INORGANIC AND ORGANIC FERTILIZATION IN BIOMASS AND ESSENTIAL OIL PRODUCTION OF MATRICARIA RECUTITA L.

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Abstract:
In the production of aromatic plants, fertilization is one of the factors that affect the biomass yield and the composition of secondary metabolites of an economic importance. The aim of this study was to compare the effect of fertilizer sources (FS) and harvest days (HD) on the flower yield, as well as diameter, plant height, biomass production and accumulation of essential oil of chamomile (Matricaria recutita L.). Plants were grown in a hydroponic system with two types of substrates: one from volcanic rock, locally called "tezontle" and another from a mixture of soil, compost and perlite (50:20:30). The source of inorganic fertilizer was the Slenir solution at 75% nutrient concentration. While organic fertilizers consisted of application of humic acids and an organic fertilizer with biosynthetic amino acids. The results showed that inorganic fertilizer and harvest days have a positive influence (P<0.05) in the morphological variables evaluated, but there are no differences in total yield of essential oil. This depends on the fresh flowers per treatment, while, α-bisabolol yield was increased by the humic acids application.

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