

Appendix S1. Summary of the annual atmospheric rates of K deposition ($\text{kg ha}^{-1} \text{ yr}^{-1}$) observed in various studies.

Site location	Atmospheric K deposition ($\text{kg ha}^{-1} \text{ yr}^{-1}$)	Reference
Quebec (Canada)	Total deposition 1.13	Gélinas <i>et al.</i> (2000)
Ontario (Canada)	Total deposition 6.8	Watmough & Dillon (2004)
Northeastern USA	Total deposition 12	Friedland & Miller (1999)
Northeastern USA	Total deposition 0.86	Lindberg <i>et al.</i> (1986)
North Carolina (USA)	Dry deposition 0.3	Potter <i>et al.</i> (1991)
Seventeen sites in various areas of USA	Total deposition 0.13-2.24	Watmough <i>et al.</i> (2005)
237 sites across USA	Wet deposition 0.30 (0.022-3.0)	NADP network database (http://nadp.sws.uiuc.edu/) (2012)
Sao Paulo (Brazil)	Wet deposition 3.4	Rocha <i>et al.</i> (2003)
Southern Brazil	Dry deposition 0.56-3.11	Allen <i>et al.</i> (2010)
Southern Brazil	Wet deposition 18.6	Calil <i>et al.</i> (2010)
Amsterdam Island (Indian Ocean)	Wet deposition 3	Galloway & Gaudry (1984)
Central Serbia	Wet deposition 0.5-7.3	Golobocanin <i>et al.</i> (2008)
Basque country (Spain)	Total deposition 6.3-7.5	González-Arias <i>et al.</i> (2000)
Catalonia (Spain)	Total deposition 1.4	Izquierdo & Avila (2012)
Norway	Wet deposition 2.3-3.3	Jonard <i>et al.</i> (2012)
Kaunas (Lithuania)	Total deposition 4.3	Juknys <i>et al.</i> (2007)
Kaunas (Lithuania)	Total deposition 5.1	Zaltauskaitè & Jukyns (2007)
Sweden	Dry deposition 3.16	Ferm & Hultberg (1999)
Northern Greece	Wet deposition 8.6	Melidis <i>et al.</i> (2007)
Bologna (Italy)	Total deposition 1.8-3.6	Morselli <i>et al.</i> (2008)
Newcastle (Australia)	Wet deposition 1.7	Morrow <i>et al.</i> (2010)
Estonia	Total deposition	Pajuste <i>et al.</i> (2006)

	0.75-4.71	
Various areas of Austria	Wet precipitation 0.3-1.6	Puxbaum <i>et al.</i> (1998)
Southern Nigeria	Wet deposition 281	Muoghalu & Oakhumen (2000)
Southern China	Wet deposition 7	Huang <i>et al.</i> (2012)
Mumbai (India)	Wet deposition 9-26	Prathibha <i>et al.</i> (2010)
Sydney (Australia)	Wet deposition 0.56	Poor <i>et al.</i> (2006)
Sulawesi (Indonesia)	Wet deposition 0.07-1.1	Köhler <i>et al.</i> (2012)
Southwestern Viti Levu (Fiji Islands)	Total deposition 2.3-4.9	Waterloo <i>et al.</i> (1997)