International sugar experts visit CFC/ISO/20 project site

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Representatives of the International Sugar Organization and the Common Fund for Commodities came to the Philippines to observe the accomplishments achieved under the CFC/ISO/20: Sugar Variety Improvement in Southeast Asia and the Pacific project.

In a supervision mission to the country from June 20 to 24,2005, CFC Representative Eltha Brown and ISO Senior Economist Lindsay Jolly visited two project sites – the PHILSURIN Experiment Station in Victorias City, Negros Occidental, and the Institute of Plant Breeding in the University of the Philippines – Los Banos.

"The mission was very usefl in providing first-hand observation of the work undertaken in the Philippines under the project, and confirming information provided in reports on the project," Brown said.

Dr. Fe dela Cueva, plant pathologist and project leader for disease indexing, briefed the two on how the project's elaborate quarantine and disease indexing procedures ensure disease-free sugarcane varieties. "It was explained that disease indexing procedures ensure disease-free sugarcane varieties. "It was explainedthat disease indexing is performed to minimize the introduction of new diseases or new strains of existing pathogens," Brown stated in a report.

Sugar experts from the IPB-UPLB discussed the project's germplasm characterization component. Characterization plays a key role in any crop improvement program because it helps to identify outstanding traits present in the germplasm.

University Researcher and CANEPOINT Project Leader Nestor Altoveros demonstrated how the innovative sugarcane database, CANEPOINT works. "One of CANEPOINT's key featuires is the query tool that allows sugarcane breeders to search for a sugarcane variety with specific characteristics, and obtain immediate results," Brown said.

In Victorias City, the two visited the CFC-funded Biotechnology Laboratory where PHILSURIN's breeders, microbiologists and pathologists look for ways to improve sugarcane productivity. Brown and Jolly saw first-hand the advances made in breeding such as DNA fingerprinting which helps breeders to ensure that only distantly related varieties are cross-bred for excellent hybrid-vigor. "It was noted that this was the first time that DNA fingerprinting was used to identify genetic variability in sugarcane," Brown said. The utilization of molecular markers to identify diseases in sugarcane was also discussed.

Visits to varietal trial sites in Negros also were part of Brown and Jolly's itinerary. Hawaiian-Philippine Company Mill District Coordinator Manuel Gallego brought them to fields where he is testing sugarcane varieties from Bangladesh, Indonesia, Malaysia and Thailand. Sugarcane variety trials allow agronomists to observe agronomic characteristics, disease reactions and yield performance of exchanged varieties.

The supervision team was treated to a sneak preview of PHILSURIN's latest opus, the development of a biofertilizer which carries microorganisms that help sugarcane increase their nutrient uptake. Microbiologist Dr. Luciolle Villegas discussed the field trials she is conducting to evaluate the effect of

bacteria on sugarcane yield. With tests running over seven years and promising results, PHILSURIN will commercialize the biofertilizer in 2 to 3 years.

PHILSURIN's Geographical Information System Coordinator Jose Rojo Alisla discussed the institution's state-of-the-art GIS, a tool used to assemble, store, manipulate and display geographically-referenced information with Brown and Jolly.

They also observed PHILSURIN's sugarcane micropropagation program – an advanced multiplication technique utilizing tissue culture procedures by which the excised tissue of a plant is grown in an artificial medium in a germ-free environment. Micropropagation has greatly reduced the lag time between the introduction and the full adoption of a new variety because it enables breeders to generate hundreds of thousands of plantlets in a small laboratory space in a shorter period of time.

PHILSURIN Director General Leon Arceo took the team to several mill district coordinating councils where they were briefed on PHILSURIN's other projects such as the biological control of the sugarcane borer using Trichogramma chilonis, the Hot Watyer Treatment facility, development of small farm machinery, and soil analysis and fertilizer recommendation. A bonus treat was a trip to a small plant at HPCo which manufactures muscovado sugar.

The trip "further reinforced the successes of the project in terms of both the technical and administrative perspectives," Brown said.