SUMMARY

This investigation was carried out during two seasons 1990/1991 - 1991/1992 at the experimental research station of Faculty of Agriculture at Moshtohor, Zagazig University, Benha Branch, where three experiments were conducted.

The first experiment aimed to study the effect of different constituents of growth media on the growth of the seedlings of Aralia longifolium L. and Cupressus sempervirens L. Five type of different media were investigated to reveal their effects on the growth.

The second experiment aimed at studying the effect of light intensities on the plant growth, in outdoors locations.

The third part was to study the growing of Cupressus sempervirens L. indoors under 4 different light intensities combined with soil dressing and foliar nutrition.

The most important results were as following:

A. Media treatment:

1. Medium (4) consisted of (Sand : Clay : Foam 3:1:1) by volume was the best for growing both Aralia longifolium L and Cupressus sempervirens L. The plants were more healthy Aralia longifolium L. plants reached 57.9 cms in length and gave 77.7 gms in vegetative fresh weight, also Cupressus
*semprevirens* L. seedlings reached 28.4 cms in length and 35.5 g vegetative fresh weight.

2. The medium (3) consisted of - Sand : peatmoss : leaf mould (3:1:1) - by volume, respectively negatively, affected the fresh and dry weights of the plant gave the least growth parameters.

3. Medium (4) decreased the leaf number of Aralia plants, while medium (5) resulted in a decrease in the branch number of *Cupressus* plants.

4. Regarding the nitrogen contents of plants grown on medium (4) was obtained the highest value of N content in plants comparing with any other medium.

5. The highest value of (P and K contents) were detected in Aralia plants grew in medium (1), where as medium (5) gave the least value. Generally media 2, 3 and 4 nearly did not differ in P and K contents.

6. A positive correlation between phenolic compounds and the effect of media on plants growth was found. Medium (5) contained the highest value, whereas, medium (4) showed the lowest value.
Generally, the media differed in their effect on the availability of major elements absorbed by plants, the most promising effect was for the nitrogen uptake with medium (4) and with K uptake with medium (1) which consisted of (Sand : Clay : Peat moss 1 : 1 : 1) by volume.

B. Light intensity:

1. The plants grown under lathhouse conditions under 8500 lux gave the best growth than the plants grown in the open under full sun or under network conditions.

2. The tallest plants were found under low light intensity as - 25% full sunlight - .

3. Fresh and dry weight were increased in both Aralia and Cupressus plants grown under lathhouse conditions - 25% full sunlight.

4. Significant correlation was found among the plants grown under lathhouse conditions rather than full sunlight plants or those grown under network conditions.

5. The highly effect of lathhouse condition increased NPK absorption comparing with the plants grown in out-door conditions.

6. Increasing light intensities resulted more of phenols content in treated plants under full sunlight.
REFERENCES


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*The weather monthly during growing season (1990)*
Obtained from Meteorological Station, Giza, Ministry of Agriculture, A.R.E.

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FOAM:

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Nutrition:

1) Kristalon: N : P2O5 : K2O + MgO
   19     19     + 19     + 2

Produced by Phayzon Company - Holland

2) Foliar:

   STIMUFOL

   N : P : K : V (B1) : (EDTA)
   25% : 16% : 12% : 0.0004% : 3%

   Amino Acids: B : Mg : Cu : Mn : Mo :
   1% : 0.04% : 0.020% : 0.0585% : 0.085% : 0.085%

   Co : Fe : Zn

   0.001% : 0.170% : 0.085%

   Produced by ICI Agrochemicals plant protection division.