





Beta Bugs Ltd.



Biotechnology and
Biological Sciences
Research Council



Company Overview

Beta Bugs Ltd is an innovative agri-food biotechnology company based at Roslin Innovation Centre, driving the future of sustainable protein production. With a mission to feed the world livestock and aquaculture responsibly, Beta Bugs breeds high-performance insects that boost protein availability, reduce land use and lower emissions. Founded in 2017, the company is the UK's first dedicated insect genetics business, leading the way in selectively breeding high-performance black soldier flies (BSF) to help build a more sustainable global food system.

Key Challenges Addressed

Beta Bugs addresses the global need for sustainable, scalable protein sources in agriculture. BSF farming offers a green, circular alternative, with BSF larvae reared on organic waste (such as food or agricultural waste) and upcycled into a nutritious, locally produced feed ingredient.

By applying selective breeding techniques similar to those used in traditional livestock and crop improvement, Beta Bugs develops advanced insect breeds that deliver higher performance and productivity. This innovation makes insect protein more efficient and increasingly cost-competitive with conventional feed ingredients.

Role of Roslin Innovation Centre

Since joining Roslin Innovation Centre in August 2018, Beta Bugs has accessed laboratory space and research capabilities that would otherwise be out of reach. The company was originally established at Rothamsted Enterprises, part of Rothamsted Research, a Biotechnology and Biological Science Research Council (BBSRC) strategically funded institute and sister campus to the Roslin Institute. Beta Bugs' transition between these two leading BBSRC-supported institutes highlights the strengths and connectivity of the UK's research and innovation ecosystem.



At Roslin Innovation Centre, Beta Bugs has benefited from close proximity to the Roslin Institute, collaborating with world-leading quantitative geneticists to create bespoke solutions for their breeding initiatives. This access to breeding expertise, was instrumental in the decision to locate to the University of Edinburgh Easter Bush Campus, alongside the wider opportunities within the Midlothian Science Zone cluster.

As the company has grown, it has expanded seamlessly within the campus, moving into dedicated specialist facilities to support scale-up. This includes establishing an insect genetics nucleus facility, co-located on campus at the UK Agri-Tech Centre (UKATC) Northern Hub, while remaining a tenant of Roslin Innovation Centre. This ability to access complementary facilities and expertise within the same campus has been instrumental in accelerating growth.

Growth has also been supported through participation in leadership programmes including Unlocking Ambition, which strengthen strategic capacity and prepare a business for expansion. Partnerships with the Roslin Institute on black soldier fly genetics, alongside UKATC scale-up facilities, have supported the scaling of BetaBugs' breeding operations, fostered innovation and helped bridge the gap between research and commercial deployment while refining both its technology and market offering.