

Strengthening regional partnerships to facilitate integrated soil fertility management

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Local students trained in the evaluation of biological activity of soil under the Quesungual Agroforestry system



Group of farmers that are supporting students conducting their thesis work on Quesungual Agroforestry system

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Latin American team of TSBF-CIAT has been supporting partner institutions of the Integrated Management of Soils (MIS) consortium in the development of research and validation proposals. Recent funding from the Water and Food Challenge Program of CGIAR will allow NARS from Honduras and Nicaragua to conduct collaborative research with the Latin American team of TSBF-CIAT on management principles of the Quesungual Agroforestry system and validate the system in hillsides of Nicaragua and Colombia.

Specific workplans for training were discussed during the last planning meeting held in Honduras last February. The plan considers; 1) two Master students from Nicaragua and one PhD student from Colombia on water dynamics in the Quesungual system under the supervision

of Dr E. Amézquita; 2) one Master student on gas production by the system under the supervision of Dr M. Rondón and; 3) one PhD student on nutrient dynamics under the supervision of Dr. E. Barrios. Several BSc theses will be supported by the project on aspects dealing with carbon accumulation in the forest biomass, forest inventory in the validation sites in Nicaragua and spatial analysis on potential sites for extrapolation.

TSBF-LA scientists and MIS partners met in Honduras in February 2005 to discuss research and validation activities for the Quesungual project in Honduras, Colombia and Nicaragua. The training process is not limited to Masters and PhD students. The process is extended to local students from rural schools in Lempira region on methodologies to assess soil quality.



Validating the potential of the NuMaSS expert system to generate recommendation of N and P fertilization in maize-based systems in hillsides of Honduras

Additionally, members of the consortium are validating the potential of the NuMaSS expert system to generate recommendation of N and P fertilization in maize-based systems in hillsides of Honduras and Nicaragua. This activity is being carried out with the financial and technical support of the USAID-CRSP consortium in collaboration with Professor J. Smyth of the North Carolina State University, Raleigh, USA. Preliminary results indicate the system is able to predict N needs under a wide range of conditions. MIS partners working on the validation of the system will meet in May 2005 to share results and plan additional activities for 2005.

The International Union of Soil Sciences has nominated one of the members of the MIS consortium as the convener for a mega-symposium on methods to assess soil degradation during the next World Congress of Soil Science in 2006. The Latin American team of TSBF-CIAT played a central role in the success of the Latin American Congress of Soil Science in 2004, where one keynote address, five invited talks, thirteen oral presentations and four posters were presented by the team and were well received. As one of the highlights

of the Congress, the Latin American Soil science Council, approved at its biannual meeting, the creation of the Latin American network of soil science (LatNet). The network aims at promoting the use of common methodologies across countries and institutions, facilitating information sharing and promoting the development of joint research activities. Members of the Latin American team were selected to coordinate the launching of the network and TSBF-CIAT will host the website of the network.

A national workshop was held at CIAT in Colombia on the topic of indicators of soil quality and land degradation, where the tools developed by the TSBF-Latin America team were exposed to and adopted by a wide range of partners and organizations. The workshop was sponsored by the Ministry of Agriculture and Rural Development from Colombia and was attended by 80 researchers, academicians, farmers and students from twenty institutions from all over the country. Because of the demand from the region, the team intends to plan a second event more likely to take place in Central American hillsides and a third one for the savannas in South America.