

PRESS RELEASE

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Protix's strong sustainability data confirmed by peer review

Based on primary data, the peer-reviewed Life Cycle Assessment shows impressive day-to-day impact in the feed and food chain

A recent peer review published in ScienceDirect¹ confirms Protix's Life Cycle Assessment (LCA) data, demonstrating that Protix's insect ingredients have a remarkably low environmental footprint in land and water use, as well as emissions. The results are based on primary data collated directly from Protix's commercial operation, which operates 24/7 at full capacity. The figures therefore reflect real-life impact at industrial scale. While the data are specific to Protix's insect ingredients, they highlight the insect industry's exciting capacity to lead sustainable change.

Protix is the leader in insect ingredients for pet food, animal feed and plant care worldwide. The company is passionate about driving down the environmental impact across the feed and food system. Piotr Postepski, Chief Commercial Officer of Protix, says: "We welcome these peer-reviewed results as independent confirmation of the capacity of our insect ingredients to significantly reduce the environmental impact. There is still a lot of potential to lower the footprint of the black soldier fly ever further, for example with government approval for the use of lower grade feedstock. This is something we continue to work tirelessly on."



The peer review data for Protix's products compared against incumbent ingredients yield the following:

- ProteinX® premium insect meal is confirmed to reduce CO₂ emissions by 78% compared with the poultry meal often used in pet food and livestock feed. Compared to soy protein concentrate, an ingredient often used in aquaculture, ProteinX lowers CO₂ emissions by as much as 89%.
- For LipidX®, Protix's premium insect fat, the land use figure was already close to zero. The peer review shows it has improved even further, now approaching near-zero levels. Compared to coconut oil, a common fat source in livestock and aquaculture feed and pet food, LipidX achieves 100% less land use as a result.
- PureeX®, Protix's unique fresh insect meat, uses a staggering 99.8% less water than the poultry meat commonly used in pet food as a high moisture protein source.

These figures either remained the same or showed even greater environmental benefits against earlier comparisons published by Protix. Back in 2024, Protix already published LCA results based on data collected from the Bergen op Zoom plant in 2023. The improvements between the peer-reviewed numbers and the numbers published in 2024 are mainly due to the fact that some external databases that the scientists used for feedstock data and energy mix data had undergone some changes.

Additional comparisons yield the following impressive data:

- ProteinX high-quality insect meal reduces CO₂ emissions by 20.4% compared with fishmeal.
- In terms of soy bean, ProteinX premium insect meal reduces CO₂ emissions by 52.6% compared with soy meal.

The updated LCA white paper for Protix's products can be downloaded from the company's website: protix.com/discovery-centre/white-paper-on-peer-reviewed-life-cycle-assessment-2025.



About Protix

Protix is the leading company in insect ingredients for healthy and sustainable pet food, aquaculture and livestock feed, and plant care. The company is on a mission to create low footprint ingredients that solve major issues in the current food system. Protix contributes to a circular food chain by using waste from the food industry as feed for insects. In turn, the insects are processed into valuable nutrients such as proteins and lipids. Protix's customers use these proteins and lipids as high-quality, functional ingredients for animal feed and pet food. Moreover, residual streams from the insects are used as organic fertiliser. This way, insects close the loop and bring the food system back in balance with nature.

Since its foundation in 2009, Protix has developed state-of-the-art, scalable technology, enabling the efficient use of resources and supply chain optimisation, including the reduction and recycling of residues and waste. Protix has been producing insect ingredients at its fully ramped-up industrial scale plant in the Netherlands since 2019. The company takes a measured approach to growth. Emphasising the power of partnerships, Protix actively collaborates with forward-thinking partners to unlock the full potential of insect ingredients worldwide.

www.protix.com

ⁱ <https://www.sciencedirect.com/science/article/pii/S0959652625015902>