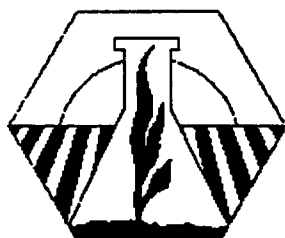


2001
Annual Meetings
ABSTRACTS



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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ASA-CSSA-SSSA Annual Meetings - October 21 - 25, 2001 - Charlotte, NC

Title

Wheat/Alien Chromosome Translocations in Elite Spring Wheats.

TSNo

c01-mujeeb-kazi104914-P

PaperType

P

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Keywords

CYTOGENETICS	BREAD WHEAT
WIDE CROSSES	TRANSLOCATIONS

abstract

Hybrids between wheat and tertiary gene pool species in general indicate lack of Intergeneric chromosomal associations. This precludes the opportunity of transferring beneficial traits of the alien donor species into wheat by recombination at the F1 stage. We have used the ph genetic stock in crosses onto PhPh amphiploids and produced Phph backcross one (BC1) heterozygotes. From such BC1's homozygous ph progeny has been developed by selfing, or by maize induced haploidy. Mitotic analyses on these derivatives allowed identification of several plants with wheat/alien chromosomal associations using Giemsa C-banding and FISH diagnostics. Additional backcrosses are being made with an elite CIMMYT bread wheat. A second aspect in this study is using the same wheat cultivar and incorporating into it the other globally available translocation stocks by reciprocal backcrossing to facilitate field multilocational screening. Anticipated from both activities is a possible alien introgression contribution that may equal or surpass the well known current T1BL.1RS or T1AL.1RS translocations.

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