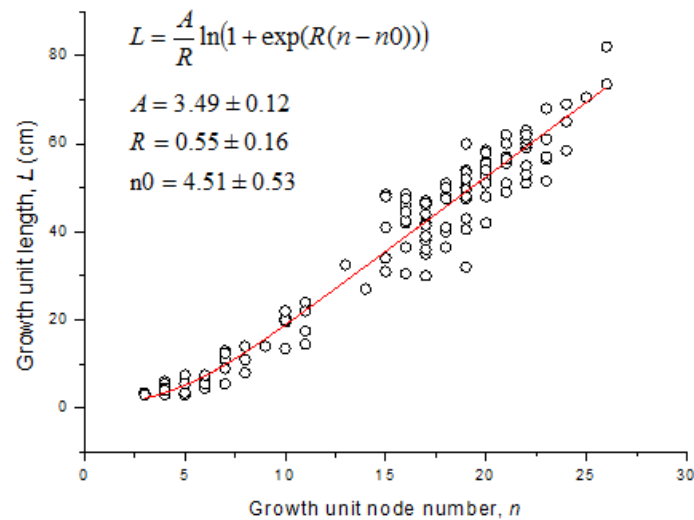
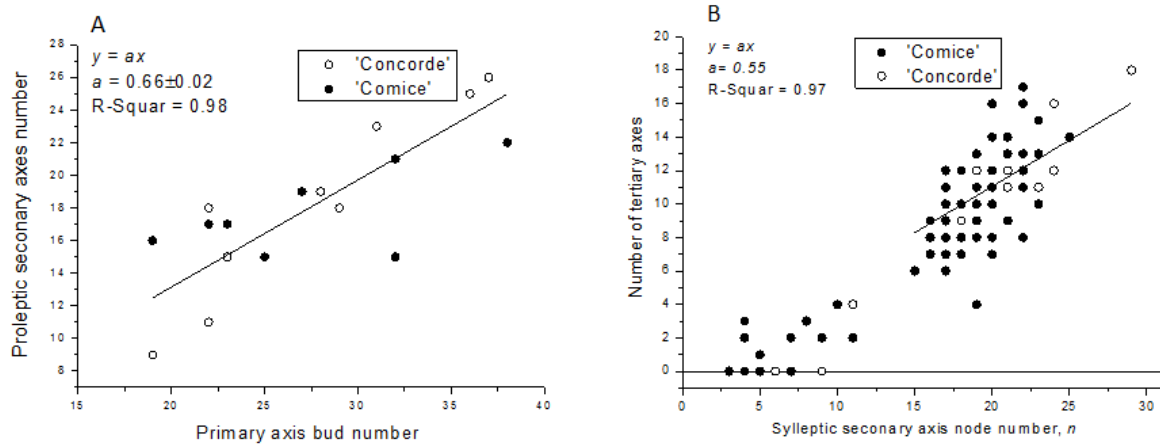


**Supplementary material**

**Fig. S1.** Relationship between the growth unit length and node number for the first annual shoot of the sylleptic secondary axes. Open symbols represent data for headed treatments, the solid line represents an exponential model fitted to the data. Interpretation of model parameters:  $A$  - slope of the model asymptote, which approximates the model for large  $n$ ;  $R$  - curvature parameter for small  $n$ ;  $n_0$  - a point where the asymptote crosses the line  $Y=0$ .



**Fig. S2.** A well-branched tree from 'Comice' / *Pyrus calleryana* treatment 1 year after heading.



**Fig. S3.** Proleptic branching in the second year after heading. Open and closed symbols represent data for treatments with 'Comice' and 'Concorde' scions, respectively. (A) Number of proleptic secondary axes as a function of the number primary axis bud number. (B) Number of proleptic tertiary axes as a function of the (sylleptic) secondary axis node number (note that there are a large number of overlapping data points in this graph). Lines represent a zero intercept linear models fitted to (A) all data and (B) to the data for axes with  $n > 14$ . Model slopes  $a$  represent mean proportions of budbreak for each axis category.