

Molecular Profiles of Five Salinity-Resistant Soybean {glycine max (L.) Merr.} Cultivars

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Abstract	<p>In this study, the molecular profiles of five soybean cultivars (Burangrang, Gema, Grobogan, Panderman, and Sinabung) exhibiting salinity resistance were elucidated. The DNA profiles of the five cultivars were found to differ based on simple sequence repeat (SSR), insertion-deletion polymorphism (InDel)-QS080465, and sequence characterized amplified region (SCAR)-QS08064 markers. Three distinct SSR profiles Satt-243, Satt-294, and Satt-308 and the SCAR-QS08064 marker were only observed in the Grobogan cultivar, whereas the InDel-QS080465 marker was only successfully amplified from the Burangrang, Gema, and Grobogan cultivars. The results indicate that the Grobogan cultivar is the most tolerant soybean cultivar, followed by the Burangrang and Gema cultivars. Results were consistent with those from genetic similarity analysis, which showed that Grobogan is genetically more similar to Burangrang and Gema compared to Sinabung and Panderman. In conclusion, the five soybean cultivars have different molecular profiles that are related to their resistance to salinity. SSR markers, InDel-QS080465-152, and SCAR-QS08064-383 are molecular markers specific to salinity-resistant cultivars.</p>
Publisher Name	Universitas Jenderal Soedirman
Publish Date	2020-11-27
Publish Year	2020
Doi	DOI: 10.20884/1.jm.2020.15.3.628
Citation	
Source	Molekul
Source Issue	Vol 15, No 3 (2020)
Source Page	184-190
Url	https://ojs.jmolekul.com/ojs/index.php/jm/article/view/628/347
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