



Impacts of contrasting light on bud burst and on RwMAX1 and RwMAX2 expression in rose

Submitted by Jose Gentilhomme on Mon, 04/20/2015 - 17:25

Titre	Impacts of contrasting light on bud burst and on RwMAX1 and RwMAX2 expression in rose
Type de publication	Article de revue
Auteur	Azri, Wassim [1], Gentilhomme-Le Gourrierec, José [2], Demote-Mainard, Sabine [3], Huché-Thélier, Lydie [4], Rabot, Amelie [5], Guérin, Vincent [6], Sakr, Soulaïman [7]
Pays	Allemagne
Editeur	Springer
Ville	Berlin
Type	Article scientifique dans une revue à comité de lecture
Année	2015
Langue	Anglais
Date	Jan-02-2015
Numéro	2
Pagination	30
Volume	37
Titre de la revue	Acta Physiologiae Plantarum
ISSN	0137-5881
Mots-clés	Axillary buds [8], Bud burst [9], Contrasting light [10], MAX genes [11], Rosa hybrida [12]
Résumé en anglais	<p>Bud burst is a crucial factor in plant architecture and is strongly induced by light. In <i>Rosa</i> sp., this light effect was correlated with the growth of axillary buds and RwMAX1 and RwMAX2 expression within buds. In this paper, we investigated whether strigolactone pathway is involved in the regulation of axillary bud in response to light intensity. Hence, young roses were subjected to two contrasting light intensity regimes: high/high and high/low. The phenotype was characterized in both conditions and the expression of RwMAX1 and RwMAX2 genes was measured in the basal, middle and apical parts of rose primary branch. Light treatments showed a strong impact on axillary bud. The percentage of bud burst was severely reduced in the treatment high/low compared to the treatment high/high in all branch parts. In addition, the expression of RwMAX1 and RwMAX2 was strongly inhibited by high/high light regime and was conversely correlated with the rate of bud burst. In in vitro-grown axillary buds supplied with sucrose, glucose and fructose, RwMAX1 expression was significantly stimulated whereas that of RwMAX2 was significantly inhibited. Our results suggest that although RwMAX1 and RwMAX2 expression can be regulated by light, this expression does not explain the ability of bud burst.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua9768 [13]
DOI	10.1007/s11738-014-1764-9 [14]

Lien vers le document <http://link.springer.com/article/10.1007%2Fs11738-014-1764-9> [15]

Titre abrégé Acta Physiol Plant

Liens

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- [14] <http://dx.doi.org/10.1007/s11738-014-1764-9>
- [15] <http://link.springer.com/article/10.1007%2Fs11738-014-1764-9>

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