The important results which obtained can be summarized as follows:

Part I- *Limonium sinuatum L.*

1.A. Spraying different concentrations of cheleate calcium, calcium bicarbonate and sodium silicate significantly increased plant height compared with control plants and the best results in both seasons for this character were obtained from spraying Limonium plants with higher concentrations of calcium bicarbonate and cheleate calcium.

- Spraying limonium plants with different concentrations of cheleate calcium, calcium bicarbonate and sodium silicate significantly increased i.e fresh and dry weights of leaves, as well as, fresh and dry weights of plant herb in both seasons compared with untreated plants, and the best values for these characters were obtained from spraying Limonium plants with high levels of each of calcium bicarbonate and cheleate calcium, respectively.
- Treating *Limonium sinuatum L.* plants with each of cheleate calcium, calcium bicarbonate and sodium silicate increased each of number of flowers stems, F.W. and D.W. of flowers stems / plant compared with control plants in both seasons. The higher value for any character was attained with higher level for any treatment.
- The thickness and the length of peduncles were increased by treating the limonium plants with any level of different treatments and the increases were gradually increased by increasing the levels of any treatment.

- Spraying the Limonium plants with different levels of each of cheleate calcium, calcium becarbonate and sodium silicate increased each of N,P, and K percentages in leaves in both seasons compared with control plants, the highest contents of N, P and K were attained by spraying the Limonium plants with high level of calcium bicarbonate treatment. Also, calcium content in leaves of Limonium plants was increased by treated the plants with different levels of any treatment of this experiment.

- The percentage of total carbohydrates was increased by spraying the Limonium plants with any levels of each of cheleate calcium, calcium bicarbonate and sodium silicate and the highest value for this character was obtained by using the high level of each treatment in this experiment.

I.B. Spraying Limonium plants with different concentrations of PP_{333} and atrimmec decreased plant height and increased different characters of vegetative growth ie. No of leaves, F.W. and D.W. of leaves, F.W. and D.W. of herb / plant in both seasons compared with control treatment. The highest fresh and dry weights per plant in both seasons were obtained with treating the plants with 750 ppm of dikegulac sodium.

- Each of number of flower stems, fresh and dry weights of flower stems, as well as, thickness of flower stems were increased with treating the *Limonium sinuatum* L. plants with any level of PP_{333} and Atrimmec treatments, the increases of any character was gradually increased due to increasing the levels of any treatments.

- The plant leaves contents of the different elements of (N, P, K and Ca) were increased by using different growth retardants in both seasons compared with untreated plants,
- Treating the *Limonium sinuatum L.* with different levels of PP_{333} and Atrimmec treatments increased total carbohydrates compared with control plants for this character.
- Spraying *Limonium sinautum L.* plants with different concentrations of cheleate calcium, Ca-bicarbonate and Na silicate decreased the breakage dust flowers and percentage of reflexed flower stems in both seasons compared with control plant. The best values for these characters were obtained from spraying the plants with high level of each of chelate calcium, calcium bicarbonate and sodium silicate respectively. While the same treatments were not affected on the colour density of *Limonium sinautum* L. flower during the time of flowers cutting or during the flowers handling as everlasting flower.
- The obtained results indicated that most treatments of the two growth retardants significantly decreased the breakage dust flower and percentage of reflexed flower stems of plants in both seasons compared with control plants.
- Most mineral nutrition treatments decreased the breakage dust and percentage of reflexed flower stems compared with control treatment.
- The highest concentration of PP_{333} and Atrimmec produced flowers with full colour than the control. The colour density of Limonium flower was fixed during the time of their handling as everlasting flowers.

Part II- Helichrysum bracteatum:

II-A. Spraying *Helichrysum bracteatum* Andr. plants with different concentrations of cheleate calcium, Ca-bicarbonate and Na silicate significantly increased i.e. plant height, number of leaves, fresh and dry weights of leaves, as well as, fresh and dry weights of herb / plant in both seasons compared with untreated plants. The best values for these characters were obtained from spraying the plants with high level of each of cheleate calcium and calcium bicarbonate , respectively.

- Treating *Helichrysim bracteatum* Andr. plants with each of cheleate calcium, calcium bicarbonate and sodium silicate increased each of flower diameter, number of flowers in panicles, fresh and dry weights of flowers plant compared with control plant in both seasons, the higher value for any character was attained with higher level of any treatment.

- Most treatments of mineral nutrition increased the thickness (cm) and length of panicels (cm) and the increases was gradually increased by increasing the levels of any treatment.

- The highest content of N, P and K were attained by spraying the Helichrysum plants with Ca $(HCO_3)_2$ at 150 ppm treatment, Also, calcium concentration in leaves of Helichrysum plants was increased by treateing the plants with different levels of any treatment in this experiment and total carbohydrates in the leaves of *Helichrysum bracteatum Andr.* was significantly increased in both seasons by using different mineral nutrition

treatments. The highest value for this character was obtained by using cheleate calcium at rate of 100ppm and Ca bicarbonate at rate of 150 ppm in the two seasons in this experiment.

II.B. The obtained results indicated that most treatments of the two used growth retardants significantly increased the number of leaves, fresh and dry weights of leaves and fresh and dry weights of plant in both seasons.

- Plant height was significantly reduced due to using all treatments of growth retardants in both seasons especially with application of PP_{333} at rate (100 ppm) and dikegulac sodium at rate 750 ppm compared with control treatment.

- The highest fresh and dry weights of leaves per plant in both seasons were obtained with treating the plant with dikegulac sodium (500 ppm).

- The flower diameter, number of flower in peduncle, fresh and dry weights of flower, thickness of flower panicles were increased with treating the *Helicrysum bracteatum Andr.* plants with any level of PP_{333} and dikegulac sodium treatments. The increase of any character was gradually increased due to the increase the levels of any treatments.

Most treatments of PP_{333} and dikegulac-Sodium increased N, P, K, Ca and total carbohydrates contents in the leaves of *Helicrysum bracteatum Andr.* in both seasons compared with control plant for these characters:

- The obtained results indicated that most treatments of the two used growth retardants significantly decreased the breakage dust

of flowers and percentage of reflexed flower stems of plants in both seasons compared with control plants.

- Spraying different concentrations of cheleate calcium, calcium bicarbonate and sodium silicate significantly decreased breakage flowers dust and percentage of reflexed flower stems compared with control and the best results in both seasons for this character were obtained from spraying Helichrysum plants with higher concentrations of cheleate calcium and calcium bicarbonate. The same treatments had a slight effected on the colour density of *Helichrysum bracteatum* flower during the time of flowers cutting or during the flowers handling as everlasting flower.

The conclusion

It could be concluded that the best yield of flower spikes, tallest flowers, strongest and thickest panicles / peducncle of *Limonium sinuatum L. and Helichrysum bracteatum Andr.* can be achived by spraying cheleate or bicaronate calcium at 150ppm. Also, the above- mentioned two mineral nutrients reduced the weight of breakage dust, bent neck (reflexed flowers) and increased the viability of using both studied genera as everlasting flowers.

The two used growth retardants placobutrazol (100 ppm) and dikegulac-sodium (750) improved the vegetative and flowering characteristics of both studied genera also, it succeded in producing high quality everlasting flowers.