Field Research Station, Shillaru, Shimla

The Field Research Station Shillaru located about 50 km. away from Shimla towards Rampur at 2400 m elevation (77^0 27 30" E longitude, 31^0 15 30" N latitude) is an ideal site for carrying out research on temperate Himalayan tree and medicinal plants. The area experiences moderate to heavy snowfall during December to March in winters. The total area of the station is approximately 0.5 ha having soil with clay loam texture and 15–20 % slope. The layout includes preparation of contour beds mainly used for raising bare- root plants of Silver fir (*Abies pindrow*), Spruce (*Picea smithiana*), Poplar (*Populus spp*), *Aesculus indica, Salix spp* etc. Since its inception during 1977, the institute has carried out extensive trials on artificial regeneration of high-level conifers i.e. Fir and Spruce at this station, the species posing serious concerns to the forest managers due to total failure of its natural regeneration. Silver fir and Spruce are the very slow growing species and require 4 $^1/_2$and $3^1/_2$years respectively in nursery to attain plantable size of 20-25 cm. Out of this nursery period 1 $^1/_2$year is in germination beds and rest in the transplanting beds. Results of the various nursery studies undertaken at this station have been summarized below:

- Nursery techniques for raising bare-root stock of Silver fir and Spruce have been standardized and extended to SFD HP.
- Experiments conducted on root pruning at the time of transplanting indicated that root pruning of Silver fir & Spruce, leaving about 10 cm of root length intact, improves the growth and survival percentage of seedlings. Hence roots of these seedlings should be pruned leaving 10 cm root intact before transplanting.
- Application of Phorate @ 10 gm per Sq. m has been recommended to control cutworm attack in these nurseries.
- Root trainer seedling production of*Picea smithiana*and *Abies pindrow*revealed thatthe growth performance was found to be the best when raised in single cell root trainers of size 500 cc.
- Improved techniques for mass production of *Aconitum heterophyllum* (Atish) and *Angelica glauca* (Chora) developed and successfully applied in National Medicinal Plants Board (NMPB, New Delhi) funded project namely "Production of Quality Planting Material of *Aconitum heterophyllum* Wall.exRoyle and *Angelica glauca* Edgew. and extension of their cultivation technology to local communities".
- Produced around 4 lakhs nursery stock of Atish and Chora under various projects in this nursery during last five years.

A view of Shillaru Nursery

Atish Nursery stock in beds

In this Field Research Station, presently activities related to the following projects are being implemented:

1. Production of quality planting material of *Aconitum heterophyllum* Wall. Ex Royle, *Podophyllum hexandrum*Royle & *Angelica glauca* Edgew. and extension of their cultivation technology to local communities (NMPB funded)
2. Raising of nursery stock of tree species (tall plants) and medicinal plant species for HPSFD.
3. Germplasm of the 10 medicinal plants species in the nursery for research, demonstration and training purposes is being maintained.

Manpower:

Sh. Sangat Ram, Deputy Ranger

Sh. Jiya Lal, Forest Guard