Tiny plant mutant ty*-8446 is allelic to brd1.

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The tiny plant mutant ty^* -8446, a small seedling mutant that arose following gamma radiation experiments at Oak Ridge Laboratory, was originally described and mapped to chromosome 1 by F. D. Pettem (1956. MNL 30:9-10). Mutant seedlings of ty^* -8446 do not respond to gibberellic acid (Phinney, BO. 1956. MNL 30:11-12). The *brassinosteroid-deficient dwarf1* (*brd1*) mutant, recently described by Makarevitch *et al.* (2012. *Brd1* gene in maize encodes a brassinosteroid C-6 oxidase. PLoS One. 7:e30798), has a similar seedling phenotype and also maps to chromosome 1. In order to resolve the relationship between these two mutants, a test of allelism was performed at the Maize Genetics Stock Center. Plants heterozygous for ty^* -8446 and *brd1-m1* were intercrossed, and kernels from the resulting ears were planted in the sand bench. The emerging seedlings segregated for the tiny seedling phenotype, indicating allelism. Although ty^* -8446 was isolated earlier than *brd1*, it had not been assigned a formal gene symbol. Therefore, the *brd1* locus name is retained, and the ty^* -8446 allele has been reassigned the name *brd1-ty8446*.