Seeds of Life

Fini ba Moris

ANNUAL PLAN 2011-2012

01 February, 2011 – 31 January, 2012

Includes progress report for period from 01 February, 2011 to 30 July, 2011

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Acronyms and Abbreviations

ACIAR	Australian Centre for International Agricultural Research
AEZ	Agricultural Ecological Zone
ALGIS	Agricultural Land Geographic Information System
ANU	Australian National University
AP	Annual Plan
APC	Australian Program Coordinator
APM	Australian Program Manager
ATL	Australian Team Leader
AYAD	Australian Youth Ambassadors for Development
AusAID	Australian Agency for International Development
CGIAR	Consultative Group on International Agricultural Research
CIAT	Centro Internacional de Agricultura Tropical (International Centre for Tropical Agriculture)
CIMMYT	International Maize and Wheat Improvement Centre
CIP	International Potato Centre
CLIMA	Centre for Legumes in Mediterranean Agriculture
CSPG	Community Seed Production Group
DSO	District Seed Officer
ESA	Environmental Site Assessment
EoPOs	End-of-Program Outcomes
EU	European Union
FAO	Food and Agriculture Organization
FSMG	Farmer Seed Marketing Group
FSPA	Formal Seed Production Advisor
GIS	Geographic Information Systems
GPS	Global Positioning System
ICRISAT	International Centre for Research in the Semi-Arid Tropics
IELTS	International English Language Testing System
IRRI	International Rice Research Institute
ISPA	Informal Seed Production Advisor
M&E	Monitoring and Evaluation
MAF	Ministry of Agriculture and Fisheries
MPCLs	MAF Program Co-Leaders
NDA&H	National Directorate for Agriculture and Horticulture (MAF)
NDR&SS	National Directorate of Research and Special Services (MAF)
NDP&P	National Directorate of Policy and Programming (MAF)
NDACD	National Directorate of Agricultural Community Development (MAF)

NGOs	Non-Government Organizations
OFDTs	On-Farm Demonstrations and Trials
OJT	On the Job Training
OM	Office Manager
PDD	Program Design Document
PMU	Program Management Unit
PSC	Program Steering Committee
RA	Regional Advisor
SEOs	Suco Extension Officer (MAF extension officer)
SoL1	Seeds of Life 1
SoL2	Seeds of Life 2
SoL3	Seeds of Life 3
SOSEK	Social Science and Economics (Sosial Ekonami Pertanian)
STA	Short-Term Advisor
TAG	Technical Assessment Group
TL	Timor-Leste
UN	United Nations
UNTL	University of Timor Lorosae
UWA	University of Western Australia

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1. INTRODUCTION

"Seeds of Life (SoL)" (Fini ba Moris) is a program within the Timor-Leste (East Timor) Ministry of Agriculture and Fisheries (MAF) to improve national food security through increased productivity of major foodcrops. The Governments of Timor-Leste and Australia collaboratively fund the program. Australian funding is through the Australian Agency for International Development (AusAID) plus the Australian Centre for International Agricultural Research (ACIAR) and is managed by ACIAR. The Centre for Legumes in Mediterranean Agriculture (CLIMA) within The University of Western Australia (UWA) coordinates the Australian funded activities. The current phase (Phase 3 or SoL3) commenced at the beginning of February, 2011.

This Annual Plan and Six Monthly report describes SoL3's planned activities of the first year and summarized the outputs during the initial six months of the program. Details are presented in the appendices. a) Appendix 1, Progress against M&E framework, b) Appendix 2, Seeds of Life communication and dissemination activities, c) Appendix 3, Program budget for Year 1 and d) Appendix 4, Annual workplan in gant form for 2011-2012.

1.1 Program origin

The current phase of Seeds of Life (SoL3) consolidates the gains made by the Seeds of Life – East Timor (SoL1) Project (2000-2004), a five year Phase 2 (2005-2010) and a Phase 2 extension (September 2010 to January, 2011) (SoL2). Phase 1 conducted replicated trials mainly under research station type conditions as an ACIAR project. The project commenced prior to the establishment of a Government of Timor Leste and was slowly incorporated into the newly formed Ministry of Agriculture and Fisheries as a program under its direction. Likely high yielding varieties were identified in trials conducted in Aileu (Kintal Portugal), Manufahi (Betano) and Baucau (Fatumaca) but these test entries had not been tested under farmers conditions for release.

Seeds of Life 2 commenced in 2005 and conducted both on-station and on-farm trials. Two maize, one rice, one peanut and three sweet potato varieties were identified from the work conducted over the period from 2000 to 2006 and released by the MAF as MAF recommended varieties in 2007. Two cassava varieties were released in 2009 making a total of nine released varieties from SoL/MAF research. Access to seed of the newly released varieties proved to be a constraint and the scope of SoL2 was expanded in 2008 with extra funding to increase the production of seed of released varieties for distribution to farmers. In 2009 the program was evaluated by a review team and it was agreed by all parties that the program be continued. Subsequently a design mission prepared a design for the SoL3 which was approved as the SoL3 Program Design Document (PDD).

1.2 Program implementation

The SoL 3 Program Steering Committee (PSC) provides overall strategic direction and resource allocation to the program. It is chaired by the Minister of MAF and possesses representation from MAF, AusAID, ACIAR and Program management. The MAF Director General acts as the head of the program management team along with MAF directors for a) National Directorate for Research and Special Services (NDR&SS) b) National Directorate for Agriculture and Horticulture (NDA&H) c) National Directorate for Agricultural Community Development (NDACD) and d) National Directorate for Policy and Planning (NDP&P) plus the Australian Project Coordinator (APC) and Australian Team Leader (ATL).

The PSC will meet twice in the first year and annually in subsequent years to approve six monthly progress reports and Annual Plan. The first PSC meeting is scheduled to be held on Tuesday, 11 October, 2011.

Long term Australian funded advisor personnel in Timor Leste includes the ATL, advisors for Research, Formal Seed Production, Informal Seed Production, Monitoring and Evaluation/Social Science Research and three regional advisors. The program also has an office manager.

MAF provides a majority of the technical staff working on the program. A list of personnel working full time with the program is presented in Table 1.

Table 1. Personnel working full time on SoL3

	Positions		
	MAF	**SoL**	**Total**
Research staff – Component 1			
On-Station Research Officers (OSRO)	11	0	11
OFDT Coordinators (OFDTC)	2	0	2
OFDT Officers (OFDTO)	9	5	14
Pure Seed Officers (PSO)	2	0	2
Seed production staff – Component 2			
Seed Production Coordinators (SPC)	1	0	1
Seed Production Officers (SPO)	10	2	12
C-B seed production staff – Component 3			
C-B Seed Production Coordinators (CBSPC)	9	0	9
Program management – Component 4			
M&E/ SOSEK Staff	4	0	4
Germplasm curator	1	0	1
Climate change	2	0	2
Advisors and office manager		10	10
Dili and regional office staff		12	12
Drivers	5	10	15
Total GoTL positions	**56**	**39**	**95**

The program manages 85 locally employed staff member including field staff, drivers, and office staff. The MAF funds 56 of these directly. Their classifications include on-station and on-farm (On-farm demonstrations and trials known as OFDTs) research staff, formal and informal seed production coordinators and officers, climate change research personnel and monitoring and evaluation/social science researchers. Drivers and administrative staff are funded by both MAF and from SoL directly.

The office is located in the MAF compound, Comoro, Dili.

1.3 Preparation of the Annual Plan

This, the first Annual Plan of SoL3, was prepared during July-September, 2011. The program officially commenced on 01 February, 2011 but half of the advisors did not commence with the program until later. The first to arrive was the M&E/SOSEK advisor on 20 February followed by the advisor for Informal Seed Production (Component 3) on 01 April, Regional Advisor for Maliana (26 April) and Regional Advisor for Same (05 May). The Australian Team Leader commenced work with the program on 14 June, 2011. A workshop with MAF directors from three national directorates (NDR&SS, NDA&H and NDACD) and from the seven Districts SoL3 will be working in during the first year (Aileu, Baucau, Manufahi, Ainaro, Liquica, Bobonaro and Viqueque) was held on 24-25 June, 2011 during which an operational plan was discussed. The new ATL represented SoL at the SoL3 launch on Tuesday, 28 June. Following the launch, the ATL visited the three regional centres for higher level workshops (District Directors and Deputy district directors) and seven districts at which Directors, Sub District Directors and Suco Extension Officers

(SEOs) attended. Operational plans were discussed and by the end of the process, the SoL office and MAF had agreed on the implementation plan. The dispatch from the Director General's office for extra MAF personnel to work on SoL activities to implement the plan was issued on 08 August, 2011 and twenty six extra personnel commenced soon after (see total personnel numbers in Table 1).

SoL personnel were in constant touch with MAF personnel in Dili and at the District level, NGOs, and other organizations working in the agriculture sector to ensure the program was designed to reach the maximum number of collaborators. The ATL discussed planned program activities with the DG on a daily basis, regularly with National and District directors plus at Quarterly program management meetings (see under program origin for structure)

This draft plan will be submitted to the first Program Steering Committee meeting on 11 October for approval.

2. PROGRAM DESCRIPTION

SoL addresses the underlying causes of food insecurity in Timor Leste. These include low yields of staple crops, vulnerability of unfavourable seasons and natural disasters, lack of cash incomes to purchase food during periods of shortfall, post harvest losses and low market distributional capacities.

SoL3 builds on the success of previous phases and maintains a core focus on increasing yields by selecting and distributing improved varieties of superior genetic quality. It also has a secondary focus on analysing and developing strategies to overcome climate variability and change; improving agronomic practices to reduce weed burdens and increase soil fertility; reducing post harvest storage losses and improving input supply arrangements for seed.

The program concentrates on evaluating higher yielding varieties of crops currently cultivated by farmers in Timor Leste. These are maize, sweet potato, cassava, rice and peanuts. A small amount of work is also conducted on some minor crops such as wheat, barley, potato and various bean crops.

SoL3 remains a program within the MAF and will be implemented over a five year period (01 February, 2011-31 January, 2016). During the first year, activities will be concentrated in the Districts of Aileu, Baucau, Viqueque, Bononaro, Manufahi, Ainaro and Liquica and expand out into the remaining five Districts (plus Dili) over the remainder of the period.

The vision of the end of Phase 3 is to have the foundations of a national seed system for Timor Leste established, capable of providing a high level of access to seed of improved varieties to farmers throughout the country.

2.1 Program goal, objective and vision

The **goal** of the Program is 'Improved food security through increased productivity of major food crops'.
The **objective** (purpose) is '35,000 lowland rice farmers and 46,000 upland farmers have access to and are routinely using improved food crop varieties'.

At the end of the program SoL3 will aim to have:

- 70% of lowland rice farmers (equally to approx 35,000 farmers) using one or more SoL varieties.
- 45% of upland farmers (equally to approx 46,000 farmers) using one or more SoL varieties. Within this:
    - 40% of maize growers using SoL varieties;
    - 70% of peanut growers using SoL varieties;
    - 50% of sweet potato growers using SoL varieties; and
    - 20% of cassava growers using SoL varieties.

The **Vision** for the end of Phase III is to have the foundations of a national seed system for TL established and capable of providing a high level of access to seed of improved varieties to farmers throughout the country. Within this vision: (i) MAF is competently managing an adaptive research program that is regularly identifying and releasing improved varieties; (ii) MAF is competently managing formal seed production and processing activities at an appropriate scale; (iii) MAF is effectively distributing formal seed in a manner that maximises scale-up benefits; (iv) informal seed production and distribution is stimulated nation-wide through the establishment of community seed production groups (CSPGs); and (v) MAF is effectively managing overall development of the national seed system for TL.

2.2 SoL Components and component objectives

SoL 3 has four components and a management unit. The four components are a) Evaluation and improved food crop varieties, b) Formal seed production and distribution, c) Informal seed production and distribution and d) Seed system management. The objectives and general direction of these components are as follows:

Component 1: Evaluation of improved food crop varieties

Component objective: Improved varieties of food crops identified and released.

Variety evaluation work will continue (from SoL2) to concentrate on the major crops of maize, rice, sweet potato, peanuts and cassava but expand, where possible, into improving staple crops growing in the poverty affected upland areas (e.g. legumes, wheat, barley, and potatoes) and on lowland rice research, a discipline which has been difficult in the past because of the lack of Government research station in this environment. Extra research effort will also be on food crops that may adapt to climate change such as more variable rainfall and higher temperatures.

End-of-Program outcomes: (EoPOs), against which performance of Component 1 will be assessed, include:

- National network of Research Centres and smaller Research Stations established, sufficient to cover major crop types and agroecological zones.
- 10-15 new varieties of food crops evaluated and officially released.
- MAF competently managing all phases of the research cycle including objective setting, planning and implementation of trials, analysis, and reporting.

Component 2: Formal seed production and distribution

Component objective: Sufficient high quality seed being produced through formal channels to maintain the genetic quality of released varieties.

The multiplication and distribution of formal seed, initiated during the second half of SoL II, is expanded under Component 2. Production of formal seed is an essential component of any national seed system but is expensive to produce. Its production is therefore targeted towards supplying the informal seed production activities both directly through SoL and with NGOs plus other organizations involved in seed production. There is an increased emphasis on cost-recovery and a rationalisation of seed processing/ storage infrastructure to improve production efficiency.

End-of-Program outcomes: End of program outcomes (EoPOs) against which performance of Component 2 will be assessed, include:

- Four Seed Processing Centres established (2 new) for receiving, grading, drying, storing, and packing formal seed, with a combined capacity of approximately 175 Mt per year.
- Production of 100 Mt of formal maize seed, 50 Mt of rice seed, 25 Mt of peanut seed, 600,000 sweet potato cuttings, and 600,000 cassava canes per year.
- Formal seed and planting material effectively and efficiently distributed to CSPGs and farmers.
- MAF competently managing the production and processing of targeted quantities of formal seed, and the effective distribution of this seed to farmers.

Component 3: Informal seed production and distribution

Component objective: Mechanisms for the production and distribution of seed through informal and market channels strengthened.

Under this component, a range of new approaches are supported to begin building the foundation of a commercial seed industry in TL and hence increase farmers' access to improved varieties, outside of government channels. These include the production of informal seed by community seed production groups (CSPGs), which will complement and provide a scale-up mechanism for the seed produced through formal channels (Component 2). In future years a range of initiatives will also be piloted to stimulate market-based seed exchange.

End-of-Program outcomes: EoPOs against which performance of Component 3 will be assessed, include:

- Around 1,000 CSPGs established and producing a marketable surplus of informal seed.
- CSPGs linked with market outlets and selling seed.
- Mechanisms for strengthening market-based exchange of informal seed trialled, evaluated, and where appropriate replicated.

Component 4: Seed system management

Component objective: MAF capacity to manage the national seed system strengthened.

The focus of this component is on developing MAF's capacity to manage strategically a national seed system, balancing formal (Component 2) and informal (Component 3) seed production and supply, and linking with on-going improved variety evaluation work (Component 1). Cross cutting issues included in this component include gender, environmental change, and policy engagement.

End-of-Program outcomes:

EoPOs against which performance of Component 4 will be assessed, include:

- National seed planning, allocation and inventory control systems established.
- M&E/ SOSEK unit competently managing field evaluation activities, providing a sufficient basis for progressive learning.
- Policy issues identified and advice provided on key issues related to development of the national seed system.
- Gender issues reflected in the implementation of the national seed system.
- Widespread awareness of SoL varieties in all districts.
- Improved varieties and management practices being identified taking into consideration projected climate change impacts.

2.3 Program outputs

Component 1: Evaluation of improved food crop varieties

National Agricultural Research Centres and Research Stations established. Research centres existing at the beginning of the program (Betano and Loes) are being rehabilitated where necessary. Three addition stations are also being established at: (i) at Darasula (Baucau District) for evaluation of varieties at mid-altitude on red acid soils; (ii) a high altitude site in Ainaro District for evaluation of temperate crops; and (iii) in an irrigated rice growing area in Bobonaro for evaluation of rice varieties.

Genetic material of potential improved varieties identified and sourced. Under SoL2, the main emphasis was on evaluation of rice, maize, peanuts, sweet potato and cassava. Under SoL 3 the range of species evaluated is broadened to include food legumes, and temperate species such as wheat, barley and potatoes. The scope of the adaptive research program will also be broadened this coming wet season to identify improved varieties and farming systems that will be resilient to projected climate change impacts.

Potential new varieties evaluated on-station. All introduced material will be evaluated on MAF research centres based at either Betano, Aileu, Loes or Darasula. The material will be examined in replicated trials

Potential new varieties evaluated on-farm. Support continues to be provided for on-farm demonstration trials (OFDTs), as an essential final stage of variety evaluation across all agroecological zones.

Selected new varieties officially released. A Variety Release Committee was established under SoL2, chaired by the Minister of Agriculture, and is functioning well.

Sufficient foundation seed being produced. Foundation seed production has been expanded to include Loes and will also include the new rice station.

Capacity of MAF staff to manage the identification and release of new varieties strengthened. The overall objective of training provided under this component is to improve the performance of research and OFDT staff to the point where they can competently manage all phases of the research cycle.

Component 2: Formal seed production and distribution

Formal seed being produced through farmer contracts. For species that are propagated from true seed (e.g. maize, rice and peanuts), the mechanism existing under SoL2 of contracting farmers to produce seed is working well and has been expanded.

Quality assurance systems established. Quality assurance processes underpinning the production of true seed crops are already reasonably well developed, encompassing crop production monitoring, roguing, monitoring of harvest operations, routine measurement of moisture content (and drying if necessary), routine assessment of germination percentage, lot management procedures, inventory control, and labelling.

Technical extension support provided to contracted seed producers. SoL 3 will establish stronger linkages with district extension staff for extension support of formal seed distribution.

Seed grading, packing and storage facilities established. The number of seed processing centres was expanded during the first six months of SoL3 from Baucau and Manufahi to Bobonaro and Liquica. Extra centres are planned for Aileu and Viqueque.

Formal seed distributed through preferred distribution channels. Priority for seed produced through the formal seed system is given to informal seed production under Component 3. Any surplus to the needs of this program is then sold to other informal seed producing programs (generally under (NGOs or International Organizations) or finally distributed directly to farmer by the MAF. Seed sales are at on a cost recovery basis.

Capacity of MAF staff to manage the production and distribution of formal seed strengthened. The overall objective of training provided under this component will be to improve the performance of the SPOs responsible for supervising the production and processing of formal seed, and extension staff (at all levels) responsible for managing seed distribution activities, to the point where they can competently manage these activities.

Component 3: Informal seed production and distribution

Community Seed Production Groups established. CSPGs provide a means of increasing the volumes of seed produced and diversifying production sites, both of which can help widen access to seed. Initially, CSPGs will increase seed access and seed security of their own members, but eventually they should be able to supply other farmers, in some cases beyond the immediate locality. Under SoL3, approximately 1000 groups will be established in rural districts by the end of the Program. A typical CSPG will comprise 10-15 farmers, self-selected, and will receive 2 years of intensive support.

Farmer Seed Marketing Groups established. Farmer Seed Marketing Groups (FSMGs) are organisations that cluster together several CSPGs as a way of facilitating their marketing of seed and overall scope of activities. The Program will initially support the establishment of up to 6 FSMGs as a pilot, covering maize, rice and peanuts. These groups will be established in the second year.

Focal seed merchants in local markets established. Focal merchants in district markets will be assisted to access seed of new varieties, with the eventual aim of establishing links, and possibly contracts, with CSPGs and FSMGs.

Access to seed for vulnerable groups improved through seed fairs. Seed vouchers and fairs are increasingly used in post-disaster situations to help monetise seed producers and improve access to seed for seed-insecure farmers. Vouchers for SoL varieties will be distributed to target households in advance, allowing them to purchase the seed they require during the day of the fair. This program will commence during the second year of SoL3.

Systems linking informal seed producers with potential buyers enhanced. Unknown or unpredictable local demand for seed is often a major constraint to local seed enterprise development. The Program will support a set of activities intended to improve the flow of information on potential seed suppliers, and areas of demand, to facilitate trade. This will entail: (i) gathering information on surplus production from CSPGs and FSMGs; (ii) gathering timely

information about the potential demand for seed, from projects, local NGOs, and SEOs; (iii) collating and managing this information at a higher level; and (iv) facilitating links between buyers and potential sellers.

Capacity of MAF extension staff to establish CSPGs strengthened. MAF extension staff will be provided with training so that they can support the establishment of the CSPGs, in addition to that included under Component 2.

Component 4: Seed system management

Seed planning and management systems established. The Program will support the development of systems to management of a national seed system encompassing the formal and informal sectors.

M&E systems established. The SOSEK Unit established under SoL 2 is being expanded and refocused under Sol 3. It will become responsible for the routine assessment of performance against EoPOs, as well as for conducting the range of field evaluations necessary to guide the refinement of implementation approaches. The Unit will link to the MAF's National Directorate of Policy and Planning.

GoTL seed policy being informed by SoL experience. Capitalising on its central position in the national seed system and its strong field presence, there is a prime opportunity for the Program to influence seed-related policy. This requires identification of policy issues; analysis of evidence based on field experience; and reporting to relevant government officials.

Seed system gender strategy implemented. A draft gender strategy for SoL 3 has been prepared as part of the design process. A concise (max 2 pp) gender 'action plan', based on the draft gender strategy, will be prepared during the second half of the first year. Implementation of this action plan will be supported by a national Gender Coordinator, assisted by ST TA.

Improved-variety technical and promotional materials developed. SoL is already producing a range of high quality technical and promotional materials, including brochures, posters, calendars, and banners. Additional materials will be developed as new varieties are developed and new activities are initiated.

Awareness of improved varieties increased. As seed supply increases, a key challenge will be increasing the awareness of improved varieties amongst farmers to stimulate the demand for seed, especially from the informal sector. The Program will develop strategies to further promote SoL varieties using mass media such as radio, text messaging, and television.

Environmental and climate change impacts addressed. The climate change unit will assess the likely impacts of climate change on food crop production in TL to help inform the selection of species/varieties that are better adapted to climate change.

Capacity of MAF staff to manage the national seed system enhanced. Provision is made for targeted training of national MAF staff as an integral part of developing the above systems. Provision is also made for exposure visits by senior staff to review the structure and operation of seed systems in other countries such as Australia and Indonesia.

2.4 Program inputs

The MAF provides office space in its Comoro compound to house most of SoL's Dili based staff. A recent increase in team size for SoL 3 resulted in a need for more office space. An expansion of the office will be completed in November, 2011. In addition, SoL/MAF personnel operate from program dedicated offices at the MAF District centres in the three regions based in Baucau, Same and Maliana. The team also utilizes office space in the districts plus research sites at Aileu, Bobonaro (Corluli), Liquica (Loes) and Betano (Manufahi), Darasula (Baucau). Where possible, these buildings are serviced with electricity and security.

MAF personnel provide leadership and manage all research in the districts. The program co-leaders designate approximately 10% of their time to SoL and 51 of the 58 professional staff assigned full time to duties at SoL are fully funded by MAF.

AusAID/ACIAR funding through CLIMA supports the operation of the SoL office, installation and management of replicated and on-farm trials, formal seed production, informal seed production, climate change activities, training activities, short and long term advisors, infrastructure rehabilitation, some research station maintenance and the operation of SoL vehicles.

Program inputs and their budgeted costs for 2011-2012 and expenditure against budget for the first half of 2011 are presented in Appendix 3 and Table 5 of this report respectively.

2.5 Program sites

SoL conducts research in 19 subdistricts spread across the 7 districts of Manufahi, Aileu, Liquica, Baucau, Ainaro, Bobonaro and Viqueque. In addition, there are seed production centres in Triloka (Baucau), Loes (Liquica), Betano (Manufahi), Corluli (Bobonaro), and Aileu (Aileu). A further seed warehouse is being constructed in Viqueque. Regional Advisors are located at the regional centres in Baucau, Same (Manufahi) and Maliana (Bobonaro). The program will expand into further districts in later years. A representation of site location for the OFDTs in 2010 is in Figure 1.

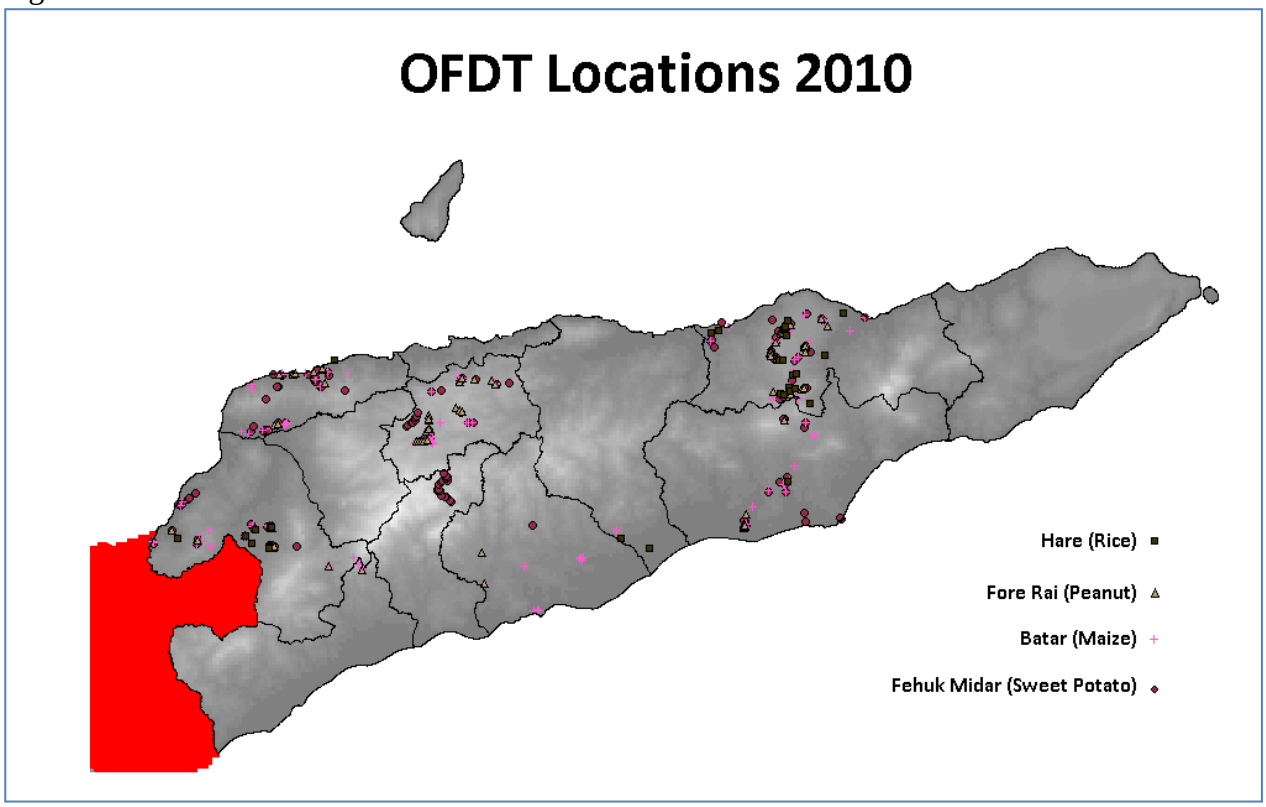

Figure 1. OFDT sites in Timor-Leste (Oecussi excluded) 2009-2010.

3. Program accomplishments by component (Feb – July, 2011)

Introduction

SoL 3 commenced on 01 February, 2011. However, as described in Section 1.3 above, the MOU between the Governments of Timor Leste and Australia was not signed until 31 January, 2011 after which it was possible to offer an expanded number of advisor positions to assist with the program. The extra positions were filled between February and June, 2011. In the meantime, Component program activities progressed at varying rates. These activities are briefly described below and summarized in the Appendix 1. Progress against M&E Framework.

Component 1: Evaluation of improved food crop varieties.

National Agricultural Research Centres and Research Stations established. Buildings were rehabilitated or constructed on TriLoka (Baucau) and Corluli (Bobonaro) during the first six months of the year. At the end of July, buildings were under construction at TriLoka, Darasula and Kintal Portugal. The irrigation system at Loes was being rehabilitated and improved. Sites for a) irrigated rice and b) temperate crop research were being identified for development.
Betano, Loes and Darasula stations was operating to a budget and manned by MAF professional staff

Genetic material of potential improved varieties identified and sourced. During the first six months of SoL 3, new improved test entries imported were 25 new wheat and 25 new barley varieties and 13 wingbean entries from Australia plus 104 upland rice and 60 lowland rice varieties from IRRI, Philippines.

Potential new varieties evaluated on-station. 32 wet season trials were carried over from SoL 2. Most of these trials were harvested at the end of July and the results analyzed. Some results were also presented at conferences. 15 dry season trials were planted in May or June and were in progress in July. The number of entries in each trial varied from 13 to 106 depending on the crop.
10 elite peanut varieties were selected and will be considered for final replicated trials.
3 new sweet potatoes were identified for inclusion in coming wet season's OFDTs.

Potential new varieties evaluated on-farm. 375 OFDTs carried over from SoL2 were either harvested or close to harvest at the end of July. Of these, 118 were maize, 34 legumes, 81 sweet potato, 86 rice and 56 cassava. The OFDTs were installed across 7 districts and 19 sub districts.

Selected new varieties officially released. One new white maize variety was identified for release in by the SoL team in June. This variety identified as P07 originated from the Philippines and with permission from the breeders will be submitted to the variety release committee for release on 26 November, 2011.

Sufficient foundation seed being produced. On hand at the end of July, 2011 were 300kg of Sele foundation seed stored at Betano station; 1 ha of cassava plants for cuttings at Loes and 1 ha at Corluli. Approximately 3000 m^2 of sweet potato seedling material were also grown at Loes and 800m^2 at Aileu. Foundation seed of Nakroma rice and Utamua peanuts were conserved on commercial farmers fields.

Capacity of MAF staff to manage the identification and release of new varieties strengthened. During the first six months of 2011, statistics courses were held in Aileu (35 persons) and Liquica (30 persons). Two research data analysis courses (15 and 17 persons) were also held along with one course on wheat and barley disease identification and one course on report writing. Three persons from UNTL were also assisted through their scripsi's. Three MAF personnel were assisted in the preparation of papers for presentation at a conference in Dili, an indication of their capacity to conduct research. A list of all training conducted during the period from 01 February to 31 July, 2011 is presented in Table 2. Training from 01 August to end of September is presented in Table 3.

In addition to short term courses, five East Timorese graduates were assisted with their post graduate training. Two masters degree students were directly sponsored by SoL at a university in Indonesia. In addition, three students were assisted with gaining ACIAR, John Allwright scholarships for study in Australia.

Table 2. Summary of Training(February 1 – July 31, 2011)

Date	Title	No. of Participants	Training Days
Jan 3 – Feb 4	CELT - Australia	2	33 (66)
March 14-18	Statistics Training - Aileu	22	5 (110)
March 21-25	Statistics Training - Liquica	31	5 (155)
April 18-20	Research Report Writing – Betano	4	3 (12)
May 3-4	Seed Multiplication - Covalima	23	2 (46)
June 13-17	Maize OFDT Analysis - Dili	18	5 (90)
June 20-24	English Training in Aileu (Level 4)	13	5 (65)
June 27	Informal Seed Production training. NGOs	10	1 (10)
July 18-22	English Training in Liquica (Level 3)	19	5 (95)
July 26-29	Training Workshop on Variety Selection	6	4 (24)
	Total	**148**	**68 (673)**

Table 3. Summary of training August 1 – September 30, 2011

Date	Title	No. of Participants	Training Days
Aug 6-9	Research Data Analysis (OFDT)	17	4 (68)
Aug 12-13	ToT on Informal Seed Production – Liquica	14	2 (28)
Aug 16-27	Training Workshop on Rice Technology Transfer Systems in Asia - Suwon, Korea	2	12 (24)
Aug 22-23	Cereal Disease Identification training, Dili	4	2 (8)
Aug 22- Sept 23	English language training - Australia	3	33 (66)
Sept 6	Informal Seed Production training, MAF, Bobonaro	15	1 (15)
Sept 9	Informal Seed Production training, MAF, Liquica	17	1 (17)
Sept 13-14	Informal Seed Production training, MAF, Ainaro	21	2 (42)
Sept 15	Informal Seed Production training, MAF, Manufahi	14	1 (14)
Sept 16	Informal Seed Production training, MAF Aileu	18	1 (18)
Sept 20	Informal Seed Production training, MAF, Baucau	14	1 (14)
Sept 22	Informal Seed Production training, MAF, Viqueque	13	1 (13)
Sept 23	Informal Seed Production training NGOs, Baucau	28	1 (28)
Sept 26 – Oct 28	English Language training - Australia	3	33 (99)
Sept 26-27	Mathematics for Agronomists Level 1 in Maliana	18	2 (36)
Sept26 - 30	English Training in Baucau (Level 4)	8	5 (40)
	Total	**209**	**102 (530)**

Component 2. Formal seed production and distribution

Formal seed being produced through farmer contracts. At the end of July, 2011 the amount of formal seed distributed equaled 50t rice, 32t maize, 17t peanuts, 64,000 sweet potato cuttings and 50,000 cassava canes. The program was also on target to plant 50ha of Sele maize, 25 ha of

Utamua peanuts, 40 ha of Nakroma rice, 3800m^2 of Hohrae sweet potato and 2.85ha of Ai Luka cassava.

Quality assurance systems established. High quality seed was maintained by rejecting up to 20% of that harvested. One technician dedicated to laboratory analysis of seed quality.

Technical extension support provided to contracted seed producers. One training course presented during first half of year with most training to be done in second half of 2011

Seed grading, packing and storage facilities established. New storage facilities were established at Maliana, Aileu and Loes and the facilities in TriLoka were upgraded. Betano warehouse maintained. Each warehouse capable of storing 30t of seed and cleaning/grading rice and maize at 1t/hr. 15 persons assigned by MAF to seed production program. 6 new personnel including one new coordinator and one pure seed officer. 3 are women.

Formal seed distributed through preferred distribution channels. The amount of formal seed distributed to various organizations at the end of April, 2011 equaled 50t rice, 32 t maize, 17 to peanuts, 64,000 sweet potato cuttings and 50,000 cassava canes. 2 field demonstrations were established (1 maize and one rice). No seed sales at the beginning of the year.

Capacity of MAF staff to manage the production and distribution of formal seed strengthened. One course held during the first half of the year. Courses to be held at the beginning of the wet season during the second half (Table 4)

Component 3. Informal seed production and distribution

The informal seed production component is budgeted to commence during Program Year 2. However, planning of activities in this component for the wet season of 2011/2012 commenced at the beginning of April, 2011. By the end of July, SoL/MAF personnel arranged 280 groups to conduct seed multiplication activities and 446 extra groups with NGOs.

Community Seed Production Groups established. SoL establishing four groups in each of 10 sucos in seven districts (280 groups). NGOs establishing 446 groups using SoL seed. The number of groups by commodity were: Maize – 356 (97 MAF, 259 NGO), Peanuts – 172 (53 MAF, 119 NGO), Paddy – 104 (69 MAF, 35 NGO), Cassava – 103 (21 MAF, 82 NGO) and Sweet potato – 103 (40 MAF, 63 NGO).

Farmer Seed Marketing Groups established is a second year activity.

Focal seed merchants in local markets established is a second year activity.

Access to seed for vulnerable groups improved through seed fairs. is a second year activity.

Systems linking informal seed producers with potential buyers enhanced is a second year activity.

Capacity of MAF extension staff to establish CSPGs strengthened. 11 training sessions held in first six months of program, 187 trainees (122 from MAF and 65 form NGOs) trained on Informal Seed Production techniques. The training was provided to MAF's 7 Chief of Extension Department, 2 MAF/SoL National Seed Production Coordinators, 7 MAF/SoL District Informal Seed Production Coordinators from 7 Districts and 106 Suco Extension Officers from 9 Districts (7 from SoL and 2 outside of SoL).

Component 4. Seed system management

Seed planning and management systems established. Forward planning systems yet to be established. Inventory system for SoL seed established and will be expanded to encompass the National seed program.

M&E systems established. Two additional MAF staff were assigned to the M&E/SOSEK Unit in August, 2011, bringing total to four staff, as agreed to by MAF in the PDD. The M&E/SOSEK Unit has started a study on the SoL experience with seed producing farmer groups and commenced a baseline survey.

Seed system gender strategy implemented. A gender advisor will be contracted to complete a gender strategy for SoL in the second half of 2011.

Improved-variety technical and promotional materials developed. Scientific publications of SoL research were prepared and released during the first six months of SoL 3. Variety and technical recommendations in Tetun were also printed and distributed (See Appendix 2).

Awareness of improved varieties increased. SoL activities received considerable publicity during the period both on local and international TV in addition to publicity in local press. (Appendix 2).

Environmental and climate change impacts addressed. Climate change report addressing the extent of expected change in rainfall and temperature completed during the six month period and new program developed based on a second report on agricultural interventions to address climate change.

Capacity of MAF staff to manage the national seed system enhanced. MAF staff received considerable training during the six month period (see component 2, Table 2 and Table 3). One masters degree student in Australia also studying participatory plant breeding and seed distribution systems.

Program management

A major activity of SoL during the first six months of the program was in setting up the program to operate effectively within the MAF and with other organizations, particularly nationally, on a regional and district basis. A program management unit (PMU) was established with four directors, seven district directors, the SoL ATL and chaired by the MAF DG. Quarterly PMU meetings are scheduled with the second being on 29 September, 2011.

Three Regional Offices were established and operating as planned and District coordinators joined regular meetings. Three Regional advisors (all male) were appointed and management systems are being established. Most of the physical and financial management systems were established in the first six months and these are being developed further. Charles Sturt University (CSU) is being commissioned to develop a communication strategy for SoL. Administrative guidelines were developed and the M&E Framework was reviewed and being implemented. The first TAG visit is scheduled for October, 2011

4. Workplan 01 February, 2011 – 30 January, 2012

A gant chart of the workplan for Year 1 is presented as Appendix 4.

Component 1: Evaluation of improved food crop varieties.

National Agricultural Research Centres and Research Stations established. Buildings to be rehabilitated or constructed during the year include those at TriLoka (Baucau) and Corluli (Bobonaro) and Darasula (Baucau) plus a pre-fabricated building will be located at Kintal Portugal. The irrigation system at Loes is also scheduled to be rehabilitated and improved. Sites for a) irrigated rice and b) temperate crop research require identification and development. Existing stations at Betano, Loes and Darasula to be operating and manned by MAF professional staff

Genetic material of potential improved varieties identified and sourced. New improved test entries of wheat, barley, wingbean, upland rice and lowland rice varieties are to be imported for evaluation. This will supplement the sweet potato, peanut, cassava, red beans and pigeon pea already in the country ready for evaluation.

Potential new varieties evaluated on-station. 32 wet season trials carried over from SoL2 and 15 dry season trials will be established during the year and approximately 32 extra replicated trials designed and installed during the 2011-2012 wet season. The number of entries in each trial will vary from 10 to over 100 depending on the crop.

Potential new varieties evaluated on-farm. The 375 OFDTs from the 2010-2011 season will be evaluated and possible releases identified during researcher meetings. Based on these results the OFDT program for 2011-2012 wet season will be designed. Approximately 600 OFDTs will be installed across 7 districts and 19 sub districts.

Selected new varieties officially released. New varieties identified from the replicated and on-farm trials will be submitted to the variety release committee for evaluation to be released. Potential varieties are recognized by research staff after undergoing agronomic social (taste tests etc) evaluation. One maize variety is identified for release, possibly on 28 November.

Sufficient foundation seed being produced. Both research and formal seed production needs will be assessed at the beginning of both the dry and wet seasons of 2011. Based on this demand, the research stations will multiply sufficient seed for Components 1 and 2. This is approximately catered for with 300-500 kg of Sele and 200kg of Nakroma seed. In addition there will be 1ha of cassava plants for cuttings at Loes and 1 ha at Corluli. Approximately 3000 m^2 of sweet potato seedling material will also be grown at Loes and 800m^2 at Aileu. Foundation seed of Nakroma rice and Utamua peanuts will be conserved on commercial farmer's fields.

Capacity of MAF staff to manage the identification and release of new varieties strengthened. Approximately 10 short term training courses of 1-2 days to 5 days will be held during the year to further improve the capacity of MAF personnel to design and operate a national agronomic research program. In addition, at least one study tour to research in a developed country will assist recognition of the quality of research required to achieve research outcomes with some confidence. The program will continue to assist UNTL with the supervision of final year scripsi's. MAF personnel with potential for post graduate training will also be identified and promoted for scholarships. A training plan for the second half of the Program Year is presented in Table 4.

Component 2. Formal seed production and distribution

Formal seed being produced through farmer contracts. The program will target planting 50ha of Sele maize, 25 ha of Utamua peanuts, 40 ha of Nakroma rice, 3800m^2 of Hohrae sweet potato and 2.85ha of Ai Luka cassava by farmer contracts. The harvest from these sites will provide sufficient seed for Component 3. Extra seed can be produced in the dry season on a need basis.

Quality assurance systems established. SoL has established quality assurance systems that results in up to 100% of the harvest being rejected to maintain high quality seed. One technician will dedicated to laboratory analysis of seed to ensure the quality remains high.

Technical extension support provided to contracted seed producers. Training is scheduled for the second half of 2011 with both seed officers and with contracted farmers.

Seed grading, packing and storage facilities established. New storage facilities will be established at Maliana, Aileu, Viqueque and Loes and the facilities in TriLoka upgraded. The Betano warehouse will be maintained. Each warehouse is designed to store 30t of seed and cleaning/grading rice and maize at 1t/hr. MAF will assign 6 extra personnel (for a total of 15) to the seed production program including one new coordinator and one pure seed officer.

Formal seed distributed through preferred distribution channels. It is planned that 50t rice, 32 t maize, 17 to peanuts, 64,000 sweet potato cuttings and 50,000 cassava canes will be distributed during 2011.

Capacity of MAF staff to manage the production and distribution of formal seed strengthened. Training courses will be held at the beginning of the wet season during the second half of the year (See Table 4).

Component 3. Informal seed production and distribution

The informal seed production component is budgeted to commence during Program Year 2. However, the program commenced earlier than planned with an objective of farmer groups multiplying and storing 64t of maize, 62t of rice, and 8t of peanut during the first year. Farmer groups are also expected to produce more than 100,000 cassava canes and 1.2 million sweet potato cuttings. Including farmer groups managed by NGOs, the planned number is 356 for maize, 172 for peanuts, 102 rice, 103 cassava and 103 sweet potato.

Farmer Seed Marketing Groups established is a second year activity.

Focal seed merchants in local markets established is a second year activity.

Access to seed for vulnerable groups improved through seed fairs. is a second year activity.

Systems linking informal seed producers with potential buyers enhanced is a second year activity.

Capacity of MAF extension staff to establish CSPGs strengthened. At least 20 training sessions are planned for the first year of Component 3 to form sufficient CSPGs to reach the goal of 1000 SCPGs by the end of Year 5. Training will be provided to all of MAF's 7 District Extension Department personnel, 2 MAF/SoL National Seed Production Coordinators, MAF/SoL District Informal Seed Production Coordinators from 7 Districts and 106 Suco Extension Officers from 9 Districts. (See Tables 2, 3 and 4)

Component 4. Seed system management

Seed planning and management systems established. An seed inventory system developed for SoL2 has proven to be effective and will be expanded to the National program.

M&E systems established. Two additional MAF staff will be assigned to the M&E/SOSEK unit, bringing total to four staff, as agreed to by MAF in the PDD. The M&E/SOSEK Unit will then start a study on the SoL experience with seed producing farmer groups and commenced a baseline survey.

Seed system gender strategy implemented. A gender advisor will be contracted to complete a gender study in the second half of 2011.

Improved-variety technical and promotional materials developed. Scientific publications of SoL research will be prepared and released during the year. Variety and technical recommendations in Tetun will also be printed and distributed.

Awareness of improved varieties increased. SoL activities receive considerable publicity during SoL2 both on local and international TV in addition to publicity in local press. An extension awareness policy will be developed during the year.

Environmental and climate change impacts addressed. Climate change report addressing the extent of expected change in rainfall and temperature will be completed during the first six month period and a new program will be developed based on a second report on agricultural interventions to address climate change.

Capacity of MAF staff to manage the national seed system enhanced. MAF staff will receive considerable training during the year both in terms of short term training, study tours and some support will be given to long term training. (see Tables 2,3 and 4).

Table 4. Training Schedule, October 1, 2011 – January 31, 2012

Date	Title	Target Participants
Oct 3-4	Mathematics for Agronomists Level 1 - Liquica	Approximately 20 staff (OFDT, Seed Production Officers, Informal Seed Production Staff and Extensionists)
Oct 3-7	Training of Seeds of Life Baseline Survey Implementers	Approximately 44 (Supervisors and interviewers)
October/November	Suco Informal Seed Production Socialization Workshop (70 Sucos)	Approximately 2,100 (Local leaders and farmer groups)
October 10-14	English training in Aileu	Approximately 15 staff (in English level 4)
October 17-21	English training in Same	Approximately 20 staff (in English level 2 and 1)
October	Basic Seed Production Techniques	Approximately 5 staff
November	Basic Seed Processing and Storage	Approximately 5 staff
November	Basic Seed Quality Control Method	Approximately 5 staff
December 19-23	English training in Liquica	Approximately 10 staff (in English level 4)
December	Study Tour in Indonesia (visit to corn seed grower)	Approximately 9 staff
January	Statistics Training	Approximately 25 staff
January/February	Informal Seed Production Training (Harvest and Post-harvest Operations) in 7 districts	Approximately 105 (Suco Extension Officers)
January/February	Informal Seed Production Training (Harvest and Post-harvest Operations)	Approximately 30 NGO staff

5. Expenditure and budget

At the end of June, 2011 (five months into year) the budget for the 2011-2012 program 21% of the budget had been spent (See Table 5). Under expenditure in most components was due to the fact that research and development activities tend to be concentrated during the wet season in the second half of the year and for the first 2-3 months of the following year. The operating of sweet potato sites in Component 2 will occur from September on for example. Other delayed expenditure are presented in Table 5 and include delays in infrastructure (Irrigation system at Loes and research station construction), training abroad, and equipment purchases (Toyota delivery times affected by Tsunami in Japan). Despite the slow start, many of these activities are "catching up" and the program is expected to be reasonably on budget at the end of the year. The full operational budget is presented in Appendix 3.

Table 5. Budget and expenditure to end of June, 2011

	Budget ($'000)	*% Budget expenditure at end June, 2011*	*Activity behind schedule or being delayed*
Component1: Evaluation of improved food crop varieties.	518	13	Irrigation system Loes RS Research station buildings ST visits by CGIAR Specialists Support for SEOs to assist w/OFDTs Building for Potato Storage
Component 2. Formal seed production and distribution	714	15	Operating Sweet Potato cutting sites Operating Sweet Potato cutting sites Cassava cane distribution Sweet Potato cutting distribution On-job-Trg (visits to intl centres) In-country short courses Seed/agronomy/gender training Operating costs SEOs
Component 3. Informal seed production and distribution	149	0	All programs
Component 4. Seed system management	331	0	All programs
Program management	1600	31	On target. Inception workshops overspent as indicator of priorities to end of June, 2011. Vehicle and equipment purchases delayed due to external factors.

6. Monitoring

The monitoring and evaluation framework for SoL3 was reviewed and updated during April, 2011 (Seeds of Life Monitoring and Evaluation Review, April, 2011). This framework has comprehensively covered a methodology of measuring the impact of program activities. After six months of implementation, many of the procedures to do this had been established with others to follow the visit of a short term gender specialist and training specialist.

The gender specialist will develop a strategy for building the capacity and capability of the MAF to make and sustain real improvements in this arena. SoL already targets involving women in

the research program (especially the OFDTs) and this will expand into the formal and informal seed production programs. Involvement of both gender in SoL will continued to be monitored.

The short term training specialist will review the SoL2 training database and develop a training database for SoL3. The new database will be developed around a strategy for the development of mainly MAF Government employees. This is different to SoL2 where most of the personnel working with SoL were contracted to the Ministry.

Environmental impacts will continue to be monitored, although there is little threat of the use of higher-yielding varieties increasing environmental degradation in the short term. In the long term, as TL's agriculture shifts towards more intensive land-use practices, additional attention will need to be paid to agronomic and farming system practices. Trials on plant spacing, nutrition, pest and disease control, weed management, soil moisture management are included as part of the current program and the number of these will increase under both the auspices of research and "climate change".

No impact measurements were made during the first six months of SoL3. However, scientific publications were prepared and data collected on the impact the research program has on the Timor Leste science community. Data will also be collected on the institutional, economic and social science components for a late or post program evaluation. A baseline study to evaluate the status of the TL farmer and his/her knowledge of SoL will be conducted during the second half of 2011.

The major risks to the success of SoL3 identified in the PDD are summarised to be mainly with regard to SoL and its interactions with the MAF. Many of these risks were reduced dramatically when a program management unit was established to foster good relations between SoL, MAF at the national level and MAF in the districts. The MAF assigned a high proportion of the staff needed to manage the extra activities within the program and the three regional advisors work closely with District personnel to ensure all are fully involved with SoL program activities. This approach will continue to be monitored.

7. Appendices

Appendix 1. Progress against M&E framework

Code	Intervention Logic	Performance Indicators (PIs)	Means of Verification	Progress to July 2011 (after six months)
G1	**Goal:** Improved food security through increased productivity of major foodcrops.	Percentage of farmers experiencing periods of food shortage decreased by 33% in Timor-Leste	Secondary sources	
G2		XX% (TBD) increase in production of major staple foodcrops in Timor-Leste.	Secondary sources	
P1	**Purpose:** 46,000 lowland rice farmers and 61,000 upland farmers have access to and are routinely using improved foodcrop varieties.	46,000 (70%) of lowland rice farmers growing one or more SoL varieties. 61,000 (40%) of upland farmers growing one or more SoL varieties.	Program assessment via Distribution Surveys.	The SoL 3 PDD overestimated the number of farmers in Timor-Leste. The 2010 national census only counted 116,426 farmers growing crops. The target was therefore revised downwards to 81,200 farmers. (35,000 rice farmers and 46,000 upland farmers).
P2		TBD. Indicator relating to use, yields and/or future intentions of farmers growing SoL varieties	Program assessment via Distribution Surveys.	
COMPONENT 1: EVALUATION OF IMPROVED FOODCROP VARIETIES				
C1.1	**Component Outcome:** Improved varieties of foodcrops evaluated and released.	National network of Research Stations and smaller Research Posts established, sufficient to cover major crop types and agroecological zones.	Consolidated Research Advisor Monthly Reports Six Monthly Reports	
C1.2		10-15 new varieties of foodcrops evaluated and officially released.	Consolidated Research Advisor Monthly Reports Six Monthly Reports	One new white maize variety (P07) ready to be presented to Variety Release Committee for consideration by MAF for release.
C1.3		MAF research staff competently managing all phases of the research cycle, including objective setting, planning and implementation of trials, analysis, and reporting.	Staff competency assessments	MAF staff showing improved understanding of research design, management and analysis.
Key Outputs:				
O1.1	Establishment of Agricultural Research Centres and Stations completed.	**Research Centres** upgraded, nature of upgrade, location and cost. # professional staff deployed at Research Centres, by position and sex. Operational budget, by source. **# Research Stations** established, location and cost. # professional staff deployed, by position and sex. Operational budget, by source.	Research Officer Monthly Reports, including: Program records. MAF staff records. SoL financial reports; MAF budget docs.	Buildings rehabilitated or constructed on TriLoka and Corluli. Buildings under construction at TriLoka, Darasula, Kintal Portugal. Irrigation system being a) rehabilitated and improved at Loes. Sites for a) irrigated rice and b) temperate crop research being identified for development. Betano, Loes and Darasula stations operating to a budget and manned by MAF professional staff.
O1.2	Genetic material of potential improved varieties identified and sourced.	# and type of improved varieties introduced.	Research Advisor Monthly Reports	During the first six months of SoL 3, new improved test entries imported were 25 new wheat and 25 new barley varieties and 13 wingbean entries from Australia plus 104 upland rice and 60 lowland rice varieties from IRRI, Philippines.

Code	Intervention Logic	Performance Indicators (PIs)	Means of Verification	Progress to July 2011 (after six months)
O1.3	Potential new varieties evaluated on-station.	# varieties trialed on-station, by type and location. # trials completed and reported. # varieties selected for OFDTs. # Research Centre and Station deployed, by position and sex.	Research Advisor Monthly Reports	32 wet season trials were carried over from SoL 2. Most of these trials were harvested at the end of July and the results analyzed. Some results were also presented at conferences. 15 dry season trials were planted in May or June and were in progress in July. The number of entries in each trial varied from 13 to 106 depending on the crop. 10 elite peanut varieties were selected and will be considered for final replicated trials. 3 new sweet potatoes were identified for inclusion in coming wet season's OFDTs.
O1.4	Potential new varieties evaluated on-farm.	# varieties trialed on-farm, by type and location. # OFDTs conducted, by type and location. # OFDT coordinators and OFDT officers deployed, by position and sex.	Research Advisor Monthly Reports	375 OFDTs were either harvested or close to harvest at the end of July. Of these 118 were maize, 34 legumes, 81 sweet potato, 86 rice and 56 cassava. They were spread across 7 districts and 19 sub districts.
O1.5	Selected new varieties officially released.	# new varieties officially released.	Research Advisor Monthly Reports	One new white maize variety was identified for release in by the SoL team in June. This variety identified as P07 originated from the Philippines and with permission from the breeders will be submitted to the variety release committee for release on 26 November, 2011.
O1.6	Sufficient foundation seed being produced.	Qty of foundation seed produced, by type and location.	Research Advisor Monthly Reports Research Centre records.	On hand at the end of July, 2011 were 300kg of Sele foundation seed stored at Betano station; 1 ha of cassava plants for cuttings at Loes and 1 ha at Corluli. Approximately 3000 m^2 of sweet potato seedling material were also grown at Loes and 800m^2 at Aileu. Foundation seed of Nakroma rice and Utamua peanuts were conserved on commercial farmers fields.
O1.7	Capacity of MAF research staff to manage the identification and release of new varieties strengthened.	# of people trained, by position, subject, type of training provided and sex.	Staff training records	During the first six months of 2011, statistics courses were held in Aileu (35 persons) and Liquica (30 persons). Two research data analysis courses (15 and 17 persons) were also held along with one course on wheat and barley disease identification and one course on report writing. Three persons from UNTL were also assisted through their scripsi's. Three MAF personnel were assisted in the preparation of papers for presentation at a conference in Dili, an indication of their capacity to conduct research.

COMPONENT 2: FORMAL SEED PRODUCTION AND DISTRIBUTION				
C2.1	**Component Outcome:**. Sufficient high quality seed produced through formal channels to maintain the genetic quality of released varieties.	Four Seed Processing Centres (SPCs) established (2 new) for receiving, storing, grading, drying and packing formal seed.	Consolidated Seed District Officer Monthly Reports Six Monthly Reports	Seed storage and processing centres established at TriLoka, Loes, Maliana and Betano. Further warehouses being constructed at TriLoka (extension to existing building), Aileu, Maliana and Viqueque.
C2.2		SPCs capacity approximately 175 Mt per year, consisting of 100 Mt of formal maize seed, 50 Mt of rice seed, 25 Mt of peanut seed, 600,000 sweet potato cuttings, and 600,000 cassava canes /yr.	Consolidated Seed District Officer Monthly Reports Six Monthly Reports	The amount of formal seed distributed to various organizations at the end of April, 2011 equaled 50t rice, 32 t maize, 17 to peanuts, 64,000 sweet potato cuttings and 50,000 cassava canes.
C2.3		MAF seed production staff competently managing the production and processing of targeted quantities of formal seed; and extension staff competently managing the distribution of this seed to farmers.	Staff competency assessments	Staff competency assessments indicate a steady improvement in the skills throughout SoL2. A further assessment will be done during the second half of 2011.
Key Outputs:				
O2.1	Formal seed produced through farmer contracts.	Qty of true seed produced, by variety and location. No. of farmers under contract, by variety and location. Value of seed produced. # and area of sweet potato and cassava nurseries established. # of sweet potato cuttings and cassava canes produced. # SPCs and SPOs deployed, by position and sex	SPC/SDO Monthly Reports. MAF staff records.	At the end of April, 2011 the amount of formal seed distributed equaled 50t rice, 32t maize, 17t peanuts, 64,000 sweet potato cuttings and 50,000 cassava canes. At the end of June, the program was on target to plant 50ha of Sele maize, 25 ha of Utamua peanuts, 40 ha of Nakroma rice, 3800m^2 of Hohrae sweet potato and 2.85ha of Ai Luka cassava.
O2.2	Quality assurance systems established.	% of formal seed produced that meets minimum standards, by type. % rejected.	SPC/SDO Monthly Reports.	High quality seed is maintained by rejecting up to 20% of that harvested. One technician dedicated to laboratory analysis of seed quality.
O2.3	Technical extension support provided to contracted seed producers.	# extension staff providing direct support to contract seedgrowers. # of contract seedgrowers trained, by subject, type of training provided by sex.	SPC/SDO Monthly Reports. Training records.	One training course presented during first half of year with most training to be done in second half of 2011.
O2.4	Seed grading, packing and storage facilities established.	#, capacity and location of SPCs established. Total investment. # professional staff deployed, by position and sex. Qty of seed processed by SPCs, by variety.	SPC/SDO Monthly Reports	New storage facilities were established at Maliana, Aileu and Loes and the facilities in TriLoka were upgraded. Betano warehouse maintained. Each warehouse capable of storing 30t of seed and cleaning/grading rice and maize at 1t/hr 15 persons assigned by MAF to seed production program. 6 new personnel including one new coordinator and one pure seed officer. 3 are women
O2.5	Formal seed distributed through preferred distribution channels.	Qty of seed distributed by distribution channel, location and variety. # and type of field demonstration/ farmer training activities conducted by SEOs. Budget provided to local extension services for farmer training activities. $ generated from cost recovery on seed	SPC/SDO Monthly Reports	The amount of formal seed distributed to various organizations at the end of April, 2011 equaled 50t rice, 32 t maize, 17 to peanuts, 64,000 sweet potato cuttings and 50,000 cassava canes. 2 field demonstrations were established (1 maize and one rice). No seed sales at the beginning of the year.

		distributed.		
O2.6	Capacity of MAF seed production and extension staff to manage the production and distribution of formal seed strengthened.	# of seed production staff trained, by position, subject, type of training provided and sex. # of extension staff trained, by position, subject, type of training provided and sex.	Staff training records	One course held during the first half of the year. Courses to be held at the beginning of the wet season during the second half.
COMPONENT 3: INFORMAL SEED PRODUCTION AND DISTRIBUTION				
C3.1	**Component Outcome:** Mechanisms for the production and distribution of seed through informal and market channels strengthened.	Approximately 1000 CSPGs established and producing a marketable supply of informal seed	Consolidated Seed Extension Officer Monthly Reports Six Monthly Reports	The planning for the number of groups that will be supported in 2011 in the seven districts has been completed. These groups will start to grow seed in the coming planting season that starts in October/November. Ten groups of in four subdistricts in each of seven districts (280 groups) established for Year 1. NGOs will also receive SoL seed for 450 groups.
C3.2		CSPGs linked with market outlets and selling seed.	Consolidated Seed Extension Officer Monthly Reports Six Monthly Reports	This is a second year activity.
C3.3		MAF extension services staff and District-based officers competently establishing and supporting CSPGs	Consolidated Seed Extension Officer Monthly Reports Six Monthly Reports	Training of MAF personnel commenced in May, 2011.
C3.4		CSPG members competently operating and managing informal seed production and distribution of targeted quantities	Staff competency assessments	Competency assessments yet to be made.
Key Outputs:				
O3.1	Community Seed Production Groups established	# and location of CSPGs established, by crop type Total membership, by sex. # women-only groups established. Total production of CSPGs, by variety. Qty and value of sales, by variety. # SEOs directly involved in supporting establishment of CSPGs	CSPG records Seed Extension Officer Monthly Reports	SoL establishing four groups in each of 10 sucos in seven districts (280 groups). NGOs establishing 446 groups using SoL seed. Group numbers and sex yet to be finalized.
O3.2	Farmer Seed Marketing Groups established.	# and location of FSMGs established. Total no of CSPGs as members. Total production, by variety. Qty and value of sales, by variety.	CSPG records Seed Extension Officer Monthly Reports	Second year activity.
O3.3	Focal seed merchants in local markets established.	# focal seed merchants supported, by sex. Qty and value of sales, by variety.	CSPG records Seed Extension Officer Monthly Reports	Second year activity.
O3.4	Access to seed for vulnerable groups improved through seed fairs.	# of seed fairs conducted, by location. # of merchants involved, by type. # buyers involved. Qty and value of sales, by variety.	CSPG records Seed Extension Officer Monthly Reports	Second year activity.
O3.5	Systems linking informal seed producers with potential	# districts where system established. # of suppliers recorded.	CSPG records Seed Extension Officer	Second year activity.

	buyers developed.	# buyers recorded. Qty and value of sales facilitated, by variety.	Monthly Reports	
O3.6	Capacity of MAF extension staff to establish CSPGs strengthened.	# of people trained, by position, subject, type of training provided and sex.	Staff training records	10 training sessions held in first six months of program.
COMPONENT 4: SEED SYSTEM MANAGEMENT				
C4.1	**Component Outcome:** MAF capacity to manage the national seed system strengthened.	National seed planning, allocation and inventory control systems established.	Planning, allocation and inventory control systems in place and being used.	Yet to be established
C4.2		M&E/ SOSEK unit competently managing the implementation of field evaluation activities, providing a sufficient basis for progressive learning.	Staff competency evaluations.	Staff competency evaluations yet to be completed.
C4.3		Gender issues fully reflected in implementation of the national seed system.	SOSEK Evaluation Reports.	Measurements yet to be taken.
C4.4		Widespread awareness of SoL varieties in all districts.	Program assessment via Distribution Surveys.	Variety brochures printed and distributed. SoL activities and new varieties receive considerable exposure on local media.
Key Outputs:				
|O4.1	Seed planning & management systems established.	Forward planning systems developed and operational. Allocation procedures developed and operational. National inventory management system established and operational.	Seed production plans. Allocation procedures and distribution plans. Inventory control reports.	Procedures yet to be established. Inventory system for SoL seed established and to expanded to National program.
O4.2	M&E / SOSEK processes strengthened.	# of dedicated staff involved in the M&E / SOSEK Unit. # and nature studies conducted and reported.	MAF staff records. Evaluation reports.	Two additional MAF staff assigned to the M&E/SOSEK Unit, bringing total to four staff, as agreed to by MAF in the PDD. The M&E/SOSEK Unit has started a study on the SoL experience with seed producing farmer groups and commenced a baseline survey.
O4.3	GoTL seed policy being informed by SoL experience.	# of seed system-related policy issues identified. # of advisory documents prepared and submitted.	Policy advisory notes.	Seed policy with Parliament for discussion.
O4.4	Seed system gender strategy implemented.	To be defined by Gender Specialist.	To be defined by Gender Specialist.	Gender advisor approached to complete a gender study.
O4.5	Improved-variety technical & promotional materials developed.	# and type of technical and promotional materials prepared. Extent of distribution.	Publicity records	Scientific publications of SoL research were prepared and released during the first six months of SoL 3. Variety and technical recommendations in Tetun were also printed and distributed (see attached list)
O4.6	Awareness of improved varieties increased though use of mass media.	# of mass media campaigns conducted, by channel and cost. Size of target audience.	Publicity records	SoL activities received considerable publicity during the period both on local and international TV in addition to publicity in local press. (see attached list)
O4.7	Environmental and climate change impacts addressed.	# species/ varieties evaluated taking climate change considerations into account, by species/ variety. # released. # and nature of farming system adaptations	Annual research work programs and technical reports.	Climate change report addressing the extent of expected change in rainfall and temperature completed during the six month period and new program developed.

		recommended.		
O4.8	Capacity of MAF staff to manage the national seed system enhanced.	# of people trained, by position, subject, type of training provided and sex.	Staff training records	MAF staff received considerable training during the six month period (see component 2). One masters degree student in Australia also studying participatory plant breeding and seed distribution systems.
PROGRAM MANAGEMENT				
5.1	**Objective:** SoL III effectively and efficiently managed in a manner that is responsive to stakeholder needs.	As per Mid-Term Review	Independent Mid-Term Review.	
Key Outputs:				
O5.1	Program governance arrangements established and operating effectively.	PSC established and meeting routinely. APs and M&E reports reviewed and endorsed by PSC.	PSC minutes. PSC minutes.	
O5.2	Program Management Unit established and operating effectively.	PMU established and core GoTL staff appointed including the NPM. Regional Offices established; Regional Coordinators appointed. # GoTL staff appointed, by position, sex # LT TA staff appointed, by position, sex # and type of training conducted for PMU/ RO staff. Staff performing to a satisfactory level. Physical and financial management systems established. Communication Strategy and Administrative Guidelines developed/ refined. APs prepared in timely manner and approved by AusAID/ ACIAR. APs implemented in an efficient manner. Timely Progress reports prepared M&E Framework established and effectively implemented. Timely mobilisation of quality ST TA. # TAG visits conducted.	Staffing records and duty statements. Training reports. Annual staff performance evaluations. 6-mnth Progress and Financial Reports. Communications Strategy and Admin Guidelines. APs. 6-mnthly Progress Reports. MEF design and M&E Reports. TA mobilisation records. TAG Reports.	Quarterly PMU meetings scheduled. Regional Offices established and operating. District coordinators join regular meetings. Three Regional advisors (all male) appointed. Management systems being established. Physical and financial management systems established. CSU being commissioned to develop communication strategy Administrative Guidelines developed. M&E Framework reviewed and being implemented. First TAG visit scheduled for October, 2011 .
O5.3	Program effectively coordinated with other relevant donor programs.	# of other donor programs with which SoL III is formally associated. Nature of cooperation.	6-mnth Progress Reports.	SoL has established good relationships with NGOs, particularly working with CSPGs and climate change field trials.
O5.4	Lessons learned reviewed and shared with Government and other donors.	# lessons learned/ sharing workshops conducted; # of participants.	6-mnth Progress Reports. Lessons-learned reports.	MAF/SoL personnel presented papers at a national conference on agriculture. Staff regularly attend interagency workshops.
O5.5	Pilots on the direct use of MAF's financial systems evaluated and reported.	% of *Chef de Suco's* reporting satisfactory service delivery. Satisfactory audit report.	SOSEK Evaluation Reports. Audit reports.	Pilot to commence after system established.

Appendix 2. Seeds of Life 3 communication and dissemination activities

Publications

SoL, 2010 Annual Research Report, 2010, Seeds of Life, April, 2011, 238p (English and Tetun editions)

Shepherd C.J, McWilliam A. (2011) Ethnography, Agency, and Materiality: Anthropological perspectives on rice development in East Timor. East Asian Science, Technology and Society: An International Journal 5:189–215

Molyneux N, 2011. Seeds of Life: Adapting for food security. Issues, Vol 94. March, 2011

Partners. ACIAR Journal. March-May, 2011. A country farms its future.

Variety Fact Sheets, Sweet Potato (Tetun), fifth printing March, 2011

Variety Fact Sheet, Peanuts (Tetun), fifth printing March, 2011

Variety Fact Sheet, Rice (Tetun), fifth printing March, 2011

Variety Fact Sheet, Maize (Tetun), fifth printing March, 2011

Variety Fact Sheet, Cassava (Tetun), fifth printing March, 2011

Nicholas Molyneux, Gil Rangel da Cruz, Robert L. Williams, Rebecca Andersen and Neil C. Turner. Climate change and population growth in Timor Leste: Implications for food security. 30pp Submitted to Ambio

Lacoste, M, Borges F., L., Williams, R and Erskine, W. Varietal diffusion patterns following on-farm trials of maize, sweet potato, peanut and rice in East Timor, 16pp. In preparation

Williams, R., Borges F., L., Andersen, R., Lacoste M., Johansen C. and Nesbitt., H. On-farm evaluation of introduced maize varieties and their yield determining factors in East Timor 22pp. In preparation

Neil C. Turner, Nicholas Molyneux, Sen Yang, Youcai Xiong, Kadambot H. M. Siddique (2011). Climate change in south-west Australia and northwest China: challenges and opportunities for crop production. Crop and Pasture Science 62(6) 445-456

Marcal Gusmao, Kadambot H. M. Siddique, Ken Flower, Harry Nesbitt, Erik J. Veneklaas Effect of severe water deficit during reproductive period on growth, reproductive development and yield of grass pea (*Lathyrus sativus L.*). 33p. To be submitted to Journal of Experimental Botany.

SoL 3 reports

Seeds of Life Phase III. Program Design Document. Volume 1. Main Report. 63 p

Seeds of Life Phase III. Program Design Document. Volume 2. Appendices. 187 p

Seeds of Life Monitoring and Evaluation Review. April, 2011. Geoff Moyle 45p

Guidelines for Informal Seed Production of Maize in Timor Leste. Buddhi Kunwar and Asep Setiawan, MAF. May 2011 26p

Informal seed Production: An Introduction, Buddhi Kunwar, MAF, May 2011, 3p

Summary Recommendations of Major Crops – Maize, Peanuts, Paddy, Cassava and sweet Potato. Buddhi Kunwar and Asep Setiawan, MAF. August 2011 5p

Seeds of Life, 2011 Agricultural Interventions for improving food and nutritional security in Timor Leste; with reference to Contemporary Predictions of Climate Change and Population Pressure. A policy and planning paper for the Ministry of Agriculture. 57p

Strategy for Promotion of Gender Equality in Informal Seed Production. MAF/Seeds of Life, August 2011 p4

Strategy for Capacity Building of MAF Extension Staff to implement Informal Seed Production, MAF/Seeds of Life September 2011 2p

Seeds of Life Program, Monitoring and Evaluation Manual (October, 2011) In draft

East Timor media coverage

Enjoy magazine – Timor Leste. Climate change and its effects on agriculture in Timor-Leste by Valentina Gjuraj. Report in Tourism and Business magazine on Climate Change report. November, 2010.

Jornal Agrikultura. February, 2011. Signing ceremony for SOL 3 (with large photographs) on front cover

CPA weekly show "Povu Nia Matenek" 13 April 2011. Seeds of life farmers and staff featured

Jornal Agrikultura, July, 2011. Reporting SoL variety seed production at Betano Research Station, District of Manufahi.

TVTL. Visit of Australian Minister for Foreign Affairs visit to Seeds of Life activities in Maliana 11 July, 2011

Televisaun De Timor Leste (TVTL) , July 12, 2011, Visit of Mr Kevin Rudd, Australian Minister of Foreign Affairs to SoL activities

Benefits of informal seed production. August, 2011. Broadcast on Maliana Community Radio.

TVTL broadcast of SoL team participation in the First Lady's Cup. August, 2011.

Video of Research Advisor's presentation at the Lao T Hamutuk forum on Seed Policy. August, 2011.

Revolusaun Verde Hamosu Problema ba Toos Nain. Aug-2011. Timor Post Newspaper

Bi-weekly updates on Sol activities on Maliana Community Radio.

Conference presentations

Luis Fernandes, LuisPereira, Armoino Moises and Robert L. Williams. *Hili varidade ai horis trigu (titboa ho asinata) nian nebee resultadu diak hamutuk toos nain sira.* 'Knowledge, Attitudes and Skills for Timor-Leste's Development: an Opportunity for Dialogue' 4 July 2011

Marcos Correia Vidal ho Robert L Williams. Moris - *Lehe bele hasae produsaun batar iha Timor Leste.* 'Knowledge, Attitudes and Skills for Timor-Leste's Development: an Opportunity for Dialogue' 4 July 2011

Felisberto A. Soares, Joao Bosco da Costa, RB, Leandro C.R. Pereira Abril de Fatima ho Robert L. Williams. *Varidade ba batar balu, bele hetan produsaun aas, ho bele tahan ba fuhuk.* 'Knowledge, Attitudes and Skills for Timor-Leste's Development: an Opportunity for Dialogue' 4 July 2011

Australian media coverage

Radio Australia, 11 July, 2011. Kevin Rudd, Minister of Foreign Affairs Interview with Phil Kafcaloudes, Radio Australia spoke about the Seeds of Life visit conducted the previous day.

Minister of Foreign Affairs webpage has a selection of images from his visit to SoL in Maliana. http://gallery.foreignminister.gov.au/Photo-Gallery/Visit-to-East-Timor-July-2011/17966129_s9NjPK#1375934150_zHpcGh8

UWA News. 22 August, 2011. UWA helps to sow the seeds of a new life. http://www.news.uwa.edu.au/201108243844/features/uwa-helps-sow-seeds-new-life
Seeds of hope are being sown in Timor-Leste,. ABC News Online, Stephanie Dalzell. 7-Sep-2011. http://www.abc.net.au/news/2011-09-07/seeds-of-life-feature/2875464

Website http://www.seedsoflifetimor.org/

Appendix 3. Budget for Year 1

Seeds of Life Phase III: Budget for Year 1 (A$'000)								
				Year 1 ($'000)				
Ref	Activities / Item	Unit	Cost ($)	1	2	3	4	Tot
C1	Evaluation of improved foodcrop varieties							
O1.1	Establishment of National Research Centres and Stations completed							
O1.1.1	Irrigation system for Loes Research Centre	System	$50,000	$50.00	$0.00	$0.00	$0.00	$50.00
O1.1.2	Additional Research Stations	Centre	$100,000	$100.00	$0.00	$0.00	$0.00	$100.00
O1.2	Genetic material of potential improved varieties identified and sourced							
O1.2.1	ST visits by CGIAR specialists (3/year) (tech and training)	Visit	$10,000	$0.00	$10.00	$10.00	$10.00	$30.00
O1.3	Potential new varieties evaluated on-station							
	Timor Leste Staff			$8.25	$8.25	$8.25	$8.25	$33.00
O1.3.1	Operations at Betano and Loes	Year	$120,000	$120.00	$0.00	$0.00	$0.00	$120.00
O1.3.2	Operations at new upland Research Stations (2) ($2,000/mth)	Year	$50,000	$0.00	$0.00	$0.00	$0.00	$0.00
O1.3.3	Operations at new irrigated Research Station ($2,000/mth)	Year	$25,000	$0.00	$0.00	$0.00	$0.00	$0.00
O1.4	Potential new varieties evaluated on-farm							
	Timor Leste Staff			$16.49	$16.49	$16.49	$16.49	$65.97
O1.4.1	Cost of OFDTs (excluding staff time) (pds, equip, etc.)	OFDT	$150	$26.25	$26.25	$26.25	$26.25	$105.00
O1.4.2	Support for SEOs to assist with OFDTs	Year	$10,000	$10.00	$0.00	$0.00	$0.00	$10.00
O1.5	Selected new varieties officially released							
O1.5.1	Variety launch events and promotional events	Year	$10,000	$0.00	$0.00	$10.00	$0.00	$10.00
O1.6	Sufficient basic and foundation seed being produced							
	Timor Leste Staff			$2.25	$2.25	$2.25	$2.25	$9.00
O1.6.1	Building for potato storage	0	$10,000	$10.00	$0.00	$0.00	$0.00	$10.00
O1.7	Capacity of MAF staff to manage the identification and release of new varieties strengthened					0.0	0.0	0.00
O1.7.2	On-the-job training (visits to int'l res. centres) - 2 mnths	0	$15,000	$0.00	$15.00	$0.00	$0.00	$15.00
O1.7.3	Short courses run by CGIAR pers. In TL (no inc. cost)	0	$0	$0.00	$0.00	$0.00	$0.00	$0.00
O1.7.4	In-country short courses (15-25 pp, 1 week) (1 course/qtr)		$8,500	$17.00	$17.00	$17.00	$17.00	$68.00
			Sub-Total TL Staff	$26.99	$26.99	$26.99	$26.99	$107.97
			Total Operating Costs	$333.25	$68.25	$63.25	$53.25	$518.00
			Total Component 1	$360.24	$95.24	$90.24	$80.24	$625.97
C2	Formal seed production and distribution							
O2.1	Formal seed being produced through farmer contracts							
	Timor Leste Staff			$9.75	$9.75	$9.75	$9.75	$39.00
O2.1.1	Purchased rice seed ($0.50/kg)	Mt	$500	$25.00	$0.00	$0.00	$0.00	$25.00
O2.1.2	Purchased maize ($0.50/kg)	Mt	$500	$12.50	$0.00	$0.00	$0.00	$12.50
O2.1.3	Purchased peanut seed ($1.00/kg)	Mt	$1,000	$25.00	$0.00	$0.00	$0.00	$25.00
O2.1.4	Operating sweet potato cutting sites (30 x 0.05 ha sites)	Site	$500	$15.00	$0.00	$0.00	$0.00	$15.00
O2.1.5	Operating sweet potato cutting sites (30 x 0.05 ha sites)	Site	$5,000	$75.00	$0.00	$0.00	$0.00	$75.00
O2.1.6	Operating cassava cane sites (1 ha/district) (replace 3 sites/yr)	ha	$50,000	$25.00	$0.00	$0.00	$0.00	$25.00
O2.2	Quality assurance systems established							
O2.2.1	Seed laboratory equipment	Lump Sum	$25,000.0	$0.00	$0.00	$25.00	$0.00	$25.00
O2.3	Technical extension support provided to contracted seed producers							
	Timor Leste Staff			$0.74	$0.74	$0.74	$0.74	$2.97
O2.4	Seed grading, packaging and storage facilities established							
O2.4.1	Additional Seed Processing Centres (have 2)	Centre	$80,000	$80.00	$0.00	$0.00	$0.00	$80.00
O2.4.2	Annual operating & R&M Seed Centres (15% of cost)	Lump Sum/Yr	$12,000	$48.00	$0.00	$0.00	$0.00	$48.00
O2.4.3	Annual labour, seed packaging costs, etc.	Mt	$1,000	$100.00	$0.00	$0.00	$0.00	$100.00
O2.5	Formal seed distributed through preferred distribution channels							
O2.5.1	Seed distribution (some contracted, plus cooperation with MAF districts)	Mt	$600	$60.00	$0.00	$0.00	$0.00	$60.00
O2.5.2	Cassava cane distribution (by local staff)	Mt	$200	$0.00	$20.00	$0.00	$0.00	$20.00
O2.5.3	Sweet potato cutting distribution (some by local staff)	Mt	$300	$0.00	$60.00	$0.00	$0.00	$60.00
O2.6	Capacity of MAF staff to manage the production and distribution of formal seed strengthened							
O2.6.1	Short term training	Year	$5,000	$0.00	$10.00	$0.00	$0.00	$0.00
O2.6.2	On-the-job training (visits to int'l seed centres) - 2 mnths	Visit	$10,000	$0.00	$20.00	$0.00	$0.00	$30.00
O2.6.3	In-country short courses (15-25 pp, 1 week) (1 course/qtr)	Course	$8,500	$8.50	$8.50	$8.50	$8.50	$34.00
O2.6.4	Seed/agronomy/gender training for SEOs	LS/pp/yr	$100	$8.00	$8.00	$8.00	$8.00	$32.00
O2.6.5	Operational costs for SEOs	LS/pp/yr	$100	$8.00	$8.00	$8.00	$8.00	$32.00
O2.6.6	Seed/agronomy/gender training for Dist & SD staff (80 pp)	LS/pp/yr	$100	$2.00	$2.00	$2.00	$2.00	$8.00
O2.6.7	Operational costs for Dist & SD staff (80 pp)	LS/pp/yr	$100	$2.00	$2.00	$2.00	$2.00	$8.00
			Sub-Total TL Staff	$10.49	$10.49	$10.49	$10.49	$41.97
			Total operating costs	$494.00	$138.50	$53.50	$28.50	$714.50
			Total Component 2	$504.49	$148.99	$63.99	$38.99	$756.47

C3	**Informal seed production and distribution**							
O3.1	**Community Seed Production Groups (CSPGs) established**							
	Timor Leste Staff			$7.52	$7.52	$7.52	$7.52	$30.06
O3.1.1	Cost of establishing CSPGs (Year 1 zero)	Av cost/group	$355	0	0	0	0	$0.00
O3.2	**Farmer Seed Marketing Groups established**							
O3.2.1	Farmer Seed Marketing Groups established (Year 1 zero)	Av cost/gp/yr	$3,000	$0.00	$0.00	$0.00	$0.00	$0.00
O3.3	**Focal seed merchants in local markets established**							
O3.3.1	Assistance to sell branded seed in local markets	Av cost/merch/y	$1,000	$0.00	$1.00	$0.00	$0.00	$1.00
O3.4	**Access to seed for vulnerable groups improved through vouchers and seed fairs**							
O3.4.1	Lump sum cost of holding an annual seed fair (Year 1 zero)	An L/sum	$10,000	$0.00	$0.00	$0.00	$0.00	$0.00
O3.5	**Systems linking informal seed producers with potential buyers developed**							
O3.5.1	Computer-based record-keeping system	LS/district	$4,000	$0.00	$4.00	$0.00	$0.00	$4.00
O3.6	**Capacity of key actors involved in the production and distribution of informal seed strengthened**							
O3.6.1	On-the-job training (visits to int'l seed industries) - 2 mnths	Visit	$15,000	$0.00	$30.00	$0.00	$0.00	$30.00
O3.6.2	In-country short courses (15-25 pp, 1 week) (1 course/mth)	Course	$8,500	$8.50	$8.50	$8.50	$8.50	$34.00
O3.6.3	Group/seed/agronomy/gender training for SEOs	LS/pp/yr	$100	$8.00	$8.00	$8.00	$8.00	$32.00
O3.6.4	Operational costs for SEOs	LS/pp/yr	$100	$8.00	$8.00	$8.00	$8.00	$32.00
O3.6.5	Group/seed/agronomy/gender training for Dist & SD staff	LS/pp/yr	$100	$2.00	$2.00	$2.00	$2.00	$8.00
O3.6.6	Operational costs for Dist & SD staff	LS/pp/yr	$100	$2.00	$2.00	$2.00	$2.00	$8.00
		Sub-Total TL Staff		$7.52	$7.52	$7.52	$7.52	$30.06
		Total operating costs		$28.50	$63.50	$28.50	$28.50	$149.00
		Total Component 3		$36.02	$71.02	$36.02	$36.02	$179.06
C4	**Seed system management**							
O4.1	**Seed planning and management systems established**							
O4.1.1	Hard and software	Lump Sum	$25,000	$25.00	$0.00	$0.00	$0.00	$25.00
O4.1.2	Training for NDFC&H staff (in-country short courses, 1/yr)	LS/year	$8,500	$0.00	$8.50	$0.00	$0.00	$8.50
O4.2	**M&E systems established providing a basis for progressive learning**							
	Timor Leste Staff			$3.00	$3.00	$3.00	$3.00	$12.00
O4.2.1	Training provided on-the-job by Advisors	0	$0					
O4.2.2	SOSEK operations and surveys	LS/year (5 pp)	$48,000	$0.00	$48.00	$0.00	$0.00	$48.00
O4.2.3	Adoption, impact, seed system, seed distribution, etc. surveys	LS/year	$100,000	$0.00	$100.00	$0.00	$0.00	$100.00
O4.3	**GoTL seed policy being informed by SoL experience**							
O4.3.1	Experience related to MAF by Advisors and SoL staff (Zero cost)							
O4.4	**Seed system gender strategy implemented**							
	Timor Leste Staff			$1.50	$1.50	$1.50	$1.50	$6.00
O4.4.1	Gender awareness training and support programs	LS/year	$50,000	$0.00	$50.00	$0.00	$0.00	$50.00
O4.5	**Improved variety technical and promotional materials developed**							
O4.5.1	Lump sum per year	Year	$70,000	$70.00	$0.00	$0.00	$0.00	$70.00
O4.6	**Awareness of improved varieties increased**							
O4.6.1	Lump sum/yr	LS/year	$15,000	$15.00	$0.00	$0.00	$0.00	$15.00
O4.7	**Environmental and climate change impacts addressed**							
O4.7.1	Costs covered in Research Station operating costs and TA							
O4.8	**Capacity of MAF staff to manage the national seed system enhanced**							
	Timor Leste Staff			$3.75	$3.75	$3.75	$3.75	$15.00
O4.8.1	Intl study tours for exposure to sustainable mature seed systems	Tour	$15,000	$0.00	$15.00	$0.00	$0.00	$15.00
		Sub-Total TL Staff		$8.25	$8.25	$8.25	$8.25	**$33.00**
		Total operating costs		$110.00	$221.50	$0.00	$0.00	**$331.50**
		Total Component 4		$118.25	$229.75	$8.25	$8.25	$364.50

C5	**Program management and coordination**							
	Timor Leste Office and Admin Staff			$44.70	$44.70	$44.70	$44.70	$178.80
O5.1	**Management and coordination**							
	Establish Regional Offices (3)							
O5.1.1	Upgrade office, sundry equipment	Office, etc	$10,000	$30.00	$0.00	$0.00	$0.00	$30.00
O5.1.2	Generator (5 kva) (3)	Generator	$6,000	$18.00	$0.00	$0.00	$0.00	$18.00
O5.1.3	District Satellite Dishes (3)	Dish	$6,000	$18.00	$0.00	$0.00	$0.00	$18.00
O5.1.4	Regional office operations (3)	Month	$2,000	$18.00	$18.00	$18.00	$18.00	$72.00
0	***Trucks, Vehicles & Motor Bikes - Capital and Ops***							
O5.1.5	Trucks	Vehicle	Rented					
O5.1.6	4 cabs	Vehicle	$45,000	$0.00	$540.00	$0.00	$0.00	$540.00
O5.1.7	2 cabs	Vehicle	$35,000	$0.00	$385.00	$0.00	$0.00	$385.00
O5.1.8	Motor Bikes	Bike	$2,750	$0.00	$181.50	$0.00	$0.00	$181.50
O5.1.9	Transport operational & maintenance (20% of capital)	Qtr	$71,825	$71.83	$71.83	$71.83	$71.83	$287.30
O5.1.10	Extension to Dili Office Building	Building	$100,000	$0.00	$100.00	$0.00	$0.00	$100.00
O5.1.11	Communications	Qtr	$12,500	$12.50	$12.50	$12.50	$12.50	$50.00
O5.1.12	Program Reports	Qtr	$6,000	$6.00	$6.00	$6.00	$6.00	$24.00
O5.1.13	Dili and Perth office ops & DG's Fund ($50,000/yr for DG's fund)	Month	$15,000	$45.00	$45.00	$45.00	$45.00	$180.00
	Program Workshops							
O5.1.14	Program inception workshops (50 pp)	Event	$5,000	$5.00	$5.00	$5.00	$0.00	$15.00
O5.1.15	National annual planning workshops (50 pp)	Event	$10,000	$0.00	$10.00	$0.00	$0.00	$10.00
O5.1.16	District annual planning workshops (50 pp)	Event	$1,500	$0.00	$18.00	$0.00	$0.00	$18.00
O5.1.17	Quarterly district coordination meetings (50 pp)	Event	$1,500	$18.00	$0.00	$18.00	$18.00	$54.00
	Replacement/New Office Equipment							
O5.1.18	Dili Office Desk Tops (40)	Unit	$1,000	$10.00	$10.00	$0.00	$0.00	$20.00
O5.1.19	District and Dili Lap Tops (100)	Unit	$1,500	$37.50	$37.50	$0.00	$0.00	$75.00
O5.1.20	Dili Office Printers (4)	Unit	$2,000	$4.00	$0.00	$0.00	$0.00	$4.00
O5.1.21	Dili Office Generator (15kva) (1)	Unit	$6,000	$6.00	$0.00	$0.00	$0.00	$6.00
O5.1.22	Dili Office Server & Software (1)	Unit	$4,000	$4.00	$0.00	$0.00	$0.00	$4.00
O5.1.23	Dili Office Furniture (12)	Sets	$500	$6.00	$0.00	$0.00	$0.00	$6.00
O5.1.24	Dili Office Photocopier (1)	Unit	$2,500	$2.50	$0.00	$0.00	$0.00	$2.50
O5.1.25	Dili Office Network Equipment (1)	Unit	$4,000	$4.00	$0.00	$0.00	$0.00	$4.00
O5.2	**Program publicity**							
O5.2.1	Web-site management	Qtr	$500	$0.50	$0.50	$0.50	$0.50	$2.00
O5.2.2	Program publicity brochures, calendars, etc.	Qtr	$2,500	$2.50	$2.50	$2.50	$2.50	$10.00
O5.2.3	Program signage	Qtr	$500	$0.50	$0.50	$0.50	$0.50	$2.00
O5.2.4	Promotional events	Event	$500	$0.00	$0.50	$0.00	$0.50	$1.00
O5.2.5	Media liaison (International)	Event	$1,000	$0.00	$1.00	$0.00	$1.00	$2.00
O5.2.6	Conference participation	Event	$5,000	$5.00	$0.00	$5.00	$0.00	$10.00
O5.2.7	Promotional merchandise (non-technical)	Qtr	$1,250	$1.25	$1.25	$1.25	$1.25	$5.00
	Sub-Total TL Office and Admin Staff			$44.70	$44.70	$44.70	$44.70	**$178.80**
	Total Costs			$326.08	$1,446.58	$186.08	$177.58	**$2,136.30**
	Total Component 5			$370.78	$1,491.28	$230.78	$222.28	$2,315.10

Total Program Costs					
Total TL Office and Admin Staff (Aust. funded)	$44.70	$44.70	$44.70	$44.70	**$178.80**
Total TL Staff (Timor-Leste funded)	$53.25	$53.25	$53.25	$53.25	**$213.00**
Total operating costs (All Aust. Funded)	$1,291.83	$1,938.33	$331.33	$287.83	**$3,849.30**

Appendix 4. Annual work plan for Seeds of Life 2011-2012

1 February 2011 - 31 January 2012

Preparation ● ● ● Intermittent Continuous

No.	Component / Output / Activity	2011 Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2012 Jan
1	**Component 1: Evaluation of improved crop varieties**												
1.1	Establishment of Agricultural Research Centres and Stations completed												
	● Irrigation scheme for Loes												
	● Additional research station established												
1.2	Genetic material of potential improved varieties identified and sourced												
	● Genetic material sourced from CG centres												
1.3	Potential new varieties evaluated on-station												
	● Operations at Betano, Loes, Aileu and Darasula												
	● Operations at new upland site												
	● Operations at new irrigated (rice) site												
1.4	Potential new varieties evluated on-farm												
	● Potentail new varieties tested on farm												
	● MAF SEOs conduct OFDTs												
1.5	Selected new varieties officially released												
	● Variety launch events												
1.6	Sufficient foundation seed being produced												
	● Building potato storage												
1.7	Capacity of MAF research staff to manage the identification and release of new varieties strengthened												
	● Masters degree study												
	● On the job training												
	● In-country short courses												
2	**Component 2: Formal seed production and distribution**												
2.1	Formal seed produced through farmer contracts												
	● Seed crop growing in contract farmer 2010/2011 seasons												
	● Seed processing by farmer												
	● Seed delivering to Seed Processing Unit (SPU)												
	● Seed grower application form submission for 2011/2012 planting season												
	● Contracting of seed growers for the 2011/2012 season												
	● Seed crop growing 2011/2012 season												
2.2	Quality assurance systems established												
	● Field inspection of 2010/2011 planting season												
	● Seed processing at SPUs												
	● Conducting laboratory seed quality testing												
	● Seed bagging, labelling and distribution												
	● Application of seed grower for 2011/2012												
	● Pre planting field inspections												
	● Brief introduction on seed production to contract growers												
	● Field inspection of 2011/2011 planting seasons												
	● Repeat laboratory seed testing for seed > 6 months of storage												
2.3	Technical extention support provided to contracted seed producers												
	● SEO visits to contract growers												
	● Technical support by organic fertilizer producer for selected maize seed grower at Maliana												
	● Training of rice cultivation and basic formal seed production techniques												
2.4	Seed grading, packing and storage facilities establihed												
	● Seed ware house construction and renovation at Aileu, Baucau, Bobonaro, Manufahi, Viqueque												
	● Ordering, delivering and installation of seed testing and processing equipment												
2.5	Formal seed distributed through preferred distribution channels												
	● Seed distribution planning for 2011/2012 planting season												
	● Seed Request submission from interesting parties												
	● Seed Request approval by MAF and SoL TL												
	● Seed distribution for SoL's program (Research; OFDT; Informal seed production; Formal seed production), MAF and NGOs												
2.6	Capacity of MAF seed production and extention staff to manage the production and distribution of formal seed strengthened												
	● Individual mentoring during field visits												
	● Individual mentoring in Dili office												
	● Regular 2-monthly meeting												
	● District cross-visits of Seed Officers												
	● Seed District Officers on-the-job training of field inspection for seed certification												

1 February 2011 - 31 January 2012

Preparation ● ● ● Intermittent Continuous

No.	Component / Output / Activity	2011 Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2012 Jan
3	**Component 3: Informal seed production and distribution**												
3.1	Community Seed Production Groups established												
	● Develop guidelines & implementation plan for informal seed produciton												
	● Coordinate with MAF to select districts for pilot implementation												
	● Select of counterpart staff for informal seed produciton (Dili)												
	● Select of counterpart staff for informal seed produciton (District)												
	● Select/form CSPGs in pilot districts												
	● Training & orientation to CSPG by SEOs on informal seed production												
	● CSPGs implement informal seed production												
	● Provide technical guidance to (I)NGOs interested in informal seed												
3.2	Farmer Seed Marketing Groups established												
	No activity planned this year as harvest not ready by January 2012												
3.3	Focal seed merchants in local markets established												
	● Consult with stakeholders												
	● Together with MAF identify local seed merchants in local markets												
3.4	Access to seed for vulnerable groups improved trough seed fairs												
	● Develop simple guidelines for organizing seed fairs in Timor-Leste context												
3.5	Systems linking informal seed producers with potential buyers developed												
	● Consult with potential buyers												
	● Consult with CARE staff and their seed groups												
	● Consult with new producers, SEOs and MAF District Directors												
	● Develop strategy for linking buyers and seed producers												
	● Conduct seed producer-buyer workshop												
3.6	Capacity of MAF extension staff to establish CSPGs strengthened												
	● Conduct visit to informal seed production groups and sites for MAF staff												
	● Provide training to district MAF staff on infomal seed production												
	● Orient SEOs on monitoring and reporting progress of CSPGs												
	● Train SEOs on seed storage of maize, paddy and peanuts												
	● Meeting with District Sr. Extensionist and SoL Regional Advisors												
	● Individual mentoring of key MAF staff in Dili Office												
	● Individual mentoring of MAF Sr. Extension Officers and SEOs in Districts												
	● Organise two monthly meeting with MAF National Director (Extension)												
	● Undertake Farmer Field Day												
	● Organize exposure visit for senior MAF staff outside of Timor Leste												
4	**Component 4: Seed system management**												
4.1	Seed planning and management systems established												
	● Informal discussions with National Directors and other stakeholders												
	● Establishment of National Review Team of Timor-Leste's seed program												
	● Comparative study visit by Timor-Leste seed program policy makers to other countries to gain a better understanding of their seed systems.												
4.2	M&E/SOSEK processes strengthened												
	● Capacity building of M&E/SOSEK unit staff												
	● Study on SoL experience with Seed Production Groups												
	● Second socio-economic study (topic to be determined)												
	● Competency evaluation for all SoL staff												
4.3	GoTL seed policy being imformed by SoL experience												
	● Workshop on Formal Seed Production (Lessons learned from three years of experience)												
	●												
	●												
4.4	Seed system gender strategy implemented												
	●												
	●												
	●												
4.5	Improved-variety technical & promotional materials developed												
	●												
	●												
	●												
4.6	Awareness of improved varieties increased through use of mass media												
	●												
	●												
	●												
4.7	Environmental and climate change impacts addressed												
	● Training of counterparts in CC												
	Selection of counterpart staff for CC												
	● Acquisition and analysis of rainfall and yield data												
	● Trialling of interventions (water/fertiliser/conservation ag)												
	Coordination with USC for conservation and supplementary irrigation												
	Building tanks for water storage												
	Identifying sites for microdosing												
	● Potential new varieties identified and evaluated on-station												
	● Production of reports and keeping upto date with CC												
	Development of planning and intervention implementation document												
4.8	Capacity of MAF staff to manage the national seed system enhanced												
	● Individual mentoring of MAF staff												
	● Orientation/familiarization on seed legislation and seed certification for MAF staff												

1 February 2011 - 31 January 2012

Preparation ● ● ● Intermittent Continuous

No.	Component / Output / Activity	2011 Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2012 Jan
5	**Program management**												
5.1	Program governance arragements established and operating effectively												
5.2	Program Management Unit established and operating effectively												
	Staffing and regionalization												
	● Recruitment and mobilisation of long-term TA staff												
	● Establishment of Regional Offices (Baucau, Maliana, Same)												
	● Recruitment of additional MAF staff for secondment with SoL												
	Program development												
	● Development of M&E Framework												
	● Preparation of SoL 3 Annual Program 2011												
	● Preparation of SoL 3 Annual Program 2012												
	● Baseline survey												
	● Revision of SoL Training Management System												
	Reporting												
	● Six-monthly progess report												
	● Annual progress report												
5.3	Program effectively coordinated with other relevant donor programs												
5.4	Lessons learned systematically reviewed and shared with government and other donors												
	● Revision and updating of the SoL website												
	● Annual research report 2010												
	● Annual research report 2011												
5.5	Pilots on the direct use of MAF's financial systems implemented, evaluated and reported												