The 1st International Conference on New Ideas in Agriculture
Islamic Azad University Khorasgan Branch
26-27 Jan. 2014, Isfahan, Iran

EFFECTS OF DIFFERENT LEVELS OF SUPER ABSORBENT ON DROUGHT STRESS AND QUALITATIVE AND QUANTITATIVE PROPERTIES OF SPORT GRASS

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ABSTRACT
Grasses are monocotyledon plants of Poaceae which have been known for a long time. Grass as a key element of green covering has a familiar and obvious manifestation and is cultivated in almost all areas of human settlement in the world. According to irrigation requirement of grass every day and limited water resources in our country and the adverse effects of drought stress on agricultural production and green spaces, it is needed that innovative and appropriate solutions for cost-saving and efficient use of water in agriculture are examined, so, in the near future, we face fewer problems with the food supply. Therefore, the effect of different amounts of super absorbent on drought stress and quantitative and qualitative characteristics of sport grass in nursery of Zob Ahan were studied. Irrigation treatments included a control (at field capacity or F. c), 30 and 60% of moisture depletion in regard to field capacity were assigned to the main plots and super absorbent treatments including 0, 50 and 100 grams per square meter were assigned to secondary plot. This test was performed in field conditions in a split-plot in randomized block design with four replications. Traits such as height, wet and dry weight of shoot, color, chlorophyll a, chlorophyll b, carotenoids, wet and dry weight of root, proline and relative moisture of water of the leaf. The results indicated that different amounts of super absorbent, height, chlorophyll a, chlorophyll b, relative moisture of water of the leaf, wet and dry weight of grass in significant level of 1% is meaningful and increase each of these attributes, so the maximum amount of each of them is related to 100 grams per square meter super absorbent. Effects of different irrigation period were meaningful in dry weight of shoot, root weight, height and color of the grass. Maximum dry weight of shoot, height and color of the grass height was associated with treatment of no stress. Interaction of super absorbent consumption and irrigation on shoot weight, chlorophyll a, proline, color, height were meaningful. Based on the results of interactions between irrigation and super absorbent, maximum dry weight of shoot was associated with 100 gram treatment per square meter super absorbent and control (no stress).

Keywords: Super absorbent, Sport grass, Drought stress, Proline, Height.