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**IFAR 2008 Professional Development Program
Completion Report
[800 words]**

Instructions:

Please submit the completion report by email, using this form, through the sponsoring CGIAR Center to ifar@ifar4dev.org within three months after the completion of the fellowship.

Please check if Thalwitz Scholarship

 Yes

Name of Applicant -----Yagya Prasad Giri-----

Sponsoring CGIAR Center

CIP,Lima Peru-----

I. Work Program goals achieved (maximum length: 200 words)

1) Pest status of the potato tuber moth (PTM) and other insect pests across major potato production environments in Nepal assessed, farmers' current control measures understood, and locality-specific options for improving pest control are identified.

A survey (Key informant interviews, focus group discussions, and field observations) was carried out during March to August 2008 in 19 districts of Nepal that covers Low, Mid-, and High Hills production sites. This survey generated data on the nationwide distribution and severity of PTM and other insect pests, specifically it identified the leafminer fly (LMF) as a new exotic potato pest and a merging constraint to the potato production in the Kabre district, initiated new research topics and also demonstrated farmers' high use of pesticides to stored ware potatoes. *Bacillus thuringiensis* and *Acorus calamus* (sweet flag) were tested and provided good control against PTM in storerooms.

2) Inventory of insect species in potato systems and occurrence and efficacy of local natural enemies assessed from each site during the winter cropping season. The samples are currently processed and unidentified species prepared for shipping to CIP and to the Rosenheim Museum in Germany.

Since no natural enemies of PTM have been identified the importation of exotic parasitoids of PTM from Peru for biological control has been approved by Nepali authorities.

II. Plans for follow-up (maximum length: 200 words)

In all surveyed sites, PTM has been monitored year-round. The last traps were installed in August 2008 and monitoring will continue until August 2009.

The granulovirus (*PoGV*) that attacks PTM has been detected naturally in Sanku (Kathmandu) for the first time in Nepal. It is currently multiplied in the Entomology Division of NARC for further study; a MSc student from IAAS is currently working on *PoGV*, the fungal entomopathogen *Metharhizium anisopliae* and *B. thuringiensis* var *kurstaki* (Z-1 strain) against PTM.

The analysis of socio-economic aspects is not analyzed in detail yet. For further analysis of potato production on a national-wide level, collaboration with ICIMOD is considered. ICIMOD holds a broad set of climatic, agricultural, and socio-economic data in their GIS databases that will be used for further spatial analysis and generation of potato maps.

The collection of insect species needs to be continued in higher altitudes. Sampling has been initiated in the summer crop in Nigale, Sindupalchok (1500 to 2400 m asl.)

The presence of local natural enemies of LMF needs to be assessed (initiated in February 2009). Research on LMF has been initiated. Importation of specific exotic parasitoids is considered as one option for its control.

**III. Report budget utilization including whether budget was spent as planned
(maximum length: 100 words)**

The budget was spent as outlined; however, the funds for international travel were later considered for YP Giri's participation at the Global Potato Conference, 2008. Mr. Giri obtained as author and speaker additional funding from the Central Potato Research Institute, India, for his participation in the conference. Therefore, the planned budget was used for national travel (CIP will support a visit to Bhutan for regional exchange of scientists during 2009).

The budget planned for office supply was used to co-fund a computer Notebook. The additional costs were covered by CIP. This investment had been considered more useful.

**IV. Assessment of the fellowship experience and general comments.
(Maximum length: 300 words)**

The fellowship obtained in the form of IFAR project proved very useful to enhance the ongoing work on PTM as well as to generate important information on the presence of the leafminer fly (LMF) in central mid hills of Nepal that exists in an alarming situation. It created background to enhance further research work on LMF. I believe the initiative work started on LMF will contribute significantly to save potato yields of Nepalese potato growers in the long-term.

While implementing research activities on major insect pest of potato researcher involved in the project get exposure and opportunity to contact eminent researchers that will prove beneficial for him in conducting further collaborative research work. The work will support him to be linked with the knowledge source in concerned area. Lastly I would like to thank the authority who provided me the opportunity as a recipient of the award.