عنوان مقاله:

The effect of magnetic field intensity and different times on germination behavior and seedling growth of Bromus tomentellus

محل انتشار:

اولین همایش بین المللی و پنجمین همایش ملی علوم و تکنولوژی بذر ایران (سال: 1400)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

In order to investigate the effect of intensity and duration of different magnetic fields on the germination traits of cotton grass seeds, an experiment was conducted in the laboratory of the Faculty of Agriculture, the University of Guilan, in ۲۰۱۵. Experimental treatments included different intensities and durations of magnetic fields. Magnetic field intensities included exposing the seeds to magnetic fields of ۳, ۶, and ۹ milliseconds, and the duration of exposing the seeds to each intensity included ۲۰, ۴۰, ۶۰, and ۸۰ minutes and control (excluding seeds). The experiment was performed with ۱۳ treatments and factorial design utterly randomized with four replications. The analysis of variance showed that the magnetic field intensity and duration treatments had a significant effect (one percent probability level) on most of the evaluated traits. Magnetic field treatments did not significantly affect germination percentage, root dry weight, and allometric coefficient. By comparing the mean of the interaction of the treatments, it was found that the magnetic field intensities of ۳, ۶, and ۹ ms showed the most positive effect in all traits for ۶۰, ۸۰, and ۲۰ minutes, respectively. This study showed that the application of magnetic fields increases growth indices, especially root length in seedlings.

کلمات کلیدی:

Magnetic field, Cotton grass, Germination, Electromagnetic.

لینک ثابت مقاله در پایگاه سیویلیکا: