



ONDA AND INNOVAFEED ANNOUNCE PROMISING RESULTS FROM TRIALS USING INSECT-BASED INGREDIENTS IN SALMON NUTRITION

- **Preliminary research demonstrates antibacterial potential and strong growth performance in Atlantic salmon**

Prince Edward Island (Canada) - April 6, 2026 – Innovafeed, a global leader in insect-based ingredients (Black Soldier Fly - *Hermetia illucens*), and Onda, the world's largest independent aquatic contract research organization, today announced promising results from **two collaborative trials evaluating the performance and functional benefits of insect-based ingredients in aquaculture nutrition**.

The trials, conducted at Onda's world-class aquaculture research facilities in Prince Edward Island, assessed the potential of Black Soldier Fly Larvae Meal to support fish health and performance in Atlantic salmon diets.

Promising *in-vitro* antibacterial activity

Initial *in-vitro* analyses conducted by Onda demonstrated antibacterial activity associated with Innovafeed's Black Soldier Fly Larvae Meal (Hilucia™ for Aqua). The study evaluated the inhibitory effect of its hydrosoluble fraction against several aquatic pathogens commonly responsible for disease outbreaks in aquaculture.

Results showed growth inhibition against four gram-negative bacteria of major relevance for aquaculture health management: *Aeromonas salmonicida*, *Flavobacterium psychrophilum*, *Vibrio anguillarum*, and *Photobacterium damsela*. For further technical details on the methodology and results, please refer to our white paper available on our Hilucia™ Aquaculture page: <https://innovafeed.com/en/hilucia-aquaculture/>.

These results build on previous studies that have demonstrated antimicrobial activity of Black Soldier Fly Larvae against a broader range of aquatic pathogens.

The antibacterial potential of Hilucia™ for Aqua is believed to be linked to **antimicrobial peptides naturally produced by Black Soldier Fly Larvae** (*Hermetia illucens*). These bioactive molecules are part of the insect's innate immune system and are known to interact with microbial cell membranes, inhibiting growth or causing pathogen death.

Given the growing challenge of **bacterial diseases and antimicrobial resistance in aquaculture**, these findings highlight the potential of insect-derived ingredients not only as sustainable protein sources but also as **functional feed ingredients capable of supporting fish immunity and helping reduce reliance on antibiotics**.

Strong growth performance in salmon trials

A second trial at Onda evaluated **the use of Innovafeed's BSFL meal as an appetite and performance booster in grower Atlantic salmon**.

Throughout the 84-day trial, the Hilucia™for Aqua-fed group grew from around 300 to 800g, and achieved a perfect 100% survival rate. Results showed **increased feed intake** with a dose-response

pattern to Hilucia™ inclusion rate, associated with a **strong growth performance**, with statistically increased growth rate and improved feed efficiency demonstrating the BSFL meal's potential to enter grower salmon's diets while boosting fish farming performance.

The trial also included a seawater stress test, assessing fish resilience during a critical stage of the salmon production cycle. While results are still being analyzed, this work reflects the continued efforts of Onda and Innovafeed to demonstrate the functional potential of insect-derived ingredients in aquaculture nutrition.

These results further support the use of insect-derived ingredients as both **nutritionally effective and functionally beneficial components of aquaculture feeds**.

Advancing innovation in aquaculture nutrition

*"Working with innovative partners like Innovafeed allows us to further develop our testing platforms and explore solutions that can transform aquaculture," said **Dr. Fabio Zanuzzo, Director of Aquatic Research at Onda**. "Our integrated, and tailor-made research approach enables us to fully evaluate and maximize the value of our clients' products, generating precise and actionable insights for the aquaculture industry."*

*"This collaboration has been both highly effective and very promising. The scientific foundation and expertise of Onda's teams bring significant value to our work, and the results generated provide further evidence of the functional potential of insect-based ingredients for aquaculture nutrition" said **Marine Bezagu Phd, Head of Product Development on Aquaculture at Innovafeed**.*

Additional trials, including **in-vivo studies**, will further evaluate the potential of **insect-derived functional ingredients to support fish health and disease resilience in commercial aquaculture production**.

ABOUT ONDA

Onda is a contract research organization specializing in aquaculture research and trials. Onda offers bespoke bench top and in-tank trials and challenges for a variety of species at both our Souris & Victoria, PEI locations, presenting our clients with custom-made solutions to the challenges they are facing with best-in-class industry expertise and experience.

Onda holds a variety of certifications including, GLP, GMP, ACQ3 & ACQ2, integrating our customized service offering with the highest quality of work. Quality, consistency, and reliability are traits that we at Onda pride ourselves in each interaction with our clients. From idea to solution, Onda provides expertise, guidance, and navigation during the product development process.

www.onda.ca

ABOUT INNOVAFEED

Innovafeed is a global AgTech pioneer (B Corp™, Next 40, Impact 40, World's GreenTech Company 2025), specialized in producing insects (Black Soldier Fly - *Hermetia illucens*) for animal and plant nutrition. As one of the world's foremost insect producers, Innovafeed develops cutting-edge technologies that replicate nature's resource conversion processes at industrial scale.

By recreating a circular, zero-waste food chain in which insects reclaim their natural role in the ecosystem, the company contributes to building a more sustainable, resilient, and efficient agri-food system.

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