

**Title** Genotypic difference in postharvest characteristics of hardy kiwifruit (*Actinidia arguta* and its hybrids), as a new commercial crop: Part II. Consumer acceptability and its main drivers

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### Abstract

*Actinidia arguta*, called also hardy kiwifruit, is an exotic fruit of *Actinidia* genus which have obtained commercial interest in recent years. Its high frost hardiness, relatively short vegetation period and pro-healthy properties make it very interesting, especially in cold regions. The aim of the presented study was to identify main drivers of postharvest consumer acceptability of *A. arguta* (and its hybrids with *A. purpurea*) fruit among its sensory (flavour and texture) attributes and appearance characteristics (size and colour). To achieve that goal nine genotypes were assessed by over 200 consumers during two-year experiment. In order to perform a possibly broad research the chosen genotypes included five of the popular *A. arguta* cultivars grown around the world, two promising genotypes selected at Warsaw University of Life Sciences (WULS) as well as two hybrids (*A. arguta* × *A. purpurea*) from the same source. The study consisted of the consumer assessment of external (appearance) and internal (flavour and texture) fruit liking. The results showed general positive consumer acceptance of hardy kiwifruit with low differentiation of its genotypes. No segment of consumers disliking fruit appearance was found and segments disliking their taste and flavour constituted only about 14% in 2005 and 6% of consumers in 2006, respectively. Study indicated a significant effect of fruit size on consumers as it was highly correlated with the mean liking scores in each of consumer segments. The pink-red skin colour has also large positive impact on consumer's *Actinidia* choice observed in outstanding acceptance of small 'D11' genotype. The most preferable fruit should moreover have sweet taste and odour as these features are significant for most of consumers. Genotypes best meeting consumer preferences were pointed, including *A. arguta* × *A. purpurea*, which should obtain special breeders' focus.