The following supplement accompanies the article

White spot disease risk factors associated with shrimp farming practices and geographical location in Chanthaburi province, Thailand

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Supplement.

Questionnaire:

The questionnaire is a part of a research project of the Faculty of Veterinary Science, Chulalongkorn University and is used for research purposes only. All information regarding farm owners will remain classified.

Thank you, for your cooperation.

Patharapol Piamsomboon, DVM
Part I Laboratory data

1. General information
   1.1 Owner’s name/address .................................House No. .......Village No. ........
   Sub-district.......................... District................................. Province........................
   Tel:........................................
   1.2 Farm’s coordinates: Latitutde..........Longitude........................

2. Disease history
   2.1 PCR confirmation of WSD  ☐ Yes  ☐ No (Skip to article 3)
   2.2 Date of WSD occurrence.........................
   2.4 Cultured species    ☐ White pacific shrimp    ☐ Black tiger shrimp
   2.5 Observed clinical sighs:
      - Mortality rate......................
      - Reddish to pinkish discoloration    ☐ Yes  ☐ No
      - Presence of white inclusion    ☐ Yes  ☐ No
      - Swimming pattern.................................................................
   2.6 Laboratory examination
      - Hepatopancrease (HP) freash smear  ☐ Normal
      ☐ Shrinkage at the tips of HP lobes
      ☐ Presence of melanization
      ☐ Severe deformity and melanization
      - External parasite  ☐ Found ....................................
      ☐ Not found
      - Bacterial culture from HP  ☐ Green colony .........................CFU/g
      ☐ Yellow colony...............................CFU/g

2.7 Age of affected shrimp......................... Days of Stocking
2.8 Stocking density......................... PL/ m²
2.9 Source of PL
      ☐ Province 1   ☐ Province 2   ☐ Province 3
2.10 Are these PL submitted for virus screening before stocking  ☐ Yes  ☐ No

Part II Questionnaire survey

3. Farm characteristic
   3.1 Farm area................................. 3.2 Culture area ..............................
   3.3 Number of pond .................
   3.4 Reservoir pond   ☐ Yes, water reserver area ..................... ☐ No
   3.5 Sludge pond    ☐ Yes, sludge area............................ ☐ No
   3.6 Water recying in farm (use water from previous crop for the next crop)
      ☐ 100% recycle
      ☐ Partial recycle
      ☐ Release all water at shrimp harvest
   3.7 Do you treat water before release?
      ☐ Yes, method: .................................................................
      ☐ No
3.8 Where does the water used for shrimp culture come from?
☐ Sea       ☐ Public canal       ☐ Underground water

3.9 Personnel who operate the farm
☐ Yourself     ☐ Yourself and workers       ☐ Appointed manager and workers

3.10 Do you have other farms in your care?
☐ Yes, Number of farm you own .................
☐ No

3.11 Other shrimp farms located next to the observed farm
☐ Yes       ☐ No

3.12 Is the farm fenced?
☐ Yes       ☐ No

3.13 Do you allow non-related personnel to enter a farm freely
☐ Yes       ☐ No

3.14 Do you have any pets roaming freely in farm
☐ Yes, what kind of pet................................. ☐ No

3.15 Do you apply any disinfection practice for vehicals entering a farm?
☐ Vehical spray       ☐ Tire bath       ☐ None

3.16 Do you have hand- and foot- disinfection bath for personnel entering a farm?
☐ Yes       ☐ No

3.17 Do you separate work and equipment for each pond or cluster of ponds?
☐ Yes       ☐ No

3.18 How many crop do you produce per year?.................................................................

4 Pond features
4.1 Are the ponds lined with a polyethylene sheet?
☐ Whole pond       ☐ Slope       ☐ None

4.2 Pond biosecurity
☐ Bird-proof netting       ☐ Crab-proof fencing
☐ Hand- and foot- disinfectant baths       ☐ None

5. Pond and water preparation
5.1 Is the sludge (soil at the bottom of the pond) removed after each harvest?
☐ Yes       ☐ No

5.2 Do you dry the pond before use?
☐ Yes, how long? ......................... ☐ No

5.3 Do you apply lime to the pond bottom?
☐ Yes, concentration......................................................... ☐ No
  please describe the method..............................................

5.4 Is the water is filtered through a trawling net before entering culture ponds
☐ Yes, size of mesh................. How many layers?............... ☐ No

5.5 Do you use chicken/pig manure or cow dung to fertilize a pond?
☐ Yes       ☐ No

5.6 Do you use inorganic fertilizer to adjust water color?
☐ Yes       ☐ No

5.7 Water treatment, which are the following substance(s) that you use?
☐ Insecticide (Trichlorfon, Dichlorvos) ☐ Copper ☐ Tea seed ☐ Chlorine ☐ Iodine
☐ Quaternary ammonium compounds (QACs) ☐ Probiotics (license, non-license)
☐ Other ..............................................
5.8 Please describe how you prepare the water for shrimp culture:
.................................................................................................................................
.................................................................................................................................

6. Feed management

6.1 Feed
☐ Commercial feed ☐ Live feed .................................................................

6.2 Feed supplementation
☐ Probiotics (license, non-license) Type ...................................................
☐ Immunostimulant .................................................................................
☐ Other ........................................................................................................

Please describe how you apply feeding supplementation
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6.3 Feeding ratio (%) and frequency (per day)
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Other note or comment
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End of the questionnaire