O-55 (128)
HYBRIDIZATION AND ASSESSMENT OF NEW HYBRIDS OF IRIS GERMANICA

Assist. Prof. Mohammad Hosein Azimi, Department Genetic and Breeding, Ornamental Plants Research Center (OPRC), 37815-137 Mahallat, Iran; m.h.azimi58@gmail.com (Presenting author)
Assist. Prof. Somayyeh Jozghasemi, Khorramdarreh, Iran; ag2sa@yahoo.com
Assist. Prof. Maryam Karimi Alavijeh, Department of Genetic and Breeding, Ornamental Plants Research Center OPRC, 37815-137 , Mahlat, Iran; mkarimia61@gmail.com
Ms. Fatemeh Bakhtiyari, PhD student, Department of Horticulture, Science and Research branch, Islamic Azad University, tehran, Iran; fatemeh.bakhtiyari65@gmail.com
Assist. Prof. Fatemeh Hasanzadeh Davarani, Department of Plant Pathology, Islamic Azad University, Rafsanjan, Iran; hasanzadeh.fatemeh1662@gmail.com

Important traits and heterosis of 28 hybrids and 8 parents of *Iris germanica* were evaluated. Analysis of variance genotypes trait showed that the exception of the Inner tepal length and Bush length, significantly different from traits as well ($p \leq 0.01$).The evaluation of heterosis (percent) in Progeny showed that hybridization among the cultivars had higher positive of heterosis in superior parents and self parents in majority traits. Hybrid 37 (cross of 5×4) in flower size, leaf width and hybrid 25 (cross of 8 × 6) in the inner tepal length and outer tepal width had higher positive of heterosis in superior parents and self parents. Highest heterosis in the traits length peduncle, pedicel diameter and crown diameter, respectively, in a hybrids of 20 (cross of 2×4), 30 (cross of 4×5) and 16 (cross of 2×5) were observed. It can be expected that these selected progenys (37, 25, 20, 30 and 16) to able registered as a variety of commercial, developed on the market ornamental plants. Hybrids 42 and 43 of the cross between I. spuria and I. germanica (cross of 7×2) in the most traits in superior parents and self-parents had higher positive of heterosis. Results of factor analysis showed that six factors accounted 71.24% of total variations, based on cluster analysis and ward method of genotypes were divided in four groups. The research, newly method provides for planned the hybridization between wild type and commercial cultivars in future.

Keywords: Iris, Progeny, Heterosis, Hybrid