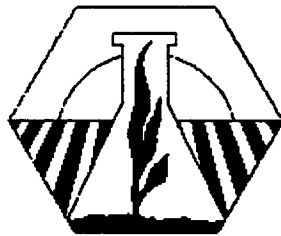


**2001**  
**Annual Meetings**  
**ABSTRACTS**



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

#### AGRONOMIC DIVISIONS

*President and Program Chair:* Darrell W. Nelson, Univ. of Nebraska

*President-Elect:* Charles W. Stuber, North Carolina State Univ.

*Chairs (Program Chairs) and Chairs-Elect of Divisions*

#### **A-1- Resident Education**

Chair: Jeffory A. Hattey, Oklahoma State Univ.

Chair-Elect: Freddie A. Martin, Louisiana State Univ.

#### **Subdiv. A-1a - Student Activities**

Chair: Sherry S. Fulk-Brinkman, Purdue Univ.

Chair-Elect: Mary H. Wiedenhoef, Iowa State Univ.

#### **A-2 - Military Land Use and Management**

Chair: Dana L. Quinney, State of Idaho Military Division, Boise, ID

Chair-Elect: Robert M. Lacey, U.S. Army, Champaign, IL

#### **A-3 - Agroclimatology and Agronomic Modeling**

Chair: Jay M. Ham, Kansas State Univ.

Chair-Elect: Keith L. Bristow, CSIRO, Australia

#### **A-4 - Extension Education**

Chair: Steven C. Hodges, North Carolina State Univ.

Chair-Elect: Eugene G. Krenzer, Jr., Oklahoma State Univ.

#### **A-5 - Environmental Quality**

Chair: Deanna L. Osmond, North Carolina State Univ.

Chair-Elect: Lawrence J. Sikora, USDA-ARS, Beltsville, MD

#### **A-6 - International Agronomy**

Chair: Erick C. Fernandes, Cornell Univ.

Chair-Elect: John Ryan, ICARDA, Syria

#### **A-7 - Agricultural Research Station Management**

**Title**

Cytogenetics of Bread Wheat/*Thinopyrum bessarabicum* Derivatives Based Upon Ph and ph Influence.

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**PaperType**

P

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**Keywords**

PH LOCUS	BREAD WHEAT
WIDE CROSSES	CYTOGENETICS

**abstract**

*Thinopyrum bessarabicum*, a diploid ( $2n=2x=14, JJ$ ) grass species is a potent source for salinity tolerance and wheat head scab resistance. Its amphiploid ( $2n=8x=56, AABBDDJJ$ ) has tested positive for both these stresses. The K:Na discrimination value tester for salt tolerance was 16.5; and is a positive indicator of tolerance. For scab Type II the score of 6.5% suggested resistance, and is the focus of this presentation. Screening of six of the seven possible disomic chromosome addition lines of *Th. bessarabicum* gave data indicating that several chromosomes influence the trait. This necessitated the use of a modified cytogenetic manipulation protocol at the amphiploid level to enhance the efficiency of homoeologous alien genetic introgression from the grass species into bread wheat. The protocol is described and cytogenetic evidence provided to substantiate enhanced meiotic chromosomal pairing. The self-fertile products after the ph based manipulation stage have yielded some superior scab resistant derivatives from which euploids are being obtained.

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