Morphogenetic analysis of the phenotypic variability of the architectural unit of Hydrangea macrophylla

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Résumé en anglais	Hydrangea macrophylla is a ligneous plant that has attracted the attention of many plant breeders and agronomists for the purpose of enhancing its phenotypic plasticity. However, this plasticity was always exploited empirically.Can this plasticity be assessed by a more scientific approach? In this work, the phenotypic variation is analysed via a description of the different development sequences of the plant and by exposing the plant to different contrasted environments. The architectural unit consists of two morphogenetic units: the Vegetative Unit (VU) and the Vegetative and Floral Unit (VFU). They result in four successive development sequences: an organogenetic phase accompanied by continuous growth (sequence A), floral transformation (sequence B), dormancy (sequence C) and flower bloom (sequence D). Under the effect of environmental factors, the formation of the mixed terminal bud (sequence B) provides a considerable source of spatial variability, whereas the absence or presence of dormancy (sequence C) is responsible for a source of temporal variation. The in-depth description of the architectural unit with its morphological components and the characterisation of the four development sequences provide a necessary scientific basis to identify environmental effects on plant development and for the integrated use of its plasticity.
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