



BIOCONTROL REPORT 2026

Enabling the Future of Green
Biocontrol Products

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Solid formulation technologies, including granules and wettable powders, improve the shelf life, stability, and transport efficiency of natural biological control agents. Contract manufacturing and standardised processing enable the commercial scaling of these low-impact crop protection solutions while mitigating technical adoption barriers in sustainable agriculture.

EXWOLD
partners in chemical processing



BICONTROL PRODUCTS



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INNOVATING AGRICULTURE FOR A HEALTHIER PLANET



As the world faces mounting environmental challenges, agriculture is under pressure to adopt sustainable practices.



Green biocontrol products, which are natural alternatives to chemical pesticides, continue to gain traction for their ability to protect crops while preserving ecosystem health. Yet bringing these innovative solutions to market requires specialised expertise in formulation, processing and quality assurance. This is where Exwold can work with innovators to commercialise products.



WHAT ARE GREEN BIOCONTROL PRODUCTS?



Green biocontrol products, also known as biological control agents, are natural substances or organisms that help manage agricultural pests and diseases. Biocontrol innovations are wide ranging.

AT WORK



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Microbial Agents

Beneficial fungi (eg *Trichoderma* spp.), bacteria (eg *Bacillus Thuringiensis*) and viruses can infect and suppress pest populations or plant diseases.

Plant Extracts

Plant-derived substances such as neem oil and pyrethrins offer pest control with low toxicity to humans and wildlife.

Mineral Based

Natural compound like salts or copper based products.

Semiochemicals

Natural compounds like pheromones are used to disrupt pest mating or attract pests into traps, reducing their numbers without chemicals.

Predatory and Parasitic Insects

Ladybirds, lacewings, and parasitic wasps are released to prey on pest insects like aphids and caterpillars.

Unlike synthetic chemicals, biocontrol agents target specific pests, minimising harm to non-target species and the environment.

WHY CHOOSE SOLID

FORMULATIONS?

Solid formulations, such as granules and wettable powders, offer many advantages and are widely used in biocontrol products:

Improved Stability & Shelf-life

Long-term stability is a major requirement for commercial success. Solid formulation can address formulation challenges such as moisture sensitivity. Solid forms are often more stable than liquids, especially for sensitive active ingredients and can maintain the viability of microbials. Solids also benefit product integrity during storage and transport, reducing degradation risks.

Easier Storage, Transport & Packaging

Solid formulations can simplify transportation and reduce costs, making them a more sustainable option. A significant proportion of liquid formulations are solvents or water based, and this increases the volume of product transported worldwide. Solid formulation can reduce these volumes by reducing packaging volume. Solids are also easier to pack and product leakage is more easily avoided.

Controlled release & Improved Performance

Granules are a suitable format for natural extracts and microbials and can provide:

- Targeted applications
- Improved dissolution rates
- Slow release control

Manufacturing Flexibility

Solid formulation technologies such as extrusion, impregnation and blending are well established and commercially scalable. Farmers are highly experienced in handling these types of formulations and have the equipment and expertise to apply them efficiently.

Improved Dose Accuracy & Consistency

Allowing controlled application to crops, solid formulations can be precisely metered and standardised.

Compatibility with Sensitive Ingredients

Many active ingredients can degrade quickly in liquid environments. Solid formulation can protect them from hydrolysis, oxidation and other degradation pathways.



HOW EXWOLD SUPPORTS GREEN

BIOCONTROL

1 Advanced Formulation & Processing

Exwold specialises in contract manufacturing and formulation for crop protection products.

Since 1993, Exwold has been a market leader in solid formulations. Our expertise covers a wide range of processing technologies, such as extrusion, coating, impregnation, particle size reduction and blending. We enable the production of custom formulations tailored to specific pest-management needs.

Granules (GR): coating active ingredients onto a carrier or impregnating a suspension/solution into an absorbant

carrier. They are used for direct applications, such as in-furrow, and offer the possibility of controlled release. These are suitable for natural extracts, as well as microbial formulations.

Wettable Powders (WP) formulations are dry, which limits the opportunity for unwanted microbial growth of the active ingredient during storage. Dry nutrients can also be included in the formulation to support the growth of microbial actives after application.

Water Dispersible Granules (WG) formulations can be the perfect solution for

natural substances such as inorganic salts. Exwold has four sites which carry out extrusion. Moisture levels can be carefully controlled through the drying process. This flexibility is crucial for

developing targeted, low-impact solutions that meet the demands of modern agriculture.

2 Quality & Environmental Standards

Operating under rigorous quality and environmental management systems, Exwold ensures that products are manufactured to the highest standards of safety, efficacy and environmental responsibility.

Our commitment to ISO 9001, ISO 14001, and ISO 45001 certifications guarantees that every product meets

stringent requirements for both performance and sustainability. Our commitment to sustainability has led to us achieving Ecovadis Silver in 2026.





3 Supporting Sustainable Agriculture

By partnering with innovators and brand owners, Exwold continues to support the adoption of green biocontrol products whilst continuing to supply conventional formulations. Our confidential and efficient manufacturing processes

allow companies to scale up production and bring new solutions to market quickly. This partnership approach is essential for meeting the growing demand for sustainable crop protection and supporting a healthier planet.

process optimisation, resource efficiency, and waste minimisation, we are embedding sustainability into every stage of our toll manufacturing operations.

These efforts directly align with the ethos of green biocontrol, further supporting the sustainability goals of our partners and the broader agricultural community.

By driving continuous operational improvements and adhering to rigorous environmental management standards, Exwold serves as a reliable partner in the transition toward sustainable farming. We remain dedicated to helping our clients lower their Scope 3 emissions, uphold transparent ESG reporting, and build resilient, environmentally responsible supply chains for the future.

4 Overcoming Adoption Challenges

Green biocontrol products face challenges such as higher initial costs, limited shelf life, and the need for specialised knowledge. Exwold addresses these barriers by offering technical support, advanced

formulation techniques, and ongoing innovation to improve product reliability and efficacy. Our expertise helps ensure that biocontrol agents perform consistently, even under variable environmental conditions.

5 Commitment to Sustainability

Exwold is actively working to reduce our own environmental footprint, lowering

energy consumption and greenhouse gas emissions across our sites. Through targeted investments in

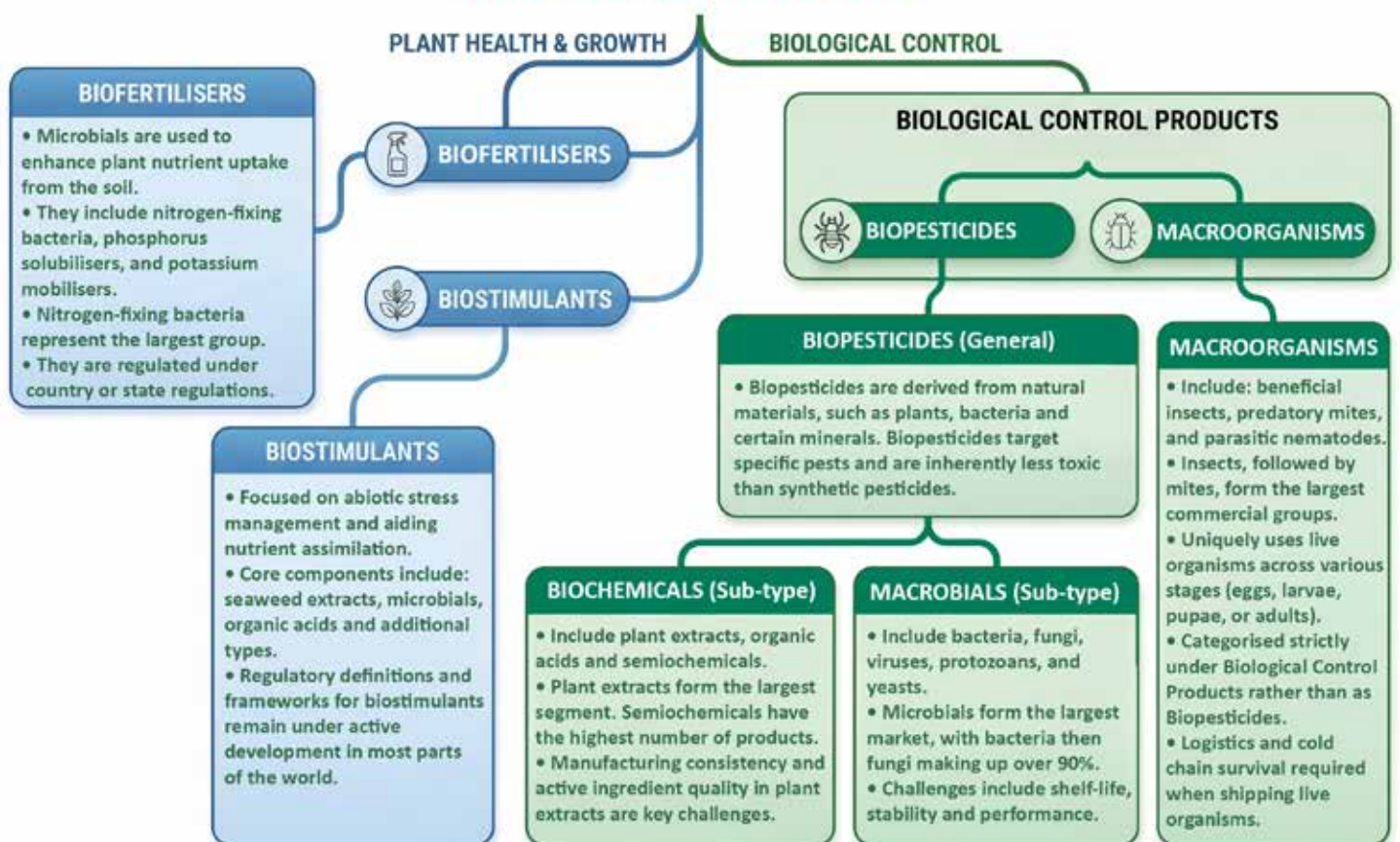
Conclusion

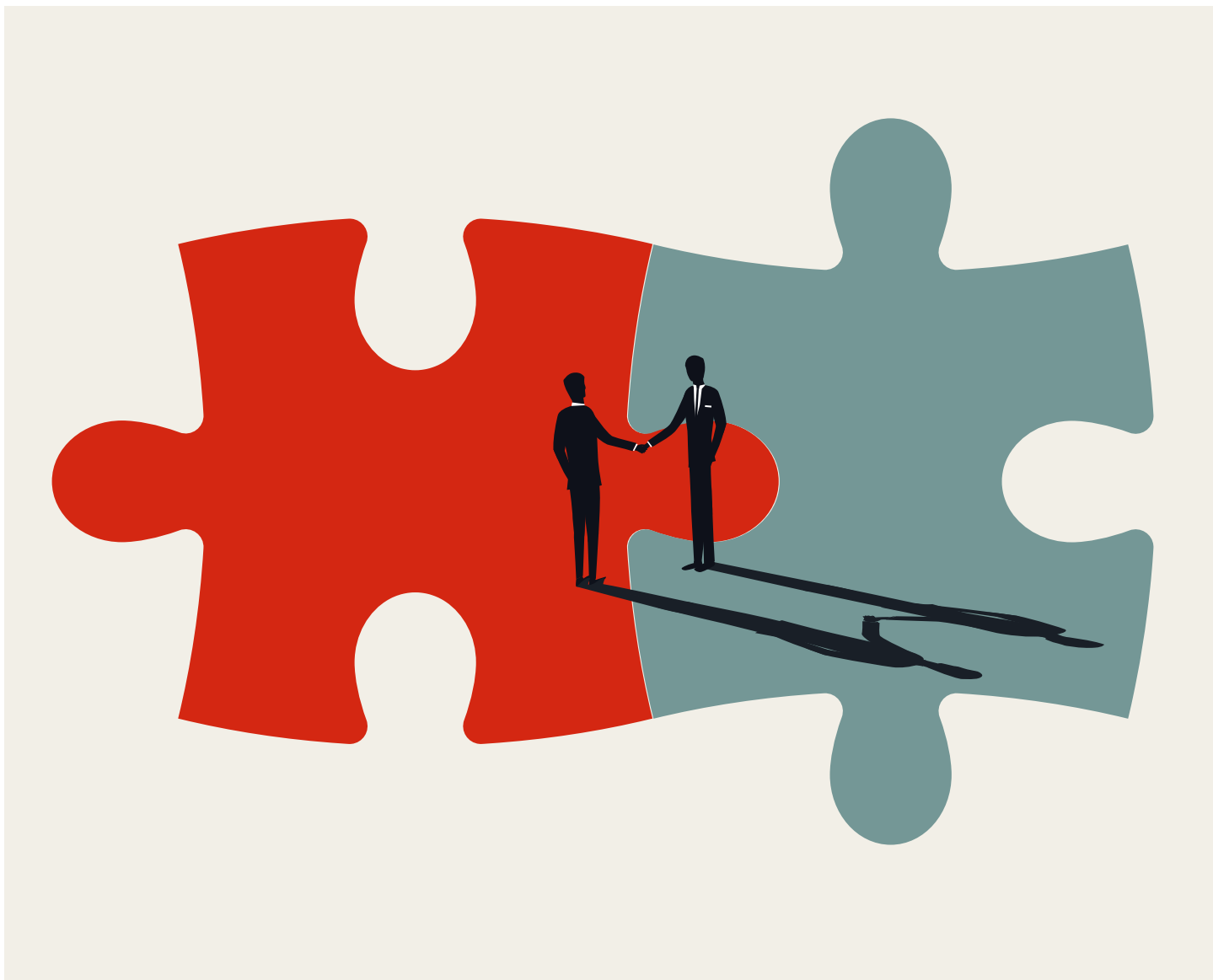
Green biocontrol products represent a vital shift toward environmentally responsible farming. By harnessing the power of nature, they offer a sustainable path for agriculture, balancing productivity with ecological preservation. Exwold enables innovators to bring these solutions to market efficiently and responsibly, helping to secure food production and the health of our planet for generations to come.

THE TREE

Biological products are split into two primary categories: Plant Health and Growth, and Biological Control. The Plant Health and Growth branch enhances crop nutrition and resilience using biofertilisers to improve soil nutrient uptake and biostimulants to manage abiotic stress. On the other hand, Biological Control manages pests through biopesticides (naturally derived biochemicals and microbials) and macroorganisms, which use live beneficial insects, mites, and nematodes as eco-friendly alternatives to synthetic chemical treatments.

BIOLOGICAL PRODUCTS





CONTACT

To speak to us about your biocontrol product, please reach out to us by using the details below.



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