

Supplementary Material

Table S1. Coefficients regression established by each forest species.

Species name	Assimilated species	a ₀	a ₁	a ₂	a ₃	a ₄
<i>Acer tataricum</i> L.	<i>Acer tataricum</i> L.	-3.45646	1.94746	0.01879	-0.1642	0.342355
<i>Acer campestre</i> L.	<i>Acer campestre</i> L.	-3.22096	1.58409	0.13567	-0.08677	0.313054
<i>Carpinus betulus</i> L.	<i>Carpinus betulus</i> L.	-4.23139	2.15204	-0.00988	0.59652	0.11281
<i>Fraxinus ornus</i> L.	<i>Fraxinus excelsior</i> L.	-3.53048	1.26636	0.31105	0.52368	0.082743
<i>Fraxinus excelsior</i> L.	<i>Fraxinus excelsior</i> L.	-3.53048	1.26636	0.31105	0.52368	0.082743
<i>Prunus avium</i> L.	<i>Prunus avium</i> L.	-3.59371	1.95047	0.04086	-0.12835	0.374948
<i>Prunus cerasifera</i> Ehrh.	<i>Pyrus pyraister</i> (L.) Burgsd.	-3.96965	2.11784	-0.03021	0.32199	0.127335
<i>Prunus domestica</i> L.	<i>Pyrus pyraister</i> (L.) Burgsd.	-3.96965	2.11784	-0.03021	0.32199	0.127335
<i>Prunus padus</i> L.	<i>Prunus padus</i> L.	-3.96202	1.98138	0.02542	0.43872	0.130176
<i>Pyrus pyraister</i> (L.) Burgsd.	<i>Pyrus pyraister</i> (L.) Burgsd.	-3.96965	2.11784	-0.03021	0.32199	0.127335
<i>Quercus cerris</i> L.	<i>Quercus petraea</i> (Matt.) Liebl.	-4.17315	2.27662	-0.09084	0.57596	0.093429
<i>Quercus petraea</i> (Matt.) Liebl.	<i>Quercus petraea</i> (Matt.) Liebl.	-4.17315	2.27662	-0.09084	0.57596	0.093429
<i>Robinia pseudoacacia</i> L.	<i>Robinia pseudoacacia</i> L.	-3.37551	1.80802	0.02827	-0.33554	0.51215
<i>Ulmus glabra</i> Huds.	<i>Ulmus</i> sp.	-4.49118	2.18244	-0.10324	1.20293	-0.124978
<i>Ulmus minor</i> Mill.	<i>Ulmus</i> sp.	-4.49118	2.18244	-0.10324	1.20293	-0.124978

Table S2. Variables and correction factor established to estimate dry biomass for seedlings.

Variable	ln(a)	b	cf
Aboveground biomass	4.1234	2.4783	1.1976
Belowground biomass	3.7327	1.8965	1.1955

a and b are the regression equation coefficients while cf is the correction factor.

Table S3. The mean value for each pool of carbon stocks (tonnes C ha⁻¹).

Carbon pools		No-SI	Low-SI	High-SI
Biomass	Aboveground biomass, d > 6cm	33.0	205.3	54.4
	Belowground biomass, d > 6cm	6.8	45.2	11.9
	Aboveground biomass, d < 6cm	1.0	-	-
	Belowground biomass, d < 6cm	0.4	-	-
Dead wood		1.4	2.2	-
Litter		7.4	16.4	15.6
Soil		84.0	109.1	78.6
Total		134.0	378.2	160.5

d is the diameter at breast height, No-SI represent the non-silvicultural intervention site, Low-SI represent the low silvicultural intervention site and High-SI represent the high silvicultural intervention site.

Table S4. Pairwise post-hoc test on sites for each carbon pools, using Wilcoxon signed-rank test with Bonferroni correction.

Measures	CS_litter	CS_soil	CS_AGB	CS_DW	CSC_AGB
Low-SI vs. No-SI	0.33	0.50	<0.01**	0.0863	<0.01**
High-SI vs.No-SI	0.33	0.67	1.00	<0.01**	<0.01**
High-SI vs. Low-SI	0.33	0.17	<0.05*	0.4237	<0.05*

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

No-SI represent the non-silvicultural intervention site, Low-SI represent the low silvicultural intervention site and High-SI represent the high silvicultural intervention site. CS_litter, CS_soil, CS_AGB_CS_DW and CSC_AGB represents carbon stock in each pool. Statistically significant values for each level of significance (i.e., * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$) are represented in bold. Asterisks indicate significant results.

Table S5. The mean value of annual living biomass by trees volume, carbon stock and carbon dioxide amount.

Annual	Biomass	No-SI	Low-SI	High-SI
Volume (m ³ ha ⁻¹)	AGB	10.4	6.3	2.2
	BGB	2.1	1.4	0.5
	AGB, d < 6 cm	1.0	-	-
	BGB, d < 6cm	0.4	-	-
Carbon (tonnes ha ⁻¹)	AGB	2.9	1.8	0.6
	BGB	0.6	0.4	0.1
	AGB, d < 6 cm	0.6	-	-
	BGB, d < 6cm	0.2	-	-
Carbon Dioxide (tonnes CO ₂ ha ⁻¹)	AGB	-10.8	-6.8	-2.3
	BGB	-2.2	-1.5	-0.5
	AGB, d < 6 cm	-2.0	-	-
	BGB, d < 6cm	-0.8	-	-

AGB represent the above ground biomass, BGB represent the below ground biomass, d is the diameter at breast height, No-SI represent the non-silvicultural intervention site, Low-SI represent the low silvicultural intervention site and High-SI represent the high silvicultural intervention site.