



## Evaluation of *Hydrangea macrophylla* Cultivars for Remontant Flowering and Cold Hardiness

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Studies to quantify differences in flowering characteristics and cold hardiness among *Hydrangea macrophylla* cultivars are underway at both the Center for Applied Nursery Research and The University of Georgia, Athens. These studies were initiated following observations that all cultivars did not fit neatly into preconceived notions concerning the two characteristics. *Hydrangea macrophylla* forms flower buds in the fall in response to decreasing photoperiods and cooler temperatures. Typically, these are the only flower buds formed for the following season; therefore, if buds are damaged or killed by low winter temperatures or late spring frosts, flowering would be theoretically lost for the entire season. However, this is not always the case as variation exists among cultivars; flowering has been observed on some cultivars originating from the current seasons growth.

The extreme case is found in *H. macrophylla* 'Endless Summer'. This plant was brought into our program after being observed flowering 11 September 1998 in the Bailey Nursery trial plots in St. Paul Minnesota. Based on observations, Endless Summer provides many more flowers beyond those initiated during the previous year. The benefits, of course, are that even if cold damage occurs flowering will ensue. In a recent greenhouse study we identified additional cultivars which possess this remontant flowering capability to some degree. Cold hardiness tests are under way in Griffin to identify any variation in cold hardiness among nine different cultivars.

This years work at the CANR provided additional observational data to support differences in flowering behavior among cultivars. In 2001, a continuation of the above work aimed at further elucidating cultivar differences will be carried out. Plants at the CANR will undergo one of three treatments during the following year. Plants will be either pruned to half their height to represent cold damage, have all flower buds removed or remain unaltered in late February or early March. Flowering will be observed the following summer and compared to determine what level of remontant flowering exists. Superior cultivars can then be directly marketed as such and/or used as breeding parents to develop remontant flowering plants with other unique aesthetic characteristics.