

**Project 1: Reclamation of highly eroded site of Cherrapunjee, Meghalaya [RFRISM/ 4/2003-2006]**

**Findings:** *Alnus nepalensis* and *Exbucklandia populnea* were planted in the experimental plot at Cherrapunjee, Meghalaya. Survival percentage of *Alnus nepalensis* was found to be 90.8% and that of *Exbucklandia populnea*, it was 75.18%. Of the sixteen treatment combinations, P2W0M0F1 showed maximum height growth (221 cm) in case of *A. nepalensis* and 63 cm for *E. populnea*. The experimental plot was damaged entirely by fire during February 2006. The burnt area was fenced properly to preserve the plot for the rest of the project period to see the impact of fire hazard on the targeted species. It has been observed that *A. nepalensis* can come up after the fire hazard in more numbers and better height as compared to *E. populnea*.



**Project 2: Development of an eco-friendly strategy for the Management of *Calopepla leayana* Latr., a serious pest of *Gmelina arborea* Roxb. [RFRI/FE/11/2004-2007]**

**Findings:** Population fluctuation of *Calopepla leayana* on *Gmelina arborea* was studied in and around Jorhat, Assam. The population trend was correlated with abiotic factors of the study site which indicated significant dependence on temperature, relative humidity, and rain fall. Regression equation was also developed to predict population of *C. leayana* based on abiotic factors.

Damage potential of different stages of *C. leayana* on *G. arborea* was also assessed to develop suitable protocol for their management.

Entomopathogenic fungus, *Beauveria bassiana* was isolated and identified as an effective natural pathogen against the larval and adult stages of *C. leayana*. Mass production of *B. bassiana* using different substrates was attempted to produce ample amount of spores.