BioTechnology Solutions for Tree Breeding and Forestry Operations

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Abstract

SweTree Technologies is a plant and forest biotechnology company providing products and technologies to improve the productivity and performance properties of plants, wood and fiber for forestry and fiber related industries. SweTree works in a broad array of Biotechnology including: Gene based breeding (including GM forestry and gene editing), automated clonal propagation using Somatic Embryogenesis and nutritional solutions (spun off into the company Arevo). One of the key strengths of SweTree is the ability to successfully work with academia and industry partners benefiting all involved parties.

In the area of Gene Based breeding, SweTree develops trait gene technologies that is then applied in customer's elite germplasm. SweTree has a technology platform for GM Eucalyptus and a large trait gene portfolio including genes improving: yield, yield protection and wood quality. SweTree currently develops the gene technologies for several forest companies growing Eucalyptus on a total of 1,5 M ha. For the near future there are also strong possibilities in species such as Poplars which performs well in temperate parts of the world.

In the Somatic Embryogenesis (SE) area, SweTree is developing automated solutions for large scale (1-20 million seedlings per annum) economical production of SE derived plants. We are currently working with Norway spruce in Scandinavia, setting up the technology for major Swedish forest owners. We are also starting to look into possibilities for other tree species.

We will here present results and future prospects in these areas and how we work towards providing solutions to one of the major challenges of the future: sustainable growth of renewable and high value forest raw material facilitating replacement of non-renewable products.

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