Centre for Environment
Fisheries & Aquaculture
Science

FINFISH BIOSECURITY MEASURES PLAN

FISH HEALTH INSPECTORATE

Cefas would like to thank the Environment Agency for their permission to use an example from their farm Biosecurity Measures Plan (BMP).

This publication is also available at: www.gov.uk/guidance/prevent-fish-or-shellfish-diseases

Contact address for further information:

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Introduction

The application of biosecurity in aquaculture is a shared responsibility where each individual involved, plays a different but critical role in the implementation of the overall programme. In order to be effective, biosecurity is necessary at all levels within the aquaculture industry, from the control of the spread of infectious disease at an international level, to the development of national controls and to the operation of suitable practices at a local level. In these terms, the World Organisation for Animal Health (OIE) monitors the international status of diseases, our government (through Cefas) is responsible for controlling biosecurity within national limits, and Aquaculture Production Businesses (APBs) are responsible for biosecurity within their enterprises.

The key elements of biosecurity include; practical and appropriate legislative controls, adequate diagnostic and detection methods for infectious diseases, disinfection and pathogen eradication methods, reliable high quality sources of stock; and best management practices.

At the local level, implementation of an effective biosecurity measures plan is essential in reducing the risk of disease introduction to an APB. This follows the fundamental principle that prevention is better than the cure, which is also a cornerstone of the GB Animal Health & Welfare Strategy published in June 2004. In addition, it is widely accepted that fish disease prevention is cheaper than the cure.

The Aquatic Animal Health (England and Wales) Regulations 2009, recognises the importance of effective biosecurity measures in restricting the spread of disease. It requires APB operators to implement a biosecurity measures plan as a condition of their authorisation.

These guidelines are designed to help the APB operator identify biosecurity measures that might be applicable to their site. It describes biosecurity measures that can be implemented by fish farmers and traders and includes a template to enable APB operators to develop and operate a meaningful plan of their own.

Appointing a Biosecurity Manager

Identify an individual with the responsibility to ensure biosecurity measures are implemented at an APB, or over several APBs if the business is made up of more than one site. The biosecurity manager is responsible for producing and maintaining a biosecurity measures plan, as well as demonstrating its effectiveness through use of good record keeping (see Section 7). Additional responsibilities include ensuring staff are trained in biosecurity issues and visitors are aware of measures that apply to them. It is good practice to appoint a deputy in the event that the manager is unavailable.

Veterinary Health Contacts

The biosecurity manager should identify a veterinarian, and if appropriate a fish health consultant with specialised knowledge of fish health issues. The manager should endeavour to establish a good working relationship with their nominated veterinary professionals.

Providing Staff Training in Fish Health Management and Disease Recognition

A fundamental requirement when identifying risks to your APB is an awareness of the following; diseases that can affect your stock, clinical signs of disease, host susceptibility and the range of environmental parameters that could precipitate clinical outbreaks. Staff training and periodic refresher courses will facilitate better disease recognition in fish stocks, and informed and trained staff will be of greater benefit to the business. Training should be through continuous learning rather than a one-off exercise.

Information on fish diseases can be obtained from a variety of sources:

- Attendance at short courses or completion of distance learning courses on fish health and disease
- Textbooks on fish health
- Periodicals (Finfish News, Fish Farmer, Fish Farming International, etc.)
- Disease recognition leaflets and posters
- Internet – further information on these resources is available on the Cefas

- Fish Health Inspectorate (FHI) website (www.gov.uk/government/groups/fish-health-inspectorate)
- Veterinarians and fish health professionals
- Conferences and meetings

Identify the Risks of Contracting and Spreading Disease

One of the greatest risks of introducing an infectious agent into an APB comes with movements of fish. Where fish or eggs have to be introduced from outside sources you should consider the following:

- Assess the potential quality of the fish by checking that the supplier is operating to a biosecurity measures plan
- Do not hesitate to ask for details of fish health surveillance programmes and disease records
- Be aware of the provenance of the fish when buying from any supplier
- The stock should not be exhibiting any clinical signs of disease at the time of transport
- Attention should be paid to both transport water sources and disinfection procedures applied to equipment used
- Disinfect eggs before incubation and dispose of packaging in a safe and biosecure manner
- If possible, isolate introductions of fish from other stocks until their health status can be established
- Consider the risks associated with the movements of dead fish or fish products and waste for processing
- Consider the risk posed by wild fish

By implementing a higher level of isolation, you will increase the degree of protection of an APB.

In addition to the obvious potential of introducing disease through movements of fish into an APB, there are other routes through which infectious agents can be introduced and spread. A comprehensive biosecurity measures plan should cover these risks. Some areas for consideration are:

- Use of shared equipment and vehicle
- Visitors to the site, including; delivery drivers, other APB operators, veterinarians and fish health professionals, inspection agencies, etc

- Presence of vermin, birds and other predators capable of introducing or spreading disease
- The potential for water or wild fish to transfer disease either to or from the APB
- The management of extreme weather conditions – floods and tides
- Access by anglers and members of the public to the site
- Access to the site by fish transporters

Risk Limitation Measures

Once risks have been identified the APB biosecurity manager should decide on appropriate systems and procedures to control or reduce these risks. Such measures may include:

- Early identification of disease through regular stock inspections
- Training staff to recognise clinical signs of disease and enable them to identify procedures that carry a risk of introducing or spreading disease
- Ensure that fish husbandry is suitable for the species being held or cultivated
- Limit APB access to authorised staff or approved visitors
- Provide advice on biosecurity to visitors at fish farm sites and anglers at fishing lakes
- Identify and set up zones within your APB, e.g. hatchery, fishery lake, packing and processing, parking, storage
- Restrict access to these zones
- Provide zone-specific protective clothing. Consider using colour-coded boots/overalls for particular zones
- The use of suitable disinfectants and disinfection procedures for personal protective equipment and other equipment
- Introduce disinfection protocols for site visitors (including delivery vehicles)

It is the biosecurity managers responsibility to ensure these measures are implemented and regularly monitored for compliance.

Monitoring the Plan

Once procedures and measures have been implemented it is essential to maintain a clear recording system for results of checks made and actions taken. Accurate recording will aid the biosecurity manager to make informed decisions and take appropriate actions when a disease or breach of biosecurity occurs. A comprehensive log or diary can be used to demonstrate to interested parties (customers, senior management, auditors, quality management and inspection agencies) that a biosecurity measures plan is in operation. Examples of information to be recorded in the log are listed below and a template is included in this document.

Stock Health Inspections

- Routine inspection of stock should be an essential activity on a fish farm or fish holding unit
- Keeping an inspection log is highly recommended. This should record numbers of sick and dead fish in the holding units, as well as other significant details relating to the health of the fish, such as feeding behaviour and water quality parameters
- Establish a formal chain of reporting so that the biosecurity manager is quickly informed of any potential problems

Visitor Details

- Keep a record of all visitors to the APB
- Ensure visitors are aware of the biosecurity measures that apply to them

Disinfection Procedures

- Record dates of disinfectant solution replacements.
- Disinfectant solutions need to be replaced before they lose efficacy

Other Useful Biosecurity Information to be Recorded

- Movements on and off site: a condition of authorisation requires records to be kept for movements of fish on and off an APB. Cefas FHI provide a book for this purpose, or this information may be recorded electronically. The site codes must be recorded, not just the farm of fishery name.
- Movements within the site: apart from the basic on/off movements, it may be appropriate to keep more detailed records of how fish batches may have been mixed and moved within a site. This would be especially appropriate if a site is divided into specific sections or zones. These records need not be routinely presented to Cefas but are essentially for internal management.
- Maintaining treatment records is a requirement under the Veterinary Medicines Regulations 2008. Cefas FHI provide a book to keep this information in the prescribed manner.
- Details of significant weather conditions, e.g. electrical storms or flooding
- Details of water quality parameters, e.g. Dissolved Oxygen and water temperature

FINFISH BIOSECURITY MEASURES PLAN

Site/Business Name	**BABYLON FISH FARM**
Authorisation Number	**EW054-B-991A**

Biosecurity Manager

Name	MR JASON DORKINGS
Contact Details	07739030748
Alternative Contact Name	MRS ERIKA DORKINGS
Alternative Contact Details	7709433667

Responsible Person signature: Name:JASON DORKINGS Date: 4/2/2019

Inspector signature: Name: Date:

Useful Contacts

	CEFAS	Fish Health Professional	Veterinarian
Business Name	Fish Health Inspectorate	AQUATIC CONSULTANCY	

Business contact	Fish Health Inspectorate	BERNICE BREWSTER	
Telephone	01305 206700	7973323494	
Email	fhi@cefas.co.uk	BERNICE.AQUATIC.CONSULTANCY@GMAIL.COM	
Address	FHI CEFAS Barrack Road Weymouth Dorset DT4 8UB	9 CHARLTON LANE WEST FARLEIGH MAIDSTONE KENT ME15 0NX	

Site Details

Answer the following providing as much detail as possible:

Site Information	Yes/ No/NA	Details

Does the site have approved compartment status?	NO	
Regulation 23 facility or Isolate site (delete as appropriate)	N/A	
Regulation 23 or Isolate facility detailed in BMP and Site Plan?	N/A	
Is the site currently under statutory disease controls? Is this detailed in the BMP?	NO	
Are special permissions consented under statutory disease controls?	NO	
Are contactors regularly used for activities such as fish transport or stock management?	NO	

Site Details

Ensure all information is representative of the site plan and provide detail as appropriate:

Pond/ Tank/ System Number	Volume (m3)	Static/ Flow Through/ Recirculation
POND1	5000	STATIC
POND 2	4500	STATIC
POND3	1500	STATIC
POND4	2300	STATIC
POND 5	2500	STATIC
POND6	600	STATIC
POND7	4000	STATIC
POND8	4000	STATIC
POND9	5000	STATIC
POND 10	2000	STATIC
Pond 11	5000	static
Pond 12	2300	static

Site Details

Ensure all information is representative of the site plan:

Pond/ Tank/ System Number	Volume (m3)	Static/ Flow Through/ Recirculation
HATCHERY	20	RECIRCULATION
HOLDING TANKS	60	RECIRCULATION

Risks of Contracting Disease

Use this section to identify how your business could possibly contract disease through both farming practices and business activities. Detail the risk limitation methods you have in place and how you will monitor and record these measures:

Risks of Contracting Disease	Risk Limitation Measures	Monitoring the Plan/ Recording
VISITORS FROM OTHER FISHERIES	All visitors accompanied no other site equipment used on this site	
OFF SITE NETTINGS	All equipment is disinfected after use offsite	
BIRDS	STRINGS ABOVE PONDS TO DETER BIRDS	
DELIVERY	VEHICLE IS DISINFECTED WHEN RETURN	
VISITS FROM CEFAS OR EA	EA ARE NOT PERMITTED CEFAS DISINFECT	

Stream water pumped	there is no other sites upstream, pumps are screened	
Mortalities	Dead fish are removed from ponds asap	mortality events recorded in diary
Fish movements	no fish are moved on to the farm all equipment is disinfected	

Risks of Contracting Disease	Risk Limitation Measures	Monitoring the Plan/ Recording

Risks of Spreading Disease

Use this section to identify how your business could possibly spread disease through both farming practices and business activities. After identifying how disease can spread, detail the risk limitation methods you have in place and how you will monitor and record these measures:

Risks of Spreading Disease from the site	Risk Reduction Measures	Monitoring the Plan
DELIVERING FISH	**HEALTH CHECKS GOOD FARMING PRACTICES REGULAR CEFAS CHECKS**	**BIO SECURITY MEASURES PLAN And fish movements recorded**
OFF SITE NETTING	Equipment is disinfected before brought back to site	
Transporting	Use fishery equipment when delivering	Records keep in transport book
Discharge water is reused or returned to gravel traps.		

Risks of Spreading Disease

Risks of Spreading Disease from the site	Risk Reduction Measures	Monitoring the Plan

Contingency Planning

In the event of a Listed disease outbreak it is essential that an Aquaculture Production Business (APB) has a contingency plan in place. In the event of the site testing positive for a listed disease there is no government compensation for the stocks that require culling. All equipment and materials required for the disinfection must be supplied by the APB. The contingency plan aims to identify the methods, resources and materials required in the event of a listed disease outbreak.

Contingency	Details
Contact FHI if listed disease is suspected.	Phone 01305 206700 immediately if listed disease is suspected or fish are not responding to treatment.
Stock isolation	No stocks will be moved on, off or within the site if listed disease is suspected unless under written authorisation from the FHI.
Traceability of stocks & movement	All fish movements on & off site will be recorded in fish movement records using site codes, in a format prescribed by the FHI. This information to made available to the FHI as requested.
Personnel management	Only authorised personnel to access the site if a Listed disease is either suspected or confirmed.
Farm Equipment	No farming equipment to leave the site. Vehicles to be fully disinfected if required to leave site.

Water isolation	Detail where & how the water entering the site will be isolated/ stopped. ALLL WATER IS PUMPED ON AND OFF SITE SO ANY PUMPS WOULD BE STOPPED
Site drainage	Detail how holding units will be drained if required. Include where the water will discharge. THE PONDS CAN BE DRAINED TO GROUND WATER

Fish Disposal	Add details of the licenced category 2 waste removal company to be used in the event of Listed disease occurrence capable of disposing the capacity of farm site. FISH MEAL PLANT FELIXSTOW Veola waste management maidstone cat 2

Silt removal & disposal (if applicable)	Detail how sediment will be removed and where it will be dispersed or disposed of (All sediment is mixed with lime). ON NEIGHBOURING FIELD
Pump/ equipment suppliers	Add contact details of pump suppliers in the local area All equipment is onsite and ready for use

Disinfectant suppliers	Add contact details of suppliers of Calcium Hydroxide (hydrated lime) & Caustic Soda AGRO VISTA PARKWOOD INDUSTRIAL ESTATE MAIDSTONE
Machinery suppliers	Identify machinery required during culling and disinfection and potential suppliers. ATHERAL PLANT HIRE HAWKHURST KENT

If you are an authorised importer you can only use the CEFAS approved sources. Please provide all current suppliers of susceptible species below (this will be reviewed annually at every inspection for accuracy). Using sources not listed below will make you non-compliant with the terms of your authorisation and enforcement action will be taken. **For new suppliers, the FHI must be contacted 5 working days in advance before the import.**

Name & Address of Supplier	Species	Country
N/A		

Additional Information

Transporting Fish

If live fish are being transported distances over 65km you are required to be an authorised transporter. A Type 1 transporter authorisation is required for journeys between 65km and 8 hours. A Type 2 transport authorisation is required for journeys greater than 8 hours. More information on how to apply can be found at www.gov.uk.

Importing Fish

To import fish, you must be authorised as an importer by the Fish Health Inspectorate (FHI). You can apply for importer authorisation by completing an AAH2 Form (Authorise an Importer). Liaise with the FHI if you are considering importer authorisation or require further information on importing fish. More information on importing fish is available at www.gov.uk.

Exporting Fish

If you plan on exporting live fish you are required to find out if the receiving country requires health certification. You must notify the Fish Health Inspectorate of your intention to export by completing an EXP1 Form (Export Notification: Live Fish & Shellfish) a minimum of 5 working days' notice before the export is due to take place. If health certification is required to a Fish Health Inspector will need to assess the stocks being exported within 72 hours of departure from the site. No fish may be moved on to the site between inspection and dispatch. More information is available at www.gov.uk

Stocking Fish

If you are supplying fish for stocking, an Environment Agency Suppliers Permit is required. Fish may only be stocked in waters that have an Environment Agency Site Permit and may require a Health Check. Contact the Environment Agency Fish Movements Department for further information. Further information is available at www.gov.uk.