

RESEARCHES CONCERNING THE INFLUENCE OF ORGANIC FERTILIZERS OVER PRODUCTION AND QUALITY AT *ECHINACEA PURPUREA* MOENCH. (L.)

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Abstract

Echinacea purpurea (L.) Moench, is a perennial plant, native to North America, from which there are used in therapeutic purpose the aerial parts and the roots. The aerial parts contains flavonoides, polyphenolic acid, coffee acid, volatile oil etc. The medicine prepared from this plant determines the rise of self defense system of the human body (by mobilizing the leukocytes and extending the phagocytosis activity and inhibits virus multiplication). Since on the international and national market is required that the vegetable raw material to be produced in ecological system without chemical fertilizers, the research conducted at A.R.D.S. Secuieni, during 2008 – 2011 aimed to establish the optimum doses of muck at *Echinacea purpurea* L. (Moench.) species and track its impact on the herba production but also on the content in active principles. As a result of the performed determinations it was found that the on average over the three years of experimentation the highest height (91.74 cm) and weight (108.26 g) was at the plants from the variant fertilized with fermented muck in dose of 40 t/ha. In this variant the dry herba production obtained during three vegetation years were 39.14 g/ha in the second year, 72.13 g/ha in the third year and 74.02 q/ha in the fourth year. The highest coffee acid content (79.7 mg/100ml tincture) was determined in leaves from plants fertilized with 30t/ha muck and the highest content in polyphenolic acid (2.657 g clorogenic acid) was determined in flowers from plants fertilized with 40t/ha muck.

Keywords: organic fertilizer, echinacea, herba, production
