



# Soilless cultivation of hardy nursery stock (Teelt de grond uit)

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## Preface

The aim of the project “Soilles culture-Hardy nursery stock” is to develop a profitable cropping system for tree nurseries that will meet the European standards for water quality.

Cooperation between the sector of tree nurseries and the government can reach a win-win situation where important bottlenecks in cropping systems will be resolved. Soilless production is not new for the nursery stock sector. In the Netherlands the area used for cultivation in pots and containers is about 750 ha. Labour availability and labour conditions are important constraints.

## New developments

Tree growers in the region of Opheusden have developed a system for growing trees in gutters. In this system trees are grown in the gutters during one growing season. The winter hardiness of trees in gutters has been tested (2009-10).

Fruit trees were planted this spring that will be monitored in gutters for two successive growing seasons.



Fig. 1. Frost resistance of conifers and shrubs in gutters.

Cultivation of avenue trees in containers for more than one growing season gives problems with development of root circling. Root development is now being assessed in different types of containers (Fig. 2).



Fig. 2. Effect of container types on root development.

In the spring of 2011 a so-called ‘pot-in-pot’ system will be built. In this closed system water and nutrients will be applied through a flood and drain system.



Fig. 3. Pot-in-pot system.

The Dutch tree nursery sector is well known for its pioneering activities. Companies are prepared to invest in order to improve their market position.