



PRESS RELEASE

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Protix first insect genetic selection program yields incredible results

Protix and Hendrix Genetics have demonstrated for the first time in the insect food and feed industry that animal selection in Black Soldier Fly (BSF) can deliver significant benefits. The world's longest insect selection program has materialized and proven itself. The program, resulting from a joint project between Protix and Hendrix Genetics, is the first in the insect industry to demonstrate that BSF genetically selected for increased larval weight do perform better than standard animals in a large-scale production facility. This milestone demonstrates that using genetics to improve the economic and environmental performance of the insect food and feed industry is no longer speculation. It is now a reality.

Protix and Hendrix Genetics in collaboration developed a sustainable way of selective breeding for large scale insect production. This combination, in which Protix is the insect and production expert and Hendrix Genetics the expert in animal genetics, proved to be very successful. The results of the joint project showed that substantial genetic improvement can be realized through selective breeding. Black Soldier Fly larvae with desirable qualities were selected and bred to produce improved offspring generation after generation. Due to the short life cycle and large reproductive capacity of BSF, there is huge potential to make this already sustainable species even more sustainable, for example by using less feed, land, and water.

After running the selective breeding program for two years, a large-scale and fully automated production trial was done at Protix production facilities in Bergen op Zoom, NL. An average improvement was found of:

- 39% heavier larvae
- 32% more protein harvested per facility
- 21% more fat harvested per facility

Based on the achieved results in this trial the annual improvement in production is estimated at 20%. So more can be produced with the same energy. Making insect protein even more attractive from a sustainability perspective.

Solving the global food challenge

CEO and founder of Protix, Kees Aarts says *"Being a pioneer in the insect industry means you must lead the way and drive the biggest and most ambitious programs across nutrition, technology and genetics. Our advancements in genetics are a great step forward for the insect industry and the environment. Animal breeding has a vital role to play in help solving the global food challenge."*

“We are really proud of the achievements of the collaboration with Protix.” says Johan van Arendonk, Chief Innovation & Technology Officer at Hendrix Genetics. “The results clearly indicate that selective breeding on insects is not only possible, but also has significant benefits. Hendrix Genetics is truly multi-species focused and this collaboration demonstrated again that sharing knowledge across species speeds up innovation. Working on the genetics of insects adds a new dimension and opportunity to create added value.”

Partnership

In 2018 Protix and Hendrix Genetics announced to be partnering on insect breeding with the aim to further improve the potential of insects as an efficient protein converter to use for feed. In the past 3 years, a team of experts from Protix and Hendrix Genetics worked on this project to show the contribution selective breeding can make to the insect industry. In 2019, a selective breeding program for increased larval body weight for Black Soldier Flies was commenced. The results were presented at Insecta2021 and will be presented at other relevant congresses. Detailed results will be published in a scientific paper. Protix and Hendrix Genetics continue to collaborate on selective breeding of BSF. The implications of the findings are not restricted to BSF but also applies to the whole insect food and feed industry.

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about Protix

Protix is the market share leader in in circular, natural and sustainable ingredients from insects. We breed larvae from the Black Soldier Fly. Organic waste from the food industry serves as feed for the insects. In turn, the insects are processed into sustainable ingredients like proteins and lipids. Protix has built the first-in-the-world industrial insect facility and has laid the basis for a broad range of certified applications in feed and food.

Protix was founded in 2009 and has been on the forefront of the rapidly developing market for insect-based ingredients. We co-founded the International Platform of Insects for Food and Feed (IPIFF) to enable EU legislation and we are the first [and only] company in the world with industrial-scale production of insect-based ingredients. Protix stands for change in the food system to secure a long-term future for all. www.protix.eu

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about Hendrix Genetics

Founded in 2005, Hendrix Genetics is a leading multi-species animal genetics and technology company with primary activities in turkeys, laying hens, traditional poultry, swine, salmon, trout, and shrimp breeding. Backed by a strong portfolio of leading brands, Hendrix Genetics aims to provide innovative and sustainable genetic solutions to meet the growing global demand for food. Learn more about our history and how we embrace the past to catch the future at www.hendrix-genetics.com