Application of trinexapac-ethyl and mycorrhiza on turf grass quality of Festuca arundinacea

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Abstract
Heavy traffic often causes significant damage to turf grasses, especially on sport field turf grass. Foot traffic stress, particularly on wet soil, can also cause injury to the turf grass crown and the upper area of root structure. In the present study application of trinexapac-ethyl (TE) on turf grass inoculated with mycorrhiza was investigated. To determine how mycorrhiza effects Festuca establishment and TE impact on turf quality and their physiological response after establishment under traffic stress, three field experiment were designed. First experiment was conducted to determine whether two mycorrhiza species, Glomus mosaeae and Glomus intraradices at 50 gr/m², affected the establishment of Festuca arundinacea L. cv. Barvado and Festuca arundinacea L. cv. Asterix. A factorial experiment including combination of two mycorrhiza inoculation and two Festuca arundinacea cultivars was performed based on a randomized complete block design (RCBD) with three replications. For second and third experiment after two month establishment and TE application, turf quality and the physiological responses of two Festuca arundinacea cultivars that were inoculated with mycorrhiza were examined. A split-plot factorial experiment including combination of TE application, two mycorrhiza species and traffic stress treatments...