



THE 15TH INTERNATIONAL SYMPOSIUM
**PROSPECTS FOR THE
3rd MILLENNIUM
AGRICULTURE**

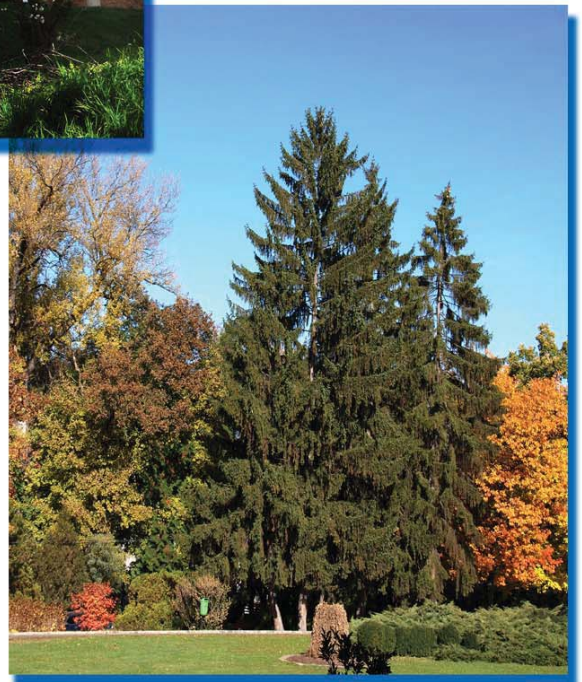


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EGGPLANT PRE-BREEDING USING AN INTROGRESSIOMICS APPROACH

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Introduction: Introgressiomics is an approach, based in the use of a large variation of wild species, interspecific hybridization and genomic tools, to create multiple materials of crops carrying introgressions from wild relatives. One of the most promising target crops for introgressiomics is eggplant (*Solanum melongena*), as it is related to a large number of very diverse wild species.

Aims: Our objective is to develop highly diverse pre-breeding materials of eggplant that contain introgressions from different wild species using an introgressiomics approach.

Materials and Methods: We used six accessions of eggplant and different accessions of 15 wild species from the primary, secondary and tertiary genepools. Hybridizations were performed and the interspecific hybrids obtained were backcrossed to the cultivated eggplant. For one of the wild species (*S. incanum*), marker assisted selection was used in a backcross programme to obtain introgression lines.

Results: Hybrids between eggplant and 14 wild species have been obtained, and up to now first backcross generations have been obtained with 10 wild species. These materials are highly variable and a selection for high diversity using morphological traits and molecular markers will be used for further backcrossing. Also, a large set (>40) introgression lines carrying specific genomic fragments of the wild *S. incanum* in the genetic background of *S. melongena* have been obtained using marker-assisted-selection.

Conclusion: The materials obtained represent eggplant pre-breeding materials of great interest to breeders. The use of the introgressiomics approach has allowed generating a large diversity of materials that may represent the foundations for a new generation of eggplant cultivars.

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