AquaBounty Response to New Research by Memorial University


Ron Stotish, CEO of AquaBounty, stated:

“We are pleased to see further independent research published using AquAdvantage® Salmon. The authors used fertile AquAdvantage® Salmon and mated them with brown trout in the laboratory to produce hybrids. The hybrids had characteristics expected of conventional inheritance from their parents. The authors point out such hybrids would be improbable in nature, but fail to mention such hybrids would also be unable to reproduce. Any interpretation of their data should also account for the all female triploid nature of AquAdvantage® Salmon. It should be emphasized that this is a hypothetical study due to the biological and physical containment within which AquAdvantage® Salmon will be raised.

“This latest study follows a series of previously published papers by Fleming and Moreau (co-authors of the research) showing reduced breeding efficiency of fertile AquAdvantage® Salmon compared with non-transgenic comparators. It is important to note that AquAdvantage® Salmon are all female, triploid, and required to be reared in contained land-based aquaculture systems. This fact must also be considered in any risk assessment model, and would appear to further reduce any concerns for potential environmental consequences.

“Brown trout and Atlantic salmon are known to be able to produce hybrid progeny. This paper confirms that AquAdvantage® Salmon, like all Atlantic salmon, can be used to produce such hybrids, and that the presence of the transgene does indeed confer accelerated growth in hatchery conditions.

“It is worth noting that in 1995, Peter Galbreath and Gary Thorgaard of Washington State University published research that the Atlantic salmon brown trout hybrid is sterile. Such a hybrid would pose little ecological threat as the fish could not reproduce.

“Moreover, AquaBounty has stipulated that we will market only sterile, all female AquAdvantage® Salmon – with specific tests being performed on every commercial batch of fish to assure our product meets our specifications. The FDA conducted a rigorous Environmental Assessment of AquaBounty salmon eggs, as required under the National Environmental Protection Act, and, in December 2012, published its draft Environmental Assessment of the salmon, which concluded with a “finding of no significant impact” (FONSI). In the FONSI, the FDA states that ‘No effects on stocks of wild Atlantic salmon are expected’ and that ‘…approval of the AquAdvantage® Salmon…will not jeopardize the continued existence of United States populations of threatened or endangered Atlantic salmon or result in the destruction or adverse modification of their critical habitat, when produced and reared under the conditions described.’
“These authors deliberately created brown trout AquAdvantage® Salmon hybrids using fertile AquAdvantage® Salmon and demonstrated small effects in an artificial environment. In their model ecosystem, they demonstrated little risk from transgenic salmon or trout salmon hybrids. Overall, the study seems to present no new evidence for any added environmental risk associated with AquAdvantage® Salmon and there appears to be nothing of concern in the Oke manuscript, particularly since the authors point out there is such a low probability of such hybrids occurring. Furthermore, the brown trout AquAdvantage® Salmon hybrids would be sterile in any case.

“We continue to be surprised at what we believe to be precautionary and negative interpretation of apparently very encouraging data.”

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