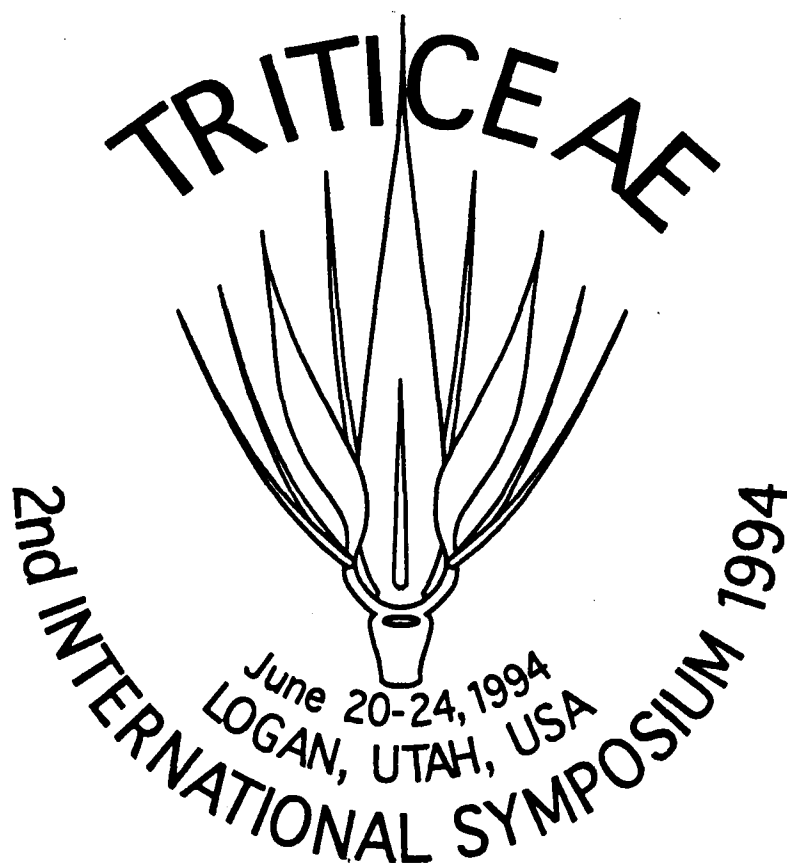


PROGRAM AND ABSTRACTS



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A19

Title: Progress in Polyhaploid Production Techniques of Hexploid Wheat through Wide Crosses.

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Abstract:

Progress in Polyhaploid Production Techniques of Hexploid Wheat through Wide Crosses.

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Polyhaploid production techniques of hexaploid wheat (*Triticum aestivum* L.) through wide crosses were evaluated in terms of pollen sources, 2,4-D application, embryo rescue and chromosome retention. Pollen sources included *Hordeum bulbosum* L., *Zea mays* L., *Pennisetum glaucum* (L.) R, Br., *Sorghum bicolor* (L.) Moench, and *Tripsacum dactyloides* (L.) L. Maize-mediated polyhaploid production was more stable than those with other methods because of its negligible genotypic effect on embryo formation. Application of 2,4-D onto wheat after pollination was critical to promote seed setting and embryo formation in all cross combinations. Embryo rescue was needed at a suitable embryo developmental stage with respect to plant regeneration. Paternal chromosomes were eliminated by the stage of haploid seedlings. Polyhaploid production frequencies, at present, ranged from 10 to 20% of pollinated wheat florets, suggesting germplasm genotypic effects.