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Effects of Using Super-Absorbent Polymers on Physiological Indexes of Maize

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Abstract : To study the effects of using superabsorbent polymers on physiological of maize in deficit Irrigation condition .an experiment carried out in split plot factorial based on completely Randomized Block design (RCBD) with three replication in 2012years. Deficit Irrigation was applied by three different Irrigation amount. Super absorbent polymers in 3 levels were and two veriety of maize allocated in sub plots. there was significant difference between Irrigation levels in all experimental Traits by increasing in deficit irrigation. Results of this research showed water stress significantly decreased relative water content (RWC) LAI,Ash percentage in both hybrids, and increased Cell membrane percentage and SPAD,ADF percent.whereas the application of super absorbent polymer compensated the negative effect of drought stress, especially in high rates of polymer application .These mentioned rates of polymer had the best effect to all of the studied traits. These findings can be suggested that the irrigation intervals of corn could be increased by application of super absorbent polymer.

Keywords : super absorbent,p hysiological, water stress, zea maize
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