



Capacity building at CIMMYT: Where tried-and-true meets new

"I was fortunate to obtain practical experience in some of the most important procedures in plant breeding," Robert Crowther Lindeque (third from the right in the picture above), senior research technician at the Small Grains Institute, Agricultural Research Council of South Africa, is an experienced researcher, but had high praise for the knowledge and skills he gained in the wheat improvement course conducted at CIMMYT in Mexico during 26 February-25 May. "The trainee group was involved in the whole selection procedure, right from plant selection for specific traits to comparison of field results." Lindeque and the others also benefited from direct and frequent interaction with CIMMYT scientists in specific subject areas.

The course had not been offered since 2002, according to CIMMYT knowledge-sharing and capacity-building coordinator, Petr Kosina. "We're rebuilding the tradition of longer, hands-on courses," he says. Their advantages include participants gaining an intimate acquaintance with the countless details of running a field breeding program, but Kosina also commends the life-long professional relationships that derive from living and working together.

"The linkages between CIMMYT wheat researchers and these national program scientists are actually the basis of all the Center's research and outputs, he explains. "Life-long partnership" aptly

describes the fruitful interaction between CIMMYT and South African research institutes, according to Lindeque. "CIMMYT was already working with South Africa since the mid-1970s." Lindeque also says that a "...unique virtue of CIMMYT has been the availability of its germplasm to national breeding programs." As part of courses, participants gain knowledge of the Center's breeding stocks and methods, facilitating their access to and effective use of the materials to benefit the farmers they serve. "Among other things, they make their own selections and obtain breeding materials in the earlier stages of development," says Kosina.

Bringing training closer to home

The Center has offered over 70 training courses and workshops at locations outside of Mexico in 2007. Such events generally focus on specific needs or capacities for a particular project or group, and often involve personnel from national research programs, non-government organizations, and small- and medium-scale enterprises. Just one example is the workshop “Molecular characterization of inbred lines and populations in maize” given in New Delhi, India, by CIMMYT scientists and collaborators during April 2007. “In the lab where I’m working, we have a number of problems using SSR markers,” says Shirangi Imalka Samararatne, researcher in Sri Lanka’s Plant Genetic Resources Centre, who attended the workshop. “I’m happy (now) that my problems are solved.”

The workshop, which was hosted by the Indian Agriculture Research Institute (IARI) and sponsored by the Generation Challenge Program of the CGIAR, drew 19 participants from 10 countries in Asia and Africa, with interest in a broad range of crops. Nine resource persons from five countries gave lectures, lab presentations, computer training, and hands-on practice.

Worldwide knowledge on key cereal crops

As part of a strategic alliance begun several years ago, IRRI and CIMMYT—the first and second centers formed in what became the Consultative Group on International Agricultural Research (CGIAR) 40 years ago—are leading an initiative to gather and make widely available precious global public goods like data, information, and knowledge on key food staple crops. “The idea of this ‘Cereal Knowledge Bank’ is to address the current fragmentation of extension and training materials, making them available in an accessible and interactive web-based platform,” says Kosina.

According to Kosina, the Bank will contain information from a widely-used Rice Knowledge Bank created by IRRI; interactive diagnostic and crop management applications, Maize Doctor and Wheat Doctor; Maize Finder, a tool to identify suitable varieties for specific settings; and information about diverse cropping and intercropping systems and constraints in developing countries.

“With our help and initial support through the platform, country partners will eventually be able to build their own knowledge banks,” says Kosina. Several applications of the Cereal Knowledge Bank should be operational by the end of 2007.

For more information:
Petr Kosina, Coordinator,
Knowledge Sharing and Capacity
Building (p.kosina@cgiar.org)



Supporting and cultivating students

The Center assists scores of university students in agricultural science worldwide, advising them or working directly with them on thesis research, as well as helping to identify funding sources. Both CIMMYT and the students benefit.

A recent example is the case of Gul Erginbas and Elif Sahin, two committed and talented young people from Turkey who hope to make a difference in their own country and are already making a difference for CIMMYT. “We work in close collaboration with the Turkish Ministry of Agriculture and several universities,” says Julie Nicol, the CIMMYT soil-borne disease pathologist, based in Turkey. “Both women have started work on doctoral degrees, supervised by key university experts and myself. This is a highly effective way to build capacity in applied research both for Turkey and the world.” Erginbas is screening wheat for resistance to crown rot disease. Sahin is focusing on an underground pest called the cereal cyst nematode. Both organisms are especially damaging to wheat grown under more marginal conditions or under conservation tillage with crop residue mulches, and so figure prominently in CIMMYT work on conservation agriculture and for small-scale, rainfed wheat farming. Having a CIMMYT scientist like Nicol as a co-advisor helps, according to the students. “She brings us a global perspective and makes sure we work with care and precision, and she really knows the field,” says Sahin.

“Inasmuch as nearly all CIMMYT activities involve extensive collaboration, they help strengthen CIMMYT and partners’ capacities,” says Kosina. “The Center’s efforts over the years have easily reached upwards of 9,000 persons, essentially creating an agricultural community of knowledge that has benefited maize and wheat farmers in developing countries. We aim to build on that community, both with modern tools and tried-and-true approaches.”