Data in Brief 20 (2018) 454–458

Contents lists available at ScienceDirect

Data in Brief

journal homepage: www.elsevier.com/locate/dib

Data Article

Data on seed priming and seedling growth of Barli 21 tobacco varieties under polyethylene glycol and salinity stress conditions

Fatemeh Nejatzadeh-Barandozi

Department of Horticulture, Faculty of Agriculture, Khoy Branch, Islamic Azad University, Khoy, Iran

ARTICLE INFO

Article history:
Received 7 May 2018
Received in revised form
27 July 2018
Accepted 13 August 2018
Available online 16 August 2018

Keywords:
Polyethylene glycol (PEG)
Tobacco
Salinity
Emergence percentage

ABSTRACT

Data on the effect of seed priming on Barli 21 tobacco (*Nicotiana tobacum* L.) cultivars, an experiment was carried out in 2014 at the Tobacco Research center of Urmia, Iran under saline and Polyethylene glycol conditions. This experiment was arranged as factorial, based on RCB design with three replications. Treatments were polyethylene glycol (− 0.5%, − 1%, − 1.5% and − 2% (PEG) and hydropriming, and salinity levels (1, 2, 3 and 4 dS m^{-1} KNO_3) in periods 1, 2, 3, 5 and 10 days. Means of Emergence time, emergence rate coefficient, Emergence rate index, Emergence rate, and Emergence percentage decreased with increasing salinity. Emergence time and emergence rate coefficient increased with hydropriming in priming 5 and 10 days. Emergence rate index, Emergence rate, and Emergence percentage increased with 1.5% Polyethylene glycol. Seed priming with Polyethylene glycol was more beneficial in improving Emergence percentage, compared with KNO_3 priming.

Specifications Table

Subject area	*chemistry, biology*
More specific subject area	Seed Priming and Seedling Growth of Barli 21 Tobacco data Under PEG and Salinity stress
Type of data	*Table and figure*

E-mail address: fnejatzadeh@yahoo.com

https://doi.org/10.1016/j.dib.2018.08.033

How data was acquired	*Laboratory experiments*
Data format	*Analyzed data*
Experimental factors	*Seed Priming and Seedling Growth of Barli 21 Tobacco, PEG, Salinity stress*
Experimental features	*Seed treatments were polyethylene glycol (− 0.5%, − 1%, − 1.5% and − 2% (PEG) and hydropriming, and salinity levels (1, 2, 3 and 4 dS m^{-1} KNO3) in periods 1, 2, 3, 5 and 10 days. seedling emergence was counted daily with seeds recorded as emerged, when hypocotyls appeared and mean emergence rate was calculated according to Ellis and Roberts (1980). After emergence, Emergence time, emergence rate coefficient, Emergence rate index, Emergence rate, and Emergence percentage were determined*
Data source location	*Urmia, Iran*
Data accessibility	*All data are present in this article*

Value of the data

- These data provide the priming of seed and seedling growth of Barli 21 Tobacco under PEG (*polyethylene glycol)* and salinity stress and relationships between seed priming and salinity stress it shows.
- PEG (*polyethylene glycol*) treatment may be applied to improving germination of Tobacco seeds as valuable method for increasing hardening at salinity stress conditions.
- These data are valuable to researchers investigating priming technique to improving germination of Barli 21 Tobacco seed at salinity stress.

1. Data

Effect of Polyethylene glycol and hydro priming treatments on Emergence traits of tobacco seed are presented in Table 1. Effect of priming time on emergence traits of tobacco are presented in comparison table (Table 2). Means of emergence traits of tobacco affected by salinity treatments are presented in Table 3. In addition, Analyses of variance of the effects of priming, priming time on emergence traits of tobacco under salinity stress are presented in Table 4. Means of interaction of priming duration × concentration of polyethylene glycol and hydropriming on emergence percentage of tobacco are presented in Fig. 1. Also Means of interaction of salinity × concentration of polyethylene glycol and hydropriming on Emergence time of tobacco are presented in Fig. 2. In addition, means of interaction of salinity × concentration of polyethylene glycol and hyropriming on Emergence rate index of tobacco are presented in Fig. 3.

Table 1
Means of emergence traits of tobacco affected by Polyethylene glycol and hydro priming treatments.

Treatment	Emergence time (day)	Emergence rate coefficient (%)	Emergence rate index (seed day^{-1})	Emergence rate (% day^{-1})	Emergence percentage (%)
PEG-0.5	6.70 bc	2.1 b	42 ab	42 ab	97 a
PEG-1	6.52 c	2.2 b	46 a	45 a	96 a
PEG-1.5	6.55 c	2.1 b	45 a	44 a	98 a
PEG-2	6.90 ab	2.2 b	38 bc	40 b	96 a
Hydropriming	7.00 a	2.5 a	35 c	35 c	91 b

Different letters in each column indicating significant difference at $p \leq 0.05$.