

habitat	
natural distribution	West, South and Mid Europe
in N.W. Europe since	approx. 1600
natural areas The Netherlands	
geological landscape types The Netherlands (Hoek 1997)	river and brook valleys, inner dune area, loess covered terraces, holocene cover
forested areas The Netherlands	none
area Netherlands	not a forest tree any more
% of forest trees in the Netherlands	-
soil type	
pH-KCl	neutral to alkaline
soil fertility	nutrient rich
light	shade tolerant
① shade tolerance (0=no tolerance to 5=max. tolerance)	no data; probably as U. minor
① drought tolerance (0=no tolerance to 5=max. tolerance)	no data; probably as U. minor
① waterlogging tolerance (0=no tolerance to 5=max. tolerance)	no data; probably as U. minor
plant communities in the Netherlands	Klasse der Eiken-beukenbossen van voedselrijke grond: -Viola odoratae-Ulmetum – Abelen-lepenbos -Fraxino-Ulmetum – Essen-lepenbos
management	
status Europe	natural hybrid, scattered, locally frequent in landscape and urban environment
status The Netherlands	scattered, locally frequent in landscape and urban environment
application	timber tree, landscape tree, street tree, windbreak
propagation	grafting, cuttings, layering
regeneration	planting; natural regeneration from seed or up-rooting
optimal gap size for regeneration	1-2x tree length
first plantation Netherlands	possibly in Roman times as supporting trees for grapes
resprouting after cutting	very good
growth rate (M.A.I. in $m^3ha^{-1}j^{-1}$)	fast (data unknown)
diseases	<i>Ophiostoma ulmi</i> , <i>Ophiostoma novo-ulmi</i> , fungi in xylem (iepenziekte) for non-resistant trees
insects	<i>Scolytus scolytus</i> , <i>Scolytus multistriatus</i> , <i>Scolytus pygmaeus</i> (Dutch: iepenspintkevers)
wood	
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 ³)	630-680 (12% moisture content)
elastic modulus (N/mm ²)	10.800
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)
non-timber products	
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



Leaves of two different *Ulmus x hollandica* types:
U. x hollandica 'Groeneveld' (left)



U. x hollandica 'Belgica' (right)



branch of the type *U. x hollandica* 'Schuurhoek'

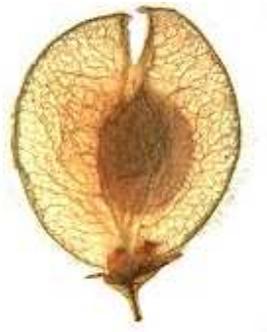
photos 3x © Leo Goudzwaard



seeds at a branch of cv 'Belgica'



unripe seeds, photos 2x © Leo Goudzwaard



ripe fruit, photo RUG, www.zadenatlas.nl



Ulmus x hollandica 'Belgica', Amsterdam, one of the highest trees in the city
photo © Jeroen Philippona



mature Elm 'Belgica', Utrecht
photos 2x © Leo Goudzwaard



young Elm, 'Vegeta', Veenendaal



stem of a mature elm
photos 2x © Leo Goudzwaard



the bark in detail



Elm wood, photo © Chris Sonnemans