

Development of formulation for new sustainable plant protection product

Short summary for practitioners:

INTRODUCTION

European regulations provide the framework for plant protection products (PPPs) in the EU. Amendments to the regulation have led to some insecticides being banned in the EU. Resistance to grain protectants is widespread and likely to increase with fewer approved active substances, which will limit the availability of PPPs and increase the risk of resistance. Therefore, the main concept of the present project is to develop a new, maintainable/sustainable plant oil-based ULV formulation containing S-methoprene active substance intended to be used for post-harvest, indoor application on cereals in closed grain storage to achieve long-term preventive control of stored grain attacking insect infestations.

RESEARCH FOCUS

Throughout this project, we will assess the complex behaviour of the formulation and the active substance in living organisms as well as in the ecosystem, and predict environmental and human fate by studying biological effects on target and non-target organisms. We will also perform detailed analysis on physico-chemical properties and metabolic, toxicological and ecotoxicological profiles and test efficacy in the laboratory, under simulated-use and practical conditions. The end-user is to receive a new sort of insecticide, that has never been used in the EU before. The larvicide to be developed will stop the cycle of insect regeneration. When used in combination with an adulticide, the end-user can be more certain of his grain protection. This way, additional income will be secured because up to 30% of grain losses can be avoided.