Nius

29 years

of dedicated agricultural research for sustainable development.

Newsletter of the National Agricultural Research Institute

NARI Nius Volume: 29 July to August Issue: 04 ISBN: 1608-6554 Copyright@nari.gov.pg

Director General's Message



Understanding the socio-economic aspect of agriculture allows a researcher to tailor research agendas that will deliver impact at scale.

Additionally informing policy makers to create policies that will address challenges within the sector. Hence the National Agricultural Research Institute has partnered with the International Food Policy Research Institute – PNG to conduct a socio-economy survey within a Fresh Produce Value Chain.

While NARI largely focuses on the biophysical aspect of agricultural research, socio-economic research offers equilibrium.

As part of this survey, NARI and IFPRI offered Survey Enumerator Training to 50 participants before deploying them to five selected provinces. NARI values professional development and has not only equipped the survey team but through different partnerships ran numerous trainings for farmers and researchers. In the 29th edition of the NARI Nius, NARI is championing sustainable growth by elevating local talent through collaborative learning and empowerment.

We partnered with K92 Mining to teach taro seed production to Markham farmers and Australian Volunteers to advance the R and R Studio Softwares, and City Mission discusses possibilities of a rehabilitation program with NARI. The National Agriculture Research values partnerships as we continue to empower our people. Enjoy!

Fresh produce value chain research underway in five provinces

A socio-economy research is being undertaken by the National Agriculture Research Institute and the International Food Policy Research Institute (IFPRI) to identify the challenges and opportunities in a Fresh Produce Value Chain.



Enumerator conducting an interview.

Fresh produce, or garden-grown fruits and vegetables, has been the basis of many informal sectors in Papua New Guinea.

To achieve the National Agriculture Sector Plan's goal of transforming subsistence farming into commercial farming, it is imperative to evaluate and understand the socio-economic mechanisms that affect the Fresh Produce value chain.

A value chain includes all the necessary activities from production or farming to processing, transportation, product sales, and consumption at different stages of a product or service.

The project started early this year with initial groundwork and the training of 50 enumerators in July.

"For this survey, we want to identify the inefficiencies and opportunities in the Fresh Produce Value Chain," said Deputy Director of the National Agriculture Research Institute, Dr Peter Gendua, who spoke to the enumerators before sending them off.

"Findings from the Provinces will be analysed to develop research and policy papers to inform the stakeholders, sector agencies and government to address the necessary constrains and opportunities to strengthen both domestic supply and demand of the fresh produce sector as well as options for export promotion," he said.

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1928–2028 research in Papua New Guinea

100 YEARS ANNIVERSARY

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Farmers gain skills in *taro seed* production

A group of farmers from Markham and the K92 Mining corridor area participated in a taro seed production training facilitated by NARI, supported by K92 Mining and the PNG University of Technology's (UNITECH) South Pacific Institute of Sustainable Agriculture and Rural Development.

Plant Genetic Resource Research Technical Officer Ms Cecily Walter and her team at the Momase Regional Centre, facilitated the one-day training which covered the mini sett technique using taro corm buds or eye, to mass produce taro seed, the surface sterilisation of young taro suckers, decapitation of the taro corm technique, and preparation of nursery beds.

The decapitation of a taro is done by cutting out the taro stem and placing the corm in prepared soil to produce shoots which can be transplanted to the field.

UNITECH School of Agriculture Lecturers Nick Kewa and Timothy Bafiec thanked NARI for facilitating the taro seed production training saying taro has potential of becoming a cash crop and such initiatives will build towards commercial farming of taro.

K92 Mining Community Affairs Officer Natasha Sehonae spoke on behalf of the company and expressed gratitude towards NARI and UNITECH through such partnership in making the taro seed production possible and looked forward to future engagements.

Farmer representative Karo Nanivah was pleased and thanked NARI, UNITECH and K92 Mining for their support towards the training saying demand for taro is growing and such partnership will progress work of making taro a commercial crop in the near future.

The one-day taro seed production training, brought together farmers within Markham district and farmers around the vicinity of K92 Mining area with support through NARI, and the PNG University of Technology's South Pacific Institute of Sustainable Agriculture and Rural Development.



Demonstration how to mix the bleach and water to use as solution for surface sterilisation of taro seed material.



Soaking taro suckers in the water and bleach solution.

How three simple techniques; **mini sett, surface sterilisation and decapitation** can rebuild a seed system for taro in Markham and K92 Mining corridor.





HILL TOP GUESTHOUSE –EASTERN HIGHLANDS

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Data analytical software is essential for research



Participants and facilitators to the workshop



Participants going through a practical activity.

Learning how to use R and RStudio, which are free and open source statistical and data analysis software is essential for researchers in the agriculture sector.

A three-day training covering basics on the R and RStudio was facilitated by NARI to enhance researchers' ability to develop good experimental designs to generate quality and effectively analyze data.

Training facilitator Boney Wera says the open -source software allows researchers to han-dle complex data and generate easy-to-read data information in a unified environment.

Mr Wera says, "There is a general lack of knowledge and exposure in designing and conducting experiments, basic statistics, data management and data analysis skills among researchers at different levels."

The three-day training saw researchers from NARI, KIK, FPDA and PNG National Biosecurity Authority (formerly NAQIA) who are part of the National Agriculture Research System focus on improving the way data is presented through proper experimental designs to generate high quality data for statistical analysis and publication.

Mr Wera urged participants to put into practice what they have learnt and expand on how the agriculture systems work in PNG.

Meantime, Australian Volunteers Jennifer and Stephen Clark who are attached with NARI facilitated training on leadership and supervisory skills, spreadsheet basics and scientific writing.

Laboratory Services offered by NARI

Prof John Kola Chemistry Laboratory-Kilakila

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Scaling and Innovation



Farm Mechanisation Technical Officer Valentine Diikuk in Tambul, Western Highlands demonstrates how to use a bed-former at one of the fields in Tambul. A bed-former is used to shape soil into raised ridges and create drainage before planting crops. Stacey Rulete Mechanisation Officer from the Momase Regional Centre, spent two days in Tambul to train staff how to use and adjust farm machinery. **Photo Insert:** He visited Aiyura in Eastern Highlands to assist staff set up farm machinery before using them in the field.

Black Soldier Fly shed completed



Before



After

The team at the Islands Regional Centre of Kerevat in East New Britain have made significant progress in completing up the Black Soldier Fly Breeding Shed.

Work has been done to the main frame of the shed, with cement slab and have progressed to setting the metal frame as part of the shed.

A team of carpenters at IRC has been engaged to construct the shed and have completed the shed. Part of the shed design comes with drainage to prevent ants from entering the breeding area. The shed will enable the team to continue work on rearing the BSF, as a potential source of protein for livestock feed and organic fertilizer for farming crops.

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Fresh produce value chain research in five provinces

The Fresh Produce survey is carried out in key production areas of Western Highlands, Jiwaka, Eastern Highlands, Simbu and Morobe Provinces.
Enumerators will hear from commercial fresh produce farmers, rural aggregators/lead farmers, urban wholesalers and retailers.
The survey is lead by Dr Emily Schmidt, a Senior Research Fellow in the Development Strategies and Governance Unit at the International Food Policy Research Institute (IFPRI), and Mr Anthon Goiye, a renowned Socio-Economist engaged by NARI.
This research aims to enhance evidence-based policy development and capacity within the PNG Agriculture sector by conducting targeted research and capacity-building initiatives in three key areas of;
Enhancing Domestic and Export Value Chains
Women's Economic Empowerment in the Agriculture Sector and
Climate Resilience, Climate Adaption and Mitigation
NARI's Director General Dr Nelson Simbiken acknowledged IFPRI for partnering with NARI in this significant project that will provide a clear pathway in addressing challenges faced by each player in the Fresh Produce Value Chain.



Enumerator conducting survey in ....\



City Mission seeks partnership with NARI

City Mission PNG is hoping to partner with NARI to provide training and mentoring for marginalised young men.
The non-government organisation has been supporting about 400 young men annually as part of its rehabilitation program over the last 25 years.
CMPNG Chief Executive Officer Daniel Jackson met with NARI Director General and other senior management staff to determine the possibility of a partnership, to make use of arable land where young men can gain agriculture skills and knowledge in growing food crops and rearing livestock, including animal feed.
Mr Jackson said the young men who are currently with CMPNG learn different aspects of life including religion and agriculture as their core business. Dr Simbiken added that NARI would be happy to work with CMPNG to prepare young men who can contribute meaningfully when they return to their respective communities.


CMPNG CEO Daniel Jackson (second from left in front) with Dr Simbiken and senior staff of NARI.



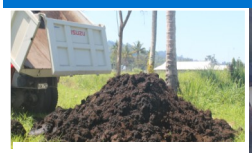
GADI LING GUESTHOUSE –EAST NEW BRITAIN

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Centres At a Glance

Momase Regional Centre-Bubia, Morobe



Chicken manure.

Zenag, a long time partner to NARI in agriculture donated about 10 tonnes of chicken manure to the Momase Regional Centre (MRC), Lae, to help improve soil fertility. Zenag General Manager Stanley Leahy says this gesture will help NARI's core business of food crop research. Deputy Director General Dr Peter Gendua and MRC Centre Manager Anton Beko acknowledged the support by Zenag.

Sir Alkan Tololo Research Centre_ Morobe Head Office



Dr Nelson Simbiken

Dr Nelson Simbiken has been re-appointed Director General to NARI. His reappointment is a fitting recognition of his ability with strong leadership to deliver on important mandates of the institute. Through technical capabilities, competencies and commitment to agriculture's research and development, supporting NARI's role in innovation, productivity, food security and sustainable development. The institute's council, management and staff congratulate Dr Simbiken on his reappointment and wish him well

Highlands Regional Centre-Tambul, WHP



A piggery shed and mini feed mill was commissioned in Tambul, Western Highlands. This was made possible through the PNG Agriculture Commercialisation and Diversification Project.

Islands Regional Centre-Kerevat, ENB



The Rhinoceros Beetle Project commenced in 1968 at (Lowland Agricultural Experiment Station) now known as Kerevat. The project was supported through the UN and SPC. Most coconuts were abandoned after World War 2. Trials were made to improve coconut seedlings.

Southern Regional Centre-Laloki, Central



Visiting delegation by the People's Republic of China to Laloki on August 19 to strengthen the collaboration between Jiangsu Academy of Agricultural Sciences. On hand to receive visitors were Dr Simbiken and staff of Laloki.

Prof John Kola Chemistry Laboratory & Insect Collection-National Capital District

Mr David Willy has been appointed as the new Laboratory Manager at the Prof John Kola Chemistry Laboratory.
Mr Willy is a highly experienced professional chemist with the National Analytical Laboratory at UNITECH as its chief chemist among other senior professional engagements in the country, overseas and brief stints in Australia.
MR Willy's role will cover a broad range of tasks including laboratory management, business development, strategic approach and staff empowerment and career progression.
NARI values Mr Willy's appointment as the PJKCL Manager.

Champion Farmer

Farmer supports local rugby league club



Youths of Meteyufa help to harvest sweetpotato.



Team Captain Glen Kulo

Aku Kulo, a sweetpotato farmer who turned sweetpotato into a flourishing business engaged youths to assist him harvest sweetpotato as part of the club's fundraising to raise funds for sports jerseys and shoes to participate in the local rugby league competition.

Mr Kulo is from the community of Meteyufa in Eastern Highlands and is not new to the local rugby league team.

The youths through its club captain Glen Kulo expressed that they were very fortunate to have Aku supporting their sports club.

"Unlike other youths in other communities who are engaged in unlawful activities such as drugs and alcohol abuse, we are very lucky to have Aku supporting our club," expressed Glen Kulo. The youth's rugby league received K1, 000 as part of their fundraising from Aku after assisting to harvest sweetpotato at Meteyufa, Eastern Highlands.

Aku Kulo is also supporting women who help to weed, plant and harvest sweetpotato.

Meet Ben Wasika

Ben Wasika is very eager after learning that the Black Soldier Fly can break down waste into useful organic fertilizer to farm food crops.

"I went to Japan for 1 year 3 months to study organic farming but didn't know that insects like BSF can turn waste into an organic fertilizer," expressed Mr Wasika.

Mr Wasika comes from a mixed parentage of Morobe and West New Britain.

He joined Kerevat in August 2003 as a field supervisor.

He also works in raising, maintaining and harvesting other crops such as cocoa, kava, spices and galip including Balsa.

Mr Wasika is grateful to mentors such as Michael Wan, Arthur Roberts, Nicodemus Bokame, including late Fidelis Hela and Martin Lobao. He still maintains keen interest on breeding BSF to produce livestock feed and farm machinery.



REGIONAL CENTRES



Sir Alkan Tololo Research Centre (SATRC) Lae–Morobe



Momase Regional Centre (MRC) Lae–Morobe



Highlands Regional Centre (HRC) Aiyura– Eastern Highlands



Highlands Regional Centre (HRC) Tambul– Western Highlands



Islands Regional Centre (IRC) Kerevat– East New Britain

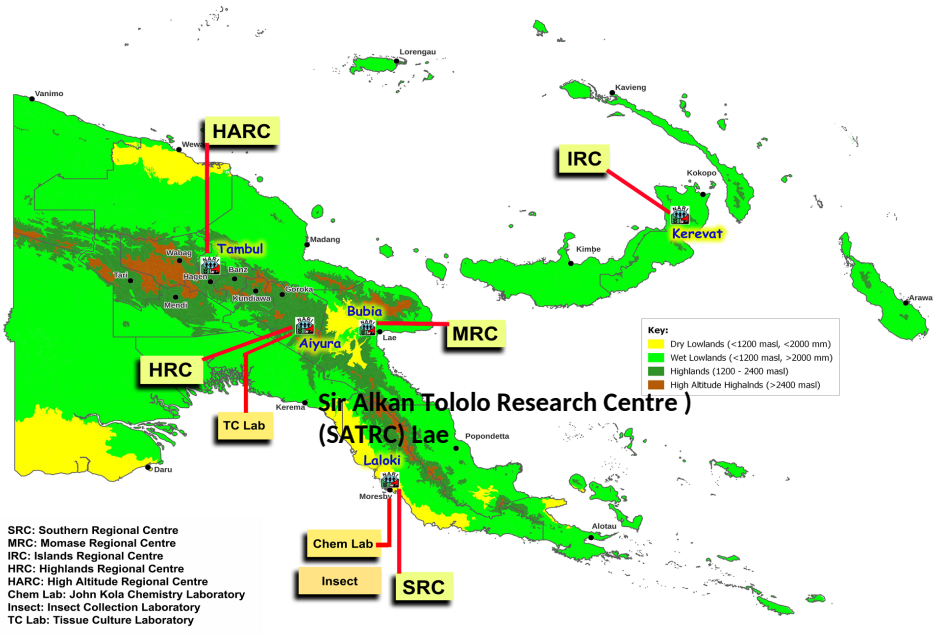


Prof John Kola Chemistry Laboratory Kilakila-NCD



Southern Regional Centre- Laloki, Central

Our regional centres' location in the country





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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.