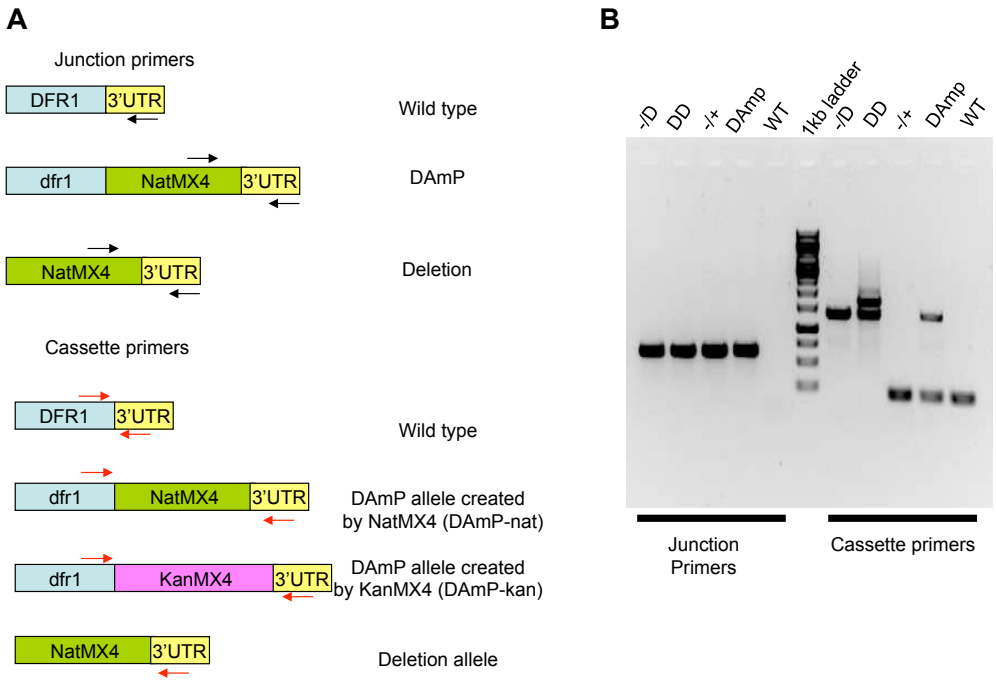

FIGURE S1.—Confirmation of gene-dose strains by PCR. The *DFR1* gene-dose alleles were used to illustrate the confirmation of gene-dose alleles. (A) Schematic diagram of primers used to confirm gene dosage alleles. Two pairs of primers were used to confirm gene dose strains. One pair spans the right junction of the mutation module (junction primer) represented by black short arrows in the figure. A second pair of primers flanks the stop codon of *DFR1* (cassette primer) represented by red short arrows. Using this pair of primers, the deletion modules cannot produce a product because the homologous region of one of the primers was deleted. The other modules can produce a PCR product but the size of PCR product varies depending on modules. The size of PCR products for the wild type allele, DAmP –Kan and DAmP-Nat allele are 207, 1676 and 1326 base pair respectively. (B) Agarose gel analysis of confirmation PCR of *DFR1* gene-dose strains. The strain names were listed in the top of each lane. When using the junction primer pair (left side), the D/+, D/D, -/D and -/+ strain produced a 650 base pair PCR product whereas the wild type strain will not generate a PCR product. When using the cassette primer (right side), the -/D produced a 1326 bp band. The wild type and -/+ strain produced a 207 bp band. The D/+ strain produced two bands, 1326 bp and 207 bp. The D/D strain produced two bands, 1326 bp and 1676 bp. To verify the genotype of each strain, genomic DNA was prepared using the YeaStar genomic DNA kit (Zymo research, cat# D2002) and used as template in PCR. Two pairs of primers were used to confirm each strain (Table S2).