

On Antimicrobial Resistance

Background

Antimicrobial resistance (AMR), occurs when bacteria, viruses, fungi and parasites change over time and no longer respond to medicines making infections harder to treat and increasing the risk of disease spread, severe illness and death. As a result of drug resistance, antibiotics and other antimicrobial medicines become ineffective and infections become increasingly difficult or impossible to treat.

It is recognised that antibiotic resistance poses a serious risk to both human and animal health, since resistant bacteria can be transferred between animals, animal products and people. The World Health Organisation has warned of a post-antibiotic era, where antibiotic resistance would cause more deaths than cancer.

The European Commission presented in 2011 its Action Plan against the rising threats from Antimicrobial Resistance¹ containing actions for implementation with EU Member States and identifying areas where measures are most needed. And in 2016 it published its One Health Action Plan against Antimicrobial Resistance² aiming to make the EU a best practice region, to boost research, development and innovation, and to shape the global agenda.

Healthy animals produce safer food.

Consumers in the EU and beyond should have access to the finest and safest European farmed fish products on the market. Therefore, European fish farmers and their veterinarians continue to work in concert to develop Veterinary Health Plans, optimised global surveillance and monitoring programmes. No fish farmer wishes to lower growth performance and lose fish through disease and infections. The FEAP strongly supports the improvement of veterinary skills and networking throughout Europe so as to improve and access best on-farm practices.

Antibiotics are sometimes used to treat farmed and pet animals for the same reasons as they are used to treat people: they are selectively used to treat and control specific diseases. Responsible prescription and use of antibiotics in all types of food producing animals, including fish, is a key consideration.

The focus for professional fish farming is on **disease prevention** rather than cure: antibiotics are therefore not used unless considered to be essential for disease treatment. Highest-Priority Critically Important Antibiotics (HP-CIAs) are very rarely used in European aquaculture, and only if their use is justified by sensitivity testing. The prophylactic use of antibiotics does not occur in European fish farming and is forbidden within the EU. The treatments with veterinary medicines that are unavoidable are fully traceable in order to ensure the absolute absence of drug residues in fish delivered to the market.

¹ Communication from the Commission to the European Parliament and the Council
Action plan against the rising threats from Antimicrobial Resistance <https://bit.ly/3dBE4c0>

² A European One Health Action Plan against Antimicrobial Resistance (AMR) <https://bit.ly/3dRA2wr>

Use of good husbandry practices and associated biosecurity measures are thus a priority for fish farmers to assure high levels of health and welfare.

Vaccination at the freshwater stage of the farmed salmon cycle, before fish are exposed to the more open marine environment, has reduced antimicrobial usage at sea to a minimum. Vaccine development for existing and emerging diseases needs to be encouraged.

For example, while Norway increased its salmon production from 50,000 tons in 1982 to 1.2 million tons in 2016, they reduced a 99.99 % the use of antibiotics, using 0.00036 mg of antimicrobials per kg of salmon.

The use of bacteriophages and selective breeding technologies for disease resistance provides other options, which has to be further explored and developed.

Emerging bacterial diseases may require the use of antibiotics until vaccines can be developed. However, few new or alternative medicinal treatments are being discovered, so it is vital for the sector to retain the effectiveness of present antibiotic medicines for the future. A higher number of registered Veterinary Medicines containing antimicrobials will lead in a better and more effective treatment of fish, reducing the risk of antimicrobial resistances development.

In respect of the presence of antibiotic residues in the environment, as pointed out above, high quality water is of primary importance for the growth and health performance of the fish. Any water treatment is an additional cost for the fish farmers who will therefore avoid, as much as possible any potential residues.

Innovative measures and developments are evident requirements to assure fish health and welfare in the future and research into new medicines and treatments is needed urgently. The therapeutic reserve for veterinarians to be able to treat infections is very limited, due particularly to the marketing authorisation procedures existing in Europe. The FEAP supports the proposal to decouple the veterinary procedures from those of medicines for humans.

The FEAP is well aware of the imminent dangers to fish and shellfish aquaculture posed by climate change and ocean acidification, complicated by new and emerging diseases. European projects, such as 'Climefish' and 'Ceres' have examined these aspects in detail and published [case studies](#) with on-farm best management practices.

The FEAP therefore looks forward to the results of implementation of the new EU legislation concerning veterinary medicines and medicated feeds that hopefully will improve both availability and efficiency of use. This should contribute to increase the health and welfare of millions of fish that, at present, are potentially placed at risk and hopefully limit the risk of antibiotic resistance developing.

The FEAP strongly promotes the conditions for a 'level playing field' for European aquaculture and believes that such EU rules on farming processes and responsibilities should be applied to farming activities in third countries that supply fish and fish products to the European consumer market. European producers should not be put at a disadvantage in this respect.

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The Federation of European Aquaculture Producers is an organisation that represents the European fish farming profession and is based in Brussels. FEAP is composed of 24 national fish farming associations from 23 countries, both EU and non-EU. The combined yearly production of FEAP members surpasses 2,5 million tonnes of nutritious, safe, delicious and environmentally sustainable fish.