

# UNH to Conduct First Cold-Hardy Hydrangea Study to Help Regional Cut Flower and Landscape Industry

**State Has Seen Dramatic Increase in Cut Flower Farms as Demand Grows**

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*H. PANICULATA ZINFIN DOLL* (CREDIT: [PROVEN WINNERS® COLORCHOICE®](#))



*H. paniculata*

*Limelight.* (Credit: [Proven Winners® ColorChoice®](#))

New Hampshire has seen a dramatic increase in cut flower farms, underscoring the need for reliable research to support the state's flower industry. To that end, University of

New Hampshire researchers have launched the first study to evaluate plants from three cold-hardy hydrangea species for cut flower and landscape use in New Hampshire.

“The floriculture and bedding plant industry is a top agricultural commodity in New Hampshire, and the number of farms producing field-grown cut flowers has increased by a staggering 60 percent from 2007 to 2017. This dramatic increase suggests that cut

flowers are an increasingly important horticultural crop in the state and illustrates that consumer demand is strong for regionally grown flowers,” said Kaitlyn Orde, research associate who will oversee the project at the Woodman Horticultural Research Farm, a facility of the New Hampshire Agricultural Experiment Station.

“However, no studies have been conducted to evaluate these species in the Northeast or beyond, making providing information to the commercial farming community on characteristics and performance nearly impossible,” said Orde, who will conduct the research with experiment station researcher Becky Sideman, professor of sustainable agriculture and food systems and UNH Cooperative Extension professor and specialist in sustainable horticulture production, and Cathy Neal, retired experiment researcher and extension landscape horticulture specialist.

Hydrangea is a deciduous shrub popular for landscape and cut flower use. The *H. macrophylla* or “big leaf” species is widely recognized for its ubiquitous use as a landscape shrub across Cape Cod and Nantucket and as a cut flower by florists. However, this species is only reliably winter hardy through USDA Zone 6, which is south of most of Northern New England, and injury in winter to buds is common when the species is grown in colder areas, making establishing it in New Hampshire risky.

There are many other species of hydrangea, including species that are more cold hardy than the big leaf type. Notable hydrangea species are *H. paniculata* (“panicle”), *H. quercifolia* (“oakleaf”), and *H. arborescens* (“smooth”), which are believed to be hardy through Zone 4 and Zone 5, respectively, making them obvious choices for growing in New Hampshire.

In the three-year project, researchers will evaluate 14 hydrangea cultivars from the cold-hardy panicle, oakleaf, and smooth species. They will measure several factors to determine cultivar suitability for both landscape and cut-flower use, including winter survival, plant vigor, bud-hardiness, stem length, stem number, head size, flowering time and duration, color, and any notable pest and pathogen challenges. They also plan to measure the vase life of the cut stems, as a life of at least seven days has been cited as an important factor by florists in the area.

The 14 cultivars included in the study are *Arborescens* Invincibelle Mini Mauvette, *Arborescens* Invincibelle Spirit II, *Arborescens* Lime Rickey, *Paniculata* Confetti, *Paniculata* Limelight, *Paniculata* Little Lime, *Paniculata* Bobo, *Paniculata* Zinfin Doll, *Paniculata* Diamond Rouge, *Paniculata* Magical Flame, *Paniculata* Fire Light, *Paniculata* Quick Fire, *Quercifolia* Gatsby Star, *Quercifolia* Munchkin, *Arborescens* Invincibelle Ruby, and *Paniculata* Bloomin Easy Lavalamp “Candelabra.”



*Paniculata Fire*

*Light.* (Credit: [Proven Winners® ColorChoice®](#))

“We will generate and share information on plant hardiness, cultivar characteristics, and the suitability of cultivars for cut flower use. This information will hopefully allow growers, florists, and landscapers to confidently select cultivars for their intended purpose,” Orde said.

Furthermore, all of the florists we surveyed expressed interest in purchasing locally produced hydrangea stems, and all the commercial growers we surveyed expressed interest in growing hydrangeas. This leads us to believe that there is tremendous potential for business partnerships between these two entities, and we hope that this research will help to support the development of these relationships,” she said.

Researchers also plan to showcase the hydrangea cultivars at annual field days at the Woodman Horticultural Research Farm, as well as twilight meetings hosted by UNH Cooperative Extension. This will allow commercial growers and landscapers the opportunity to view the cultivars and gather information on specific cultivars.

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Founded in 1887, the [NH Agricultural Experiment Station](#) at the [UNH College of Life Sciences and Agriculture](#) is UNH’s original research center and an elemental component of New Hampshire’s land-grant university heritage and mission. We steward federal and state funding, including support from the [USDA National Institute of Food and Agriculture](#), to provide unbiased and objective research concerning diverse aspects of sustainable agriculture and foods, aquaculture, forest management, and related

wildlife, natural resources and rural community topics. We maintain the Woodman and Kingman agronomy and horticultural research farms, the Macfarlane Research Greenhouses, the Fairchild Dairy Teaching and Research Center, and the Organic Dairy Research Farm. Additional properties also provide forage, forests and woodlands in direct support to research, teaching, and outreach.

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## NH AGRICULTURAL EXPERIMENT STATION



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