



Icelandic Forest Research, Mógilsá, IS-116 Reykjavik, Iceland



Icelandic Forest Research (IFR) is the research branch of the Icelandic Forest Service. Its headquarters are located at Mógilsá at the base of mount Esja, approximately 20 km north of Reykjavik. An office is also operated in Akureyri, North Iceland and field experiments are located throughout much of the country.

The main focus and aim of Icelandic Forest Research is to conduct basic and applied forestry research, and to accumulate and disseminate research knowledge pertinent to afforestation, forest management, forest protection and the carbon budget in forests and forest soils in Iceland. During 2007 IFR employed 15 people of whom 3 have a PhD and 4 are currently working on their PhDs. Altogether, 13 staff members of IFR have a university degree.

The main fields of IFR are:

- Genetic resources and genetic improvement of forest tree species used in Icelandic forestry.
- Applied research in silviculture, with the main aim to improve the success of afforestation in Iceland. This includes research on site preparation, tree nutrition, beneficial soil organisms etc.
- Forest inventory and mensuration of forest stocks, growth, yield and carbon stock changes.
- Research associated with forest protection, i.e. forest pests and pathogens.
- Forest ecology research, especially concerning the ecological effects of afforestation.



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Some recent projects of IFR:

- Icelandic Forest Inventory (IFI). The main purpose of the IFI is to continuously provide information about the state of the Icelandic forests, especially in respect to carbon budget. In addition to assessing carbon stocks the IFI gathers information on land use, forest age and structure, condition of forest sites etc.
- Affornord – a joint Nordic project that aims to improve knowledge on the effects of new forests on biological diversity, the rural development and the landscape. Supported by the Nordic Council of Ministers.
- Plant Protection by Beneficial Soil Organisms – a Nordic research project on the interactions between root herbivorous larvae, beneficial soil fungi and birch roots. Supported by the SNS-Nordic Forest Research Co-operation Committee.
- Succession of Ectomycorrhizae and Nutrient Status in Forests. – a research project supported by the Icelandic Centre for Research.
- Nordic center for studies of Ecosystem Carbon Exchange and its interactions with the Climate. (NECC). Project done in cooperation between the Icelandic Forest Research and the University of Lund in Sweden. The main goal of the project is to measure carbon dioxide exchange over an afforested area in eastern-Iceland.
- The Holocene History of Birch (*Betula* sp.) woodlands in Iceland. The main aim of the project is to better understand the history of the Icelandic native Birch woodland and the effects of settlement, volcanic activity and climate on the forest history. The main methods used are; pollen and macrofossil analysis, sedimentary studies, dendroecology, tephrochronology and C-14 datings.
- „Better trees for Iceland“ (Tree Improvement Project). The project aims at selection of genetic material which has improved adaptation to Icelandic climate, better growth form and increased resistance to pests and diseases. It is now concentrating on two tree species which were introduced from Alaska in the last century. These are Sitka spruce (*Picea sitchensis*) and black cottonwood (*Populus balsamifera* ssp. *trichocarpa*). In case of the spruce, the main emphasis is on provenance trials and selection of trees for a seed orchard. The black cottonwood program consists of clonal trials, intra- and interspecific crosses and progeny field trials.