

**Tree factsheet**

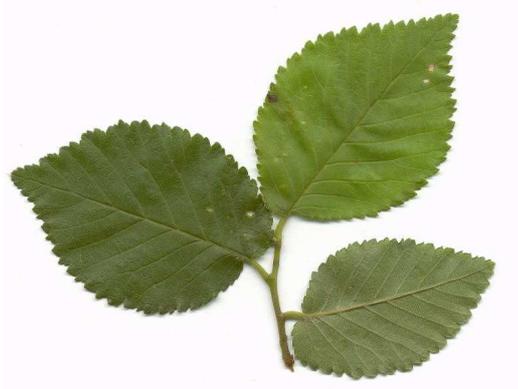
images at pages 3, 4, 5

***Ulmus minor* Mill.**

<b>taxonomy</b>	
author, year	Miller, 1768
synonym	<i>U. carpinifolia</i> Gled.; <i>U. campestris</i> L.
Family	Ulmaceae
Eng. Name	European Field Elm, Smooth-leaved elm
Dutch name	Veldiep, Gladde iep
subspecies	
varieties	
hybrids	<i>Ulmus x hollandica</i> ( <i>U. minor</i> x <i>U. glabra</i> )
cultivars, frequently used	
'Sarniensis'	columnar shape (frequent in city center of Amsterdam)
<b>references</b>	Weeda, 2003, deel 1 (Dutch)
	Heybroek, H.M. 1987. Het genus <i>Ulmus</i> (in Dutch). in: Schmidt, P. 1987. Nederlandse boomsoorten I, Syllabus Vakgroep Bosbouw Landbouwuniversiteit Wageningen
	Plants for a Future Database; <a href="http://www.pfaf.org/index.html">www.pfaf.org/index.html</a>
<b>morphology</b>	
crown habit	tree, oval or vase-shaped
max. height (m)	20 (30)
max. dbh (cm)	50 and more
leaf length (cm)	5-8 (-10)
leaf petiole (cm)	0,5-1
leaf color upper surface	green
leaf color under surface	green
leaves arrangement	alternate
flowering	March
flowering plant	monoecious
flower	hermaphrodite
flower diameter (cm)	0,2
pollination	wind
fruit; length	samara (=winged nut); 1-1,5 cm
fruit petiole (cm)	0,1-0,2
seed; length	nut; 0,5 cm
seed-wing length (cm)	1-1,5
weight 1000 seeds (g)	6,7-8,3
seeds ripen	April-May
seed dispersal	wind, water (river)
<b>habitat</b>	
natural distribution	West, South and Mid Europe
in N.W. Europe since	7000 B.C.
natural areas The Netherlands	forests, hedges

geological landscape types The Netherlands (Hoek 1997)	river and brook valleys, inner dune area, loess covered terraces, holocene cover
forested areas The Netherlands	moist and nutrient rich sandy, loamy and clayish soils; half shaded oak, ash and poplar forests
area Netherlands	< 1700 ha (2002, Probos); not a forest canopy tree any more
% of forest trees in the Netherlands	< 0,6 (2002, Probos)
soil type	
pH-KCl	acid to neutral
soil fertility	nutrient rich
light	shade tolerant
① shade tolerance (0=no tolerance to 5=max. tolerance)	3.4
① drought tolerance (0=no tolerance to 5=max. tolerance)	3.4
① waterlogging tolerance (0=no tolerance to 5=max. tolerance)	2.1
plant communities in the Netherlands	Klasse der Eiken-beukenbossen van voedselrijke grond: -Viola odoratae-Ulmetum – Abelen-lepenbos -Fraxino-Ulmetum – Essen-lepenbos
<b><u>management</u></b>	
status Europe	scattered, locally frequent indigenous tree in forests and landscape
status The Netherlands	scattered, locally frequent in landscape and urban environment
application	nature tree, landscape tree, street tree, windbreak
status	scattered, locally frequent but declining due to Dutch Elm Disease, adult trees rare indigenous species
application	
propagation	cuttings, layering, seed; named cultivars by grafting
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
oldest tree Europe	300 years France, Salignac (†2004)
oldest trees Netherlands	natural origin: probably Wageningen, Bergrand. Orig. approx. 1945. cultivar: 'Hoersholmiensis' Amsterdam approx 1930.
resprouting after cutting	very good
growth rate (M.A.I. in $m^3 ha^{-1} j^{-1}$ )	fast (data unknown)
diseases	<i>Ophiostoma novo-ulmi</i> , fungus in xylem (Dutch: iepenziekte)
insects	<i>Scolytus scolytus</i> , <i>Scolytus multistriatus</i> , <i>Scolytus Pygmaeus</i> (iepenspintkevers)
<b><u>wood</u></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> )	630-680 (12% moisture content)
elastic modulus (N/mm <sup>2</sup> )	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)
<b><u>non-timber products</u></b>	
leaves and shoots	for fodder (old in Europe, still in Asia)
young leaves	edible
fruits	edible
inner bark	edible

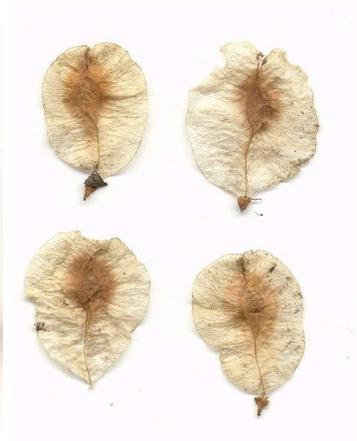
① Ülo Niinemets and Fernando Valladares. 2006. Tolerance to shade, drought, and waterlogging of temperate Northern Hemisphere trees and shrubs. Ecological Monographs 76:521–547



Field Elm leaves



twig and fruits in spring  
sometimes red colored



dry fruits



mature tree, Utrecht  
photography 5x © Leo Goudzwaard



approx 6 years old, Wageningen



stem of a mature Field Elm, Utrecht  
photo © Leo Goudzwaard

12.

44. Ulmaceae.



184. *Ulmus campestris* L.

Feldrüster.