

IRRIGATION REGIME FOR BEAN BEANS IN THE CONDITIONS OF THE ROMANIAN PLAIN

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Abstract

Unlike other crops, beans have moderate moisture requirements, but are very sensitive to moisture deficiency during flowering and grain formation. It has been established that in the short interval between these phenophases the sensitivity is maximum both in case of excess moisture and moisture deficit. Research has shown that the lack of water during flowering and fruiting greatly reduces production by shortening the duration of these phases of vegetation, by reducing pollen fertility, reducing pods and grain weight. The sensitivity of beans to the deficiency of vapor saturation in the atmosphere during flowering also has negative effects on the harvest. In order to determine to what extent the years of experimentation approach or deviate from the climatic conditions typical of the experimental field, monthly aridity indices were used for the series of years in which the experiments were performed at the studied farms, compared to indices of aridity from a longer period. The highest yields were obtained when the soil moisture at the beginning of flowering was at the field capacity for water and was maintained at the mentioned ceilings until the full formation of the grains. This paper summarizes the results of research on the influence of irrigation on production obtained in 2018-2021, at four farms located in the North Baragan Plain in Braila County.

Key words: aridity index, irrigation regime, soil moisture, harvest increase, economic efficiency