Cytogenetics of Amphiploids Between Various Wheat and Triticeae Species. (C01-mujeebkazi114516-Poster)

Authors:

- V.Rosas* - *CIMMYT*
- A.Cortes - *CIMMYT*
- R.Delgado - *CIMMYT*
- A.Mujeeb-Kazi - *CIMMYT*

Abstract:

Intergeneric hybrids within the Triticeae are a potent source of exploiting alien genetic diversity for wheat improvement. Those produced with the perennial sources yield hybrids with perenniality and are germplasms that can be used repetitively until an amphiploid is obtained. Annual F1 intergenerics are time-bound due to their growth habit, and inducing amphiploidy is a one chance complex process. In our wheat breeding doubled haploid program the success frequency ranges from 90 to 100%. This doubling success however, has never exceeded 5% for the Triticeae intergeneric combinations, but over the past two decades a wide array of fertile amphiploids have been produced. The cytogenetic stability is excellent up to the octoploid level (2n=8x=56). There is severe hypo-ploidy and some hyper-ploidy at the 2n=12x=84 level. For practical goals the self-sterile F1 hybrids can be back- or top-crossed, but having amphiploids has greater significance. They are a valuable resource for long-term observations, exploitation, and distribution. The status of amphiploids produced and maintained in CIMMYT is reported.

Corresponding Author Information:

Abdul Mujeeb-Kazi
International Maize and Wheat Improvement Center
Apdo. 370, P.O.Box 60326
Houston, TX 60326
MEXICO

phone: 650-833-6655
fax: 650-833-6656
e-mail: m.kazi@cgiar.org

Presentation Information:

Presentation Date: Wednesday, November 13, 2002
Presentation Time: 4:00-6:00 pm
Poster Board Number: 737

Keywords:
Intergeneric hybridization, Cytogenetics, Wheat