SUMMARY

The present experiment was carried out at the greenhouse of the Departement of Ornamental Horticulture, Faculty of Agriculture, Cairo University, Giza, during the two successive seasons; 1990/1991 and 1991/1992.

The objective of this study was to investigate the effect of midia, nutrition and their interaction on growth and chemical composition of *Brassaia actinophyll* and *Ficus nitida* "Hawaii" in order to produce good plants with high quality for the market.

The treatments were arranged in 6 x 4 split-plot layout in Completely Randomized Design with four observations. The analysis of variance was conducted according to Steel and Torrie (1980). Duncan's Multiple Range test at the 0.05 level of probability was used to separate mean differences.

The plants were grown in four different kinds of midia, viz ; peat, peat + sponge 2:1, peat + sawdust 2:1 and peat + foam 2:1. The plants grown in each medium were supplied with six different rates of nutrition; control, Fertilin 5:10:10 NPK, Fertiline 10:10:10 NPK, foliar fertilizer, foliar fertilizer+fertilin 5:10:10 NPK and foliar fertilizer + fertiline 10:10:10 NPK.
The main results can be summarized as follows:

1. *Brassaia actinophylla*

   A - Effect of media:

   1. Using peatmoss, peat + sponge (2:1) and peat + foam (2:1) as growing media increased number of leaves, number of internodes, fresh weight of foliage and roots, and K% in foliage.

   2. Growing the plants in peatmoss and peat + sponge (2:1) increased plant height, N% in roots and carotene contents in first season.

   3. Peat + sawdust (2:1) and peat + foam (2:1) increased carbohydrates contents in foliage and carotene contents in first season.

   4. Using peatmoss alone increased stem diameter, N % in foliage and Chl.B in two seasons.

   5. The mixture of peat + sponge (2:1) increased dry weight of foliage and roots, P% in foliage, Chl.A and carotene in second season.

   6. There were no differences among all media due to their effect on dry weight of roots.
B-Effect of nutrition:

1- The most favourable nutrition, during the production period of *Brassaia chefflera actinophylla* plants, was NPK fertilization at the two ratios of fertilin 5:10:10, NPK and fertilin 10:10:10, as well as to these ratios supplemented with a foliar fertilizer, since it gave the highest values of plant height, stem diameter, number of leaves and number of internodes.

2- The application of NPK 10:10:10 combined with foliar fertilizer was the most effective for increasing fresh and dry weight of foliage and roots, an carbohydrates contents in foliage and roots.

3- The application of NPK 5:10:10 combined with foliar fertilizer increased K% in foliage and roots.

4- The application of NPK 10:10:10 without foliar fertilizer increased N% in foliage and Chl.B in second season

5- The application of NPK at 5:10:10 increased Chl.A and catotene in first season.

6- All leaves of nutrition gave a slight effect on P% in foliage and roots, but decreased N % in roots compared with control (without nutrition).
II. *Ficus nitida "Hawaii"

A- Effect of media

1. Growing the plants in peatmoss, peat+sponge 2:1 and peat+foam 2:1 increased stem diameter, number of leaves, fresh weight of foliage and roots, dry weight of roots, carbohydrate contents and Chl.A in the second season.

2. Using peat+sponge 2:1 and peat+foam 2:1 increased N% in foliage.

3. There were a slight increase in carbohydrate contents in foliage for plants grown in peat+sponge 2:1, peat+sawdust 2:1 and peat+foam 2:1 from peat alone. Also they gave increase Chl.A in first season.


5. Using peat+foam 2:1 increased number of branches and carotene in two seasons.

6. There were no differences among all media due to their effect on K% in foliage, N% and P% in roots.

B- Effect of nutrition:

1. The two ratios of Fertilin 5:10:10, as well as to these ratios supplemented with a foliar fertilizer were the most favourable nutrition for increasing plant height, stem diameter, number of leaves and number of branches.
2- The application of NPK 10:10:10 plus New Tramin-V was the most effective for increasing fresh and dry weight of foliage and N% in foliage.

3- The application of NPK at 5:10:10 with New Tramin-V increased fresh and dry weight of roots, and carbohydrate contents in foliage.

4- Foliar fertilizer (New Tramin-V) increased chl.A in second season and Chl.B in first season.

5- The application of NPK at 10:10:10 increased P% and carbohydrate contents in roots.

6- The application of NPK at 5:10:10 increased chl.A in first season

7- Allinutrition treatment gave a slight differences in K% of foliage and no differences in N% of roots.

8- The application of NPK at 5:10:10 and 5:10:10 + New Tramin-V increased K% in foliage and roots