

R6983 LogFrame

Modifications to project outputs

The following are the original and suggested new outputs for the project:

Original Outputs:

- 1/ Rigorous, broad-based, yet detailed understanding of PPD from ultrastructural, biochemical and genetic perspectives generated.
- 2/ Specific enzymes, metabolites or structural features showing a strong association with high and low PPD identified.
- 3/ Identification of molecular markers linked to PPD-related quantitative trait loci (QTLs) assisted.
- 4/ Parental material for recombination and selection for increasing cassava storability identified.
- 5/ Stability of biochemical processes under a range of environmental and agro-ecological conditions determined.
- 6/ Key candidate genes and metabolic pathways with the potential to be manipulated via genetic modification experiments in order to modulate the PPD response identified.
- 7/ Results disseminated via reports, scientific meetings and publications to international (CIAT and IITA) and national centres and the wider research community concerned with cassava improvement.

Modified Outputs in light of the Mid-Term Review process:

- 1/ Rigorous, broad-based, yet detailed understanding of PPD from structural, biochemical and genetic perspectives generated.

(Note: ultrastructural changed to structural since this thought to be more appropriate)

- 2/ Specific enzymes, metabolites or structural features showing a strong association with high and low PPD identified.
- 3/ Identification of molecular markers linked to PPD-related quantitative trait loci (QTLs) assisted.
- 4/ Parental material for recombination and selection for increasing cassava storability identified.
- 5/ Stability of biochemical processes under a range of environmental and agro-ecological conditions determined.
- 6/ Key candidate genes and metabolic pathways with the potential to be manipulated via genetic modification experiments in order to modulate the PPD response identified.
- 7/ Results **disseminated** and Outputs **promoted** via reports, scientific meetings and publications to international (CIAT and IITA) and national centres and the wider research community concerned with cassava improvement.

(Emphasis on promotion of outputs as well as just scientific publication.)

The suggested revised logframe is attached. This reorganises the project activities to take into account the progress made and timeframe for achievement of remaining tasks. OVI's at the output level have been revised to reflect the updated work programme. The broad changes were agreed at the review meeting, the Project Leader documented the changes and the review team have made a few minor amendments.

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
Goal			
Poor people benefit from new knowledge applied to food commodity systems in forest-agriculture interface areas	To be completed by Programme Manager	To be completed by Programme Manager	To be completed by Programme Manager
Purpose			
Strategies developed and promoted which improve food security of poor households through increased availability and improved quality of root crop and horticultural foods and better access to markets.	To be completed by Programme Manager	To be completed by Programme Manager	To be completed by Programme Manager
Outputs			
<p>1. Biochemical and structural components of PPD and wound-healing characterised.</p> <p>2. Components associated with low and high PPD identified</p> <p>3. Stability of components in different environments and agro-ecosystems determined</p> <p>4. PPD-related QTLs identified.</p> <p>5. Parental material for breeding for reduced PPD identified.</p> <p>6. Key enzymes and pathways for genetic modification identified.</p> <p>7. Experimental results and recommendations for breeding and genetic modification disseminated and promoted.</p>	<p>Preliminary biochemical analyses completed by March 1998.</p> <p>Appropriate structural studies completed by March 2000.</p> <p>Methodologies applied to material exhibiting differential PPD responses by March 1999</p> <p>Material evaluated under different environmental & agro-ecological conditions by March 2000</p> <p>PPD-related QTLs mapped by March 2001</p> <p>Genetic stocks for breeding identified by March 2001</p> <p>Key entry points for genetic modification identified by March 2001</p> <p>Publications, reports & meetings presentations 1998-2001; at least two per year. Project Outputs available to target institutions by March 2001.</p>	<p>CIAT reports, DFID-NRI reports</p> <p>Annual project review by NRI</p> <p>Project reports, CBN scientific meetings proceedings, Journal articles, Project reports</p> <p>Informal communications to relevant CG centres, NARS and cassava scientists</p>	<ul style="list-style-type: none"> Markers prove to be sufficiently stable under different environmental conditions to predict PPD responses, in order to map QTLs, identify breeding material & key entry points for genetic manipulation

Activities	Inputs	Means of Verification	Important Assumptions
<ul style="list-style-type: none"> Annual visit by JRB to CIAT Annual review by NRI of progress towards outputs Ongoing transfer of methodology and data between Bath and CIAT by email 	<p>Total Budget here</p> <p>Year 1: £41,620 Year 2: £78,201 Year 3: £76,556 Year 4: £81,488</p> <p>Total: £277,865</p>	<ul style="list-style-type: none"> CIAT reports DfID-NRI reports Annual project review by NRI Project reports CBN scientific proceedings Journal articles Informal communications to relevant CG centres, NARS and cassava scientists 	<ul style="list-style-type: none"> Cassava storage roots can be produced from an appropriate range of varieties in Bath glass-house Differences revealed by biochemical & ultrastructural methods prove to be correlated with PPD Results are confirmed by work on field grown cassava
<p>1997/98¹</p> <p>1.1 Establish cassava varieties with differential PPD responses in Bath glass-house</p> <p>1.3 Optimise biochemical methodologies</p> <p>2.1 Undertake preparative work at CIAT in anticipation of post-graduate student starting</p>			
<p>1998/99</p> <p>2.2 Post-graduate started at CIAT</p> <p>2.3 Technical skills passed on by post-doc to post-grad.</p> <p>2.4 Initial application of methodologies to Bath-grown cassava exhibiting differential PPD responses</p> <p>2.5/1.4 Initial application of methodologies to CIAT field-grown material</p> <p>2.6/5.1 Evaluate responses in field-grown material at CIAT</p> <p>5.2 Identify genetic stocks for breeding</p>			

¹ An attempt has been made to group Activities into the years of the project. However, some are not confined exclusively to a particular year. While a few of the Activities are specific to particular Outputs, most contribute in varying degrees to all.

<p style="text-align: center;">1999/00</p> <p>1.5 Appropriate structural work.</p> <p>1.6 Evaluate wound healing response in cultivars with differing PPD responses.</p> <p>1.7 Complete compound profile analyses and structure identification.</p> <p>2.6 Evaluate responses of field-grown material at CIAT.</p> <p>3.1/5.3 Evaluate progeny for PPD response, biochemicals, and QTLs in different agro-ecological zones.</p> <p>4.2 Map PPD related QTLs.</p> <p>5.2 Identify genetic stocks for breeding (continued)</p> <p>6.1 Refine and optimise biochemical analyses of PPD responses at Bath and CIAT</p> <p>7.1 Preparation of results for publication and dissemination.</p>			
<p style="text-align: center;">2000/01</p> <p>3.1/5.3 Evaluate progeny for PPD response, biochemicals, and QTLs in different agro-ecological zones (continued).</p> <p>4.2 Map PPD related QTLs (continued).</p> <p>5.2 Identify genetic stocks for breeding (continued)</p> <p>6.2 Identification of key markers and entry points for control of PPD</p> <p>7.1 Preparation of results for publication and dissemination (continued)</p> <p>7.2 Promote project Outputs to target institutions.</p>			