P4_09

Analysis and prediction of rapeseed production indicators in the Republic of Srpska

Miroslav Nedeljković[1], Aleksandar Maksimović[2]

[1]*University of Novi Sad, Faculty of Agriculture, Republic of Serbia*
[2]*Institute for Scientific Researche and Development, Brčko, BiH*

Corresponding author: Miroslav Nedeljković,
miroslavnedeljkovic2015@gmail.com

Abstract

The aim of this paper is to predict future trends in the basic production of rapeseed in the Republic of Srpska. The period to which the prediction relates is from 2018 to 2022, and the time series that is the subject of research is from 1996 to 2017. In addition to the descriptive analysis method, the Box-Jenkins model based on the ARIMA (*Autoregressive Integrated Moving Average)* class is used in the paper with the prediction purpose. The results obtained from the research show that, regardless of the present oscillations, in the future, there will be an increase in the area under the rapeseed and that in the last year of the prediction, the surface will reach the level of 1920 ha. Also, production is expected to increase even by 4 times more in comparison with the average from the analysed period. Predicted production in the last year of the prediction period will be about 5,824 tons. As far as the yield of rapeseed is concerned, it is expected to be 1.11 t/ha or even by 36% at a higher level than the average yield in the analysed period. Respectively, the predicted yield in the last year is higher by 0.21 t/ha or about 7% of the maximum yield in the observed period.

Key words: rapeseed, prediction, ARIMA models, Republic of Srpska