

Figure S1. BLB disease phenotype on different rice cultivars 21 dpi. (a) Black bars are BLB lesions, and both white and black bars are total leaf length in centimeter, (b) Typical BLB symptoms on nine rice cultivars. In light of the phenotype displayed in the above figure, three categorical symptoms are observed: leaf drying up. As the disease progresses, the leaves turned yellow to straw-colored from the cut edge of inoculated leaves (from tip to the boarder of the the leaf, and leaf veins) and induce kresek (wilting), leading to entire leaf to dry up and die in highly susceptible cultivars ; leaf rolling up as part of the response to the pathogen attack; For each cultivar, pictures of two leaves were taken.

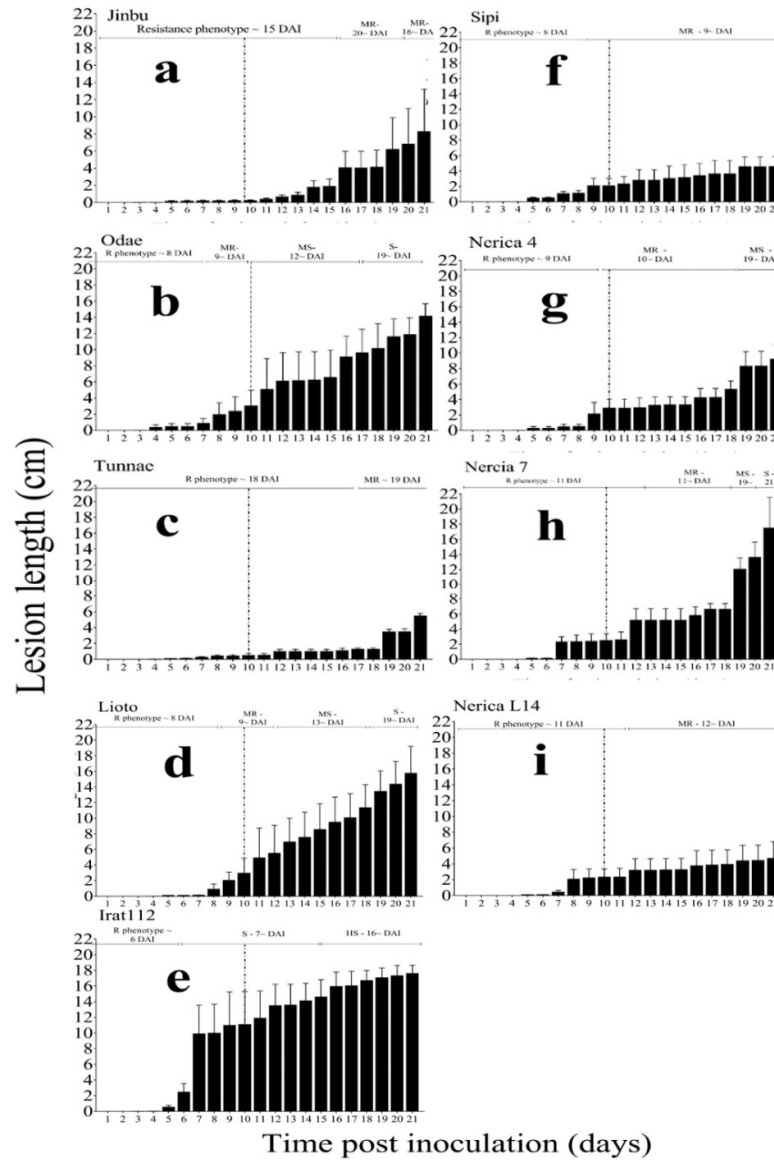


Figure S2. BLB daily lesion length on 9 rice cultivars. Data were recorded on a daily basis on living plants, up to 21 dpi, to track the symptom development and estimated the disease severity and the response of each genotype to K3 infection. With little exception, symptoms started to appear on inoculated leaves 4 days after inoculation. Highly susceptible indica genotype (IRAT112) exhibited a faster and invasive symptom development (e) where at 7th day of inoculation, BLB symptoms covered more than 50% of infected leaves. (a) Jinbu, (b) Odae, (d) Lioto, (g) NERICA 4 and (h) NERICA 7 are susceptible, while (c) Tunnae, (f) Sipi and (i) NERICA-L14 are resistant. Data are mean \pm SEM. Dot lines mark the early BLB scoring time point after inoculation suggested by IRRI.

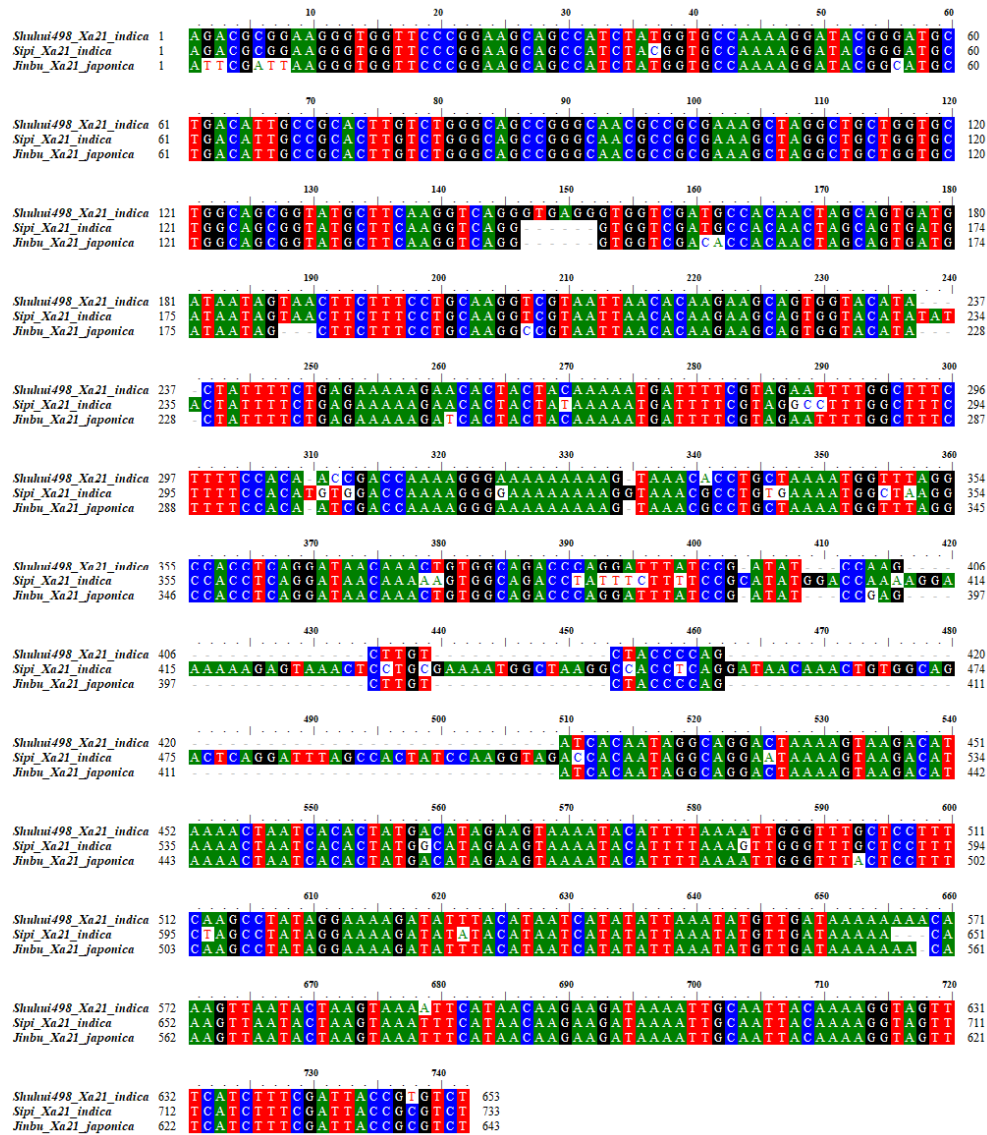


Figure S3. Alignment of *Xa21* sequences cloned from *indica* and *japonica* cultivars against the standard cultivar Shuhui498. We aligned sequences of the cloned pTA248 STS marker linked with *Xa21* from Sipu (*indica*) and Jinbu (*japonica*) with the Shuhui498 available on NCBI. The BLAST shows that in Sipu cultivar has bigger *Xa21* sequence (733bp) than Shuhui498 (653bp) and Jinbu (643bp). The similarity index shows 93% between indica clone (Sipu) and indica database (shuhui498, ID CP018167.1). The japonica clone (Jinbu) shows 99% similarity with japonica database (Nipponbare, ID: AP014967). The indica clone (Sipu) and japonica clone (Jinbu) shows 92% sequence similarity.

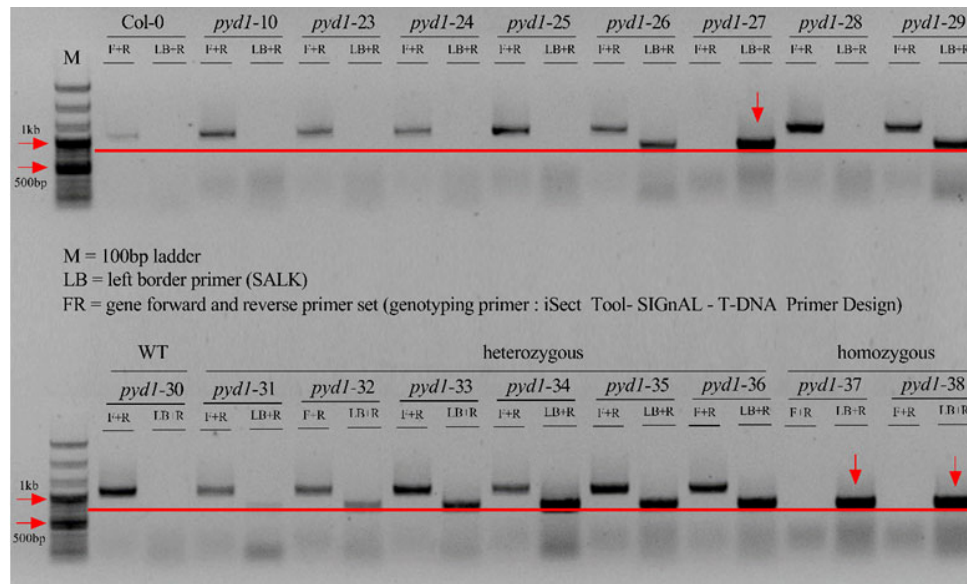


Figure S4. Genotyping of the Arabidopsis *atpyd1-2* knockout to identify homozygous mutant plants. We screened *atpyd1-2* (SALK_083897C) knockout plants ordered from the ABRC prior to conducting experiment. We identified homozygous plants for subsequent functional analysis studies. Lane with single upper left bands are wild type, lanes with single bands down right are homozygous plants. We used gene specific primers (Forward and reverse: F+R) and border primers (T-DNA primer design: <http://signal.salk.edu/cgi-bin/tdnaexpress>). Bigger bands size (1,015bp) were amplified with gene specific primers. Smaller bands (772bp) was amplified with the left border primer (LB) and the gene reverse primer.

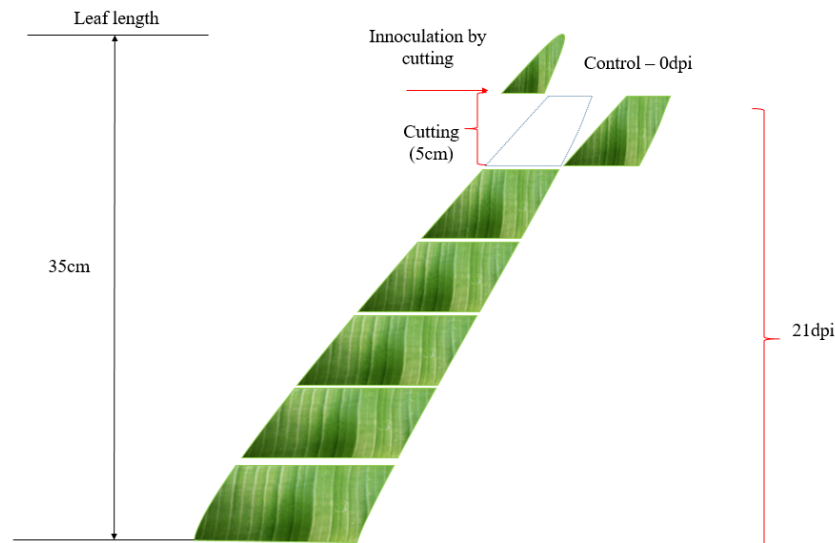


Figure S5. Illustration of the inoculation method by leaf cutting. In Figure S5 we illustrate the methods used in this study to inoculate rice leaves. About 5 cm leaf tip was cut.