

Tree factsheet

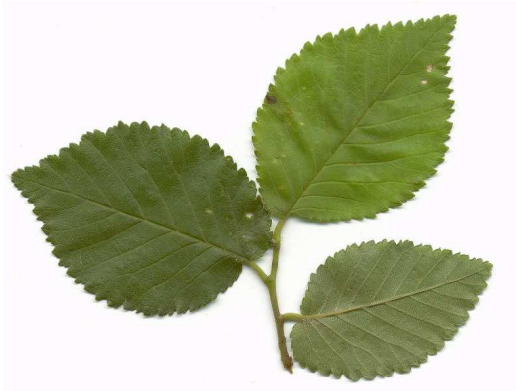
images at pages 3, 4, 5

***Ulmus minor* Mill.**

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| taxonomy | |
| 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) |
| references | 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; www.pfaf.org/index.html |
| morphology | |
| 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) |
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| habitat | |
| 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 |
| ● shade tolerance (0=no tolerance to 5=max. tolerance) | 3.4 |
| ● drought tolerance (0=no tolerance to 5=max. tolerance) | 3.4 |
| ● 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-Iepenbos -Fraxino-Ulmetum – Essen-Iepenbos |
| | |
| <u>management</u> | |
| 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 $m^3ha^{-1}j^{-1}$) | 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) |
| | |
| <u>wood</u> | |
| 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) |
| | |
| <u>non-timber products</u> | |
| leaves and shoots | for fodder (old in Europe, still in Asia) |
| young leaves | edible |
| fruits | edible |
| inner bark | edible |

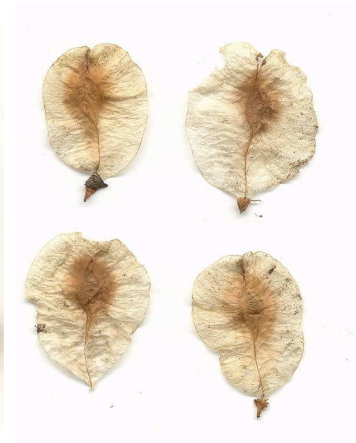
● Ülo Niinemets and Fernando Valladares. 2006. Tolerance to shade, drought, and waterlogging of temperate Northern Hemisphere trees and shrubs. Ecological Monographs 76:521–547



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.