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Medicinal and aromatic plants are the dominant from of medicine in the most countries. Recently, because of concerns about the harmful side of allopathic drugs, medicinal plants occupy a promineut economic position because of the continuous increasing demancls for this medicine of products as a natural for drugs.

Mentha piperita L. plant is considered as one of the most important medicinal and aromatic plants due to its importance as a main source of safety drugs and raw substance used in manufacturing of pharmaceuticals. Mentha is the most important genus of labiatae (lamiaceae) family, which contains 18 species and 11 hybrids and *Mentha piperita L.* is one the most famous *Mentha hybrids*, which have been traditionally used in flavors, fragrances and medicines. Recent scientific studies have supported these uses with raw extracts, essential oils or their isolates. Peppermint oil which contains menthol and its isomers, menthone and its isomers and methyl esters is antibacterial, antifungal, **(Piccugilia *et al.*, 1993; Tassou *et al.*, 1995 and Imai *et al.*, 2001)** antiallergenic, anti-inflammatory **(Arakawa *et al.*, 1992 and Shine and Kim, 1998)** and antispasmodic **(Froster *et al.*, 1980).** In addition **White *et al.*, (1986)** mentioned that, peppermint oil reduces cholesterol synthesis in rabbits and inhibits enterocyte glucose up take **(Beesley *et al.*, 1996).**

Furthermore, luteolin, a yellow pigment in peppermint leaves has been shown to be strongly antimutagenic.

Owing to the great imptance of *Mentha piperita L.* plants, several investigations for optimization of biomass production (herb yield) and improving its essential oil content were carried out by several investigators. In this regard the herb yield and essential oil production depend to a large extent on the application of proper agriculture practices such as supplying the plants with adequate nutrients, particularly phosphrus and potassium nutrition.

Otherwise, in the recent time there has been an increasing awareness of the undesirable impact of using high doses from chemical fertilization, wich have a dangerous effects on the environment and human health.

Therefore, several attempts were carried out by many investigators to minimize the nonstop addition of high doses of chemical fertilizers through the application of biofertilization by inoculating the seeds or the growing media with free living N_2-fixing bacteria such as *Azospirillum lipoferum* and *Azotobacter chrooccum*. The inoculation of the growing media with the aforementioned bacteria was found to have a beneficial effects in enhancing the productivity of many medicinal and aromatic plants through N_2fixation as well as through producing phytohormones such as gibbrelleus, IAA and cytokinins, which could stimulate plant growth, nutrient absorption and photosynthesis process **(Fayz *et al.*, 1985)**

Organic materials are olgreded in soil by chemoheterophic microogamisms and consequently by nutrients become available in soil . the extent of availability of such nutrients depends on the type of organic material and

microorganisms **(Saha *et al.*, 1995)** Generally, organic matters are considered as important factors for improving physical, chemical and biological properties of soil and consequently, increasing plant growth **(Maynard, 1991 and Abd-EL-Moez *et al.*, (1991)** .

Therefore the present study was carried out for an investigation the effect of organic manures (biogas) and biofertilizers (nitrobin, phosphatine, potasiumage) as well as N, P and K on the vegetative growth and yield of oil. This investigation may be considered as step towards the using safety substitules to improving medicinal plants growth and yield.