

## **SOME RESULTS OF THE AFFORESTATION OF CLOSED OIL SHALE OPENCASTS WITH EXOTIC CONIFERS**

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*The growth and survival of exotic coniferous tree species on closed oil shale opencasts during the last decade was studied, and their suitability for afforestation of plained opencast areas was estimated. The study was carried out in 2001–2003 on experimental plantations on exhausted and recultivated oil shale opencast mines of Narva, Sirgala and Viivikonna. In seventeen experimental plantations a sample plot was established. As for pines, only the growth of shore pine (*Pinus contorta* Dougl. ex Loud.) was satisfactory. The observed spruce species are unsuitable for afforesting these mines as the substrate is too poor in nutrients, and trees are damaged by frosts in open areas. The afforestation by spruces may be more successful if the seedlings are planted under the shelter of higher deciduous trees. Our tests showed the European, Russian, Siberian and Kurile larch to be most suitable for afforestation of leveled oil shale opencast sites. These species have grown better than other larch species and even better than native tree species. The diameter growth of balsam fir was more or less equal to that of the native tree species, but its height growth was less due to poor nutrient supply in the substrate.*

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