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Skog Alnarp

The road to more broadleaves

A record-breaking investment in fast-growing broadleaf trees has been made.

Today almost all trees planted are Norway spruce or Scots pine. The goal is for 10 percent of new planting to be broadleaves.

"Most of all, we hope for improved birches. They are already competitive with spruce in some locations. With new methods to speed up genetic improvement, we can produce birches that grow 50 percent faster than the best unimproved trees," says Professor Urban Nilsson.

TO take advantage of these opportunities, a lot of new knowledge is required, from planting, processing and forest management to finished products.

A centre of competence for fast-growing broadleaves is being built from a record-breaking research project funded from the Swedish Energy Agency over five years.

The project, headquartered in Alnarp, is called TFM (Trees For Me). Beyond SLU, participants include Luleå Technical University, the Swedish forest research agency Skogforsk, Umeå University and Uppsala University.

In addition, 45 co-financers participate in the project, from local nature protection associations to large forestry firms.

About 20 researchers are involved in the work and recruitment of PhD students is in full swing. Together with a postdoc 14 posts will be filled.

AT an introductory meeting in mid-April, the researchers presented the project.

It is about everything from semi-automated machines for planting and soil preparation (Luleå Technical University) to DNA analyses to evaluate trees´ properties and speed up breeding (Skogforsk).

Other key questions concern biodiversity and climate benefits, to fix more carbon and replace fossil products.

Trees For Me is coordinated by Gudmund Vollbrecht (left), and led by Urban Nilsson with Michelle Cleary (right) and Magnus Karlberg as vice-directors.

At the introductory meeting, Henrik Böhlenius showed a study with 17-year-old poplar. It is the second generation on that site, and was regenerated through stump sprouting.

FOREST management is also important in the project. Previous research has focused on spruce and pine. There is little knowledge about cultivating broadleaf stands via large-scale planting.

To give guidance, five large field studies are being installed across Sweden.

They will evaluate different plant types, mixed forests, fertilisation and alternative management. One possibility is to target energy extraction through later thinning and then switch the focus to timber.

An important problem to solve is the risk of browsing damage. Fencing out deer is not a realistic alternative, but some protection from wildlife may be needed. An advantage of fast-growing broadleaves is that they quickly grow to a browsing-safe height, therefore only a few treatments may be needed.

THE focus is on native birch species that can be used without restriction. Poplar and hybrid aspen are considered exotic species, but Urban Nilsson notes that this could change.

"It is good to have several alternatives in forestry, and fasting-growing broadleaves definitely have an important place."

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