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THE CRAWFORD FUND
For a Food Secure World

HIGHLIGHTS

NEWSLETTER

INSIDE

Mining, Agriculture and Development: Bread from Stones? 1

An overview of the Crawford Fund 2013 Annual Conference

Conference Travel Scholarships 2

Assistance for young scientists and students to attend our annual conference

National Task Force on Aid for Food Security 3

Our new study on the benefits to Australia from international agricultural research

Making the Public Aware 4

Crawford Fund efforts to make the benefits of international agricultural research and development better understood

Developments for Master Class Participants 5

Reports from two former Communications Master Class participants

Crawford Fund Training Program 6

The latest news on Crawford Fund short-term, hands-on training for men and women from developing countries

A Wider Canvas for International Agricultural Research 10

An update on our briefs on emerging trends

Contributors	11
Board of Directors	11
What is the Crawford Fund?	12
Awards Training Courses and Master Classes ahead	12

MINING, AGRICULTURE AND DEVELOPMENT: **Bread from Stones?**

A joint conference of the Crawford Fund and the Africa Australia Research Forum, 25-27 August 2013 • Perth, Australia

The Crawford Fund's 2013 annual conference on food security will be held on 25-27 August in Perth. We have joined with the Africa Australia Research Forum and the highly successful "Africa Down Under" event to bring together a mix of senior food security and mining experts to address the interaction between mining and agriculture, and identify national and international practices and policies that provide benefits to communities and improve food security.

The African Economic Outlook Report released in late May carried the promising news that the continent's economy was projected to grow at 4.8 per cent this year and 5.3 per cent next year, and also highlighted the core significance of the agricultural and mining industries to the future of that continent – a situation not dissimilar to those industries' importance in Australia.

Can the Australian and African experiences of these industries better inform and complement development in both continents?

The report by UN and partners highlighted that large-scale agricultural transformation

is yet to happen and much of Africa's natural wealth is still unexplored. It could be argued that this makes even more timely our consideration of opportunities for improvements in the way that agriculture and mining intersect and develop.

In releasing the report, our conference morning keynote speaker Mario Pezzini, Director at the OECD Development Centre, noted that Africa's agricultural, mining and energy resources could be better used to boost the continent's pace of economic growth and pave the way for a breakthrough in human development.

"Growth is not enough. African countries must provide the right conditions for turning natural resources into jobs, optimise their resource revenues through smart taxation and help investors and locals to make the most of linkages," he said.

"Ultimately, transformation means opening opportunities so people can find jobs, create businesses, as well as invest in health, education and food security," he said.



Mining, Agriculture and Development

2013 Annual Conference

Our event will focus on:

- How to ensure positive, sustainable outcomes from mining and agriculture for food security and development
- How policy, investment and research and development can be better used to provide pro-poor benefits
- How we can use expertise and infrastructure from mining in developing countries to help poor agricultural and rural communities emerge from poverty.

The conference will kick off on Sunday 25 August with a networking event being hosted by Curtin University at the Western Australian Museum's Shipwreck Galleries to allow conference delegates to renew old acquaintances and meet new friends in an informal setting.

On Monday 26 August there will be a field visit titled 'Linking Mining and Agriculture - The Western Australian Experience', which will take place at the Alcoa Farmlands, co-sponsored by the Western Australian Beef Council. The trip will provide an opportunity to see and discuss innovative agricultural land use associated with mining and refining operations, with a panel of mining and agriculture specialists. Speakers from leading mining companies in Australia will describe how they have

been developing agricultural projects in conjunction with mining activity.

On Monday evening the Sir John Crawford Memorial Address will be given by the Hon Dr Florence Chenoweth – an influential global agriculture development and human rights expert, Africa Prize Winner and Minister for Agriculture in the Republic of Liberia. Titled 'Opportunities in the Midst of the Global Food Crisis', the address will be followed by a reception in the State Function Centre overlooking the city of Perth and attended by delegates and VIP guests.

The Conference Breakfast will take place on Tuesday 27 August and is titled 'Issues for Mining, Agriculture and Development in Africa'. It will be co-hosted by the Crawford Fund and the Australia-Africa Mining Industry Group (AAMIG) and will be followed by the conference forum.

Key speakers at the Conference Forum will be:

- Mr Mario Pezzini, Director, OECD Development Centre addressing 'Developing Opportunities and Challenges for Mining and Agriculture'
- HE Festus Mogae, former President of Botswana and Chairman of the Coalition

for Dialogue on Africa on 'The Role of Agriculture and Mining in Pro-Poor Sustainable Development'

- Ms Jane Karuku, President, Alliance for a Green Revolution in Africa is on the panel on 'Exploring the nexus between Mining and Agriculture for Development' with others including Dr Gavin Hilson, Chair Sustainability in Business, Surrey University, UK
- Dr Yemi Akinbami, Executive Director, Forum for Agricultural Research in Africa and formerly with Agriculture and Food Security Division, African Union Commission will be part of the panel on 'Strategies and Policies to Support Sustainable Community Development' with Mr Antonio Pedro, Director, UN Economic Commission for Africa.

The forum will end with a Fireside Chat hosted by J Max Bankole Jarrett, Special Adviser, Coalition for Dialogue on Africa and former BBC presenter in Africa, with our Sir John Crawford lecturer The Honorable Dr Florence Chenoweth and The Honorable Professor Sospeter Muhongo, Minister of Energy and Minerals, Tanzania for their responses to the day's proceedings.



Young Scholars Program

Conference Travel Scholarships

It is our intention to once again offer travel scholarships to young Australian agricultural scientists with a genuine interest in international agricultural development to attend the Crawford Fund conference. Further details are on our website or to receive background please contact **Crawford@crawfordfund.org**

National Task Force on Aid for Food Security

The Crawford Fund has established a task force to consider benefits accruing to Australia and its States and Territories from development-assistance related investment in international agricultural research, and to propose ways in which these benefits might be enhanced and made better known.

"We believe that Australian development assistance programs in agriculture and related sectors should retain their primary purpose of assisting economic and social development in developing countries, in accordance with Australia's national interests," said the Fund's Dr Eric Craswell, the project leader.

"However, since being set up over 25 years ago, the Crawford Fund has also emphasised the fact that investment in agricultural research for development and food security can deliver substantial direct and indirect benefits to Australia, in effect 'doing well by doing good,'" he said.

Prof John Mullen, a distinguished fellow of the Australian Agricultural and Resource Economics Society from Charles Sturt University is assisting the task force by doing an assessment of a range of published studies around investments in agricultural research for development to build a comprehensive picture of the costs and benefits and their distribution.

Former Speaker of the House of Representatives and former chair of the Crawford Fund, The Hon Neil Andrew AO, leads the Task Force. He says special attention will be given to the biosecurity and biodiversity contributions of international agricultural research.

"We hope the findings will provide evidence-based policy advice to guide investments in agricultural research and training in the future and also broaden the appreciation of the impact of R&D funding for developing countries and for Australia – our economy, our security, our environment, our farmers, our scientists, and our international relations," Mr Andrew said.

The new task force follows a 2008 Crawford Fund task force, which focused national debate around rising world food prices and food shortages – a debate which continues today.

The task force includes Mr Terry Enright, farmer and former chair of the Grains Research and Development Corporation; Dr Tony Gregson, who has an extensive science and corporate research management background including board positions on a range of international agricultural research

centres; Ms Cathy McGowan, rural consultant and academic, and Prof John Mullen.

The task force has consulted widely with the domestic and international agricultural research and extension communities as well as with development specialists at AusAID and the Australian Centre for International Agricultural Research.

An initial draft report is expected in the coming months, with a final report to be published by the end of the year. For further information, including Terms of Reference, go to www.crawfordfund.org

As a sampling of the contributions being received by the task force, the following is a quote from Dr Meryl Williams's submission. Meryl is a distinguished fisheries expert, former Director General of the WorldFish Centre, inaugural chair of the Commission of the Australian Centre for International Agricultural Research and currently a board member of ICRISAT (one of the CG centres):

"Agricultural science is a global enterprise. Much the same crops and animals are grown around the world, in a variety of farming environments. Much knowledge and technology is adoptable and adaptable and no one company, institute, or country can do it alone. Nearly from the dawn of the international agricultural research enterprise, Australia

joined in, led by the vision of such pathbreakers and the institutions they helped create as Sir John Crawford, Professor Derek Tribe, ACIAR and the Crawford Fund.

The incredible numbers of Australian scientists and science leaders since then, to use another sporting analogy, reads like our Olympic medal tally – we have had a disproportionate number relative to our population size. At one point when I was a CGIAR Center Director General, four of the 15 DGs were Australians and one was an "honorary Australian", a New Zealander who did his Ph D in Australia. We have also enjoyed more than our pro rata share of Board chairs and members, TAC and Science Council members, etc.

And the enriching international experience of such agricultural researchers and leaders has brought back to Australia, the "inside tips," the insights and knowledge our agriculture needs. For example, much of Australia's crop germplasm, especially for dryland crops, comes from the international genebanks, to which we also contribute in funds and accessions. Australian universities have been enriched greatly in their undergraduate, postgraduate and teaching capacity by many agricultural students, who have become life-long contacts and Australian supporters."



MAKING THE PUBLIC AWARE

Our public awareness campaign is shaping up to once again include a busy set of activities associated with a range of events, advocacy around policy, international visitors and media announcements. Between newsletters, you can keep up-to-date with our regular feature stories and news reports on our website, through our @CrawfordFund Twitter site and videos on our YouTube site. Key activities since the last newsletter are highlighted below.

Advocacy Apace

Earlier in the newsletter, readers have been given background on our key policy-based advocacy efforts underway around the Task Force on benefits to Australia from international agricultural research, and our 'Wider Canvas' project research briefs on issues in agricultural research. Each of these will be launched through 2013 with stakeholder meetings, public events and a media outreach to ensure that they receive the widest possible audience.

Bread from Stones - 2013 Conference

Registration is online for our 2013 Annual Conference 'Mining, Agriculture and Development: Bread from Stones', which will be on 25, 26 and 27 August in Perth. As explained in the newsletter's lead article, it is being held outside of Canberra for the first time and is in conjunction with the Africa Australia Research Forum. We hope that by having our event prior to the highly successful Africa Down Under mining event, which attracts thousands of people with an interest in mining, we can raise awareness with significant players in the mining industry of the importance of working for better food security outcomes.

Svalbard Maintains its Appeal

The response to the planned visit to Australia by Marie Haga, the new head of the Global Crop Diversity Trust, shows that the so-called 'Arctic Doomsday Seed Vault', one of the activities of the Trust which has grabbed international attention, has not lost any of its appeal. The Fund is assisting Marie with her visit in late June to talk to key stakeholders and the media about new activities of the Trust. The Hon Tim Fischer, former chair of the Fund, sits on the board of the Trust and will be chairing a roundtable discussion, co-hosted by the Fund and ACIAR.

Science-Led Dairy Industry

The Fund worked with the Geoffrey Gardiner Dairy Foundation to spread the message on national TV and radio by Distinguished Prof Paul Moughan that over the next 30 years there will be an unprecedented demand for food, fuelled by rapid world population growth and that a science-led dairy industry can benefit from the opportunities this demand will provide.

'Seeing is Believing' in 2013

Our program of journalist visits to developing countries includes visits to Africa, Asia, Pacific and South America in 2013. The Fund has launched its journalism award for food security reporting, with the prize being a 'seeing is believing' visit. The winner will be announced in July.

'Serious Games' for Food Security

The Fund continues to assist and encourage the development of partnerships and projects related to 'serious games' for food security for farmers in Australia and the developing world. The practical aspect of building a first prototype is underway with a team of game design students from QUT.

Comms Master Classes

The very positive response from the group of agricultural scientists and communicators from across Africa who attended our second Master Class in Communicating with Stakeholders bodes well for the next Master Class being planned for scientists in the Pacific to be held in PNG later this year. A report on the Africa Master Class is in the training section of the newsletter.



Master Class participants hard at work writing their communication plans

Scramble for Natural Resources: More Food, Less Land?

The proceedings of our 2012 conference are now available for download from our website. The proceedings provide learned consideration of the range of issues involved in the competing demand for land for a variety of purposes. For those who find the 2012 topic of interest, our 2013 conference 'Mining, Agriculture and Development: Bread from Stones' will provide an opportunity to delve further into issues related to one key competitor for land.

MAKING THE PUBLIC AWARE

Ag Economists and Food Security

The Fund's connection to this year's Australian Agricultural and Resource Economists' conference went beyond the extensive national media coverage generated around food security and other issues. John Kerin addressed the conference dinner, received Honorary Life Membership and launched the Fund's journalist award.

Derek Tribe Biography

Copies of the Derek Tribe biography by Prof Lindsay Falvey FTSE, are still available. Congratulations to Lindsay who was appointed to the board of the International Livestock Research Institute, based in Nairobi, Kenya.



The Hon John Kerin, Chair of the Crawford Fund, addresses the AARES conference

Developments for Master Class Participants

With our second Master Class in Communicating with Stakeholders just completed and a third planned, it's interesting to hear from two of our participants from the first training, both women from the Philippines involved in work related to the WorldFish Centre. Both report they have found the Master Class has helped in subsequent endeavours and personal development. Within a few months of finishing the Master Class, the two of them joined forces and replicated the course with 19 participants selected by the WorldFish Centre, so with that kind of energy we shouldn't be surprised by how much they've managed in the last year.

Dr Della Grace Galope-Bacaltos is a marine scientist and a professor in the Southern Philippines Agri-Business and Marine and Aquatic School of Technology (SPAMAST). She is also a coordinator for the Philippine Council for Aquatic and Marine Research and Development (PCAMRD). Grace was supported by the Fund to come to Australia for training on seagrass watching, as well as presenting at the International Coral Reef Symposium in Cairns. She was then awarded a Fulbright Scholarship and is studying in California. She reported that her lecture on 'Our Gulf is Our Life: Protecting Marine Resources in Davao, Philippines' covered protection and management initiatives for the gulf, including the topics of overexploitation of coral reefs, sedimentation, accumulation of waste, and harmful fishing methods.

"My lecture at the California State University Sacramento was a success of course with my learnings from the Crawford Fund Master Class."

Grace is now considering going on to study a Masters Degree in science

communication, and has a growing interest in nematodes.



Grace presents at CSU Sacramento

Dr Alice Joan G. Ferrer of the University of the Philippines Visayas has also reported in on her work and the benefits from the Master Class. She finished a book using materials from her mangroves research, which was part of the action plan in her communication strategy from the Master Class. The book was launched during the celebration of the National Fisheries Week in 2012

and was published by the Bureau of Fisheries and Aquatic Resources, with support from the Economy and Environment Program for Southeast Asia. This year she goes to Japan to present her mangroves research in the Global Commons Conference of the International Association on the Study of the Commons, having also presented it in Korea at the Asian Fisheries and Aquaculture Forum. Alice hopes to then go on to do another presentation at the MARE Centre for Maritime Research in Amsterdam. Alice also reports that she's involved in a health project to develop and test health innovations.

"We are wrapping up our work on testing a protocol to measure and validate the extent of coverage of national health insurance. I just finished two manuals related to this work, and the manual will be used when the project will be rolled out to the rest of the country in July. In all these, I remember the training you gave me and am thankful for the things I learned."



Alice during a staged media interview at the Master Class in Thailand

CRAWFORD FUND TRAINING FOR IMPACT

We have supported another diverse range of hands-on, short-term training opportunities for men and women engaged in agricultural research in developing countries. A list of upcoming training is also on the back cover of Highlights. The Fund's training scheme is managed in large part by the State program committees, whose members volunteer their time and knowledge to match Australian talent with developing country needs.

The reports provided below cover a broad range of skills and topics including soil mapping, forestry, crop disease, poultry farming, biosecurity and the Asian beef industry. Participants in the highlighted training were from Zimbabwe, India, Thailand, Sri Lanka, Kenya, Vietnam, Zambia, Malawi, East Timor, Philippines, Bangladesh, Pakistan, Laos, Cambodia and PNG highlighting the spread of our partnerships and collaborations around the world.

MASTER CLASS UPDATE

Second Master Class in Communicating with Stakeholders

Readers may recall our first 'Master Class in Communicating with Stakeholders', held in late 2011 in Thailand for around 20 scientists from Asian countries to improve their skills in communicating about their research. Following the success of that first class and the interest it generated, a second class was held in Ethiopia in April this year, and a third is planned for scientists from the Pacific later in the year.

"We seem to have timed the development of this Master Class at just the right time – the interest and support has been very positive," said Cathy Reade, the Fund's Director of Public Affairs and Communications, who developed and managed the training.

"Special thanks must go to our Australian facilitators, Jenni Metcalfe and Toss Gascoigne. We are definitely benefiting from their many years of experience in training Australian scientists and the excellent purpose-written training guides they've developed," said Cathy.

Participants will be surveyed after three months to gauge the benefit they received from the skills and materials they took back to their institutes including a communication plan that identifies key targets and the best way to reach them.

Rhizobiology Master Class

Our last newsletter mentioned our two-week 'Master Class on Rhizobiology' training that was held in Kandy, Sri Lanka involving participants, facilitators and coordinators from Zimbabwe, Zambia, Malawi, South Africa, Kenya, India, Thailand, Vietnam, Australia and the host Sri Lanka. The title of the master class was "The isolation, identification and utilization of root nodule bacteria (rhizobia) in promoting sustainable agricultural productivity" and it was facilitated by scientists from Murdoch



HE Lisa Filipetto, Australian Ambassador in Ethiopia, presents Liz Ogotu from the Kenya office of the Australian International Food Security Centre with her Master Class certificate, watched on by Eric Craswell from the Fund and Dr Azage Tegegne from ILRI

University. The teaching was based on four modules: Isolation; Characterization; Authentication; and Inoculants Technology.

"This was the most fulfilling training course I have ever attended. This training strengthened my willpower to make nitrogen fixation known to more people and benefit a lot more," said course participant Tatenda Kainga.

STATE TRAINING PROGRAMS

SOUTH AUSTRALIA

Soil Mapping Kenya

Optimal allocation of land resources for production of agricultural and industrial crops is critically important in countries such as Kenya where land productivity is a matter of individual survival as well as national food security. The Kenya Agricultural Research Institute (KARI) has earmarked six oil crops for enhancing

food and energy security for the country's future. Currently, deciding where to locate crops is done using a system of trial and error – with few tools available for assessing the long-term risks relating to soil erosion, salinity and sodicity.

With this in mind, the Crawford Fund sponsored Matolo Nyamai from KARI to travel to Australia to develop soil-mapping skills, collate templates and gather information in order to implement a concerted land resource assessment in Kenya and to help on his return with the selection of crops best suited to the different soils and climatic conditions of the land. Mr Nyamai spent time learning from Australian experts in the field – visiting scientists in Adelaide, Hobart and Brisbane where he developed a greater understanding of Digital Soil Mapping and the collection of comprehensive land and soil attribute spatial data.

"Mr Nyamai now has some options of improving the soil and landscape information in Kenya that is required to assess where different crops may be

grown,” said Roger Wickes, Coordinator of the Fund’s SA Committee.

“He presented his story to a number of scientific forums and tested the technical options he considered appropriate to recommend when he returned to Kenya. A strong working relationship has been developed between Australia and Kenya.”

QUEENSLAND

Mentoring in Soil Fertility Testing in East Timor

In 2011, approximately 50 cardboard containers containing new and used laboratory apparatus and instrumentation were shipped to Dili in East Timor. This equipment was donated by laboratories in Australia through an initiative of the Australian Soil Science Society in collaboration with the Crawford Fund and the ongoing Seeds of Life Program (SOL) in East Timor. Following the donation of the equipment, The Crawford Fund sponsored Queensland Scientist David Lyons to travel to Dili to develop a soil test for plant available P and to mentor laboratory technicians employed by the Ministry of Agriculture and Fisheries.

The mentorship involved general laboratory practice; workplace health and safety; the use of volumetric ware; identification of potential sources of error in the methods; the use of spectrophotometers, and batch quality control. Assisting Mr Lyons with the training was Ms Lamdor T. Sitorus Gusmao – a part time Agronomy lecturer at the National University of Timor Lorosae.

“I foresee an important role for someone such as Lamdor to continue on as trainer and supervisor of the technicians. The only way the new soils laboratory can become a success is with a qualified person being on hand in East Timor,” Mr Lyons said.

Filling the Skills Gap in Agribusiness

There has been a rapid increase in the demand for market and value chain based research and development to reduce poverty and improve smallholder market access and productivity. However, the number of experienced specialist agribusiness researchers in ACIAR partner countries such as Vietnam, Indonesia, Philippines and the Pacific is very small. In order to address this multi-disciplinary skills gap, a workshop was held in Hanoi with the support of the Fund’s NSW, Tasmanian and Queensland committees.

A total of 56 participants attended, including market and value chain researchers from ACIAR managed projects in Vietnam and international market and value chain research specialists. The workshop provided them with an opportunity to share value chain methods being used in different agribusiness projects; evaluate research practices in experimental design; identify agribusiness training and capacity building needs, and develop a program for agribusiness training with Vietnamese partner agencies involved in ACIAR agribusiness projects. Participants were able to identify a number of avenues to improve collaboration around market and consumer research. A website was suggested as a way of sharing tools, experiences and other data of common interest.

“Design and use of appropriate methodologies was identified as a high training priority. One option for addressing this would be the development of an Agribusiness Master Class focusing on the effective implementation of agribusiness methodologies,” said facilitator Rodd Dyer, ACIAR’s Agribusiness Research Program Manager.

VICTORIA

Fruit Growing Insights

When agricultural researchers from a formerly Taliban-occupied province in northern Pakistan visited Australia recently, they found the two countries faced plenty of common agricultural challenges. The three researchers, from the Agricultural Research Institute in the Swat Valley in Pakistan, were hosted by the Australian Khyber Pakhtunkhwa Agricultural Development Organisation (AKPADO) – with the support of our Victoria and Queensland Committees and Syngenta.

“We have a number of issues in our region, particularly with brown rot and blossom blight in peach trees as well as problems with fruit flies. Much of what we’ve learnt here in Australia will be able to be applied on our return to Pakistan,” said one of the researchers, Dr Mohammad Rauf.

AKPADO Executive Director Mark Drew has been to the Swat Valley a number of times and said “We are aiming to develop agriculture and improve the income of farmers in the region. To do this, we need to ensure they are up-to-date with fruit growing technologies and techniques.”

Master TreeGrowers

The Fund supported five African nationals and two international aid workers to visit Australia for two weeks to participate in a training course run by the Australian Master TreeGrower (MTG) program. Their first week was spent in Gippsland and included tours of various forestry projects and sawmills – as well as workshops on management of trees on farms. The second week was spent with the Otway Agroforestry Network and focused on the design of revegetation projects that reflect the interests and aspirations of landholders. The participants visited nurseries, farms and native forests and had a chance to experience our unique wildlife and rural hospitality.

The success of the trip has resulted in firm plans being put into place for further courses in Uganda and Niger involving researchers, extension agents and leading local farmers and will kick start a series of new courses run by Africans in their own communities. Like the Australian MTG, the course will not specifically promote forestry on farms but rather, it will assist farmers to explore opportunities for using trees to improve their livelihoods. Unlike the Australian



(From L) Ms Lamdor overseeing Ministry of Agriculture and Fisheries lab technicians

MTG course however, the outcome of the African MTG has the potential to save the lives of many people who face starvation.

NORTHERN TERRITORY

Biosecurity Training works for Australia too

The Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) and the Department of Agriculture and Food, Western Australia (DAFWA) have been working together to strengthen regional biosecurity with neighbouring countries by providing training in plant pathology and entomology for representatives from East Timor. Plant Pathologist Mr Abel Ximenes and Entomologist Mr Joaquim Sarmento Cabra from the Timor Leste National Directorate for Quarantine and Biosecurity attended an eight week training program based in Darwin and Perth which included general and applied plant biosecurity, plant quarantine, pest and disease identification and a two week English course.

With financial support from The Crawford Fund, they were able to learn about processing and identifying pathology and entomology samples in the laboratory during their visit. Training was also provided in traditional diagnostic methods and introductory molecular DNA-based methods. The participants were able to do field work with quarantine officers in order to gain more of an understanding of passenger and fresh commodities quarantine inspections from both a state and commonwealth perspective.

"This training will enable East Timor to safeguard its food production system from biosecurity risks which will have a long term benefit to Australian agriculture," said Dr Sharma, Director Plant Biosecurity, DAFWA.

ACT

Cause for Congratulations

Congratulations to Dr Tony Fischer AM, coordinator of the Crawford Fund's ACT Committee who was honoured with the naming of the new "Tony Fischer Laboratory" at CIMMYT in Mexico, dedicated to the support and friendship of Australian farmers and the wheat scientific community. The Fund is proud to have such an eminent researcher in its



Participants and supporters of the first African Master TreeGrower course

ranks. Tony is well known internationally as a wheat cropping scientist. Tony's new book, titled 'Crop Yields and Global Food Security: Will Yield Increases Continue to Feed the World?', is due for release later this year and was written with colleagues Derek Byerlee and Greg Edmeades.

It is particularly pleasing to see that the dedication acknowledges the many years of 'support and friendship' between CIMMYT and Australian farmers, a fact that will no doubt be highlighted in our upcoming Task Force on benefits to Australia from international agricultural research.



Hans Braun, CIMMYT's current Global Wheat Program Director presenting Tony Fischer with his plaque

NSW

Chooks Hold the Key

Chickens are owned by 70 - 80 per cent of households in Southern and Eastern Africa. They provide their owners with meat, eggs and financial security. For this reason, poultry disease is a major threat to the livelihoods of many African families.

In support of the long-term international poultry project being undertaken by Associate Professor Robyn Alders from the Faculty of Veterinary Science of the

University of Sydney, Dr Halifa Msami from the Tanzanian Veterinary Laboratory Authority travelled to Australia with the help of the Crawford Fund. This enabled him to benefit from a tailor-made training program to equip him to work effectively and efficiently with the University of Sydney in his role as the Tanzanian country coordinator of their poultry program and to gain insights into multi-disciplinary approaches to food security.

During his visit, Dr Msami was also able to address 'Food Security in Africa: Bridging Research and Practice' conference, hosted by ACIAR's Australian International Food Security Centre (AIFSC). The work by Robyn and Msami, which was mentioned by the Minister for Foreign Affairs at the AIFSC conference and the focus of Msami's presentation, is explained in a short video on the Crawford Fund's YouTube website.

"I gained an enhanced understanding of systems analysis, research governance and interdisciplinary research whilst in Australia. I learnt about the implementation of international agricultural R&D – and was able to improve my oral and written communication skills by giving a number of presentations," Dr Msami said.



Dr Msami and Professor Alders meet The Hon Senator Bob Carr, Minister for Foreign Affairs

Farming Systems Research in Asia

Three Cambodian and two Laotian trainees were able to return to their homelands with a number of new ideas on how to improve the efficiencies of their cropping systems following a two-week research trip to Australia supported as a joint effort by the Fund's Queensland, NSW and Victoria committees.

One of the participants, Mr Ngin Chhay, Director of the Rice Crop in Cambodia said there were aspects of Australian rice growing that could be adopted in Cambodia for improved productivity, such as the pure seed scheme, the ability to manage water and land better, effective use of herbicides and insecticides and improved fertiliser management.

Another focus of the trainee's visit was to learn how Australian researchers and farmers are working together to solve production issues. This involved visits to dryland farms to develop an understanding of the concept of farming water, the diversity of the crops grown, the role of farmers in setting the research agenda through involvement with farmer groups and how a whole range of technologies come together to produce a successful crop.

"Pesticide resistance was identified as an emerging issue in Asia. This resulted in efficient pesticide application being discussed and demonstrated in southern NSW and a presentation for trainees on the theory of resistance whilst in Queensland," said Geoff Beecher, Research Agronomist, NSW DPI, Yanco Agricultural Institute.

TASMANIA

Cattle Clubs for Better Beef

As part of an existing ACIAR project to develop the Vietnamese beef industry, the Crawford Fund supported a series of workshops and a study tour for farmers and extension staff in Dak Lak province in the Central Highlands of Vietnam. More than 50 people were involved in the training, which aimed to engage South Central Coastal (SCC) farmers and extension workers with counterparts in Eakar district, Dak Lak, where beef cattle production is more specialised and focused on fattening and finishing animals for market.

Representatives from the Department of Agriculture and Rural Development



Dak Lak farmer explaining his forage production system

(DARD), Hue University of Agriculture and Forestry, the Research and Development Centre for Animal Husbandry, and the University of Tasmania were involved in facilitation of the training.

SCC farmers and extension workers were presented with an overview of the farming system in Eakar district where beef cattle have steadily replaced other less profitable crops. A major factor in the success of beef cattle farmers in Dak Lak has been the formation of 'cattle clubs'. These clubs are typical of many rural associations where farmers have regular meetings to share information and learn from each other.

"Feedback from the participants was very positive. By hearing and seeing how farmers in Dak Lak province have successfully transitioned from cattle keepers to cattle producers, farmers and extension workers from SCC Vietnam now have a greater level of confidence to implement similar programs in their provinces," said facilitator Associate Professor Peter Lane from the University of Tasmania.

Veggies in PNG

Poverty in rural and urban communities and inequality of opportunity remain challenges in Papua New Guinea (PNG). Farming provides food security and economic benefits in rural communities but often the produce available for sale is based on subsistence farming. Philmah Seta-Waken, a Junior Agronomist at the National Agriculture Research Institute of PNG was able to travel to Australia with the help of the Crawford Fund to interact with scientists and participate in the Australian and New Zealand Soil Science Institutes Conference in Hobart.

During the event, Ms Seta-Waken presented a paper based on soil and crop data from the current ACIAR funded project 'Increasing Vegetable Production in Central Province, PNG, for Port Moresby markets'. This provided conference delegates with an appreciation of the quality of soils and potential for vegetable production in the lowlands and highlands of Central Province.

To learn more about Australian vegetable production, Ms Seta-Waken spent a week in the vegetable producing areas of North West Tasmania visiting farms, fresh vegetable packers, potato and vegetable processors and TIA laboratories and Vegetable Research Facility.

"I gained an insight into intensive production systems, strong value chains and industrial and research support for the vegetable and potato industries. I will be able to apply the principles that I've learnt about soil management, post-harvest processing and crop management along the value chain, to my work in Papua New Guinea," Ms Seta-Waken said.

WESTERN AUSTRALIA

Beating Blight

Each year *Stemphylium* blight destroys between 50 – 60 per cent of lentil crops in Bangladesh. To assist the country's scientists in tackling this problem, the Crawford Fund and the International Centre for Agricultural Research in the Dry Areas supported training on *Quantifying epidemiology and forecasting risks of crop disease*.



Trainees viewing Stemphylium in the field

Two West Australian scientists travelled to Bangladesh in February to run a series of workshops at the Bangladesh Agricultural Research Institute.

"Lectures on general principals of plant pathology, on-farm biosecurity measures for implementation by growers, identification of crop diseases and the need to implement biosecurity farm practices for farm visits were just a few areas which were covered," said Dr Moin Salam, Senior Research Officer at the Department of Agriculture and Food, Western Australia.

He said that a major factor in organising the course was the severe epidemic of Stemphylium blight in 2012, which became a potential threat to sustainability of lentils in the cropping systems being tested by the on-going ACIAR project on the introduction of short duration pulses. Dr Salam led

the training with his colleague Mr Bill MacLeod. The course was attended by 16 participants with two from Nepal, one from India and 13 from Bangladesh.

"We hope that the scientists involved will be able to develop, test and apply disease forecasting models for key crop diseases in order to combat production losses. The trainers will continue to mentor the two groups through email dialog," Dr Salam said.

Crop Protection in Africa

A unique opportunity was provided for Mogomotsi Moatswi from Botswana's Ministry of Agriculture when he travelled to Australia with help from The Crawford Fund to undergo plant pathology training. Mr Moatswi spent time with scientists at the Department of Agriculture and Food Western Australia (DAFWA) – working with the crop protection team

and plant diagnostics group.

During his trip he was able to learn about inoculation of different fungal and viral pathogens to plants in terms of varietal evaluation for resistance, identification using indicator plants and maintenance of viral cultures in glass houses.

"Most importantly, I learnt how to avoid spreading viruses and pests into disease-free zones and how to maintain those 'safe' zones through well-coordinated quarantine operations," Mr Moatswi said.



Mogomotsi Moatswi harvesting potatoes for extraction of root knot nematodes

A Wider Canvas for International Agricultural Research: **Briefs on emerging trends in international agricultural research**

Plans for our 'Wider Canvas' project, considering important and emerging issues in agricultural research, include 2-3 papers in 2013.

The study is currently addressing the issues associated with the increasingly important roles of the private sector in food and agriculture in the developing world, including:

- Drivers of change affecting the growing role of the private sector (e.g. the growing role of supermarkets and urban consumers in setting market demands for food)
- Public/private partnerships as ways to stimulate growth and access to markets by small scale producers
- The importance of food safety standards in ensuring market access
- Role of public/ private sector partnerships in R&D, to develop more demand driven research agenda, for example in the development of new crop varieties and more productive livestock breeds in Africa.

The Syngenta Foundation for Sustainable Agriculture is sharing its experience in establishing public/private partnerships with the Crawford Fund and the University of Queensland Global Change Institute.

CONTRIBUTORS FINANCIAL YEAR 2012-13

We wish to thank the following contributors to our training and public awareness activities:

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22nd International Grasslands Congress

Sydney | 15 - 19 September 2013

Revitalising grasslands to sustain our communities

The Crawford Fund is pleased to be supporting the 22nd International Grasslands Congress on 15 – 19 September 2013. The program will explore the current issues facing grasslands around the world and share the latest industry developments and solutions. The Fund will be assisting with media and, as Grasslands Youth Futures sponsor, providing training opportunities for young developing country scientists.

More information at <http://www.igc2013.com/>

What is the Crawford Fund?

The Crawford Fund's purpose is to encourage investment in international agricultural research (IAR) by governments and the private sector, in the belief that it is an essential, high priority, international activity.

We believe that IAR holds the key to alleviating rural poverty in developing countries, and can thus open the door to economic progress. Good news is worth sharing, and the Fund's Public Awareness Campaign increases understanding of the importance and potential of IAR, its achievements and needs.

The Fund also has a training program that fills a niche by offering practical, highly focused non-degree instruction to men and women engaged in agricultural research and management in developing countries.

HIGHLIGHTS is the Crawford Fund newsletter. Letters from readers are welcome and should be sent to the editor, Cathy Reade at cathy.reade@crawfordfund.org

Highlights and other publications and materials are on our website:

www.crawfordfund.org

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THE CRAWFORD FUND
For a Food Secure World

Awards and Training Courses supported by The Crawford Fund

The following awards to individuals and courses for groups will be reported in future newsletters:

Training awards to individuals:

David Gale – Australia - Take part in 'Rice: Research to production' at IRRI

Dewi Sartami – Indonesia - Development of an illustrated identification system for pest species of Thysanoptera in Indonesia

Dipendra Pokharel - Nepal
- Molecular techniques for wheat improvement for adaptation to drought stress

Dr Nuchanart Tangchitsomkid and Mr Thanakorn Chanmalee – Thailand - Nematodes in cropping systems and Informal training with DAFF, CSIRO and Plant Biosecurity CRC

Enopa Lindsay – PNG - Value/supply chain analysis

Fernando Aguater – Argentina - Untangling the climate component of the genotype x environment interaction on wheat yield using incomplete datasets

Graham McDowell – Australia - Scoping visit to Myanmar with a view to establishing a degree program in animal production

Manoj Kumar – India - Analysis of arsenic and other elements in various environmental samples using advanced analytical techniques

Mohammad Shahid – Pakistan - International workshop on pest fruit fly identification and management

Training courses to groups:

Strengthening food security in Laos through improved family poultry production: scoping, training and mentoring activity - Laos - *Robyn Alders*

Hands on training on modern field agronomic research - Africa - *Daniel Rodriguez*

Workshop on diagnosis of foliar fungal diseases in Tunisia and establishment of fungal culture collections - Tunisia - *Paul Taylor*

Translating the Australian landcare model into a Pacific village community - Tonga - *Bob Edgar*

Statistics for livestock and fisheries research - Laos - *John Schiller*

Writing scientific research articles for international submission - Indonesia - *Margaret Cargill*

Writing research papers - PNG - *Mike Webb*

African Master Treegrower Course - Africa - *Jon Lambert*

Cost benefit analysis of adopting new technology for the Indonesian mangosteen industry - Indonesia - *Peter Johnson*

Ecologically-based rodent management - Fiji - *Simon Reid*