



ANTIBIOTIC USE

- We believe that disease control in salmon requires a holistic approach. Good site management, fish husbandry and rigorous biosecurity measures are central to reducing the risk of disease outbreaks and controlling the spread of infectious diseases, while antibiotics must never be used for performance reasons.
- The correct use of antibiotic is critical in reducing antimicrobial resistance which is why our vets/fish health teams follow the World Health Organisation (WHO) guidelines for the use of antibiotics in livestock industries. Antibiotics are prescribed by a qualified veterinarian, as a last resort, always following a full investigation, confirmation of diagnosis through laboratory testing of fish health samples and after confirming antibiotic sensitivity of causative organisms. There is a strict withholding period which means that any traces are completely passed through the fish long before it is harvested. Antibiotics are generally added to the feed pellets.
- In real time, Huon voluntarily publicly reports antibiotic use in addition to meeting regulatory reporting requirements to government authorities for Huon owned and operated sites.
- From 2017 to December 2021 no antibiotics were used across any marine leases (both in Macquarie Harbour and in South East Tasmania). In January 2022, some smolt at our Yellow Bluff lease were treated for the bacteria, *Vibrio*, which is present in saltwater but generally doesn't cause a primary illness (ie marine livestock are unaffected) which is why Huon's fish have not been previously vaccinated. The warmer water conditions over the 2021/22 Summer may be one reason why fish displayed signs of the illness. A vaccine exists against *Vibrio* so all future year classes will receive this vaccination in conjunction with the annual vaccination schedule.
- Across our freshwater sites, Huon has not used antibiotics at any of our land-based sites (i.e. hatcheries) since January 2019. Our use of antibiotics across our freshwater operations (i.e. hatcheries) is restricted to our non-consumptive flow-through hatcheries (which only hold on average around 20 per cent of our total smolt biomass). Huon also participates in the annual independent National Residue Survey (NRS) to monitor levels of therapeutants (results are industry-wide).
- Australia has one of the most conservative approaches in the world to the use of antimicrobials in food producing animals and is a world leader in minimising the use of antibiotics in food producing animals. In a 2015 United Kingdom review, Australia was ranked the fifth-lowest for antibiotic use in agriculture among the 29 countries examined. www.amr.gov.au/about-amr/amr-australia/amr-and-animal-health-australia.

A LAST RESORT

We believe that antibiotics should only be used as a last resort which is why we practice a holistic approach to farming. Integral to our approach is good site management, low stocking densities, the development and use of vaccines, feeding a high-quality diet, and keeping our fish as calm and low stress as possible.

In January 2019, we needed to use antibiotics to treat small fish at one of our flow-through freshwater hatcheries. These fish were prescribed the treatment as they had *Yersinia* (a coccobacilli bacterium which is naturally present in the river the flows into the hatchery). The treatment was highly successful and effectively



resolved the infection. Huon adheres to the Australian Pesticides and Veterinary Medicines Authority standard withholding period between treatment and harvest.

To avoid needing to treat fish in this way in future, we have since changed our stocking practices so that these small salmon are instead grown in our newer, recirculation hatchery systems, where they should not come into contact with the Yersinia bacterium at all.

TYPES USED

Huon does not use any of the antibiotics listed as Critically Important by the WHO – despite WHO guidelines stating that this would be acceptable under certain defined circumstances. This ensures that we preserve those Critically Important antibiotics for human use only. Of the other antibiotics available for use, Huon would only ever use an antibiotic that is confirmed to be effective against the causative disease organism – which is done through testing at our local Fish Health laboratories. This way, we can be sure that we are following best practice in terms of antibiotic stewardship.

(WHO categorises all antimicrobials used in human medicine as either Critically Important, Highly Important or Important in the medical treatment of bacterial infections in humans; in effect placing a value/importance on each antimicrobial in terms of its effectiveness in combating bacterial infections).

The Tasmanian industry as a whole independently made the decision many years ago not to use antibiotics such as Oxolinic Acid (Quinolone) and Amoxycillin (Penicillin) which are compounds listed by the WHO within Critically Important classes of antimicrobials. This decision was made despite these particular antibiotics being used in salmon farming across other countries.

WITHOLDING PERIOD AND RESIDUE TESTING

In the event that antibiotics are used in a population of fish at sea, we adhere to strict withholding periods which allows any therapeutants to pass through the fish long before it is harvested for consumption.

In addition, every year Huon participates in the independent annual National Residue Survey to monitor levels of a wide variety of compounds and therapeutants, across the salmon industry, ensuring we comply with national standards. The industry-wide combined results can be found on the [National Residues Survey website](#). The Australian Pesticides and Veterinary Medicines Authority (APVMA) sets the MRLs (maximum residue limits) for agricultural and veterinary chemicals at levels that pose zero risk to humans. Food Standards Australia New Zealand and the Australian New Zealand Food Regulation Ministerial Council consider and endorse the MRLs before than are then adopted into the rigorous Food Standards Code.

Notwithstanding the industry-wide NRS results, Huon voluntarily publishes our flesh testing results [here](#)

Also see [Environmental Contaminants - Fact Sheet](#)

