



IBMA

INTERNATIONAL **BIOCONTROL**
MANUFACTURERS ASSOCIATION



DEFINITION

Bioprotection as the global
term for all **biocontrol**
technologies

This leaflet encompasses the definition of technologies supported by IBMA – the International Biocontrol Manufacturers Association

National definitions are diverse but may be precisely defined in a given country's legislation, including examples such as biocontrol in France, biopesticides in USA and biopesticides in some African countries. The IBMA aim is not to change these words but rather to encompass these definitions with an overarching harmonised global term. The need for a harmonised global term is driven by the diverse national definitions which may have a different meaning when used in another country. Terminology wherever possible should be compatible with intergovernmental organisation, scientific, association and standards agency definitions.

In order to cover biocontrol or biological control or biopesticides or management of biotic effects on plants that are used around the world, IBMA proposes to use the English terms, **bioprotection** and thereby **bioprotectants**.

IBMA uses the term "bioprotection"¹ to serve as a collective concept in defining the principal activities of the association and its members. This concept embraces the terminology of the current product categories of the association members namely: Invertebrate Biocontrol Agents, Microbials, Semiochemicals and Natural Substances.

¹ Bioprotection, in the English language is the definitive term.





Bioprotection is used to protect against unwanted organisms including pests and pathogens and as such:

- it originates from nature and
- it can either be sourced from nature or is nature identical if synthesised and
- it has uses including in agriculture, forestry, amenity, home and garden, and public health.

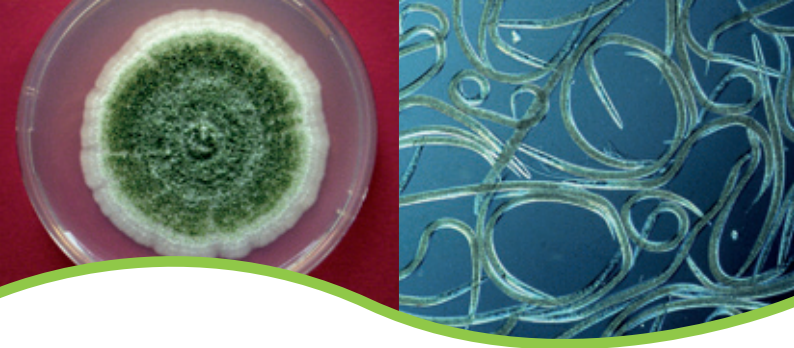
Bioprotection is intended to:

- be non-pathogenic to humans
- cause no harm to humans
- not contribute to antimicrobial resistance development for human or veterinary pathogens

And because **bioprotectants** have their origins in nature they have minimal impact in the environment:

- natural substances and semiochemicals have existing degradation pathways or are inert
- IBCAs and microbes have existing ecosystem mechanisms to equilibrate their populations
- semiochemicals, IBCAs and microbes are usually highly specific to the target organisms
- and they cause minimal negative effects to non-target organisms, ecosystems and the environment because:
- any negligible negative impact would be transient, resulting in no lasting reduction in biodiversity

And often bioprotectants contribute to ecosystem services.



IBMA Product categories within the scope of “Bioprotection” currently include:

- » **Semiochemicals** are substances emitted by plants, animals and other organisms used for intra-species and/or inter-species communication and have a target-specific and non-toxic mode of action.
- » **Microbials** are based on microorganisms, including but not limited to bacteria, fungi, protozoans, viruses, viroids, mycoplasmas, and may include entire microorganisms, living and dead cells, any associated microbial metabolites, fermentation materials and cell-fragments.
- » **Natural substances** consist of one or more components that originate from nature, including but not limited to: plants, algae/micro algae, animals, minerals, bacteria, fungi, peptides, protozoans, viruses, viroids and mycoplasmas. They can either be sourced from nature or are nature identical if synthesised. This definition excludes semiochemicals and microbials.
- » **Invertebrate Biocontrol Agents** (also called macrobials) are natural enemies such as insect, mite and nematode species providing control of pest populations through predation or parasitism.

Currently IBMA does not include, within the scope of “Bioprotection”, any technology for which there is no regulatory pathway or policy decision. Once policy decisions have been published, the technologies will be considered for inclusion.

This is a living document, which might be developed further in the future.