

To test whether effluents released from white spot syndrome virus (WSSV)-infected farm ponds are a pathway for spreading WSSV, WSSV-negative Pacific whiteleg shrimp, *Litopenaeus vannamei*, were exposed to WSSV-containing water under conditions of fluctuating water temperatures. White spot disease outbreaks occurred at the shrimp ponds before and during the experiment. Two cages were placed inside each test pond, and one was placed at the outlet canal. Each cage was stocked with 30 shrimp. Hemolymph from stocked shrimp was collected at intervals of 24, 48, 72, 120, 168, and 360 h after exposure and analyzed for presence of WSSV DNA by nested polymerase chain reaction. At diurnal variation of water temperature from 28.0 to 33.4 C, WSSV was detected as early as 120 h (ca. 11% of shrimp hemolymph pools) and 168 h (ca. 18% of shrimp hemolymph pools). WSSV was detected by 360 h (ca. 33% of shrimp hemolymph pools) in all cages, when water temperature varied from 24.9 to 28.5 C during a 48-h period. Cumulative mortality in cages inside ponds was  $\leq 50.0$  and 86.7% at the outlet canal. These data show that grow-out operations during the summer–autumn transition are at risk of WSSV outbreaks. The experiment demonstrated that WSSV can be spread by shrimp farm water drainage.