

# Researchers discover new longer-living flower

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Penn State researchers have discovered a new flower that lives longer than an ordinary one. Named Elegance Silver by the researchers, the plant could be the Superman of the flower world.

Elegance Silver is a Regal Pelargonium, a flower that is used as a flowering houseplant and belongs to the genus Pelargonium, the same genus as geraniums. It has a glistening white flower with two burgundy feathers on the top two petals. In terms of flower shape and size, Elegance Silver resembles geraniums. The major differences are the palette of flower colors, symmetry of petals and the highly serrated leaves of the regal.

"It's unique because of its floral longevity and physiological attributes," said Richard Craig, professor emeritus in the Department of Horticulture at Penn State. This super-flower is a result of almost 30 years of plant breeding.

Through hybridization and genetic selection, Craig was able to achieve this unique flower. Hybrids are produced when pollen from one flower is taken and used to pollinate another with different genetic qualities. This leads to the dominant traits of the two parents being passed on to a new plant. Researchers used forceps to extract the pollen from one parent by hand and used it to fertilize another parent.

"It's like a roll of the dice," Craig said. "You can only hope for the best when breeding regals. Sometimes you'll get lucky and breed the perfect plant, and sometimes the plant you breed will be useless."

This time the dice rolled in Craig's favor. However, he would not have known about the plant's special longevity had he not cut some of Elegance Silver's flowers and placed them in a vase. He wanted to share the flower he bred with his grandchildren, who were visiting him from Chicago. Craig was surprised to see that the flowers were still in an acceptable condition after 14 days of being in the vase.

Elegance Silver is much less sensitive to ethylene compared to other regals, according to Hye-Ji Kim who conducted the physiological research as part of her dissertation. Small amounts of ethylene cause petals to separate and also to wilt. The reduced sensitivity to ethylene allows the flowers to retain their vitality for a much longer time. Elegance Silver later was found to produce many more flowers over an extended period of time than other regals.

"There are no other known regal cultivars that have both," added Craig.

The Penn State researcher introduced Elegance Silver into his breeding program after he discovered it was quite different from other plants. The original seedling was used to start a new group of plants.

The University applied for a plant patent for Elegance Silver filed with the U.S. Patent and Trademark Office. Additional protection is being sought internationally. A license was given to Oglevee Ltd. of Connellsville, Pa., which has produced Penn State's other patented geraniums and regals for many years. The first plants will become available to flower growers in fall 2005 and to consumers next spring.

Source: Penn State

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