



The efficacy of the minerals fertilizers on the herb production, seed and volatile oil in species *Foeniculum officinale* mill in the pedoclimate conditions from S.D. Banu Maracine

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The herb and aromatic plants constitute the first substance used for the production of the medicines of vegetal origins for the chemical-pharmaceutical industry. In comparison with the cereals and even with the technical plants, these occupy an insignificant area. The significance of their growing must be considered not for the area they occupy, but for their specific value, the product of each could not be usually replaced. On a universal scale, the aromatic and herbal plants are enjoying a rising attention and they are the object of many phitochemical, agrobiological and pharmacological searchings. *Foeniculum* is an aromatic and medicinal species, used even from antiquity. It is cultivated for fruits that contain volatile oil composed from trans-anetol (50-75%), cisanetol (0.2-0.5%), estragol (2.6-6%) phenilpropionici and terpenic derivatives. The stem, the leaves and the flowers contain ethereal oil (0.25%) with the same composition as the one from the fruit. The active principles that they contain have the antispastic, carminative, galactogoge, sedative, diuretic, expectorante, vermifuge pharmacodynamic action, being used in the pharmaceutical industry, in cosmetics for the ocular inflammatory states treatment. The volatile oil is used in the alimentary industry and in perfumery. It is also a meliferic species, the flowers offer the bees the ingathering of nectar and pollen, (0.012-0.135 mg nectar/flower; 25-100kg/hectar honey) in July and August. The experience has been located on SD Banu Maracine territory on a luvic preluvo soil which can be characterized by a humus conten, middling to weakly supplied with 2.16 percent in the first horizon stock, after which it gradually lowers on the profile up to 0.42%. The soil is well supplied with phosphorus and mobile potassium. In the first horizon, the content is of 80, respectively 320ppm, and under 40 the quantities suddenly lower. For the climate characterization the dates recorded at Craiova meteorological station were used. Within the framework of the experience different doses of NPK were used. The optimum doses of mineral fertilizers are of N96P54K60 when the largest quantities of volatile oil are obtained. The fertilization of the cultivation with N128P36K40 led to the obtaining of the weakest results. The *Foeniculum* plants respond to the chemical fertilizers, the latter proving their efficacy, but they should be applied in moderate quantities, and between NPK a well balanced proportion must be assured.