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# SUMMARY

The present study was carried out in North-western coast of Egypt in summer resorts of Marina during the two seasons of 2012/2013 and 2013/2014 to study three maintenance systems (specialized company system, internal management system and technician system) on three groups ornamental plant species (*Ficus retusa*, *Hibiscus rosa sinensis*, *Myoporum pictum*, *Vinca rosea* and *Paspalum vaginatum* ) which were chosen in Marina resorts for evaluation, taking in consideration the effect of these maintenance systems throughout the four climatic seasons of the year on the tested plants. Evaluation of these factors included some plant growth and quality parameters such as plant height, crown diameter, stem diameter and plant performance.

## **The study included the following aspects:-**

- 1- Study kinds or types of maintenance systems. There are 5 kinds or types of maintenance systems recreation areas.
- 2- Three kinds or types of maintenance systems were chosen (technical system- internal management system and specialized company system).
- 3- Five ornamental plant species of common plants were chosen in the resorts for evaluation, taking in consideration the effect of maintenance systems throughout the four climatic seasons of the year.

(These plants look like many kinds that grow on every garden in the resorts).

- 4- Studying the effect of maintenance systems throughout the four climatic seasons of the year on growth of the chosen plants.

## 5- Questionnaire:-

A questionnaire for provisional working in maintenance was done with the aim of knowledge about the different factors which affect on landscape grading and maintenance in this resort and anther resorts.

## **The results showed the following:-**

- 1- There are 5 kinds of maintenance green areas.
- 2- Three kinds or types of maintenance systems were chosen:-

These systems were look like many kinds or types of maintenance systems of resorts of widely expansion along the coast.

Three kinds were chosen as a sample for the study.

A-Technical system (Technician and ordinary workers). This type of maintenance systems served by technical and workers used in some resorts.

B- Internal management system (Engineer, technician and farm workers(Internal management).This type of maintenance systems served by internal agriculture direction

supervision that used in most resorts plus using the less good level of every component from maintenance system and all that cheap and good.

C- Specialized company system (Specialized company contain consultant or supervisor, engineer, technician and agricultural workers). This type of maintenance systems served by special and provisional agriculture company used in some resorts.

3-The effect of maintenance systems on the investigated plants: -

The results showed that the provisional system was the best as it based on a specialized company with consultants, experienced and specialized technicians. The good system and its components are appropriate in terms of types, quantities and appropriate dates this all due to accumulated experience and recommendations.

4- The effect of the seasons of the year on the investigated plants:-

The results showed great differences between the four climatic seasons in plant species under the investigation. Generally, the results showed that most of the studied plant species had better results in spring and summer while there were bad effects on plants in winter due to ( wind-salt spray-savory- salinity), but we can decrease these effects on plants with protection and good designs.

**Generally**, the efficiency of plant growth and its landscape value is affected with more than one factor like the responsible for maintenance and maintenance program (irrigation, fertilization, weed removal and pesticide management and soon...). Although several factors share the same effect on plant growth and landscape value, one can say the maintenance system is main effective one.

The least system for maintaining green areas was technical system because it gives the least results; we do not prefer using this system for maintaining green areas.

The best system for maintaining green areas was specialized company system as results showed that because it gives the best results.

# CONCLUSION

## Generally, it could be concluded from this study that:

1. Maintenance should be done with specialized companies.
2. We do not prefer using technical system for maintaining green areas.
3. Internal management system has pros and cone of both systems.
4. Maintenance of green area should be considered from the government especially at the time of construction of the summer resorts.
5. Guided maintenance program should be available to be used.
6. Studies should be done to know the best maintenance program which is suitable for each place and plant group.
7. Money sources should be available for maintaining green areas and that should be done at the time of construction.
8. Studies should be available to make designs with least maintenance and cost.
9. There must be binding and regulated laws for the establishment and maintenance of green spaces

## Future studies

1. Consider maintenance of green area from the government especially at the time of construction of the summer resorts.
2. Guided maintenance program should be available to be used.
3. Studies should be done to know the best maintenance program which is suitable for each place and plant group.
4. Money sources should be available for maintaining green areas and that should be done at the time of construction.
5. Studies should be available to make designs with least maintenance and cost.
6. There must be binding and regulated laws for the establishment and maintenance of green spaces.
7. Studies to increase the benefits and improve the function of the recreation areas, the resorts need more areas for sports playground.
8. Researches to add more ornamental species from using it for landscaping gardens in North Coast of Egypt.
9. The mowing: - The appropriate time and duration –running them – benefit from the remnants of mowing.
10. Use of waste:- Must be used in the work of agricultural residues matrices manure (compost) –sludge treatment.