

Facts & Figures

About Protix

- Protix is the leading insect company in circular, natural and sustainable proteins from insects.
- Our vision is a food system in balance with nature. Insects are part of the solution to the protein crisis while building a natural and circular food system with minimised food waste.
- Protix collaborates with over 20 institutions and regularly publishes in peer reviewed journals
- The black soldier fly (*hermetia illucens*) is a key player in bringing our vision to life: their larvae provide us with a unique source of protein for food and feed.
- Protix farms insects predominantly for aquaculture and livestock feed, including pet food.
- Protix has products in over 15 countries, ranging from fish and poultry feed to pet food specialties.
- The facility in Bergen op Zoom uses state-of-the-art technology and is one-of-a-kind when it comes to it's levels of automation, digitization and capacity.
- The new facility is able to produce protein to provide feed for more than 5 million salmon and 250 million eggs laid by feeding hens with soy free feed.
- Our products are used in multiple fast-growing markets like high-end pet food, speciality feed ingredients, aqua feed (fish and shrimp) and food concepts, including OERei, which is currently available in supermarkets throughout the Netherlands.

In the last 10 years

- Largest producer in the world with most extensive experience in operations.
- Patent portfolio of over 20 patents covering all aspects from breeding to rearing and processing.
- Commercially active in 18 countries and 2,000 point of sales serving customers in the feed, aquaculture, food and pet food industry, following strong trends towards sustainable and natural ingredients.
- Initiator and founder of insect producer association IPIFF. Our strategy unlocked new EU legislation within 4 years, the fastest ever in food system regulation.
- Built team of the best people with over 120 people and 20 in R&D.
- Largest funding in 2017 of 45M€ to build new facility in Bergen op Zoom, the Netherlands.
- Total invested capital of €70 million.
- Protix was founded in 2009, by Kees Aarts and Tarique Arsiwalla, both former McKinsey consultants and Delft University alumni.
- Protix won the Technology Pioneer award in 2015 at the World Economic Forum.
- Founder Kees Aarts is a member of the Global Council for Food Security and Agriculture of the WEF and is a member of the WBCSD where he co-writes on the protein future and food system transformation.

Our Concepts

- **OERei**
 - Protix provides the insects for the chickens' diets who lay these eggs, combining animal welfare with sustainability.
- **Friendly Fish**
 - Insects instead of fish meal for aquafeed, eliminating the need for "fish for fish".

Our Products

- **ProteinX**
 - Ideally suited for pet food and aquaculture purposes, can be used as the only protein source in these applications.
- **LipidX**
 - High-quality purified insect oil that is ideal for livestock and pet food.
- **PureeX**
 - Hypoallergenic fresh ingredient used as a base for wet pet food.
- **FlytilizerX**
 - An all-natural, sustainable soil enricher using by-products of the insect breeding industry, creating a natural balance in the soil.

The potential of insects

- Reducing pressure on soy and fishmeal.
- Solving food waste through natural conversion.
- Providing highly nutritious proteins and compounds to feed and food.
- Local and circular upcycling of food waste into feed and food proteins.
- Improving animal welfare of target animals like chicken, fish, turkey and shrimp.
- Increasing global protein supply.
- Unlocking new protein supply with low dependency on land, water and energy.
- Reducing protein import dependency in areas like Africa.

Quick General Facts

- Insect protein is the answer to many of the problems we face today.
- Insects can grow on food waste, which is a global supply potential of 1.5 billion tons of food waste holding a potential of 100 to a 150 million tons of proteins unutilized. Addressable feedstocks estimated to be around 30-35% allowing for a production potential of 30 to 50 million tons of insect protein.
- European Protein imports account for 50% of 26 million tons per year.
- Breeding programs are highly effective. In chickens and fish it reduced conversions from 3 to 1.6 and 1.1.
- Insects have a significant benefit over other protein sources due to the high content and density of nutrition. Insects have 31% dry matter as opposed to algae and single cells that often contain less than 5%.
- Insect proteins have no issues like toxins and antinutritional factors as opposed to plantbased proteins.
- Insects are resilient and less prone to diseases like other animals.
- All fish, birds and young animals eat insects for quality nutrition.
- Conversion improvements have been seen in trout diets and salmon diets in significant inclusions of insect meals.
- More than 50% of the people are already looking for answers on how food is made and where it comes from.
- Insect frass can improve growth and soil health by stimulating microbiology.
- Mortality of chicken fed larvae was 15% lower than control diets.
- In general, the addition of lauric acid products resulted in a better performance due to a higher growth.
- BSFL lipids contains over 40% lauric acid, a well-known fatty acid with antimicrobial factors.