



Nius

Newsletter of the PNG National Agricultural Research Institute
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27 YEARS
of Dedicated
**Agricultural Research for
Sustainable Development**

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Welcome to the 6th edition of NARI Nius for 2024. If you have any comments or contributions please drop us a line at:
naripng@nari.gov.pg for an e-copy.

Christmas Message from the office of the Director General



Dr Nelson Simbiken

It is the time of year again when families, friends, colleagues and people from all walks of life gather to celebrate and reflect on events that happened in the last 12 months.

The Management and Staff of NARI extends our warm and best wishes to all our stakeholders in the private and public sector and most importantly farmers, the men and women on the land who have worked tirelessly to support the institute and the agriculture sector in general.

As NARI part takes in the festivities, we would also like to share some of our notable achievements in the last twelve (12) months:

- Export of Taro to New Zealand and Australia in partnership with Wantok Taro Produce
- Participated in the signing of the National Agriculture Sector Plan 2024-2033
- Successful staging of the inaugural Agriculture Minister's Seminar Series
- Successful completion of the 4 year Taiwan Technical Mission's Project on Quality Rice Seed Production – a partnership project between NARI and Taiwan under the International Corporation Development Fund (ICDF)
- Commenced research on Black Soldier Fly Larvae as a protein based feed for livestock in partnership with ACIAR (Australian Centre for International Agricultural Research).
- Signing of MOU between Jiangsu Academy raise the profile of breadfruit production in coastal and island food systems in PNG with the Peoples Republic of China on Comprehensive Agricultural Research for Rural Revitalisation.

NARI has taken a new direction and that is to add value to food crops and introduce farm mechanisation with valuable stakeholders including farmers. The ultimate goal is to alleviate workload and produce a quality packaged product for the domestic market and export to international markets. NARI has embarked on the Black Soldier Fly Larvae Project (BSFL) as a potential protein based feed for livestock (chicken, fish and pigs).

A team of farmers and entrepreneurs from Kenya and the International Centre for Insect Physiology and Ecology (ICIPE) visited NARI to exchange knowledge and share skills and technologies involved in breeding Black Soldier Fly from wastes and earning money from it.

We would like to acknowledge our key stakeholders and development partners for their continuous support and contribution by;

- The National Government
- Department of Agriculture and Livestock
- PNG University of Technology
- University of Goroka
- University of Natural Resources and Environment
- University of Papua New Guinea
- Australian Centre for International Agricultural Research
- International Cooperation for Development Fund
- Food and Agriculture Organisation
- International Treaty for Plant Genetic Resources for Food and Agriculture
- PNG Women in Agriculture for Development Foundation.

We wish you and your families A Wonderful Christmas and May the New Year bring us more Blessings, Good Health and Wealth!!



Forum looks at better production, nutrition, environment and life

The 2024 Pacific SID forum was organised by the Food and Agriculture Organisation of the UNDP with the Government of Fiji to support Pacific countries' food system transformation.

This year's theme is 'Transforming Agrifood Systems for our Blue Pacific Continent through Better Production, Better Nutrition, a Better Environment, and Better Life'.

The forum was held to encourage interregional knowledge exchange to incubate, promote, scale up and replicate ideas for the advancement of agriculture, food, environment and health related sustainable developments was discussed at the Pacific Small Islands Developing State solutions in Nadi, Fiji recently.

In attendance and on behalf of NARI was Research Officer Mauro Okrupa who was invited as one of the key speakers at this forum, which was predicted as one of the largest in the Pacific and graced by Fiji Prime Minister Sitiveni Rabuka along with ministers and high level dignitaries in the region.

Mr Okrupa presented on the use of mobile phone to provide seasonal farm advisory to help farmers make informed decisions to manage the effects of climate change.

The office of UNDP FAO in a statement expressed that digitalizing climate information system to manage risks imposed by climate change is not an option by a necessity. NARI's collaboration with ACIAR using seasonal farm advisory was pointing in the right direction. Mr Okrupa accompanied DAL Secretary Dr Sergie Bang, Agriculture Minister John Boito, Bianca Suarez of the Australian National University Climate Change Institute and other colleagues in the region.



Team of scientists including PNG DAL Secretary Dr Sergie Bang (2nd from left), Australian National University, NARI, Commonwealth Scientific and Industrial Research Organisation, Samoa Ministry of Agriculture, University of Tasmania & C2O Pacific.



Crop Agronomist Mauro Okrupa making a presentation on the seasonal farm advisory as a practical solution to mitigate climate change.



Field visit to sites around Nadi in adapting innovative Agrifood systems solutions including initiatives by the government of Fiji, development partners, local entrepreneurs. Innovators and producer groups.

NARI marks World AIDS Day

NARI staff and surrounding community had opportunity to learn basic facts on HIV and AIDS. To commemorate World AIDS Day 2024, the Publication Team organised a 2 hour Mini Awareness to disseminate information on HIV and AIDS, Family Violence, Youths and a Condom Demonstration session. It was a success and staff wanted to see more sessions of this kind on other social topics in the future.

The Mini HIV Awareness invited Mr Gabriel Desiang of PNG Family Health Association to conduct awareness



Staff and Mr Desiang (2nd from left) after marking the World AIDS Day.

and demonstration on the use of condom.

Bugweb rebuilding livelihood with water cress farming

The Climate Smart Agriculture project is fully supported by ACIAR with the main objective, of finding meaningful ways to enable vulnerable communities become resilient and improves agricultural production from negative effect of climate change.

In 2015, a devastating flood washed away coffee trees in Bugweb village in the Rural Buang LLG of Bulolo district. Coffee is one of their main source of income. The locals responded by farming water cress, a fast way of making good income to revive and sustain their livelihoods.

Farming of water cress is done by building stone walls in a plot-like style and skilfully diverting water into their water cress plots.

This traditional style of irrigation is a display of resilience to continue surviving by locals in Bugweb towards the negative effect of climate change like flooding.

Bugweb's stone-wall water cress farming and irrigation was discovered by a team comprising of officers from NARI and Goroka University's Centre for Social and Creative Media while working on an ACIAR-funded, Climate Smart Agriculture Project by video documenting a traditional irrigation systems with farmers on taro and water cress in Patep 2 village, across the bordering mountain range.

Farming water cress can fetch between K150 to K300 to sustain their living expenses from school fees, uniforms, church work, basic household needs and cultural responsibilities.

Ward 6 Councilor of Bugweb, William Sale expressed that 99 households participate in this water cress farming, and involves males and females from harvesting, sorting, bundling and packing. Each bundle of water cress is sold from K1 to K1.50.

Apart from water cress, orange, when in season, provides additional income including dried seeds of pumpkin, amaranth (aupā), cucumber, and corn.

The community of Bugweb expressed that farming water cress is a fast way of earning income and by sharing their story, will enable other areas with similar resources to be resilient and sustainable during natural disasters.

Apart from water cress, yam and the red pandanus fruit is a staple in Bugweb.

Patep 2 village is another area that uses traditional irrigation since the 1950s to grow taro and water



Freshly harvested water cress.



Water cress plot surrounded by hand built stone wall.



NARI, UoG's CSCM team with locals of Bugweb, Buang with foreground of where fresh and cool waters that sustains water cress farming

cress. If you happen to come across a farmer who is selling fresh water cress at the Lae Main Market, be sure to ask where it was farmed.

A short video featuring water cress farming in Bugweb will be developed along and later released with other farmer videos by NARI and UoG's CSCM over the life of the CSA project.

The CSA project ends in March, 2025.

Staff join Anton to pay their respect to his late son

NARI Staff including Director General Dr Nelson Simbiken visited Anton Beko and his family to present cash and in kind contribution on the passing of his late son Evans Beko on November 12.

Anton Beko thanked staff saying their time and contribution will go a long in helping his family during the mourning of his late son.

Dr Simbiken in response expressed his heart-felt sympathy saying Anton was an exceptional officer who committed much of his time in the rice and grain program.

He says the support and presence of staff is a true sign of what a strong family is regardless and expressed gratitude towards Anton's tireless work with NARI.

A funeral service was held at the Allan Quartermain Hall to farewell late Evans including his late friend Mascellinus Hevese who lost their lives in a fatal road accident. Olivia Beko, the youngest sister in her eulogy tribute expressed late Evan's great influence



Olivia Beko, youngest sister reading out her late brother's tribute.

as an elder brother who was caring and generous to his family and friends.

Late Evans leaves behind 4 siblings, which includes his eldest brother and three sisters.

His casket was laid to rest at Surumbia village, in Wewak, on November 14.

Gabsongkeg farmer video gets ok for publishing

The Climate Smart Agriculture project's main objective is to find meaningful ways to help farmers improve agricultural production and increase their resilience in light of the negative effects of climate change.

The University of Goroka's Centre for Social and Creative Media and NARI after working together on farmer videos got the approval from farmers at Gabsongkeg village in Wampar LLG of Huon district to publish their video.

CSCM and NARI have been collaborating with farmers on the ACIAR-supported Climate Smart Agriculture by documenting farmer videos which portray how they are able to survive through natural disasters using traditional knowledge and skills to mitigate climate change.

Gabsongkeg farmers in Morobe are among other farmers from Aiyura in Eastern Highlands and Kerevat in East New Britain who have worked with the team to document traditional knowledge and skills. NARI and the CSCM team are grateful to the farmers from Morobe, Eastern Highlands and East New Britain for their indigenous knowledge and friendship over the life of the CSA project through their stories that



Farmers in Gabsongkeg viewing the final video.



Officers from NARI and CSCM after meeting with Ottob Ferea (left) to make preparations to view the final video.

were video documented.

NARI ends 2024 on a high note



Promoting a positive attitude through Australian Football

The NARI Human Resource team organised an AFL sports clinic for the staff children as part of promoting sports discipline and keeping them out of trouble.

This sports clinic was organised with Niukick, a sports organisation led by Ms Josephine Ila and has an office in Lae that focuses on identifying skilled individuals from the ages of 5 to 17 through the sports clinic.

Staff children who were on holidays were invited during the festive period to experience real hands on AFL with the Niukick team.

Participating children were encouraged to join Niukick and develop a positive attitude towards sports.

Mrs Manah Mazi, a mother who attended the clinic with her children, expressed gratitude towards the Niukick program saying, it promotes positive energy and keeps children away from violence and other social issues.

Niukick made a commitment to return in February 2025 to stage a competition for four consecutive Saturdays.



Ms. Josephine Ila

This will enable them to pick the 'wow factor' players to join the Lae training squad and eventually be sent off to an Australian Football Academy.

Learning about Australian Football in *pictures*



NARI farewells staff

NARI bid farewell to three (3) of its staff on December 17 during the Staff Christmas Party at the Allan Quatermain Hall.

Dr Michael Dom dedicated 22 years of outstanding service in research and project management. Mr Clifton Gwabu served as an economic analyst for 21 years while Ms Ruth Baiga served as a soil scientist for 4 years.

Ms Baiga values the learning experience as a young researcher with the crops team at the Momase Regional Centre.

"I urge others who want to pursue their career in agricultural research to grow by learning and gaining more experience, having good mentorship and possess good leadership skills," Ms Baiga remarked.

Dr Dom remarked saying he had grown and matured during his tenure with a wealth of knowledge mainly under the livestock program at Labu.

Dr Dom expressed that commercial investment does not happen by chance, rather it has to have enough and good research-based information to determine that an agricultural product has the potential for further development.

Mr Gwabu says he intended to work with NARI in Port Moresby but a thoughtful person had kindly delivered his application to Lae where he began his career. He expressed that there are people who work behind the scenes to make us successful and we should be grateful for such actions.

NARI wishes Ms Baiga, Dr Dom and Mr Gwabu the best in their future endeavours!



Clifton Gwabu (left).



Dr Michael Dom (left)



Ms Ruth Baiga



Christmas cake for staff during the Christmas party.

Revised medical insurance now more affordable

The current medical insurance cover for the staff and management of NARI has been revised to make it more accessible and affordable. This was announced on December 17 during the Christmas Party at the Allan Quartermain Hall by the Director General Dr. Nelson Simbiken.

Currently, staff are required to pay medical expenses in full then get an 80% reimbursement from the insurance company. This is an added burden to staff, who could not afford private medical services.

The revised insurance cover will make it more accessible as NARI will do an upfront payment to the medical provider where staff can access medical services.

When making the announcement, Dr Simbiken stressed that the employees must be in good health to produce results at the workplace.

“Our health is very important. Our staff must be taken care of to serve the organisation and this is the management’s Christmas gift to you” said Dr. Simbiken.

Meanwhile NARI staff at Headquarter and MRC Bubia shared Christmas dinner with the NARI Council after their final quarter meeting on December 17.

Staff Christmas party in pictures



Jiangsu delegation visits NARI

A delegation from the Jiangsu Academy of Agricultural Sciences (JAAS) from the People's Republic of China, led by the Academy President, Mr Yi Zhongyi, visited NARI headquarters and its Momase Regional Centre at Bubia, Lae, Morobe Province on Sunday 3rd of November.

The visit was a followup to a Memorandum Of Understanding(MOU) signed earlier this year between Jiangsu Academy of Agricultural Sciences (JAAS) and NARI.

The MOU is aligned with the Government's call to address the challenges facing rural communities and the growing need for agricultural innovations to improve livelihoods and wellbeing of the rural sector.

After a short briefing with NARI Council Chairman, Mr Nimo Kama, and Director General, Dr.Nelson Simbiken, and senior staff, the delegates took time out to see some of the NARI facilities and talk with staff on current research.

The delegation returned to Port Moresby where they will sign an agreement with NARI to collaborate in research and development activities



Arthur Robert (Senior Scientist) taking the visitors through banners and posters of the different projects on cash crop and livestock that NARI has participated in.

in agriculture.

This agreement will solidify ties between the two institutions for long term collaboration and sharing in research and technical innovation.

NARI to use new accounting system



NARI signs an agreement with Norengo Capacity Building Solutions Ltd to implement cloud-based accounting across NARI regional centres in 2025. The new accounting system be will Xero Accounting Software which will be more efficient for daily financial reconciliation and timely statement reports.

Laboratory Services offered by NARI

The Professor John Kola Chemistry Laboratory offers a wide range of analytical and diagnostic testing services. We are a national chemical testing laboratory and have been operating for over 30 years.

Our 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).

**Prof John Kola Chemistry Laboratory
Kilakila**

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Aquatek Analyser for measuring Ammonium in water

What we test for in the laboratory in pictures



Quality Control Chemist, carrying out food testing on the Fat extraction equipment



Test to determine mineral elements such as Calcium, Magnesium, Potassium, etc and mainly used for water and environmental samples.



A high throughput & inexpensive analytical technique used to primarily test for major elements such as Calcium, Magnesium etc in food, beverage, water, plant and soils.



Extraction technique to extract from crushed, dried or ground samples with the aid of heating & refluxing to determine fats in dried nuts, grains, etc



Unit used to determine nitrogen (crude protein) content in soil, plants, food and natural products.



This is a purification system which eliminates bacteria using ultra violet radiation and provides chemical reactive water for the laboratory's daily use.

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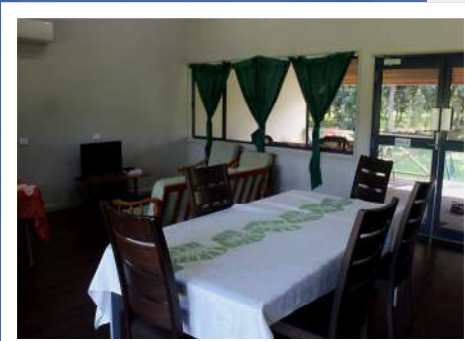
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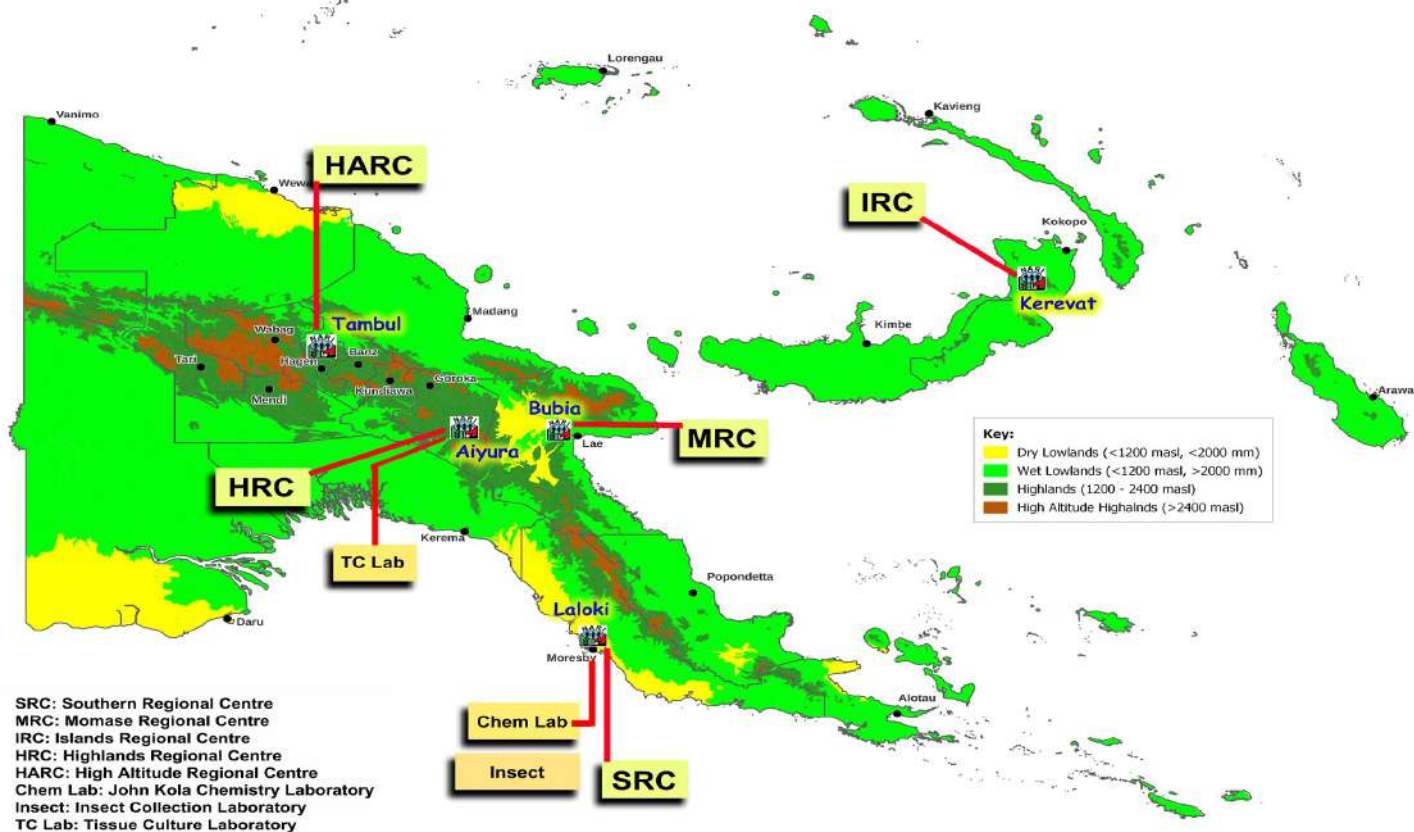
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To make your stay a ***‘Home Away from Home’***, we have guesthouses conveniently located in Lae, Eastern Highlands and East New Britain.

The next time you visit any of these locations, be sure to call in and make the most of your stay.

For more information Our Regional Centres



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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:

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