

عنوان مقاله:

THE EFFECT OF GROWTH BY POLYETHYLENE WITH DIFFERENT TREATMENTS ON SEED DORMANCY AND PROVOCATIVE BIOTIC OF TWO SPECIES IN FENEL

محل انتشار:

اولین کنفرانس بین المللی ایده های نو در کشاورزی (سال: 1392)

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خلاصه مقاله:

In order to evaluate the effects of dormancy breaking treatments and growth by polyethylene glycol on dormancy breaking, germination stimulating and seedling growth of two fennel cultivars a study was carried out in seed technology research laboratory of Islamic Azad University (Isfahan Branch). Study was conducted as split factorial in completely randomized design with four replications in 2012. Polyethylene glycol levels were main plots and factorial of cultivars and dormancy breaking treatments were subplots. Levels of polyethylene glycol (6000) were potentials of -0.99, -0.35, and -2.33 Mpa at 15°C. Fennel cultivars were Nahavand and Malayer. Dormancy breaking treatments were Gibberellic acid (100mg/lit), Benzyladenine (10-5 M), Chitin (10-5M), Gibberellic acid + Benzyladenine, Gibberellic acid + Chitin, Benzyl adenine + Chitin, Gibberellic acid + Benzyladenine + Chitin (with the same concentrations), sulfuric acid (90%) for 15 seconds, potassium nitrate (0.4%), distilled water, Aminol forte (0.4%), Kadostim (0.4%), Phosphothreonine (0.4%) and Humiforte (0.4%). Studied traits were percentage and rate of germination. Polyethylene glycol had significant effect on germination percentage ($p < 0.05$) and the highest percentage was obtained from -0.99 Mpa whereas -2.33 Mpa concentration had the least. Dormancy breaking treatment affected this trait highly significantly ($p < 0.01$) and the highest percentage was obtained from Aminol forte. Germination percentage was affected by cultivar very significantly ($p < 0.01$) and Malayer had higher percentage. The effect of polyethylene glycol on germination rate was not significant; however, -1.35 Mpa concentrations showed the highest rate and -2.33 Mpa treatment had the least radicle length. Cultivars didn't affect this trait but dormancy breaking treatments affected it highly significantly ($p < 0.01$). The highest germination rate was obtained in phosphothreonine which didn't show significant difference with other treatments except Benzyladenine + Chitin.

کلمات کلیدی:

seed dormancy, fennel, polyethylene glycol, dormancy breaking treatments, germination percentage, germination rate

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