Supplementary file S5: Variance-covariance matrix of the fixed effects of the developed multi-response biomass model for Norway spruce.

Effect		Stem			Branches		Foliage		Stump		Roots		
		$Inercept$	$d_s/(d_s+k)$	$\ln(h)$	$Inercept$	$\ln(d_s)$	$Inercept$	$d_s/(d_s+k)$	$Inercept$	$d_s/(d_s+k)$	$Inercept$	$d_s/(d_s+k)$	$\ln(h)$
Stem	$Inercept$	**0.1641**	**-0.3517**	**0.07347**	-0.00718	0.008252	0.002021	-0.00332	0.0185	-0.02768	-0.00985	0.01876	-0.01005
	$d_s/(d_s+k)$	**-0.3517**	**0.7646**	**-0.1667**	0.01255	-0.0156	-0.00386	0.006482	-0.03324	0.05148	0.02867	-0.05077	0.02281
	$\ln(h)$	**0.07347**	**-0.1667**	**0.04674**	6.4E-05	-0.00008	0.000192	-0.00032	-0.00168	0.001725	-0.016	0.02593	-0.00641
Branches	$Inercept$	-0.00718	0.01255	6.4E-05	**0.00838**	**-0.00854**	0.01008	-0.01581	0.01693	-0.02348	0.01333	-0.01848	0.00003
	$\ln(d_s)$	0.008252	-0.0156	-0.00008	**-0.00854**	**0.01061**	-0.01171	0.01966	-0.01993	0.0292	-0.01569	0.02298	-0.00004
Foliage	$Inercept$	0.002021	-0.00386	0.00019	0.01008	-0.01171	**0.03777**	**-0.062**	0.02607	-0.03755	0.04401	-0.063	-0.00056
	$d_s/(d_s+k)$	-0.00332	0.00648	-0.00032	-0.01581	0.01966	**-0.062**	**0.1041**	-0.04298	0.06303	-0.07252	0.1058	0.000947
Stump	$Inercept$	0.0185	-0.03324	-0.00168	0.01693	-0.01993	0.02607	-0.04298	**0.2289**	**-0.3212**	0.1513	-0.2125	0.000568
	$d_s/(d_s+k)$	-0.02768	0.05148	0.00173	-0.02348	0.0292	-0.03755	0.06303	**-0.3212**	**0.4586**	-0.2121	0.3033	-0.00073
Roots	$Inercept$	-0.00985	0.02867	-0.016	0.01333	-0.01569	0.04401	-0.07252	0.1513	-0.2121	**0.6013**	**-0.941**	**0.1671**
	$d_s/(d_s+k)$	0.01876	-0.05077	0.02593	-0.01848	0.02298	-0.063	0.1058	-0.2125	0.3033	**-0.941**	**1.4877**	**-0.2751**
	$\ln(h)$	-0.01005	0.02281	-0.00641	0.00003	-0.00004	-0.00056	0.000947	0.00057	-0.00073	**0.1671**	**-0.2751**	**0.06951**

Off diagonal blocks consist of the across equation covariances of the fixed effects, and block diagonal is variances-covariances matrix of the sub-model for the individual tree component (bold).