An experimental trial was carried out at Fayoum Governorate during two successive seasons (2010/2011 and 2011/2012) to study the effects of NPK (1:1:1), active dry yeast and ascorbic acid on *Ammi visnaga* L. plants. The NPK fertilizer was used at the rates of 2, 4 and 6gm/per plant, while active dry yeast and ascorbic acid were sprayed at rates of 0, 2 and 4gm/L and 0.0, 0.2 and 0.3gm/plant respectively. The results showed that, using 6gm/plant of NPK, and 4/gm of active dry yeast as well as 0.3gm/plant of ascorbic acid increased vegetative growth characters (*i.e.* plant height (cm), number of branches /plant (number of umbels /plant, umbel diameter (cm), fresh weight (g/plant), herb dry weight of herb (g/plant)), chemical composition (*i.e.* chlorophyll a, b, total carotenoids, total carbohydrates, nitrogen, phosphorus and potassium percentages and percentage of fixed oil) and yield component (*i.e.* seeds yield per plant and per fedden and active ingredients (khellin and visnagin as mg /100g fruits). The effects of most interactions between each two factors or between all factors on studied characters were not obvious in both seasons.