GENERALITAT VALENCIANA

efsa European Food Safety Authority | XF ACTORS

3rd European Conference on
Xylella fastidiosa and XF-ACTORS final meeting

What research needs in the outbreak areas? A risk manager perspective

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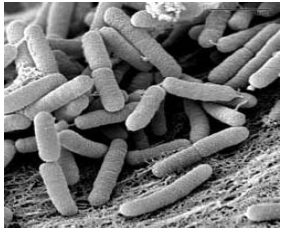


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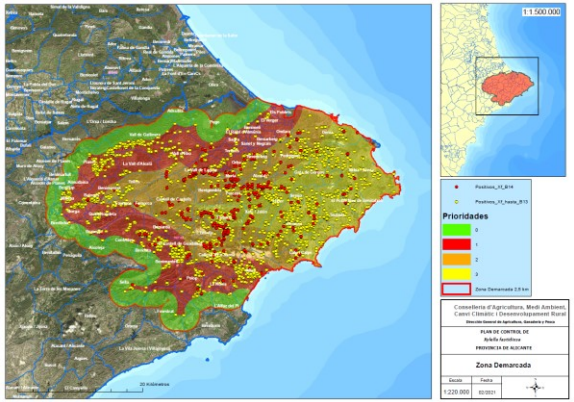
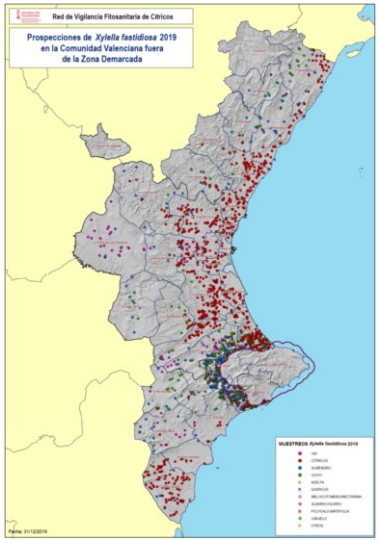
XYLELLA FASTIDIOSA OUTBREAK DETECTED IN JUNE 2017

XYLELLA FASTIDIOSA OUTBREAK DETECTED IN JUNE 2017

- Demarcated Area: 128.000 ha, Infected Zone: 2.300 ha
- Surveys in place (57.000 samples in DA and 23.000 in NDA)
- Eradication measures (129.000 trees removed, mainly Almonds, 1.970 ha eradicated)
- 2.500 ha treated with insecticide (pyrethroids) for vector control and 27.000 additional ha treated by growers
- Strong restrictions for plant propagation material movement (63 nurseries affected)
- Road, airport and port controls
- Awareness campaigns
- …





XYLELLA FASTIDIOSA OUTBREAK DETECTED IN JUNE 2017

XYLELLA FASTIDIOSA OUTBREAK DETECTED IN JUNE 2017

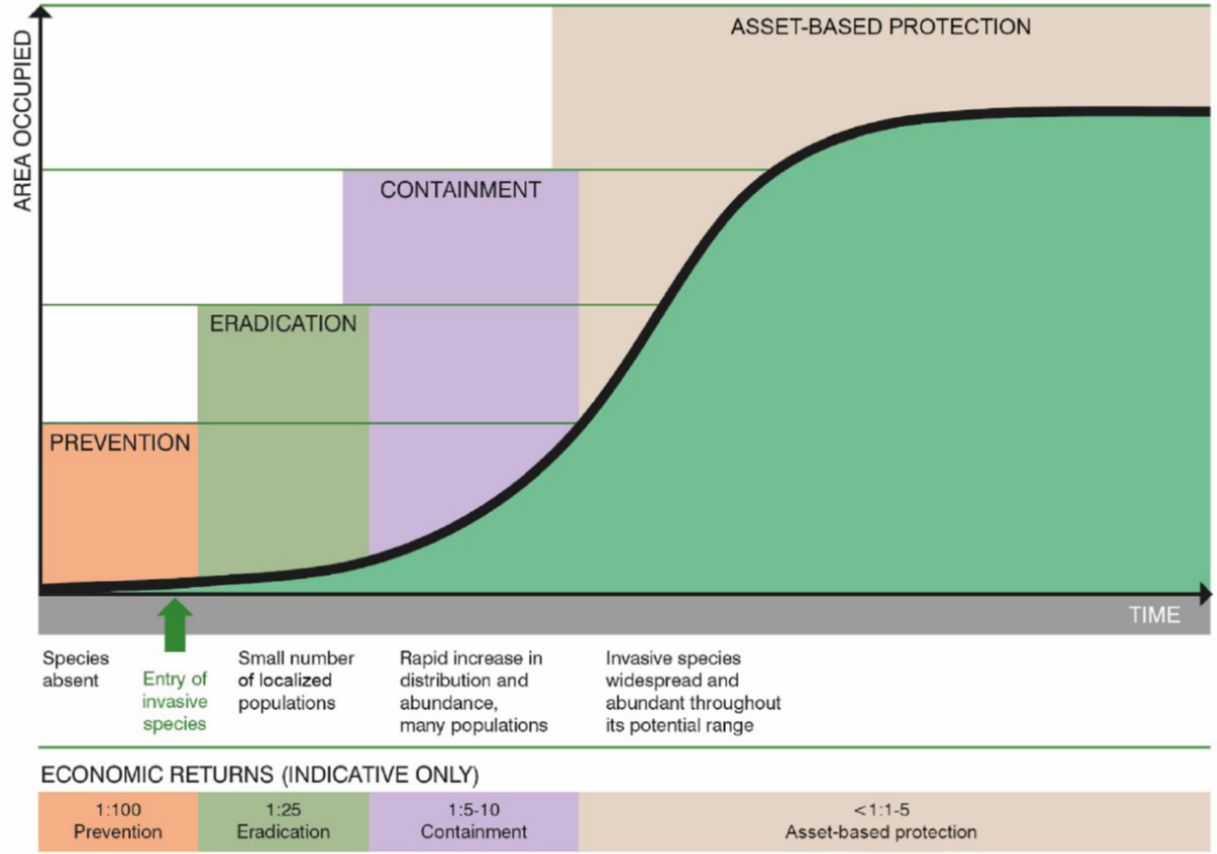
Huge amount of resources required:

Human resources:	**142**
- Surveys:	32
- Eradication and treatments:	56
- Lab. and analysis:	21
- Plant material movement control:	20
- Administrative and legal staff:	13

More than 19,6 Million € spent in less than 4 years (GVA, ES, EU) Diciembre 2020

Highlight the **importance of research** to adapt regulations and to make an **efficient use of resources** to stop *Xylella fastidiosa* spread in the EU

PREVENTION AND EARLY DETECTION ARE KEY FACTORS

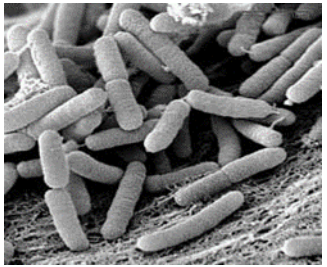


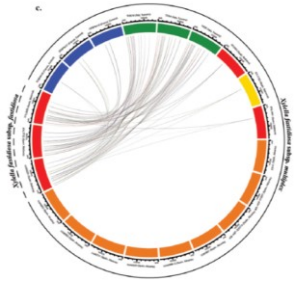
Pest invasion curve and actions at different stages. (Source: PARM (2017)).

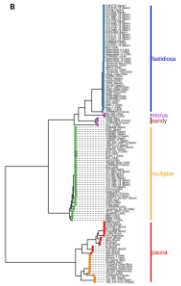
WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

Xylella fastidiosa BIOLOGY, ECOLOGY and GENETICS

- Genetic studies for better understanding of differences of infection in different host plants (eg. *Prunus*, rootstocks)
- Where remains the bacteria in deciduous species out of the sampling period? (broaden sampling period)
- Is there any seed transmission? (nurseries, eradication measures)
- Any other means of spread? e.g. pruning



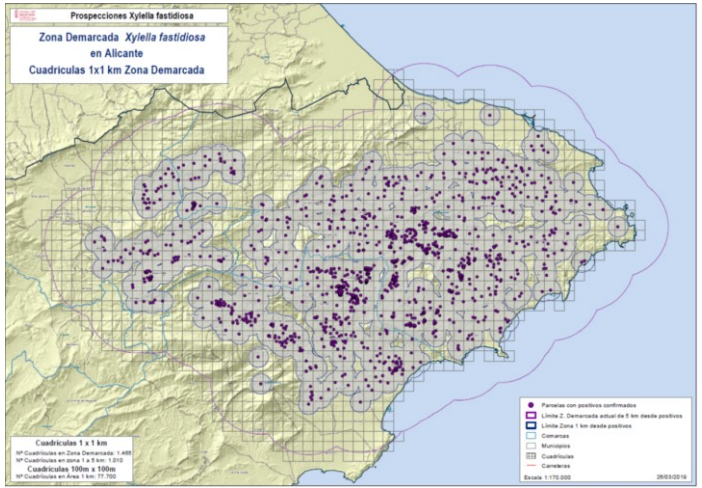


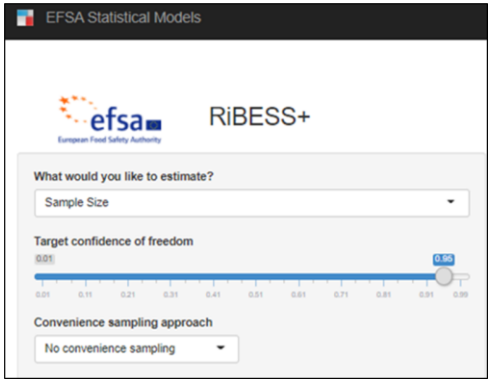


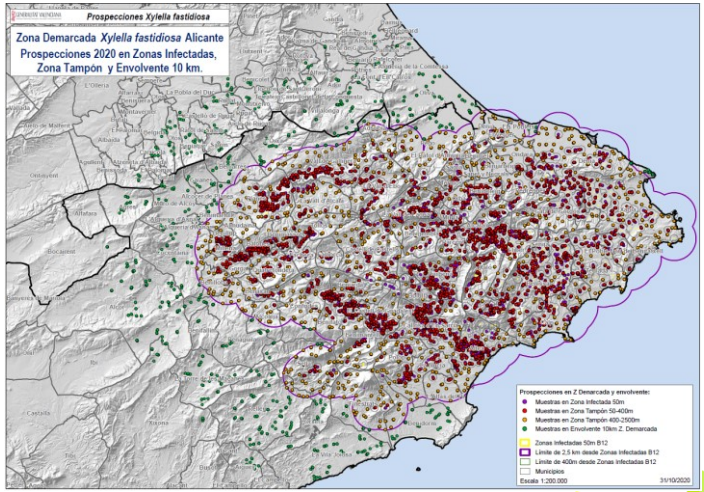
WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

Xylella fastidiosa SURVEYS

- Risk based surveys: reducing the number of samples but maintaining the level of detection
- Broaden the sampling period (to reduce the peak season)







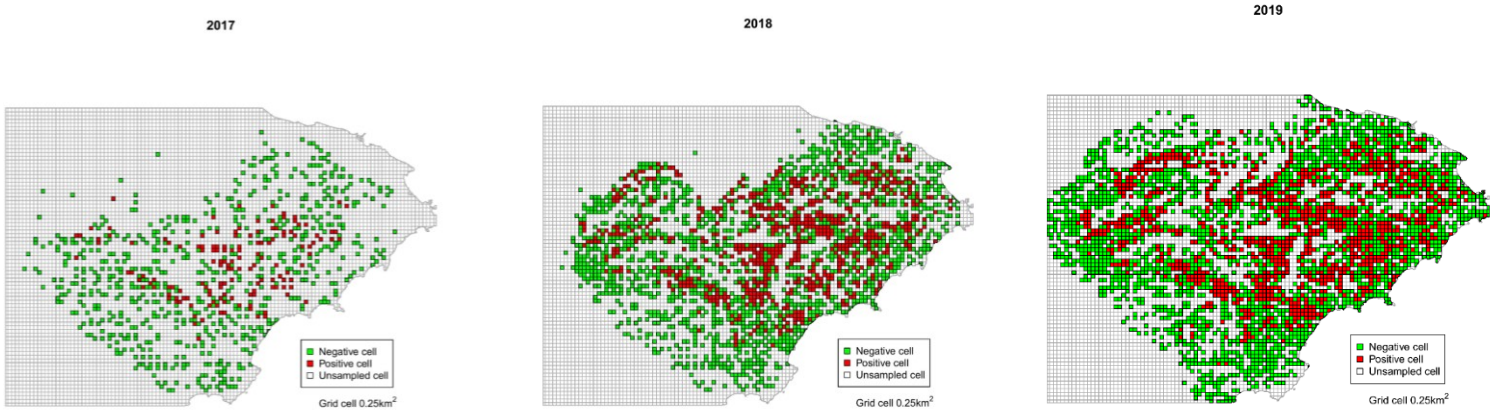
80.000 samples

15.000 samples

WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

Xylella fastidiosa SURVEYS

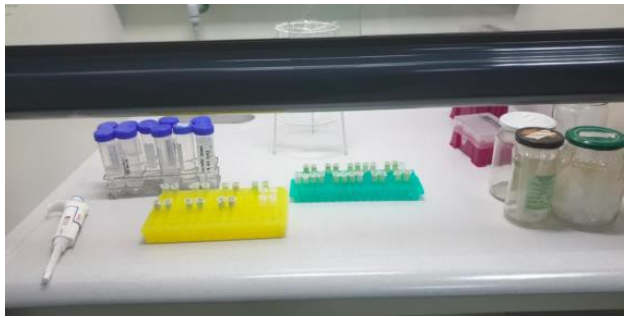
- Accurate delimitation of infected zones
- Modelling to estimate disease dynamics in space and time
- GIS development and adaptation for *Xf* requirements
- Better knowledge of the "local" bacteria and its possible host plant range



WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

LABORATORY

- Pooled sampling and analysis
- Accurate, consistent, quick and affordable diagnostic
- Samples storage in the peak season
- Parts of plants for sampling and optimal sampling period to improve method sensitivity



WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

ERADICATION

- Find a treatment to cure infected plants (reduced impacts)
- Effectiveness of removal only the plant species showing the disease in each area
- Find measures to avoid re-sprout of eradicated plants
- Improvement of eradication techniques (quick and effective…)

WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

VECTORS

- Finding the most effective treatment to reduce insect populations
- Finding a feasible treatment to suppress insect transmission
- More eco-friendly control measures (BCA, …)
- Knowledge of effective dispersal ability in natural conditions and requirement of control measures

WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

RE-PLANTING IN INFECTED ZONES

- Studies for legal alternative species
- Studies for economically viable alternative species (rainfed/irrigated)
- Development of resistant varieties of specified plants

WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

PLANT PROPAGATION MATERIAL FROM DEMARCATED AREAS

- Studies of thermotherapy in other plant species than *Vitis*
- Other quarantine treatments prior to plant movement
- Asymptomatic pooled sampling and analysis (oleander, lavender, rosemary, fruit trees, vineyard…) adapted to the subspecie and ST

WHAT RESEARCH NEEDS IN THE OUTBREAK AREAS?

AWARENESS RAISING

- R&D consistent results (communication of partial or inconclusive information generates lack of confidence in the public)
- More events addressed to the general public
- Generate official communication actions, including response to fake news

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Thanks for your attention

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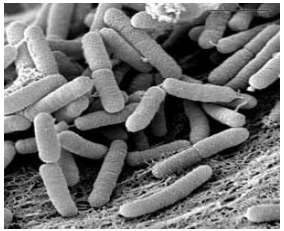


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