The Omani Barley Landrace Bahtini. I- Varaibility for Salt Tolerance and Agronomic Traits (C08-jaradat112412-Oral)

Authors:

- A.A.Jaradat* - *NCSC Research Lab., ARS-USDA*
- M.A.Shahid - *ICBA, Dubai, UAE*

Abstract:

One hundred twenty-five accessions representing seven ecotypes of the Omani barley landrace Batini were selected from a collection of 3,000 accessions based on their agronomic performance under optimum growing conditions. The 125 accessions were evaluated for biomass production, in a hydroponics system for eight weeks, under increasing (0.5, 10.0 and 20.0 dS/m) salinity levels. A salinity susceptibility index (SSI), based on standardized maximum yield (Ymax), yield under 10 (Y10) and 20 (Y20) dS/m, was calculated for each accession. SSI ranged from 0.84 (least susceptible) to a high of 1.68. Ymax was positively and significantly correlated with Y10 for all ecotypes, however, for four of the seven ecotypes, correlation coefficients between Ymax and Y20, and between Y10 and Y20 weren't significant. SSI was best predicted by Ymax (R**2=0.95) and resulted in selecting 10 high-yielding accessions under medium (10 dS/m) and high (20 dS/m) salinity levels.

Corresponding Author Information:

Abdullah Jaradat
NCSC Research Lab
803 Iowa Ave.
Morris, MN 56267

phone: 320-589-3411
fax: 320-589-3787
e-mail: jaradat@morris.ars.usda.gov

Presentation Information:

Presentation Date: Tuesday, November 12, 2002
Presentation Time: 1:30 pm

Keywords:

Landrace barley, tolerance to salinity, biomass , maturity