



Valoya LED Lights at Holmen Skog's Multilayer Nursery for Tree Seedlings

Background

Holmen Skog installed 2100 units of Valoya Ltd's LED lights to its fully automated tree nursery in Friggessund, Sweden. The newest part of the nursery is a multilayer growing unit with 12 layers and its sole source of light is Valoya's LED lights.

Holmen Skog, a major Swedish forestry company, uses 32 million tree seedlings annually to reforest its forests. Most of the tree seedlings come from their own nurseries. The nursery in Friggessund has been rebuilt to become a state-of-the-art nursery, enabling year-round cultivation. In this multi-layer growing environment with automated transplantation and quality control as well as cold storage, use of artificial light is critical for successful cultivation of the tree seedlings. To ensure high quality plants from this process, Holmen selected Valoya's products after a rigorous testing of different options. Valoya's LEDs, together with the selected substrates and growing protocols, provide high quality plants, with strong roots and full cold hardiness.

Valoya Advantage

The new process enables Holmen Skog to have fully controlled growth, year-round production and a 100-fold increase in productivity per area. Valoya lights provided Holmen with superior growth results compared to other light sources already at low intensities. The results were seen as strong roots, strong plants and required full cold hardiness. Use of LEDs enabled Holmen to increase production density by going to a vertical production environment. The no-natural light multilayer production environment, enabled full control of all growth factors and also enabled to increase annual crops from 3 to 7 compared to conventional glass-greenhouse cultivation. Cold storage of plants is critical phase for Holmen, and thus full cold hardiness had also to be achieved in the vertical growth cell. The vertical growth cell is now part of a larger fully automated growing process with novel growth protocols.

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