

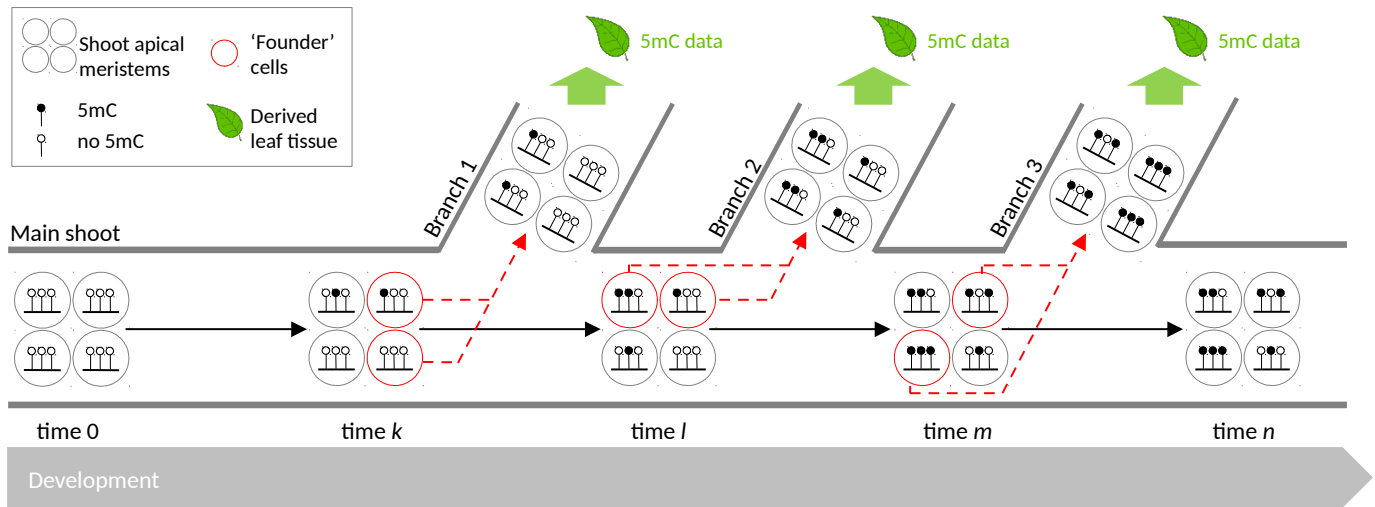


Fig. S1: Developmental origin of somatic epimutations in plants. The failure to maintain the methylation status of cytosines during the mitotic maintenance of shoot apical meristematic cell pools leads to spontaneous somatic epimutations. Shown here are only spontaneous gains of methylation, for simplicity. A small set of 'founder' cells gives rise to lateral branches at developmental times k , l , and m . The random sampling of founder cells creates a bottleneck which increases the frequency of somatic epimutations in the cell populations of lateral branches. Somatic epimutation accumulation in shoot apical meristems thus leads to increased 5mC divergence between leaves originating from different lateral branches (e.g. leaf methylomes from Branch 1 and 2 are more similar than those from Branch 1 and 3).