PROJECTS COMPLETED DURING THE YEAR 2007–08

PLAN PROJECTS

Project 1: Introduction and performance trial of *Paulownia* species for agroforestry in different agro-climatic zones of Himachal Pradesh [HFRI-026/08 (AGF-02) PLAN 2003-08]

Findings: As a result of various combinations tried with *Paulownia* in different agroforestry trials, the species showed that, *Paulownia fortunei* exhibit, better growth performance in lower and in mid-hill zones whereas, *Paulownia tomentosa* performed well in the high hills in the State of Himachal Pradesh. Accordingly, the species can be recommended for its integration in various agroforestry systems. Also organized three trainings and published technical manual on *Paulownia* for the ultimate benefit of different stakeholders.

Project 2: Diagnostic survey and appraisal of existing agroforestry systems in mid and high hills of Himachal Pradesh [HFRI-028/08 (AGF-03) PLAN/ 2003-08]

Findings: On the basis of structure and functions of components, five types of the existing agroforestry systems were identified viz. Agri-silviculture, Horti-agriculture, Horti-agri-silviculture, pastoral-silviculture and Horti-pastoral both in mid and high hill temperate regions of Kullu district, Himachal Pradesh. Data for biological yield and economic returns of different existing agroforestry systems have been collected for evaluating the technological gaps, if any.

Project 3: Natural enemy complex of key and potential pests of five *Quercus* species of Himachal Pradesh [HFRI-027/06(FPT-05) PLAN 2003-2008]

Findings: The entomo-pathogenic fungus which was collected from IGM larval cadaver, were cultured in PDA media for extraction. The culture was maintained and when sporophores were grown, fungus was identified on the basis of spore characteristics as *Beauveria bassiana*. Bioassay experiment to evaluate the pathogenic efficacy of *Lymantria obfuscata* Nuclear Polyhedrosis Virus (LONPV) was also carried out and 92% mortality was recorded from 3rd instar larvae to 6th instar larvae, whereas 1st and 2nd instar larvae were found more resistant to the virus. One egg parasitoid was got identified from FRI, Dehradun, as *Anastatus kashmirensis* Mathur (Eupelmidae: Chalcidoidea: Hymenoptera). Laboratory culture of about 1000 individual of IGM is being maintained for future experiments. As per the extension activity, a one day villagers training on the control of Indian Gypsy Moth was organized at Sarhan, Sirmour district, in Himachal Pradesh.