

THE EFFECTS OF CLIMATE CHANGE ON SOYBEAN (*GLYCINE MAX* L.) CULTIVATION AND PRODUCTION IN HUNGARY

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Abstract

Due to its importance in supplying oil and animal feed, soybean (*Glycine max* L.) is one of the four most important crops in the world. Compared with other crops, soybean has superior ability to provide high quality raw material for human consumption as its nutritional values are outstanding. Soybean global production is constantly rising, however, in recent years, a decrease in the interest has been registered in Hungary from 2017. Soybean yield decline can be affected by various biotic and abiotic stress factors in all growing seasons. In addition to this, changes in climatic conditions and abiotic stress factors directly affect the level of yield potential which is very important for improving sustainability of agricultural systems. In order to profitably adapt to a changing climate and guarantee food security in Hungary, improved crop varieties are needed to bring in to cultivation. Due to changing climatic conditions, farmers are interested in growing soybean since crop rotation diversity influences soil microbial communities and often increases crop productivity. The increase in cost of agricultural inputs and loss of soil fertility drive the search for sustainable strategies. Therefore, the objective of the present work was to study the effect of climate change on soybean cultivation and grain yield since this crop plant can be described with high yield stability even under changing weather conditions which adversely affects all ecosystems. Agriculture is one of the most affected branches due to its dependence on the evolution of the weather throughout the entire plants growing season. The variance of climate requests the use of a variety of agronomic strategies and good crop choices. Thus, searching for optimal tillage management is crucial for the maintenance and improvement of soil functions.

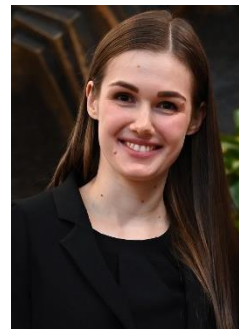
Keywords: *soybean, climate change, Hungary, soil tillage, production*

Biography

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I am currently a PhD student at Hungarian University of Agriculture and Life Sciences, where I work forward my thesis to develop conducive researches. Before joining the PhD programme, I was working in cooperation with farmers. Since joining the University, I have been involved with studies related to agricultural sciences.



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