

CHARACTERIZATION OF 3X X 2X ANEUPLOID HYBRIDS IN POTATO

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A ploidy bridge strategy was used to overcome isolation barriers due to endosperm balance number (EBN) differences between wild *Solanum commersonii* (cmm $2n=2x=24$, 1EBN) and *S. tuberosum* haploids (tbr $2n=2x=24$, 2EBN). Following 3x x 2x crosses between triploid cmm x tbr hybrids and 2x genotypes, progenies with 29-36 somatic chromosomes were obtained. Clearly, only eggs with 17-24 chromosomes of the triploid parents were able to develop mature embryos. These results may be explained on the basis of a post-zigotic barrier operated by the EBN. To estimate the introgression of interesting traits from the wild parent, 3x x 2x genotypes were screened for resistance to abiotic and biotic stresses. Most hybrids showed tolerance to low temperatures under acclimated conditions. The screening for resistance to *Ralstonia solanacearum* allowed resistant hybrids to be identified. In order to further study the resistance to *R. solanacearum*, cDNA AFLP technology was applied. Differential banding patterns between susceptible tbr and resistant cmm genotypes were detected. Polymorphic fragments were sequenced and compared to the GenBank database. Preliminary results confirmed the switched on of genes involved in resistance response. The specific fragments from the resistant genotypes up till now analyzed did not find similarity in the database.