

White spot syndrome virus (WSSV) may spread through water to neighbor ponds or farms. Routine water exchange and wastewater released during white spot disease (WSD)-emergency harvests may preserve WSSV in shrimp farming areas. To test this hypothesis, on-site experiments were performed in a WSSV-affected farm in Guasave, Sinaloa, Mexico. Plankton and shrimp hemolymph were collected from 12 ponds during a WSD outbreak. PCR analyses showed that 72% of the hemolymph pools (26 out of 36) were WSSV-positive. In contrast, only 14% (4 of 28) plankton samples (filtered through 10 and 0.45 μm) from three ponds (2, 7 and 10) were WSSV-positive. Plankton from pond 9 was WSSV-negative, but 14 days later, shrimp began to die. At this point, a differential filtration experiment was performed in pond 9. WSSV-positive samples were only found in three fractions [particulate fraction (PF) 1 μm and liquid fractions (LF) < 100 and < 40 μm]. Both LFs and PFs were used for *insitu* infectivity assays by water-borne routes in WSSV-negative whiteleg shrimp *Penaeus (Litopenaeus) vannamei*. Some shrimp exposed to different PFs and LFs (100 μm to > 0.65 μm) became WSSV-positive. Results indicate that water fractions between 100 and 0.65 μm induced WSSV infection to shrimp. Results showed that pond water and/or particulate fractions are vehicles for WSSV dispersion via virus suspended in water, attached to microalgae, or carried by zooplankton.