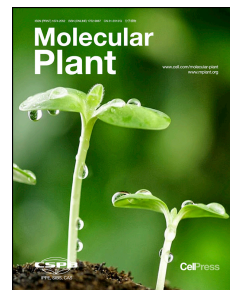


# Accepted Manuscript

Genome-wide scan for seed composition provides insights into soybean quality improvement and the impacts of domestication and breeding

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1 **Title: Genome-wide scan for seed composition provides insights into**  
2 **soybean quality improvement and the impacts of domestication and**  
3 **breeding**

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22

23 **Running title: Seed nutrient GWAS enlightens soybean improvement**

24

25 **Short Summary:** Molecular and genomic investigation helps to reveal the  
26 genetic architecture of complex traits. By genome-wide association study, 138  
27 quantitative trait loci associated with seed composition and many candidate  
28 genes were identified in soybean. The results also indicated a different genetic  
29 basis between seed weight based and total protein corrected amino acids, and  
30 revealed a marked impact of soybean domestication and modern breeding  
31 selection on six major-effect loci.

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