



<b>habitat</b>	
natural distribution	Europe, W. Asia
in N.W. Europe since	Ulmus 7000 B.C.
natural areas The Netherlands	forests
geological landscape types The Netherlands (Hoek 1997)	river and brook valleys, loess covered terraces
forested areas The Netherlands	moist and nutrient rich sandy, loamy and clayish soils; half shaded ash forest
area Netherlands	approx. 50
% of forest trees in the Netherlands	<0,1
soil type	
pH-KCl	indifferent
soil fertility	nutrient rich
light	shade tolerant
① shade tolerance (0=no tolerance to 5=max. tolerance)	3.7
① drought tolerance (0=no tolerance to 5=max. tolerance)	1.5
① waterlogging tolerance (0=no tolerance to 5=max. tolerance)	2.8
plant communities in the Netherlands	Klasse der Eiken-beukenbossen van voedselrijke grond: -Violo odoratae-Ulmetum – Abelen-lepenbos -Fraxino-Ulmetum – Essen-lepenbos
<b>management</b>	
status Europe	rare, indigenous species in forests
status The Netherlands	endangered indigenous species in forests and landscape
application	nature tree, landscape planting
propagation	seed, cuttings, (layering)
regeneration	planting; natural regeneration from seed or up-rooting
optimal gap size for regeneration	?
first plantation Netherlands	
oldest tree Europe	Guelitz, Perleberg, Deutschland dbh 300 cm, year ...
oldest trees Netherlands	Borculo, approx 1850
resprouting after cutting	good
growth rate (M.A.I. in m <sup>3</sup> ha <sup>-1</sup> j <sup>-1</sup> )	fast (data unknown)
diseases	susceptible for <i>Ophiostoma novo-ulmi</i> , fungus in xylem (Dutch: lepenziekte) but no natural infections in West Europe
insects	usually not eaten by <i>Scolytus</i> spp. (Dutch: lepenspinkevers)
<b>wood</b>	
wood	elm (Dutch: iepen)
wood structures key characteristics of pores	Ring porous. Tangential bands of pores. 4-5 seriate rays.
vol. mass heartwood (kg/m <sup>3</sup> )	....(12% moisture content)
elastic modulus (N/mm <sup>2</sup> )	
durability heartwood	fungus 4
heartwood color	light brown to dark brown
sapwood color	grey-white to light brown
contents	
products	construction timber, cladding, furniture, tools, coach-building, bows (pre-historical)
<b>non-timber products</b>	
leaves and shoots	for fodder (old in Europe, still in Asia)
young leaves	edible
fruits	edible
inner bark	edible

① Ülo Niinemets and Fernando Valladares. 2006. Tolerance to shade, drought, and waterlogging of temperate Northern Hemisphere trees and shrubs. Ecological Monographs 76:521–547



White elm leaves and fruit

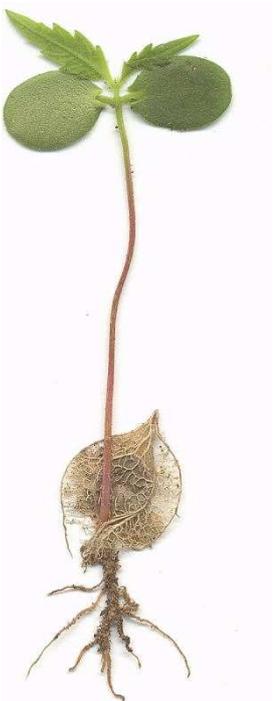


twig in winter



White elm, seedlings, Valkenburg, Limburg

photos 3x © Leo Goudzwaard



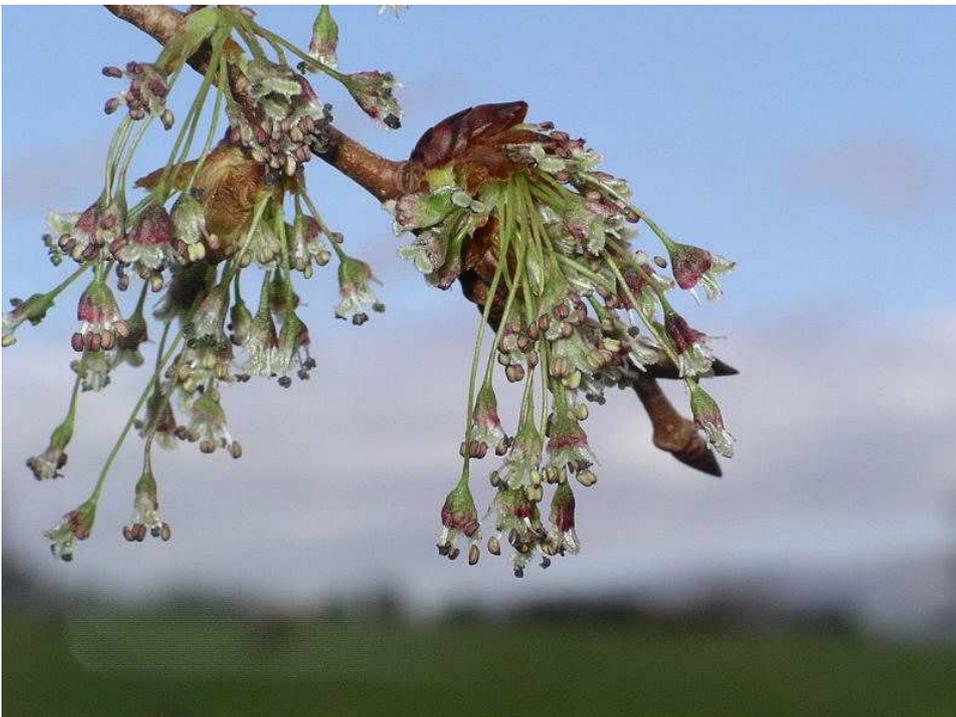
White elm seedling  
photo © Leo Goudzwaard



mature tree at the Isle of Anglesey, Wales, U.K. photo Wikipedia



fruits at a branch  
photos 2x © Leo Goudzwaard



flowering branch, Isle of Anglesey, Wales, U.K. photo Wikipedia