 5. Chafukula Irrigation Scheme

Attendants	Councilor Leo Mpande, Mr Chola Cosmas, Mr Kubi Francis		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu.		
Date/Time	15.30 -17.10 hr	Venue	Mankhokwe Ward, Kaunga
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Solar panel installed in 2006 with 4 bore holes.</li> <li>▪ 8 solar panels connected together – 120W or 21.5Vlts.</li> <li>▪ Area under irrigation is 1.2 Ha. but has capacity of irrigating up to 2 Ha.</li> <li>▪ Total land available 38 Ha. , for expansion.</li> <li>▪ Two (2) tanks with capacity of 10,000 litres each. 2 pumps feeding each tank.</li> <li>▪ 4 submersible pumps and each can pump 19,000 L in 8 hrs.</li> <li>▪ 12 drip or family irrigation tanks with total capacity of 350 L interconnected or can be connected to either tank.</li> <li>▪ Each drip tank can irrigate 32 x 32 m<sup>2</sup> for 8 hrs with output of 2 L /hr.</li> <li>▪ 2 Extra boreholes with hand pumps for flood irrigation.</li> <li>▪ 33 farmers in a group each contributing K200,000 to the cooperative at the end of each crop harvest.</li> <li>▪ The site is suitable for multiplication nurseries but requires land expansion and increase irrigation pipes.</li> <li>▪ Need for an engineer to advice on expansion and other modifications if expanded.</li> <li>▪ Chafukula coop. is motivated and has good support from DACO'S Office.</li> </ul>			

#### 6. Tiyeseko Cooperative (not registered).

Attendants	Mr Chola Cosmas		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu.		
Date/Time	23/01/07 , 17.30 -18.15 hr	Venue	Kaunga Ward
Points of discussion			
<ul style="list-style-type: none"> <li>▪ 2 Ha. of land fenced although a small portion still requires to be completed and prevent goats going into the land.</li> <li>▪ 2 boreholes with output of 5L / sec form each borehole.</li> <li>▪ Has 1 tank with a capacity of 250 L and 3 hydrants used for flood irrigation.</li> <li>▪ The site has more solar panels giving a higher water output than the Chafukula site. It has also an inverter A/C power supply.</li> <li>▪ In 2002/03 PAM had supplied the farmers with maniopola cassava cuttings for multiplication and sold @ K50 / bundle. SCCI had also provided Chingovwa vines for the same but the cooperative did not look after the material and all was wasted.</li> <li>▪ They also have fish ponds and bananas within the site.</li> </ul>			

- Replacement of some of fencing poles and completion the unfenced portion.
- Sensitization of farmers to fully utilize the facility as it was found abandoned during the rainy season.
- It is a potential multiplication site for the district.

### Chipata

#### 1. MACO (Eastern Provincial office)

Attendants	Dr O. Kabinda The Provincial Agric. Coordinator, Mr P.B.J Daka, The Principal Agric. Officer, Mr Evaristo Nyanoka, Senior Agric. Specialist		
Interviewer	Dr M. Simwambana, Mr Suzuki and Mr M. Ndhlovu.		
Date/Time	09.00 -10.00 hr	Venue	PACO's Office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Due to poor market and price, farmers have divorced some crops e.g. tobacco and cotton.</li> <li>▪ Earlier FAO/PAM distributed seed input for cassava, soybeans, maize and beans and also off season crops like vegetable seed as well as tobacco in some areas.</li> <li>▪ Main NGOs operating in the province are PAM, Plan International, LWF, FAO and WCS.</li> <li>▪ Problems observed in distribution of cassava planting material</li> <li>▪ Late delivery of planting materials sourced from long distances and also poor handling while in transit.</li> <li>▪ No phytosanitary measures for control of pest and diseases.</li> <li>▪ Traditional late planting of these crops by the farmers require training in cultural practices to sensitize them.</li> <li>▪ Need for root and tuber crops nurseries established within the province</li> <li>▪ There is high demand for planting material of improved varieties of these root crops in the province.</li> <li>▪ The problem of animals destroying the crops during the dry season requires fencing of the fields.</li> <li>▪ Generally the two crops are adopted in the province only require more planting material.</li> <li>▪ Both sweet and bitter cassava varieties are generally accepted in the province.</li> <li>▪ Need for training in cassava utilization and processing and PACO's office has the capacity to facilitate the training.</li> <li>▪ Sweetpotato is more adopted in Nyimba and Petauke districts where it is being sold along the road to Chipata.</li> <li>▪ Processing to add value to the final product and establishment of market for the two crops would stimulate high production in the province.</li> </ul>			

#### 2. ZARI (Msekera Res. Centre)

Attendants	Mr K.Kanenga, Mr Mwila Lwaile, Mr Mackson K. Sakala , M/s Josephine Matibini		
Interviewer	Dr M. Simwambana, Mr Suzuki and Mr M. Ndhlovu.		
Date/Time	25/01/07 11.00 -13.30	Venue	Programmes Officer's Office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ The following are Msekera staff to coordinate FoDis it starts: Mr Mwila Lwaile as contact person, Mr M Sakala- Plant Protection, Messrs Muleya and Maguswe – Seed Control and Certification.</li> <li>▪ All the five cassava varieties to go into the nurseries are available at the station although in small quantity. However, the station does not have enough Kapumba and Nalumino</li> <li>▪ Both sweet and bitter cassava varieties should be multiplied at the station.</li> <li>▪ Mambwe, particularly Masumba TAS was recommended for nursery in the district because cassava growth is much faster than other places.</li> <li>▪ Farmers multiply their planting material in dambos during the dry season and use that material to plant new fields on the upland at the on set of the rainy season.</li> <li>▪ Average cassava field size planted for food security during the year was estimated at about 1 – 2 lima.</li> <li>▪ PAM has conducted processing demonstrations in the province.</li> <li>▪ ZARI and Extension would the training while NGOs mobilize the farmers.</li> <li>▪ There is need for stake holders meeting convened at an early stage for collaboration and avert duplications. It is sustainable and helps for monitoring and assessing the impact.</li> <li>▪ The issue of nutrition has to be considered to supplement protein in root crops.</li> <li>▪ Soil fertility in rotation with root crops and reduce soil degradation- use of Agro-forestry species.</li> <li>▪ Other crops as companion for root crops – recommended cowpea, ground nuts being tolerant to drought</li> <li>▪ Distribution of planting material could be from farmer to farmer or cooperative to cooperative.</li> <li>▪ The station claims to have capacity to handle the project (farm implements, cassava and sweetpotato varieties and human resources).</li> <li>▪ Assistance required for land expansion and borehole.</li> </ul>			

### 3. LWF

Attendants	Dr Roy M. Chiti		
Interviewer	Dr M. Simwambana, Mr Suzuki and Mr M. Ndhlovu.		
Date/Time	25/01/07 14.00 – 15.30 hr	Venue	LWF Office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Food Security and Livelihood (Foseli) managed by LWF is a new project that started in July 2006. Faith based organization for vulnerable.</li> <li>▪ Objective is improve food security in rural communities</li> <li>▪ Beneficiaries - vulnerable communities of chronic diseases, orphaned and aged households.</li> <li>▪ Crop diversification – thrust – improved yield and extension delivery and later market.</li> <li>▪ In a baseline survey- cassava and sweetpotato important but lack of planting material.</li> <li>▪ The project could not take off this season due to lack cassava and sweetpotato planting materials.</li> <li>▪ Implementation will involve training of community workers linked to Dept. of Agric.</li> <li>▪ The workers will be trained in crop husbandry and land use.</li> <li>▪ Criteria for selection of worker will be based on some one who can write, resident in that area, and good reputation with leadership qualities.</li> <li>▪ Only community groups without draft animal will be targeted.</li> <li>▪ There will collaboration of LWF, DACO, Community Development and Social Welfare as well as Ministry of Health.</li> <li>▪ Donors are Danish Church Aid (80%), Lutheran World Federation –small percentage and Bread for the World.</li> <li>▪ Crop conflicts anticipated- cassava vs. cattle and cassava vs. rat diggers in the field.</li> <li>▪ There is need to reduce maize fields and distribute the land to other crops in form of crop rotation.</li> </ul>			

### 4. World Food Program

Attendants	Mr Fanwell Hamusonde		
Interviewer	Dr M. Simwambana , Mr Suzuki and Mr M. Ndhlovu.		
Date/Time	25/01/07 16.00 – 17.00hrs	Venue	WFP Office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Food for asset to assist the farmer – conservation farming</li> <li>▪ Food for asset implemented in Mambwe, Nyimba and Luangwa.</li> <li>▪ Partners in these areas are: <ul style="list-style-type: none"> <li>○ Mambwe - WCS</li> <li>○ Nyimba - ADRA</li> <li>○ Luangwa – WCS</li> </ul> </li> <li>▪ Work done in partnership with above mentioned NGOs.</li> <li>▪ Mabwe they have 12 cassava nurseries of cassava variety – Maniopola.</li> <li>▪ Last season farmers in Mambwe asked to grow 0.5 lima cassava and 1 lima maize in exchange for food from WFP.</li> <li>▪ After preparing land and planting, they are given food.</li> <li>▪ Cassava is important because is a cushion during hunger period.</li> <li>▪ Because people use cassava as a snack and do not know how to make cassava nshima, FAO introduced processing and utilization by producing cassava flour.</li> <li>▪ Cassava has been adopted by these communities because of working for food.</li> <li>▪ Food for asset targets viable farmers working by working in groups</li> <li>▪ Training has been conducted in planting of cassava by the Conservation Farming Unit and Utilization and processing by FAO.</li> <li>▪ Community training centre is at Mbesuma where there is also 1 Ha. of cassava nursery.</li> </ul>			

### 5. PAM Food Security

Attendants	Ms Bernadette Ngulube		
Interviewer	Dr M. Simwambana , Mr Suzuki and Mr M. Ndhlovu.		
Date/Time	29/01/07 15.00 – 16.00 hrs	Venue	PAM office, Chipata
Points of discussion			
<ul style="list-style-type: none"> <li>▪ PAM started promoting cassava in 2001</li> <li>▪ Cassava is not eaten much in the province only taken as a snack or boiled.</li> <li>▪ The crop is grown around Chama and Lundazi – Magodi Area.</li> <li>▪ Sales of cassava cuttings are a lucrative business. Farmers selling planting material to NGOs such as PAM are in good business. Trucks from Malawi were reported buying planting material from the border.</li> <li>▪ Maniopola is the main cassava variety that is commonly distributed from these areas.</li> </ul>			

- PAM's food pack consists of cereals, root crops and legume.
- For this season PAM involved MACO for inspection of the source of the material.
- When delivering input, PAM starts with other crops leading to late delivery of root crops planting material to farmers during the season.
- As a result adoption of these crops has been slow.
- There is also a problem of goats and pigs destroying the crop leading farmers cultivating their crop away from their homes.

#### 6. Plan International

Attendants	Mr Stephen C. Ngwira		
Interviewer	Dr M. Simwambana, Mr Suzuki and Mr M. Ndhlovu.		
Date/Time	30/01/07 09.15 to 10.30	Venue	Plan International Office.
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Started operating in the province in 2001 focus on food security, education and health.</li> <li>▪ Target districts Chadiza and Mambwe. The NGO has not yet reached Mambwe due to limited logistics.</li> <li>▪ Chadiza has high poverty levels and the soils are poor.</li> <li>▪ Chadiza depends on crops that require a lot of fertilizer such as tobacco, groundnuts and cotton. People there depend on traditional crops and do not use improved varieties.</li> <li>▪ Other crops include cassava, cow pea, beans and sweetpotato.</li> <li>▪ Crops on promotion include cassava, cow pea, beans and sweetpotato. Other all season crops being promoted are Irish potato, vegetables being irrigated using treadle pumps.</li> <li>▪ The district has a lot of domestic animals destroying the crops grown upland.</li> <li>▪ There is high demand for cassava and sweetpotato planting material by the NGO.</li> <li>▪ Plan Int. collaborates with MACO, CIAT, and ICRISAT.</li> <li>▪ Plan Int. is does not promote use of chemical fertilizer but organic manure and also agro-forestry species.</li> <li>▪ The organization initially started with 500 farmers and has now reached 10,000 farmers with 1000 farmers for cassava only.</li> <li>▪ Chadiza has 20 wards of which they had targeted 9 wards but managed 6 wards for cassava and sweetpotato</li> <li>▪ Last season 400 farmers, each received a 50kg bag of sweetpotato vines.</li> <li>▪ Plan Int. proposed Chipata to be central for nurseries and supply planting material to Petauke and Mambwe. Other districts to have demos.</li> <li>▪ Sizable field for food security in a family could be 1 lima.</li> <li>▪ Initially used to give farmers a bundle cassava bundle (25 sticks x1m) but stopped and started giving 65 bundles enough to plant a Lima.</li> <li>▪ A farmer can have other crops out side the cassava lima.</li> <li>▪ Farmers prefer sweet cassava variety</li> <li>▪ If recommend communal nurseries, should not be very large ( 5 member groups) with balanced gender being led by one person.</li> <li>▪ Plan is targeting female, child, orphan and old aged headed house holds.</li> <li>▪ Plan Int. provides money to MACO to do the training of farmers; others have been taken to Malawi on study tours to see what other farmers are doing there.</li> <li>▪ Adoption of processing and utilization is low due limited knowledge in those areas for the commodity.</li> <li>▪ During monitoring farmers also participate to tell if any progress.</li> <li>▪ Plan Int. is funded by more than 16 international organizations world wide.</li> </ul>			

#### 7. SARRNET Chi Nyanja Triangle Consortium

Attendants	Mr Mutale Peter Bwalya, Mr Mwila Mulundu		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu.		
Date/Time	30/01/07 11.07 to 12.25	Venue	Msekera IITA/SARRNET Office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ This is a SARRNET Chi Nyanja Triangle Consortium with partners in Total Land Care (TLC), ICRISAT and CIAT.</li> <li>▪ Objective is to improve livelihood and reduce poverty.</li> <li>▪ In 2005 cassava planting material (Maniopola) obtained from Lundazi and supplied to farmers to establish nurseries</li> <li>▪ Farmers were trained and cassava multiplied. After the season, a bundle of cuttings were passed on to another farmer and the remainder used for expansion of own field.</li> <li>▪ Areas of operation- Chipata (Chipalamba, Feni and M'tenguleni) and Katete (Chitasa).</li> <li>▪ In 2006 season got 776 bundles (50 stems of more than 1m long) and distributed to above mentioned areas</li> </ul>			

<p>but extended to Gombaila (Katete), and Petauke (Mumbi-B) and Mondola) camps</p> <ul style="list-style-type: none"> <li>▪ Distribution 117 bundles to Petauke, 37 bundles to Mondolo and 80 bundles to Mumbi – B.</li> <li>▪ In 2007 got Bangweulu, Chila, Kariba and Mweru from Mansa for multiplication.</li> <li>▪ There are also 2 ha. of 10 cassava varieties for multiplication from Mansa by ZARI.</li> <li>▪ No bitter cassava variety has yet been given to farmers. Bangweulu shall be promoted for processing.</li> <li>▪ The project has a total of 16 farmer groups in 10 Agric camps of 4 districts (Chadiza, Katete, Petauke and Chipata).</li> <li>▪ The project is evaluating 103 cassava clones obtained from IITA/Malawi for diseases, pests, and carotene content.</li> <li>▪ Cassava Verification Trial-6 cassava varieties being assessed for their suitability in Eastern Province.</li> <li>▪ Future plans- processing and utilization of cassava.</li> <li>▪ dairy farmers for cassava leaf production for silage.</li> </ul>
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## Mambwe

### 1. MACO (Mambwe District)

Attendants	Mr Derrick Simukazye, Mr Njekwa Misozi, Mr Morrison Hamoonga,		
Interviewer	Dr M. Simwambana, Mr Suzuki and Mr M. Ndhlovu		
Date/Time	26/01/07 15.00 – 16.30 hrs	Venue	Mambwe DACO's Office.
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Cassava has been in the district for only the past 5 years, therefore it is a new crop.</li> <li>▪ Other crops cultivated include sorghum, maize, rice and cowpea.</li> <li>▪ Cassava and sweetpotato are important crops food security.</li> <li>▪ Most common varieties are Maniopola and Bangweulu and Chingovwa for sweetpotato.</li> <li>▪ The type of variety (sweet or bitter) is not a limiting factor for adoption.</li> <li>▪ The district has a critical shortage of planting material for the crops.</li> <li>▪ Usually the planting material supplied by PAM reach the farmer late leading to late planting and the material comes in dried form resulting in poor field establishment.</li> <li>▪ In 2005 PAM delivered 2,449 cassava cuttings from Lundazi in 2006/07 22,000 cuttings were received.</li> <li>▪ Farmers lose their planting material when harvest their crop in the dry season.</li> <li>▪ The main NGOs operating in the district are WCS, DWA and WFP.</li> <li>▪ Most of the Agricultural camps are manned in the district.</li> <li>▪ MACO and Community Development /Soc. Wel. Do the training and identification of the vulnerable respectively.</li> <li>▪ Training in utilization and processing as well as utilization of treadle pumps has been conducted by PAM.</li> <li>▪ There are 83 treadle pumps provided by FAO/PAM and DEF for winter cropping to mitigate hunger ( 1 pump to a group of 6 farmers).</li> <li>▪ Group nurseries were recommended as groups are more responsible.</li> <li>▪ There are also processing equipment brought in 2006 by PAM and ADB.</li> <li>▪ A field size of 1 lima cassava would be sufficient to sustain a house hold.</li> <li>▪ Main NGOs operating in the district are WCS and DWA which the project could partner with in the district.</li> <li>▪ DACO's office has the capacity for collaboration, well staffed with transport</li> <li>▪ They only require financial support for fuel and allowances.</li> <li>▪ DWA farmers are a potential entry point for the project.</li> </ul>			

### 2. WCS - Mambwe

Attendants	Mr Daka Whiteson, Mr Jere Yolamu, Mr N'qumayo Joel		
Interviewer	Dr M. Simwambana, Mr Suzuki and Mr M. Ndhlovu		
Date/Time	26/01/07 15.00 to 16.30	Venue	Masumba WCS Office.
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Objective is to promote crop diversification</li> <li>▪ During the 1<sup>st</sup> season the had established 6 x 1 lima cassava nurseries and 5 in the 2<sup>nd</sup> season.</li> <li>▪ They lost 3 nurseries due to flooding and wild life and now have 8 established nurseries.</li> <li>▪ Last season WCS distributed cassava planting material to 484 farmers.</li> <li>▪ They have 484 farmer groups- each group is composed of 10-15 members with .0.5 lima /farmer.</li> <li>▪ This season WCS expects 1,700 farmers to benefit from their 1 ha. Masumba cassava nursery.</li> <li>▪ WCS works with WFP who provide food for asset before the establishment of their fields.</li> <li>▪ The cassava nurseries are funded by FAD.</li> <li>▪ Maniopola is the main cassava variety being multiplied with some other unknown varieties. WCS would welcome both bitter and sweet cassava varieties.</li> <li>▪ The sweetpotato variety available is Kenya / Chingovwa and other local varieties.</li> </ul>			

- MACO extension and community workers encourage the farmer groups.
- Need for involvement of village leaders themselves.
- There is need to create awareness of the project before it is introduced to the community.
- In the past training on cassava processing was done by farmers who in turn went to train their colleagues. 30 farmers have been trained to manage nurseries.
- Other activities include groundnuts, Soya, poultry, rice and bee keeping with 30% that goes to cassava.
- The Community Market for Conservation & Livelihood adds value to a commodity by processing and packaging the product then finds market for it.
- WCS is recommendable organization to work with the project.
- They have well organized farmer groups operating in their areas.
- Collaboration with WCS should be initiated from the Head Office in Lusaka.

### 3. Masumba TAS

Attendants	Mr Bernard Mulambya, Mrs Ruth Kanyanga		
Interviewer	Dr M. Simwambana, Mr Suzuki and Mr M. Ndhlovu		
Date/Time	26/01/07 16.50 to 18.00 hrs	Venue	Masumba TAS
Points of discussion			
<ul style="list-style-type: none"> <li>▪ The station tests technologies developed from other Research stations.</li> <li>▪ Has total area of 250 ha with only 10 ha. cleared and utilized by the station.</li> <li>▪ The station has a tractor with implements from DACO's office and at times borrows from Msekera Res. Station.</li> <li>▪ There are 2 bore holes with irrigation pipes and 2 tanks (5000 l &amp; 10,000 l capacity). Only 4 ha. can be irrigated from the existing facilities.</li> <li>▪ The smaller tank requires replacement.</li> <li>▪ The station also conducts training courses in utilization and processing of cassava products, field days and demos.</li> <li>▪ The station has no permanent worker and the officer is alone.</li> <li>▪ Masumba TAS is a suitable site for multiplication as recommended by both the PACO and DACO. The station has a valley environment suitable for cassava plant fast growth rate.</li> <li>▪ However, there may be need for an irrigation engineer to look at the irrigation facilities for expansion.</li> </ul>			

### 4. Mambwe District Women's' Development Association (DWA)

Attendants	Mrs Maureen Ngoma, Mrs Benardetty Nkhoma		
Interviewer	Dr M. Simwambana, Mr M. Ndhlovu		
Date/Time	27/01/07 09.10 to 12.00 hrs	Venue	DWA Guest House
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Started in 1994 to empower rural women socially, culturally and legally by training them.</li> <li>▪ They initially started with 4 areas and have now expanded to 10 in 10 wards.</li> <li>▪ There 73 women's groups with 1,200 members and each group are composed of not more than 20 members.</li> <li>▪ Criteria for selection of house holds. <ul style="list-style-type: none"> <li>○ female headed house hold</li> <li>○ orphan headed house hold</li> <li>○ child headed house hold</li> <li>○ old aged house hold</li> <li>○ terminally ill and disabled house hold</li> </ul> </li> <li>▪ Among other PAM's food pack is a cassava bundle consisting of 50 cuttings of maniopola from Chama.</li> <li>▪ In a satellite are five people these are: 1 person from CBO, 1 person from the village, 1 from the chief, 1 from the church and 1 from the neighbourhood or health.</li> <li>▪ The food pack from PAM is delivered to DWA, from DWA to satellites and the satellites distribute the pack to the farmers.</li> <li>▪ Training for processing and utilization has been done, but they do not have enough trainers and need more.</li> <li>▪ DWA realizes the importance cassava and sweetpotato as drought resistant crops even where there is no drought the crops are good supplements</li> <li>▪ Problems were cited as late delivery of inputs by PAM leading to poor crop establishment. Poor funding resulting to poor monitoring and evaluation of activities. Poor market for these two crops.</li> <li>▪ DWA proposed two nursery sites in the district: Masumba TAS and at DWA office where they have a bore hole.</li> <li>▪ DWA could be a potential NGO to work with for materials to reach the farmer.</li> <li>▪ They need financial support for mobility and allowances- even bicycles could help to execute their duties.</li> </ul>			

## 5. Mukhanya Village – WCS Cassava Nursery

Attendants	Mr Mulambya N., Mr Hamoonga		
Interviewer	Dr M. Simwambana, and Mr M. Ndhlovu		
Date/Time	29/01/07 08.30 to 09.30	Venue	
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Expected to meet some members of farmers group but nobody was at the site therefore the WCS Extension Officer briefed the team.</li> <li>▪ The nursery is owned by 5 members of the group with 0.5 ha. cassava.</li> <li>▪ The cassava nursery was planted in 2005/06.</li> <li>▪ Cassava variety is maniopola and some other unknown varieties sourced from within Mambwe</li> <li>▪ The group passes on the material to individual farmers who always come to the nursery to collect the material.</li> <li>▪ Farmers know how to process bitter varieties by soaking and pounding.</li> <li>▪ However, preference is for sweet cassava varieties.</li> <li>▪ The planting material is clean with mild CMD infection, but the plants are vigorous.</li> </ul>			

## Mambwe

### 1 MACO (Petauke District)

Attendants	Dr Crisborn Mubamba, Mr Mukuka Moses		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	31/01/07 09.20 to 10.20	Venue	DACO's Office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ The district covers a total are of 11,000 km<sup>2</sup></li> <li>▪ It has 44 Agric. camps and 5 blocks (Chinika, Nyika, Ongolwe, Kapoche and Musansala).</li> <li>▪ Only 26 camps are being manned by Agric. staff.</li> <li>▪ The district has a population of 310,000 with 39,000 active farming families.</li> <li>▪ These are involved in mixed farming with a bias to crop husbandry.</li> <li>▪ Major NGOs operating in the district are: <ul style="list-style-type: none"> <li>○ -Care International –cassava, soyabeans and sweetpotatoes.</li> <li>○ -WVI – Maize, beans, and cow peaaas- this season reduced on cassava.</li> <li>○ -PAM – Cassava, maize, soyabeans and beans.</li> <li>○ -Petauke Nutrition Group (PNG) - works with PAM.</li> </ul> </li> <li>▪ Since 2000 there has been consistent supply of cassava planting material but farmers have been losing their material due to cattle in the dry season.</li> <li>▪ Cassava is an important crop but has not been widely adopted in the district.</li> <li>▪ More cassava crop is found in Musansala and Ongolwe blocks reason being supplies earlier made by PNG, WVI and PAM.</li> <li>▪ The most common cassava variety is maniopola</li> <li>▪ Sweet cassava varieties are recommended being a new crop.</li> <li>▪ They used to conduct training courses before but stopped due to poor funding by the government.</li> <li>▪ Proposed nursery sites: <ul style="list-style-type: none"> <li>▪ FTC- Maniopola and other cassava varieties from Msekera were planted. There is a sort of a dambo with enough land for nursery. The institution also has a borehole if need for irrigation arises.</li> <li>▪ Lusowe Irrigation Dam – needs to extend the irrigation canal for nursery. <ul style="list-style-type: none"> <li>○ There is need to promote processing and utilization of the crops in the district</li> <li>○ The district has chippers and graters for demos</li> <li>○ The district has demand for cassava and sweetpotato planting material.</li> <li>○ Establishment of cassava nurseries would promote adoption of these crops.</li> </ul> </li> </ul> </li> </ul>			

### 2. Petauke Nutrition Group (PNG)

Attendants	Mrs Charity Njongolo, Mrs Grace Jembo Banda		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	31/01/07 11.00 to 12.40	Venue	PNG Office.
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Is a community based organization combating malnutrition in the district.</li> <li>▪ Activities involve out reach nutrition programs, provision of seed to vulnerable groups and support to orphans and vulnerable children (ovc).</li> <li>▪ Is a leading NGO in the district in partnership with PAM.</li> </ul>			

- Pam food pack consists of 10 kg maize, 1 bag fertilizer basal and 1 bag for top dressing, groundnuts, beans, and sweetpotato vines
- Initially target was for 3000 farmers but this season it has been reduced to 353 farmers.
- The farmers are expected to pay back 80 kg of maize and use that money to buy input to help additional farmers.
- Satellite committees in satellite centres collect the returns from farmers.
- Satellite committees together with PNG and the communities involving headmen do the monitoring to ensure the right people benefit.
- Committees consist the chairman and vice, Secretary and vice, Treasurer and vice plus 5 members. One third of the committee should be women.
- Operational areas are in Sandwe and Kalindawalo chiefdoms.
- Problems of malnutrition in Chinika and Nyika blocks
- sensitization of nutrition practices
- identification of female headed
- promotion of nutritious foods eg. soyabeans to combat malnutrition.
- PNG received from PAM 322 bundles of Maniopola (100x90cm long) which was distributed to 353 farmers. Each farmer to plant 0.5 lima cassava for this season.
- In the past the cassava planting material used to come from Iteshi teshi and sweetpotato from Kapiri.
- Farmers prefer maniopola because it is sweet and early bulking.
- Kampuba from Kaoma was also preferred for its sweetness but Nalumino was bitter.
- Cassava nshima was not palatable for the communities, PAM will come with a processing program in June this year.
- Production of both cassava and sweetpotato has decreased because of shortage of planting material.
- There is high demand for sweetpotato planting material.
- Proposed nursery sites are chief Sandwe and Mumbi because communities receive a lot of support from NGOs and their own chief while chief Mwanjibantu is controversial and does not support any project in his area.
- Cassava is an important crop and improved varieties can be accepted with sensitization and establishment of market for the crop.
- PNG generates a bit of income from 2 hammer mills and Agro-shop funds initially came from Danish source. PAM also provides operational funds.

### 3. CARE International

Attendants	Mrs Mukonde Siafunda Mweemba		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	01/02/07 08.35 to 09.30	Venue	CARE Int. Office.
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Agricultural Input for Community Asset (AICA) had started in Southern Province in 2005.</li> <li>▪ It was replicated in Eastern Province, Petauke in 2006 phased out in Dec 2006 because of changes.</li> <li>▪ The project was focusing on food security for vulnerable by promoting drought tolerant crops such as sorghum, millet, groundnuts, cassava and sweetpotato.</li> <li>▪ Seed and tools were given to people after working on roads, building clinics, teachers' houses and storage houses.</li> <li>▪ Cassava and sweetpotato were paid to Chinika and Kapoche Agric.Blocks after recommendation from the DACO because there was no NGO operating in those two blocks 2006.</li> <li>▪ There are 5 camps in each block giving a total of 10 camps.</li> <li>▪ The above mentioned crops were distributed to all these camps sweetpotato coming from Kapiri in deteriorated condition.</li> <li>▪ Last year the number of people who worked for food reduced (1,500) because of the bumper harvest and most of the people had enough food.</li> <li>▪ At Kapoche block which borders Mozambique, theft of cassava is rampant leading to loss of planting material.</li> <li>▪ There is also a problem of goats and pigs hence farmers have resorted to growing these crops away from their homes.</li> <li>▪ Proposed sites for nurseries in Kapoche and Chinika blocks and also at the FTC. However, the FTC will require financial support.</li> <li>▪ A few farmers could be identified for nurseries from the blocks and keep FTC as the main nursery for the district.</li> <li>▪ Since the programme is being redesigned, FoDIS may not make concrete plans for partnership yet need to consult CARE head office in Lusaka but they are a viable partner for the project..</li> </ul>			

Record on Interviews

#### 4. Petauke Farmers Training Centre (FTC).

Attendants	Mr Michael Banda		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	01/02/07 10.30 to 11.30	Venue	Petauke FTC office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ The institution has a total hectarage of 617, 400 ha. arable land and only 18 ha. being cultivated.</li> <li>▪ FTC collaborates with Msekera Res. Station for on-farm and on-station trials.</li> <li>▪ The institute has 7 sweetpotato varieties being multiplied including Zambezi, Kenya and others still using the Breeder's number.</li> <li>▪ Last season they had 2 lima of sweetpotato and intend to increase to 2 ha. Chingovwa next year.</li> <li>▪ At Matambazi they have 9 sweetpotato local varieties to be tested with improved varieties.</li> <li>▪ They also have 4 ha. of Maniopola being multiplied and have plan to increase that 15 ha. next year.</li> <li>▪ For last season CARE bought 9 m.t. of cassava planting material from them while other material was given to farmers free of charge.</li> <li>▪ There is a high demand for cassava planting material in the area.</li> <li>▪ Training involves agronomical cultural practices and crop diversification.</li> <li>▪ Other courses by WVI included vegetable growing, use of kraal manure, crop diversification, crop rotation, and pot holing done in the dry season.</li> <li>▪ All the training resources are provided by MACO with support from NGOs such as WVI and CARE Int.</li> <li>▪ Women and Youth does the training of utilization and processing together the nutritionist from MACO.</li> <li>▪ FTC has a tractor and implements and a bore hole for domestic use.</li> <li>▪ However, FTC would require to fence some fields to protect the crops from animals; labour for crop management, truck for planting material distribution and allowances for extension workers</li> <li>▪ FTC is capable of managing the nurseries, it is also a good institute for training and the officer has a drive for his work commanding good relationship with his farmers.</li> </ul>			

#### 5. A farmer (Zone 6 B, Matambazi camp)

Attendants	Mrs Egenia Lungu, Mr M. Banda		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	01/02/07 13.10 to 13.50 hr	Venue	Zone 6 B, Matambazi camp-field .
Points of discussion			
<ul style="list-style-type: none"> <li>▪ This was a sweetpotato demo being managed by 22 members of a farmers group (6 male and 16 female).</li> <li>▪ Purpose of the demo is for crop diversification</li> <li>▪ There are 3 local sweetpotato varieties (Viunji, Tilezye and Chipata). These varieties were preferred by the farmer for good storability.</li> <li>▪ The above grown side by side with 5 improved varieties from Msekera (Chingovwa, Zambezi and 3 other lines still using the breeder's numbers).</li> <li>▪ Farmer complained of Chingovwa for having short shelf life in storage.</li> <li>▪ Price of 50 kg bag of sweetpotato vine was @ K10,000.</li> <li>▪ Farmers wish to grow cassava and sweetpotato but lack source of planting material.</li> <li>▪ The material used for this demo was all sourced from a Mr Caleb Zulu reported to be a supplier of planting material in that area.</li> <li>▪ The demo was comparing these sweetpotato varieties for time of maturity, yield and taste.</li> <li>▪ Earlier before going to this farmer, the team in company of Mr Michael Banda tried to visit Lusowe Dam as per program, but could not reach because the road was washed away and the vehicle could not pass.</li> </ul>			

#### 6. PAM/ Petauke Nutrition Group (PNG) Field Trip

Attendants	Mr Annord Tembo, S.D.Sakala, Mrs Grace Jembo Banda		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	01/02/ 07 15.30 to 16.30 hr	Venue	Chilimanyama Agri Camp, Nyika Block.
Points of discussion			
<ul style="list-style-type: none"> <li>▪ The owner of the farm Mr Henry Tembo was not available hence met with his son Mr Annord Tembo.</li> <li>▪ The house hold is composed of 8 members</li> <li>▪ The original source of planting material was PAM/PNG.</li> <li>▪ Total area of cassava was 2.5 ha. maniopola planted in 2004/05 in a small field which is being rationed and planted for expansion until the field reached to that size.</li> <li>▪ After part of the cassava field was harvested, the planting material was planted on dambo during the dry season and grows to planting size by the on set of rainy season and used to plant new fields.</li> </ul>			

- The tuberous roots harvested are used as a snack or boiled. Some of it is paid for labour in kind.
- Limited training for utilization and processing was done by PAM.
- Both the farmer and extension officer seem to be aware of CMD symptoms but the field was highly infected with CMD.
- The farmer would have loved to learn more on the utilization and processing of the crop but have limited exposure to training.
- The farmer prefers sweet cassava varieties since they do not know how to process the crop.
- There is need for supply of improved varieties as farmer has already adopted the crop.

## Nyimba

### 1. MACO (Nyimba District)

Attendants	Mr M.Kapuka, Mr Musendo, Mr Katongo		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	02/02/07 08.30 to 09.50 hr	Venue	DACO's
Points of discussion			
<ul style="list-style-type: none"> <li>▪ In the past 3 years ADRA, DWA, FAO, GRA, MACO/PAM have been involved in distribution of cassava planting material and other input.</li> <li>▪ In 2001 more than 300,000 cassava cuttings and 120,000 x 50 kg bags (50 small bundles/bag) sweetpotato were distributed in the district.</li> <li>▪ In 2006/2007 season PAM through DWA distributed 79 bundles of cassava as a pack with maize seed, Soya, cowpea and fertilizer. In some areas cassava distribution has been rejected by farmers because it was late for planting.</li> <li>▪ Problems of the crop involve late delivery of planting material arriving in dried state, Kenya does not grow well for multiplication in the dry season. Some of the material supplied without certificate bringing disease in the district.</li> <li>▪ Cassava varieties distributed are Maniopola, Bangweulu, Kapumba and a small quantity of Nalumino.</li> <li>▪ People in the district prefer sweet cassava varieties hence adoption for maniopola.</li> <li>▪ The adoption of cassava in the district is very low- cassava is less than 5 ha. and less than 20 ha. for sweetpotato.</li> <li>▪ For increased adoption of these crops in the district, there is need to promote utilization, processing and market.</li> <li>▪ The drought experienced in 2002/03 led to loss of planting material resulting in high demand for cuttings.</li> <li>▪ A field size of 0.5 lima cassava, 0.5 lima maize, 0.5 groundnuts would be sufficient for food security in a year to sustain a house hold of 6members</li> <li>▪ Proposed nursery at Moombe (Viz Mumba block). They also recommended nurseries managed by individuals, not farmer groups.</li> </ul>			

### 2. Nyimba DWA

Attendants	M/s Christine Zulu		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	02/02/07 10.00 to 11.30 hrs	Venue	DWA Office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ Established in 1998 and is operating in 11 areas of the district.</li> <li>▪ DWA is registered under the Registry of Societies and is also identified to carry out the food security program with PAM for second year.</li> <li>▪ The objective is to empower rural women economically, socially, culturally and politically.</li> <li>▪ Have 147 beneficiaries under food security pack, among these 55 males and 92 females.</li> <li>▪ In 2005/06 season distributed maize, sorghum, Soya, okra, sweetpotato, cassava cuttings, 1 bag of basal and a bag of top dressing to 250 beneficiaries.</li> <li>▪ In 2006/07 the number of beneficiaries reduced to 147 who received maize, Soya, cowpea, cassava, and no sweetpotato</li> <li>▪ 79 bundles of cassava were sent from Lundazi the balance of the expected consignment did not reach after the truck over turn on it the way.</li> <li>▪ The cassava material did not have a phytosanitary certificate</li> <li>▪ There is a high demand for cassava and sweetpotato planting material.</li> <li>▪ For this season only Soya training was done and there were no courses on cassava, farmers complained for they want training of cultural practices.</li> <li>▪ The District Food Sec. Committee decides where to take the pack. The committee delivers the food pack to DWA and DWA supplies the farmers.</li> <li>▪ It is the responsibility of the District Food Pack Committee together with the leading NGO to identify the transporter to the site.</li> </ul>			

- DWA being new in the district, they depend on MACO for identification of recipients in the area.
- MACO and Community Dev. Soc. Wel. Collaborate with DWA.
- The farmers could manage to look after the nurseries but need to be identified and trained in cassava cultural practices.
- DWA would need support for logistics and allowances.

### 3. Nyimba COMACO

Attendants	Mr Banda Masauso, Mr Bornface Tembo		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	02/02/07 12.00 to 13.00 hr	Venue	COMACO Office
Points of discussion			
<ul style="list-style-type: none"> <li>▪ This is a 7 month old project under PAM in the district.</li> <li>▪ It aims at promoting food security through crop diversification, increase income through cash crop and other livelihood eg. bee farming and fish ponds.</li> <li>▪ The project is funded by the Norwegian Embassy.</li> <li>▪ Targeting the game management and drought prone areas</li> <li>▪ The food pack consists of cassava, maize, groundnuts, Soya and sunflower <ul style="list-style-type: none"> <li>- -maize and cassava being for food</li> <li>- Soya, groundnuts and sunflower for cash and food processing handled by COMACO.</li> </ul> </li> <li>▪ The project is also giving out bee hives and fingerlings for fish ponds. These are new activities for this season.</li> <li>▪ The marketing and production component buys the crop from the farmer and finds a market to sell the products.</li> <li>▪ If have excess on the market, COMACO processes into another product to be sold as a finished product or even export it to neighbouring countries</li> <li>▪ COMACO will be putting up machinery for processing. <ul style="list-style-type: none"> <li>- maize to mealie mill</li> <li>- groundnuts to peanut butter</li> <li>- sunflower to cooking oil</li> <li>- Soya to oil and livestock feed</li> <li>- cassava to feed and food security pack</li> <li>- cassava targeting Tiger Feed and National Milling Cos</li> </ul> </li> <li>▪ PAM has opened COMACO offices in Nyimba, Serenje and Chinsali districts.</li> <li>▪ In 2006/07 the project distributed 40,000 cassava cuttings to wild game management areas for crop diversification – Viz Mumba and Chipembe on the upland with fenced fields.</li> <li>▪ In the Valley area a lot of cassava planting material have been distributed around Lwembe, Mwepe and Chinsimbwe – human and wildlife conflict in those areas.</li> <li>▪ 400 house holds are targeted for field crops and 150 house holds for fish ponds and bee keeping.</li> <li>▪ FoDIS is a very important project in the area to alleviate the problem of planting material for these crops.</li> <li>▪ It was suggested that the nurseries should be at farm level not at the district because of the poor condition of roads.</li> <li>▪ There will be need to use chilli to repel elephants.</li> <li>▪ Communal nurseries could be established and the material should not be free but in form of paying in kind to other farmers.</li> <li>▪ Sweet cassava varieties could be promoted for food security and bitter varieties for industrial use</li> <li>▪ People need to be trained for utilization and processing of cassava</li> <li>▪ Although this year the project did not distribute sweetpotato vines, there is high demand for the planting material.</li> <li>▪ It is a viable partner attracting increasing production of the crops in the district and neighbouring districts in the province.</li> </ul>			

### 4. A farmer (Chalubilo Camp)

Attendants	Weta Sakala(Farmer),Mr H. Banda, Mr Katongo,		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	03/02/07 12.30 to 13.23 hr	Venue	Mr Weta Sakala's field
Points of discussion			
<ul style="list-style-type: none"> <li>▪ The farmer has 52 ha. farm only about 0.5 ha. being cultivated.</li> <li>▪ Other crops grown are maize, groundnuts, sunflower, sweetpotato</li> <li>▪ Mr Sakala has been growing cassava and sweetpotato since 1972. The Council at that time used to encourage the communities to grow cassava as a way of crop diversification.</li> <li>▪ In 1982 he received cassava planting material (maniopola) from District Agric. Office to plant 1.5 lima.</li> </ul>			

This year he planted only 8 lines.

- Cassava can store in the soil for long time unlike sweetpotato reported to rot easily.
- Sweetpotato is easily attacked by weevils (Kapiri and other local varieties).
- Cassava could be attacked by rodents, monkeys and other wild animals.
- Cassava is only boiled or roasted while fresh. However, in the past they used to process by soaking and sun drying.
- He prefers the sweet cassava variety, influence from local communities.
- Fresh cassava tubers are used for cash and paying for labor in his field.
- He is willing to grow both sweet and bitter varieties depending upon market for his produce.
- He is not familiar with any cassava disease or pest.
- He uses both cassava and sweetpotato leaves for vegetable.
- He is a COMACO member.

5. A farmer (N' gambwa camp)

Attendants	Mr Ackson Lungu (farmer), Mr H. Banda, Mr Katongo		
Interviewer	Dr M. Simwambana and Mr M. Ndhlovu		
Date/Time	03/02/07 14.00 to 14.30 hr	Venue	Mr Ackson Lungu's house
Points of discussion			
<ul style="list-style-type: none"> <li>▪ One of the selected lead farmers who worked under DRP and had cassava since 1998/99 season for five years.</li> <li>▪ He lost his cassava through theft – used Bangweulu brought by DACO's office.</li> <li>▪ His found Bangweulu to be sweet. He applied some 25 kg D compound and 25kg urea on a lima.</li> <li>▪ He had been trained by DACO's office how to grow cassava. His main problem is the people stealing his cassava. He would like to continue if planting material was available, particularly Bangweulu and maniopola.</li> <li>▪ He is also willing to try any other new varieties.</li> <li>▪ He is conversant with cassava processing and utilization; he also knows the mixing maize and cassava flour from a workshop he had attended earlier</li> <li>▪ He is willing to share planting material with other farmers.</li> <li>▪ He is a member of a cooperative in his village, any advantage of using the cooperative for sharing material within the area.</li> </ul>			

## Annex 7. QUESTIONS AND COMMENTS RAISED IN THE PRESENTATION WORKSHOPS

### FASAZ/JICA Presentation for MACO staff held on 6th March 2007

NAME	QUESTION OR COMMENT
Mr. Mingochi. NANGA	<ol style="list-style-type: none"> <li>1. Mr. Suzuki, will the project procure a truck for the transportation of planting material. Transport is crucial in the timely delivery of planting material?</li> <li>2. Vegetables &amp; cow peas are mentioned to be grown with cassava in new areas to be introduced. Are these crops mentioned as candidates for the diversification or not?</li> <li>3. I have not heard the alternative utilization of cassava especially for contribution of essential nutrients as leafy vegetables. Would the project consider this at later stage?</li> </ol>
Mr. Phillip Siamuyoba MACO HQ	<ol style="list-style-type: none"> <li>1. Is there a provision for an alternative crop other than cassava in the areas where cassava is not preferred?</li> <li>2. The base line survey dwelt more on cassava and less on other drought tolerant crop. Does this mean cassava is the main crop in the crop diversification project?</li> <li>3. I propose that selection of districts to establish secondary nurseries should consider identifying districts where cassava production is low. Establishment of secondary nurseries would create ease access for the farmers to acquire plant material within their location.</li> </ol>
Mr Mwila MSEKERA	<ol style="list-style-type: none"> <li>1. We need to be sure that beneficiary communities can apply adequate culture practices to ensure good crop. We should do as we select sites.</li> <li>2. What weight does the project place behind variety verification trails? The role of variety trails in addressing the issue of diseases and yields/suitability e.t.c.</li> </ol>
Ms Edah Nawale PO	<ol style="list-style-type: none"> <li>1. Availability of resources i.e. budget line would encourage officers to supervise project Areas.</li> <li>2. Promote cassava as fodder/feed for livestock; a sure positive promotion success in southern province where most live stock are</li> </ol>
Mr Hamazakaza Mochipapa	<ol style="list-style-type: none"> <li>1. Other drought tolerant crops for southern province may include sorghum, cowpeas and pigeon peas.</li> <li>2. One aspect that need emphasis and probably could enhance adoption of cassava especially in rural areas where the crop is new is the aspect of intervention. Focusing on processing and utilization we need to diversify on the recipes and blending of cassava meal with other cereals</li> </ol>
Mr. Kanenga PO Msekera	<ol style="list-style-type: none"> <li>1. Proposed crops; sorghum, G/nuts pigeon pea, green gram, cow peas -we have different varieties with the crops.</li> <li>2. The issue of breeders not producing basic/breeders seed could have been a miscommunication and does not arise.</li> <li>3. Rotation for cassava-Recommendation is that cassava is planted the last crop in the rotation after other crops have been planted in the rotation.</li> </ol>
MR Serenje	<ol style="list-style-type: none"> <li>1. Clarify on purchase of motor vehicles (4x4) to enhance transportation in foundation sites.</li> </ol>
Mr Zulu M PO Mutanda	<ol style="list-style-type: none"> <li>1. The other crops that need support of the project are cow peas, pearl millet and sorghum in the southern districts of Northern province. A minor legume Bambaranuts may also be considered.</li> <li>2. The base line survey on cassava has been comprehensive and well done, but is there going to be another baseline in the same areas for legumes and other drought tolerant crops. A combined and multidisciplinary approach would definitely be cheaper.</li> <li>3. The issue of purchasing motor vehicles for foundation sites was discussed in station meetings by JICA staff and briefly mentioned in the last counterpart meeting at Mt Makulu research station. The issue of tractors was also presented.</li> </ol>

NAME	QUESTION OR COMMENT
Mr Mbulo GART	1Wrong varieties of sorghum are planted because of NGOs which buy wrong varieties 2. The sorghum programme is able to provide enough seed of correct varieties e.g. drought tolerant Kuyuma and 25v etc
Mr. R Mulenga . Mt Makulu	1. Include reagents for screening cassava for diseases
Mr Mashuta Kabwe	Practically present some of these ideas (Ideas in the project) in a very physical way. Do environmental characterization of these areas. Also present these in schematic formats as simplified maps-especially of the new areas.
Mr. Musanya. ZARI Mt	The crops under consideration are considered heavy feeders hence in the short term there is no problem but in the long run the Is a possibility of them affecting the fertility of the lands they will be targeted therefore we should consider the problems of soil fertility.
Mr Chiona M Mansa	Cassava is not a heavy feeder it is an efficient feeder. It is planted as the last crop in rotation when all other crops fail. When it does well in poor soils people want to bring other crops that failed in the first place. Give credit to cassava.
Mr Chalwe Mutanda	Promote invitro micro-propagation as an approach to eliminate viral diseases.
Mr. I Mukuka	One GRZ promotion efforts ZARI has been implementing a project in Mansa where a pilot processing was set up. The project focused on cassava production, processing and marketing. It was funded by CFC
Dr Sumani A	The project will crumble at primary sites. JICA should buy smaller tractors and implements instead of only tractors.

**Dissemination Workshop for Cassava Utilization Promotion Taskforce held on 16th March 2007 at ACF**

NAME	QUESTION OR COMMENT
Ms. Sylvia. C Banda Sylvia Profession catering	1. As buyers, we sometimes face problems where ethics are concerned. Farmers need to be helped to be consistent and honest on this processing of their cassava. Some of the cassava flour contains cyanide which is poisonous. At one time we bought cassava which after being consumed caused head ache. 2. Sweet varieties are planted near homes while bitter varieties in the bush to avoid poisoning.
Mr P Chibamullilo JICA	1.The survey should highlight one point on marketing. It should have included bulking. In case we produce more how can we link producers to buyers e.g. small scale farmers who are around a big commercial farmer 2.Related to demand how do small scale farmers get linked to utilization eg Peko Biscuits 3. What should start first extension training on production or start with how to utilize then farmers can grow.
Dr Klaus ACF	1. Production and processing message should be disseminated together in order to reach markets in sustainable manner. 2. Cassava processing should be in two phases (local processing for home consumption) and (processing commercial Purpose). Local processing should be first priority.
Mr Kapotwe. PAM.	1. The report should mention that entry point is cassava because there isn't enough sweet potato seed at the time of inception.
Dr Collins Nkatito CFU.	1. What role can commercial farmers play in the promotion of cassava? Can be considered at secondary multiplication site level. 2. Cassava processing should be in two phases (local processing for home consumption) and (processing for

NAME	QUESTION OR COMMENT
	<p>commercial purposes). Local processing should be first priority. Among the donor funded projects conservation Agriculture project (CAP) NORAD funded programmes through CFU/ZNU will be promoting among others cassava cultivation among 120 000 farmers in southern Lusaka, Central Western and eastern provinces. the programme will be promoting cassava nurseries in these areas at emergent and commercial farmers level( Minimum 10 ha) under irrigation. The areas are Sinazongwe, Gwembe, Petauke, Sesheke, Chongwe districts.</p> <p>3. The problem of lack of land can be solved by intercropping cassava with other crops. Maize should be eventually be replaced with cassava there by reducing the competition between the crops.</p> <p>4. What is the purpose of discussing the market today when this project will come on the market 4 years from now?</p>
Dr Mwale Director ZARI	<p>1. One of the project outputs emphasizes need to establish efficient and least cost multiplication and distribution system. How will this be achieved with the NGOS mentioned in the presentation?</p> <p>2. In this project there are three primary sites while in the presentation there are four has one more primary sites been added?</p>
Dr. Mungomba GART	<p>1. The aspect of introducing cassava outside the rain season is contradictory may you please furnish more light on is one. How will farmers manage to irrigate the cassava?</p>
Mr Kayama Geoffrey Harvest Help	<p>1. Is it not better to adopt the bitter varieties for food security than sweet varieties? The project should help the communities learn how to utilize it.</p>
Mr. Briton Katoat Mulonga Freelance Consultant.	<p>1 How does JICA hope to help industries to educate the would be users of products from the industries?</p> <p>2. There is need to distinguish between varieties for snack and varieties to be used as cassava meal. Sweet varieties and bitter varieties should be promoted and each to be used for particular use.</p> <p>3. Any traditional processing is alright and can meet the safety and quality standards is used appropriately</p>
Dr. J Simbaya Animal Science UNZA	<p>The emphasis on sweet cassava should not be emphasized as sweet varieties also yield less than bitter ones, the whole should emphasis on the purpose of cassava and since we need to look at the processing aspect of cassava</p>
Dr Yambayamba UNZA	<p>I would rather we promote more of the bitter varieties and come up with the best processing technology. Bitter varieties yield higher and they are not easily attacked by pests and there is less theft compared to sweet varieties.</p> <p>2. One problem is that we always want to group rural dwellers into one category-farmer. but they cannot all have the same interest and therefore it is important to identify only those who are interested in a particular activity</p> <p>3. What proportion does this project target to reduce poverty? How sure are you that the farmers will adopt the technology of processing and preservation?</p> <p>4. With regard to the disconnect between producers and users, is the idea of the project to grow and market the cassava, or is it for consumption only or for both?</p>
Mr. Chisamanga PAM	<p>On the issue of adoption the younger generation is more likely to adopt cassava for commercial purposes than the older</p>

NAME	QUESTION OR COMMENT
	generation .This is because the order generation has higher resistance to adopting new things

## Minutes of discussions in the dissemination workshop at ACF

### **1. How to promote cassava/sweet potato consumption in the maize-belt areas where the cassava has not been traditionally consumed?**

- Sensitize farmers on how to process Cassava for household food consumption first before supplying to a commercial market
- Appropriate methods of processing should be introduced rather than concentrating on promotion of sweet varieties only
- Sensitize farmers on different varieties and their utilization
- Availability of various varieties is limited but farmers are willing to try different varieties/types (sweet/bitter)
- 
- Question of competing resources, i.e. labor and land → Cassava/Sweet Potatoes should replace Maize thereby reducing competition aspects
- Question on soil conservation in Cassava rotations → intercropping / crop rotation with legumes and agro-forestry
- Off season planting becomes an option with irrigation development
- Work with traditional leaders on issues of livestock management vis a vis crop protection → introduce by-laws at community level, arbitration/ compensation systems
- Use Jatropha for life-fencing
- Acknowledge different preferences of farmers and not put everybody in the same group
- Promotion campaigns should address gender aspects in production and utilization of Cassava/Sweet potatoes

### **2. How to establish a stable supply system of cassava for stock feed companies?**

- Concern: SP will only come on the market in about 4 years from now on
- Price of Cassava chips will have to be competitive with Maize at about 60-75% of Maize and then transport costs from production sites to markets will determine the viability of this venture → Cassava GM models will need to be developed (initiative have started already)
- Project will focus on the ten districts during the next five years but is free to collaborate with partners outside the target area

### **3. How to enhance the farmers' skills for cassava/sweet potato production, processing and marketing?**

- Any traditional processing method is appropriate in order to meet safety and quality standards for human consumption if applied correctly
- Clear extension messages have to be developed with regard to the proper utilization of Cassava varieties and processing methods
- Extension messages to include sensitization on importance of adhering to business ethics
- Promotion of Cassava standards through the project and extension service provision