

ORIGINAL PAPERS

Determination of genetic structure of germplasm collections: are traditional hierarchical clustering methods appropriate for molecular marker data?

T.L. Odong · J. van Heerwaarden · J. Jansen · T.J.L. van Hintum · F.A. van Eeuwijk 195

Collinearity-based marker mining for the fine mapping of *Pm6*, a powdery mildew resistance gene in wheat

B. Qin · A. Cao · H. Wang · T. Chen · F.M. You · Y. Liu · J. Ji · D. Liu · P. Chen · X. Wang 207

A high density genetic map of tobacco (*Nicotiana tabacum* L.) obtained from large scale microsatellite marker development

G. Bindler · J. Plieske · N. Bakaher · I. Gunduz · N. Ivanov · R. Van der Hoeven · M. Ganai · P. Donini 219

Fine mapping of a male sterility gene *MS-cd1* in *Brassica oleracea*

X. Zhang · J. Wu · H. Zhang · Y. Ma · A. Guo · X. Wang 231

Development of a molecular linkage map of pearl millet integrating DArT and SSR markers

A. Supriya · S. Senthilvel · T. Nepolean · K. Eshwar · V. Rajaram · R. Shaw · C.T. Hash · A. Kilian · R.C. Yadav · M.L. Narasu 239

Selection strategies for marker-assisted backcrossing with high-throughput marker systems

E. Herzog · M. Frisch 251

New consistent QTL in pea associated with partial resistance to *Aphanomyces euteiches* in multiple French and American environments

C. Hamon · A. Baranger · C.J. Coyne · R.J. McGee · I. Le Goff · V. L'Anthoëne · R. Esnault · J.-P. Rivière · A. Klein · P. Mangin · K.E. McPhee · M. Roux-Duparque · L. Porter · H. Miteul · A. Lesné · G. Morin · C. Onfroy · A. Moussart · B. Tivoli · R. Delourme · M.-L. Pilet-Nayel 261

Mapping QTLs with main and epistatic effects underlying grain yield and heading time in soft winter wheat

J.C. Reif · H.P. Maurer · V. Korzun · E. Ebmeyer · T. Miedaner · T. Würschum 283

Advanced backcross QTL mapping of resistance to Fusarium head blight and plant morphological traits in a *Triticum macha* × *T. aestivum* population

M. Buerstmayr · M. Lemmens · B. Steiner · H. Buerstmayr 293

Targeted discovery of quantitative trait loci for resistance to northern leaf blight and other diseases of maize

C.-L. Chung · J. Poland · K. Kump · J. Benson · J. Longfellow · E. Walsh · P. Balint-Kurti · R. Nelson 307

QTL involved in the partial restoration of male fertility of C-type cytoplasmic male sterility in maize

S. Kohls · P. Stamp · C. Knaak · R. Messmer 327

Genome-based prediction of testcross values in maize

T. Albrecht · V. Wimmer · H.-J. Auinger · M. Erbe · C. Knaak · M. Ouzunova · H. Simianer · C.-C. Schön 339

Molecular mapping of the rust resistance gene *R4* to a large NBS-LRR cluster on linkage group 13 of sunflower

L.L. Qi · B.S. Hulke · B.A. Vick · T.J. Gulya 351