CIMMYT
International Maize and Wheat Improvement Center

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CIMMYT Launches Wheat Matters Campaign Leading up to World Food Prize

To help celebrate the award of the 2014 World Food Prize to former CIMMYT wheat scientist Dr. Sanjaya Rajaram, CIMMYT's International Communications Department and the Global Wheat Program have launched a wheat awareness campaign, "Wheat Matters."

In the weeks leading up to the mid-October World Food Prize ceremony, influential members of the wheat community including Peter Shewry, Mahmoud Solh and Hans Braun will contribute thought-provoking articles on climate change, nutrition, food security and challenges to modern wheat research; influential CIMMYT scientists will speak to these issues and their professional history with Dr. Rajaram in weekly videos; and a #WheatMatters campaign on social media will engage readers and promote awareness to a diverse audience.

Please visit wheat-matters for more information.

Also in this issue

Photo: Ranak Martin

Partnership on Maize Lethal Necrosis in Africa Makes Significant Progress

BM Prasanna and Florence Sipalla

Partners of the Maize Lethal Necrosis (MLN) project in Africa, funded by the Bill & Melinda Gates Foundation and Syngenta Foundation for Sustainable Agriculture (SFSA), came together to review and discuss the progress and next steps for the project at a workshop on 14-15 May. "The primary goal of this project is to identify MLN-tolerant germplasm, including inbred lines and pre-commercial hybrids, for potential deployment of MLN-tolerant varieties (with other relevant adaptive traits) through partners in Sub-Saharan Africa. The project also seeks to gain information regarding the genetics of resistance to the disease, create awareness and build capacity for more effective MLN management.

"As the project matures, we will be screening additional promising germplasm coming out of the MLN screening facility at Naivasha and from national agricultural research institute (NARI) partners at satellite testing centers in Kenya, Tanzania and Uganda under high natural disease pressure. This will help to validate the performance of the germplasm under MLN in important agro-ecologies," said CIMMYT Global Maize Program Director and MLN-Africa project leader, BM Prasanna.

Mike Robinson, chief scientific advisor at SFSA and representatives of several seed companies and NARIs in Kenya, Tanzania and Uganda participated in the MLN Field Day at Naivasha on 14 May. The companies included East African Seed, Kenya Seed Company, Meru Agro, Monsanto, DuPont Pioneer and Seed Co Limited. "We hope to submit several germplasm entries for trials at the MLN screening facility in the next planting season," said Francis Ndambuki, a maize breeder with Kenya Seed Company. Less than a year after its opening, the MLN screening facility is now fully functional, evaluating materials from several partner organizations, including the International Institute for Tropical Agriculture, NARIs and seed companies. The partners/visitors had an opportunity to see several trials taking place at the facility, as well as promising MLN-tolerant germplasm.

Scientists involved in this project are working intensively – in collaboration with national and international institutions to develop and validate virus inoculation and germplasm screening protocols. They are also testing a large array of germplasm for responses against MLN under artificial inoculation, developing diagnostic techniques and building the capacity of national partners in MLN diagnostics and management. The CIMMYT seed systems team is working on scaling-up the identified MLN-tolerant germplasm and distributing it to interested public and private partners in Africa. The progress made on the project's diverse fronts was presented in detail, and the next steps were discussed during the project meeting held in Nairobi on 15 May.

"We are pleased that CIMMYT teamed with KARI to address this important issue for Africa," said Joseph Mureithi, KARI deputy director. Mureithi continued, "The MLN screening facility at Naivasha is a model of partnership between CGIAR centers, NARIs and the private sector," adding that the results of the trials at the facility would have far-reaching impact. "Stresses such as drought and poor soil fertility could potentially compound the expression of the MLN disease," said KARI virologist Dr. Anne Wangai, a key partner ▶

▼ Group photograph taken at the MLN Screening Facility, Naivasha, Kenya. Photo: Florence Sipalla/CIMMYT

in this project. "This is a great opportunity to demonstrate the confluence of technologies – breeding, pathology and entomology," said Robinson, urging the project partners to further strengthen the scientific edge and demonstrate how the research being undertaken on the disease can quickly result in products that benefit African farmers affected by the disease.

"Policy advocacy is key," said Wilfred Mwangi, CIMMYT's regional representative for Africa. He emphasized the need to fast-track registration and commercialization of the MLN-tolerant hybrids, especially in the MLN-affected countries. The Kenya Plant Health Inspectorate Service (KEPHIS) was commended for its commitment and support in fast-tracking the release of promising MLN-tolerant hybrids.

"There is fast progress on the MLN research and the first wave of improved materials is coming now," said Robinson, adding that he is looking forward to seeing more materials in the future. He emphasized the importance of coordination, policy clarity, communication and international synergies on MLN research and development in Africa.

CIMMYT, Limagrain and Seed Co Limited Teams Discuss Partnership for Tackling Maize Lethal Necrosis

Florence Sipalla and BM Prasanna

Research managers and scientists from CIMMYT, Limagrain and Seed Co Limited held a discussion at CIMMYT-Nairobi on 4 July to forge a partnership to effectively tackle the maize lethal necrosis (MLN) disease in Africa. Scientists from CIMMYT's Global Maize Program, led by BM Prasanna, and representatives of the two companies, including Thierry Rosin (Limagrain lead for global corn research), Michel Debrand (chief executive officer, Limagrain-Africa), Emmanuel Aubry (head of corn research, Limagrain-South America) and Ephrame Havazvidi (research manager, Seed Co Limited), had detailed discussions on opportunities for collaborative research on MLN, as well as training and capacity building of African partners.

The proposed partnership seeks to fast-track the breeding and release of MLN-tolerant hybrids adapted to Sub-Saharan Africa (SSA)through molecular marker-assisted breeding. "Seed Co is already an important partner of CIMMYT in Africa. Limagrain has been supporting CIMMYT's research work with maize doubled haploids at CIMMYT in Mexico, and disease resistance in Asia," said Prasanna, adding that through this proposed partnership all parties would bring various strengths to the effort of finding effective solutions to MLN.

MLN has resulted in significant yield losses to smallholder farmers in East Africa. Therefore, it is important to identify and develop germplasm with MLN tolerance to replace the susceptible varieties in SSA as quickly as possible. "CIMMYT's recent work on identification of trait donors for MLN tolerance, coupled with the establishment of the MLN screening facility at Naivasha, serve as an important foundation

Photo: Florence Sipalla/CIMMYT

for this partnership to develop improved maize varieties for Sub-Saharan Africa with MLN tolerance and other adaptive traits," said Prasanna.

The visitors from Limagrain and Seed Co also toured the MLN Screening Facility at Naivasha, where germplasm from public and private sector partners is being screened. "It was a very good eye-opener on the MLN disease," said Havazvidi, who described the MLN research for development efforts of CIMMYT as "well-thought-out," especially with respect to the investigation of screening protocols and identification of sources of resistance to the disease. "I was impressed with the size of the screening and the professionalism in developing and managing the work at the MLN screening facility," Rosin said. "I learned a lot about MLN which was new to me," stated Aubry. Debrand commented that, "the research collaboration with CIMMYT will enhance the impact of Limagrain and Seed Co in Africa, especially with reference to maize-based food security."

Japan Ambassador visits CIMMYT

His Excellency Shuichiro Megata, the Japanese ambassador to Mexico, his wife, Yoshie Nakatani-Otsuka, counselor to the ambassador and others visited CIMMYT on 6 August.

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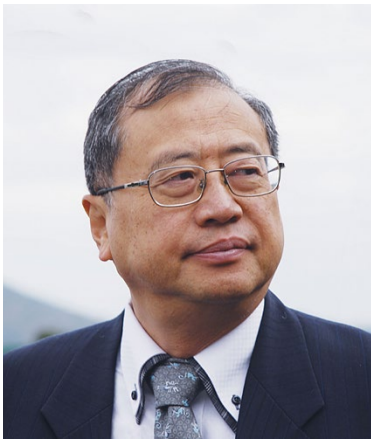

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Photos: Clyde Beaver III/CIMMYT

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1 Ambassador Megata admires the maize fields outside the CIMMYT headquarters complex.

2 Dr. Marianne Bänziger explains details of the CIMMYT gene bank, which is supported by the Government of Japan, to Ambassador Megata.

3 Masahiro Kishii, wheat cytogenetist/ wide crosses, provides details about CIMMYT's wheat collection to the ambassador and his party.

4 Ambassador Megata and Nakatani-Otsuka view the series of historical photos mounted above the lobby of CIMMYT headquarters.

5 Mrs. Megata, Ambassador Megata, Bänziger and Nakatani-Otsuka pose with the statue of Dr. Norman E. Borlaug in the lobby of CIMMYT's headquarters. Some of the earliest wheat varieties that Dr. Borlaug experimented with were descendants of wheat grown in Japan.

Shandong Academy of Agricultural Sciences Representatives Visit CIMMYT

A delegation from Shandong Academy of Agricultural Sciences (SAAS) in China visited CIMMYT on 8 August, as part of a long-term partnership between CIMMYT and SAAS that is focused on wheat breeding. The visit included a tour of the Wellhausen-Anderson Plant Genetic Resources Center, the bioscience complex, as well as the wheat and maize nutrition and quality and biotechnology laboratories.

Photo: Clyde Beaver III/CIMMYT

Visitors from SAAS and CIMMYT employees during a tour of CIMMYT's bioscience complex (left to right): Wan Shubo, President of SAAS; Ding Hanfeng, Director of Crop Germplasm Resources Center; Ruan Huaijun, Director of Research Institute for Sci & Tech Information; Yuanfeng Hao, Global Wheat Program; Wang Qingcheng, Professor of Maize Research Institute at SAAS; Dong Hezhong, Director of Shandong Cotton Research Center; and Zhiying Deng, visiting scholar from SAAS.

Heat Stress-Resilient Maize Hybrids for Asian Farmers

P. Nagesh, K. Seetharam, M.T. Vinayan and P.H. Zaidi

The Heat Tolerant Maize for Asia (HTMA) project, supported by the United States Agency for International Development (USAID) under the Feed the Future (FTF) initiative, is a public-private alliance that targets resource-poor people of South Asia who face weather extremes and climate-change effects. HTMA aims to create stable income and food security for resource-poor maize farmers in South Asia through development and deployment of heat-resilient maize hybrids.

Photo: UAS, Raichur photographer

Nora Lapitan of USAID addressing the audiance in HTMA seminar at UAS Raichur.

The project connects several public sector agricultural research institutions in South Asia, such as the Bangladesh Agricultural Research Institute; the Maize & Millets Research Institute, Pakistan; National Maize Research Program, Nepal; and Bhutan Maize Program. Also involved in the project are two state agriculture universities from India – Bihar Agriculture University, Sabor and University of Agriculture Sciences (UAS), Raichur – as well as seed companies in the region including DuPont Pioneer, Vibha Agritech, Kaveri Seeds and Ajeet Seeds and international institutions including Purdue University and CIMMYT.

The "2nd Annual Progress Review and Planning Meeting for the HTMA Project" was held 22-23 July at UAS, Raichur in Karnataka, India. The meeting was attended by scientists and representatives from the collaborating institutions in South Asia, Purdue University and CIMMYT. Dr. Nora Lapitan represented USAID at the meeting.

To take advantage of the presence of renowned scientists at this newly established agricultural university, the inaugural session of the meeting was organized as a special seminar on "Global initiatives on climate resilient crops." Dr. B.V. Patil, director of education at the university, organized the seminar for UAS staff and students. In his welcome speech Dr. Patil highlighted the importance of the HTMA public-private alliance, especially for addressing such complex issues as developing and deploying heat stress-resilient maize.

Dr. BM Prasanna, director of the CIMMYT Global Maize Program, lectured on "Adapting Maize to the Changing Climate," talking about the importance of climate change effects and CIMMYT initiatives on different continents in the development and deployment of stress-resilient maize hybrids. This was followed by another high-profile lecture on "Climate-Resilient Crops: A Key Strategy for Feed the Future," which was delivered by Lapitan. She spoke about the priorities of the FTF initiative, including efforts to reduce poverty and malnutrition in children in target countries through accelerated inclusive agricultural growth and a high-quality diet.

Photos: UAS, Raichur photographer

▲ HTMA-Project Steering Committee meeting.

The inaugural session was followed by a series of HTMA annual review and planning technical sessions. In the first, Dr. P.H. Zaidi, HTMA project leader and CIMMYT senior maize physiologist, presented updates on the project's execution and the progress achieved at the end of the second year. The project has met agreed milestones, and is even ahead on some fronts. This was followed by detailed progress reports on objectives given by each collaborating partner. Professor Mitch Tuinstra of Purdue University presented on membrane lipid profiling in relation to heat stress, as well as identifying quantitative trait loci for heat stress tolerance and component traits by joint linkage analysis. The leads from each of the public and private sector partners presented the results of the HTMA trials conducted at their locations, and also shared a list of top-ranking, best-bet heat-tolerant maize hybrids to take forward for large-scale testing and deployment.

▲ Prasanna explaining the HTMA products to Vice-Chancellor of UAS Raichur and other participants.

During the project's first two years, each partner identified promising and unique maize hybrids suitable for their target environment.

In molecular breeding, Zaidi presented the results of the association mapping panel, and Dr. Raman Babu, CIMMYT molecular maize breeder, presented the progress made on genotyping and association analysis. Dr. M.T. Vinayan, CIMMYT maize stress specialist for South Asia, presented a progress report on genomic selection for heat stress tolerance. Dr. K. Seetharaman, CIMMYT special project scientist in abiotic stress breeding and Dr. A.R. Sadananda, CIMMYT maize seed system specialist , presented jointly on the HTMA-product pipeline, including the promising heat stress-resilient hybrids ready for deployment, and a series of new hybrids ready for testing across locations in target environments. Dr. Christian Boeber, CIMMYT socio-economist, talked about progress in HTMA product targeting, pricing and adoption, summarizing the ongoing work on crop-modelling, reviewed work on the IMPACT model component, presented the survey tool and reviewed study sites in heat stress-prone ecologies of South Asia. Zaidi and Tuinstra presented the progress in project capacity building, including nine Ph.D. student fellowships offered under the project, and

three workshops/training courses including in-country courses on "Precision phenotyping for heat stress tolerance" in Nepal and Pakistan, and a course on "Statistical analysis and genomic selection."

Project progress was critically reviewed by the project steering committee (PSC) headed by Prasanna, who expressed high satisfaction on its overall development. Speaking for USAID, Lapitan said: "I am highly impressed with the progress in the HTMA project. Within a period of two years there is a first wave of heat-tolerant hybrids ready for large-scale testing and deployment. This is one of the 26 projects in our climate-resilient cereals portfolio, but this project successfully demonstrated excellent balance between up-stream and down-stream research. We have made impressive progress, and are rather ahead on some milestones. I consider it a model project." Other PSC members also expressed their satisfaction, and agreed that HTMA has made tremendous progress in products for heat stress ecologies in the partners' target environments. After discussing the progress in detail, project partners discussed the work plan and research activities for the third year. A parallel group discussion on objectives helped finalize the workplans and activities for each partner during the project's third year.

Finally, the PSC met and discussed the overall progress of the project in detail. In addition to Prasanna chairing the PSC, members include Dr. Mohammda Munir, chief scientific officer, Pakistan Agricultural Research Council; Dr. Yagna Gajadhar Khadka, director, crops and horticulture, Nepal Agricultural Research Council; Dr. Khalid Sultan, research director, Bangladesh Agricultural Research Institute; Dr. B.V. Patil, director of education at UAS; Tuinstra; Dr. N.P. Sarma, Kaveri Seeds; and Zaidi as member secretary. Overall, the PSC members expressed their satisfaction with ongoing activities and the progress being made by HTMA, particularly the close collaboration with partner institutions. "I sincerely hope that the same momentum is maintained for rest of the project, which is certainly going to have a strong impact on the maize farming community in stress-prone agro-ecologies of South Asia," said Munir.

The meeting was also attended by special guests, including Drs. Navin Hada and Danielle Knueppel from USAID in Nepal, and Dr. Mahendra Prasad Khanal and Mr. Dilaram Bhandari from the Agricultural Ministry of Nepal. They stated their appreciation for the opportunity to participate in the meeting for the project model and noted HTMA's fast-track progress. Khanal said, "We need to have a similar project for maize research and development in Nepal, since we are also pushing for hybrid varieties, and we should use a similar public-private partnership model for the product development and deployment."

CIMMYT staff can view the presentations given by Prasanna and Lapitan on InSide CIMMYT.

Photo: UAS, Raichur photographer

▲ Team-HTMA at UAS, Raichur.

Recent Activities and Accomplishments of the Agricultural Innovation Project (AIP) for Pakistan

The Agricultural Innovation Project (AIP) for Pakistan, led by CIMMYT and funded by USAID, has accomplished a great deal since its inception in March 2013. Among this year's most notable AIP achievements by partner institutions were numerous training sessions and workshops, important vaccine developments, progress in baseline surveys and advances in seed improvement and distribution.

Amina Khan and Jennifer Johnson

In May, 25 stakeholders involved in dairy production received training on the seven rapid assessment (RA) tools developed and modified by the International Livestock Research Institute (IRLI). Another 25 stakeholders involved in small ruminant production were given training on the small ruminant value chain rapid assessment (SRVC RA) tools by scientists from the International Center for Agricultural Research in the Dry Areas (ICARDA).

On 4 June, a wheat seed value chain workshop organized by CIMMYT in collaboration with the Cereal Crops Research Institute (CCRI) and the Pakistan Agricultural Research Council (PARC) was held at CCRI in Nowshera, Khyber Pakhtunkhwa Province (KPP). Nearly 50 actors in the wheat seed value chain participated in the workshop, in order to analyze gaps and identify opportunities in the KPP wheat seed system. A "training of trainers" was organized by the International Rice Research Institute (IRRI) on developing and validating a local rice crop check system at Engro Eximp, Muridke, Sheikhupura for seven field staff of the private sector on 24 June. The World Vegetable Center held a series of customized training workshops with its partners in order to identify gaps, exchange experiences and to further streamline the Center's activities among public and private partners.

Advances have also been made in improved maize seed under the AIP maize component, which evaluated the performance of about 220 recently introduced maize varieties against locally available checks in spring 2014. Preliminary results from the harvested sites show the good selection potential of introduced maize varieties, which consisted of early to intermediate maturity, climate-resilient and bio-fortified white and yellow kernel hybrids and open pollinated varieties. Best or comparable varieties identified will be further tested to fulfill variety release procedures.

With the help of ILRI, the production of the *Peste des Petits Ruminants* (PPR) vaccine in Pakistan will soon be improved. The version of the vaccine currently produced in Pakistan is thermo-stable at 35˚C, while the version of the vaccine produced by IRLI is thermo-stable at 45˚C and is therefore more resistant to damage and able to be kept at a wider variety of temperatures. Dr. Jeff Mariner, a former ILRI employee, visited Pakistan in June and conducted a technical audit of the production process in the two laboratories that produce the PPR vaccine. An action plan that includes training and production of a first batch of vaccine based on ILRI's vaccine composition was created based on this audit, and will be implemented in August in order to help Pakistan create a more heat-resistant variety of the PPR vaccine.

AIP staff members have also worked this year to address the issue of quality fodder for livestock in Pakistan by promoting the growth of spineless cactus on rangeland. AIP Livestock, in collaboration with the Rangeland Research Institute (RRI) of the National Agricultural Research Council (NARC), held a farmer's field day at NARC on 15 May to train farmers in the advantages and methodology of growing spineless cactus. Forty farmers participated, and many have since planted spineless cactus on their lands.

IRRI, in collaboration with Engro Exemp, distributed 600 kilograms (kg) of certified, high-yielding Basmati-515 rice seed to 30 farmers in the Punjab region to scale up the adoption of this variety. Basmati-515 has good quality attributes and a comparatively short growing duration, and is an excellent supplement to super basmati, which has lost its yield potential and is also prone to damage by insects and diseases. One hundred kg of high-yielding, salt-tolerant seed of low phytate rice variety NIAB IR-9 was also distributed to farmers in Usta Muhammad in Balochistan. In addition, IRRI is working to promote mechanized dry rice seeding in Pakistan; a method which uses significantly less water than rice cultivated using the conventional planting method and is much easier to harvest. IRRI scientists, with the help of local farm machinery manufacturer Greenland Engineering, have identified a proper seed drill for direct dry seeding, which they are popularizing through the creation of public and private partnerships.

In addition, AIP reports that baseline surveys for wheat and conservation agriculture as well as vegetables and mung bean value chains are in progress in Pakistan's four provinces. A maize baseline survey will be launched in August, and will interview more than 500 maize growers. The CIMMYT socio-economics team is also preparing to initiate durum wheat value chain studies in Pakistan, which will target producers, millers, food processors, seed companies, dealers, consumers and restaurants.

A total of US $82,829 in funding was awarded to 14 research and extension projects, including: three projects related to grape and mango processing from PMAS Arid Agricultural University, Rawalpindi; seven projects on citrus from a research group at Citrus Research International; and four projects focusing on mangoes from faculty at the Institute of Horticulture and Institute of Food Science and Technology at the University of Faisalabad. UC-Davis and the AIP Perennial Horticultural Project in-country coordinator will conduct the first review of these funded projects in September.

Looking to the future, AIP partners chaired by UC-Davis met in Islamabad in June and created a working group for vocational training, which collaboratively planned cross-institute vocational training activities. The top priorities are to implement a short course on proposal writing that will enable the collaborators to prepare high-quality proposals for upcoming competitive grant submissions on AIP call, as well as statistics courses that cater to the specific needs of trials and breeders.

GRIN-Global Training at CIMMYT

Bibiana Espinosa

The Germplasm Resource Information Network-Global (known as GRIN-Global) was created to provide the world's crop gene banks with a powerful, flexible, easy-to-use global plant genetic resource information management system. GRIN-Global is the platform for an efficient and effective global network of gene banks to permanently safeguard plant genetic resources vital to global food security, and to encourage the use of these resources by researchers, breeders and farmer-producers. By improving the capability of gene banks to provide data to a global accession-level information system, it is possible to more accurately assess the state of plant genetic resources and to identify priority global needs for plant genetic resource conservation.

The GRIN-Global project created a scalable version of the network used by the United States Department of Agriculture/ Agricultural Research Service (USDA/ARS) National Plant Germplasm System. The GRIN-Global database platform was developed jointly by USDA/ARS, the Global Crop Diversity Trust and Bioversity International.

Since 2010 CIMMYT's Wellhausen-Anderson Plant Genetic Resources Center has worked to implement GRIN-Global to simplify the management of its collection of more than 180,000 accessions of maize and wheat genetic resources. GRIN-Global has a web application that has allowed CIMMYT gene bank users (breeders, students and researchers) to search accessions and request seed from the website (http://mgb.cimmyt.org/gringlobal/search.aspx and http://wgb.cimmyt.org/gringlobal/search.aspx).

CIMMYT's gene bank was the first outside the United States to fully use GRIN-Global and CIMMYT was the first CGIAR Center to promote and implement GRIN-Global in its daily activities.

From 4-8 August CIMMYT and International Center for Tropical Agriculture (CIAT) staff members were trained to use GRIN-Global. The facilitator was Marty Reisinger; Bibiana Espinosa provided translations. Espinosa is responsible for the implementation of the GRIN-Global program at CIMMYT.

Photo: Xochiquetzal Fonseca/CIMMYT

MasAgro Móvil Brings Key Crop Information to Farmers' Mobile Phones in Guanajuato

Karen Willenbrecht

Photo: Guanajuato Communication Department

As of April, farmers in the central Mexican state of Guanajuato are now receiving localized agriculture updates and decision-making advice on their mobile telephones thanks to a service launched by MasAgro Móvil. This new development in MasAgro Móvil´s service is part of Guanajuato's plan to modernize agriculture with CIMMYT-developed technologies.

MasAgro Móvil, a project of the Sustainable Modernization of Traditional Agriculture (MasAgro) program, along with other MasAgro tools, received an investment of 10.4 million pesos (US$ 804,000) thanks to the support of Miguel Márquez Márquez, governor of Guanajuato, who seeks to promote sustainable agriculture in his state.

Javier Usabiaga Arroyo, Guanajuato's secretary of agricultural development, announced on 31 May that approximately 755,000 farmers in Guanajuato will eventually have access to vital information through e-MasAgro, a virtual ecosystem that connects various agriculture-related information tools on one site, including MasAgro Móvil.

Farmers "will receive technical information, recommendations, response to agricultural plagues and diseases and anything else they might need to improve their production," he told the *El Heraldo* newspaper.

The regionalized service offered by MasAgro Móvil in Guanajuato has the potential to be a game-changer for smallholder and medium-scale farmers. After registering for the service, farmers receive short, simple, timely and free agricultural information on the most innovative and profitable conservation agriculture practices. Each message is compatible with the region´s agricultural cycle and provides information that is difficult for an average farmer to find.

In the past few months, MasAgro Móvil has sent various messages specific to Guanajuato, focusing on fertilization and monitoring for diseases. It also began sending weekly weather forecasts, regionalized news and invitations to local events. In the future, the service will add price alerts, crop health advice and more market-segmented information. The developers are also experimenting with messages that interact with the users, help retrieve user information and facilitate feedback. Abraham Menaldo, a consultant for MasAgro Móvil, said the feedback has been positive so far and farmers are eager to participate and interact.

MasAgro Móvil´s goal is to expand this model to the rest of the country, which would replace the current service that sends information to each of MasAgro's innovation centers, known as hubs. Project leaders are developing collaborations to create parallel services in the states of Tlaxcala and Hidalgo.

A communications campaign planned for autumn 2014 will encourage more farmers to use the system. Extension agents will identify places where farmers congregate, and visit in person to help them register on-site. The campaign will include a study of the target group's perceptions of MasAgro, their livelihood and the future of farming.

MasAgro Móvil´s website offers detailed information about services, future projects, program activities and CIMMYT's partner-led mobile development projects around the world. The site will eventually offer an online registration service to minimize some of the technological problems farmers have encountered, such as autocorrect mistakenly changing the spelling of a key word.

MasAgro Móvil was recognized by the Inter-American Development Bank as an ideal tool to integrate farmers into the agricultural value chain in its report "The Next Global Breadbasket: How Latin America Can Feed the World: A Call to Action for Addressing Challenges & Developing Solutions"

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Recent Publications by CIMMYT Staff

Lucía Segura

Accessing the spelt gene pool to develop well-adapted bread wheat lines with increased grain zinc and iron. 2014. Srinivasa, J.; Arun, B.; Mishra, V.K.; Chand, R.; Sharma, D.; Bhardwaj, S.C.; Joshi, A.K. *Crop Science*. Online first.

Influence of thiabendazole seed treatment on the integrated control of Heterodera filipjevi on six wheat genotypes with different levels of genetic resistance under controlled conditions. 2014. Dababat, A.A.; Pariyar, S.R.; Nicol, J.M.; Erginbas-Orakci, G.; Goll, M.; Watrin, C.; Duveiller, E.; Braun, H.J.; Cabrera, J.A.; Sikora, R.A. *Nematropica* 44(2):25-30.

Quantifying the impact of weather extremes on global food security: A spatial bio-economic approach. 2014. Gbegbelegbe, S.; Chung, U.; Shiferaw, B.; Msangi, S.; Kindie Tesfaye Fantaye. *Weather and Climate Extremes* 4:96-108.

Socio-Economics Program Management Moves from Ethiopia to Mexico

Fotos: Xochiquetzal Fonseca/CIMMYT

Olaf Erenstein, the director of the CIMMYT socio-economics program, has relocated to CIMMYT headquarters effective 10 August. He is joined by his wife Anne Bouma, daughter Aisha and son Sybren. Olaf first arrived in Mexico exactly 20 years ago – albeit in a somewhat more junior capacity as associate expert (pre-doc) and without a family. His previous stay lasted only three years and was followed by various positions across West Africa before he rejoined CIMMYT in 2004. Since then he spent five years in India and five years in Ethiopia.

Linked to the move, socio-economics program manager **Dil Rahut** also relocated to El Batán at the end of June. Dil is a Bhutanese citizen and is joined by his wife Nirmala and his two sons Sahaj and Vinaik. Dil joined CIMMYT in his current capacity in 2013 and previously was based in the Ethiopia office.

CIMMYT staff will benefit from the fresh and first-hand perspectives they will bring from regional offices to headquarters.

Delivery of Informa

For a small group of readers there apparently have been issues with the delivery of Informa recently. We apologize for any inconvenience and have taken steps to keep this from happening going forward.

Every CIMMYT employee with a CGIAR e-mail address will receive an e-mail from 'CIMMYT - International Communications Department' late Friday afternoon/ early evening (El Batán time) in their Outlook mailbox. English and Spanish versions are available in the same e-mail. When either the English or Spanish version is clicked, the reader is automatically redirected to Informa on InSide CIMMYT. Staff who have never logged into InSide CIMMYT will need to log in (first use only) using their Outlook credentials.

In addition, each issue of Informa will be posted and available on InSide CIMMYT for all employees with access to the CIMMYT intranet. A low-resolution version is also posted. Past issues of Informa will also be available in PDF format.

For staff who wish to forward a copy of Informa to non-CIMMYT colleagues (for example, staff of donors or partners who may be featured in an article), please note that you cannot simply forward the email you received, because it will redirect that reader to InSide CIMMYT and a non-CIMMYT employee will not be able to access the system. If you want a non-CIMMYT employee to receive Informa (or someone expresses such an interest) they should subscribe at the CIMMYT website.

Readers who are not CIMMYT staff, or those employees who prefer to receive Informa directly because of a slow Internet connection (either in a high resolution or low resolution version) should also subscribe at the CIMMYT website.

The system described above allows the CIMMYT Communications Department to provide an internal version of Informa (along with additional messages) to staff via InSide CIMMYT, and an external version of Informa to friends of CIMMYT.

Again, we apologize for any confusion and inconvenience. Please contact CIMMYT-International-Communications-Department@cgiar.org if you do not receive Informa in the manner indicated above.

CGIAR Opens Blog Competition

The "Talking Science" blog competition is now open as part of the CGIAR Development Dialogues taking place in New York City on September 25. Scientists from CGIAR centers and partners are encouraged to submit blog posts linking their research to the United Nations Sustainable Development Goals, including improving food security, nutrition and health.

Photo: Courtesy of CGIAR

Blog posts are limited to 800 words, must be written in English and may include photos. In addition to having their blog posts featured on the Development Dialogues website, participants have the chance to win prizes including a GoPro camera and a profile on cgiar.org.

Submissions are due by 15 September to p.casier@cgiar.org. For more information on rules, regulations and how to write a blog post, visit the competition website.

CIMMYT-Pakistan Newcomers

Photo: Fawad/CIMMYT

◄ L-R: (back) Shoaib Abbas, Tariq Saleem, Salman Saleem, Adnan Sheikh (front): Khurram, Ghazi Kamal, Hira Khalid, Saima Sharif, Amina Nasim Khan

El Batán Social Committee Hosts Trip to Gourmet Show

The El Batán social committee invites CIMMYT staff and their partners and guests over the age of 18 to take part in a trip to the Gourmet Show (www.tradex.mx/gourmet) at the Mexico City World Trade Center on 6 September. The Gourmet Show will feature tastings of wine, chocolate, beer and other gourmet foods produced in Mexico.

Photo: Courtesy of tradex.mx/gourmet

A bus will leave the CIMMYT campus at 10:00 a.m.; guests who live in the city can arrive at 11a.m. at the World Trade Center to meet the group. Guests who are not CIMMYT staff members are welcome, but will need to pay the $130 peso entrance fee themselves. All attendees will need to register online by August 22nd (no payment is due at the time of registration).

Please register yourself and then email Liz Martinez (E.M.delaO@cgiar.org) to confirm your attendance and whether you will be taking the bus from CIMMYT. Bon appétit!

Informa is published by CIMMYT Communications Department. We welcome your input, preferably in both English and Spanish. The deadline for submissions is 9 a.m. on the Wednesday before publication. We reserve the right to edit all contributions. Please send proposed material to CIMMYT-International-Communications-Department@cgiar.org