

Tree factsheet

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***Populus nigra* L.**

taxonomy	
author, year	Linnaeus 1753
synonym	
Family	Salicaceae
Eng. Name	Black poplar
Dutch name	Zwarte populier, Peppel
subspecies	
varieties	
hybrids	<i>Populus x canadensis</i> Moench (<i>P. nigra</i> x <i>P. deltoides</i>)
cultivars, frequently used	
'Italica'	Lombardy poplar (Italiaanse populier), a street and landscape tree
references	Weeda, E.J. 2003. Nederlandse Oecologische Flora, deel 1
	OECD, 2001. Concensus document on the biology of Populus (online document) Series on Harmonisation of Regulatory Oversight in Biotechnology, No. 16
	Schotveld, A. 1987. Populier (in Dutch). in: Schmidt, P. 1987. Nederlandse boomsoorten I, Syllabus Vakgroep Bosbouw Landbouwuniversiteit Wageningen
	Hiemstra, J.A. 2002. Rassenlijst bomen. Plants for a Future Database; www.pfaf.org/index.html
morphology	
crown habit	tree, oval to round
max. height (m)	38
max. dbh (cm)	200
actual size Europe	year ..., d(130) 218, h 31, Christ's College, Brecon, Powys, Wales year ..., d(..) 201, h 38, Longnor Hall, Shropshire, England
actual size Netherlands	year 1600-1700, d(130) 143, h 19 year 1870-1880, d(130) 210, h 25 year 1880-1890, d(130) 102, h 35 year 1860, d(130) 213, h35, Heemstede Noord Holland year 1860, d(130) 204, h 38, Eijsden, Limburg
leaf length (cm)	5-11
leaf petiole (cm)	2-7
leaf colour upper surface	green
leaf colour under surface	green
leaves arrangement	alternate
flowering	March
flowering plant	dioecious
flower	monosexual
flower diameter (cm)	
flower male catkins length (cm)	4-7,5
female fruit catkins length (cm)	10-15
pollination	wind
fruit; length	capsule (doosvrucht); 0,1-0,2 cm
fruit petiole (cm)	<0,1
seed; length	seed; .. cm
seed-wing length (cm)	pappus: approx 0,5
weight 1000 seeds (g)	<i>P. tremula</i> : 0,2
seeds ripen	June
seed dispersal	wind, water

habitat	
natural distribution	Europe, W. Asia, N. Africa
in N.W. Europe since	approx 11.000 B.C.
natural areas The Netherlands	riverine forests
geological landscape types The Netherlands (Hoek 1997)	river valleys
forested areas The Netherlands	clayish soils near rivers
area Netherlands	Populus+Salix: 16.290 (2002, Probos)
% of forest trees in the Netherlands	Populus+Salix: 6,3 (2002, Probos)
soil type	
pH-KCl	neutral to alkaline
soil fertility	nutrient rich
light	light demanding
① shade tolerance (0=no tolerance to 5=max. tolerance)	2.5
① drought tolerance (0=no tolerance to 5=max. tolerance)	2.2
① waterlogging tolerance (0=no tolerance to 5=max. tolerance)	3.7
plant communities in the Netherlands	Klasse der Wilgenvloedbossen en –struwelen: -Artemisio-Salicetum albae – Bijvoet ooibos
management	
status Europe	endangered indigenous species in forests
status The Netherlands	endangered indigenous species in forests and landscape
application	nature tree, timber tree, landscape tree, street tree
propagation	seed, cuttings or rootings
regeneration	planting; natural regeneration from seed and up-rootings
optimal gap size for regeneration	2-3x tree length
first plantation Netherlands	
resprouting after cutting	good
growth rate (M.A.I. in $m^3ha^{-1}j^{-1}$)	fast 10-24
diseases	<i>Melampsora larici</i> – fungus on leaves – roest <i>Xanthomonas populi</i> – bacterium on branches – bacteriekanker <i>Marssonina brunnea</i> – fungus on leaves – bladvleckenziekte
insects	<i>Cossus cossus</i> – caterpillar feeding on wood – Wilgenhoutrups
wood	
wood	Poplar (Dutch: populieren)
wood structures key characteristics of pores	diffuse porous, uniseriate, homogeneous rays
vol. mass heartwood (kg/m ³)	(380-)440 (-530) (12% moisture content)
elastic modulus (N/mm ²)	9.700
durability heartwood	fungus 5
heartwood color	yellowish white
sapwood color	white
contents	
products	pulpwood, veneerwood, package wood
non-timber products	
	leaves for fodder

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



winter buds



fruits and leaves



cv 'Italica', Rhenen



mature tree, Wageningen