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# Effects of various periods of water logging surface stress in the different growth stages on yield and yield components of barley (*Hordeum vulgare* L.*)* under Khuzestan environment

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## Abstract

In order to study the effects of different levels of water logging at different growth stages on yield and yield components of barley WB-79-10, a field experiment was carried out using split plot in randomized complete block design with four replications in Ramin Research Field Station in a growing season (2009-2010) in Ramin Agriculture and Natural Resources University, Ahvaz. Tillering, stem elongation and booting stage were assigned to main plots, and water logging periods, including 0, 7 and 14 days in terms of water logging were randomized in sub–plots. The results showed that between the beginning stages of water logging and various water logging periods for yield and yield components, significant differences exist. The water logging at tillering stage had more damage than stem elongation and booting stages on grain yield and its components. In the tillering stage, grain yield at 7 and 14 days, compared to control water logging 42 and 78.28 percent respectively, to the spikelet, respectively 20.84 and 37.5 percent and to the grain number per ear 22.31 and 41.04 percent respectively, decreased. Overall, the results showed that water logging at each stage of plant growth, even in a short period, led to irrecoverable damage on yield and its components on the leaves.

***Keyword**: Barley, Waterlogging periods, Ggrowth stage,*