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Efficiency of the EPPO protocol for preventing the introduction and dissemination of *Erwinia amylovora* in two Spanish areas

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Fireblight was first detected in the Basque Country (Northern Spain) in 1995. Since then, measures were taken to eradicate the disease, in order to prevent its fast spread to other important Spanish fruit production areas and to preserve the protected zone status of Spain in the EU. At the same time, all the other Spanish regions reinforced its survey activity, including the analyses of symptomless plants. We present here the results of two different approaches of analyses that were adopted in function of the specific situation and of the development of the disease.

In the Valencian Community, the pathogen has never been detected. The movement of ornamental plants is very active in the nurseries and the loquat cultivation represents the most important loquat production area in Spain. Visual inspections of orchards, gardens and nurseries and analyses of asymptomatic material from nurseries are carried out every year. The EPPO protocol for the detection of the pathogen in asymptomatic plant material was followed. From 1996 to 2008, more than eight thousand plant samples have been analysed, both from asymptomatic plants in the nurseries and from the field with unspecific symptoms. They were all negative for *E. amylovora* and the protocol utilised has shown its usefulness. This approach has revealed the presence of other pathogens as *Pseudomonas syringae* pv. *syringae*, other species of *Pseudomonas* and the detection of a novel *Erwinia* sp., (proposed as *E. piriflorinigrans*) different from those previously described.

In Aragon, the pathogen was detected in 1998 in ornamental plants in the North of the region and the disease eradicated since then. However, in 2000 fireblight was found in several orchards in the central part of the region, in a pear and apple production area. The eradication was performed based in intensive surveys, fast and strong elimination of the affected trees and those trees surrounding them, and economic compensation to the growers. Exhaustive analyses were performed in several plots to evaluate the amount of inoculum present after the eradication. As an example, in 2002 and 2003, more than thousand analyses of asymptomatic pear samples were performed by using the techniques of the EPPO protocol and they were all negative with one exception. Furthermore, bees, flies, pollen, water and soil were also analysed with the same negative result. These analyses were confirmed by the lack of new fireblight outbreaks in the area demonstrating that the inoculum was completely eliminated.

The accuracy of the different techniques employed for *E. amylovora* detection in the types of plant material tested and in other possible inoculum sources is discussed based on the results obtained.