

A few words on grapevine primary and lateral shoots

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- The primary shoot (PS) has been initiated in the latent bud year 1 to develop year 2 from bud burst.
- The growth of the PS is due to the development-elongation of the pre formed organs (8 to 10 pre-formed phytomers per latent bud) and to the newly formed organs by the apex (i.e. apical meristem).
- One internode + one node (bearing 1 leaf, 1 latent bud, 1 lateral, 1 inflorescence or 1 tendril) = one phytomer.
- There is a linear and stable relationship between the main axis development and thermal time (TT), and the phyllochron which is the needed TT between the emergence of two new successive unfolded leaves is *ca.* +21°C /leaf (with a base T°C of 10 °C).
- The apical dominance is the ability of the growing apex to inhibit the development of the laterals shoots located beneath the apex. Therefore, the first laterals to grow will be underneath 4 to 6 phytomers from the apex. The apical dominance is removed by hedging or topping.
- Lateral shoot development is very sensitive to vine water status, nutrients and to topping-hedging. (Lebon et al., 2004. *Annals of Botany* 93: 263-274 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4242199/>)

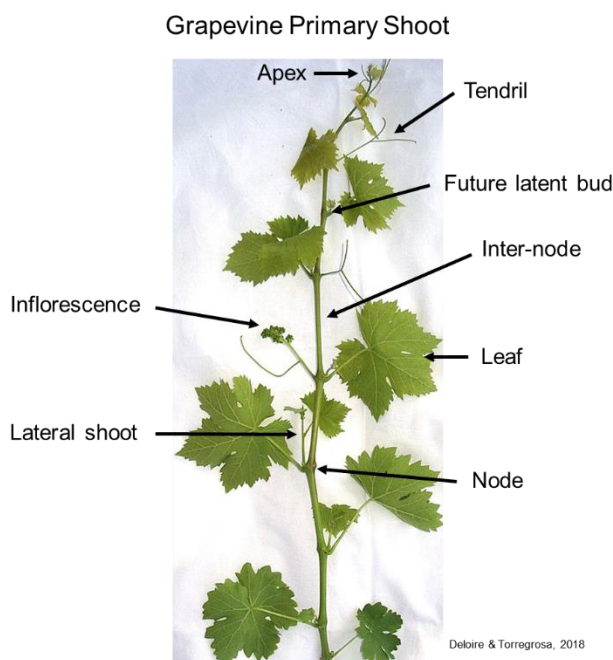


Figure 1: Grapevine primary shoot organisation and main organs.