January 2022

ENVIRONMENTAL CONTAMINANTS - CHEMICAL COMPOUND USE/HEAVY METALS

- Salmon farming is occasionally wrongly accused of “using chemicals” or environmental contaminants in our farming practices.
- In its most pure definition, a chemical is a range of compounds – including H20 (water) and Sodium Chloride (salt), two essential elements of the ocean. Therapeutants, such as antibiotics, are chemical substances which we occasionally use to treat sick fish. Their use is strictly overseen and administered by one of our veterinarians. See Fact Sheet - Antibiotic for more information.
- We submit our salmon and trout for routine testing by the Federal Government as part of the National Residue Survey and since we began reporting to the NRS in 2000 there have been no detections of any additives, anthelmintics, contaminants, hormones, PCBs/dioxin-like chemicals or insecticides in Huon Aquaculture products. Survey results continue to demonstrate that the presence of heavy metals in farmed Tasmanian salmon is exceedingly low (NRS results are industry wide).
- Huon voluntarily publishes our flesh testing results here.
- Lead and Mercury have a mandated limit of 0.5 to 1 mg/kg. Our most current results (2022) show that lead was not detected in Huon fish at all and mercury was detected at a level of half the MRL – ie 50% less than what the authorities recommend is an acceptable level in Australia. The source of heavy metals in both farmed and wild fish comes from what they eat; the difference is that we know exactly what our fish eat whereas both the location and type of food eaten by individual wild fish is unknown.
- There has been a lot of analysis undertaken on dioxins and PCB’s in Australia (both environmentally and in agricultural products) with evidence showing that levels of these compounds are generally much lower than in other countries and residues in fish are either very low or non-existent. Tasmania is likely to be even better due to much lower historical pesticide/herbicide use.
- SafeFish, Australia’s primary source of technical advice about export, import and domestic trade of Australian seafood products is an excellent source of research www.safefish.com.au

MICROPLASTICS

While some overseas fish stocks have been found to be ingesting small plastics, this primarily occurs during feeding from the seafloor or by consuming prey that have previously ingested microplastics themselves.

Because we provide our fish with a pelleted diet, and they do not scavenge the seafloor, the risks of exposure to microplastics are much lower than those typically affecting wild populations.

Our feed suppliers also ensure fish meal is sourced from responsibly managed fisheries with low likelihood of contamination from microplastics.

Salmon farmers world-wide have been working on ways to substitute fish meal in the diet for many years and during this time, Huon has reduced use by around 20 per cent. This not only improves the sustainability of our operations, but is also inherently protective against microplastics contamination.

In 2018, a study by the Global Centre for Environmental Remediation at the University of Newcastle (UoN) determined that the global average of microplastic ingestion largely came from consuming water containing fibres. The outcomes of this report is in alignment with the 2019 World Health Organisation (WHO) report Microplastics in drinking water.

SafeFish (www.safefish.com.au) is Australia's leading program for food safety, trade and market access issues affecting Australian seafood, and has compiled a range of fact sheets on the available worldwide research regarding microplastics in Australian seafood.

A 2021 FRDC research project into the presence of microplastics in seafood has found much smaller quantities in the guts of Australian marine species compared to those in many other countries. Australian seafood scores well on microplastic scale | FRDC

WHAT CHEMICAL COMPOUNDS DOES HUON USE?

Our nets are only cleaned using equipment that physically removes the fouling without the need for chemicals.

Anaesthetics are sometimes used on our fish so they can be handled safely for procedures such as health checks or vaccinations without causing any damage or stress. The only two anaesthetic compounds used are benzocaine (commonly used in pain relief gels for human mouth ulcers and in common cough drops) or Aqui-S (a derivative of the commonly used clove oil as a sedative and a relief method for tooth pain).

There are a number of chemical compounds found in our fish feed pellets including:

- Inorganic phosphates (necessary to meet the phosphorus requirements for animal production to ensure optimal growth, fertility and bone development). Phosphorus is indispensable for life and animals cannot live without it.
- Propionic and sorbic acids are widely used in food for human consumption—propionic acid is present naturally in dairy products and works alongside other short-chain fatty acids in the gastro-intestinal tract of humans and other mammals as an end product of the microbial digestion of carbohydrates while sorbic acid is a naturally occurring compound that has become the most commonly used food preservative in the world. It is most commonly found in human foods (wines, cheeses, fresh produce, refrigerated meat etc.), animal feeds, pharmaceutical drugs and cosmetics.
- Amino acids (alanine and proline), often referred to as the building blocks of proteins, these core chemicals are needed by both the human and animal body to function well.
- Inosine is a nucleoside, one of the basic compounds comprising cells. It is essential in the metabolism of organisms and important for a functioning immune system and has led to advances in immunotherapy in recent decades.

In addition, we are part of an independently run programme to quality assure our fish for entry to the European Union and other overseas markets; this involves testing of our fish for a range of substances and comparing these with relevant standards.

REFERENCES

Mercury and Omega-3 Oils in Australian Seafood (safefish.com.au)

Seafood Consumption in Australia Risk and Benefits (safefish.com.au) – includes research/food surveys from Food Standards Australia New Zealand.