

GENERAL INFORMATION

author(s)	Mussche S, Bussche B, De Schrijver A, Neiryck J, Nachtergale L, Lust N
year	1998
English title	Nutrient uptake of a mixed oak/beech forest in Flanders (Belgium)
original title	
reference	Silva Gandavensis 63
pages	120–133
type	article (a3)
ecosystem service	supporting – nutrient cycling
keywords	nutrient uptake
taxa	<i>Quercus robur</i> – <i>Fagus sylvatica</i>
project	
location	hardcopy, pdf
data	

MATERIALS & METHODS

study area	scientific zone (5n)
time period	1997
goal	<ul style="list-style-type: none">- Quantification of the nutrient content in the woody biomass, litter fall, and crown leaching in an oak/beech forest.- Calculation of the nutrient uptake of the stand.
set-up	<ul style="list-style-type: none">- 8 oak, 6 beech trees felled
data collection	<p>Nutrient content</p> <ul style="list-style-type: none">- 1 m logs: weighed, diameters measured (volume calculations) + wood disc/log: dry weight, N, P, K, Ca, and Mg concentrations for heartwood, sapwood, bark- branches in 4 \emptyset classes (2.5 cm, 2.5–4 cm, 4–7 cm, > 7 cm) + fresh & dry weight + nutrient content <p>Canopy leaching: see Bussche_1998_th and De Schrijver & Lust 1998 Litter fall: see Mussche_1997_th Nutrient uptake = sum of the above</p>
remarks	

RESULTS

Nutrient concentrations are higher in the bark. Regression equations between nutrient content and wood volume were determined and used to calculate nutrient content for the entire stand. Canopy leaching and litter fall were calculated for the entire stand. Nutrient uptake was calculated based on the nutrient content, canopy leaching, and litter fall.

CONCLUSIONS

Biomass, litter fall, and element content are high in the studied stand. However, reported concentrations in literature vary widely. Crown leaching is important for K and Mg; litter fall is important for N, P, Ca.