CHAPTER – VI
SUMMARY AND CONCLUSION

6.1 Summary

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

The experiment was laid out in a Completely Randomized Design (CRD) with three replications and eight varieties as treatments. The data were subject to appropriate analysis and the variation obtained for various morphological levels.

The salient features of the results presented and discussed in preceding chapter are epitomized here under.

6.1.1. Vegetative Parameters

- Among the different varieties of gerbera, variety Pertired (V2) was found significantly superior with respect to leaf area, while minimum leaf area was to be found in variety Setubal (V5).
- The maximum number of leaves per plant was found in variety Pertired (V2), whereas minimum number of leaves per plant was found in variety Caiman (V6).
- Significantly maximum plant height was found in variety Pertired (V2), whereas minimum plant height was found in variety Petitamarel (V4).
- Significantly maximum plant spread (N-S and E-W) was produced by variety 1314 (V2) while it was found minimum in variety 1133 (V8).
- The maximum number of suckers per plant was found in variety Pertired (V2), whereas minimum number of suckers per plant was found in variety Helena (V7).

6.1.2. Flowering parameters

- Among the different varieties of gerbera, Varieties Pertired (V2) was found earlier with respect to first flower bud initiation followed by varieties 1314 (V1), Helena (V7) and 1133 (V8). However, variety Alcochete (V3) takes maximum days to first flower bud initiation.
Summary and conclusion

- In case of opening of flower bud, variety Pertired (V₂) was found to be earlier while variety Petitamarel (V₄) get maximum days to opening of flower bud under saurashtra condition.

6.1.3. Quality attributes

- Significantly maximum flower diameter was found in variety Pertired (V₂). However, it was found minimum in variety Caiman (V₆).
- Flower stalk length was found significantly maximum in variety Pertired (V₂) while it was found to be minimum in variety Petitamarel (V₄).
- Maximum flower of A-grade quality were reported in variety Pertired (V₂) while variety Helena (V₇) was produced highest flowers with respect to B-grade. With respect to C-grade, variety Setubal (V₅) obtained highest flowers. However, D-grade flowers were formed by variety Petitamarel (V₄).
- Stalk diameter of flower was found significantly maximum in variety Pertired (V₂) while it was found to be minimum in variety Petitamarel (V₄).
- Significantly highest fresh weight of flower was found maximum in variety Pertired (V₂). However it was found lowest in variety Caiman (V₆).
- Significantly maximum number of petals per flower was found maximum in variety Pertired (V₂). However it was found lowest in variety Setubal (V₅).

6.1.4. Yield attributes

- The highest yield per plant per year was registered in variety Pertired (V₂) as compared to all other varieties while it was found minimum in variety Helena (V₇).
- Significantly highest yield per sq.m per year was registered in variety Pertired (V₂) as compared to all other varieties while it was found minimum in variety Helena (V₇).

6.1.5. Flower longevity

- Superiority with respect to flower longevity highest shelf life in situ was obtained by variety Pertired (V₂) and 1314 (V₁) as compared to all other varieties. However, it was found minimum in variety 1133 (V₈).
- Significantly highest vase life was obtained by variety Pertired (V₂) and 1314 (V₁) as compared to all other varieties. However, it was found minimum in variety 1133 (V₈).
6.1.6. Flower quality

- With respect to consumer preference, excellent flower quality was achieved by varieties 1314 (V\textsubscript{1}), Pertired (V\textsubscript{2}) and Alcochete (V\textsubscript{3}).

6.1.7. Pigment profiling

- Based on CIELAB, yellow color variety Caiman (V\textsubscript{6}) was found to be characteristics of strong color than all other varieties.
- Different varieties showed wide variation with respect to pigment analysis i.e. variety Caiman (V\textsubscript{6}) showed significantly highest total flavonoid content, while variety Setubal (V\textsubscript{5}) showed significantly highest anthocyanins content. However variety 1133 (V\textsubscript{8}) recorded significantly highest in total carotenoids and total β-carotene content. While variety Pertired (V\textsubscript{2}) was recorded significantly more cynidins content of total anthocyanidins.

6.2 Conclusion

Based on the results of present investigation, it can be concluded that significant effect of different varieties of gerbera was observed on different vegetative and flower attributes in controlled climatic condition. Variety Pertired is most preferable for qualitative as well as quantitative cut flower production of gerbera. However varieties 1314 perform well next to cv. Pertired in terms of growth, flowering, flower yield and flower quality of gerbera, while variety Alcochete secured place in middle order in majority characters of growth, yield and quality flower production. From the economic point of view, the highest net return along with maximum cost benefit ratio were noted in variety Pertired.