Table S1. The coefficient of determination (R^2) of the fitting model for xylem and phloem formation dynamics.

Site	Variables	Mean R^2
Helanshan	Cambial cells	0.61
	Enlarging cells	0.80
	Wall thickening cells	0.91
	Mature cells	0.91
	Xylem cells	0.90
	Early phloem cells	0.92
	Late phloem cells	0.84
	Phloem cells	0.95
	Xylem-phloem ratio	0.87
Luoshan	Cambial cells	0.79
	Enlarging cells	0.90
	Wall thickening cells	0.90
	Mature cells	0.96
	Xylem cells	0.95
	Early phloem cells	0.96
	Late phloem cells	0.90
	Phloem cells	0.95
	Xylem-phloem ratio	0.90

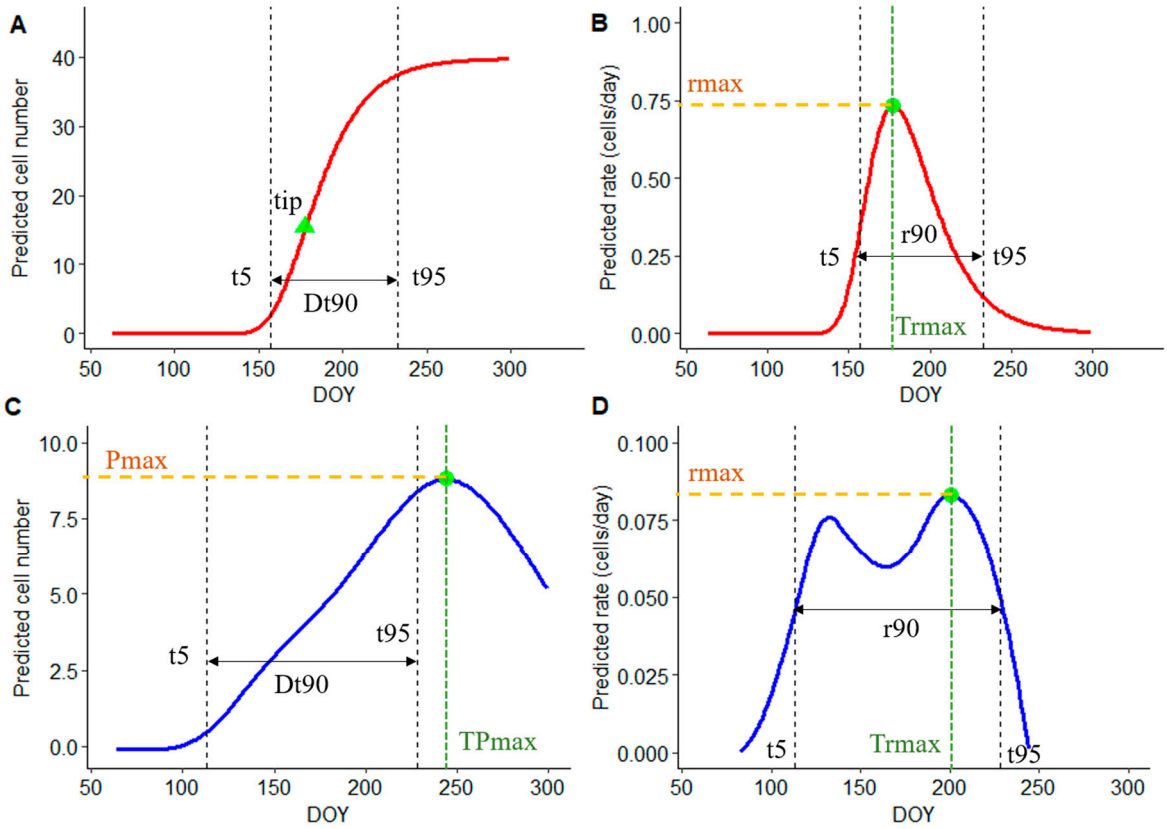

Figure S1 The biological parameters from the Gompertz equation (A and B) and GAM function (C and D) for a monitored *Picea crassifolia* tree in Luoshan. For Gompertz function, t5 is the date at which 5 % of the cells were produced; tip is the date of the inflection point; t95 is the date at which 95 % of the cells were produced; Dt90 (t95 - t5) is the duration between 5 and 95 % of the produced cells; rmax is the maximal growth rate; r90 is the mean growth rate computed between 5 and 95 % of the produced cells and Trmax is the date maximal growth rate appeared. For GAM function, Pmax is the maximum predicted cell production; TPmax is the date that Pmax appeared; t5 and t95 represent the first date for 5 % of maximum production and 95 % of maximum production, respectively; Dt90 is the duration between 5 % and 95 % of the maximum produced; rmax is the maximum growth rate computed from the first derivative of fitted GAM; Trmax is the date maximal growth rate appeared and r90 is the average rate between t5 and t95.