Plant & Animal Genomes XII Conference

January 10-14, 2004
Town & Country Convention Center
San Diego, CA

Workshop: Compositae

W60

APPLICATION OF MOLECULAR MARKERS TO PGR MANAGEMENT AND GM-CROP BIOSAFETY ISSUES IN LETTUCE

Rob van Treuren[1] , Theo van Hintum[1] , Clemens van de Wiel[2]

1

Centre for Genetic Resources, the Netherlands. Wageningen University and Research Centre, P.O. Box 16, 6700 AA Wageningen, the Netherlands

2

Plant Research International B.V. Wageningen University and Research Centre, P.O. Box 16, 6700 AA Wageningen, the Netherlands

Lettuce is considered a major food crop within the European Union, and Europe is regarded an important distribution area for wild relatives of lettuce. In recent years a number of EU-funded projects were initiated in the Netherlands. In the project ‘Molecular markers for genebanks’, the entire lettuce collection of the Centre for Genetic Resources, the Netherlands was characterized with microsatellites and AFLPs. The issues that were addressed included the genetic structure of the collection, the association of marker data with relevant traits and the validation of regeneration methods. The experiences gained from this project resulted in two new initiatives that were merged into the project ‘GENE-MINE’. One aspect of GENE-MINE involves bioinformatics research, concentrating on the storage, analysis and presentation of large genetic data sets. The other aspect of GENE-MINE involves wild lettuce, focusing on the improvement of the efficiency of plant genetic resources (PGR) management and on the promotion of the utilization of wild crop relatives, using microsatellites, AFLPs and markers targeted to disease resistance genes. In the project ‘ANGEL’, microsatellites, AFLPs, retrotransposon-based markers and markers targeted to disease resistance genes are used to study gene flow from crop to wild relatives of lettuce within the context of GM-crop biosafety. The three projects are briefly outlined and where possible the main achievements are presented.

Return to Previous Page or Intl-PAG Homepage