



Action in Agroforestry

November 2013
Vol. 4, No. 11

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EXPLORATIONS IN COSTA RICA

Joint Research, Education Programs with CATIE

Under the auspices of the ongoing USDA NIFA International Science and Education (ISE) Grant Program entitled “Internationalization of Forest Resource Education, Research and Extension: U.S.-Costa Rica Cooperation,” UMCA Director Shibu Jose and Associate Director Michael Gold visited the Tropical Agricultural Research and Higher Education Center (CATIE) located in Turrialba, Costa Rica, November 5-8, 2013. The purpose of their visit was to help solidify institutional cooperation between MU and CATIE and establish an array of collaborative research and education projects.

Development on the “Land Grant University” model. CATIE is a unique regional research, higher education and outreach institution devoted to environmental issues

Central America and the Caribbean. During productive discussions with a number of scientists there, it was learned that their programs revolve around five broad and holistic platforms (themes): 1) Forest management and conservation; 2) Climate change and watershed management; 3) Socio-economic and environmental development; 4) Livestock and environmental management; and 5) Agroforestry systems with perennial crops. A number of promising areas for joint research/education collaboration related to the platforms were discussed and will be explored in depth in the coming months.



Cacao pods grown as part of CATIE's germplasm collection. Photo by Michael Gold.

Both were impressed by CATIE's beautiful 2,500 acre campus which sits in a valley at ~2,000' elevation surrounded by fertile, volcanic hills that rise up another 1,500'. CATIE, established in 1973, was built with funding from the U.S. Agency for International

including sustainable agriculture and natural resource management. It has become a “Center of Centers” that includes a host of scientists from other global research and development organizations. CATIE's activities are primarily focused on

Prof. Jose and Gold visited a few of the ongoing research projects located on the CATIE campus including beef and dairy cattle silvopasture research trials, cacao germplasm collection and breeding program, and shade coffee research trials.

KUDOS

The Society of American Foresters held its national meeting in Charleston, S.C. from Oct. 24-26, 2013. As a part of the Agroforestry - Innovations in Agroforestry Education, Training and Extension session, UMCA's own Shibu Jose and Michael Gold gave talks on “An Interdisciplinary Online Certificate and Master's Degree Program in Agroforestry” and “The Agroforestry Academy: A Crash Course to Educate Natural Resource Professionals” and also moderated the Agroforestry sessions.

Up Close with Himalayan Silvopastoral Systems

Online Agroforestry Masters student Brad Leeger spent several days interviewing Bakarwal shepherds in Kashmir (India) and enjoying their hospitality at 10,000 feet. These shepherds guide their sheep and goats 200 to 300 miles from the lowlands into the mountains every summer, in order to take advantage of fresh pastures. Here, he describes his activity.

When asked how the shepherds would like to improve their pastures they answered, “we would like to have more trees.” That is when I learned that these shepherds had a strong understanding of the beneficial interactions between trees, forage and livestock in their ancient silvopastoral system. These shepherds valued the trees for the diversity they bring to the forage in their shade, the protection they provide from avalanches and erosion, and because they keep the land “in balance” ecologically.

Grazing the 30 to 60 degree slopes, their sheep prefer the grasses and forbs while their goats climb higher and browse

the birch trees which are already bent horizontal by the winter snow pack. Through my classes, I recognized the wealth of indigenous knowledge these shepherds had applied to the system.

The shepherds value trees, and I uncovered a complex system of stakeholders with conflicting assumptions when asked why they don't plant trees in this pasture. (I learned that an avalanche had taken many out a few years ago.)

As it turns out, the shepherds only have grazing rights on the land. The government owns it, and any trees that are planted there. Despite a disagreement on whether it was legal for them to plant trees, there was agreement as to why they would not survive.

Some of the reasons given were: the shepherds did not have the resources or the right to build fences to protect planted trees; shepherds from other groups would come through later and destroy the trees; they did not know where to get seedlings



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The blue dot represents the Kashmir region in India, which is the area where Leeger spent time with Bakarwal shepherds.

or how to plant them; and it is illegal for them to farm this land, and tree planting could be seen as farming.

I was struck by the frustration of these shepherds who viewed that planting trees was out of their control.

In discussions with government foresters and range managers, they too wanted to see more reforestation, and were somewhat surprised to hear that the shepherds also wanted more trees. They said that the shepherds could plant trees, but would not be able to cut them down, only to harvest branches and leaves for fodder.

It seemed to me that there was a need for someone to act as facilitator between the two groups, to help them achieve what turned out to be a common goal: planting trees.

Now, I plan to use the knowledge I gained from my online studies to join a Kashmiri business that works with farmers to add value to their produce, while also interacting with the agroforestry department at the local university, and facilitating the planting of new trees in high altitude pastures.



Some sheep exploring their surroundings and grazing among the Himalayan mountains. Bakarwal shepherds want to plant more trees for them, but there is a lack of communication between the shepherds and the government who owns the land. Photo by Brad Leeger.



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