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## A Major Soybean QTL, *qPDH1*, Controls Pod Dehiscence without Marked Morphological Change

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**Abstract:** Pod dehiscence (shattering) is a major source of yield loss in the mechanically harvested soybean. We examined near-isogenic lines (NILs) for a major quantitative trait locus (QTL) controlling pod dehiscence, designated as *qPDH1*, to reveal the mechanism underlying the effect of this QTL on shattering resistance. The degree of shattering resistance differed among the NILs; as pod dehiscence percentage after 3 hr heat treatment was under 50% and over 90% for the genotypes resistant to shattering and those susceptible to shattering, respectively. On the other hand, there were no significant differences in the length, width and thickness of pods among the NILs. Anatomical analysis of the dorsal sutures of pods, at which pod dehiscence was found to commence most frequently, revealed no marked differences between the NILs. These results suggest that *qPDH1* controls pod dehiscence without markedly changing the morphology of the pods.

**Keywords:** [Glycine max\(L.\) Merr.](#), [Pod dehiscence](#), [QTL](#), [Near-isogenic lines \(NILs\)](#), [Pod morphology](#)

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