AGROCHEPACK

Design of a common agrochemical plastic packaging waste management scheme to protect natural resources in synergy with agricultural plastic waste valorisation

The agrochemical plastic packaging waste (APPW) mismanagement practices are one of the major sources of water, soil and air pollution in agricultural zones throughout Europe and particularly in Mediterranean.

AGROCHEPACK “Design of a common agrochemical plastic packaging waste management scheme to protect natural resources in synergy with agricultural plastic waste valorisation”, is a MED European program for territorial Cooperation co-funded by the European commission. Seven key partners covering five Mediterranean countries (namely: Greece, France, Spain, Italy and Cyprus) located in MED eligible regions where the agricultural sector plays a key role in the economy target the agrochemical packages disposal problem that has not been solved at all or, in the best cases, has not been solved with a proven optimized and uniform (throughout the region and/or across borders) waste management scheme.

Mediterranean European countries consumed 20.6 kg/ha tonnes of agrochemicals in 2003. This amount increases steadily. These countries are among the major European consumers of agrochemicals per farmed hectare, with large agricultural areas. This means that a high volume of packaging is used and should be returned for recycling or energy recovery if not recyclable.

Where no disposal scheme exists, the release of harmful substances by uncontrolled burning of APPW in the fields, or their burying, contaminates soil and water and compromises the products
safety and health of consumers, wasting resources that may be recycled or used for energy recovery. Mismanagement of APPW leads to direct pollution of productive soil and water resources with inevitable contamination of the Mediterranean Sea and ground water, already at crucial level. These serious problems affect strongly all participating countries.

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, in Spain and France the established APPW (agricultural plastic waste) management schemes are incompatible while they are not combined in a synergic way with the management of other APW categories to optimise resources and reduce cost.

AGROCHEPACK aims at designing an environmental friendly and economically viable APPW management scheme by transferring know-how from existing schemes and LabelAgriWaste\(^1\), by identifying problems and bottlenecks faced by existing schemes in Europe and by designing and implementing effective pilot schemes in Greece, Cyprus and Italy. The schemes in operation in Spain and France will benefit by adapting technical solutions developed by LabelAgriWaste.

**OBJECTIVES**

The proposed development and demonstration of an efficient, coherent, environmental friendly and economically viable APPW management system in Europe that will work synergistically with APW management to reduce costs (a major incentive for non-compliance) is expected to:

- allow transferring knowledge and the acquired experience from the existing schemes
- provide the best solution where no APPW management scheme exists
- improve the environmental soundness, cost structure, operational efficiency, coherence and sustainability of existing systems

The project results will be quantified against the benchmark performance of existing APPW schemes (Sigfito, Adivalor).

In addition to the direct environmental benefits and the protection of the natural resources, the proposed solution will contribute to enhancing health and safety of farmers, local population and consumers by the elimination of the illegal disposal of the contaminated agrochemical containers.

The development of the proposed scheme will involve from the earliest stage the participation of all interested parties (agrochemical packaging producers, farmers, waste management companies, local authorities, public and environmental associations) through the invitation of the participating local authorities. The piloting of the proposed APPW management scheme not only will test the design and allow its optimization but it will demonstrate the advantages of the proposed scheme over other existing ones and will serve as training prototype to promote its adoption.

The maximization of recovery of APPW in synergy with APW plastics (recycling and energy recovery) will enhance sustainability, prevent pollution and wasting non renewable resources (oil), protect the environment and will create employment opportunities in the areas of waste management, recycling and energy recovery.

Partners:
- Municipality of Nigrita (project coordinator) (Greece)
- Agricultural University of Athens (AUA) (scientific coordinator) (Greece)
- Agricultural Research Institute (ARI) (Cyprus)
- Fruit & Vegetables Federation (France)
- University of Basilicata DITEC – Department (Italy)
- Municipality of Cellamare (Italy)
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