

May 5, 2011

Dear Standards Oversight Committee,

Please accept my submission of a formal minority report for the final draft standards for farmed salmon.

It was my pleasure to serve on the technical working group, and while I feel we have accomplished much in addressing the most egregious abuses in chemical use in the salmon farming industry, we have not done our duty balancing the impacts on human health, environment and fish health. Adherence to the RUMA Guidelines for the Responsible Use of Antimicrobials in Fish Production, the World Veterinary Association Prudent Use recommendations, and the Judicious Use of Antimicrobials for Aquatic Veterinarians developed by the American Veterinary Medical Association and the FDA's Center for Veterinary Medicine provides guidance on better practices, but it is unclear if these best practices lead to the impact we're seeking to avoid, namely loss of effective antibiotics for the treatment of human diseases. The fact that these documents were developed by experts in veterinary medicine and pharmaceutical development, and did not include authors or associations with specific expertise in antibiotics for human health or the impacts of chemical use in marine environments demonstrates their limited perspective. Moreover, the RUMA, WVA and AVMA documents are best practices and recommendations, rather than auditable standards. I understand the challenges in hard and fast standards presented by something as dynamic as disease control and prevention, but that is precisely why we need to provide specific guidance on the use (or non-use) of the most important antibiotics for treating human diseases or the riskiest antibiotic classes in terms of environmental impacts.

During the process of developing the standards, we reached out to experts on the interaction between livestock production and effective antibiotics for the treatment of human diseases, and were provided with key peer-reviewed publications documenting concerns over the impacts of chemical use, namely antimicrobials, in the types of dynamic ecosystems where aquaculture takes place and to human health. In our communications with experts at the Centers for Disease Control<sup>1</sup>, we received expert opinion that critically important antibiotics for human health should be severely limited in animal production, and some should not be used at all. The recommendation that the most critically important antibiotics for human health not be used in aquaculture was never seriously considered by the STC. Instead, assurances that they are rarely used and concerns that these critically important antibiotics were the only option available superseded the legitimate concerns over the impact of potential resistance in these antimicrobials.

The nature of this standard, like the standard addressing invasive species, requires a higher level of precaution than the majority of the standards in Salmon BAPs. Unlike water quality, predator control and others, the impacts we are seeking to address in this standard cannot be undone. Once we lose the efficacy of a critical antimicrobial, it is gone. I urge the SOC to reconsider how we are addressing the impacts associated with chemical use in aquaculture to ensure we are placing as high of a value on protecting human health and the environment as we are protecting the health of fish.

Sincerely,



Teresa Ish, Independent Consultant  
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Cc: Katherine Bostick, Salmon Aquaculture Dialogues

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<sup>1</sup> Email from Dr. Fred Angulo, CDC, dated April 15, 2010

Dear Ms Ish,

Thank you for your minority report on antibiotic use in salmon farming, detailing your concern that the BAP salmon farm standard does not adequately address the corresponding risks to human health. Specifically you urge us, the Standards Oversight Committee (SOC), “to reconsider how we are addressing the impacts associated with chemical use in aquaculture to ensure we are placing as high of a value on protecting human health and the environment as we are protecting the health of fish”.

We have had an opportunity to discuss your concerns and seek the opinions of other experts and we would like to respond with this summary of our views. In general it is felt that the current approach to antibiotics in the BAP salmon standard, with its focus on judicious and prudent use by qualified fish health professionals, is the most appropriate means of minimizing associated human health risks. However, although this was the consensus view, a range of different opinions were expressed. Some SOC members would, like you, prefer a precautionary stance but they still wonder if this would be viable or reasonable in every instance (such as the use of erythromycin to treat BKD in broodstock fish, which, on the face of it, poses little or no risk to human health). Other SOC members reject the validity of the precautionary approach, considering the risk to human health to be little more than a theoretical possibility, claiming that there is no evidence that the use of antimicrobials in fish farming has ever led to antibiotic resistance in human pathogens.

Overall, we have considerable faith in the ability of fish health professionals to give due consideration to human and environmental health when taking decisions on how best to manage fish health. Clearly, human, environmental and fish health specialists will have different overall perspectives but there is still plenty of common ground on which fish health specialists can develop and apply judicious and prudent treatment policies. The BAP standards reinforce such policies.

You express a concern that the Salmon Technical Committee (STC) never seriously considered the recommendation that the most critically important antibiotics for human health not be used in aquaculture. But correspondence between John Forster and Dr Fred Angulo, copied to the STC, indicates that this option was aired and that it prompted Dr Angulo to confirm his view that the use of critically important antibiotics in aquaculture ought to be discontinued. So it would seem the STC did consider this possibility and then went on to reject it.

We are in full agreement with you about the importance of environmental and human health and, keen to gather more information on the risks to human health, we will commission a study. We will also ensure that your minority report is published on the GAA website and discussed by the GAA board, as required by the BAP standards development process.

Sincerely,

Standards Oversight Committee, 8 June 2011

Dave Anderson, Dawn Purchase, Sebastian Belle, Estelle Brennan, Michael Tlusty, Steve Otwell, George Chamberlain, John Wigglesworth, Dave Little, Pete Bridson, M.C. Nandeesha