## 2016 August Trip Work Diary

Ben Heyward

### Monday 15 August, Adelaide to Cairns

12.30-16.00pm

Flew Adelaide to Cairns where I picked up 10kg of 'Stuart' soya bean seed and 2 of 250gm packets of Rhizobium inoculum.

### Tuesday 16 August, Cairns to Port Moresby to Goroka

11.45am-13.10pm, 14.55-16.05pm

Flew Cairns to Moresby, bringing in the 10kg commercial bag of Soya Bean Seed and inoculum. I had previously applied and paid for both Seed and Biological Material Import permits (see July report Friday 22 July) for which I had electronic copies but NAQIA Waigani had not sent the hard-copies to the airport as agreed. After I had offered to leave the seed with them my electronic copies satisfied the NAQIA staff. I proceeded to the Domestic Terminal for my flight to Goroka where I joined the team. We overnighted with David and Anna Kulimbao at Safanaka near Goroka.

### Wednesday 17 August, Goroka to Kerowaghi

We left the Kulimbao's at 7.30am by Wapenamanda District vehicle reaching the Catholic Church Centre at Kerowaghi by 11.30am where we settled in participants and prepared for the start of the Simbu Project Close Workshop at 1pm.

By 1pm almost all participants from the District Workshop site communities had arrived. We commenced the Workshop at 1.30pm following the program as drafted until lunchtime on the first day with presentations from the Gumine and Digine groups and the Kerowaghi DPI team after which we broke for the evening meal. In the evening we resumed with a Powerpoint presentation of soil loss in the Highlands and the potential of SALT, Sloping Agricultural Land Technology based on alley cropping in contour hedgerows. This completed the Day 1 program excluding the visits to participant gardens originally scheduled for the first afternoon.

### Thursday 18 August, Kerowaghi

8.30am 12.30am

David Kulimbao began the day with a story and Bible passage making it a parable that if you reject the chance to lean about and take up rabbit farming then you will miss out on the rabbit-feast!

Debbie Kapal, the Coordinator of Jiwaka Lutheran Agricultural Women, a former NARI Agricultural Researcher with an Agronomy Masters and David Askin used a series of slides to present a session around the ecological disturbance to predator-prey dynamics caused by drought and the limitations of virus free planting material. The message was that people need to understand that these NARI lines are not resistant to insect infestation, rather we all need to take care when selecting plant material that is free of obvious disease and pest infestation. The presentation generated much discussion.

As it was raining we asked Captain Steve Lawaki of the Salvation Army to present before we left the Centre to visit Kerowaghi participant gardens by Koronike Creek.

The gardens featured mulching and the use of trash in drains to retain soil and limit erosion as well as the complete 'package' of the changes to sweet potato planting that developed from our Workshops and Follow-up Visits. Josephine Wenabo, the Kerowaghi women's leader, also presented her scraped cassava drying in the sun as a future food reserve for her family.

2.00 5.30pm

After late lunch we resumed our Workshops sessions beginning with participants breaking into groups to either review their most important learnings or to prepare their presentations focussing on 'Lessons Learned/ What Worked Best' and 'What did not Work well'. The Gembogl participants and Jiwaka Lutheran Women presented before dinner.

In the evening we reconvened to finish the day with a Powerpoint presentation of soil loss in the Highlands and the potential of SALT, Sloping Agricultural Land Technology based on alley cropping in contour hedgerows.

### Friday 19 August, Kerowaghi

8.30am 12.30pm

After an introductory reflection Daisy and Judith, respectively the President and Treasurer of the Kawagl Agricultural Mother's Group, presented to the participants then responded to their questions.

The Kerowaghi participants followed with their presentation which featured greater attention and insights into the social impact of the drought on people's behaviour including the increase in theft of garden foods, families by the river charging people coming to draw water and some men setting fires to kill animals in the bush without regard to the risk to houses and gardens.

To prepare for the distribution of Soya Bean seed and inoculum we ran a short training session focused on the symbiotic relationship between Rhizobia bacteria and legumes, especially for the potential nutrient buildup from planting beans and leguminous cover-crops like clover and live fence/contour hedgerow species. We extended this to discussing protein levels of Highland staple foods, the importance of protein in children, adult and livestock diets and finally, the need to cook peanuts and soya beans before feeding them to children.

Pastor Albert Athro then spoke about the small NGO he has set-up to lead his own community towards self-reliance rather than fatalism and welfare dependency. He referred to the 1997 Drought as having changed his thinking. At that time he came to the feeling that "God was telling me to stay close to my community, to work with my 'wantoks'. I work with my hands, planting gardens, looking after my orange orchard and goats."

He reached the stage of wanting to lead his own family and community to look to securing their future on both the spiritual and physical side. He expressed a deep fulfillment saying, "Now I sleep soundly, without moving, like a copra bag that is full to the top." This seems a fascinating approach for a local NGO to take

We ran the final session of the Workshop as a Q&A of what were the most important lessons to take away and put into practice, 'As Tok bilong Kaikai Sekuriti', which generated 6 key points. As we waited for lunch we distributed Soya Bean seed and inoculum and demonstrated the inoculation process to the participants.

After sharing lunch together participant community representatives made several affirming and thankful speeches before they departed. Father Peter Noklai and his team at the Catholic Centre went out of their way to help us with transport both for Thursday's garden visit and in transporting many participants to Kundiawa to catch buses straight after lunch on the Friday.

We farewelled people, packed up and drove through to Wapenamanda, with a stop in Mount Hagen to purchase much of the store food for the Enga Workshop and to try and catch up with Fredah Wantun at BUPNG. We slept at Yalis with Desmond and Martha Kolao as the planned accommodation was occupied. It was a long, demanding day.

### Saturday 20 August, Wapenamanda

8.30am 12.30pm

We inspected the progress of NARI sweet potato and cassava plantings in Desmond and Martha's garden and decided that we would use it for the Tuesday morning visit to participant gardens during the Enga Project Close Conference. DA and DK went to Wabag with Desmond to complete store food purchases.

2.00 5.00pm

Went to Janet Kepuli's house at the District Centre where I went ahead with recording proceedings of the Simbu Project Close Conference. We returned to Desmond and Martha's for dinner and sleep.

### Sunday 21 August, Wapenamanda

8am 2pm

We moved into a duplex apartment at the District Centre for accommodation during the Project Close Conference.

David Askin and I worked on updating the Project Maps on Google Earth and my versions of those and completed recording information off the hardcopy Simbu Workshop participant group posters we had in hand.

### Monday 22 August, Wapenamanda

8am 5.00pm

The first morning of the Enga Project Close Workshop started with a reflection on the human responsibility to take care of creation, of our respective corners of "the Garden of Eden." While several participants later acknowledged that these ideas were new to them, other older people referred back to the instruction they received from parents as based on the same kinds of thinking that "we do not have total rights over the land our clan uses". On the other hand, we have to pass it on to children and grandchildren so that they, in turn, can live and have families for the future.

After breaking into groups to prepare posters answering questions about the worst impacts of the 2015 Drought, the most effective changes they had made to their gardening, and the least effective, the Kanamanda, Birip and Sirunki participants presented to the Workshop. The common theme was of hard-dried difficult to till soil, dried out dead gardens, while floods and landslides hit them hard when the rain returned.

Lunch was prepared at the Wapenamanda Primary School venue by cooks recruited by Martha Kolao.

All 3 groups acknowledged the package of sweet potato planting techniques for avoiding weevil infestation in new gardens then went further to stress the importance of coming to realize how much soil they were losing in the 'clean mound, clean drain' system of the past. They all reported that now they were changing by mulching over mounds, and trying other techniques like planting small food crops between mounds or around their bases and using trash and earth barriers to slowdown rainwash through the gardens in order to retain the soil.

Kevin Yati, the Wapenamanda District Deputy CEO, spoke briefly, strongly supporting the impact of the Project team and with insight into our approach of a series of Follow-Up Visits noting, however, that a 3rd Round was needed to fully evaluate the performance of the package of new sweet potato planting techniques and of the NARI crop varieties we had distributed. He also observed that Wapenamanda was a district with a population of over a 100,000 people saying that the 30 or so participants present would need to make a lot of awareness but that really more Workshops were needed.

Dave Askin delivered a session, particularly relevant to participants from Sirunki and the high areas of the Upper Tsak Valley, on the conditions in which frost would occur, ways to protect selected gardens from frost and the interaction between frost and hail, noting that everlasting beans and peas were largely frost resistant.

### Tuesday 23 August, Wapenamanda

8.30am 12.30pm

The Kompiam community participants started off the day with their presentation highlighting their planting of a large new garden since the Workshop in which the different local Women's groups are growing their own plots of inoculated peanuts, NARI sweet potato and cassava singly and intercropped and trying different ideas for soil conservation and fertility building with compost, mulch, cover crops, live fences and rainwash barriers.

Jonah Siki, husband of Janet the Women's leader, contributed his experience of the development of the women's garden since he and Janet had shifted their household and established the Woman's Training Centre. He said that intensive gardening followed by the turnout of pigs onto the block had 'made the land a desert'. There were no trees, mainly a kunai grassland. After only a short dry spell the creek would cease to flow. After 'Ekolosi Kibungs' David and Anna Kulimbao had facilitated in 2000 and following, he had planted trees, Wild Sunflower and other shrubs which regenerated bush, refreshed the air and fertility so that they grew good crops. This discussion led into the next session, after lunch, presented by Penny Nathan from 'Enga Women in Coffee.'

Penny is the Secretary of this local group of women who buy coffee in the Lae Valley between and beyond Wapenamanda and Wabag and also in more remote centres in Enga, many without road access, then on-sell to factories around Mount Hagen. They would like a planned marketing structure so that local people, especially like those of areas such as Lapalama where she is from, would receive better prices instead of the transport-cost-penalties that coffee-buyers impose on them. She spoke of the people no longer bothering to prune or weed their coffee, instead turning their pigs into the orchards to clear the way for picking. The trees are suffering, yield and fruit quality has fallen. DRDO Samson Fezono added to this saying that with more people in the district, ground was short, 'coffee was in trouble' so there was a need for groups like Enga Women in Coffee to form partnerships with CIC for rolling out the latter organization's Coffee Rehabilitation Program.

A vigorous discussion followed about the combined destructiveness of pigs and fire preventing and destroying bush regeneration and fertility restoration and accelerating soil loss in coffee orchards and on fallow land. Pakene Koneyala, Penny Nathan's father, supporting her presentation, wrapped up this discussion saying that action by LLG and Provincial Governments was needed to prod and support communities to pass By Laws or make agreements on Watershed, Bush and Fire Management.

Following this session the Tsak Participants, all from the Women's Association, presented to us with their unique information about the drying up of almost all fish ponds in the normally cool and well watered valley. The stock died, or were stolen. Some ponds still await re-stocking. Bush and domestic animals died from hunger, fire and sickness. They also reported that a number of old people and infants had died walking over the mountains from frost-affected areas in the east of Kandep District.

They wrapped up saying that their greatest need was marketing, implying a marketing network, and that from the discussions and Bible Study yesterday they feel motivated to make awareness throughout the Tsak that our lives depend upon gardens planted on rich soil.

Captain Gaina from the Salvation Army spoke to the Workshop participants saying how impressed he was by what he had heard from them. He saw now that this approach to drought response could be effective and would be worth him trying to find funding to run them across the communities served by Salvation Army churches both in the Highlands and in other regions of the country such as Rigo in Central where he and his wife Jenny are from. They had found their time in Wapenamanda a most worthwhile experience.

Kyaka Enga Women from the BUPNG Project in the Baiyer River Valley, the Kyaka are the only Engas in WHP, then told the Workshop about their ACIAR funded project for increasing the resilience of food production through strengthening family life. The theory of change or core strategy being that husbands would begin to work alongside their wives, giving them a more support in raising the family and producing the food.

Next, the Lokwaipales group presented with emphases on the potential of virus-free NARI potato and sweet potato lines and their worry about how badly the next drought would affect everybody in Wapenamanda District. The losses of sweet potato from weevils and potato from grubs of a larger beetle had alarmed them. Dorothy Kukum from DAL cleared up their misconception that the NARI lines were also weevil resistant, or especially drought resistant. Nevertheless, Nancy, a dedicated potato grower was very happy with the yield from NARI line E24.

Apart from practising strict planting sweet potato planting hygiene their strategy for increasing resilience of their food production, both household and their vegetable and potato cash crops, will be to practice soil conservation and fertility restoration.

David Askin kicked off a following discussion asking how acceptable the latter techniques would be in the face of a tradition of clean mounds and clean drains rather than mulching mounds and beds, leaving trash and bunding drains to control rainwash. While the question left most participants thinking a few said that in this new time, facing climate change, we must try new ways of doing things.

### Wednesday 24 August, Wapenamanda

8.30am 1.30pm

After the Wednesday Morning reflection David Kulimbao interviewed Albert Athro who responded saying like things to his presentation to the Simbu Workshop. Once again his message was about bringing people back to the way the life of these rural PNG communities is founded on relationship with forest, soil and water. He ended saying, "We all need how to look after the ground. My life is in the village and garden not wasting my time in the town. [If we remember and follow that] Then we will have food security, we can be self-reliant with no need to cry out to the Government whenever there is emergency."

The final participant presentation of the Workshop was by 2 Sari participants who had only arrived midday Wednesday. Thomas has already been functioning as a community facilitator. He tried to organize an agriculture workshop for men but was forced to cancel it when only a handful turned up. Then he attended the Sari Drought Adaptation Workshop where he was very impressed by the gender equity of the men and women working together in the garden then breaking into gender groups to trial the old way versus the new way of planting sweet potato. Due to fighting on the northern side of Wabag David and Anna have not yet been able to make a round 2 Follow-up Visit to Sari to review progress of this trial or in participant gardens.

We closed off the Workshop with a with a Q&A as at Kerowaghi of what were the most important lessons to take away and put into practice with an English equivalent title of, 'The Key Points We have Learned'. We generated 8 key points covering:

1. What to plant every year for a Drought Food Reserve
2. We must change our way of planting sweet potato
3. First crops to plant when the rain comes back
4. Planting potatoes, an early response to a dry spell
5. Protecting topsoil
6. Controlling Fire
7. Fencing out, Controlling and Killing Pests
8. Check nodulation of your beans and mulch and compost legumes.

As we waited for lunch we distributed 5 kg of Soya Bean seed and inoculum to all participant groups (amounts varying from 200 to 600gm) and demonstrated the inoculation process.

1.30pm 3.00pm

Lunch and farewell speeches, with thanks to the New Zealand Government and the Hon Rimbink Pato, closed off the day after which the team cleaned the venue and cooking area, packed up, thanked the Head Teacher of Wapenamanda Primary and headed back to the apartment.

### Thursday 25 August, Wapenamanda

8am 12.30pm

First collated a breakdown table of participants, names and gender, by District and community or by NGO or government team for both the Simbu and Enga Workshops. Then completed recording all sessions of the Enga Project Close Workshop including the contributions of NGO representatives and the Deputy Wapenamanda District CEO Kevin Yati.

I wrote an English Version draft of the 'Key Points for Adapting to Drought' Project Close Workshop summary session.

### Friday 26 August, Wapenamanda

7.30am 11.30amp

David Kulimbao and I prepared a set of Round 3 Follow-up Questions to ensure that, if these Follow-ups take place, we collect all available information on the participants' awareness making, what they say, where and with whom they do it. We also have questions for following up on the level of weevil infestation in new kaukau crops, and other grubs in potato and cassava, including the NARI varieties, that people will start digging over the next 2 months.

12.30pm 5pm

I read, edited and returned by email the summary paper that David Askin had prepared for MFAT then edited and finalized the English Version of the 'Key Points for Adapting to Drought' summary.

I did further work on the Simbu Project Close Workshop proceedings.

### Saturday 27 August, Wapenamanda to Mount Hagen

7.30am-12.30pm

David, Anna and I caught a bus to Mt Hagen where we met with Debbie Kapal to discuss her joining the CDWAI team in a combined Shifting Agriculture Specialist, Administrator and General Training role. She agreed to this and would be likely to take part in some of the prospective 3rd Round of Follow-up Meetings as well as in CDWAI's 'Kirapim Kaikai na Maket' Project with the Tsak LLG area Women's Association.

Anna and David caught a Goroka bus at 11.30am. I continued with the Simbu Project Close Workshop proceedings and drafted a 'Kirapim Kaikai na Maket Project Plan' in light of our Drought Adaptations Project activities there and our current knowledge of how clear and fixed are the ideas of the Women's Association leaders.

### Sunday 28 August, Mount Hagen to Port Moresby

7.30am 9am

Had a breakfast meeting with John Kaewa, General Director of the BUPNG, and his wife Doris who is OIC of the Mt Hagen Health Services Maternal and Infant Health Clinic. I brought John and Doris up to date with Drought Adaptations Project progress and its significance for all rural people, in particular, those living in the central Highlands Provinces. In turn Doris provided a picture of the probable fall in rate of increase of HIV prevalence in WHP and Jiwaka as determined by the voluntary testing of mothers who attend her Clinic. However, this provides no indication of what is happening to changes in rate of increase of HIV prevalence in other provinces or Lae, Madang, Goroka, Rabaul and Port Moresby.

2.15pm 4.00pm

Flew Mt Hagen to Port Moresby.

In the evening I met with Richelle Tickle from Cardno to go through the Provision of Services Agreement for CDWAI's 'Kirapim Kaikai na Maket' Project with the Tsak LLG area Women's Association. Provided that Cardno remove any claim on CDWAI training materials and manuals I will now recommend that CDWAI accept the Agreement.

I was able to explain to Richelle that we had invited both the Care International team and Simbu and Enga NGOs participating in ACIAR's Agriculture Program to the Project Close Workshops. Moreover, office bearers of the latter NGOs, both coordinated by Fredah Wantun, the BUPNG Health Officer based in Mount Hagen, had presented to the respective Workshops.

### Monday 29 August, Port Moresby to Brisbane

I flew out of Port Moresby on the 6.15 flight to Brisbane.

On Tuesday morning I posted the August Receipts to Virginia Askin by International Express Airmail from Mermaid Beach Post Office.