

PANEL

Agri-food R&D – re-examining the rewards and the risks

Dr Ravi Khetarpal¹, Dr Madaline Healey²,
Ms Regina Bi Nukundj³, Professor Philip Pardey⁴

Chair: Dr Sandro Demaio

1 Asia Pacific Association of Agricultural Research Institutions

2 University of the Sunshine Coast

3 Department of Agriculture and Livestock, Papua New Guinea

4 University of Minnesota

Q: Chair

In his paper just now, Philip Pardey has outlined some fairly strong returns, together with flatlining investment and confounding risks.

Dr Khetarpal, coming to you first. What is the ‘magic sauce’? What elements in agricultural research do you think are critical to the success of high impact projects that you have seen?



A: Ravi Khetarpal

Good morning, everyone.

The factors which are leading to, or led to, the success of the collaborative projects in the Asia–Pacific region as we observed, are, firstly, the quality of collaboration with partners. Secondly, it is the ownership taken by the beneficiary countries. If we have ownership from day one, I think we have an easy go, and half the job is done.

The quality of collaboration – with the partners with whom we implement – matters. We are not the implementing agency; we are an association; we get others to implement. One example is an ACIAR project, which was funded by ACIAR and implemented by IFPRI, Washington. There it was the quality of the partnership, with how we collect the data, analyse the data, clean the data, and how to project it for future research investments. We incorporate it locally in South-East Asian countries. That played a very important role. So, the engagement of the partners and the technical implementation with us become very crucial, apart from the ownership by the country.

Another point which is becoming very important now is how we see the policy institutionalisation of the outputs of the project, if there is something related to policy. Or how we look at the scaling-up of what is a research output. We normally build capacity of individuals, but we fail at times in building capacity to scale-up. Capacity and scaling-up are entirely different domains, and most of the donor agencies only build individual capacity and that’s all. So that is where many good projects stumble. If you have a capacity to scale-up also inbuilt in the whole funding process, that makes a winner.

Q: Chair

Thank you. So, partnership, and capacity to scale.

Dr Healey, Ravi's answer must really resonate with you. You have had experience as a volunteer and a trainer and now as a mentor. Can you tell us about impacts that you have seen and from your own involvement in some of these projects across the region?



A: Madaline Healey

Being a volunteer, a mentor and a trainer really speaks to the Crawford Fund's crop health capacity-building program. So that's exactly what I'm going to talk about here.

Across yesterday's RAID event and also this morning, we keep hearing about partnerships, collaboration, trust and communication.

In the Crawford Fund's program, trainers and mentors are all volunteers, and the impact of that is that everybody's very 'invested': everybody's there because they want success. They want to build up the capacity of young early career researchers here in Australia and also overseas. And that's where the collaboration comes together.

Volunteers go overseas; they work with local colleagues in Lao – where the program is mostly working – and they train other agricultural officers, other forestry officers, weed scientists, ... They engage and work with farmers as well. They say: 'What do you need and what can we do?'. And the program has so much success and so much impact because it's got this succession of volunteers and mentors and trainers coming in. We have people on the ground daily, weekly, having wins every month, having wins every year. And there's the support of these amazing and incredible people like Professor Deirdre Lemerle, who's in the room here, and Professor Lester Burgess.

There was talk yesterday [at the RAID event] about capacity-building and leaving legacies. And that's what the Crawford Fund's program is. It's a legacy. It's leaving a legacy for impact on the ground in helping with production; impact in terms of institutional training and scaling-out, slowly, in rural areas in Lao.

There is also the long-term impact, because you're working with unqualified people like myself who stumble into a volunteer position and then get to keep on going, and training, and developing research, and supporting people collaboratively. Because we're talking with everybody on the ground and saying, 'Hey, what do you need? What can we do to help? And how can we do it together?'. And so that's really what the impact of the program is.

Q: Chair

Thank you.

Ms Bi Nukundj, I want to ask you a question about the translation of research and development into policy, because that's been an area that you've led in, and done some incredible work in PNG and through the FAO.

What do you see as the major opportunities or ingredients we need to have if we want to translate research into policy outcomes?



A: Regina Bi Nukundj

That's a great question. In a beneficiary country we have policies that guide us in whatever we do, and we have policy directives and national goals and development plans that cascade down from the global Sustainable Development Goals. And in whatever we do, we must translate to achieving those plans and targets.

In my experience, we have a lot of funding and money poured into doing research. The research projects' outcomes, the objectives of the research, are very good and the collaboration is very good. But to translate these research outcomes into information that can feed into evidence-based policy decisions or decision-making, there is a connectivity gap. From my observation, the connection is not there.

I would like to take this opportunity at this forum to say that it would be good to have policy officers being able to contribute during the design phase of the research programs, so that the research programs are also able to consider the policies in the beneficiary country, the sectoral and national overarching plans guiding the development in that country. So that the research is not done just as research and to obtain very good results, or just so it helps the research fellows in capacity-building for individual researchers in the country, but rather so that the research funding institution leaves behind a legacy.

Then the people, the government, from policy makers and decision makers, all the way through to stakeholders, the private sector and the farming communities that benefit will appreciate the money and support that is put into research. The beneficiary country will appreciate the researchers from Australia going in to work in collaboration, jointly working together with researchers in the country.

This suggestion is proposed to have that factored into the research design, so that at the end of the life of the projects we can have seminars, or a forum, where all the Australian Government funded projects can present their findings, their research outcomes and the impacts. This will be a forum where all stakeholders, from government officials to private sector, to farming community and development partners, can gather to share their research outcomes and gain from that work. The information shared can be used in developing policies and making decisions for the country.

Q: Chair

Thank you.

One more quick question to you, Dr Pardey. You mentioned that the last time we saw a significant increase in CGIAR contributions was during the 2008 food crisis. The world faces another food crisis with Ukraine at the moment. How do we galvanise that as an opportunity to increase funding for global agricultural research and make a small silver lining out of what is a significant threat and challenge to so many millions across the planet?



A: Philip Pardey

That is a tough one to answer. I think that the incentives are to throw some money at this problem really quickly, and move on. However, what might be more prudent is to couple increased investment with considered thinking (and action) to adjust the structures by which (international) agri-food research is financed.

A few years ago, colleagues and I wrote a piece on the changing (funding) fortunes of the CGIAR*, in which we speculated how different, perhaps, the trajectory of investments in the CGIAR might be if they were being funded by organisations like the National Science Foundation and the counterpart institutions here in Australia. And that maybe there is scope for opening up opportunities and dialogue with agencies *beyond* the economic development agencies – and even routing (some of) that international funding by way of domestic agricultural (research) agencies.

At the moment, in the US and here in Australia, the primary public-sector funding base for international research is coming out of foreign aid budgets, which tend to be rather volatile. Thus, there may be an institutional-design mismatch between the sources of funding and the strategies that are required to sustain this type of investment over the long term.

I think the other opportunity – one that we are actively exploring at the University of Minnesota – is to think much more creatively about public–private partnerships. The Twin Cities [Minneapolis and Saint Paul] probably has the largest cluster of Fortune 500 companies in food and agriculture ‘in our backyard’. We have behemoths like Cargill, with \$160 billion turnover or something like that, and General Mills, and Hormel, and Land O’Lakes, and others.

It’s not easy but we are working on how to strategically engage with them, beyond just picking their pockets for sources of funding, and seeking to use data-driven strategies to partner with the private sector as a means of amplifying and accelerating the impact of R&D. Figuring out what the shared value proposition is, so as to encourage investment into this joint public–private space that yields both public and private goods, is an area where I am personally spending a lot of time – and where we are starting to gain a bit of traction.

*Alston J.M., Dehmer S., Pardey P.G. 2006. International initiatives in agricultural R&D: the changing fortunes of the CGIAR. Chapter 12 in P.G. Pardey, J.M. Alston and R.R. Piggott, eds, *Agricultural R&D in the Developing World: Too Little, Too Late?* Washington D.C.: International Food Policy Research Institute.

Chair

Thank you. I am sorry to rush our speakers and our panellists this morning. We did start late. Please give a big round of applause again for Dr Pardey, Dr Khetarpal, Dr Healey and Ms Bi Nukundj.

Dr Ravi Khetarpal is the Executive Secretary of Asia Pacific Association of Agricultural Research Institutions (APAARI) which has more than 80 members from the region. He facilitates and promotes networking, capacity-building, knowledge management, policy

issues and partnerships in the region, and also coordinates the development and implementation of global and regional projects on agriculture innovation systems, phytosanitary compliances, promotion of biopesticides, agribiotechnology and bioresources, agriculture science technology indicators and public private partnerships. He has served ICAR, India and CABI (South Asia) as Regional Director in the past. He was also a consultant for twelve FAO/World Bank/USDA Projects in Asian countries on biosecurity and compliances to SPS Agreement of the WTO and represented Asia as Developing Country Expert in SPS working Group of STDF/WTO. He recently chaired (2020–2022) the Tropical Agricultural Platform, a G-20 initiative of FAO, and is now chairing (2021–2024) the Global Forum of Agricultural Research and Innovation with the secretariat at FAO. He holds a PhD in Life Sciences (Plant Pathology) from University of Paris.

Dr Healey is a member of the RAID network, a Crawford Fund mentor in Laos and a former conference scholar. She studied a Bachelor of Agricultural Science before stepping into a PhD and then landing in Laos as a volunteer entomologist in the Crawford Fund program. Madaline works at the University of the Sunshine Coast on ACIAR projects in the Mekong countries focusing on integrated pest management, biological control and forest biosecurity. Her interests are trees, veggies and all things bug like. A short video on Madaline's time in Laos as a volunteer and then a mentor in our biosecurity work is [here](#).

Regina Bi Nukundj is Chief Livestock Officer under the Food Security Branch at the Department of Agriculture and Livestock in Papua New Guinea. She holds a Master of Science Degree in Animal Production from James Cook University, Australia. She has worked for the Department of Agriculture and Livestock for 28 years now, being recruited straight into the department after graduating with Bachelor of Science Degree in Agriculture from University of Technology, Lae, Papua New Guinea. She has also worked in livestock production under food security and is now focusing her efforts as a policy planner in the sector and has served in various capacities in the department as Livestock extension officer from 1994 to 2006 before being transferred into HQ as Chief Livestock Development Officer from 2007 to 2018. Regina has acted as the focal point for PNG FAO and has been appointed as National Coordinator of various FAO Technical Corporation Projects under the food security programme from 2016 to 2019. She was appointed as Deputy Coordinator of PNG APEC Agriculture Coordination Team in 2017 preparing for hosting the 2018 APEC, and successfully hosted 11 sets of Food Security and Agriculture related meetings. During the PNG APEC host year, she initiated discussions on Promoting Women in Agriculture and Fisheries in APEC where it's been accepted as an important agenda in the following APEC meetings in 2019 (Chile) and 2020 (Malaysia). She coordinated an APEC project in 2019 to promote active participation of Women in APEC in Agriculture and Fisheries sectors, contributing to improve economic capabilities and improve food security. She has reviewed agriculture research projects, for ACIAR, of research conducted in PNG, and from June 2019 to April 2020 she was appointed as DAL's Acting Deputy Secretary of Policy and Planning, and coordinated the formulation of the National Agriculture Medium Term Development Plan 2020–2022, which was approved by the National Executive Council and launched by the Prime Minister and Minister of Agriculture.

Philip Pardey has been at the University of Minnesota since 2002. He is a Professor of Science and Technology Policy, in the Department of Applied Economics, and Director of Global Research Initiatives for the College of Food, Agricultural and Natural Resource Sciences (CFANS). He also directs the University's GEMS Informatics Center. GEMS brings together CFANS and the Minnesota Supercomputing Institute to develop and deploy computational systems that address complex problems to unlock innovation in the agri-food sector. Previously he was a senior research fellow at IFPRI (International Food Policy Research Institute), Washington, D.C., and ISNAR (International Service for National Agricultural Research), The Hague, Netherlands. Philip's career has focused on informing and enabling data-driven innovation and sustainable productivity growth in the food and agricultural sectors worldwide. He has authored more than 400 books, articles, and papers. He is a Fellow of the American Association for the Advancement of Science (AAAS) and of the Agricultural and Applied Economics Association, Distinguished Fellow and Past President of the Australasian Agricultural and Resource Economics Society, Distinguished Life Member of the International Association of Agricultural Economists, and winner of the Siehl Prize for Excellence in Agriculture.