Submission No 74

Inquiry into Australia's Relationship with Timor-Leste

Name: Australian Centre for International Agricultural Research

Joint Standing Committee on Foreign Affairs, Defence and Trade
Foreign Affairs Sub-Committee

Additional Questions—Australian Centre for International Agricultural Research

1. You comment on page 2 of the submission that livestock production is almost totally managed by individual households, very few of which are specialist livestock raisers.

   - What opportunity is there for households to pool their resources and form cooperatives?

     Answer: Collective or cooperative approaches make sense and we are exploring their relevance in Timor-Leste specifically for livestock production. ACIAR is funding Mataram University (UNRAM) to assess the potential of these collective approaches. On the island of Lombok, where UNRAM is located, there are approximately 800 collective smallholder cattle production groups with 50-150 cattle per group. An ACIAR-funded project with UNRAM has been working intensively with 36 of these groups (>3000 farmers) to develop an improved approach to cow-calf management through collective approaches. These groups are also sufficiently large and robust to attract credit from banks.

   - Would such cooperation be an immediate step to improving productivity?

     Answer: where groups are locally and culturally appropriate, yes (see below).

   - Are there cultural factors impeding such change?

     Answer: Collective approaches will likely not be appropriate everywhere in Timor Leste. In some areas, villages and individual producers are widely dispersed making collective approaches logistically difficult. In some ethnic groups, collective approaches may not be culturally appropriate (eg in Western Sumbawa in Indonesia, collective approaches have not worked for cultural reasons). In our view, however, in the majority of situations collective approaches should be widely applicable, appropriate and beneficial in assisting farmers from making the transition from being simple keepers of cattle to being market and productivity oriented producers of cattle.

2. You advise on page 2 of the submission that the Seeds of Life program focuses on the introduction and evaluation of improved crop varieties while devoting more resources to seed production; identification of improved crop management techniques; farmer participation in selecting crop varieties; and training Timor-Leste's Ministry of Agriculture and Fisheries (MAF) staff and others.

   - Would you discuss how farmers are involved in selecting crop varieties?

     Answer: Crop variety development in the Seeds of Life program commenced with a systematic on-station evaluation of large numbers of varieties at multiple sites to identify those that were well adapted to the biophysical conditions and were not susceptible to pests and diseases. It is well understood, however, that good biophysical adaptation is only one characteristic contributing to widespread

adoption by farmers. In Seeds of Life 2, a smaller suite of well adapted varieties was tested on farms throughout the country to not only confirm the robustness of their biophysical adaptation but to gain feedback on their appropriateness for copping systems and farmers' preferences. So farmers became involved in evaluating the more promising crop varieties. This allowed the Seeds of Life team to not only identify those varieties most suited to the cropping systems and farmers' needs but also to understand the farmers' criteria for evaluating varieties, which are often different from those of researchers.

Farmers continue to remain involved in varietal evaluation under Seeds of Life 3, where adoption on a wider scale is taking place and farmers are becoming involved in seed multiplication.

Publication: Lacoste et al. (2012): Varietal Diffusion in Marginal Seed Systems: Participatory Trials Initiate Change in East Timor, Journal of Crop Improvement, 26:4, 468-488.
http://www.tandfonline.com/doi/abs/10.1080/15427528.2011.651775

- Are there cultural factors impeding the selection of new crop varieties or on the program in general?

  Answer: No major impediment. To cater for the preference for white seeded maize in some areas, a white maize variety was identified and released.

  As with all cultures, taste preferences (sweetness, texture, colour, etc) play a critical role in the successful uptake of new crop varieties. Because of this, Seeds of Life regularly conducts taste testing events with farmers before any new varieties are released.

- Would you provide specific examples of the impact the Seeds of Life program on the 'hungry season'?

  Answer: The use of improved varieties results in increased yield and therefore increased production for the subsistence farmers. Together with improved simple grain storage technology (air tight drums), this gives families the ability to store more food to go through the hungry season. In 2013, the 31,500 households using SoL varieties will produce about 23,800 tons of additional food.

  Seeds of Life focuses on increasing the productivity of food crops already used by the Timorese. Extensive testing is carried out on many varieties including taste testing, processing and cooking using Timorese techniques.

  We have two strands of evidence that SoL is increasing food security.

  The first is an annual survey with farmers involved with on farm research. The table below (table 96) shows the changes in farmers' perceptions of food security

over the last four years. This has shown a reduction of food insecurity from 38% to 16-21%. This will all be due to Seeds of Life activity.

Table 96. Respondent food security over years (maize)

Year	*Insufficient* %	*Sufficient* %	*Surplus* %	*Number of respondents*
2007-2008	38	47	15	502
2008-2009	29	54	17	262
2009-2010	16	73	11	354
2010-2011	21	72	7	232

The second evidence we have is farmer's stories. In Baucau, Mana Juvita describes that the new rice variety (Nakroma) has doubled her rice yields, due to the high yield and shorter duration. Mana Martina also in Baucau has grown and sold the new sweet potato varieties, enabling her and her family to send children to school. We have many other benefit stories documented in the Phase 2 of SoL.

3. You comment on page 2 of the submission that non-government organisations (NGOs) are increasingly involved in your assistance program.

   - Would you provide some examples?

   Answer: A very diverse group of international NGOs (INGOs) and local NGOs have collaborated with SoL. Moreover, there are also a number of donor supported programs that have used and continue to use SoL varieties in their working areas (e.g. the European Commission's (EC) recently completed RDP3 in Manufahi district).

   Among the INGOs: CARE, World Vision, Mercy Corps, HIVOS, World Neighbours, CRS and USC-Canada.

   Among MAF donor supported programmes: EC's ongoing Rural Development Program (RDP) Phase 4, IFAD-supported Timor-Leste Maize Storage Project (TLMSP), and the JICA-funded Community Based Natural Resource Management Project. Seeds of Life also works closely with these MAF development partners to support MAF governance and capacity-building, particularly in the areas of strategic planning, annual action and budget planning.

   Among local NGOs, BIFANO, Achae and CECEO are the major ones.

   These local and international NGOs have used SoL varieties and supported community groups for seed production and/or food production. SoL also

provided training for their field staff in seed production, post-harvest operations and quality control of seeds.

In March this year, Seeds of Life partnered with a local NGO, HIAM-Health to provide basic nutrition training for agriculture staff from the Ministry of Agriculture, INGOs and local NGOs. This is part of SOL's goal to increase awareness and education on the linkages between agriculture, nutrition and food security, and the important role that agriculture staff play in addressing nutrition issues in Timor-Leste.

- Are these NGOs local or international?

  Answer: Please refer to the answer above.

- How are the NGOs selected for participation in the program?

  Answer: Seeds of Life selects NGOs that have substantial experience working in Timor-Leste and whom are already successful at organising communities. They approach SoL after recognising their need for specific technical support, or for certified seeds to initiate the Community Seed Production Groups.

  Example in the district of Oecussi: the local NGOs, initially supported by the international NGO World Neighbours, organised communities around saving and loans schemes, terracing steep slopes, or organising access to water. Accessing improved seeds was a logical next step to improve productivity.

- How do you evaluate the performance of the NGOs?

  Answer: SoL does not evaluate the performance of iNGOs and NGOs directly. But the NGOs share information on their results from using SoL seed and provide feedback on the performance of SoL varieties. NGOs report their progress and feedback based on the reporting formats provided to them by SoL. Similarly, the other donor programs using SoL varieties report significant yield increases.

  Below is the results of maize demonstrations implemented by RDP4 in 10 districts in previous season:

  Crop cuts of 205 demonstration plots (each 1,000m2) of improved maize varieties (mostly SoL varieties Sele and Noi Mutin) compared with traditional varieties revealed that SoL varieties and good agriculture practices (GAP) produced 61.24% higher yield than local varieties. Good agriculture practices included improved varieties with improved agronomic practices. Average yield of SoL varieties with GAP was 2.45 ton/ha compared to 1.55 ton/ha of traditional varieties.