

Variability of cell wall polysaccharides composition and hemicellulose enzymatic profile in an apple progeny

Submitted by Emmanuel Lemoine on Thu, 02/12/2015 - 13:02

Titre	Variability of cell wall polysaccharides composition and hemicellulose enzymatic profile in an apple progeny
Type de publication	Article de revue
Auteur	Galvez-Lopez, Didiana [1], Laurens, Franois [2], Quemener, B. [3], Lahaye, Marc [4]
Editeur	Elsevier
Type	Article scientifique dans une revue  comit de lecture
Annee	2011
Langue	Anglais
Date	2011/12/01
Numero	5
Pagination	1104 - 1109
Volume	49
Titre de la revue	International Journal of Biological Macromolecules
ISSN	0141-8130
Mots-cles	Apple [5], Cell wall polysaccharides [6], Genetic variability [7], Hemicellulose [8], MALDI-TOF MS [9]
Resume en anglais	<p>The genetic variability of apple cell walls polysaccharides chemical composition and structure was assessed in a progeny of 141 individuals harvested over 2 years. The variability of the hemicelluloses oligosaccharides released by glucanase was analyzed by MALDI-TOF MS. The genetic contribution was distinguished from harvest year as well as from parental crossing patterns and scab resistance selection. Results showed that harvest year had a major impact on cell wall polysaccharide composition and structure. Within each harvest, genetic effect impact more significantly cell wall polysaccharide chemistry than does reciprocal crossing or early scab selection. Uronic acids, glucose, galactose and xylose contents as well as some glucomannan and xyloglucan structures have a high heritability. This first cell wall chemotyping of an apple progeny opens the way for future searches of genetic markers for the chemical variability of cell wall polysaccharides.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua7746 [10]
DOI	10.1016/j.ijbiomac.2011.09.007 [11]
Lien vers le document	http://dx.doi.org/10.1016/j.ijbiomac.2011.09.007 [11]

Liens

[1] [http://okina.univ-angers.fr/publications?f\[author\]=11967](http://okina.univ-angers.fr/publications?f[author]=11967)

- [2] [http://okina.univ-angers.fr/publications?f\[author\]=91](http://okina.univ-angers.fr/publications?f[author]=91)
- [3] [http://okina.univ-angers.fr/publications?f\[author\]=11965](http://okina.univ-angers.fr/publications?f[author]=11965)
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=11969](http://okina.univ-angers.fr/publications?f[author]=11969)
- [5] [http://okina.univ-angers.fr/publications?f\[keyword\]=11881](http://okina.univ-angers.fr/publications?f[keyword]=11881)
- [6] [http://okina.univ-angers.fr/publications?f\[keyword\]=11930](http://okina.univ-angers.fr/publications?f[keyword]=11930)
- [7] [http://okina.univ-angers.fr/publications?f\[keyword\]=11931](http://okina.univ-angers.fr/publications?f[keyword]=11931)
- [8] [http://okina.univ-angers.fr/publications?f\[keyword\]=11932](http://okina.univ-angers.fr/publications?f[keyword]=11932)
- [9] [http://okina.univ-angers.fr/publications?f\[keyword\]=11933](http://okina.univ-angers.fr/publications?f[keyword]=11933)
- [10] <http://okina.univ-angers.fr/publications/ua7746>
- [11] <http://dx.doi.org/10.1016/j.ijbiomac.2011.09.007>

Publié sur *Okina* (<http://okina.univ-angers.fr>)