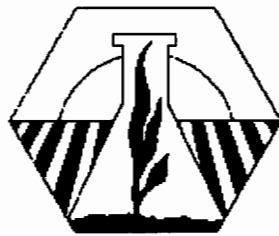


2001
Annual Meetings
ABSTRACTS



American Society of Agronomy
Crop Science Society of America
Soil Science Society of America

October 21-25, 2001
Charlotte, North Carolina

2001 ANNUAL MEETINGS ABSTRACTS

AMERICAN SOCIETY OF AGRONOMY

93rd Annual Meeting

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Chair: Erick C. Fernandes, Cornell Univ.

Chair-Elect: John Ryan, ICARDA, Syria

A-7 - Agricultural Research Station Management

Title

Elite Synthetic Hexaploid Wheats Under Drought Stress

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Keywords

BREAD WHEAT	SYNTHETIC HEXAPLOIDS
AGRONOMIC EVALUATION	DROUGHT TOLERANCE

abstract

Two field trials were conducted to study the agronomic performance of 28 elite primary synthetics derived from *Triticum turgidum* x *Aegilops tauschii* crosses under one irrigation condition in northwest Mexico. The trials were arranged in Randomized Complete Block Design with three replications. The experimental plots, each consisting of 8 rows, 20 cm apart and 4 m long were machine-drilled at a seeding rate of 100 kg/ha. Baviacora 92 (Bav92) and Dharwar Dry were used as the high yielding drought tolerant bread wheat check cultivars. Grain yield, biomass at maturity, yield components and other agronomic traits were determined. Averaged data for two years showed 3 primary synthetics with similar yield to the highest yielding check (Bav92- 4338 kg/ha). Most synthetics have comparable biomass yield (78%), spikes/sq.m (93%) and 1000-kernel weight (86%) to Bav92. All synthetics flowered and matured later and were taller than the checks. Two synthetic lines possessed more spikes m⁻² and 3 lines had heavier kernels than Bav92. The highest 1000-kernel weight recorded was 53.2 g on Doy 1/Ae. tauschii 1026 line. Results indicate the potential use of primary synthetics as progenitors in drought tolerance breeding of bread wheat.

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