

Darwin Initiative/Darwin Plus Projects Half Year Report (due 31st October 2022)

Project reference	29-025
Project title	Sweet potato, a model for food security and long-term conservation of biodiversity
Country(ies)/territory(ies)	Madagascar, Zambia, Kenya, Peru
Lead organisation	Global Crop Diversity Trust (Crop Trust)
Partner(s)	Global Crop Diversity Trust, Germany; Fiompiana Fambolena Malagasy Norvéziana (FIFAMANOR) in Madagascar; Zambia Agricultural Research Institute (ZARI) in Zambia; International Potato Center (CIP) in Kenya and Peru.
Project leader	Crop Trust
Report date and number (e.g. HYR1)	HYR1 – June-September 2022
Project website/blog/social media	

1. Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).

Agreements have been finalized and signed with agreed on deliverables for all partners and the project is proceeding on schedule.

Madagascar – The initial collection of eight sweet potato landraces by the USAID-funded BHA project in Madagascar have been added to the Darwin project and five of the landraces are now phytosanitary clean and being multiplied in vitro for repatriation. These landraces were received with a Standard Material Transfer Agreement (SMTA). An additional collection of ~80 landraces from diverse regions in Madagascar have been completed and the first 39 of these landraces have been shipped to CIP-Nairobi for placement into in vitro cultures and phytosanitary cleaning of a select 30 landraces. This effort represents a large overachievement by our partner FIFAMANOR and will ensure safe conservation of 2-3X the number of landraces targeted by the project for conservation. Leaves have been harvested from all landraces collected and dried over silica gel for shipment to Diversity Arrays in Australia for DNA extraction and development of genetic markers for this material.

Zambia – The collection of 250 sweet potato landraces has been made in Zambia as part of the Crop Trust Seeds for Resilience project and over 200 of these have been shipped to CIP-Kenya and most have been placed into in vitro cultures. Fifty of these landraces, almost double the number needed for the Darwin project, are currently undergoing phytosanitary cleaning. Dried leaf material from these landraces has been shipped to Diversity Arrays in Australia for DNA extraction and development of genetic markers and genetic data from fifty samples has been returned and we are awaiting the data from the remaining landraces prior to analysis.

CIP – CIP-Nairobi has been coordinating obtaining import permits for the shipment of sweet potato vines from Madagascar and Zambia to CIP-Nairobi. Once in Nairobi, the vine material is rooted in the greenhouse and isolated into in vitro cultures. The material which is included in the Darwin project is then put through thermotherapy, meristems are isolated, and plants are

regenerated in vitro prior to testing for the absence of viruses. A shaker was purchased by the project to accelerate the multiplication of phytosanitary clean in vitro material. CIP- Nairobi has also modified a program to allow collection of passport and characterization data when material is collected. CIP-Lima continues to facilitate communication and activities with the partners.

All partners participate in monthly meetings (five held thus far) and stay in constant touch with each other via regular email exchanges. Minutes are taken during these meetings and circulated to all partners for comment. Through these meetings any challenges that any of the partners are facing are solved in real time. These meetings have also provided a venue to discuss future activities to ensure all partners are thinking into the future. A good example was the start of discussions on forming the farmer focus groups and selecting farmers to participate.

There have been two capacity building activities during this reporting period, 1) a virtual photography workshop given by the Crop Trust for partners in Madagascar and Zambia to aid them in photo-documentation of activities in the project and 2) an in person technology transfer session between CIP-Nairobi and CIP-Lima on in vitro technologies (in vitro multiplication, phytosanitary cleaning, record keeping).

2a. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months (for COVID-19 specific delays/problems, please use 2b). Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

There is an unexpected challenge with the shipment of material from Zambia to Kenya. No courier company will transport live plant material from Zambia to Kenya. This challenge has been rectified by personnel from ZARI hand carrying material when they travel and CIP-Nairobi arranging for the material to be picked up at the airport, adhering to all phytosanitary regulations. This has worked well for three shipments.

Another challenge was that the second shipment of sweet potato vines from Zambia arrived at CIP-Nairobi the week of the national elections when everything was closed down for 2 weeks. Unfortunately, this resulted in the loss of 26 lines. These lines are still alive in Zambia and will be reshipped in the fourth shipment.

One additional challenge we are facing is the current volatility of foreign exchange rate. For the financial reporting due end November, we will be receiving financial information from our partners with regards to what they have spent to date and what they anticipate spending through 30 March 2023. Once we review the financial information, we will decide what revisions we will have to make to budgets and possible workplans taking into account the impact of foreign exchange rate movement.

2b. Please outline any specific issues which your project has encountered as a result of COVID-19. Where you have adapted your project activities in response to the pandemic, please briefly outline how you have done so here. Explain what residual impact there may be on your project and whether the changes will affect the budget and timetable of project activities.

No covid-related delays have been reported.

2c. Have any of these issues been discussed with LTS International and if so, have changes been made to the original agreement?

Discussed with LTS: No

Formal change request submitted: No

Received confirmation of change acceptance No

3a. Do you currently expect to have any significant (e.g. more than £5,000) underspend in your budget for this year?

Yes No Estimated underspend: £

3b. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a rebudget Change Request as soon as possible. There is no guarantee that Defra will agree a rebudget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.

4. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

There are no other issues that need to be reported. The project is proceeding on schedule with all partners very enthusiastic and excited about the progress and the project.

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also be raised with LTS International through a Change Request. **Please DO NOT send these in the same email.****

Please send your **completed report by email** to Darwin-Projects@ltsi.co.uk. The report should be between 2-3 pages maximum. **Please state your project reference number in the header of your email message e.g. Subject: 25-001 Darwin Half Year Report**