Introduction

Mismanagement of Agrochemicals Plastic Packaging Waste (APPW) constitutes a major environmental problem and compromises the products safety and health of consumers. Some schemes for the management of APPW have been established in a few European countries but their operational conditions and technical criteria could be improved. Thus, the established APPW management schemes in Spain (Sigfito [1]) and France (Adivalor [2]) are incompatible while they are not combined in a synergic way with the management of other Agricultural Plastic Waste (APW) categories to optimise resources and reduce cost.

The present work presents the basic design principles established by AgroChePack [3] that aims at designing an environmentally friendly and economically viable APPW management scheme in Europe by transferring know-how from existing schemes and from LabelAgriWaste [4] to establish synergy with APW, by identifying problems and bottlenecks faced by existing schemes in Europe and thorough pilot trials in five EU countries.

Material and Methods

The development of the proposed European APPW scheme is presented in the phases:

- Record & analysis of current situation scheme. Map APPW related agricultural activities, existing schemes and legal framework.

- Design principles of APPW management scheme based on a) decontamination methodologies of APPW to handle them as non-hazardous waste and b) specifications and guidelines of LabelAgriWaste adapted to technical and financial regional parameters and potential improvements and compatibility adaptations of existing schemes in France and Spain.

- In support of design of APPW management, laboratory tests were conducted to examine the reliability and to select the most efficient of the existing analysis methodologies for decontaminating the APPW to render them non-hazardous waste according to the EU hazardous waste provisions. Also a sampling methodology of the APPW was developed.

- The design of a pilot scheme of the proposed APPW management is Greece is presented.
Results/Conclusions

The design principles of an optimized integrated waste management system (*AgroChePack*) for the APPW chain in Europe are presented. The APPW management system, covering all the steps after the usage of the agrochemical until the final receiver, aims to channel the majority of the APPW to recycling and the non-recyclable to industry for energy recovery as alternative fuel.

The laboratory investigation results of different analysis methodologies for decontaminating samples of APPW to characterise them as non-hazardous were used to identify the importance of critical decontamination factors.

The pilot scheme for the implementation of the *AgroChePack* system in Greece is presented: a detailed geographical mapping of APPW generation in the region of the Municipality of Visaltia was conducted. Pilot stations were designed taking into consideration all design principles of *AgroChePack*. The first pilot trials are briefly presented.

The results of the pilot trials in Greece and four other EU countries will be used to quantify and to optimize the APPW management system.

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References

1. http://www.sigfito.es/