

ACUTE HEPATOPANCREATIC NECROSIS DISEASE / EARLY MORTALITY SYNDROME (AHPND/EMS)



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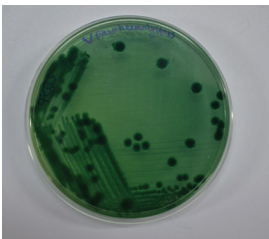
2016

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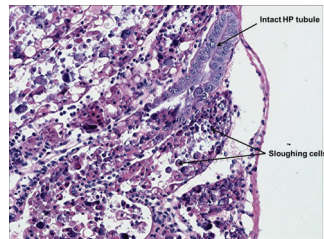
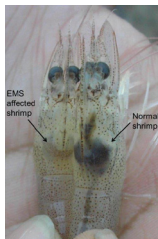
Acute hepatopancreatic necrosis disease (AHPND), currently the most important non-viral disease threat for cultured shrimp, is usually characterized by mass mortality during the first 35 days of culture. This disease is caused by certain strains of ubiquitous in marine and brackishwater bacteria called *Vibrio parahaemolyticus*. As on date, this disease is not yet found in India.

What are the symptoms of AHPND/EMS?

- ❖ Unusually high mortality within about first 35 days of shrimp grow-out culture
- ❖ Moribund shrimp sink to bottom
- ❖ Affected shrimp often have soft shells and partially full or empty gut
- ❖ Hepatopancreas (HP) often appears pale to whitish due to loss of pigment
- ❖ The HP of shrimp is significantly shrunken, small or discoloured
- ❖ The HP does not squash easily between thumb and finger
- ❖ Some times black spots or streaks within the HP may be visible



TCBS plate showing
bacterial growth

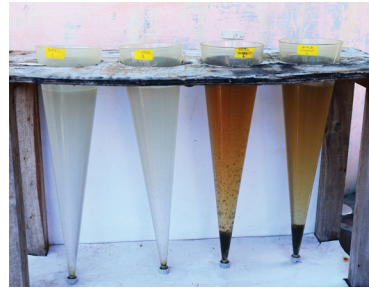


AHPND affected shrimp tissue
Courtesy : Loc Tran



How to Prevent AHPND/EMS?

- ❖ Monitor the ponds regularly, particularly during the early periods
- ❖ Follow strict biosecurity measures. Use reservoir ponds, bird fencing etc. avoid use of water from common water body
- ❖ Test the larvae for AHPND/EMS by PCR before stocking ponds
- ❖ Stock larger size shrimps in the culture pond after nursery rearing of post larvae
- ❖ Avoid feeding excess; provide optimal quantity of feed
- ❖ Using biofloc technology in shrimp culture appears to be useful in preventing AHPND/EMS outbreak
- ❖ Co-culture of tilapia and shrimp or culture with tilapia induced green water would help reduce incidence of this bacterial disease
- ❖ Adopt closed re-circulatory systems or zero water exchange practice to avoid contamination



Biofloc

Farmers should consult CIBA to confirm any new diseases

Farmers are advised to contact CIBA when they come across symptoms similar to AHPND in grow-out ponds for detailed investigation and confirmation. Samples of affected shrimp showing signs of disease only suitably preserved would be useful for investigation. Dead and frozen samples cannot be processed. Since AHPND is not reported in India so far, it is necessary that EMS like cases require to be investigated thoroughly. On confirmation as positive AHPND, the pond water should be disinfected by chlorination within the pond. The treated water should only be discharged after proper deactivation of the disinfectant.





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