

New Guinea Impatiens 'Sweet Sue'



New Guinea Impatiens – Sun-tolerant Summer Flower Garden Annuals

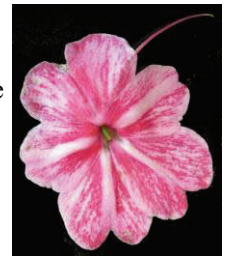
A Brief History of a Popular Garden Annual and the Role of the Beltsville Agricultural Research Center

1890s: The first written record of New Guinea Impatiens mentions one sent to Kew Gardens. Two years later, the plants were wildly popular in European gardens and greenhouses. However, by the early 1900s, a susceptibility to a mite pest stopped this popularity.

Early 1970s: New Guinea Impatiens were “rediscovered” during an expedition sponsored by Longwood Gardens in Kennett Square, PA, and

the U.S. Office of Plant Introduction. Chosen to lead this expedition was Harold Winters, a horticulturist at the Beltsville headquarters of the USDA’s New Crops Research Branch. Joseph Higgins, a plant physiologist, was chosen to accompany him. Ironically, the New Guinea Impatiens were practically an afterthought. Winters knew that there might be a few impatiens worth collecting, but the main purpose of the expedition was to collect rhododendrons. By the end of the expedition, however, 868 impatiens plants had been shipped to Beltsville, including 25 impatiens species.

Late 1970s: Researchers from Beltsville and Longwood Gardens obtained basic information about the impatiens and experimented with cross-breeding with plants collected from other sites. Toru Arisumi and Ken Leonhardt at Beltsville, tenaciously explored the impatiens’ genetic make-up well into the 1980s. In total, USDA has released 24 species, four cultivars in the Rainbow Series selected for improved flower color and size and seven cultivars in the Painted Series selected for red and yellow leaf variegation. The popular cultivar that was developed was the deep orange-flowered ‘Sweet Sue’. ‘Sweet Sue’ was obtained through crossing a New Guinea and a Celebes species. ‘Sweet Sue’ is the background of every seed-propagated deep orange New Guinea Impatiens hybrid.



2005: Wholesale value of New Guinea Impatiens reached over \$81.5 million.

Today: A novel cultivar of New Guinea Impatiens with striped flowers (“flower break”) was recently developed. Ramon Jordan and Mary Ann Guaragna at Beltsville discovered that this cultivar was infected with new virus. They have proposed the name Impatiens flower break virus (IFBV) for this new virus. When healthy Impatiens of several different cultivars (including ‘Sweet Sue’) were manually inoculated with IFBV, the plants became infected and the novel “flower break” symptom appeared. In addition, a screening assay for detection was developed and is currently being commercialized.

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Figure 1. Examples of potyvirus-infected New Guinea Impatiens cultivars exhibiting flower break. (A) Original ‘Unknown’ ‘P1’ Pink cultivar [light pink to white breaks/streaks on pink flower]; (B) ‘Sweet Sue’ [darker orange streak on orange flower]; (C) ‘Magic Sonic Pink’; and, (D) increasing white flower breaking on older plants (younger to older, left to right).