

Xylella fastidiosa:

Imminent risk to food security in
Near East and North Africa Region

One Health and transboundary
plant pests and diseases

The issue

The first report of *Xylella fastidiosa* (XF) in southern Italy in 2013 has triggered great anxiety for agriculture business in the Mediterranean region. The presence of such a pathogen poses a serious threat to crop production, food security and employment in the region's rural areas. The pathogen has the ability to infect 560 plant species and spread through insect vectors. The favourable climatic conditions, the abundant insect vectors and the wide distribution of host plants would foster the spread of the disease. Propagation materials are considered the most likely means of long-distance spread. Thus, the risk for Near East and North Africa (NENA) countries has enlarged as they are the main importers of plant propagation. For these reasons, such a "silent killer" requires an effective surveillance system to be operational before significant damage can be noticed, to act as an early warning system.

The action

Food and Agriculture Organization of the United Nations (FAO) launched a Regional Technical Cooperation Project (TCP) to support NENA countries in enforcing preventive measures against the introduction and spread of *X. fastidiosa*. FAO has provided training workshops, seminars, laboratory equipment, technical documents, awareness materials, and recently evaluated the potential socio-economic impact of the diseases on NENA countries. Support is needed still in the following areas:

Policy support (USD 8.5 million)

- enforcing and reforming the phytosanitary systems in NENA countries; and
- updating national contingency/action plans and providing the needed tools for implementation.

Research (USD 3 million)

- identification of potential insect vectors of *X. fastidiosa* in NENA countries;
- prediction of the effect of climate change on disease development;
- building regional laboratory network to harmonize protocols for detection; and
- identification and development of local cultivars with inherited genetic resistance/tolerance for *X. fastidiosa*.

Capacity building (USD 25.5 million)

- plan and implement an efficient and cost-effective surveillance programme;
- development of the capacity of phytosanitary officers in inspection and sampling, national/regional platform for knowledge sharing;
- improvement of technical capacity of plant quarantine at entry and post entry points;
- development and application of innovative surveillance methods; and
- improving capacities of farmers in prevention, detection and containment of the disease through farmer field schools.

The issue in numbers



X. fastidiosa was detected in Europe in 2013, causing the death of
6.5 million olive trees



Estimated cost in Europe
EUR 20 billion



Estimated losses in NENA
2.3 million tonnes of crops
with value of
USD 1.3 billion



Around **92 million jobs** will be lost

Programme targets



10 phytosanitary legislations updated



Surveillance programme covers **10 percent** of Xf host plants



10 inventories of Xf vectors



Train **500** farmers as master trainers on surveillance



Accredit **20** laboratories



Farmer field school guide for *X. fastidiosa*



Awareness campaign for **100 000** farmers



125 reinforced quarantine entry points



10 Pest Risk Analysis studies and national contingency/action plans updated

The budget



USD 37 million



5 years



10 countries

Xylella fastidiosa: Imminent risk to food security in Near East and North Africa Region

©University of Stirling



Expected results

- policies and regulations on phytosanitary and quarantine management strengthened;
- phytosanitary system enforced in NENA region;
- network of accredited laboratory established;
- efficient surveillance programme of *X. fastidiosa* established in NENA region;
- innovative tools to detect *X. fastidiosa* implemented;
- potential insect vectors of *X. fastidiosa* identified in NENA countries; and
- quarantine stations reinforced.

Geographic focus

The programme is regional in scope, encompassing, but not limited to, the 10 countries of the NENA region (Algeria, Egypt, Lebanon, Jordan, Iraq, Libya, Morocco, Syrian Arab Republic, Tunisia and the West Bank and Gaza Strip) to prevent the spread of the disease. The technical assistance will be provided in the form of establishing a harmonized regional surveillance system, enforcing and coordinating risk communication efforts among countries, strengthening their preparedness, improving their capacities in disease prevention, diagnosis and management.



SDG contribution

This initiative contributes to the following sustainable development goals (SDGs):

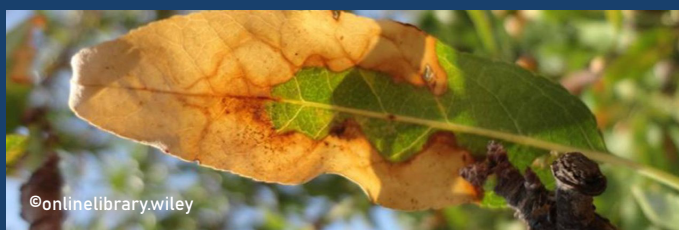


Success story

FAO efforts were fruitful in achieving some outstanding outcomes like the ability of Egypt and Tunisia to intercept imported plant commodities infected by *Xylella fastidiosa*, using the new technology introduced to the national phytosanitary systems by FAO.

In partnership with

FAO coordinates and manages the programme in collaboration with partner countries, donors and international organizations and Near East Plant Protection Organization "NEPPO" and the Mediterranean Agronomic Institute of Bari (IAMB-CIHEAM) and the 10 countries of the NENA region (Algeria, Egypt, Lebanon, Jordan, Iraq, Libya, Morocco, Syrian Arab Republic, Tunisia and the West Bank and Gaza Strip).



©onlinelibrary.wiley



Why to invest?

Preventing the introduction of *X. fastidiosa* into NENA countries will:

- Avoid crop losses of **2.3 million tons (olive grape and citrus)**, with approximate value of **USD 1.3 billion**; that will cause in decreasing profitability of running olive farming business with **around 37-83 percent profit margin losses**;
- Prohibit exportation loss is at **around 170 000 tons of olives, citrus, grapes; and**
- Prevent the losses of **92.3 million days of employment**.

Contact:

Regional Office for the Near East and North Africa Region

For more information:

Website: www.fao.org/neareast
Email: RNE-Communications@fao.org
Twitter: FAOinNENA_EN



Some rights reserved. This work is available under a CC BY-NC-SA 3.0 IGO licence