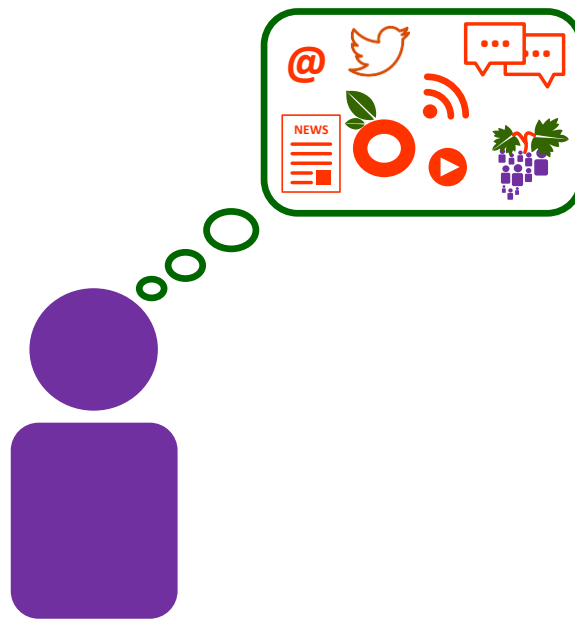




Pesticide Reduction using Friendly and Environmentally Controlled Technologies
LIFE/17/ENV/ES/000205



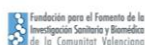
DELIVERABLE D1.7

*Database with some information on the main LIFE projects
which have relation with this project*





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A list of projects related or/and interesting for networking with the present project. For detailed information about a specific project visit its website:

- LIFE SMART IN'AIR (LIFE17 ENV/FR/000330) Applying new technology to improve indoor air quality: Hundreds of thousands of people die prematurely every year in the EU because of poor air quality. Air pollution inside buildings contributes significantly to this but improving indoor air quality is a major challenge. LIFE SMART IN'AIR aims to help by means of a technological innovation –miniaturising technology that is used to monitor levels of two of the most harmful indoor pollutants, BTEX (benzenes etc.) and formaldehyde. The project team will define best practices for reducing levels of these substances based on its analysis. It will also work towards the commercialisation of its new technology and draft a White Paper to enhance EU legislation and standardisation on indoor air quality.
- LIFE NanoEXPLORE (LIFE17 ENV/GR/000285) Engineered nanomaterials are becoming widely used in a variety of applications. However, little is known about potential impacts of sustained exposure to them in the workplace and indoors. LIFE NanoEXPLORE has set out to develop technology and outlines tools to monitor exposure to engineered nanomaterials in indoor workspaces and urban areas. The technology will be used to bio-monitor people to identify possible health impacts, including from inhalation. This new approach to nanomaterials risk assessment will be validated through a pilot study in Greece, Italy, Spain and the UK. The long-term goal is a harmonised health surveillance system and new EU policies on the safer engineered nanomaterials.
- LIFE Air & Agriculture (LIFE17 GIE/DE/000610) Reducing harmful emissions from agriculture. The industrialised production of meat and dairy emits ammonia (NH₃) and methane (CH₄), which cause severe damage to vegetation, ecosystems and health. Although the negative impacts of these emissions are widely known, there is a lack of implementation and knowledge in the legislative process and in practice. The project will focus on reducing ammonia and methane emissions from agriculture by better implementing legislation, building capacity and encouraging a change of consumption patterns. To do this it will involve NGOs in legislative processes, train relevant actors in the food sector, and improve the curriculum of agricultural vocational training.
- TOPPS (LIFE05ENV/B/0005107) (www.topps-life.org) DISAFA and UPC were partners in this project. One of the main conclusions obtained was that training, extension and dissemination activities related to the use of PPP become the best tool to improve effectiveness of the process. For that reason, in order to put in practice all the developed materials and tools for training activities, PERFECT LIFE could be considered as one step forward in the training process for EU farmers, especially for those involved in the production of what is considered “special crops” as fruit, vineyard and citrus, three key products in the Mediterranean agriculture.
- BTSFF (<https://uma.deab.upc.edu/en/training-and-extension/btsf>) The Better Training courses for Safer Food (BTSF) is a training initiative of the European Commission on food and feed legislation, animal welfare and plant health. This is the largest training program in

Europe for all Member States, for staff from candidate countries and third countries involved in official controls in these areas.

- LIFE DIOXDETECTOR (LIFE12ENV/ES/000729) (www.dioxdetector.eu) SEADM has participated in the project for the sake of the development and application of a fast, highly automated method for the determination of dioxins at ultra-trace levels. The APPI-DMA-MS technology developed was employed for the first time, for the analysis of hazardous organic compounds in a real environment. After this first 'proof of concept' PERFECT LIFE is regarded as a highly strategic project for the company, since it will allow leveraging the knowledge basis of DIOXDETECTOR in an analogous application, also with great relevance from a toxicological standpoint. In PERFECT LIFE, we will focus in the validation of analytical methods specifically adapted for the analysis of pesticides and related compounds.
- ECOPEST (LIFE07ENV/GR/000266) (<http://www.ecopest.gr>) One of the main objectives was the reduction of pollution by pesticides in water and soil. Among the approaches, one was the use of spray drift nozzles or prototype devices for a safe residues management, as Heliosec system. This technology was tested for crops such as cotton, and plum tomato and the experiences will be used in PERFECT LIFE for crops such as big fruit trees and vineyard.
- PURE: Innovative Crop Protection for Sustainable Agriculture (FP7 2011-2015) (<http://www.pure-ipm.eu/>), Coordinated by INRA. The overall objective of PURE was to provide practical IPM solutions to reduce dependence on pesticides in selected major farming systems in Europe, thereby contributing to a reduction of the risks to human health and the environment and facilitating the implementation of the pesticides package legislation while ensuring continued food production of sufficient quality. PURE provided integrated pest management (IPM) solutions and a practical toolbox for their implementation in key European farming systems (annual arable and vegetable, perennial, and protected crops) in which reduction of pesticide use and better control of pests will have major effects.
- IRRILIFE (LIFE14ENV/ES/000119) (www.irrilife.eu) FISABIO is actually partner of this project. The main objective of the project is focused on water and on irrigation systems by developing a more environmentally-friendly system for the distribution and dispensing of plant protection substances. Experiences in sampling and analysis of air and biomonitoring will be used in PERFECT LIFE.
- EU H2020, SME Instrument Phase 2. (<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/sfs-08-2015-1.html>) 'Resource-efficient eco-innovative food production and processing' SFS-08-2014 – H3O 672231. Healthy Crop, Healthy Environment, Healthy Finances – H3O: Highly Efficient Airblast Sprayer for 3D crops is designed within the Project. IVIA and UPC participate as subcontracted. As external experts they evaluate the sprayer and field and laboratory trials for the evaluation of the prototype respectively.

- Project Eurostars with reference E! 11884 FieldCompanion whose objectives are: (1) The automatic and precise adaptation of intelligent sprayers to the conditions of the field and of the plantations, which reduces the contamination of phytosanitary products in the environment while increasing the profitability of the farmers. (2) The proactive prevention of errors during the application (which require the repetition of the treatment and / or result in damage to the crop and / or crop losses), as well as the possibility of correction of the treatment error, through corrective measures of selective application. (3) The overcoming of barriers when it comes to sprayers assisted by high technology vision for special crops. This will allow FEDE to defend its technological position and differentiate it from its competitors in the key area of intelligent agricultural machinery with services.
- FITOVID (LFE13ENV/ES/000710) (www.fitovid.eu) UPC is currently participating in this project - Implementation of Demonstrative and Innovative Strategies to reduce the use of phytosanitary products in viticulture. The main objective of this project is to develop alternative methods and promote best management practices to reduce the use of pesticides in vineyard. Most of the obtained results and conclusions of this project will be implemented in the current proposal.
- EUROCHAMP 2020 research infrastructure (H2020 GA730997), (www.eurochamp.org) EUPHORE infrastructure from CEAM, which gathers the most advanced atmospheric simulation chambers in Europe. Data sets from PPP degradation in the atmosphere will be incorporated into the EUROCHAMP 2020 database.
- NEFERTITI (H2020) (<https://nefertiti-h2020.eu>) Project Networking European Farms to Enhance Cross Fertilisation and Innovation Uptake Through demonstration (NEFERTITI) is a unique 7 M€ Network (selected under Horizon 2020, Societal Challenge 2, RUR 12-2017 call) comprising 32 partners and coordinated by ACTA, the head of Network of the French Agricultural Technical Institutes.
- OPTIMA (H2020) (https://cordis.europa.eu/project/rcn/214745_es.html) A European project Optimized Pest Integrated Management to precisely detect and control plant diseases in perennial crops and open-field vegetables (OPTIMA), whose objective is to develop intelligent equipment for the application of phytosanitary products to achieve the safe use of products. The new technology that results will contribute to make an adequate distribution of phytosanitary products in the needs of crops and reduce the quantities used, improving the quality of the food produced and reducing the risks of environmental contamination.
- EUCLID (H2020): EU-CHINA Lever for IPM Demonstration (2015-2019) (<http://www.euclidipm.org/>) ; Coordinated by INRA. The overall objective is to secure food production for the increasing worldwide population while developing sustainable production methodologies to fight pests with an Integrated Pest Management approach (IPM), to be used in European and Chinese agriculture. EUCLID research activity aims at developing more sustainable pest management methods in Europe and China in order to reduce the negative effects of pesticides on human health and the environment, to reduce

economic losses in agriculture, and to provide scientific support to EU and China policies. Tomatoes, leaf vegetables and grapes are the main crops of research, due to their economic relevance in the targeted markets; however, research outcomes will also have an impact on other crops. In addition, the project will consider the entire food product chain from agriculture to the final consumers.

- INNOSETA (H2020) (<https://uma.deab.upc.edu/en/h2020/innoseta>) The main objective of the INNOSETA project is to establish a self-sustaining and innovative thematic network on crop protection and the sustainable use of plant protection products (spray equipment, training and advice) to help close the gap between the numerous European research projects and the use that farmers make of all this. The project promotes the exchange of new ideas and information between the industry, the university and the research centers and the agricultural community so that existing scientific and commercial solutions can be widely disseminated and applied, while identifying the needs of the sector. The aim is to eliminate the gap between the scientific world and the agricultural sector, in relation to the objectives set by the Commission of Agriculture of the European Commission.
- HBM4EU science and policy for a healthy future (H2020) The main aim of the initiative is to coordinate and advance human biomonitoring in Europe. HBM4EU will provide better evidence of the actual exposure of citizens to chemicals and the possible health effects to support policy making. The HBM4EU initiative represents a novel collaboration between scientists and chemical risk assessors and risk managers from 28 countries, including several Commission services, EU agencies and national representatives. The project will build bridges between the research and policy worlds and deliver benefits to society in terms of enhanced chemical safety.
- LowCarbonFeed (LIFE16/CCM/ES/000088) The LowCarbonFeed project contributes to a transition towards an economy which is efficient in terms of the use of resources, low carbon and climate resilience, as one of the climate objectives pursued by the LIFE programme. Life Low Carbon Feed employs new methods and innovative practices to achieve the effective recovery of agricultural, citrus and rice waste and turn it into new animal feed capable of reducing CH₄ emissions in ruminants, thus mitigating climate change related to agriculture and livestock breeding.

There are also several other projects from the FP7 and H2020 focused on the minimization of contaminants from agriculture, although in general terms they pay more attention to contamination in water and soil, but not in air. Techniques and experiences from the other environmental compartments will be checked in the present project.