

1) Always record the number and appearance of sick or dead shrimp that come to the edge of the pond **every day**, remove them and bury them far away from any shrimp pond.



2) Sample 5-10 shrimp every week using check trays or a castnet and check if the shell or the gills of the shrimp are dirty. If yes, try to spread the feed further from the dike, remove any bottom or floating algae, change 15-20 cm of water and then apply lime (200-300 kg CaCO_3 /ha).



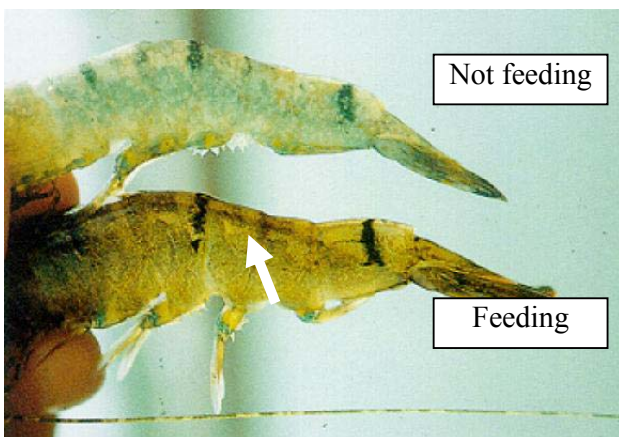
3) If there are no sick shrimp and after 3-4 weeks from stocking you see shrimp swimming around the pond, check if the pond bottom soil is black or covered by algae. If yes, remove any algae from the pond bottom, reduce feeding and change 15-20 cm of water and then apply lime (200-300 kg CaCO_3 /ha). If the pond soil is normal, increase slightly the feeding rate.



4) If you see white feces or there are sick or dead shrimp on the edge of the pond, check if the shell or the gills are dirty (see pictures in step 2).

If yes, do not use any treatment. Reduce the feeding rate, change 15-20 cm of water and then apply lime (200-300 kg CaCO_3 /ha).

5) If step 4 did not solve the problem and you find sick or dead shrimp in increasing numbers over 2 consecutive days collect a sample using a clean and dry castnet and, if more than 50% of the shrimp are not feeding, consider harvesting.



6) If the sick or dead shrimp have white spots on the shell (see picture) **do not let water out** and inform immediately all the farmers of the neighboring ponds.

If you find sick or dead shrimp in increasing numbers over 2 consecutive days **harvest without draining the pond**. If the number of dead shrimp reduces and stops for 10 days you can start again exchanging water.



7) If you find sick or dead shrimp after rain and you have acid soil, immediately add lime to the water (100-200 kg CaO/ha) and spread lime on the pond side. Consult with the extension worker for measuring the pH and alkalinity to see if some more liming is required.

8) Never move shrimp from a pond with sick or dead shrimp to your pond.

9) If you see shrimp swimming around the pond **in the early morning**, change 15-20 cm of water immediately and reduce the feeding rate.



10) If you find sick or dead shrimp during the production cycle, read carefully “10 steps for pond preparation”; “10 steps for planning to stock with good quality seed”; “10 steps for good pond management” to prevent shrimp health problems in the next crop.

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Reducing Risks of Aquatic Animal Disease Outbreaks

10 STEPS FOR GOOD HEALTH MANAGEMENT

for Nghe An and Ha Tinh farmers



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