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Participants of FITOSCEREZO are Federación Española de Asociaciones de Productores Exportadores de Frutas, Hortalizas, Flores y Plantas vivas (FEPEX); Agrupación de Cooperativas Valle del Jerte (ACVJ); Asociación de Empresarios Agrícolas del Margen Derecho del Ebro (AEAMDE); Asociación Empresarial para la Protección de las Plantas (AEPLA); Centro Tecnológico Nacional Agroalimentario Extremadura (CTAEX); Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA): (Departamento de Protección Vegetal and Unidad de Productos Fitosanitarios); DEVREG CONSULTA SLU.

The general objective of the project is to design and develop a new program of integrated control of pests and diseases for the cherry tree crop, in order to adapt it to Directive 2009/128/CE. The aim is to promote the availability and registration of new plant protection products for cherry-growing and thus ensure the sustainability of the crop. Specific non-chemical methods and new active substances or new plant protection products will be incorporated. Also, the residues of plant protection products in the fruit will be verified.

The main activities of the project are the following:

R1- Methods for estimating pest and disease risk, decision support systems and determination of thresholds and times of intervention, for pest and disease control in cherry-growing in Extremadura and Aragón.

R2- New systems of preventive and / or curative management of pests and diseases in the cultivation

R3- New phytosanitary products available and registered

R4- Determination of residues of selected plant protection products

R5- Demonstration trials of the new integrated pest and disease control programme

R6- Assessment of the effect of the new program: economic, on biodiversity and environmental waste.

R7- Results report and conclusions of the project activities.

Spain is the sixth cherry producing country in the world, (FAOSTAT, 2018). Cherry tree crop in Spain represents more than 27,000 ha, an area that is increasing as well as the production and yield of the crop, which is close to 5,292 kg/ha. Extremadura and Aragón concentrate more than 64% of the total area dedicated to this crop.

Control of cherry diseases and pests, which cause significant losses in fruit production and quality, exponentially increasing production costs, and often carrying risks of residues in the fruit or contamination of the environment by toxic products. The control of diseases and pests of the cherry tree is especially pressing in those areas of Spain such as Valle del Jerte (Extremadura) or Right Bank of the Ebro River (Aragón) that concentrate more than 64% of the total surface of the cherry tree in Spain, and where this crop is one of the key sources of income. The importance of diseases and pests in cherry cultivation has increased in recent years given the introduction of new harmful agents in the national territory, helped by globalized trade, the reduced number

of active substances available for its control and even development of pest insects and phytopathogenic fungi resistant to commonly applied products. On the other hand, the sector faces the need to compete with third countries where the cost of labour is lower and where in turn they have a greater number of products for the control of pests and diseases, which ensure a stable production.

Pests and diseases that regularly attack the cherry tree are the black aphid (*Myzus cerasi*), the cherry fly (*Rhagoletis cerasi*), spider mites, thrips and the recent presence of *Drosophila suzukii*, in addition to phytopathogenic fungi such as *Monilinia* spp., *Stigmata carpophila*, *Apiognomonium erythrostroma*, *Blumeriella jaapi*, *Gnomonia erythrostroma* and other tree root and neck diseases. Although plant health services promote the application of integrated control on this crop, the defence against pests and diseases is usually based on the use of chemical synthesis insecticides and fungicides. However, the control of these pests and diseases is hampered by the low availability of active materials in the cherry tree, as it is considered a minor crop, in addition to the need to adapt the phytosanitary control of this crop to the provisions of the 2009 Directive/128/CEE and Royal Decree 1311/2012, of September 14, which establishes the framework for action to achieve a sustainable use of plant protection products.

Plant protection products are necessary under integrated production systems, since the losses caused by pests and diseases in many cases make the infeasibility of many crops in production areas of great economic and social interest, and even the possibility of keeping crops stored.

One of the challenges of the recent Green Deal strategy published by the European Commission is the reduction of the use of plant protection products that can represent a risk. This challenge obliges to develop and promote control techniques of pest and disease based on the Integrated Pest Management and to reduce the use of pesticides in favour of other control measures, low risk pesticides and biopesticides. The actual IPM protocols for cherry does not include a specific estimation of the risk of pest and diseases and the threshold values of them that should be applied in the different regions for taking decision. It is urgent and necessary to identify specific non-chemical methods for control of pest and diseases in cherry crop in the regions that are object of this project.

Finally, cherry crop is a minor use in Spain and the availability of plant protection products for this crop is scarce, so the search for phytosanitary solutions (chemicals and non-chemicals) for this crop becomes more urgent. There is another objective of this project that is the development of knowledge and information to facilitate the registration of plant protection products for this crop.