



# Nius

Newsletter of the PNG National Agricultural Research Institute  
Volume 27, Issue 1, January to February, 2024

**27 YEARS**  
of Dedicated  
**Agricultural Research for  
Sustainable Development**

ISSN 1608-6554

Welcome to the 1<sup>st</sup> edition of NARI Nius for 2024. If you have any comments or contributions please drop us a line at: [naripng@nari.gov.pg](mailto:naripng@nari.gov.pg) for an e-copy

## PNG taro enters New Zealand market

A partnership between Wantok Produce Limited and NARI will see its first shipment of PNG taro to New Zealand in March.

The successful launching of the first export of taro also coincided with the release of NARI taro seed planting material on March 02, in the presence of Agriculture Minister and Obura Wonenara MP John Boito, Council Chairman Nimo Kama, Director General Dr Nelson Simbiken, Wantok Produce Limited Director Dr Pulotu Lautofa McCarthy, guest, and staff.

Mr Boito launched the release of NARI's seven taro varieties which is in line with the national government's plan in promoting commercial agriculture through downstream processing and international trade within the sector.

"Public Private Partnership between NARI and Wantok Produce Limited is helping to promote and achieve the national government's policy goals outlined in the Medium Term Development Goal (2023-2027). This initiative is transforming the country in the informal sector including processing of taro and other food crops," expressed Mr Boito.

Mr Boito also committed K100, 000 to Wantok Produce and NARI Enterprise Limited, a subsidiary of NARI, as part of the government's support towards achieving sustainable and economic growth for the country. Council Chairman Nimo Kama explained that the export of frozen taro is a positive testament of years of research to realise positive development that will improve



Left to right: Wantok Produce Limited Managing Director Dr Pulotu Lautofa McCarthy, NARI Director General Dr Nelson Simbiken, Agriculture Minister John Boito and NARI Council Chairman Nimo Kama with a sample of frozen-taro set for export to New Zealand.



Official release of NARI's seven taro varieties for commercial scale farming by Agriculture Minister John Boito to Council Chariman Nimo Kama.

the livelihood of people and promote economic development.

Director General Dr Nelson Simbiken believes that at the heart of every industry there must be strong support for research and development. NARI will promote and supply quality planting materials to commercial farmers and farming enterprises.

## Service honors late Sir Michael Somare

NARI staff and their family joined the rest of the country to commemorate the memorial service of the late Grand Chief Sir Michael Somare on February 26,

Director General Dr Nelson Simbiken encouraged staff to realise their full potential by attributing this to the leadership and humility of the late Grand Chief Sir Michael Somare who was visionary to see PNG grown and develop as a young nation.

“Do not underestimate the power and potential that God has vested in you to create change,” Dr Simbiken expressed.

Dr Simbiken challenged staff to become agents of change and see how they can contribute meaningfully towards the growth, development of NARI and the country.

The 3rd memorial anniversary service of the late Grand Chief Sir Michael Thomas Somare was marked with a prayer, singing of the national anthem, recital of the national pledge, a brief history of the late Grand Chief Sir Michael Somare was read out, and a moment of silence was observed.

In his closing remarks, Director General Dr Nelson Simbiken urged staff to remain positive, realise their true potential to be agents of change and contribute meaningfully towards positive developments in the country.

In honor of the late Grand Chief Sir Michael Somare’s leadership legacy, NARI initiated discussions with the East Sepik Provincial government to set up the Lady Veronica Somare Research Centre located in Moim village in the north of the Sepik River, making it the first research centre for sago in the country.

There will be formal discussions with the East Sepik Provincial government to ensure that such efforts add value to PNG’s food security system in light of the negative effects of climate change.

The sago including oil palm plants plays a very important in absorbing carbon emissions from the atmosphere.



Dr Simbiken makes his closing remarks.



Staff and their families after the memorial service.



Staff in attendance.



Memorial photo frame of late Grand Chief Sir Michael Somare.

## Project team screens farmer videos in ENB and Morobe

**N**ARI and the University of Goroka's Centre for Social and Creative Media spent the last week of February screening farmer videos in East New Britain and Morobe province.

NARI and CSCM are partners under the ACIAR-supported Climate Smart Agriculture project which aims to increase resilience and improve agricultural production to mitigate the negative effects of climate change. Farmer videos is part of the project's objective to enable farmers to enhance agricultural production and improve their resilience during dry and wet conditions.

The feedback from farmers will help the project team members improve, finalise the videos, launch and have them distributed to participating communities.

Screening of the videos took place at the Islands Regional Centre in East New Britain, and Momase Regional Centre in Morobe in late February through the support of ACIAR to ensure farming communities find meaningful ways to improve agricultural production and improve their resilience in light of climate change effects.

The farmers in East New Britain expressed gratitude towards the project which has helped them understand the importance of using weather information and usefulness of indigenous knowledge to mitigate the negative effects of climate change.

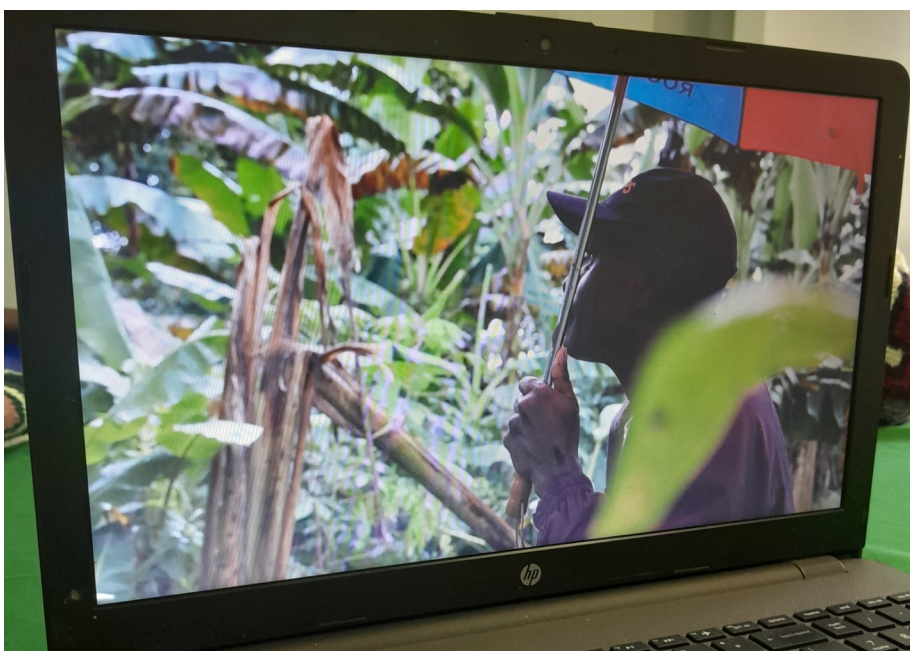
As part of a feedback session, the farmers are requesting information on food processing technology mainly for food crops such as cassava, seed planting material to help them prepare during strong winds, wet and dry season.

They explained that they tune in to the local radio station for weather information but the signal is sometimes affected by strong winds, making it impossible to get information to help them plan their farming.

The farmers requested for more awareness to be carried out in communities who are being affected by negative effects of climate change such as the increase heat, prolonged dry periods and rainfall, and other



Farmers in East New Britain with project team from NARI and CSCM after a farmer session.



Farmer video screening at the Islands Regional Centre in Kerevat, East New Britain.

## Students thankful for the learning experience

Spending the last three months as industrial trainees has been a gainful learning experience for the University of Natural Resources Oro Campus third year agriculture students Silister Kuniata and Kurttley Niali.

Ms Kuniata was attached with the livestock team and learnt about the nutritional benefits of using the black soldier fly as an alternative feed ingredient for tilapia and carp fish.

Mr Niali worked alongside officers in the laboratory to identify which type of media, used is responsible in increasing the growth rate of the fungus; mycelia, that causes the black sigatoka disease on banana leaves.

Both students made their final presentations after conducting experiments, collating and analysing results with staff from the Momase Regional Centre (MRC) who commended and provided constructive feedback.

Ms Kuniata and Mr Niali expressed gratitude to the MRC staff who had provided technical and moral support during their three months of gainful knowledge, skills and experience.

NARI wishes them well when they return to complete their fourth year of study!



Ms Silister Kuniata and Mr Kurttley Niali.



The students' final presentation to staff.

## Galip facility gets facelift by vocational students

The galip facility at Kerevat in East New Britain, has a new look through maintenance work, by nine practical students from the Vunamami Farmers Training Centre.

The maintenance work was required to meet food safety standards in compliance with the Hazard Analysis and Critical Control Points, (HACCP) as a system that aims to address food safety standards by analysing and control of biological, chemical and physical hazards when processing foods.

The building has freshly painted walls, new screen windows, including other areas.

Student Head Boy Joseph Kadui expressed gratitude to IRC for giving them the opportunity that allowed them to put into practice the theory lessons in class.

The students are specialised in various trades including carpentry, joinery, plumbing, scaffolding, cookery, metal welding & fabrication, electrical and brick-laying.

They expressed that the practical experience has made them understand agriculture in a different way, mainly where machinery is used in processing galip and other areas of work at Kerevat.

The students are grateful to IRC in providing the learning environment that allowed them to put their skills to better use and will be valuable when they enter formal employment.



Students of VFTC at the Islands Regional Centre, Kerevat.

## Study looks at plant spacing for optimum yield

A small study supported by NARI will try to determine if plant spacing between taro plants will produce good yield.

Agronomist Charlie Suruban explained that the study will use NARI taro variety 1, 6 and Numkowec, a local variety.

Mr Suruban says NT 1 and 6 were selected based on the level of breeding program which involved NARI and other organisations, and the conventional breeding program by NARI. The study will be carried in two phases. Phase one starts from March to September this year.

Phase one will involve space between each taro plant to determine optimum yield size. Phase 2 will include the use of fertilizer application rates and spacing between each plant. Mr Suruban says over the years, much of NARI's taro research was centred



Initial land preparation of one of the taro plots with space between each plant.

around pest and disease and not much around plant density and spacing for optimum yield. He says after the plant spacing to determine optimum yield for taro, this information will be beneficial to farmers who can be able to adopt into their farming system for economic benefits.

## Diverse sweetpotato varieties for climate change resilience and health benefits

A study is being carried out and aimed at creating a diverse collection of sweetpotato varieties through polycross breeding. Polycross breeding involves the cross of two different plant varieties to create desirable traits. Mr Wera's team used selected sweetpotato parent plants from farmers and NARI plant collection under three categories;

- improving traits relevant for climate change adaptation such as early maturity and drought tolerance
- improving nutritional traits, mainly developing high beta-carotene using orange-flesh sweetpotato.
- generating purple-flesh sweetpotato with high anti-oxidants (anthocyanin).

Selection of the polycross sweetpotato varieties was conducted after three months after the plants showed signs of root-forming ability.

Another intensive selection was made to avoid biasness based on the criteria mentioned and will select only 20 percent that will be evaluated in the next trial phase.

Results from the crossing of different parent plants created a huge diversity of improved sweetpotato lines through the Benefit Sharing Project by the International Treaty on Plant Genetic Resources for Food and Agriculture Project. This will add value to existing sweetpotato collection in the country, creating resilience to climate



Orange-flesh sweetpotato



Purple-flesh sweetpotato

## Services offered by NARI

The Professor John Kola Chemistry Laboratory is a national chemical testing laboratory that has been operating for over 30 years.

The laboratory offers a wide range of analytical and diagnostic testing services.

The laboratory is accredited to ISO/IEC 17025 which is a general requirement set by the International Organisation for Standardization (ISO) and International Electrotechnical Commission (IEC) for the competence in testing laboratories.

It certifies a laboratory as an Accredited Chemical Testing Laboratory under the ISO/IEC 17025:2005 Guidelines.

Prof John Kola Chemistry can perform chemical testing and all methods used are recommended by American Public Health Association (water), Australasia Soil and Plant Analysis Council (soil and plant), Association of Official Analytical Chemist (food and natural products).

### Contact details

**Prof John Kola Chemistry Laboratory  
Kilakila**

PO BOX 8277

BOROKO

National Capital District

Phone: 321 2690 Fax: 323 4733

**Email:** narichemistry@nari.gov.pg



Carrying out water test.



Carrying out soil test using Carbon Sulphur Analyzer.

# Guesthouse Enquiries



**Western Pacific Guesthouse– Morobe**

**O**ur guesthouse facilities are open to the private and public sector for bookings to host workshops, conferences, training or simply as a 'home away from home' stay. Should you find a place that is quiet and the time to relax, please do not hesitate to get in touch with our respective centres in;

- Aiyura, Eastern Highlands,
- Bubia in Morobe and
- Kerevat in East New Britain



## **Contact person:**

**Jill Kavi**

7020 9001/ 7931 31 88 or 753 93924

[jill.kavi@nari.gov.pg](mailto:jill.kavi@nari.gov.pg) or [jillian.kavi58@gmail.com](mailto:jillian.kavi58@gmail.com)

**Phone:** 478 4000/4100 **Ext:** 249

## **Gadi Ling Guesthouse– East New Britain**

**Contact person:** Daisy Besari

**Phone:** 983 9145 or 983 9200

**Email:** [daisy.besari@nari.gov.pg](mailto:daisy.besari@nari.gov.pg)



## **Hill Top Guesthouse- Eastern Highlands**

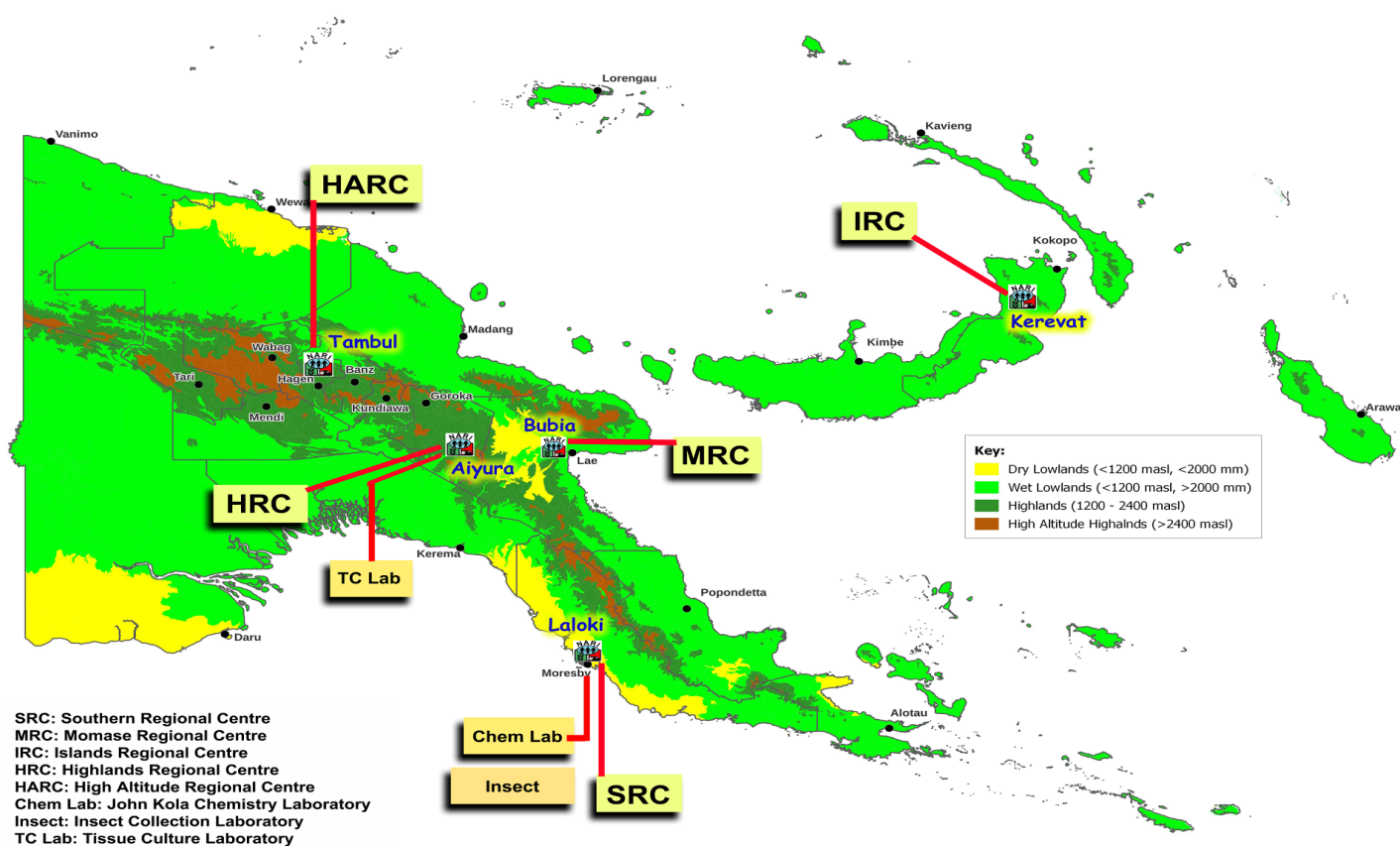
**Contact person:** Tamo Tarra

**Email:** [tamo.tarra@nari.gov.pg](mailto:tamo.tarra@nari.gov.pg)

**Phone:** 7969 5466 between 8am to 5pm



## For more information Our Regional Centres



For more information or enquiries  
Head Office  
Kana Aburu Haus  
Sir Alkan Tololo Research Centre  
PO BOX 4415  
Lae, Morobe Province  
Phone: 7986 4776/7060 1118  
Email: [naripng@nari.gov.pg](mailto:naripng@nari.gov.pg)



The National Agricultural Research Institute (NARI) was established by an Act of National Parliament of Papua New Guinea (PNG) in July 1996 as a public funded, statutory research organisation, to conduct and foster applied and adaptive research into:

- any branch of biological, physical and natural sciences related to agriculture;
- cultural and socioeconomic aspects of the agricultural sector, especially of the smallholder agriculture; and
- matters relating to rural development. and of relevance to Papua New Guinea.