Global program for grain legumes and dryland cereals launched

Over 150 participants from 25 countries met on 14-16 February 2018 at Addis Ababa, Ethiopia, to identify better models for partnering as part of the launch meeting of the CGIAR Research Program on Grain Legumes and Dryland Cereals (GLDC). Dr Peter Carberry, Director of GLDC, underlined that the Program’s approach is of finding ways to add value to what is already being undertaken. Linking initiatives and building on each other’s strengths will be a key focus of the approach.

Inaugurating the launch, Ethiopia’s Minister of Agriculture and Natural Resources, H.E. Dr. Eyasu Abraha Alle, noted that, “grain legumes and dryland cereals are what have been termed as ‘Smart Food’ because they are: Good for you, Good for the planet, and Good for the farmer. More

More pictures
7th IFLRC International conference pushes for stronger multidisciplinary research and cross-country collaborations

A team of 15 scientists led by Dr Peter Carberry participated in the 7th International Food Legume Research Conference (IFLRC-VII) held in Marrakech, Morocco, from 6-8 May 2018. The event was jointly hosted by ICARDA and INRA. Recommendations to improve farmers’ incomes through sustainable production and marketing of legumes and an emphasis on stronger multidisciplinary research partnerships and enhanced cross-country collaborations to develop and promote improved varieties for nutrition security were the highlights of the conference. More than 300 scientists and big data experts joined policy makers, traders and entrepreneurs in various discussions and workshops to come up with recommendations on strengthening research on legumes. More

ISPC foresight workshop homes in on system-level prioritization of CGIAR research

The challenges of producing more food and fibre for a growing population, adopting sustainable production methods, and adapting to an ever changing climate call for innovative and new solutions that agricultural research can offer. Against this background, the International workshop on ‘State of Foresight in the CGIAR’ was organized by the CGIAR’S Independent Science and Partnership Council (ISPC), on 9-10 May 2018, at University of Aberdeen. About 30 scientists from different CGIAR institutes, ISPC members and research and development think tanks from different advanced institutes participated in the workshop. More

Bolstering NARS partners with systems modeling training

The use of systems modeling tools and decision support systems can be of great advantage to farmers by helping them plan their farming activities based on weather predictions. ICRISAT has been actively involved in building up the capacities of its NARS partners in this area. Workshops, hands-on training sessions, and information exchange programs conducted by ICRISAT’s Innovation Systems for the Drylands (ISD) team increase awareness and use of these technologies among extension agents and subsequently, the farmers. More
India’s first biofortified sorghum launched: Moving towards better nutrition

India’s first biofortified sorghum, with significantly higher iron (Fe) and zinc (Zn) concentrations of 45 ppm and 32 ppm respectively, was formally launched on 5 July 2018. Developed by ICRISAT, it was released for cultivation by Vasantrao Naik Marathwada Krishi Vidyapeeth (VNMKV), Maharashtra. The improved variety ICSR 14001, released as ‘Parbhani Shakti’ by VNMKV, offers a cost-effective and sustainable solution to address micronutrient deficiency.

Africa’s first biofortified pearl millet variety aims to combat anaemia

For millions of women and children in Africa anaemia is a significant public health concern—and diets deficient in iron are often to blame. But consuming a new variety of pearl millet called chakti—with an additional 20% of the estimated average requirement of iron—may improve their nutritional status and help them reach their physical and cognitive potential. This scientific breakthrough is thanks to plant breeders at the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) under the work of HarvestPlus.

Empowered women & an enriched community: Groundnut story of Northern Nigeria

Mrs Hadja Talatu Idrissa of Bunkure, near Kano, Nigeria, is the leader of a 25-women group in groundnut production and processing. They began to get involved with the Tropical Legumes III (TL III) project four years ago with a small seed pack of 5 kg each in their community farmland. From the harvest of this crop, they planted in a bigger farm plot the following year.

“From 1 hectare we harvested 25 bags of the improved variety SAMNUT 24, against 13 bags of the local variety harvested on the same plot,” says Mrs. Idrissa. After the harvest season, the group earned its first revenue from the haulms of the improved variety SAMNUT 24.

A thriving community of women seed producers

It started with just three women farmers who were part of a pilot from Pagou village, Burkina Faso, who were trained on improved groundnut seed production in 2015. The three women brought in 180 new members to three multi-stakeholder platforms (MSPs). These numbers are expected to grow to 540 by the end of 2018, creating an increasing community of women seed producers. Currently, there are 23 such trained women farmers in Pagou.

India’s first biofortified pearl millet variety aims to combat anaemia

Stories and more
Resilience over profitability: Could agricultural research deliver on both?

“Although in recent years we are inclined towards separating the two issues while designing research, reviewing our agricultural research for development over the past 45 years shows that it is possible for research to develop win-win technologies,” says Kai Mausch lead author of a ‘new study’ looking at how ICRISAT research could improve both farmers’ resilience and their incomes. More

Who are those people we call farmers?

Just about six percent of rural households in Kenya, aspire for their children to become farmers. This is highlighted through a recent study that interviewed 624 rural households from Embu and Kitui in eastern Kenya. The study found however, that 65% households hoped to increase their farm incomes. Closely linked to a recently published theoretical paper on the importance of aspirations, this publication focuses on household aspirations to understand its link to the potential for technology adoption More

Major step forward in chickpea and pigeonpea research – reference genome data assembled

Breeding high nutritional varieties of chickpea and pigeonpea just got easier. With new technology, genomic processes that could have taken years, have been completed in just a few months. This has been possible by work of scientists from ICRISAT headquartered in India, in collaboration with NRGene, Israel who have helped create multiple assembly lines of pigeonpea and chickpea genomes. This means scientists can not only better understand crop traits, they can also significantly speed up work on improved varieties. More
**Grant to develop communication outputs**

GLDC has invited proposals to support communications outputs that will be funded by a grant of approximately USD 5,000 each. The grant will fund the production of communication outputs that support the objectives of the program, and is open to IITA, ICARDA, ICRAF, ILRI, IWMI, Bioversity International, ICRISAT, IRD, CIRAD and CSIRO. The communication products can be in any medium e.g. videos, success stories and narratives, an interactive timeline, infographics, blog post, webinar, social media event or interviews or any new innovative approaches. It can cover any GLDC relevant issues. It can be about the work and success of a project or more generally about broad ‘issues’. The preference is to highlight the ‘bigger issue’ and present approaches or challenges around the issue.

**Deadline for proposal submission:** 20 August 2018  
**Grant amount:** Maximum of approximately US$ 5000 per accepted proposal

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**Gender Internship Program**

Part of GLDC’s mission is to implement gender research while strengthening capacities of gender researchers in the drylands. In pursuit of this, the program invited applications from new Masters graduates from Eastern and Southern Africa (Ethiopia, Kenya Uganda, Malawi and Tanzania) to pursue a 6-month Gender Internship Program on three topics:

- Youth transitions in the drylands
- Gender dynamics in the program’s seed systems
- Synthesis of gender gaps in dryland legumes and cereals production in ESA

We received 20 applications from seven countries and are in the process of short listing.

The internship provides applicants the opportunity to be affiliated with gender researchers/mentors from the program, lend their skills to a specific research topic in the program’s Gender Research Portfolio, exposure to a network of gender researchers in the region, and an opportunity to explore if gender research is a pathway they would want to engage with in career development.
Genomic-enabled prediction models using multi-environment trials to estimate the effect of genotype x environment interaction on prediction accuracy in chickpea

Molecular mapping of QTLs for heat tolerance in chickpea

Money matters: The role of yields and profits in agricultural technology adoption

A review of the available land cover and cropland maps for South Asia

Genomic and transcriptomic analysis identified gene clusters and candidate genes for oil content in peanut (Arachis hypogaea L.)

Molecular mapping and inheritance of restoration of fertility (Rf) in A4 hybrid system in pigeonpea (Cajanus cajan L. Millsp.)

Stability analysis in chickpea genotype sets as tool for breeding germplasm structuring strategy and adaptability scoping

Standard Operating Procedures for groundnut breeding and testing

Post-harvest management and associated food losses and by-products of cassava in southern Ethiopia

Morphophysiological diversity of rhizobia nodulating pigeon pea (Cajanus cajan L. Millsp.) growing in Ethiopia

Groundnut (Arachis hypogaea L.) and cowpea (Vigna unguiculata L. Walp) growing in Ethiopia are nodulated by diverse rhizobia

Phenotypic characteristics and preliminary symbiotic effectiveness of Rhizobia associated with haricot bean growing in diverse locations of Southern Ethiopia

Heat tolerance responses of chickpea (Cicer arietinum L.) genotypes in the thermal zone of Ethiopia, a case of Werer Station

Innovative partnership approach to chickpea seed production and technology dissemination: Lessons from Ethiopia

Genomics, genetics and breeding of tropical legumes for better livelihoods of smallholder farmers

Who are those people we call farmers? Rural Kenyan aspirations and realities

Can genomics deliver climate-change ready crops?

High-density genetic map using whole-genome re-sequencing for fine mapping and candidate gene discovery for disease resistance in peanut

The RNA-Seq based high resolution gene expression atlas of chickpea (Cicer arietinum L.) reveals dynamic spatio-temporal changes associated with growth and development

Accelerating genetic gains in legumes for the development of prosperous smallholder agriculture: Integrating genomics, phenotyping, systems modelling and agronomy