

Master project proposal

Does productivity of hybrid aspen vary so much? Analysis of growth parameters of hybrid asp stands planted at forestry estate in southern Sweden.

Background

Hybrid aspen is a highly productive tree species with maximum mean annual increment of 25 m³ ha year. Fast growth and short rotation of 20-25 years might cause that hybrid aspen might be an interesting complement species to currently used in Swedish forestry.

High productivity has often been measured in well maintained experiments. The investigation of hybrid aspen stands done in Sweden after damage done by storm Gudrun in the year 2005 showed that productivity of the stands is actually very low. There is a need to do new investigations of hybrid asp stands planted by forest owners.

Materials and Methods

Axelvold forestry estate located in southern Sweden just outside Svalöv. Forest owners have planted hybrid aspen over last 30 years. Today, there are ca 55 hectare of planted hybrid aspen in age between 3 and 29 years.

The subjective observations in field indicate that there is a substantial variation in stands quality varying from very well growing stands to stands with strongly hampered growth. The variability is visible even though local site conditions seem to be even between sites.

There are range of possible explanations why productivity vary. Different clonal mixes delivered for planting, micro sites differences and access to ground water table, previous land management, thinnings timing, development of pathogens.

The intention is to do biometric inventory of the stands by establishment of temporary measurements plots to assess site index and stands productivity. The investigation of ground vegetation, soil properties and water conditions will be done.

Goal

The goal of the thesis is to find a possible explanation of variability in productivity of hybrid aspen stands established at the Axelvold estate in last 30 years.

Interested??

Contact Mateusz.liziniewicz@skogforsk.se