

# Disease and Emergency Response Strategy

## Routine Monitoring

- Identify trends in mortality
  - How old
  - Where situated in cage
  - Any noticeable flesh deterioration
- Identify trigger levels
  - 200 pieces within a cage
  - 10 fresh mortalities within a single basket
- How, why and when an investigation should be conducted
- Methods of observing general appearance and health of the environment and stock;
  - Identification manuals with all wildlife identified in or near aquaculture venture for all personal involved.
  - Data loggers
  - Growth
  - Mortalities (collected and recorded every inspection)
  - Phytoplankton counts
  - Macro algae productivity
  - Benthic transects and samples
- Methods for checking for any outside interactions and entanglements.

## Biosecurity

### **DEFINITION**

**(Hegngi 2003, p.264 - Poultry):** Cumulative steps taken to keep disease from a farm and to prevent the transmission of disease within an infected farm to neighbouring farms. Major components: isolation, traffic control, sanitation and other species interaction control.

**(O'Bryen and Lee 2003, p.275 – Aquaculture):** An essential group of tools for the prevention, control and eradication of infectious disease and the preservation of human, animal and environmental health.

*The occurrence of disease is a combination of the health of the animal, the condition of the environment and the presence of a pathogen. Out breaks of disease is the result of a weakened immune system of the cultured animals, caused by Neuro-immune changes resulting from stresses and infection. Therefore, excluding infectious agents and reducing stress are important in preventing disease outbreaks.*

Biosecurity measures in place and procedures for periods of increased risk;

- Quarterly submissions of stock samples to qualified veterinarian for testing for notifiable diseases or any other abnormalities.
- Regular checks of stock health looking for abnormalities
  - Mortalities (collected and recorded every inspection)
  - Skinny meat
  - Blisters
  - Abnormal faeces
  - Disease
  - Escapes

**After Identification of a Health Issue/Emergency**

**Notification**

- Up to date contact list on land and boats;
  - PIRSA Aquaculture, Fisheries and Compliance
  - Aquaculture veterinarian
  - Diagnostic laboratory and pathology laboratory
  - SASQAP
  - Operations Manager
  - CEO
  - Directors
  - Boats
  - Divers
  - Biologist

***Have a plan and procedures in place for an emergency including;***

- Quarantine plan for stock under suspicion of disease (describe movement restrictions and increased surveillance/observations, keeping in mind biosecurity requirements).
  - Movement to quarantine zone with permission only from PIRSA to their designated area.
  - Isolation of whole cage/net sectors/baskets.
  - Monitor stock infected.
  - Treatment as required including slaughter.
- Changed management for disease events (stocking density, feeding, diving, mortality removal, etc).
  - Increased inspections of cages involved.
  - Reduce stocking density and isolation of infected stock.
  - Immediate or as close as possible to immediate removal of mortalities.
- Consider isolation of culture units, possibly moving healthy stock etc (particularly in the event of an algal bloom).
- A system for taking diagnostic samples and submitting them in ideal condition (for all pathogens).
- A system for analysis of feed where required.
  - Nursery prepared diet analysis at random.

- Have application forms ready to send to PIRSA for anticipated actions – movement, treatment, request to move clinically affected animals (for slaughter, sale for consumption, etc).
- A plan for ongoing monitoring.
  - Daily procedures.
  - Additional monitoring undertaken by company.
- A plan and procedures in place to deal with entanglements.
  - Who contact
  - How react
  - How release
  - Who involve
  - Follow up reporting
  - Amendment to farming practices to prevent.

#### ***Post-diagnosis***

- A system in place for treatment of high-risk diseases (may require a separate risk analysis) – This may not be an option or slaughter may be preferred by some operators.
  - ABA only supply 1<sup>st</sup> class product (slaughter?)
- Prepared management plan for non-notifiable diseases – progressive depopulation and decontamination with surveillance and biosecurity requirements between cleaned and infected zones on the farm.
  - Notify PIRSA and aquaculture vet.
- Prepared plan for destruction, disposal and decontamination of clinically affected stock (Aqua Vet Plan Manuals) in event of serious disease or an order to destroy stock.
- Prepared letters/forms for disposal of stock (PIRSA, local council)
  - Mortality collection, holding and disposal.
  - Record sheets (abalone assist)
- Post-emergency/disease procedures and surveillance plan.
  - How to follow up and rectify, minimise and eliminate future problems as a result of outcomes.
  - Reassess and adjust procedures accordingly.

#### **Welfare of Abalone**

Consideration for the well being and quality of life for all abalone farmed by Australian Bight Abalone should be considered in all procedures and strategies undertaken.

*This disease and emergency strategy will be expanded as the Australian Bight Abalone ISO 14001 systems is refined (8/12/2005).*