

Supplementary Material**Tab. S1** - Summary of the 33 seed bank studies in central and north-west European temperate forests selected.

Author(s)	Date	Country	Forest type	Age (yr)
Amrein et al.	2005	Switzerland	Deciduous forest	ancient
Augusto et al.	2001	France, northeast	Beech forest	57
			Oak forest	76 & 78
			Douglas fir plantation	65
			Pine plantation	43 & 65
Bakker et al.	1996a	Sweden	Spruce plantation	35 & 65
			Juniper shrubland on former grazing land	20
			Juniper shrubland on former grazing land	55
Bekker et al.	2000	Netherlands	Juniper shrubland on former grazing land	80
			Succession on dry and wet hayfield	7
			Succession on dry and wet hayfield	15
			Succession on dry and wet hayfield	20
Berger et al.	2004	Austria	Succession on dry and wet hayfield	25
			Secondary Norway spruce stand	53 - 65
			Mixed beech-spruce stand	89
Bossuyt et al.	2002	Belgium	Mixed beech-oak stand	55
			Mixed beech-oak stand	97
			Mixed beech-oak stand	116
Brown & Oosterhuis	1981	England, east	Abandoned coppice wood	30 - 40
Buckley et al.	1997	England, south	Beech plantation	36
			Beech plantation	52 - 58
			Oak plantation	40 - 55
			Corsican pine plantation	27 - 28
			Hazel coppice with oak standards	
			Hazel coppice with oak and ash standards	
Decocq et al.	2004	France, north	Ash-beech stand	mature
			Deciduous forest of former coppice with oak	ancient
Dölle & Schmidt	2009	Germany	Succession on former arable field	22
			Succession on former arable field	36
Donelan & Thompson	1980	England	Succession on former grassland	50
			Succession on former grassland	80
			Succession on former grassland	100
			Oak forest	200
Dougall & Dodd	1997	England, southeast	Conifer plantation	0 - 10
			Conifer plantation	10 - 20
			Conifer plantation	21 - 40
			Conifer plantation	> 65
			Broadleaf plantation	ancient
Ebrecht & Schmidt	2008	Germany	Semi-natural broadleaf edge habitats	ancient
			Beech forest	ancient
			Mixed beech forest	ancient

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Author(s)	Date	Country	Forest type	Age (yr)			
Falińska	1999	Poland, Belarus	Norway spruce stand	ancient			
			Succession from meadow	0			
			Succession from meadow	5			
			Succession from meadow	10			
			Succession from meadow	15			
Grandin	2001	Sweden	Succession from meadow	20			
			Succession from shoreline to mixed spruce-deciduous forest	mature			
			Granström	1982	Sweden, north	Pine stand	16
						Pine stand	29
						Pine stand	50
Spruce stand with scattered pine	120						
Granström	1988	Sweden	Spruce stand with scattered pine	169			
			Norway spruce forest on former heathland	30			
			Norway spruce forest on former heathland	35			
			Norway spruce forest on former heathland	64			
			Norway spruce forest on former heathland	73			
Heinrichs	2010	Germany	Clearfelled Norway spruce forest	85			
			Norway spruce forest	ancient			
Hester et al.	1991	Scotland	Clearfelled Norway spruce forest	4			
			Succession on heathland	17			
			Succession on heathland	28			
			Succession on heathland	36 - 37			
			Succession on heathland	48			
Hill & Stevens	1981	England	Succession on heathland	63			
			Clearfelled Douglas fir plantation	4			
			Sitka spruce plantation on former heathland	5 - 10			
			Sitka spruce plantation on former heathland	17 - 18			
			Sitka spruce plantation on former heathland	29 - 30			
			Sitka spruce plantation on former heathland	30 - 31			
			Sitka spruce plantation on former heathland	36 - 45			
			Japanese larch plantation on former heathland	37			
			Scots pine plantation on former heathland	37			
Jankowska-Błaszczuk	1998	Poland, Belarus	Oak wood				
			Primary mixed forest	ancient			
Jankowska-Błaszczuk et al.	1998	Poland, Belarus	Secondary deciduous forest	ancient			
			Hornbeam forest	ancient			
Jaroszewicz	2013	Poland, Belarus	Oak forest	ancient			
			Spruce-pine stand	ancient			
Jędrzejczak	2013	Poland, south	Beech forest				
Kalamees & Zobel	1998	Estonia	Succession on grassland	20			
			Succession on grassland	long term			
Kjellsson	1992	Denmark	Maple stand	40			
			Beech forest	62 & 70			
			Deciduous stand	141 & 145			

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Author(s)	Date	Country	Forest type	Age (yr)
			Mixed beech-oak stand	175
			Oak-ash stand of former hazel coppice forest	180
Komulainen et al.	1994	Russia, north	Pine forest	young
Milberg	1995	Sweden, south	Succession on grassland	18
Miller & Cummins	2003	Scotland	Oak-birch woodland Pine woodland	
Mitchell et al.	1998	England	Succession on heathland	23
			Succession on heathland	30
			Succession on heathland	43
			Succession on heathland	48 - 49
Staaf et al.	1987	Sweden, south	Beech forest	90
			Beech forest	95
			Beech forest	100
			Beech forest	110
			Beech forest	140
			Beech forest	150
Thompson & Grime	1979	England	Deciduous forest	ancient
Warr et al.	1994	England, southwest	Cut oak coppice forest	8
			Cut oak coppice forest	24 - 25
			Abandoned hazel coppice forest	74
			Abandoned oak coppice forest	78
			Abandoned oak coppice forest	94
			Felled cherry and ash stand	2
			Oak stand	45
			Birch woodland on abandoned fields	80 - 90
			Oak woodland (abandoned coppice)	140
			Mixed conifer stand	18
			Hybrid larch stand	20
			Douglas fire stand	20 & 24
			Norway spruce stand	24
			Sitka spruce stand	28 - 29
			Sitka spruce stand	42
			Japanese larch stand	42
			European larch stand	53