



Health protocol for the movement of live freshwater native finfish (other than barramundi and eels)

Aquaculture Protocol FAMPR007

Version 1

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Introduction

In Queensland there are several native freshwater finfish species that are being cultured commercially for human consumption.

Australian Bass *Macquaria novemaculeata*

Barcoo Grunter (Jade Perch) *Scortum barcoo*

Golden Perch *Macquaria ambigua*

Murray Cod *Maccullochella peelii peelii*

Silver Perch *Bidyanus bidyanus*

Sleepy cod *Oxyeleotris lineolatis*

Sooty grunter *Hephaestus fuliginosus*

There are many other species of native fish that are being cultured for the ornamental fish industry and these are listed in the Appendix.

Diseases of concern for freshwater native finfish

The conditions for the importation or movement of freshwater finfish may require the sampling of fish to exclude the presence of any diseases of concern for freshwater finfish in Queensland.

Exotic diseases of concern are listed on the Queensland Declared Disease List.

Diseases and disease agents of concern for freshwater finfish on Queensland's Declared Disease List are:

- Enteric redmouth disease (*Yersinia ruckeri* Hagerman strain)
- Enteric septicaemia of catfish (*Edwardsiella ictaluri*)
- Epizootic haematopoietic necrosis virus (EHN)
- Infectious pancreatic necrosis virus (IPN)
- Red sea bream iridoviral disease
- Spring viraemia of carp virus (SVC)

Diseases and disease agents of concern that are reportable nationally (and to the OIE) but not on Queensland's Declared Disease List are:

- Viral encephalopathy and retinopathy (VER)
- Epizootic ulcerative syndrome (EUS)

These diseases, of national and international importance, are not listed on the Queensland Declared Disease List because they are known to occur in Queensland. Listing of an endemic disease or agent has implications under the *Fisheries Act 1994*.

Other diseases and disease agents of potential concern are listed in the Appendix. Should the health testing identify any of the other diseases of concern, this may result in action being taken which may include but not be limited to:

- Banning the import
- Approving the import conditional on effective treatment prior to the movement

Conditions for the movement of freshwater native finfish

These are the relevant development approval conditions for the movement of live aquatic animals into Queensland for the purpose of aquaculture. For movement of live aquatic animals out of

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Queensland the producer should seek advice from the Veterinary/Fisheries Authority in the destination jurisdiction.

Notification of intent to translocate

The species approved under this authority must not be brought into Queensland for rearing unless an “Application to allow the Translocation of Live Aquatic Animals into and within Queensland” form (FDU1398) available on the DEEDI website <http://www.dpi.qld.gov.au/fishweb> and Pathology Report or Health Certificate has been completed and the Manager, Aquaculture, DEEDI, has provided written acknowledgement and approval of the “Details of translocation form” and the Pathology Report or Health Certificate.

The “Application to allow the Translocation of Live Aquatic Animals into and within Queensland form” and a signed copy of the Pathology Report or Health Certificate (as detailed above) must be given to the Manager, Aquaculture, DEEDI, a minimum of three (3) working days prior to all shipments into Queensland. It is a requirement that the pathology report/health certificate is dated no more than 14 days before shipment date.

Health certification

The species approved under this Authority must not be brought into Queensland for rearing without a health certificate or Pathology Report, issued by the exporting State or Territory’s Fisheries or Veterinary authority certifying the animal’s health, which must include a statement that the specimens originate from:

- a. a hatchery, farm, aquaculture premises or region which is recognised as free from infection by the diseases on the Queensland Declared Disease List based on the requirements listed in the OIE Manual of Diagnostic Tests for Aquatic Animals, current edition (Fourth Edition 2003 or later) for recognition as free from infection; or
- b. a hatchery, farm, aquaculture premises or region in which an appropriate targeted surveillance scheme over two years has been undertaken under the supervision of State or Territory Fisheries or fisheries approved Veterinary authorities and where the requirements for recognition as free from infection by diseases of concern for that species on the OIE Manual of Diagnostic Tests for Aquatic Animals² current edition (Fourth Edition 2003 or later) have been met; or
- c. a single batch of gametes, larvae, fry, or early juvenile or adult of a species of finfish isolated from open waters, which has been tested using suitable techniques to provide evidence that the batch is free from infection by diseases of concern on the Queensland Declared Disease List for that species.

Appropriate Procedure for Health Testing

A sample of 150 fish per batch tested using histological methods. The fish may be tested at any stage of production but it is advisable due to cost to the grower that they are tested at <1cm size.

Post Arrival Mortality

After arrival, any unusual clinical signs or mortalities in the stock must be reported immediately to the district officer of the nearest Queensland Boating and Fisheries Patrol office. If directed by a DEEDI officer, the specimens must be forwarded to a veterinary laboratory as directed by the officer.

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Relevant legislation

Refer to the Queensland legislation website for the most current version www.legislation.qld.gov.au

Condition of approval

Fisheries Act 1994

Section 79A 'Contravening a condition of an authority'

Disease

Fisheries Act 1994

Part 5, Section 100 'Notice to be given about diseased fisheries resources or habitat'

Part 5, Section 104 'Offence to communicate disease to live fisheries resources or fish habitat'

Part 5, Section 105 'Offence to sell diseased fisheries resources and products'

Part 5, Section 106 'Offence to leave diseased fisheries resources and products in a place'

Part 5, Section 107 'Offence to bring diseased fisheries resources and products into Queensland'

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Appendix

Other diseases and disease agents

Other diseases and disease agents of potential concern for native freshwater finfish are:

Viral

- Lymphocystis (lymphocystis virus)

Bacterial

- Bacterial haemorrhagic septicaemia (virulent strains of *Aeromonas* spp.)
- Vibriosis (virulent strains of *Vibrio* spp.)
- Integumentary bacteriosis (virulent strains of *Aeromonas* spp. and *Vibrio* spp.)
- Streptococcosis (*Streptococcus iniae*)
- Bacterial peritonitis (various bacterial species)
- Mycobacteriosis (*Mycobacterium* spp.)
- Columnaris disease (*Flexibacter/Flavobacterium* spp.)

Fungal

- Integumentary mycosis (virulent *Saprolegnia* spp. and *Achlya* spp.)

Parasitic

- Skin fluke (*Neobenedinia melleni*)

Other native fish species

Australian native fish not normally cultured for human consumption i.e. ornamental

Agassiz's olive glassfish (*Ambassis agassizi*)

Australis rainbowfish (*Melanotaenia splendida australis*)

Black banded grunter (*Amniataba percoides*)

Bony bream (*Nematalosa erebi*)

Bullrout (*Notesthes robusta*)

Carp gudgeon (*Hypseleotris compressa*)

Checkered rainbowfish (*Melanotaenia splendida inornata*)

Coal grunter (*Hephaestus carbo*)

Delicate Blue-eye (*Pseudomugil tenellus*)

Desert goby * (*Chlamydogobius eremius*)

Desert rainbowfish (*Melanotaenia splendida tatei*)

Duboulays rainbowfish (*Melanotaenia duboulayi*)

Eastern rainbowfish (*Melanotaenia splendida splendida*)

Eel tail catfish (*Neosilurus ater*)

Eel tail catfish (*Neosilurus hyrtlii*)

Eel tail catfish (*Tandanus tandanus*)

Exquisite rainbowfish * (*Melanotaenia exquisita*)

Firetail gudgeon (*Hypseleotris galii*)

Fly specked hardyhead (*Craterocephalus stercusmuscarum*)

Graeffe's salmon catfish (*Arius graeffei*)

Jungle perch (*Kuhlia rupestris*)

Lake Eachem rainbowfish (*Melanotaenia eachamensis*)

Leathery grunter (*Scortum hillei*)

Lungfish (*Neoceratodus forsteri*)

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Maccullochi rainbowfish (*Melanotaenia maccullochi*)
 Macleay's glassfish (*Ambassis macleayi*)
 Midgley's gudgeon (*Hypseleotris sp.A*)
 Murray river rainbowfish (*Melanotaenia fluviatilis*)
 Neon blue-eye (*Pseudomugil cyanodorsalis*)
 Nigrans rainbowfish (*Melanotaenia nigrans*)
 Ornate rainbowfish (*Rhadinocentrus ornatus*)
 Pacific blue eye (*Pseudomugil signifer*)
 Purple spotted gudgeon (*Mogurnda adspersa*)
 Purple striped gudgeon (*Mogurnda mogurnda*)
 Pygmaea rainbowfish (*Melanotaenia pygmaea*)
 Queensland mouthbrooder (*Glossamia aprion*)
 Saratoga (*Scleropages leichardti*)
 Silver perch (*Bidyanus bidyanus*)
 Sleepy cod (*Oxyeleotris lineolatus*)
 Slender rainbowfish * (*Melanotaenia gracillis*)
 Spangled perch (*Leiopotherapon unicolor*)
 Spotted blue eye (*Pseudomugil gertrudae*)
 Strawman (*Craterocephalus stramineus*)
 Threadfin rainbowfish (*Iriatherina wernerii*)
 Trifaciata rainbowfish (*Melanotaenia trifaciata*)
 Welch's grunter (*Bidyanus welchi*)
 Western carp gudgeon (*Hypseleotris klunzingeri*)
 Archer fish (*Taxotes jaculatrix*)
 Archer fish (*Toxotes chatareus*)
 Banded rainbowfish (*Melanotaenia trifasciata*)
 Black catfish (*Neosilurus ater*)
 Catfish (*Neosilurus spp.*)
 Crimson spotted rainbowfish (*Melanotaenia doboulayi*)
 Eel tail catfish (*Tandanus tandanus*)
 Ewan pygmy perch * (*Nannoperca variegata*)
 Mono (*Monodactylus argenteus*)
 Obbes' catfish (*Porochilus obbesi*)
 Pacific blue eyes (*Pseudomugil signifer*)
 Rainbowfish (*Melanotaenia doboulayi*)
 Rainbowfish * (*Melanotaenia gracillis*)
 Rainbowfish * (*Melanotaenia exquisite*)
 Southern pygmy perch * (*Nannoperca australis*)
 Toothless catfish (*Anodontoglanis dahli*)
 Western pygmy perch * (*Edelia vittata*)

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References

Office International Des Epizooties (OIE), Paris.

- Aquatic Animal Health Code (2009)

http://www.oie.int/eng/normes/fcode/en_sommaire.htm

Epizootic ulcerative syndrome (EUS)

Lilley JH, Callinan RB, Chinabut S, Kanchanakhan S, MacRae IH and Phillips MJ (1998) Epizootic Ulcerative Syndrome (EUS) Technical Handbook. The Aquatic Animal Health Research Institute, Bangkok. 88 pp.

Epizootic haematopoietic necrosis (EHN) virus

Ahne W, Bremont M, Hedrick RP, Hyatt AD and Whittington RJ (1997) Iridoviruses associated with epizootic haematopoietic necrosis (EHN) in aquaculture. *World Journal of Microbiology and Biotechnology* 13:367-373

Whittington RJ, Kearns C, Hyatt AD, Hengstberger S and Rutzou T (1996) Spread of epizootic haematopoietic necrosis virus (EHN) in redfin perch (*Perca fluviatilis*) in southern Australia. *Australian Veterinary Journal* 73:112-114

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