



SMARTExpertise Financial Support for a Collaborative Project – FUMIGATE

Innovation funding helps university research team develop pioneering natural pest control product



Swansea University's Biosciences department has received £196.9k funding from the Welsh Government, collaborating with industry partners, to develop research into a natural biological agent that could revolutionise pest control and give growers an environmentally friendly and sustainable alternative to chemical pesticides.

The research team at Swansea University applied for SMARTExpertise funding, which supports collaborative projects between industry and Welsh research organisations to help address industrial technical challenges, focusing on commercialisation and exploitation of new products.

The compounds discovered by the Swansea University research team are a type of fungi which kill plant parasitic nematodes – a microscopic pest insect that causes losses to crop growers of over £150b globally. The team has also received funding from crop protection company Certis Europe B.V. as well as Welsh growers Maelor Forest Nurseries Ltd and Puffin Produce Ltd.

Traditional pesticides can be harmful to the environment, with some causing damage to the ozone layer and substantial water contamination. The fumigants discovered by Swansea University's research group are natural, cause no damage to the environment and not only kill the targeted pests, in some cases even promote healthier plant growth, and potentially increase crop yields.

The funding from Welsh Government and partners has meant the Swansea University team has been able to develop its ground-breaking research by appointing three new members of staff to develop new natural pest control products and move them closer to market.

Collaborating with growers has also been essential in taking the products to trial, to gain two different types of data: how effective the application of the product is for growers under field conditions, and what formats work best for growers in different scenarios.

In 18 months, the research team has been able to fully formulate a product from raw ingredients. They have also received interest from other companies in different sectors to diversify the product for alternative use and benefit more people on a global scale in the long term.

Speaking about the project, scientist and researcher on the project at Swansea University, Professor Tariq Butt said: "The

Innovation funding has allowed us to expand and accelerate our research by bringing in dedicated and passionate new members to our team to an extent that would have not been possible without that support. In partnership with companies like Certis, we have had access to large trial sites across Wales and Europe where we can get first hand feedback from growers which moves us closer to bringing our product to the market.

The support from government has increased our publicity, making us globally known for our work with biorational and innovative products which is great for our planet and the economic benefits for growers where demand is forever increasing, but also great for Wales to be known as a centre of excellence for a global market. It's wonderful for our team at Swansea University to be associated with that."

This global advancement in building the Welsh economy is also a key aspect of the **Economic Action Plan**, and the research team are hopeful that the support they have received from the Welsh Government will help to consolidate their position as a natural and sustainable alternative to current fumigates, furthering their understanding and knowledge and enabling them to diversify their product to benefit more people in the **future**.

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To find out more about funding and support from the Welsh Government:

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