

World Congress on
**NOVEL TRENDS AND ADVANCES IN BIOTECHNOLOGY,
CELL & STEM CELL RESEARCH &**
Joint Event On
15TH ANNUAL CONGRESS ON PEDIATRICS
November 28-29, 2018 Barcelona, Spain

Screening of crop seedlings to salinity stress tolerance: The case of *Pisum sativum* var. *abyssinicum* A. Braun in Ethiopia

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Dekoko (*Pisum sativum* var. *abyssinicum*) is one of the most important food legumes grown in south Tigray and north Wollo, northern Ethiopia. It is one among the most important food legumes in terms of price and protein content. It grows alone and mixed with many cereal crops growing in north Ethiopia. This study was conducted with the objective of selecting tolerant and relatively high yielding *P. sativum* var. *abyssinicum* collections under different salt (NaCl) concentrations at laboratory conditions. The seeds of the six collections were obtained from four districts; two regional states of north Ethiopia with different altitudinal ranges 1868 m a.s.l. being the lowest and 2457 m a.s.l. the highest. The six on farm vigorously growing local collections, three from Ofla (T-001/08OF, T-002/08OF and, T-003/08OF), one from Sirinka (T-025/08Sr), one from Emba-Alaje (TA-026/15E/A) and one from Endamohoni (T-023/15MW) were studied for salt stress tolerances in controlled condition by priming in four salt treatment levels (5 dS/m, 7 dS/m, 9 dS/m and 15 dS/m). Distilled water (0 dS/m) was used as control. 50 surface sterilized seeds per petri dish were sown for the four salt treatments and the control. Collections T-001/08 from Ofla and T-023/08 from Endamohoni showed good growth performance at 5 dS/m. However, T-025/08Sr from Sirinka and TA-026/15E/A from Emba-Alaje responded positively up to 7 dS/m. At higher salinity level (9 dS/m) growth features decreased with increasing salinity stress. But, T-023/15MW, T-001/08OF, T-025/08Sr followed by TA-026/15E/A from lower to the higher resistances, respectively, could withstand lower (5 dS/m) to medium (7 dS/m) concentrations of salinity as compared to the other collections.

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