

The Effect of Precipitation on Weed Infestation of Spring Barley under Different Tillage Conditions

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Abstract : The article deals with the relation between rainfall in selected months and subsequent weed infestation of spring barley. The field experiment was performed at Mendel University agricultural enterprise in Žabčice, Czech Republic. Weed infestation was measured in spring barley vegetation in years 2004 to 2012. Barley was grown in three tillage variants: conventional tillage technology (CT), minimization tillage technology (MT), and no tillage (NT). Precipitation was recorded in one-day intervals. Monthly precipitation was calculated from the measured values in the months of October through to April. The technique of canonical correspondence analysis was applied for further statistical processing. 41 different species of weeds were found in the course of the 9-year monitoring period. The results clearly show that precipitation affects the incidence of most weed species in the selected months, but acts differently in the monitored variants of tillage technologies.

Keywords : weeds, precipitation, tillage, weed infestation forecast

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