



## Wheat training gets boost from former program director

By EMMA QUILLIGAN

*Two additional trainees will have the opportunity to participate in CIMMYT's wheat improvement course next year, thanks to the generous donation of US \$20,000 by Sanjaya Rajaram, former director of CIMMYT's Global Wheat Program (GWP).*

Presenting the check to CIMMYT, Rajaram said he "hoped it would serve as an example to other people who believe in training." Rajaram started his CIMMYT career as a post-doctoral fellow, working alongside Norman Borlaug. He then went on to lead the bread wheat breeding team from 1973-1995 and develop wheat varieties among the most widely-grown worldwide. He served as director of the GWP from 1996 to 2002.

In his four decades at CIMMYT, Rajaram trained more than 400 wheat scientists. "He influenced so many trainees who lead wheat breeding in their home countries and many became national research leaders," said current GWP Director Hans-Joachim Braun.

*Thank you, Raj, for your dedication to training the next generation of wheat breeders!* 🍷



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## CIMMYT partner honored with agriculture prize

By BRENN A GOTH



A long-time colleague of CIMMYT received the inaugural [2013 World Agriculture Prize](#) from the Global Confederation of Higher Education Associations for the Agricultural and Life Sciences (GCHERA), which recognizes contributions to the field by a university faculty member.

Ronnie Coffman, international professor of plant breeding at Cornell University and director of the [Durable Rust Resistance in Wheat project](#), was awarded the

prize for his leadership in crop improvement, the prize committee said. He received the award on 20 October during GCHERA's annual meeting in China.

"The world's farmers need access to the best science that the many great institutions of GCHERA can deliver in order to produce crops that are nutritionally adequate and best-adapted to future challenges," Coffman said during his acceptance speech, according to GCHERA.

Coffman spent a year as a visiting scientist with CIMMYT's wheat program in 1970 and has continually collaborated with the organization since then. Norman Borlaug, the late CIMMYT wheat scientist and Nobel Peace Laureate, supervised Coffman when he was a graduate student, and the two worked together to address the stem rust disease race Ug99 and other wheat diseases. Coffman is

vice chair of the [Borlaug Global Rust Initiative](#), which was established to respond to wheat disease threats.

He worked in the Philippines as a rice breeder for the [International Rice Research Institute](#) in the 1970s, where he developed new varieties, before joining the Cornell faculty in 1981. More recently, he has focused on fighting wheat diseases and mentoring students.

Coffman has served on the board of various CGIAR centers, including the International Center for Agricultural Research in Dry Areas ([ICARDA](#)) and the International Crops Research Institute for the Semi-Arid Tropics ([ICRISAT](#)).

Coffman is also a confirmed speaker for the Borlaug Summit on Wheat for Food Security, a Borlaug 100 event that CIMMYT will host in March 2014. For more information about the event, visit [www.borlaug100.org](http://www.borlaug100.org). 🍷

## Demonstration showcases maize hybrids

By O.P. Yadav/INDIAN COUNCIL OF AGRICULTURAL RESEARCH



O.P. Yadav, director of the Directorate of Maize Research explains a promising hybrid to S. Ayyappan, director general of ICAR.

More than 120 researchers, policymakers and other stakeholders participated in a commercial hybrid demonstration and maize brainstorming sessions organized by the Directorate of Maize Research, Indian Council of Agricultural Research (ICAR). The National Demonstration of Maize Commercial Hybrids and sessions were held 21-22 September in New Delhi.

The event demonstrated 106 maize hybrids, including leading hybrids from the public and private sectors. Visitors included S. Ayyappan, ICAR Director General; Ashish Bahuguna, secretary of the Department of Agriculture and Cooperation for the Government of India; H.S. Gupta, director of the Indian Agricultural Research Institute; B.S. Dhillon, vice chancellor of Punjab Agricultural University; J.S. Sandhu, commissioner of agriculture; R.P. Dua, assistant director general of food and fodder crops; J.S. Chauhan, assistant director general of seeds; S. Mauria, assistant director general of intellectual property & technology management; and more than 100 researchers from the national agricultural research system. P.H. Zaidi, B.S. Vivek and A.R. Sadananda from the Global Maize Program based in Hyderabad represented CIMMYT.

While visiting the demonstration, Ayyappan said he was impressed with the national maize program's efforts to develop diverse maize hybrids that meet farmers' needs in India's different agro-ecological regions. He lauded the development and fine-tuning of maize production technology that has resulted in many improvements in the last decade.

Bahuguna said the initiative was a unique showcase of hybrid technology that can improve farmers' income. Providing farmers with a wide variety of hybrids can help achieve crop diversification in different regions, he noted. Bahuguna was also interested in new hybrids likely to be available to farmers in the near future.

Gupta emphasized the opportunities that exist to replace low-yielding, traditional maize varieties with hybrids, while Dhillon highlighted the importance of an effective seed production program to fully harness the hybrids' benefits. Other topics included the objective of the demonstration and how to expand the scale of hybrid initiatives. Chauhan said the demonstration exhibited the strength of public research and development.

Three brainstorming sessions – “Public-Private Partnerships,” “Trait Prioritization in Breeding” and “Improving Drought Tolerance” – followed the demonstration. They were led by S.K. Datta, deputy assistant director general for crop sciences, B.S. Dhillon and Sain Das, while Vivek and Zaidi contributed as panelists. More than 100 personnel from the public and private sectors participated. Datta underlined the role of both sectors and called upon scientists to identify areas where they can work together. ¶¶

Participants visit the maize hybrid demonstration field in New Delhi.

## MasAgro introduces new maize hybrids for lowland tropics

By ALBERTO CHASSAIGNE



Seed specialists evaluate white and yellow maize hybrids from MasAgro's Collaborative Testing Network for the Tropics.

Participants in the Sustainable Modernization of Traditional Agriculture (MasAgro) initiative witnessed the introduction of six new maize hybrids aimed at increasing productivity in rainfed areas of Mexico's lowland tropics. Along with representatives of 16 Mexican seed companies and a national public sector research institution, the guests attended a demonstration at CIMMYT's Agua Fría experiment station in the state of Puebla on 10 October.

The event also included a talk on the agronomic practices and pest and disease control measures commonly used in that region. Alberto Chassaigne, CIMMYT maize seed systems specialist, reported on the progress of entering the maize hybrids and varieties evaluated through MasAgro's Collaborative Testing Network for the Tropics into the National

Catalog of Plant Varieties of Mexico's National Seed Inspection and Certification Service. Information on the characterization of these materials will be available to network seed producers for the effective selection of seed lots to produce certified seed, he added.

Ubaldo Marcos, CIMMYT's seed production manager, and Manuel Velázquez, seed technology and production consultant, gave a talk on seed production technology. The participants also observed grain harvested from the six new hybrids, as well as their parents, to determine their potential for producing certified seed.

In closing, Félix San Vicente, leader of MasAgro-Maize, invited seed producers to identify the best tropical hybrids being tested through the network by examining the plants in the test plots and the harvested grain. This exercise confirmed the competitiveness of white and yellow grain hybrids, which performed better than the commercial controls. Participants will continue to attend other training and dissemination events. ▽

## Seed companies learn business management

By GUILLERMINA SOSA MENDOZA

Supporting seed producers will help MasAgro to make a bigger impact, one of its leaders said last month.

Experts from MasAgro's maize component hosted a seed business management workshop for 22 representatives of small- and medium-sized Mexican enterprises from 9-13 September. The workshop took place at El Batán and included presentations and practical activities.

Félix San Vicente, leader of the International Maize Yield Consortium –MasAgro's maize component – highlighted the importance of maintaining close communication with seed



Xochiquetzal Fonseca/CIMMYT

companies to learn their needs and expectations. "What we are looking for is impact. That's what we all want, and the better-focused the

impact, the greater it will be," San Vicente said. "We know we need to support the national seed producers and look ahead." ►

► The workshop fostered teamwork among companies that sometimes compete in the market. One activity asked seed producers to simulate the establishment of new enterprises and design marketing strategies to foster growth under optimal conditions.

Manuel Velázquez, CIMMYT external consultant, presented on the background and development of the seed sector; Alfonso Hernández, general manager of Semillas Ceres, spoke about marketing strategies, seed sale and customer service; and Beda Anghern, from Empresa Unisem, gave a talk on seed enterprise management.



Participants visit BIDASEM Productora y Comercializadora de Semillas S.A. de C.V.

Photo: Courtesy of BIDASEM.

John MacRobert, CIMMYT maize expert, offered advice on strategic planning, product development, seed production and business management. MacRobert focused on seed production cycles, main production challenges and the distribution process.

Participants also visited companies including the Celaya branch of BIDASEM Productora y Comercializadora de Semillas and Monsanto's Villagrán branch. ▼

## MasAgro posters recognized at international conference

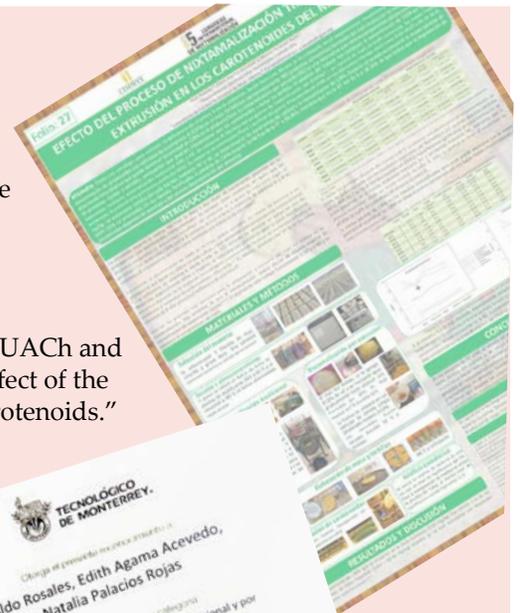
By NATALIA PALACIOS

Two posters developed by scientists from CIMMYT, Chapingo Autonomous University (UACH) and the National Polytechnic Institute (IPN) as part of maize quality collaborative projects were recognized during the Fifth International Nixtamalization Conference held in Monterrey, Nuevo León, Mexico, from 7-9 October. Nixtamalization is a method of processing maize.

The poster "Nixtamalized flour mixtures for tortillas," a collaboration between UACH and CIMMYT, won second place, while third place went to IPN and CIMMYT's "Effect of the traditional and extruded nixtamalization process on yellow maize carotenoids."

The conference's supervising committee evaluated 40 posters for coherence with research objectives, clarity in explanation and design, said Natalia Palacios, maize nutrition quality specialist, who coordinates MasAgro's research on the subject.

More than 250 participants from universities, research centers and companies from the *masa* and tortilla industry attended the conference. The conference included subjects related to nixtamalization technology, raw materials and quality control, nutrition, biofortification of soja ixtamalized products, sustainability and energy efficiency, competitiveness and marketing. ▼



# Kenya: Seed companies see maize hybrids

By MICHAEL ARUNGA

*Informative presentations, lively discussions and a research station field trip were highlights of a Water Efficient Maize for Africa (WEMA) course on maize seed production and management held last week in Nairobi.*



Photo: Michael Arunga/CIMMYT

The two-day course targeted seed companies that will commercialize drought-tolerant maize hybrids from the WEMA project. Seed company representatives were accompanied by the WEMA Product Deployment Team (DEPT) and members of WEMA partner countries (Kenya, Mozambique, South Africa, Tanzania and Uganda). Representatives from CIMMYT, Monsanto, the African Agricultural Technology Foundation (AATF), the African Seed Trade Association (AFSTA) and a member of the National Agricultural Research Organisation Board of Trustees attended. The African Agricultural Technology Foundation (AATF)-led WEMA DEPT team and CIMMYT organized the course.

During the plenary session, seed experts – including John MacRobert and Mosisa Regassa from CIMMYT and Jonga Munyaradzi from AATF – presented on hybrid seed production, distinguishing characteristics of inbred lines, certification standards and inspection procedures, quality assurance procedures and stewardship. William Munyao, an

inspector at the Kenya Plant Health Inspectorate Service, explained why standards and inspection are crucial to achieve credibility.

Participants raised concerns about the slow implementation of maize seed regulatory standards by regional bodies such as the Economic Community of West Africa States, the East Africa Community and the Common Market for Eastern and Southern Africa. Seed companies said they want to see these standards implemented as soon as possible because they will give farmers greater access to improved varieties.

After the plenary session, CIMMYT hosted participants on a visit to the KARI-CIMMYT Kiboko Crops Research Station. Stephen Mugo, Yoseph Beyene and Kiru Pillay led the tour, during which participants had the opportunity to evaluate selected hybrids and lines from demonstration plots. More than 50 hybrids are being grown under managed drought stress and optimal conditions. The hybrids are in their first or second year of national performance trials in Kenya, Mozambique, South Africa, Tanzania and Uganda.

Paul Imo (left), a participant at the seed production and management course, compares notes on his phone with a colleague during a visit to the Kiboko research station.

The participants also visited the recently-developed doubled haploid (DH) lines in a seed increase nursery.

Sotero Bumagat, the CIMMYT DH manager, led participants on a tour of the newly-commissioned DH facility. James Karanja and Regina Tended presented insect-protected confined field trials.

MacRobert, a CIMMYT expert in seed production and management, told participants to embrace realistic approaches when producing seed. He emphasized the importance of hiring skilled personnel who have a genuine interest in seed production. “Emphasis should not be entirely on academia,” MacRobert said. “We should not insist on diploma, undergraduate, master’s or even doctorate degrees as prerequisites for hiring a productive worker. A farm hand who does not have these qualifications but has excellent seed production experience may be an excellent employee.”



Photo: Courtesy of AATF.

## Female-friendly seeder to boost conservation agriculture in Africa

By FRÉDÉRIC BAUDRON



Photo: Frédéric Baudron/CIMMYT

A lightweight seeder designed for conservation agriculture could help households headed by women in eastern and southern Africa to adopt the technology. CIMMYT's Farm Mechanization and Conservation Agriculture for Sustainable Intensification (FACASI) project is addressing declining farm power by delivering small mechanization to farmers. Female-run households are particularly labor-constrained. They often don't own or are not permitted to use draft animals and are among the last to access land preparation services, which severely affects yield.

FACASI imported several female-friendly seeders designed by John Morrison, a consultant and adjunct professor at the [University of Tennessee](#). Unlike other commercially available machines, which are bulky, heavy and challenging for women to use, Morrison's development is a light, single-row seeder specially designed for operation in non-plowed fields. The seeder is equipped with a residue rake to clear crop residue from the path, a rolling coulter blade to cut any remaining residues in the path, a furrow-opener shank to open a soil slot for seeds and fertilizer and a pressing wheel to help the operator press the soil slot closed.

The seeder performed well during its pre-test last month in Njoro, Kenya, by women, FACASI scientists and John Morrison himself, and later at a demonstration to the CIMMYT Board of Trustees. Thorough field testing will take place next November in Kenya and Tanzania. A business model will also be developed to guarantee access to the technology for women farmers.

The proportion of women-headed households is particularly high in eastern and southern Africa (23 percent in Ethiopia, 32 percent in Kenya and 38 percent in Zimbabwe), according to the World Bank. Increasing the power available to these households – through small mechanization and promoting power-saving technology such as conservation agriculture – is one way to close the gender gap. ¶¶

## Course teaches farming system analysis

By FRÉDÉRIC BAUDRON

An international group of Ph.D. students was trained on farming systems and rural livelihoods during a course this month in Ethiopia.

CIMMYT, Hawassa University and Wageningen University organized "Farming System and Rural Livelihoods: Adaptation and Vulnerability" from 6-18 October. Twenty-five Ph.D. students from 17 countries – including Burkina Faso, Ethiopia, Ghana, the Netherlands, Niger, Nigeria, Portugal, Rwanda, South Africa, Sweden, Uganda, the United States and Zimbabwe – participated. CIMMYT Ph.D. students Yodit Kebede, Tesfaye Shiferaw and Alain Ndoli also attended the course.

The course provided participants with the theory behind farming systems analysis; participatory



Photo: Frédéric Baudron/CIMMYT

methods to characterize farming systems; practical use of the sustainable rural livelihood framework; methods of farm-scale yield gap analysis; and methods for scenario analysis and optimization. The four study sites were targets of the Sustainable Intensification for Maize-Legume systems in Eastern and Southern Africa (SIMLESA) project in southern Ethiopia.

Frédéric Baudron from CIMMYT-Ethiopia was one of the course supervisors. He co-organized field activities, assisted students with group assignments and gave a lecture titled "Farming System (Re)Design and Scenario Development." ¶¶

## Newcomers welcomed at El Batán

By ERICA CHIMUCA

On 18 October, 35 new employees from different programs attended a CIMMYT orientation course including information on legal issues, accounting, requesting administrative services, computing services and benefits. Attendees also learned about the activities of CIMMYT units and programs, including corporate communications, projects and budget, intellectual property and risk management.

On behalf of the director general, Miriam Mora, national staff manager, welcomed the participants and introduced them to CIMMYT's work in Mexico and around the world. Human Resources would like to thank Erica Chimuca and Ángeles Rojas for arranging the logistics of the course.



Photo: Xochiquetzal Fonseca/CIMMYT

### Staff Promotions

The following post-doctoral fellows were promoted to associate scientist:

**Aleksandre Loladze** – Global Wheat Program (GWP) – Durum Wheat Breeding and Germplasm Enhancement

**Vinayan Madhumal Thayil** – Global Maize Program (GMP) – Maize Specialist Stress for South Asia

**Xuecai Zhang** – GMP – Maize Genomic Selection Breeder

**Tina Désirée Beuchelt** – Socioeconomics Program (SEP) – Agricultural Economist

The following associate scientists were promoted to scientist:

**Vijaya Vardhana Reddy Chaikam** – GMP – Maize Doubled Haploid Production

**Biswanath Das** – GMP – Quality Protein Maize Improvement

**Thakur Prasad Tiwari** – Conservation Agriculture Program (CAP) – Cropping Systems Agronomist

**Samuel Trachsel** – GMP – Maize Physiology

The following scientists were promoted to senior scientist:

**Raman Babu** – GMP – Molecular Maize Breeder

**Jill Elizabeth Cairns** – GMP – Maize Physiology

**Susanne Dreisigacker** – GWP – Wheat Molecular Breeding

**Cosmos Magorokosho** – GMP – Maize Breeder

**Dan Makumbi** – GMP – Maize Breeder

**Andrew James McDonald** – CAP – Cropping Systems Agronomist

**Natalia Palacios Rojas** – GMP – Maize Nutrition Quality Specialist

**Jiankang Wang** – GRP – Simulation & Modeling

The following senior scientists were promoted to principal scientist:

**Arun Kumar Joshi** – GWP – Wheat Breeder

**John Findlay MacRobert** – GMP – Maize Seed Systems Specialist

### Wheat make us fat and sick?

Check out [this recent publication](#) in the *Journal of Cereal Science* from our colleagues at Maastricht University and Rothamsted Research answering the question, “Does wheat make us fat and sick?”

### Recent publications by CIMMYT staff

[Household, community, and policy determinants of food insecurity in rural Malawi](#). 2013. Fisher, M.; Lewin, P.A. *Development Southern Africa* 30(4-5):451-467.

[Lower tendency of allelic variation of Glu genes and absence of 1BL-1RS translocation in modern Pakistani wheats](#). 2013. Rehman, A.; Sajjad, M.; Khan, S.H.; Peña Bautista, R.J.; Khan, N.I. *Cereal Research Communications* Online first.

[Molecular mapping of high temperature tolerance in bread wheat adapted to the Eastern Gangetic Plain region of India](#). 2013. Tiwari, C.; Wallwork, H.; Kumar, U.; Dhari, R.; Arun, B.; Mishra, V.K.; Reynolds, M.P.; Joshi, A.K. *Field Crops Research* Online first

INFORMATION SUBMITTED BY THE KNOWLEDGE CENTER

### Reminder:

Daylight savings time ends on Sunday, 27 October. Be sure to set your clock one hour back on Saturday night.



Weekly photo contest ▶

**Weekly photo contest winner**



Gladys Nzioka, who works at the Kiboko research station in Kenya, is all smiles as she shows off seeds. Michael Arunga sent this photo.

**Runner Up:** Long-time CIMMYT partner and former visiting scientist Benti Tolessa has held many roles: farmer, seed grower, entrepreneur, member of the Ethiopia Maize Working and national maize research coordinator for the Ethiopian Institute for Agricultural Research (EIAR). Here, Tolessa, who is now retired, shows a cob of BH660, one of the hybrids he bred during his career with EIAR. Lewis Machida submitted this photo from the Ethiopia Maize Working Group demonstration plots in Bako, Ethiopia.



Don't forget to send us your entries for next week's competition. Please email them to Connie Castro ([c.castro@cgiar.org](mailto:c.castro@cgiar.org))—or hand them over on a USB stick. Look out for the winners on CIMMYT's flickr, where they are shared under a Creative Commons license.