



# ACIAR

## IN VIETNAM



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Front cover photo: Ms Leo Thi Huong, a farmer in the project AGB/2012/078 is harvesting cassava in Son La province.  
Photo: ACIAR

Back cover photo: A 50 hectare agroforestry landscape in Son La province, developed under the project FST/20216/152.  
Photo: ICRAF



# Editorial note

Dear Readers,

Welcome to the April 2021 'ACIAR in Vietnam' newsletter.

ACIAR in Vietnam is a program that has close cooperation between Australian, international, and Vietnamese scientists. We work together to solve problems and help farmers improve their livelihoods and contribute to the development of Vietnam's agriculture.

Technical assistance in our projects used to depend a lot on the travels of domestic and international scientists. In 2020, the COVID-19 pandemic hindered the visits of scientists and affected part of the program. The good news is that only some projects had to delay due to their seasonal nature. Most projects, training activities, and partnership activities still took place using a range of communication platforms. The information has been exchanged flexibly and creatively between online and offline modes.

In this issue, we are pleased to share the stories from our partners, especially from the Agribusiness, Livestock, and Forestry research programs. Don't miss the news related to One Health, food safety and hygiene from wet markets, market linkages in the context of the COVID-19 pandemic, or the series of articles on cassava with different perspectives: from the concerns of researchers about how to have a disease-free zone, to the joy of the farmer when testing new varieties, to the excellent combination of cassava with sticky rice in a traditional Vietnamese recipe.

We look forward to receiving your feedback and your contributions for the next issue of the newsletter. Happy reading!

Best regards,

ACIAR Vietnam team





All signatories to Vietnam's One Health Partnership (2021–2025) at the signing ceremony on 23 March 2021 in Hanoi.  
Photo: ACIAR

# Australia supports Vietnam's 2021–2025 One Health Partnership

Since 2020, One Health—the inter-connection between humans, animals and our environment—has drawn more attention than ever. As the world continues to struggle with the tragic impacts of the COVID-19 pandemic, more needs to be done to safeguard against health security risks. One health partnership in Vietnam has been refreshed in this context and received positive support from partners.

**One Health Partnership for zoonoses (OHP)** in Vietnam was established in 2016 with 27 national and international members. OHP supported the efforts of Vietnam to prevent, detect, and respond to emerging risks that might become pandemics. OHP supported the implementation of the laws and regulations relating to zoonotic diseases, and the One Health Strategic Plan (2016–2020) of the Ministry of Health and Ministry of Agriculture and Rural Development.

At present, the Ministry of Agriculture and Rural Development (MARD), Ministry of Health (MOH), and Ministry of Natural Resources and Environment (MONRE) and their partners have completed Vietnam's OHP framework for the next five years. **Three ministerial leaders** of MARD, MOH, and MONRE will co-chair OHP in 2021–2025. The International Cooperation Department of MARD plays the role of the OHP Secretariat.

In this period, the overall objective of OHP is to **minimise the risks of zoonotic pathogens' and environmental agents' spill-over and antimicrobial resistance** by improving multi-sectoral 'One Health' collaboration.

To continue strengthening the capacity for One Health coordination in Vietnam, the One Health Partnership will gather the stakeholders, including Vietnam governmental agencies with leadership roles; international organisations; bilateral partners; non-governmental entities and private sectors.

ACIAR has a long history of investing in research that addresses the linkages between food security and human health through a One Health approach. In Vietnam, ACIAR is committed to improving food security and food safety, particularly in diagnosing and managing food-borne zoonoses and antimicrobial resistance, and through policy and regulatory support.

The other Australian agencies, which will also contribute to Vietnam's One Health Partnership framework are:

- Australia's development cooperation under the **Department of Foreign Affairs and Trade (DFAT)** for assistance in strengthening health security,
- The **Commonwealth Scientific and Industrial Research Organisation (CSIRO)** for strengthening the animal health laboratories' capacity in Vietnam and providing world-leading research capacity for emerging infectious disease and antimicrobial resistance,
- The **Australian Defence Force** for a long-term collaborative research program on malaria.

ACIAR and the three Australian agencies will work with One Health partners to support the One Health Strategic Plan for Vietnam and a broader network in the region.

# 'Healthier people, wealthier lives' from the wet markets

By Chi Nguyen and Fred Unger

The world celebrated its second World Food Safety Day on 7 June 2020. On this day, the SafePORK team organised a communication campaign to promote safe food in wet markets. With the tagline 'healthier people, wealthier lives', the campaign highlighted the dual role of wet markets in nourishing people and generating incomes.

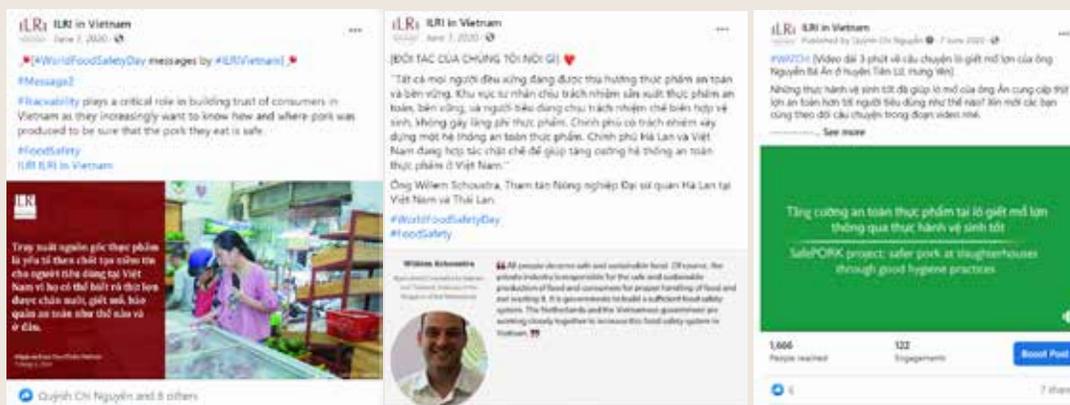
On the day, the International Livestock Research Institute's (ILRI) op-ed article was published in the Vietnam News Newspaper, highlighting the need to support traditional markets to improve food safety amid the global COVID-19 outbreak. The article presented some key findings from ACIAR-funded PigRISK/SafePORK research revealing that generally, pork across all surveyed retail types (including wet markets and supermarkets) is contaminated with *Salmonella*. There is a risk that people may get sick when they consume *Salmonella*-contaminated food that is not well cooked or due to cross-contamination when handling food. The project researchers proposed supporting traditional markets

through capacity development and co-incentivising their food safety investment, specifically through low-cost equipment (e.g. inox tray and easy to clean sell surface), and food hygiene and food safety training. On the same day, the SafePORK team also launched a video on YouTube and other social media channels introducing interventions to improve pork safety in slaughterhouses. These interventions have been through trials in smallholder slaughters in Hung Yen province, Vietnam.

A campaign on Facebook fan page of ILRI in Vietnam from 4–11 June conveyed critical messages on food safety from PigRISK/SafePORK, reaching roughly 8,300 people and engaging about 600 people.

**ACIAR project:** *SafePORK: market-based approaches to improving the safety of pork in Vietnam (LS/2016/143) is led by the International Livestock Research Institute (ILRI) with collaboration of Vietnam National University of Agriculture (VNUA) and National Institute for Animal Sciences (NIAS).*

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# COVID-19 adaptation strategies for flower and vegetable growers in Vietnam

By Pham Thi Hoa\* and Derek Baker\*\*

*This is the abstract from Dr Pham Thi Hoa's study on 'Vegetable and flower farmers in Lam Dong adapting to COVID-19 and climate change' for a symposium under the Australian Agriculture and Resource Society's 65th Annual Conference from 8–12 February 2021.*

COVID-19 closed many market outlets for agricultural products, disrupting consumption and production. This study **measures and examines the effects of COVID-19 on producers of flowers and vegetables in Lam Dong province of Vietnam's Central Highlands** and identifies their adaptation strategies. The study considers the perceived strengths and weaknesses of the production and marketing system and the utilisation of government assistance by supply chain stakeholders. These analyses generate lessons learned by market participants and recommendations for policymakers at the local and national levels.

A survey was conducted in Duc Trong, Don Duong, and Da Lat, all in Lam Dong province, targeting producing households and trading enterprises. For families (n=165), questions spanned livelihood, food security, market channel choices, and employment before, during, and after the pandemic. The interviews with trading enterprises, associations, and retailers (n=24) covered similar material relating to consumer market operation

and product availability. Interviews were conducted with local authorities (village chiefs, leaders of agricultural associations, extension staff) regarding actions taken and assistance offered. Secondary data was also employed concerning aggregate measures of production and the likely performance of enterprises. Data collection was motivated by the key informant and focus group discussion.

**For both flowers and vegetables, sales were substantially affected.** The extent of reduction in sales (and incomes) was more dependent on farmer characteristics than on crop type and reflected locations and market channel choices. However, leafy vegetables and other perishable crops destined for local markets saw the largest declines in sales. A variety of actions were taken to handle unsold products: few of these generated incomes or other benefits. Due to low income, 43.6% of farmers only used family members. Only 12.7% of farmers report receiving government assistance, and more than 21.2% report receiving support from other organisations.

Stakeholders' perceptions of threats, strengths and weaknesses indicate a preference for developing **resilient supply chains**, with climate change particularly perceived as a threat. Positive perceptions of **soils and their own skills** provide a basis for optimism for future seasons, particularly export markets.

In the short term, the government **should provide direct assistance to vulnerable householders.** An integrated approach for both the public and private sectors should be developed to deliver agricultural products for the long term.



Dr Pham Thi Hoa (left) interviewing a flower grower in Lam Dong province. Photo: Pham Thi Hoa.

(\*) Dr Pham Thi Hoa works for Lam Dong Department of Crop Production and Plant Protection. She won the Meryl Williams Fellowship and received a grant from ACIAR's Alumni Research Support Facility (ARSF) in 2020 to conduct this study. The ARSF aims to encourage ACIAR alumni researchers to develop a post-pandemic recovery strategy in agriculture.

(\*\*) Dr Derek Baker, Director of University of New England Centre for Agribusiness.

## Capacity development for ACIAR staff during COVID-19 pandemic



*Vietnam team in a 'real' partnership meeting after the training, with new partners from Vietnam National University–Ho Chi Minh City (on site) and the University of Queensland (online). Photo: ACIAR*

Even though COVID-19 hindered travels and on-site meetings, the whole Vietnam team was able to join ACIAR Country Network in an online Partnership Skills Development Program started in June 2020.

The program was designed by ACIAR Country Partnership and delivered by Rhonda Chapman and her partner Tim Ford from Co-impact Consultancy in Australia.

We had a five-week training spreading over almost four months, from June to September 2020, with all Country Network members from Australia, Africa, Asia and the Pacific participating with enthusiasm. This was the first time the training was delivered online.

During the training, we became clearer about our contribution to initiating, building, and maintaining ACIAR

partnerships. We had opportunity to join Practice Scenarios, where we were able to apply what we had learnt to real partnerships and solve real issues in a safe and confidential environment.

It was good to have a shared understanding of partnership across the whole network. For Vietnam team, we were able to apply fresh knowledge on partnership (such as active listening, providing good feedback etc.) right after this training, with a memorable trip to Ho Chi Minh City to form a new partnership with Vietnam National University–Ho Chi Minh City to conduct an innovative project in the Mekong Delta.

We also achieved a better internal partnership/ friendship throughout the training and frequent meetings.

We look forward to on-site partnership meetings, when the COVID-19 is over and we can start to travel again.



# 2020 in review: ACIAR impacts in Vietnam

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This article summarises some of the most influential successes of two projects and one small research activity (SRA) completed in 2020.

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The writer, Nguyen Thu Huong, started her work at the ACIAR Vietnam office in October 2020 as a communications officer. Huong highlighted the impacts ACIAR has achieved in Vietnam by pulling data from the available reports. The projects under review are:

- AGB/2012/078: Developing value-chain linkages to enhance the adoption of profitable and sustainable cassava production systems in Vietnam and Indonesia.
- SMCN/2010/083: Improving the sustainability of rice-shrimp farming systems in the Mekong Delta, Vietnam.
- AGB/2020/122 (SRA): A new model for Vietnam’s economic growth in 2021-2030 and vision to 2050: Quantitative assessment.

### #1: Building capacity for research partners

Every ACIAR project contributes to the international partnership and technology development between Vietnam and Australia and improves Vietnam researchers’ capacity. Here are the highlights in 2020:

- The collaborating scientists generated **10 peer-reviewed publications**; one Vietnamese researcher completed his PhD in Australia with the John Allwright scholarship, and eight master and honour thesis students completed their studies (SMCN/2010/083).
- **Researchers have used social media** to promote their ideas, technology, knowledge, etc., to a wide range of audiences in influential and persuasive ways (AGB/2012/078).

- **Several alumni who are now holding important positions in their organisations** contributed to the research that advocates for efficient economic development policies for Vietnam in the next decades. Both Vietnamese and international researchers received support from the Australian National University (AGB/2020/122).

### #2: Building capacity and resources for farmers

#### Improved farming techniques and varieties

- At Tan Bang commune, Ca Mau province, local farmers formed working groups to apply new ways of managing water salinity—the most significant risk to the rice shrimp system. The lead farmers at the experimental farms knew how to record farming data and make well-informed decisions based on the data. For rice crops, these farmers applied techniques learned from the project to reduce salinity. They applied methods that they had not previously used for shrimp crops, such as removing mud and using lime to disinfect water. Furthermore, these pioneer farmers shared this knowledge with other farmers in the commune. Thanks to the rice crop success, some farmers from different districts have visited the project trial site and started to apply these techniques (SMCN/2010/083).
- After extensive testing of some salt-tolerant rice varieties, the project has recommended to Ca Mau farmers the two most appropriate varieties for the predicted seasonal conditions (SMCN/2010/083).



Salt-tolerant rice varieties testing in Ca Mau under the project SMCN/2010/083.  
Photo: Hoang Tien



Local farmers in Hoa My commune, Ca Mau, learning to apply Bayesian Belief Networks to record farming data. Photo: Hoang Tien

- Two new cassava varieties were introduced to farmers in Son La province. These two varieties can provide up to 76% higher yield and higher starch volume than previous types (AGB/2012/078).

#### Better income

- Pilot trials demonstrated that shrimp yields could be improved when farmers apply additional feed. This modification on shrimp farming can increase yield from 242 to 303 kg shrimp/ha, making a benefit of 1,500 USD (1,900 AUD)/ha net return annually (SMCN/2010/083). The rice-shrimp system also allows farmers to boost income significantly by selling fresh, organic products to high-demand markets.

#### #3 Supporting policy development

- The SMCN/2010/083 project provided scientific evidence that helps policy makers to make the right decisions on farming plans to adapt to changes in the Mekong Delta due to salinity intrusion. Mekong Delta currently has about 200,000 ha of rice-shrimp systems. A considerable benefit can be gained from adopting the research findings, even if only 20% of this area takes the project recommendations. The research findings can also serve high-level discussions on Vietnam's economic development, especially for the Mekong Delta region, in the next decade (SMCN/2010/083).

- The AGB/2020/122 research findings will help policymakers assess and select the right economic model for Vietnam in the next decades. The research team has designed an equilibrium model to evaluate the potential policy options for Vietnam. This model has a multi-region feature that allows policymakers to assess the policy's impact in every area. Given that Vietnam is focusing on finding a new economic model that addresses the current issues, the research outcome would

inform the decision-making process to help Vietnam achieve its goals.

#### # 4 Tackling climate change

- Rice-shrimp farms were reducing nutrient loads in the environment, which contrasted with other shrimp farming systems where they contribute significant loads that can negatively impact the environment (SMCN/2010/083).
- The rice-shrimp modified techniques created a climate-smart rice-shrimp system that will help ensure livelihoods for farmers in the Mekong Delta, where the saline intrusion has become more severe in the recent years. The trials identified suitable salt-tolerant rice varieties; demonstrated that mud from shrimp farming could replace fertiliser for the rice crop; and proved that rice platform conditions could be improved by tilling, washing and leaching the residual salt. The project also made recommendations on the timing of sowing to address salinity issues (SMCN/2010/083).

#### #5 Building partnership with the private sector

- Important private sector agents from the cassava value chain in Vietnam helped assess the improved fertiliser management. The project team used the activities related to value chain as an entry point for partnerships and encouraged private sector actors to participate in the research (AGB/2012/078).

# Involving businesses to boost agricultural research



Prominent Vietnamese and Australian leaders from businesses, research communities and governments have joined hands to advance agricultural development in Vietnam.

Meeting for the first time in November 2020 at the Australian Embassy in Hanoi, the industry leaders formed the inaugural ACIAR Agribusiness Reference Group.

The initiative will help ACIAR-funded researchers in Vietnam to engage with private agribusiness firms, who will help bring greater insights about the needs and issues of the market, and of smallholder farmers.

ACIAR in Vietnam has traditionally focused on working with government agencies and research institutions. Recent developments show that there is an increasing need for researchers to work more with private companies that do business with farmers to achieve concrete and sustainable impacts.

Without business insights and involvement, research projects and participating farmers often have difficulty achieving consumer-focused and market-oriented production and supply. The Agribusiness Reference Group was established to fill this significant gap.

The group's inaugural meeting was organised in collaboration with Vietnam's Ministry of Planning and Investment and the University of Sydney.

'Businesses joining the group will have better connections with the Australian and Vietnamese

**'This initiative is a great example of ACIAR's effort to bring businesses, researchers, and policymakers together to develop practical and high impact research projects that will benefit all stakeholders, including smallholder farmers and disadvantaged groups.'**

*- H.E Ms Robyn Mudie, Australian Ambassador to Vietnam*

researchers. Working together, researchers, smallholder farmers, and private agribusinesses can identify and address bottlenecks in agri-food chains and improve the outcomes for all chain participants,' said Mr Howard Hall, Agribusiness Research Program Manager, ACIAR.

The attending businesses showed strong interest in engaging with ACIAR projects, as they are seeking sustainable growth from doing business in Vietnam.

Associate Professor Tihomir Ancev from the University of Sydney said that the group's first initiative would be to participate in an ACIAR project that supports Vietnam's agriculture policy and strategic planning.

'A joint effort like this will bridge any gaps between the labs, the fields, and the markets,' he said.

The active business engagement will also help bridge the gaps in policy development.

Ms Vu Hoang Yen from the Ministry of Planning and Investment called on companies to provide clarity around their expectations of the Government of Vietnam to achieve better business engagement in the agriculture sector.

It is expected that the group will be active and able to exchange their expert views on where ACIAR should invest in Vietnam.

The reference group approach is a first for ACIAR, with future efforts looking to replicate the model throughout East and Southeast Asia.



A group photo of AFLI-ii project team and the representatives of ACIAR and MPI at the conference.  
Photo: ACIAR

## Launch Funding supports the conference on cooperative development

Cooperatives give farmers greater power such as group support, larger production, access to technology and better market connection. But cooperatives are facing limited access to resources—including finance, land and equipment.

In October 2020, a conference in Hanoi brought together experts and representatives of cooperatives to discuss challenges and solutions to support cooperatives in Vietnam in the context of COVID-19 and climate change.

The conference contributed to the implementation of a new five-year program, approved by the Prime Minister Nguyen Xuan Phuc in late 2020, that focuses on supporting cooperative development.

Representatives of ACIAR’s agricultural research projects in Vietnam also attended and shared experiences in assisting cooperatives to form, build capacity and develop value chains.

The event was organised by Vietnam’s Ministry of Planning and Investment with support from ACIAR Launch funding scheme.

The ACIAR Launch Funding provides financial assistance to organisations or individuals wishing to conduct or attend events that directly benefit international agricultural research. Visit [aciarc.gov.au](http://aciarc.gov.au) for further information on Launch Funding.



Left photo: AFLI-ii project team discussing with Mr Nguyen Van Doan (second left), Director of Cooperative Development Department, Ministry of Planning and Investment at the workshop on 13 October, 2020. Mr Leo Van Lech (first left), Thai ethnic, is the Director of Thanh Cuong cooperative in Mon village, Mai Son district, Dien Bien province, with 34 members. Thanh Cuong Cooperative applies the agroforestry systems on sloping land with mango, plum, macadamia and vegetables. Thanh Cuong’s products are distributed at several stores in Hanoi. Photo: ACIAR.

Right photo: Mr Leo Van Lech (in the centre) was inspired to establish his cooperative when joining the AFLI-ii project supported by ACIAR. Lech was introducing his agroforestry application to ACIAR staff. Photo: Tran Ha My, ICRAF.

# 30th anniversary of the Institute of Forest Tree Improvement and Biotechnology

ACIAR congratulates the Institute of Forest Tree Improvement and Biotechnology (IFTIB) on its 30th anniversary. ACIAR is proud to have supported IFTIB to enhance Australian-native trees for plantation in Viet Nam. With huge efforts from the whole sector, including IFTIB, Vietnam has grown 2.5 million hectares of acacia and eucalyptus forests and 16,500 hectares of macadamia, creating sustainable livelihoods for many forest-reliant households.

We are privileged to share some information on the Institute's key development milestones and achievements.

Starting in 1990, IFTIB was formerly known as the Centre for Forest Tree Research under the Institute of Forestry Science of Vietnam. In 2012, the Ministry of Agriculture and Rural Development (MARD) upgraded the centre to the IFTIB.

Over the past 30 years of research and development, the Institute has become Vietnam's leading organisation in forestry research and breeding. The Institute has provided 158 tree varieties, which have helped boost the forest plantation nationwide, improve many poor farmers' livelihoods, and enhance the forestry role in the economy.

## Key milestones of the Institute

### 1. 1990–2000: Acacia hybrid selection

In 1993, IFTIB's scientists selected natural hybrid acacia trees in the acacia plantations. Thanks to IFTIB's studies, MARD has recognised three hybrid acacia varieties for forest plantation.

In 1996, the centre was involved in a project improving forest trees, funded by UNDP and

ACIAR, to help Vietnam develop a set of acacia and eucalyptus varieties with high genetic diversity. Since then, the centre has established a system of breeding populations in several localities across the country.

### 2. 2001–2010: Tree productivity and seed improvement

In this period, 48 acacia and eucalyptus varieties were selected and recognised by MARD.

In 2002, the Australian Macadamia Association provided the centre with nine Macadamia varieties for testing in ecological regions, starting with the Macadamia research and development program in Vietnam.

### 3. 2011–2020: Tree productivity and improve wood property

IFTIB selected and recognised 80 new acacia hybrid, eucalyptus hybrid, and macadamia varieties. The recognised macadamia varieties with high-efficiency propagation technology were quickly transferred to the production facilities. As a result, Vietnam had developed more than 16,500 hectares of macadamia in 2020, boosting income for many macadamia growers.

### Capacity Building

IFTIB has trained 12 masters and three PhDs in genetics, breeding, and biotechnology. The Institute also sent 11 researchers to study for the doctoral and master programs on breeding and molecular genetics in Australia, Sweden, and China; among these, six IFTIB researchers received ACIAR's John Allwright Fellowship, and one participated in the John Dillon Fellowship to improve leadership skills.

After completing the training program, the staff has held critical positions in the Institute's leadership and continued to grow professionally, playing a crucial role in scientific research and IFTIB's development. From 2011–2020, the Institute published more than 80 articles in domestic journals and nearly 30 papers in prestigious international journals.



Mr. Ha Cong Tuan - Standing Vice Minister of Ministry of Agriculture and Rural Development conferred Viet Nam's Prime Minister's award to IFTIB for their excellent performance, 10/11/2020. Photo: IFTIB



In Van Ban, GREAT has supported the formation of two cooperatives and nine collaborative groups, with ethnic minority women holding the majority of leadership positions.

*New technology boiler for bamboo shoots was introduced to farmers in Van Ho district, Son La province. Photo: GREAT*

## Green shoots are growing

Bamboo shoots are synonymous with Vietnamese cuisine and are grown in many areas of the country. As well as being a popular food ingredient in Vietnam, it is a sector with high market potential that can provide an important source of income for households living in the buffer zones of protected forests. As bamboo grows naturally in the forest, bamboo shoot cultivation does not require a large capital investment or constant tending by farmers.

However, there are constraints limiting the growth of the sector and the income of ethnic minority households. First, the production is small scale and inefficient with outdated technology for semi-processing at household level. Second, traditional production practices do not meet market requirements and there are poor linkages to processors and buyers. Consequently, bamboo shoots are often sold to local traders for a low price. Third, if not properly managed, cultivation of wild bamboo is not sustainable over the longer term. Bamboo shoot harvesting, and semi-processing is also labour-intensive, which places a heavy burden on women. Within the household, although women generally earn the income from bamboo, it is often men who make the major financial decisions.

The DFAT-funded *Gender Responsive-Equitable Agriculture and Tourism* in Lao Cai and Son La Province project (GREAT) is partnering with the Center for Rural Economy Development (CRED) and Hoang Lien Van Ban Natural Reservation Area Project Management Unit to develop the sector and generate increased income for ethnic minority women living in Van Ho District, Son La Province and Van Ban District, Lao Cai Province.

In Van Ban, GREAT has supported the formation of two cooperatives and nine collaborative groups,

with ethnic minority women holding the majority of leadership positions. Market linkages have been formed with two bamboo shoot processing companies (Kim Boi and Yen Thanh) which includes long-term purchasing contracts. Through these partnerships, farmers have access to private sector investment in new processing facilities as well as the technical assistance needed to cultivate and harvest bamboo to meet the required quality standards. To date, the average income of participating households has increased by 21% from the start of the project.

CRED has also introduced new technology for households to semi-process bamboo shoots that reduces fuel by 90% and boiling time from 12 to two hours. GREAT is also supporting gender quality training to both men and women to promote shared decision-making and a balanced workload.

These projects are also helping to shift communities to bamboo shoot cultivation rather than relying on forest harvesting. This includes building the capacity of women-led cooperatives in growing organic bamboo shoots and advocating for sustainable bamboo shoot management policies. This will not only protect the environment but also ensure a sustainable source of income.

These two bamboo partnerships will benefit approximately 1,800 women, including Dao ethnic minority women in Van Ban, Lao Cai and Thai, Muong and Mong ethnic minority women in Van Ho, Son La.

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# Financial inclusion

Many farmers—particularly ethnic minority women—struggle to access the finance they need to maximise income-earning opportunities. A *Gender Responsive-Equitable Agriculture and Tourism* (GREAT) project-commissioned scoping study undertaken by Financial Access and VietED found that 60% of vegetable and passion fruit producers and 33% of tea producers in Son La are seeking finance for farming inputs such as fertiliser and seedlings. The study also found that female respondents were slightly more likely to access finance from informal sources compared to males, indicating that there are some specific barriers for women to access formal finance.

The requirement for borrowers to provide a land title certificate when applying for bank loans is a major constraint for farmers in GREAT project areas to access formal finance. Only 22% of surveyed tea producer households, for instance,

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**A new lending product has been designed and will be initially trialed with small-scale producers within GREAT's current projects that meet the bank's requirements and risk appetite.**

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have such a certificate. Banks are often reluctant to lend to small-scale farmers given the lack of collateral, high transaction costs of setting up relatively small loans, and because they lack the technical capacity to assess and monitor risk and understand farmer needs and cash flows.

In cooperation with VietED, GREAT is partnering with LienVietPostBank as it can see the market potential of expanding its lending portfolio in the agricultural sector. LienVietPostBank is looking to innovate, has a customer-driven approach and has a strong network in GREAT target districts.

The project is developing collateral-free lending to farmers based on the crop cycles, cash flow modelling and risk-profiling of farmers within targeted value chains. A new lending product has been designed and will be initially trialed with small-scale producers within GREAT's current projects that meet the bank's requirements and risk appetite. The project is also identifying technology solutions for the bank to bring down the administrative cost of lending to smallholders. Given that loan repayments can be a source of anxiety and household stress—impacting on women's wellbeing—the project is also building the capacity of bank staff in gender-lens financing.

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Finance scoping study in Moc Chau district, Son La province. Photo: GREAT

# Australia offers funding opportunities for digitalisation initiatives

Aus4Innovation Partnership Grants has kicked off its 2021 round with up to AUD 1.5 million financial support available to help partnerships between Australia and Vietnam scale up tested, innovative ideas.

Managed and implemented by the Aus4Innovation program, and funded by the Australian Government, the latest round of funding was conceived in support of the Vietnamese Ministry of Science and Technology's COVID-19 recovery priorities. It builds on the success of the first two rounds, which received 197 applications and funded eight outstanding projects with total funding of AUD 3.6 million.

Under the theme **'Enhancing Digital Transformation'**, this round welcomes initiatives that have the potential to enhance digital transformation in the economy and deliver inclusive social impact. Suggested areas around which applicants could develop their ideas include smart manufacturing, smart agriculture, digital health, smart education, smart cities, finance and banking, e-government, and natural resources and environment. Grants of between AUD 100,000 and AUD 1,000,000 will be awarded on a competitive basis to existing partnerships between Australian and Vietnamese institutions to support tested initiatives that are ready to scale up. Grantees will have up to 12 months to implement their proposed activities.

*'Together with the Ministry of Science and Technology, we have committed to pivot Aus4Innovation activities toward COVID-19 economic recovery. This includes additional support for the application of digital technologies to help Vietnamese innovators respond to emerging challenges and opportunities brought about by the global pandemic and the new normal. Having this third round of grants focus on digital transformation links them strongly to the Artificial Intelligence initiative launched in August last year and strengthens our support for Vietnam's digital*



*transformation.'*—said H.E. Ms Robyn Mudie, Australia's Ambassador to Vietnam.

*'This round of funding from Aus4Innovation is well aligned to the Prime Minister's recent approval of the National Digital Transformation Program. By 2025, we will transform Vietnam's government management, business operations and the daily lives of our people with technology enabled by a secured digital environment. We are thankful to the Australian Government for this meaningful collaboration in support of our ambitious digital transformation goals. I look forward to seeing more and more breakthrough applications of emerging technologies like artificial intelligence, IoT and blockchain with potential widespread impact.'*—H.E. Vice Minister of Science and Technology, Bui The Duy, added.

Innovation Partnership Grants is an important part of the AUD 11 million, four-year (2018–2022) flagship Aus4Innovation program to help strengthen the Vietnamese innovation system and prepare for Vietnam's economic and digital future. It is funded by the Australian Department of Foreign Affairs and managed by the Australian Commonwealth Scientific and Industrial Research Organisation (CSIRO) in strategic collaboration with the Ministry of Science and Technology of Vietnam (MoST).

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# Food supply chains defy global pandemic

By Tony Harman, Australian Agriculture Counsellor, Australian Embassy in Hanoi

The defining narrative of 2020 and beyond has been the COVID-19 pandemic. The virus SARS-CoV-2 has decimated global health; closed schools, shops, and workplaces; curtailed travel, stifled everyday social freedoms; and wrought widespread economic havoc.

However, our **global food system has largely remained resilient to the pandemic** and the onerous international border restrictions it has created. Vast supply chains with complex interlinkages and co-dependencies continue to underwrite global food security by delivering safe, nutritious and, tasty meal solutions to the world.

Unsurprisingly, the global financial crisis saw **the world's food industries producing better results than others** in the face of extreme adversity.

**Food production, processing, and distribution have prevailed** against labour shortages, social distancing measures, logistical impediments, and unprecedented travel constraints. This serves as testimony to the skill and perseverance of our often-unheralded farmers and many other people who work diligently to safeguard the continuity of our food supply.

We owe a debt of gratitude to those involved in our farm production, storage, transportation, processing, packaging, distribution, warehousing, marketing, and retailing industries. Their efforts produce, transform, freight, and exchange rural goods among suppliers and consumers, often from opposing sides of the world.

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**Vietnam is a compelling example of how free trade and investment can improve economic security through rising incomes, enhancing health and education outcomes, strengthening infrastructure, and building greater social capacity to support those unable to be employed.**

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*Tony Harman commenced as Australian Agriculture Counsellor at the Australian Embassy in Hanoi in October 2020. He is pictured here with colleagues Minh Nguyen (left) and Hang Vuong (right) from the Embassy's Agriculture Office.*

Vietnam is a compelling example of **how free trade and investment can improve economic security** through rising incomes, enhancing health and education outcomes, strengthening infrastructure, and building greater social capacity to support those unable to be employed.

People involved in research, extension, technology transfer, and agri-innovation are integral to driving our food system's productivity. Thanks to their work, we can continuously do more with less and address ever-present risks and challenges. Government executive officers and policymakers, and industry representatives perform fundamental roles in delivering safe, high-quality produce; overseeing industry planning and adjustment;

managing biosecurity threats; and fostering the resilience of our natural resource base for future generations.

Our system of food trade is vast and complex. But at its beating heart is an ecosystem of people whose diverse skills and talents ensure the world doesn't go hungry whatever the global situation.



## Adoption of new cassava varieties in Northwest Vietnam

By Pham Thi Sen. ACIAR Project: AGB/2012/078

### A key crop for low-income families

Despite cassava's bad reputation as a crop that causes land-degradation, it has contributed up to 30% to the household income for many farming communities in Northwest of Vietnam<sup>1</sup>. Consequently, cassava crops in this region have increased over recent decades.

Contrary to common belief, cassava does not cause land degradation. In the Northwest, farmers cultivate this crop in sloping lands that have already degraded and can no longer support any other crop.

### Challenges facing cassava farmers

Due to forest loss and climate change, natural disasters happen more frequently. Extreme

droughts, hoar frost, severe cold, and flash floods seriously damage crops in the region, including cassava. Meanwhile, there are only two locally commercial cassava varieties; both are old and with low potential yields and local farmers have not been able to access and adopt soil protection practices for cassava cultivation. Additionally, cassava lands have been further degraded due to soil erosion. All these factors have caused low cassava yield in the northwest region compared to the country's average.

Fortunately, the Northwest is still a disease-free zone for cassava. Up until now, Northwest farmers themselves have selected and preserved cassava seeds; they have also brought seeds (of new varieties) from other areas to grow in their fields.

<sup>1</sup>Report of cassava value chain study, project AGB/2012/078

So far, this has not caused significant pest problems on cassava and local farmers have not had to apply chemicals for cassava pest control.

Nevertheless, cassava in the Northwest is vulnerable to pests and diseases from the surrounding regions of Laos, Cambodia, and southern provinces of Vietnam, where cassava mosaic virus and cassava witches broom occur. To prepare for this challenge, farmers in the Northwest need access to varieties, which have high yield and can withstand these diseases.



Farmers, agriculture extension officers, and researchers assessing new cassava varieties on the field in Son La province.

**Solution using a participatory approach**

In this context, the ACIAR project AGB/2012/078 *Developing value-chain linkages to improve smallholder cassava production systems in Vietnam and Indonesia* focused on two major questions: How to keep the Northwest cassava disease-free, and how to develop a sustainable cassava value chain in the region.

In 2017–2019, farmers, Son La Cassava Starch Factory and local agricultural/extension officers at different levels worked together on the research project to introduce and promote new high yielding cassava varieties suitable for the Northwest conditions. The project’s research site was Son La province.

**Key Result 1: Two new, improved varieties with high economic potential**

The results of the variety trial, repeated in three years (2017–2019), show that two new varieties, (13Sa05 and BK) are suitable for the Northwest; they expressed good growth and gave higher yield compared to the two locally popular types, KM94 and La Tre (Figure 1).

These two new varieties also have high root starch contents, between 29% and 30%. Besides, with shorter and harder stems, they are more resilient in steeply sloping lands and strong winds, while their roots are more numerous, are bigger and shorter in size, and more easily harvested.

Under the conditions of no pest occurrence and steeply sloping lands in the research sites, depending on the fertilisers levels<sup>2</sup>, the fresh root yields of both BK and Sa1305 ranged between 18 tons/ha and 32 tons/ha, which is significantly higher (14%–76% higher) than that of KM94 and La Tre.

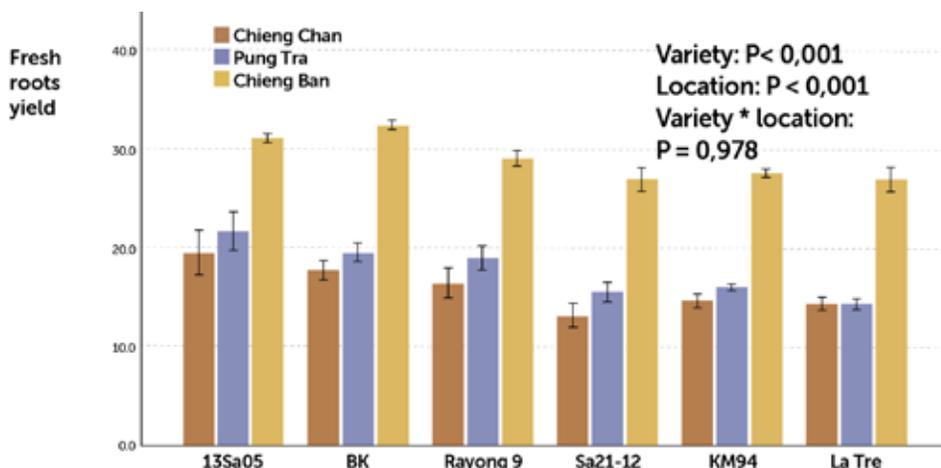
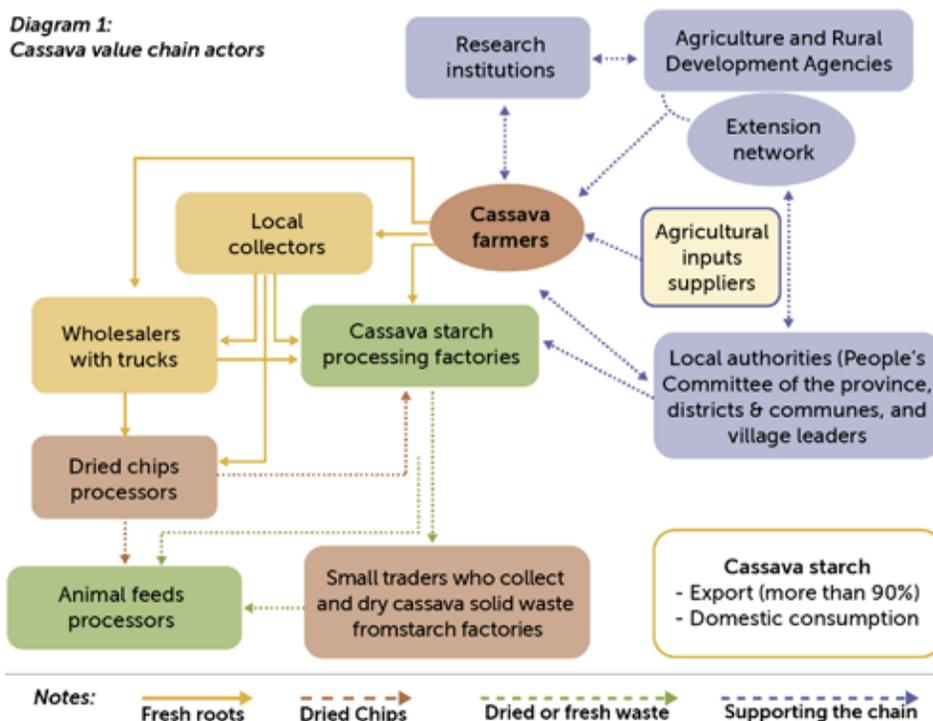


Figure 1: The yields of variety 13Sa05 and BK were between 18–32 t/ha, 14–76% higher than that of the two locally popular types, KM94 and La Tre.

<sup>2</sup>40N/10P/60K equivalent to 87 kg urea + 142 kg triple superphosphate + 80 kg KCl or; 60N/15P/60K equivalent to 130 kg urea + 213 kg triple superphosphate and 120 kg KCl



However, as the trial conditions did not allow for evaluating the varieties' resistance/tolerance to pests, to scale-out these two or any other new varieties, there should be precautionary measures to control the risks of spreading pests from other regions to the Northwest through seed cuttings.

**Key result 2: Weak linkage between actors recognised**

The project's research results also show that the cassava value chain is complicated, including many direct actors and supporting actors (Diagram 1). However, there are no close linkages between actors, or significant inputs spent by stakeholders in helping farmers to develop cassava production sustainably.

In particular, as cassava has never been considered the main crop, public actors, particularly the extension and seed quality networks, have not paid significant attention to this crop.

At the same time, as there is no need for competition in cassava fresh root supply, the private actors have not paid significant inputs in supporting farmers to adopt technical innovations, including new, improved varieties and quality disease-free seeds.

All these make the adoption of new varieties, including those suitable for the local conditions such as 13Sa05 and BK, difficult and create risks for spreading diseases from other regions to the Northwest.

Based on the study findings, the project proposed strengthening collaboration between stakeholders to successfully introduce, evaluate, produce, and provide initial source/s of quality disease-free seeds of suitable new varieties for farmers to scale-out in the region.

**Conclusions and recommendations**

There is a need for the Northwest region to increase the diversity of cassava varieties in the production. First, farmers need to receive sufficient support to adopt the two varieties (13Sa05 and BK) identified by the project AGB/2012/078 as appropriate for the region. Second, farmers need the introduction of more new varieties suitable for use.

To quickly promote new, improved varieties and prevent diseases from other regions to spread in the Northwest, it is necessary to strengthen linkages between the value chain actors. Actors should cooperate to introduce, evaluate, and trial new varieties and supply local farmers with initial sources of quality and disease-free cassava seeds.

Only when the Northwest provincial authorities make cassava the main crop can the public extension, seed quality control networks, and research institutions spend enough attention on this important crop. Cassava prioritisation is also essential for supporting farmers in selecting and adopting suitable technical innovations, including new, improved cassava varieties and quality disease-free seeds.

# New chicken genetics research project

By Fred Unger. ACIAR Project: LS/2019/142



Photo source: ACIAR

The Asian Chicken Genetic Gains project started in September 2020 in three Southeast Asian countries: Cambodia, Myanmar, and Vietnam. The project will help to enhance smallholder poultry production as a pathway out of poverty.

This new four-year partnership between the International Livestock Research Institute (ILRI) and national agricultural research institutes in participating countries aims to improve smallholder poultry systems through adapting new and proven genetic technologies and increasing farmer access to highly productive, locally acceptable and adapted chickens. The project partners, including ILRI, government research institutions, non-government organisations and private poultry genetics companies

in these countries will work together to develop a roadmap for long-term chicken genetic gains.

The project will also strengthen the capacity of young scientists in the project countries to conduct high-quality research on village poultry systems to benefit their smallholder farmers.

Finally, the project will also provide a platform for south-south learnings through the African Chicken Genetic Gains initiative implemented in 2014 in Ethiopia, Nigeria, and Tanzania.

The launching of activities is planned for the first quarter of 2021, depending on the COVID-19 situations in each participating country.

# Collaboratively advancing mango trade from southern Vietnam

By Robin Roberts and Antonia Medhurst  
ACIAR Project: AGB/2012/061



*Mango quality evaluation at a packing house  
Photo: Tram Anh San, 2020*

An ACIAR-supported four-year project seeks to improve supply chain management of fresh and processed mango trade to increase smallholder farmer incomes in the south of Vietnam.

Now commencing year three, interventions are being undertaken to develop mango trade from Dong Thap and Tien Giang provinces in southern Vietnam. The collaboration between the Australian and Vietnamese researchers has helped increase understanding of local chain activities and how improvements in processes will reduce post-harvest loss, increase retailing opportunities, and ultimately increase consumer purchasing of mangoes from this region.

## **Managing sap burn to minimise fruit quality damage**

Sap burn is the leading cause of quality loss in mango supply chains. If left on the fruit, sap burn residue can cause microbial diseases and lower returns due to poor fruit quality. Current studies are being undertaken to reduce this challenge at the farm level. Preliminary results show a near 60% reduction in fruit damage when mango sap goes through a post-harvest 'washing' process.

## **Monitoring quality along the chain to gain a better price**

Monitoring fruit along the chain has highlighted critical quality impact points where operational

changes, such as temperature control and commercial style packaging, will improve the retail end. Early outcomes of this study suggest retailers and consumers are willing to pay higher premiums for blemish-free and well-presented mangoes.

**Understanding consumer willingness to pay**

Understanding Vietnamese consumers’ motivations and preferences related to mango purchase are essential. Working with international grocery chains to showcase mangoes from Dong Thap and Tien Giang provinces will provide the backdrop to inform this study. The outcome of this study will raise the profile and showcase the superior quality of locally grown mangoes from southern Vietnam.

**TRAINING & DEVELOPMENT**

Several training courses are being undertaken in this project. Vietnamese researchers completed two successful training courses in June and July 2020.

**Agribusiness Impact Evaluation**

Earners of this badge understand impact evaluation for agribusiness interventions in a developing country context. They can identify various impact indicators, consider indirect or spillover effects of interventions, and choose among the different methodological research approaches used for assessing impact. Earners have gained knowledge in agribusiness data collection and overall design strategy needed in impact evaluation projects. Feedback from attendees was positive, with non-scientific researchers citing a high interest in the new technical knowledge they had gained.



*De-sapping treatment applied at farm  
Photo: Tram Anh San, 2020*

**Agribusiness Orchard Nutrition**

Earners of this badge have demonstrated fundamental knowledge of mango nutrition for orchard management. As a part of the program, attendees developed a nutritional plan for a mango orchard based on the plant’s requirements. The project team members now have a baseline understanding of macro and micro nutrients required for mango production and the role of plant nutrition at critical stages within the phenological cycle. The attendees can examine fertiliser programs to interpret leaf and soil analysis data to assist the farmers in the project. The team has approximately 25 members who have varying roles in the project. The summary of their achievements across the activities will be published in June 2021.



*Agribusiness Impact Evaluation Digital Badge  
Photo: Griffith University, 2020*



*Agribusiness Orchard Nutrition Digital Badge  
Photo: Griffith University, 2020*

# Supporting farmers to build market linkages

By Vu Thi Hanh and La Nguyen  
ACIAR project: FST/2016/152



*Cooperative members examining a greenhouse vegetable production system in Van Ho.  
Photo: La Nguyen, World Agroforestry*

After nearly 10 years of implementing the agroforestry systems and exemplar agroforestry landscapes on sloping land, hundreds of farmers can harvest and create good incomes. As yields increased, it became more apparent that farmers needed to form production groups and cooperatives to access new and larger markets. However, following the principles of the 2012

Vietnamese Cooperative Law is still a challenge for all cooperative members, especially for ethnic minority women.

On 19 and 20 October 2020, the project conducted a training course on cooperatives models, market access and market linkage building for Tan Thao and Thanh Cuong cooperatives. Farmers

participating in the project decided to establish these two cooperatives to leverage production and coordinate product collection for a better return. Both cooperatives are in Co Noi Commune, Mai Son District. Tan Thao cooperative (established in 2017) has more than 100 members cultivating about 70 hectares; Thanh Cuong cooperative (established in 2018) has 34 members cultivating about 20 hectares.

There were 33 participants in the training (all Thai people), of whom 18 were women and 15 were men. There was also participation and experience sharing from Moc Chau Safe Vegetable Cooperative, Son La Cooperative Alliance, and the Provincial Agricultural Extension Center and project researchers.

Most ethnic minority women in this training made it unique compared to other activities in which men were mainly involved. Some women had never attended any training or been away from their village or commune. Therefore, this was considered an excellent opportunity for them to acquire new knowledge on cooperatives, access market information, and learn more from the project. This learning opportunity played an essential role in enhancing self-confidence and promoting women's participation in economic activities.

The first day of the training was indoors, with plenty of group discussions to maximise interaction among participants. On the second day, participants visited the Safe Vegetable Cooperative in Moc Chau and the greenhouse vegetable system in Van Ho, Son La Province. The

visit allowed participants to learn how to run a cooperative and develop relationships with others effectively.

Farmers joining the training gave much positive feedback on gaining knowledge, visiting an effective cooperative in the province, having valued interactions among cooperative members, and connecting to other partners.

After the training, Thanh Cuong Cooperative signed a cooperation agreement with Fresh Studio Innovation Asia Co Ltd under the DFAT-funded GREAT program. According to the agreement, the project cooperative will support 50% of the total construction and technology transfer cost. The cooperative needs to contribute the remaining 50% (approximately VND 130 million or A\$7,200). After understanding the pros and cons of the funding conditions, all the cooperative members are willing to join the collective activities.

Additionally, the cooperative director's role increased when he demonstrated that his efforts and skills could lead to a successful agreement, thereby building more trust with the other members.

In the future, the project will continue to support the farmers in liaising with other projects, programs, and funding sources to develop their cooperatives' performance. The project will also conduct more activities to help farmers with market links, increase the cooperative staff management and executive skills, and increase the linkages among cooperative members.



*Lo Thi Mai of the Thai ethnic presenting the benefits of being a cooperative member during the training in Hat Lot.  
Photo: Nguyen Van Thach, World Agroforestry*

# SafePORK—better hygiene practices trialed along pork value chains

By Fred Unger, Nguyen Thi Quynh Chi and Dang Xuan Sinh.  
ACIAR project: LS/2016/143



*SafePORK encourages washing hands of pork sellers at markets.  
Photo: Chi Nguyen, ILRI*

Despite the COVID-19 pandemic, the SafePORK project has geared up its activities and attained some important achievements in its third year.

## **Food safety performance tool**

A food safety performance tool completed in 2020 was a critical achievement, and was applied across key pork value chains in Vietnam. The tool has prompted recommendations through research briefs and consultations with related

state agencies and local authorities of Hung Yen and Nghe An provinces. ACIAR was also engaged in the discussion to explore broader use of the tool in other food value chains and hazard contexts.

## **Training manuals for slaughterhouses and retailers updated with COVID-19 integration**

In November 2019, slaughterhouse workers and retailers in Hung Yen province were trained using training manuals specifically designed for them as

part of the intervention package. The research team also updated the training manuals in 2020 with the synergies to prevent COVID-19. Implementing these food safety practices at slaughterhouses and retailers, such as observing disinfection methods, can help effectively prevent COVID-19.

### Significant reduction of bacterial contamination at slaughterhouses

In 2020, one medium-scale slaughterhouse and two traditional markets in Tien Lu District, Hung Yen Province, started implementing the SafePORK's interventions.

At the slaughterhouse, interventions include repeated training for workers on hygienic practices and the introduction of tailored stainless-steel grids to avoid carcasses contact with the slaughterhouse floor. The slaughter workers have applied acceptable methods such as frequent hand and surface washing and better separation of clean and dirty zones, thereby reducing carcass contamination. Coloured good/poor practice posters have also been placed in the slaughter facilities. All these interventions have led to a significant reduction of total bacteria count contamination, an indicator for hygienic practice.

Based on these promising results, the slaughter intervention packages have been scaled out to four more slaughterhouses in Nghe An province. Five more facilities are set for 2021 with the local authorities' support in Hung Yen and Hoa

Binh provinces. It should be noted that owners of intervened slaughterhouses have co-funded approximately 30% of the investment in stainless steel grids.

### 'Carrot and stick' to ensure retailer's compliance with safe pork standards

Targeting 22 retailers from two markets, retail interventions included separation of ready-to-eat and raw pork and intestines, and frequent washing and disinfection of meat selling surfaces and hands of sellers. However, despite the promising result of earlier research with few pilot retailers, the interventions did not result in sustainable hygiene improvement, mainly due to decreasing retailers' compliance over time. In response to this, and in consultation with local authorities, a community-based monitoring group will be established to motivate retailers' compliance through a mix of 'carrot and stick' approach. Here, retailers will need to comply with regulations and practices to receive incentives from SafePORK, such as capacity development and facility enhancement.

### SafePORK criteria helped promote local pig breed

A significant achievement towards recognising indigenous pig breed was the registration of a collective Ban pig brand through Hoa Binh authorities, guided and supported by the National Institute of Animal Science (NIAS), a SafePORK partner.



*A slaughterhouse in Hung Yen which received investment from SafePORK for stainless steel grids. Photo: Chi Nguyen, ILRI*



Media workshop on risk communication on food safety and human health. December 2019.  
Photo: Croplife

In parallel, value chain linkages of an existing Ban pig cooperative in Hoa Binh with 90 farmers have been strengthened. This includes a gradual upgrading of two Ban pig slaughter points with ongoing hygiene training of butchers, including basic meat inspection. The latter was a joint ACIAR SafePORK and BMZ-funded initiative targeting indigenous pork produced by ethnic minorities of Hoa Binh Province. The BMZ project confirmed that Ban pigs have a low risk of parasitic pork-borne diseases, which will help the SafePORK project promote a safer Ban pork brand.

### Risk communication

Based on the findings from a risk communication needs assessment, the project conducted a wide range of risk communication activities aiming at different actors, including the mass media, policymakers, state civil servants, and consumers.

In a media workshop held in December 2019 on risk communications on food safety and human health, the SafePORK team discussed with 40 Vietnamese reporters to better communicate food safety to the public. Through the workshop, food safety researchers sought to relay accurate

research-based information on the challenges posed by unsafe food to human health.

### Capacity building

Two TOT trainings on risk communications were organised in October and November 2020 for 50 members of district health, veterinary, culture and information officers, women and farmer unions' members in Tien Lu District, Hung Yen province, and Dien Chau District, Nghe An province. These trainees will play a critical role in raising awareness of local people on food safety risks at the grassroots level. Further expansion of risk communication activities is planned for the first and second quarter of 2021.

In 2020, the project also implemented an on-farm trial to test probiotics to reduce antibiotic use in pig production. This trial happened in partnership with Thai Nguyen University of Agriculture and Forestry and the Green Feed and BioSpring Company.

Capacity development continues with 35 researchers, one PhD student, one MSc student, and 13 undergraduates covering different topics such as animal welfare, risk assessment, and behavioural nudge theories.

### About the project LS/2016/143

*The SafePORK project commenced in 2017 and aims to develop and evaluate market-based approaches to improving food safety with the overall aim of reducing the burden of food-borne disease in informal, emerging formal, and niche markets targeting small and medium scale pork value chains in Vietnam. The project is implemented with strong partnerships with the International Livestock Research Institute, the University of Sydney, and national partners such as Hanoi University of Public Health, Vietnam National University of Agriculture, and the National Institute of Animal Sciences. Further associated partnerships include the private sector in Vietnam and the UK and international academia, including Royal Veterinary Colleges and Melbourne University.*

# Risks and opportunities of goat production in Lao PDR and Vietnam

By Nguyen Huu Van and Nguyen Viet Don

ACIAR project: LS/2017/034



Increasing goat numbers and rising demand from goat restaurants in Laos and Vietnam means that the market chain needs to be better understood and developed.

## Big demand, little market insights

Vietnamese restaurants and consumers have a growing demand for goats supplied by smallholder farming systems in Laos. They believe the flavour of 'mountain' or 'grass' goats is superior to other hybrid goat meat. The Vietnam–Australia Goat Improvement Project (2006–2009) recommended an urgent need to conduct more research into the current marketing for goat meat and the opportunities for promoting processed goat products through market chains.

However, accurately determining goat market size in Vietnam is difficult due to the lack of official market information; traders mostly import goats informally to avoid institutional costs.

In 2018, the project LPS/2016/027 had many discussions with the farmers, traders, and slaughterhouses to identify the characteristics of goat production and market systems. Based on the results of this discussion, the project team proposed a new major research question: **How can smallholders and other businesses in Laos increase the quantity and quality of their goat production to serve the strong market demand in Laos and Vietnam?**

Following up on the project LPS/2016/027, the project LS/2017/034 'Goat Production Systems and Marketing in Lao PDR and Vietnam' was launched in August 2019. The project aims to enhance income-generating opportunities for

### The project has four objectives:

1. Evaluate goat production systems in Lao PDR to develop technical, social, and economic benchmarks against which improvements can be assessed.
2. Assess major constraints and identify and evaluate potential solutions.
3. Reduce market risk and increase marketing opportunities through improved understanding of the factors affecting demand and pricing of goats in Lao PDR and Vietnam, and the associated value chains.
4. Build capacity for research and development of goat production in Lao PDR and initiate scaling out project findings.



Online training on the use of Commcare app. Photo: HUAF

goat raising households in Lao PDR by developing productive, environmentally sustainable, socially acceptable and gender-sensitive production systems accessing high-demand markets in Vietnam.

Hue University of Agriculture and Forestry (HUAF) and National Institute of Animal Science (NIAS) join the project, focusing on analysing the domestic Vientiane's value chains and three leading export market chains to Vietnam. The analysis aims to characterise demand/supply and identify constraints, risks and opportunities.

#### **Desk review: Initial understanding of the markets**

Despite delayed activity implementation due to the COVID-19 pandemic, the Vietnamese researchers and the Australian and Lao partners still successfully completed the desk review draft on goat production and marketing in Laos and Vietnam. We found that Lao goat production is for meat only, with most of the goats consumed locally, or sold to the cities or Vietnamese traders as live animals.

Production mostly depends on small scale farmers of around 10 heads. There are no officially recorded export volumes for goats or their products in Laos.

The marketing channel for goats is essentially informal, which affects the farmers' income. Formal markets are poorly developed and, in some cases, non-existent.

Goat marketing systems are underdeveloped in Laos. There is little information concerning the market chain actors, the transaction costs, and details of goat and goat product chains.

A limited number of studies that describe the goat consumption, goat market, and value chain has been undertaken in Laos. It seems that overseas market demand, mostly from Vietnam, is the driver of the goat exporting chain.

However, no documentation exists of the economic contracts among chain actors and a traceability system has yet to be established. There is little

information and documentation of vertical and horizontal linkages in the Lao goat chain, and little evidence of relations among actors such as Lao farmers and local traders, traders with restaurateurs and outlets, and internal and external traders.

Increasing goat numbers and rising demand from goat restaurants in Laos and Vietnam means that the market chain needs to be better understood and developed.

#### **Upcoming: Interview with goat market chain actors**

In collaboration with the University of New England (UNE) experts, the Vietnamese group has built five questionnaires to interview main goat market chain actors, including farmers, internal and external traders, abattoir owners, restaurateurs, and goat meat consumers. The questionnaires were tested on site in Thua Thien Hue and Ha Noi and revised to fit most cases during the official survey period. After testing, the questions were transferred into the Commcare app on tablets. The electronic questionnaires have Vietnamese and English versions, and we plan to translate them to Lao in 2021.

In December 2020, the project organised a workshop guiding participants to effectively use and manage the electronic questionnaires through the Commcare app. The participants, consisting of five researchers from NIAS and six researchers from HUAF, gathered in Hue city and were trained online by three experts from UNE. Since the workshop, all participants can now do the questionnaire on the app and conduct surveys on the field.

Conducting surveys will be the main activities of the group in 2021. The group will directly implement the surveys on Vietnamese traders, abattoir owners, restaurateurs, and goat meat consumers in Northern and Central Vietnam. Several group members will go to Laos and help Lao partners conducting surveys with goat farmers and Lao traders.

Since the beginning of the project, the Vietnam group has maintained regular contacts among group members and close relationships with project partners. We are aware of the importance of improving the capacity of young researchers. In the group, two-thirds of the total members are under 40 years old. They are keen to achieve new knowledge and skills, and are guided by senior members. These are necessary for the success of the projects and the sustainable development of agricultural research in the region.

# Interview with a researcher:

## Meryl Williams Fellow helps strengthen farmers' linkage with the market during the COVID-19 pandemic

**Hi Ms Hoa, could you quickly introduce yourself to ACIAR readers?**

Hello, I am Pham Thi Hoa and I work at the Lam Dong Department of Crop Production and Plant Protection. I've been with the department since 2008, specialising in forest tree pests. In 2019, I was awarded the Meryl Williams scholarship of ACIAR. I was excited to be back in Australia to advance my leadership skills and see my teachers and friends in Australia again.

**Can you share your journey with the Meryl Williams Fellowship up to now?**

The Meryl Williams Fellowship is very different from the other scholarships I have had. I have invaluable support from my Meryl Williams mentors: Dr Rebecca Spence, Professor Derek Baker, and Dr Nozomi Kawarazuka. The program is designed to truly empower female scientists in agriculture. I sincerely thank Dr Meryl Williams and ACIAR for giving female scientists like me a

fantastic opportunity to develop ourselves and our careers.

The most meaningful thing I have learned is using my inner strength to balance work, family, and personal goals. I know what I can do to better myself at work and in life, so that I feel more confident and efficient. I prioritise time for 're-charging' activities after work, such as doing yoga or walking, and spending quality time with my family.

The second most important thing is the ACIAR's Alumni Research Support Facility. In the context of the COVID-19 pandemic, the fund assists ACIAR alumni in conducting research on vulnerable areas in agriculture and finding solutions to support farmers, businesses, and industries after the pandemic. As a Meryl Williams Fellow, I applied for and received funding to conduct my research: 'Vegetable and flower farmers in Lam Dong adapting to COVID-19 and climate change'.





**Can you share more with ACIAR readers about the research results so far?**

From September–December 2020, I interviewed many vegetable and flower farmers and enterprises in Lam Dong to understand the difficulties and how they are overcoming the challenges caused by the COVID-19 pandemic. In general, farmers suffer a lot from weak and fragile market linkages. Nearly 50% of households growing vegetables and flowers had to cut labour or change crops structure. Flower and vegetable exporting companies had to destroy thousands of tonnes of flowers because of international travel restriction.

In that situation, I propose to strengthen the linkage between managers, farmers, businesses and educators to strengthen the value chains. Currently, I am working with the Australian alumni network to implement post-research activities, and we plan to organise training courses on applying digital technology in agricultural production to better link farmers to the market. These supports aim to help them proactively find outputs for products. Besides that, the Australian alumni will also assist businesses in accessing technology applications to better manage their farms.

In February 2021, I presented the study’s initial results at the 65th annual conference of the Australian Agricultural and Resource Economics Society, with many agricultural experts in the region.

**Congratulations! Now, what are your future plans?**

I plan to organise several seminars to spread my research recommendations to the community of vegetable and flower farmers and businesses, and work with the Australian alumni network to bring together policymakers, businesses, scientists, educators, and farmers to develop specific and practical solutions.

In addition, I want to be more deeply connected with the network of Australian alumni to implement agricultural projects. I hope ACIAR and its alumni network will have many programs to exchange insights and implement joint research. This way, we can multiply and maximise the potential of the ‘seeds’ that ACIAR has planted.

**Thank you. We wish you all the best for your plans for 2021.**

# Interview with a farmer

Mr Luong Van Minh is a farmer beneficiary of the project *'Developing value chain linkages to enhance adoption of profitable and sustainable cassava production system in Vietnam and Indonesia'* (AGB/2012/078). The project aims to increase profitability and sustainability for smallholder farmers planting cassava through linking stakeholders in the cassava value chains to promote improved seed and advanced technology. The project ended in 2020 with policy recommendations and the establishment of learning groups and associations.

**Could you share the 'secret' that helped you increase your productivity?**

I follow the planting techniques developed by the NOMAFSI research team, including weeding my crop twice. I also received good cassava varieties and fertiliser from the extension officers.

**What do you think about the new cassava varieties?**

They are excellent and provide high yields. One cassava root can give 5 kilos of products.

**How much did you get from selling the new cassava?**

This year, I sold cassava to traders at 1,500 VND per kilo. This is the highest price I have earned for cassava. After participating in a workshop organised by NOMAFSI, now I know that I can sell to the Son La Cassava Starch Company at 2,700 VND per kilo. Unfortunately, my place is too far from the company location, and I do not have vehicles to transport cassava. I hope I will have a chance to sell cassava at a better price.

**How does the income from cassava help you improve your household economy?**

Because I had no one to help me harvest the crop, I could not collect and sell all cassava at once. Instead, I sold it on many different occasions, and each time I earned up to 1 million dong. I couldn't calculate the real income from cassava, but I could buy a new pig this year thanks to selling cassava.

**Do you intend to expand your cassava cultivation?**

If I continue to receive support with seeds and fertiliser, I will expand the cultivation.

**If you didn't plant cassava, which crop would you grow on your land?**

I could grow coffee. But I didn't grow coffee because there was no one who would join me in caring for the crop. And I don't have the capital for growing coffee. Cassava is a good fit for me now.

**Thank you. We wish you good health and higher cassava productivity this year!**

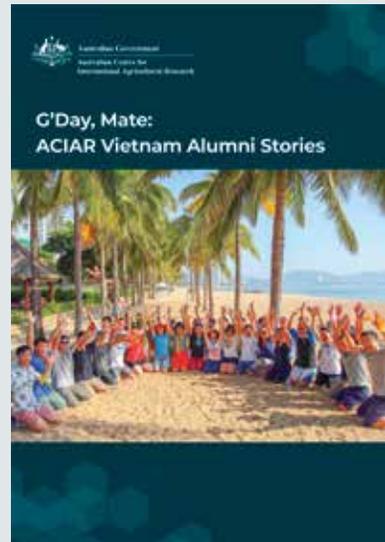
**Hi, Minh! Can you introduce yourself?**

My name is Luong Van Minh. I live in the Pung village, Pung Tra commune, Thuan Chau district, Son La province. I currently cultivate eight hectares of cassava. In 2019, I joined the Northwest Agro-forestry Research and Development Centre of Northern Mountainous Agriculture and Forestry Institute (NOMAFSI) research team to plant new cassava variants. In the same year, I harvested nine tonnes of the new cassava variety. This is a fantastic result as with the cassava I used to plant before, I could only harvest 3–4 tonnes. In 2020, I even reached higher productivity: 12 tonnes in total. I am really excited about this crop.



# G'day, Mate: ACIAR Vietnam Alumni Stories

ACIAR Vietnam has produced its first-time 'G'day Mate: ACIAR Vietnam Alumni stories.' It includes a collection of stories from 18 alumni who are diverse across field, experience, gender and age. The book seeks to increase ACIAR change-makers' visibility, showcase their agricultural research achievements, and preserve their lessons learned while studying in Australia. Although it is only a snapshot of the alumni community, the book reflects ACIAR's vision of building and sustaining a vibrant global alumni network. ACIAR will continue to accompany its alumni in 2021 to build a more united and robust ACIAR Vietnam Alumni network to further support the country's agricultural research and development.



## ACIAR Vietnam team update



We welcome **Nguyen Thu Huong**, who has joined ACIAR In-Country Communication Officer Network (ICCON) based in Vietnam. Huong joined ACIAR Vietnam in October 2020 following a two-year stint in a Communications Leader role with the Vietnam Wildlife Conservation Society. She has a wealth of communications experience across many different areas and is responsible for developing and coordinating ACIAR Vietnam's communications strategy. She also supports ACIAR in Vietnam and its Headquarters in Canberra to create and promote communications products.

Huong holds a Bachelor's degree in Television Journalism from the Academy of Communications and Journalism, and takes over from Nguyen Thi Thanh Mai, who was the

ICCON in Vietnam for the previous two years. Mai was a valuable contributor to ACIAR, coordinating events and alumni activities while supporting the Vietnam office with various communication products. We thank Mai and wish her well in her next journey, taking up a communications consultancy role with an American NGO.

# Sticky Rice with Cassava

Recipe by Chef Nguyen Manh Hung, extracted from the 'Farmer's Gourmet' cookbook published on the 25th anniversary of ACIAR Vietnam

## Ingredients

- 200 g glutinous rice
- 200 g cassava
- 20 g fried onions
- 1 tsp salt

## Method

- Soak the glutinous rice into cold water for 3 hours.
- Peel cassava and cut it in half. Remove the core fibre then cut it into pieces. Soak cassava into the salt water for about 15 to 20 minutes.
- Boil water in a steamer pot for 10 minutes.
- Mix glutinous rice with the cassava and salt the mixture well. Place the mixture into the steamer pot. Steam for about 35 minutes or until it is cooked.
- Sprinkle over the top with fried onions and enjoy.



Photo: Vu Bao Khanh





The Australian Centre for International Agricultural Research (ACIAR) is part of Australia's international development cooperation program. Its mission is to achieve more productive and sustainable agricultural systems for the benefit of developing countries and Australia. ACIAR commissions collaborative research between Australian and developing-country researchers in areas where Australia has special research competence. ACIAR also administers Australia's contribution to the international agricultural research centres.

ACIAR Vietnam is one of the ten country/regional offices and we have been active in Vietnam for 28 years (1993-2021).

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