“VARIETAL ASSESSMENT AND VARIABILITY STUDY OF GERBERA (Gerbera jamesonii Bolus.) IN CONTROLLED CONDITION.”

ABSTRACT

Key words: Gerbera, Varietal Evolution

The present investigation on “Varietal assessment and variability study of gerbera (Gerbera jamesonii Bolus.) in controlled condition” was carried out at Hi-tech Horticulture Park, Department of Horticulture, College of Agriculture, Junagadh Agricultural University, Junagadh during the year 2015-16 and 2016-17.

The present experiment was laid out in Completely Randomized Design (CRD) with three replications and eight varieties of gerbera viz., 1314, Pertired, Alcochete, Petitamarel, Setubal, Caiman, Helena and 1133. In this experiment variability was assessed on the morphological and different pigment content. The observations on growth, flowering and yield characters were recorded as morphological markers and analyzed separately.

Among the morphological characters, vigorous growth in terms of leaf area and plant height were obtained significantly superior in variety Pertired (V₂). However, plant spread (N-S and E-W) was found superior in variety 1314 (V₁). Variety Pertired (V₂) also formed maximum number of leaves and suckers per plant. With respect to flowering characters, earliness in flower bud initiation and first flower bud opening was registered in variety Pertired (V₂). Consequently the flower quality in respect of flower diameter, flower stalk diameter, fresh weight of flower and number
of petals per flower were significantly higher in variety Pertired (V₂). However, significantly longest stalk length was also obtained from variety Pertired (V₂). Significantly maximum A – grade quality flowers were recorded in variety Pertired (V₂) while variety Helena (V₇) produced highest flowers with respect to B – grade. Setubal (V₅) produced maximum flowers of C – grade. D – Grade flowers were obtained significantly maximum in variety Petitamarel (V₄). Significantly highest yield per plant and per sq. m. per year was obtained in variety Pertired (V₂) which was followed by variety 1314 (V₁). Superiority with respect to shelf life and vase life were found significantly maximum in variety Pertired (V₂) which was statistically at par with variety 1314 (V₁). While varieties 1314 (V₁), Pertired (V₂) and Alcochete (V₃) obtained highest score with respect to consumer preference. With respect to flower color variety Pertired (V₂) was observed significantly strongest flower color. According to the pigment analysis variety Caiman (V₆) was highest in total flavonoid content, while variety Setubal (V₅) was highest in total anthocyanins content and variety 1133 (V₈) showed more total carotenoid and total β-carotene content. However variety Pertired (V₂) showed significantly highest cyanidins content of total anthocyanidins.

From the economic point of view maximum net return and BCR was obtained in variety Pertired (V₂) which was followed by variety 1314 (V₁).

On the basis of results obtained in present investigation, it can be concluded that varieties Pertired (V₂) and 1314 (V₁) are most preferable for qualitative and quantitative cut flower production of gerbera.