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## **PIONEERING GREEN GRAIN STORE PEST CONTROL PRODUCT MOVES CLOSER TO COMMERCIALISATION**

**An Exosect led consortium has been awarded a quarter of a million pound grant from the Technology Strategy Board to bring to market pioneering biotechnology for the control of grain store pests.**

The consortium, led by UK based Intelligent Pest Management company, Exosect, and consisting of CABI\*, FERA\*, Sylvan Bio\* and Connaught Pest Prevention\*, have worked together for more than four years during a Sustainable Arable LINK funded project to identify an effective fungal pathogen for the control of a range of key grain insect pests. The outcome of the LINK funded project was so successful that the consortium has just been awarded a significant grant, through the Technology Strategy Board's 'New Approaches to Crop Protection' funding competition, which will enable the consortium to complete product development, create data for the regulatory authorities and bring the product to market.

The product is a formulation of the entomopathogenic fungus, *Beauveria bassiana*, and Exosect's patented delivery system, Entostat™\* powder. A patent for the composite formulation has been filed. The product will be used in grain storage and processing structures, which are coming under consumer and legislative pressure to reduce their use of traditional pesticides.

Martin Brown, Managing Director at Exosect comments, "This grant is invaluable as it means that the extensive work carried out to date can

continue until a product is commercialised". Brown continues "The global market for insecticide use in grain storage is estimated to be £90m and this excludes processing. The development work so far shows that this technology could easily be adapted to protect commodities beyond the cereals market, such as rice, dried fruit, nuts and pulses".

As well as the obvious benefit of insecticide residue reduction for consumers, this product will also lead to a reduction of insecticide residue in the waste environment. It will replace energy hungry fumigation techniques thereby reducing the carbon footprint of users and will decrease Pest Control Operator exposure to pesticides.

### **Background information**

\*Entostat powder is the platform technology for Exosect's entire range of products. Derived from a natural 'food grade' wax which is harvested from a sustainably farmed palm tree, Entostat powder acts as a delivery system for a wide range of active ingredients.

As the name suggests "Entostat" powder exhibits electrostatic properties. Even through very slight movement, it develops an electrostatic charge. Insects similarly develop an electrostatic charge as they fly through air or walk across physical surfaces. When placed in contact with insects, the powder adheres to them and can be passed from one insect to another through direct contact. This platform enables the use of very low doses of active ingredient which helps reduce the use of chemicals in a wide range of sectors.

\**Beauveria bassiana* is a fungus that grows naturally in soils throughout the world and can act as a parasite on various arthropod species.

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**For further information please contact:** Georgina Donovan at Exosect Ltd.  
Tel: 02380 603939 or email: [georgina.donovan@exosect.com](mailto:georgina.donovan@exosect.com)

**Notes to Editors**

### **About Exosect**

Exosect is focused on the development of Intelligent Pest Management solutions. Its innovative and cost-effective products help growers, food manufacturers and processors to actively reduce their use of pesticides. These products are used globally in a wide range of sectors including crop protection (agriculture, horticulture and stored products), apiculture and public health. Exosect was a SOFHT (Society of Food Hygiene and Technology) award winner in 2008 and a category winner in the 2009 Guardian Global CleanTech 100 awards.

### **About Technology Strategy Board**

The Technology Strategy Board is a business-led executive non-departmental public body, established by the government. Its role is to promote and support research into, and development and exploitation of, technology and innovation for the benefit of UK business, in order to increase economic growth and improve the quality of life. It is sponsored by the Department for Business, Innovation and Skills (BIS). For further information please visit [www.innovateuk.org](http://www.innovateuk.org).

### **About FERA**

The Food and Environment Research Agency's over arching purpose is to support and develop a sustainable food chain, a healthy natural environment, and to protect the global community from biological and chemical risks.

Our role within that is to provide robust evidence, rigorous analysis and professional advice to Government, international organisations and the private sector.

Climate change, food security and environmental sustainability are presenting the UK and indeed all other countries around the world, with significant, complex and often interrelated challenges. The Food and Environment Research Agency plays a vital role, increasingly on a world stage, in anticipating the issues, assessing the risks and gathering the evidence to guide policy response.

### **About CABI**

CABI is a not-for-profit international organization that improves people's lives by providing information and applying scientific expertise to solve problems in agriculture and the environment. Our mission and direction is influenced by our member countries who help guide the activities we undertake. These include scientific publishing, development projects and research, and microbial services.

### **About Connaught Pest Prevention**

Connaught Pest Prevention provides the full range of effective pest prevention and control services to help keep premises safe for people, and compliant with health and safety regulations. Its services can be delivered as a complete pest management solution or a tailored package of services to meet your specific requirements.

From bird proofing to rodent and insect solutions, mite clearance and much more, its highly experienced team delivers an effective and humane service - while removing unnecessary costs and disruptions to business.

### **About Sylvan Bio**

Sylvan Bio is engaged in the business of producing a wide variety of fungal cells using solid-substrate fermentation technology.

As a recognised leader in the field, Sylvan's expertise is founded upon extensive experience in culture isolation and maintenance, research and development, quality control, commercial propagation, and customised formulation and packaging technologies. This unique blend of skills enables the company to manufacture products of exceptional quality and consistency.

Sylvan currently produces a variety of products for use in agricultural and health care applications. Our capabilities include the production of both mycelial based products and the concentration of fungal spores. It is also engaged in the concentration of secondary metabolites derived from fungal cells.

Sylvan has partnered with universities, research organisations, and businesses in the development and commercialisation of new biotechnologies and products. With production facilities and staff in both North America and Europe, it is well-positioned to address a wide spectrum of developmental and regulatory issues across a diverse geographical base.