

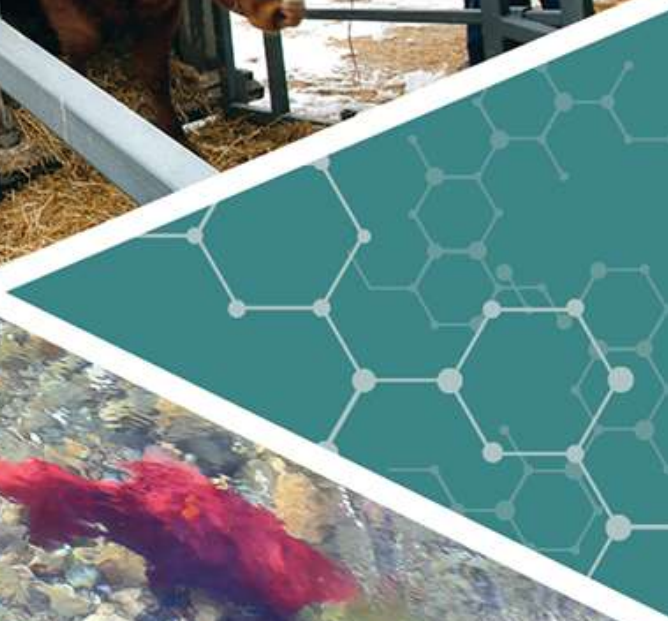


Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

Perkinsus marinus

December 10, 2024



Perkinsus marinus/Dermo

- Parasite of Oysters
- East Coast of USA
- Gulf Coast to Yucatan Peninsula
- Northeastern Brazil
- First discovery in 1940 in Gulf of Mexico




How Does Dermo Transmit?

- Infections seen in oysters older than a year
- Direct transmission between oysters
- Waterborne infective stage acquired by feeding
- Early infection in the digestive gland
- Excreted in feces
 - Can self-infect by pseudofeces near mantle

Infectivity

- Detectable infections develop slowly
 - High infective dose required
- Infective particle load in water column needs to build
- Dead and dying oysters release cells
- Live oysters release significant number of cells
 - Temperature and time of day influences
- Survives for weeks outside the host

What does it do to the oyster

- Chronic wasting disease
 - Dead or gaping
 - Thin, watery tissues
 - Start damage in paleal cavity or digestive tract
 - Consumed by haemocytes and replicate
 - Burst out of haemocyte and cause systemic infection and death
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Still Delicious!

- Dermo does not affect humans
- No human safety concerns from eating oysters harvested from areas where Perkinsus detected



Dermo vs MSX

Dermo

- Parasite
- 3 year trace out
- Direct transmission
- Easier to inadvertently move
- 50-75% mortality
- Higher prevalence when detected
- Biosecurity important

MSX

- Parasite
- 10 month trace out
- Infective particle unknown
- Unknown host needs to move
- 90-95% mortality
- Can remain at lower prevalence
- Biosecurity important

Disease Control

- Disease Eradication
 - Can remove all susceptible species
 - Cleaning & Disinfection/Fallow
- Disease Containment
 - Unable to eliminate disease
 - Wild populations infected
 - Unknown reservoir

Disease Control with MSX & Dermo

- Eradication not possible
- Containment is only option
- Once confirmed, CFIA considers infected
 - Unable to prove disease freedom

Initial Disease Response

- Quarantines
- Primary Control Zones
 - Health of Animals Act Section 27
 - Suspicion or Confirmation of Disease
- Permits for movement
 - General
 - Specific

Permits

General Permits

- Movement oysters or spat into or within a PCZ
- Removing gear or equipment from PCZ
- Moving oysters after processing out of PCZ

Specific Permits

- Removal of oysters or spat from one PCZ to another
- Moving oysters or spat out of a PCZ for processing, testing (diagnostic or other) and research

Biosecurity

- Make sure the vessel or boat is clean and in good repair
- Wear waterproof protective gear
- Be prepared with essential supplies
- Clean, rinse and disinfect

[MSX: Biosecurity guidelines for primary control zones - inspection.canada.ca](https://inspection.canada.ca)

How to Protect

1. Remove debris
2. Bleach solution
 - Ensure surfaces stay wet for 10 minutes
 - $\frac{1}{4}$ bleach topped up with water to 4L
3. Rinse with fresh water
4. Allow to dry completely



CFIA Contacts

- Permitting
 - [Dermo - inspection.canada.ca](http://dermo-inspection.canada.ca)
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We are the CFIA.

The Canadian Food Inspection Agency (CFIA) touches the lives of all Canadians in so many positive ways.

Each day, hard-working CFIA employees—including inspectors, veterinarians and scientists—inspect food for safety risks, protect plants from pests and invasive species, and respond to animal diseases that could threaten Canada’s national herd and human health.

Guided by science-based decision-making and modern regulations, the Agency works tirelessly to ensure access to safe and healthy food in Canada, and support access to international markets for our high-quality agricultural products.

To learn more, visit inspection.canada.ca.

