

Table 9.1. Rice pests addressed, their damage mechanisms, and their effect in RICEPEST

Rice pest	Damage mechanism^a	Physiological effect	Effect in RICEPEST
Bacterial leaf blight (BLB)	Light stealer	Reduces the intercepted radiation	Reduces the green LAI
Leaf blast (LB)	Light stealer Leaf senescence accelerator Assimilate sapper	Reduces the intercepted radiation Increases leaf senescence Removes soluble assimilates from host	Reduces the green LAI (lesion area + virtual lesion area) Reduces the biomass of leaves by increasing the rate of leaf senescence Outflows assimilates from the pool of assimilates
Sheath blight (SHB)	Light stealer Leaf senescence accelerator	Reduces the intercepted radiation Increases leaf senescence	Reduces the green LAI Reduces the biomass of leaves by increasing the rate of leaf senescence
Brown spot (BS)	Light stealer	Reduces the intercepted radiation	Reduces the green LAI (lesion area + virtual lesion area)
Tungro (TUNGRO)	Photosynthetic rate reducer	Disrupts phloem transport And reduces the rate of carbon uptake	Reduces the RUE
Neck blast (NB)	Tissue consumer	Disrupts transport of carbohydrates towards panicles	Reduces the flow of assimilates towards panicles
Sheath rot (SHR)	Tissue consumer	Disrupts panicle emergence	Reduces the flow of assimilates towards panicles
White head (WH)	Assimilate sapper	Disrupts transport of carbohydrates towards panicles	Reduces the flow of assimilates towards panicles
Weeds (WEED)	Photosynthetic rate reducer	Reduces water and nutrient supply Light stealer Reduction of water, nutrient and radiation reduces RUE	Reduces the RUE
Dead hearts(DH)	Stand reducer	Reduces the number and biomass of tillers	Reduces the number of vegetative tillers
Brown plant-hoppers (BPH)	Assimilate sapper Leaf senescence accelerator	Removes soluble assimilates from host Increases leaf senescence	Outflows assimilates from the pool of assimilates Reduces the biomass of leaves by increasing the rate of leaf senescence
Defoliators (DEF)	Tissue consumer	Reduces leaf biomass	Reduces the biomass of leaves by increasing the rate of leaf senescence

Derived from Rabbinge and Vereyken (1980), Rabbinge and Rijsdijk (1981) and Boote et al. (1983).