FOSTERING INNOVATION IN BIOPESTICIDES (BioPPP) WITH ROBUST AND FIT-FOR-PURPOSE REGULATORY SYSTEMS

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INTRODUCTION

In a context of growing political demand for reduced use of chemicals in EU agriculture and food production, biopesticides (BioPPP) became an even more important part of the discussion. Their development and use are encouraged by many policymakers and stakeholders. Whether it is for managing pests, weeds or diseases, farmers need access to a wide range of integrated and sustainable solutions to protect their crops. BioPPP and adaptation of the various farming practices are two tools in the farmers' toolbox, being deployed more and more often as part of integrated pest management systems. BioPPP are part of the highly innovative solutions where research is thriving; CLE member companies committed to invest 4 billion Euros in the development of BioPPP by 2030, in support of the European Commission's Green Deal ambition. While the current regulatory framework in the EU could be suitable for the development of BioPPP, providing new solutions for growers to protect their crops, appropriate regulatory guidance for BioPPP would be needed to bring innovative solutions rapidly to farmers. To facilitate a path forward, to find potential solutions for current and future BioPPP technologies, we will discuss several technologies.

METHODOLOGY

The starting point of our assessment is novel BioPPP technologies that are characterised by their mode of action on target pests/diseases. Nucleotides utilised to form ribonucleic acid (RNA) and double-stranded RNA (dsRNA) may be produced by chemical synthesis. Although dsRNA produced in this manner may technically be termed a 'chemical', nucleotides produced this way are identical to those found in nature Dead cells and fermentation material BioPPP product types are essentially 100 % identical to an already registered and viable microorganism product; however instead of viable spores, the non-viable products contain the same spores and other materials that have been treated to remove viable microbial components. Peptide-based BioPPP are peptides that act on the vital functions of target organisms (insects, nematodes and fungi). They are target-specific and may be chemically produced using synthetic methods. Antibody-based BioPPP are compounds directed against species-specific antigens and leading to impairment of vital function in a

target organism. They are obtained through an immune reaction of an animal species, which produces the antibodies against a defined target.

RESULTS

These types of products include both naturally occurring substances and synthetically derived substances, provided they are functionally identical to their naturally occurring counterpart substances. By default, the regulatory framework for such products is (EC) Regulation No 1107/2009, including the data requirements regulations. However, their high degree of specificity suggests that a similar pathway as that followed for semiochemicals/pheromones could be a constructive way forward. This would ensure enough possibilities to allow further innovation in Europe.

DISCUSSION

Requirements for BioPPP should be defined based on the nature of the active substance/micro-organism, its underlying mode of action and its intended use. We recommend working within the framework provided by Regulation 1107/2009. There would be added value for the creation of a guidance document covering these innovations.