References

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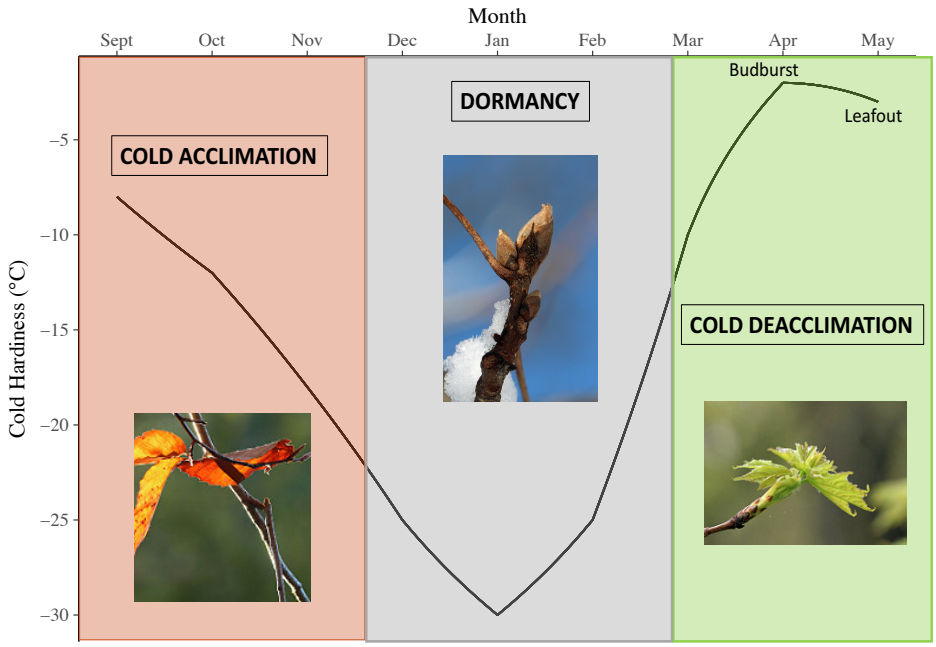
Box 1:

Cold hardiness (i.e. freezing tolerance) is essential for all temperate plants in order to survive cold winters and stochastic freezes (Vitasse *et al.*, 2014).

Cold Hardiness: Ability to resist injury to low temperatures

Cold Acclimation: Adjustment period of freezing tolerance by decreasing risk of intracellular freezing through various mechanisms (Charrier *et al.*, 2011)

Cold Deacclimation: Dehardening of buds and increase in metabolism and development (Vitasse *et al.*, 2014)



Sept-Nov (Orange): During the cold acclimation phase, cold hardiness in the bud increases rapidly as temperate plants begin to enter dormancy.

Nov-Feb (Blue): Once buds reach the dormancy phase, buds are able to tolerate temperates as low as -25°C to -40°C or lower (Charrier *et al.*, 2011; Vitasse *et al.*, 2014).

Feb-May (Green): Freezing tolerance diminishes again during the cold deacclimation phase once buds begin to swell (-8°C) and is lowest between budburst (-2°C) to leafout (-3°C).