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Generating Asian citrus Psyllid *Diaphorina citri* Kuwayama (Homoptera: Psyllidae) with twisting wings to prevent the spread of citrus greening disease

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Huanglongbing (HLB) is seriously threatening and causing considerable economic losses to the citrus groves. Its Management depends critically on the control of the Asian citrus Psyllid (ACP), the vector of the cause of HLB, *Candidatus* Liberibacter asiaticus bacteria (*C*Las). Silencing genes by RNA interference (RNAi) is a promising technique to control pests. In this study, the abnormal disk wing (awd) has been selected from the available psyllid annotated genome. It has been known that awd gene encodes a nucleoside diphosphate kinase and is associated with wing development. This research focused on the effect of RNAi of awd gene on ACP nymph instars that acquired dsRNA. The Results provide evidence that using the dsRNA of awd gene has diminished the development and survival of ACP nymphs. Moreover, knockdown of awd gene expression was observed through malformation of adult wings. Also, the expression of awd was messured by quantitative PCR (qPCR). Furthermore, we are conducting experiments to investigate awd's possible contribution in temperature tolerance. We attempt to establish effective practical application to prevent the spread of HLB in friendly environmentally strategy.