

The detection of the most suitable salinity adapted barley cultivar

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Introduction

- Barley is the 4th planted plant in the international rank .during to its economical , industrial benefits .
- Barley is one of the most plant that adapted to the saline water and soil .
- Barley crop adapted to the dry areas .
- Because of this benefits we decided to determine which is the best landraces VAR in the saline conditions.

Objectives

- Evaluate the level of tolerance to salinity in local barley landraces .
- Study the effect of salinity on barley root and shoot biomass.
- Study the effect of salinity on relative water content.

Materials and methods

Experiment **one** :
germination test.

- Using **seven** different varieties, with **three** replicates each, using **four** salt concentrations (300mM, 200mM, 100mM, DW as control) .
- We will take the highest germination ratio grown in the highest salt concentration.



- Experiment **two** :

Using the highest results as mentioned in the previous experiment .growing 50 plant seed in hydroponic sys at 300 mM (3 times) ,and author 50 plant in control conditions (DW)(3 times).

Results :

Table 1: The effect of different levels of NaCl on seed germination percentage

Salinity	Germination %
Control	84.29 ^a
100 mM	71.91 ^b
200 mM	62.38 ^c
300 mM	43.33 ^d
Accessions	
HV-1	74.17 ^a
HV-15	70.83 ^{ab}
HV-6	65.00 ^{ab}
HV-11	63.33 ^{ab}
HV-12	62.77 ^{ab}
HV-14	61.77 ^b
HV-13	60.77 ^b

Figure 1: The effect of different levels of NaCl on seed germination percentage of 7 accessions of barley.

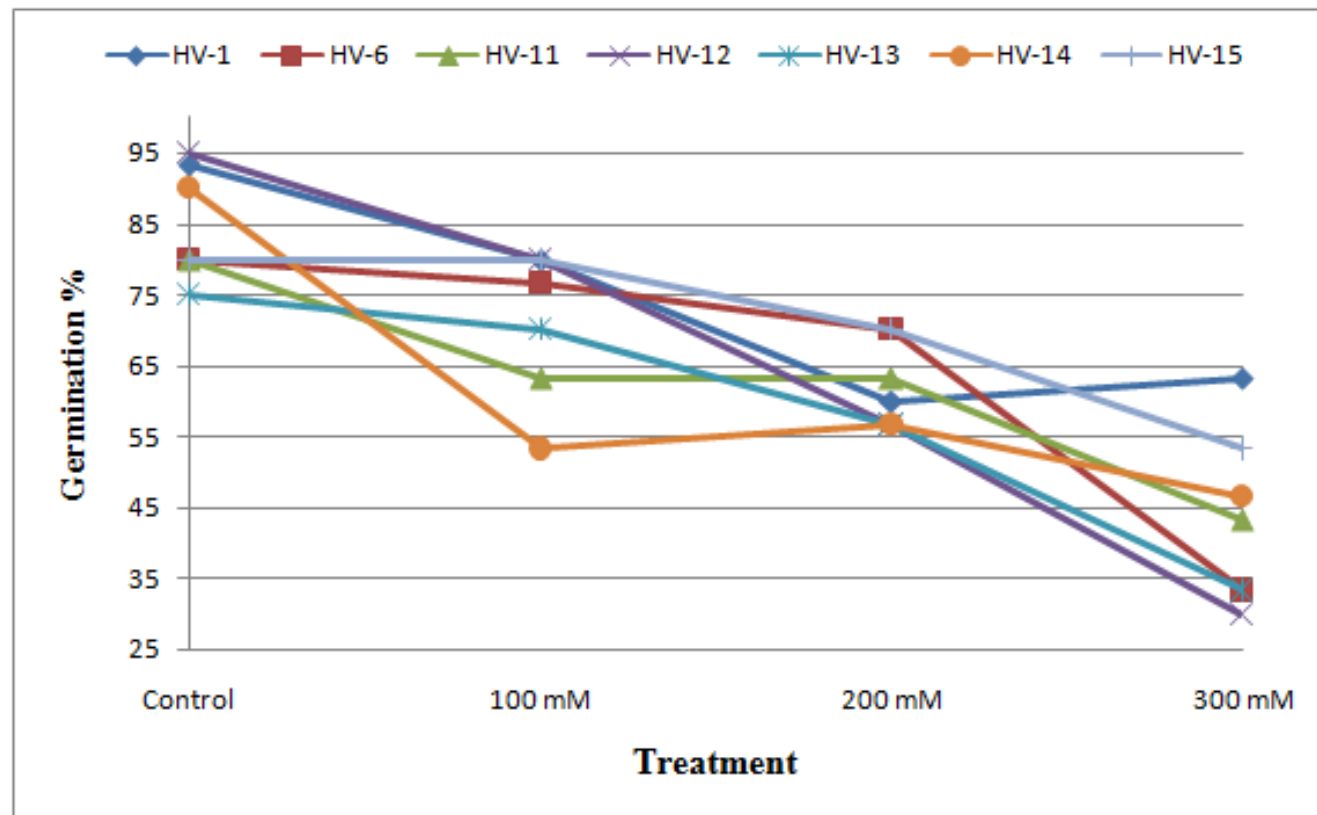




Figure 1: The effect of NaCl on barley root fresh and dry weight

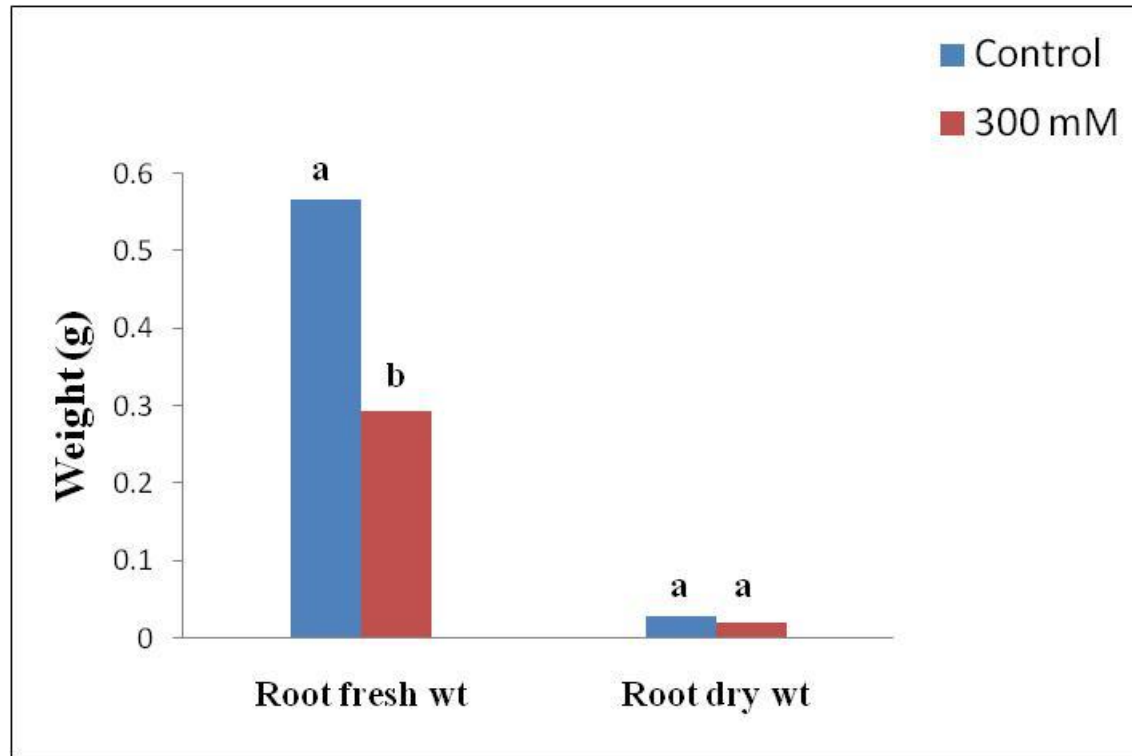


Figure 1: The effect of NaCl on barley shoot fresh and dry weight

