

عنوان مقاله:

Effect of Different Times and KNO₃ Concentrations on Silybum marianum Seedling Enhancement

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خلاصه مقاله:

Nowadays, the use of medicinal plants has increased and rangelands are the main sources of these plants. Excessive harvesting has resulted in degradation and reduction of diversity. Cultivation or seeding in nature could reduce the process of destruction, but the seed germination capacity of these species is limited. Methods of seed enhancement such as seed priming can improve these problems. In this research, the possibility of germination improvement of *Silybum marianum* (L.) Gaertn. was investigated by using potassium nitrate treatment. Different concentrations of 0, 1, 2 and 3 percent of the solution of KNO₃ were applied for 24 and 48 hours at 25 °C. An experiment was conducted in a factorial arrangement with a completely randomized design with three replications. The germination components (germination percentage, germination rate, seedling, root length, shoot length, seedling length, root and shoot fresh and dry weight) were measured in laboratory conditions (petri dish) and cultivation trays. Also, the leaf area index determined. Results showed significant differences in time interaction and different concentrations of KNO₃ in germination rate, shoot fresh weight, shoot dry weight, seedling dry weight and leaf area index. In the experiments designed in the petri dish, the interaction between time and various concentrations of KNO₃ affected all measured factors except shoot and seedling dry weight ($P < 0.05$). The optimum treatment was 1% concentration and 24 hours, which is caused a significant increase compared to control in the studied traits

کلمات کلیدی:

priming, germination, cultivation, KNO₃, *S. marianum*

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