PROTECTING PLANTS, PROTECTING LIFE

SCIENTIFIC RESEARCH AND ITS APPLICATION TO THE CONTROL PROGRAM OF THE FASFC

INTERNATIONAL YEAR OF PLANT HEALTH 2020

Belgian scientific plant health symposium
Jan Van Autreve – 15/10/2020
Federal Agency for the Safety of the Food Chain (FASFC) = “Food Safety Agency”

- **Mission:** to preserve the safety of the food chain and the quality of our food in order to protect the health of humans, animals and **plants**.

- **Competences:**
  - Operational regulations
  - Registration, authorization, approval of operators
  - Export certification
  - Prevention, awareness and information
  - Surveillance of the different links in the chain (products and productions processes)
FASFC Organization

Chief Executive Officer
Quality – Communication – Crisis prevention and management

Control
Central coordination

9 Local Control Units
On-site controls

Border Control Points
Import controls

National Investigation Unit
Control of fraud

Control Policy

Policy & programmation

Plant protection and safety of plant products

Animal health and safety of animal products

Processing and distribution of foodstuffs

International affairs

Risk assessment

Laboratories

Central administration services
coordinates a network of 50 external partner laboratories + 5 FASFC laboratories

Corporate services
Support

P&O

Finance department

Budget and management control

ICT

Logistics

Legal Department
Control program plant health:
Surveys and Import Controls

- Plant health legislation: harmonized in the EU.
- Plant Health Regulation (EU) 2016/2031: proactive approach with focus on prevention of introduction of pests into the EU.
  - focus on preventive measures, thorough surveillance of the territory and preparedness for possible outbreaks
  - Stricter phytosanitary import controls on plants and plant products from third countries
Control program plant health: Surveys and Import Controls

- 230 quarantine pests -> 20 priority pests: mandatory surveys (e.g. Xylella fastidiosa, Anoplophora chinensis, Bactrocera dorsalis)

- Pests subject to Union measures (e.g. Tomato brown rugose fruit virus, Rose Rosette virus)

- Pests known to occur in the Union territory with containment measures (e.g. Clavibacter sepedonicus, Globodera pallida)

- Other (emergent, risk based)
The core process of the FASFC

1. Programming according to risk and self-checking
2. Planning based on programming
3. Implementation of the plan by the PCUs (Inspections, controls, audits, results of analyses)
4. Performing of analyses by the laboratories
5. Reports (observations, inspections, controls, audits, results of analyses)
6. Assessment by the Scientific Committee
7. Input stakeholders
8. RASFF and various informations e.g. Research

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Example 1 (1)
Xylella fastidiosa

- Priority pest
- Associated with serious diseases in a wide range of plants
  - olive quick decline syndrome, Pierce's disease in grapevine ...
- Interaction between the bacterium, host plants, insect vectors (xylem-sap feeders) and environmental conditions
  - different subspecies, sequence types, associated with different host ranges
- Present in Italy, France, Spain, Portugal
  - apart from an isolated detection (2018) on recently introduced olive trees, not in Belgium

Photos: Donato Boscia, CNR - Institute for Sustainable Plant Protection, UOS, Bari (IT); Françoise Petter (EPPO)
Example 1 (2)
Xylella fastidiosa

- Most information about host plants, vectors described from the conditions in European Mediterranean countries and in the Americas
- Survey on the Belgian territory: need for information on local possible host plants and vectors
- Same info also needed for measures in the event of a finding or outbreak
Example 1 (3)  
Xylella fastidiosa

- => XYLERIS:
  - Fitness of *Xylella fastidiosa* in plant hosts and vectors in Belgium with investigation of specific plant growth conditions on disease development

- => XYFABEL:
  - The fate of *Xylella fastidiosa* in common woody plant species in Belgium and the analysis of communities of endophytic xylem-inhabiting bacteria as possible markers for its presence and activity

- => X-FAST:
  - Biological characteristics of potential vectors of *Xylella fastidiosa* to support sampling and containment procedures

Photos: Donato Boscia, CNR - Institute for Sustainable Plant Protection, UOS, Bari (IT); Françoise Petter (EPPO)

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15 October 2020
Example 2 (1)
Non-EU *Tephritidae* (fruit flies or fruit borers)

- major economic damage in fruit and vegetable growing and horticulture sector
- listed as Union quarantaine pests
- 4 of them as EU priority pests: *Anastrepha ludens*, *Bactrocera dorsalis*, *Bactrocera zonata* and *Rhagoletis pomonella*
- regularly intercepted on imported fruit and vegetables

Photos: Scott Bauer USDA; Johan Witters, ILVO.
Example 2 (2)
Non-EU *Tephritidae* (fruit flies or fruit borers)

- Import interceptions: fast identification needed (notifications, measures ...)
- =>TEPHRIFAST: development of a fast identification method for fruit flies in phytosanitary controls
- Survey on the Belgian territory: most suitable risk locations, appropriate approach with the highest reliability at a justified cost
- =>TEPHRISURV: developing effective methods for the surveillance of non-European Tephritids on Belgian territory

Photos: Scott Bauer USDA; Johan Witters, ILVO
Information from scientific sources, scientific research applied to the control program of FASFC

- National and European reference laboratories
- Scientific Committee of FASFC
- Knowledge and research stations
- Many other Belgian and European projects
- EFSA
- EPPO
- FASFC laboratories
- Universities
- ...
Special thanks

to the researchers

to my colleagues in the different FASFC services

Thank you for your attention!

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