



Harvesting branches can exhaust the soil

Forest managers should not be too quick to harvest branches in areas with poor soils, says Anjo de Jong, a researcher at Wageningen Environmental Research. Together with colleagues, he calculated the loss of nutrients in Dutch forests due to harvesting stem and branch wood.

In addition to nitrogen, trees need nutrients such as phosphorus and potassium to grow. The soil in higher lying sandy areas of the Netherlands is often poor and lacking in such nutrients. There is enough nitrogen due to deposition, which is good for growth, but it also leads to leaching of other nutrients. This causes an imbalance that reduces the vitality and rate of growth of the forest.

Forest ecologists see this imbalance in the soil reflected in the trees. De Jong: 'Dutch trees have much higher nitrogen content than trees in other countries. At the same time, they have lower concentrations of potassium and phosphorus.' That is mainly the case in the tree trunk. In branches, the difference is smaller for nitrogen but still big for the other nutrients.

Conifers

These days, forest managers sometimes harvest branch wood and top wood as an energy source in addition to stem wood. But the branches have relatively more nutrients than the trunks, so you then remove a lot of nutrients. This is particularly the case for conifers, where the needles stay on the branches. Deciduous trees such as the beech, oak and birch that grow in poor soils tend to have more nutrients in the trunk. That is why De Jong urges foresters to hold back on harvesting the stem wood of these trees.

The forestry agency Staatsbosbeheer was involved in the study and has now drawn up its own guidelines for harvesting. Other forestry managers are also interested in the researchers' recommendations. ^{ss}