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E-HEMP2024

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**AGROECOLOGICAL CONDITIONS FOR OPTIMAL CULTIVATION OF  
INDUSTRIAL HEMP (*Cannabis sativa* L.) IN THE TERRITORY OF THE REPUBLIC  
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**Abstract**

The Kingdom of Yugoslavia was once one of the largest producers and exporters of the hemp in Europe. The largest areas in the former Yugoslavia were 100.000 ha (in 1949), but they were constantly reduced later. In the territory of the Republic of Serbia and AP Vojvodina, hemp was grown on about 50.000 ha. The main reason why the culture of hemp plant had such a large presence was, above all, favorable soil and climatic conditions. Today, due to various restrictions and prohibitions, industrial hemp is grown on only about 1.000 ha in the mentioned area.

Industrial hemp (*Canabis sativa* L.) differs from indian hemp in its function, cultivation technology, application, as well as in the amount of psychoactive substance (THC) which is not higher than 0.3%. The best soils for the cultivation of hemp are chernozems, alluvial soils and meadow chernozems, which are represented in the study area on a total of 1.731.900 ha, approximately. For cultivation, it requires well-prepared and fertilized soil whose pH value ranges from 5.8 to 7.0. Hemp is also an indicator of soil fertility, given that if the soil is heterogeneous (uneven), its cultivation varies considerably in height and overall development.

Climatic conditions of the mentioned area are also one of the important conditions for growing industrial hemp. They are appropriate and favorable, because the conditions of the length of daylight, the minimum germination temperature (1-2°C) and the optimal temperature for intensive vegetative growth of about 20 °C are met. Hemp requires a lot of moisture in the soil, but it also reacts negatively to excessive moisture, especially in the first period of growth and development. From the above mentioned, it can be accepted the fact that the agroecological conditions for growing industrial hemp are satisfying and provide potential for the development of the Serbian economy.

**Key words:** soil, climate factors, hemp**Acknowledgment**

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