



## Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program

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### Trip Report: Nepal 15-27 August 2011

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**Purpose:** To (1) train research associates in the collection of harvest data at the on-farm CAPS trial sites in the project villages of Thumka, Hyakrang and Khola Gaun; (2) install sensors and weather stations and collect associated data in each village; (3) collect baseline socio-economic data from participating farmers in Hyakrang and Khola Gaun; (4) conduct gender and farmer knowledge surveys in Thumka; (5) meet with partnering organizations TU/IAAS and Li-BIRD to discuss collaboration and plans for in-country student fellowships and experimental trials with the university; and (6) meet with USAID/Kathmandu officials to brief them of our project progress.

**Sites Visited:** Li-BIRD headquarters, Pokhara; Li-BIRD site office, Gorkha Province; Project implementation villages: Thumka, Gorkha District, Hyakrang, Dhading, District Khola Gaun, Tanahun District; TU/IAAS University, Chitwan; USAID headquarters, US Embassy, Kathmandu

#### **Description of Activities**

The sites for each of the 2011 on-farm trial plots in Thumka, Hyakrang and Khola Gaun were visited. A total of 25 farmer fields were visited. The trial was designed to test the effects of strip tillage and maize/cowpea intercropping on yield, soil, and labor hours. Each site was assessed to monitor plant growth, soil conditions, pest management, and harvest. After plot inspection, each village weather station was tested to ensure its proper functioning and data collection. The weather stations have four sensors, to measure soil moisture, rainfall, air temperature and relative humidity, and photo-synthetically active radiation. Additionally, two Hobo tid-bit soil sensors used to measure fluctuating soil temperatures were installed next to the weather station in each of the three villages.

Farmer agricultural knowledge and food security surveys were then administered to each of the participating farm families in Thumka. The surveys were asked of both the male and female heads of household separately to discover discrepancies and commonalities between gender knowledge. A total of 18 farmer knowledge surveys were taken. Additionally, baseline socio-economic surveys were completed in the village of Thumka, and were collected from each of the participating farmer households in both Hyakrang and Khola Gaun.

In-country Li-BIRD research associates and TU/IAAS Master's students were trained on the use of a SPAD meter to measure chlorophyll content of millet leaves, as well as on the protocol for using a hanging digital scale to collect yield measurements. Actual yield measurements for maize were taken from the village of Khola Gaun, however, harvest data was unable to be taken from Thumka and Hyakrang at the time of the visit due to heavy rains and a consequently wet maize harvest. After the yield is sufficiently dried, the in-country researchers will be able to accurately measure total maize weight. A cob to grain ratio for local maize varieties was also developed to accurately convert maize harvest data as is it measured, in cob form, to a grain-only equivalent.

Two focus groups, one male and one female, were also convened in both Hyakrang and Khola Gaun. The topics discussed in these groups were aimed at determining gender perception of the burden of labor and distribution of household and farming activities. Further questioning assessed social structures and community leadership, past experiences with government extension and NGOs, and community needs and concerns.

After the site visits, meetings were held in Chitwan with TU/IAAS and in Pokhara with Li-BIRD associates to discuss the trip, administrative topics, and the plan for the next season of research. Plans for in-country fellowships for the coming year were discussed, as well as the implementation and planning for cover crop variety trials at an IAAS experimental station.

### **Suggestions and Recommendations**

Site visits to the participating villages revealed that the planned on-farm experimental procedures were often not entirely followed due to logistical problems encountered early in the season. For example, some leguminous crops agreed upon for the field trials were not used due to local preferences across the three villages and lack of seed availability.

In an effort to catch these types of procedural issues as soon as they happen, we have instated project update meetings on the third Thursday of every month with the PIs from Nepal, India and Hawaii. As the farmers prepare the land for the next season of experimentation, these meetings will allow all researchers to dynamically adjust expectations and analysis based on the realities of field implementation.

## Training Activities Conducted

Program type (workshop, seminar, field day, short course, etc.)	Date	Audience	Number of Participants		Training Provider (US University, host country institution, etc.)	Training Objective
			M	F		
Workshop	19-Aug	Li-BIRD Research Associates, Project Coordinator and TU/IAAS Master's students	5	1	University of Hawaii	To train Nepal SMARTS Research associates on the use of the SPAD meter
Workshop	19-Aug	Li-BIRD Research Associates, Project Coordinator and TU/IAAS Master's students	3	2	University of Hawaii	Training on usage of digital scale to collect yield measurements
Focus Group	22-Aug	Hyakrang (Male)	9	0	University of Hawaii	Male-To determine and discuss the labor divide between genders and previous experience with NGOs
Focus Group	22-Aug	Hyakrang (Female)	0	9	University of Hawaii	Female-To determine and discuss the labor divide between genders and previous experience with NGOs
Focus Group	23-Aug	Khola Gaun (Male)	9	0	University of Hawaii	Male-To determine and discuss the labor divide between genders and previous experience with NGOs
Focus Group	23-Aug	Khola Gaun (Female)	0	9	University of Hawaii	Female-To determine and discuss the labor divide between genders and previous experience with NGOs

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