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Charles Sturt University

the PULSE

Newsletter of the ACIAR Pakistan profitable pulse project – CIM/2015/041 Issue 1 – August 2018

In this issue

From the project leader

I am delighted to introduce the first newsletter of the Australian Centre for International Agricultural Research (ACIAR). We intend to make this newsletter a regular publication. Inside you will find news about team members' accomplishments, contributions to the project objectives and any new developments. I also look forward to team members contributing feature articles for subsequent issues of the newsletter.

This project, mainly through farmer-led research and demonstrations, aims to enhance the production and profitability of pulses in the existing cropping systems in Pakistan so that the decline in legume production can be reversed.

I hope you will enjoy this first issue and do let me know about information you'd like to see covered in the future.

Dr Ata-ur Rehman,
Charles Sturt University

Inception workshop

By Penny Heuston,
Heuston Agronomy Services

The inception workshop in Pakistan (December 2016) was our inaugural toe-in-the-water encounter with Pakistan. It brought together the heads of the peak research organisations that we will be dealing with in this project.

The highlights for me were:

- getting a better insight of Pakistani farming systems
- gaining some understanding of the problems they encounter
- exposure to the cultural differences
- meeting the research partners
- getting to know the other members of the Australian team.

Towards the end of the workshop, I was impressed by the interaction of all the workshop participants. Laughs were shared and the foundations for both friendships and collaborations built.
We have a long way to go to get the basics in place, and more time in the field would have been beneficial, but it was a good starting point.

In collaboration with:

FGC Functional Grains Centre · Barani · PARC · Sindh Agriculture University · PULSE AUSTRALIA · FarmLink

Pakistan introductory workshop December 2016 (Islamabad, Pakistan)

By Phil Bowden, Pulse Australia

In December 2016, the Charles Sturt University (CSU) team flew to Islamabad in Pakistan to plan the five-year multidisciplinary ACIAR project: Increasing the Profitability of Pulses.

Meeting with local researchers and farmers, the project team of agronomists, food technologists, economists and social scientists from CSU, FarmLink and Pulse Australia set the groundwork for the cooperative project. The team spent 10 days meeting with approximately 40 scientists in Islamabad and Rawalpindi, and with farmers in Khunda Chowk, Punjab province, about 100 km from Islamabad.

Interacting with the Pakistani delegations in teams for plant breeding, agronomy, food technology, economics and social sciences, the Australian team got to know many of their Pakistani counterparts. Discussing plans to improve the use and value of pulse crops to local farmers was an interesting interaction, with both Australian and Pakistani experts presenting views on how to manage this in their cropping systems with respect to cultural and technological differences. Meeting with local farmers and visiting farms in the Punjab region gave the CSU team an invaluable insight into some of the problems faced by the farming community.

A series of research demonstrations, including improved seed varieties, integrated pest and weed management, zero tillage techniques and improved harvesting were planned to show how Australian technology can be adapted for use on small-scale farms in Pakistan.

The initial meetings with researchers and farmers were well received, with goodwill established for the collaborative project. The team were warmly welcomed, with considerable effort made by the locals to host our group.

The Australian High Commission in Islamabad were also very cooperative, albeit under strict security regulations, and helped our team access regional areas.

Baseline survey workshop

By Dr Ata-ur Rehman, Project Leader, Charles Sturt University

The baseline survey workshop was undertaken to develop survey instruments for conducting baseline surveys in all six project sites. This workshop continued the work of the initial inception and planning workshops. The purpose of the workshop was to determine the:

1. material to be collected and development of the instrument
2. process for the collection of the material (who will be involved, the location of the sites and the time of collection)
3. means of storing, sharing and analysing the data collected.

During the workshop, the team reviewed the material provided by the various participating project team members. This led to the eventual development of the survey instrument. It was agreed that the instrument would be circulated to all project members for refinement, before undertaking the pilot testing in June 2017.

Meeting the locals (women's group).

Gender inclusiveness workshop

By Dr Ata-ur Rehman, Project Leader, Charles Sturt University

Dr Ata-ur Rehman and Dr Gavin Ramsay attended this workshop in Lahore in October 2017. The workshop provided an insight into gender inclusion processes, bringing about change through devising gender mainstreaming plans. Self-assessment of the project design helped planning of situational analysis which further strengthened gender inclusion activities planned for December 2017.

Following this workshop, Dr Rehman and Dr Ramsay met with the project coordinator Dr Shahid Riaz Malik and the newly appointed ACIAR pulses project officers. The group discussed current project activities, as well as the project officers' role in developing the manual for situational analysis of participating farm families in the project. The meeting endorsed the formulation of the manual's table of contents.

L–R: Dr Ata-ur Rehman, Abdul Manan, Tehreem Javaid, Israr Hussain and Professor Chris Blanchard at Charles Sturt University in Wagga Wagga. (Photo: Emily Malone)

Project officers from Pakistan on the pulse

By Emily Malone, Communications Officer, Graham Centre for Agricultural Innovation

The opportunity to visit Riverina farms, meet researchers and gain an insight into research and development in Australia was the focus of a recent visit by a group of project officers from Pakistan.

The Graham Centre for Agricultural Innovation is leading a $2.3 million project working with Pakistani farmers to improve the way lentil, chickpea and groundnut crops are grown and to add value to these legumes through better processing technology.

Project officers Abdul Manan, Israr Hussain and Tehreem Javaid visited the centre in February to meet the research team, visit local farms and work with project partner FarmLink.

Mr Hussain said the farm visits provided valuable insights into Australian production systems.

"What we have learned is how Australian farmers are managing disease, insect pests and weeds by following crop rotations," Mr Hussain said.

The project is funded by the Australian Centre for International Agricultural Research (ACIAR). It involves researchers from: Charles Sturt University; the Pakistan Agricultural Research Council (PARC); the University of Arid Agriculture (UAAR), Rawalpindi; Muhammad Nawaz Shareef University of Agriculture (MNSUA), Multan; and Sindh Agriculture University (SAU), Tandojam.

The project also includes actively participating researchers from federal and provincial research institutes and several farm families. Australian researchers from Pulse Australia, Riverina farming systems group FarmLink, and Heuston Agronomy Services are also involved in the project.

Situational analysis workshop and visit to project sites

By Dr Ata-ur Rehman, Project Leader, Charles Sturt University

Dr Ata-ur Rehman and Dr Gavin Ramsay travelled to Islamabad in December to lead a situational analysis workshop, which was attended by research staff representing all participating organisations and associated research institutes. The workshop provided insights on conducting situational analysis of farm families or group of collaborative research (GCR). During the two-day workshop, participants worked together to develop a facilitation running sheet with an exhaustive list of questions for GCRs, encompassing all aspects of their farming knowledge, activities and socioeconomics.

Two weeks of site visits and data collection followed the workshop. Visits to GCRs at each project site comprised of selected staff of participating organisations and affiliated research institutes, including Dr Rehman, Dr Ramsay and project officers. The data collected at each site was discussed and analysed on the second day of each visit. Based on the analysed data, a protocol for conducting participatory research with farmers (standard operating protocol [SOP]) was developed which also included SOPs for the insect, disease and abiotic stress management currently being implemented in a participatory manner at all project sites. All six project site participants are connected through WhatsApp. Farmers communicate with each other and the research team on a daily basis, discussing issues and remedies.

A follow-up workshop was held in March 2018, with Dr Rehman travelling to Islamabad. He explained that the first situational analysis in December was to engage farmers and introduce the project to the community, whereas the second stage was to conduct situational analysis of the selected individual farm families on each project site. At each varietal trial site, farm families were invited to visit the trials and rate the varieties according to their preferences. Project officers shared the results of the situational analysis with farmers, and passed on their knowledge about insect pests and diseases along with abiotic stresses based on the results of situational analysis.

L–R: Phill Whalan, Israr Hussain, Tehreem Javaid, Cindy Cassidy and Abdul Manan at Hart Bros Seed Processing and Treatment.

Visit to Australia – an overview

By Tehreem Javaid, Project Officer, Islamabad

On 4 February 2018 I arrived in Wagga Wagga, New South Wales, Australia with two other project officers: Abdul Manan and Israr Hussain. It was a very fruitful visit, where we learned about the many different approaches that Australian farmers have adopted. The dominant farm structure in Australia remains the family farm, similar to Pakistan. Australian farmers are primarily big landholders having properties as big as 2500 acres, while Pakistani farmers may have land from 12 acres (small landholders) up to 400 to 500 acres. Strategies adopted by Australian growers include crop rotation and insect pest and weed management, and most importantly, are linked to research by FarmLink. Farmers also get guidance from research institutes and universities in order to improve crop productivity and profitability, and are open to trying new things recommended by researchers. The collaboration between farmers and researchers plays a vital role in spreading knowledge of new seed varieties, herbicides, pesticides and advanced technologies, and which agronomic practices to adopt over a certain period of time.

During our stay we visited Wollundry Grove Olives, where we learned about the production process of olives, the oil extraction plant and their marketing strategies. We also visited Hart Bros Seeds' cleaning plant and discussed seed sales and local pulse production. Our visit to FarmLink in Temora helped us learn how grower groups worked.

Today, agriculture is a very sophisticated and highly technical industry, and in Australia it has been one of the most innovative and efficient. Collaboration with Australian farmers and industrialists gave us the opportunity to understand the agricultural system in Australia and how the seed industry and pulse production is so successful there. Many pulse crops were used as green manure and fodder crops because of the beneficial effect these crops have on the soil and their value as livestock feed. The industry has grown significantly and pulses are being increasingly recognised for their role in sustainable and profitable production systems. While pulses are grown in all three major cropping regions in Australia, specific crops are better adapted to some regions.

I'm thankful to ACIAR and Charles Sturt University for giving me this opportunity to travel to Australia and learn about their culture and the pulse industry.

Visit to Australia – GRDC update

By Israr Hussain, Project Officer, Islamabad

During our visit to Wagga Wagga, Tehreem Javaid, Abdul Manan and myself were lucky enough to be given the opportunity to attend the annual update of the Grains Research and Development Corporation (GRDC) at Charles Sturt University. It was our great pleasure to meet the agricultural scientists of diverse expertise. In addition to scientists, people from different sectors of the agricultural industry including farmers, seed producers, processors and those involved in agricultural markets also participated in the update.

After the welcome address by the GRDC, Ron Storey from Pulse Australia gave a presentation on the expansion of high-value pulse crops. He described the situation in the pulse industry following the implementation of import tax by India. Opportunities are still available if industry invests in the value addition of pulses instead of exporting grain in bulk. Australia can also look to the market of desi as well as kabuli chickpeas in different parts of the world, rather than focusing and relying solely on the Indian market.

Later, different presentations were given by speakers from various research fields in which the latest research questions and issues in the agricultural industry were highlighted. Some of the latest studies regarding herbicide resistance in different weeds, inoculation practices in pulses under acidic soil conditions, management of different crop diseases like blackleg in canola and crown rot in cereals, nitrogen dynamics in soil and so on were shared with the participants. There was a question and answer session after each presentation.

During these two days we were able to learn much about agricultural industry in Australia, both in general and the pulse industry in particular. The take-home message from the update is that value addition is essential to increasing the profitability of pulse-growers in Pakistan.

Visit to Australia – local field trips

By Abdul Manan, Project Officer, Multan

We visited Wollundry Grove Olives near Wagga Wagga where we learned about the process of olive oil extraction, value addition and marketing of extracted olive oil.

We met Ben Langtry on his property at Marrar. Mr Langtry shared his experience of mechanised farming and sale of produce after harvest.

We visited Dan Fox of Five Oaks, Old Junee, who shared his experience of moisture conservation using stubble retention and storage of grains.

We had a discussion at Hart Bros Seeds in Old Junee about seed sales and local pulse production.

We also had an industry orientation at FarmLink's head office in Temora, and discussed the role of grower groups and farmer-led research, development and extension (RD&E). We also discussed the role of the pulse industry in Australia, the role of the New South Wales Department of Primary Industries in its pulse program, and industry development.

At Crokers Grain in Marrar we saw the machinery set up for value addition in grain.

L–R: Israr Hussain, Ben Langtry, Cindy Cassidy, Tehreem Javaid visiting Ben Langtry's property at Marrar.

FarmLink – group for development

By Israr Hussain, Project Officer, Islamabad

It has been observed that the adoption rate of any new intervention by farmers is high in Australia. One of the main reasons is the presence of different farming groups operating in Australia. During our visit to Australia, we got a chance to visit one of them, FarmLink, which is a group of growers and researchers established about 12 years ago.

Before the establishment of farmer groups, there was an extension department of the Australian Government responsible for the dissemination of any new technology regarding crop production and so on to farmers. A decade earlier, the government realised that as the private sector was the main beneficiary of new agricultural technologies, they pulled out of the extension service and let the private sector invest in it. This was the time when Australian farmers decided to join together to form groups like FarmLink.

FarmLink consists of some 300 farms and 880 individual farmers covering an area of 1.2 million hectares. These farms are mainly located in the low rainfall regions of Australia. Farmers in this group pay tax on their produce. Funds collected through this tax are then given to research organisations like the GRDC. These organisations research problems identified by farming groups, and share the results of that research with the group. In this way farmers get practical solutions to their issues.

It was a perfect example of how farmers are fuelling the research according to their own issues and concerns. In Pakistan we do not have any farmer groups organised in such a manner. Due to limitation of funds, the modern agricultural technologies at research stations are not disseminated to the farmers through government extension departments, and the link between farmers and researchers is very weak, so we often find farmers in a helpless situation.

Cindy Cassidy, chief executive officer of FarmLink, shared her experience regarding extension methods used for the adoption of new technologies in agriculture.

Project management workshop

By Jenny Locker, Project Administrative Officer, Charles Sturt University

In April, Dr Ata-ur Rehman and Jenny Locker attended a Project Management Fundamentals workshop. This was run by an external facilitator and took us through the steps required in setting up and running a project, including the project plan, budget, communication, reporting and monitoring. We found the communication and reporting sections particularly useful and will be putting the tools learned in these areas into practice by developing reporting/progress templates and improved means of communication such as Basecamp software, regular meetings and use of WhatsApp.

Collaborations with other projects

By Jenny Locker, Project Administrative Officer, Charles Sturt University

In December, members of other ACIAR Pakistan pulses projects came to Charles Sturt University in Wagga Wagga to discuss collaboration. Staff from the following projects were in attendance.

- Developing modern value chains of pulses in Pakistan, led by the University of Tasmania. This project is still in the planning phase.
- Economic analysis of policies affecting pulses in Pakistan, led by the University of Western Australia. This is nearing completion.
- Gerard McEvilly from the Aik Saath program.

For more information on these projects please visit **aciar.gov.au**

Upcoming workshops and travel

Research Questions Workshop and Site Visits
31 July–7 August 2018
Islamabad

Aik Saath annual meeting
6–10 September 2018
Faisalabad

Project meetings and site visits
November 2018
TBA

Contact us

aciar.gov.au/project/CIM/2015/041

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