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# Regulations enforced against *Xylella fastidiosa* in Jordan

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The olive tree is one of the most important traditional cultivated trees in Jordan from economic and social perspectives. It is an essential part of the cultural heritage. The total area planted with olive in Jordan is about 120 000 hectares. This corresponds to approximately 73% of the total fruit trees and 36% of the total cultivated area. The estimated number of olive trees is 15-20 millions. The production of olive fruit was about 200 000 tonnes in 2015 compared to 155 640 tonnes in 2012. Olive oil production was about 29 611 tonnes in 2015, and 21 548 tonnes in 2012. Olive production is the main source of income for around 85 000 Jordanian families. The olive Unit Directorate in the Ministry of Agriculture plays an important role in supporting and improving the cultivated olive crop within the agricultural sector.

In addition to olive trees, other fruit trees are major cultivated crops in Jordan especially grape (production of 47 131 tonnes), almond (9 981 tonnes), peach (59 058 tonnes), citrus trees (120 087 tonnes). The total production of fruit trees was approximately 275 461 tonnes in 2014. Production areas of fruit trees are reported in Table 1. Therefore, destructive pests, such as the bacterium *Xylella fastidiosa*, can destroy these crops and would have a serious impact on the livelihood of the farmers in Jordan.

**Table 1. Areas of commercial production of fruit trees in Jordan in 2014 (ha).**

Provinces	Olive	Grape	Citrus	Fruit trees	Total
Amman	12546.8	1102.6	8.3	1307.8	14965.5
Madaba	6105.1	802.8	1.2	542	7451.1
Zarqa	15140.8	1244.6	12.9	708.3	17106.6
Irbid	25099.1	489.8	18.3	1325.7	26932.9
Jerash	6977.8	681.4	713.6	785.1	9157.9
Ajloun	11913.5	3715.1	64.8	343	16036.4
Al mafraq	23885	1418.1	1	5757.1	31061.2
Al balqa	3926.2	3230	86.5	3818.3	11061
Karak	2629.5	1418.1	19.6	289	4356.2
Tafila	2629.5	376	15.6	430.5	3451.6
Maan	1712	200.6	10	2613.8	4536.4
Aqaba	608.5	143.3	36.7	421	1209.5
Jordan valley	372.5	94.6	6946.6	2410.2	9823.9

Plant Quarantine is an important part of the Ministry of Agriculture. The Plant Protection & Phytosanitary Directorate is divided into three sections: Phytosanitary, Pest Risk Analysis, and Pesticide Registration. The Plant Health Laboratories Directorate are divided into three laboratories: Phytosanitary Laboratory, Pesticide Residue Laboratory, and Formulation Laboratory. There is a close cooperation of the Plant Protection & Phytosanitary Directorate with Jordan Universities the National Center for Agriculture Research & Extension (NCARE) on many topics concerning agriculture.

The Plant Quarantine issues are discussed by the Phytosanitary committee, which consists of: the Plant Protection & Phytosanitary Directorate, the Plant Health Laboratory Directorate, the Faculty

of agriculture/plant protection/University of Jordan, NCARE, Agriculture Marketing Directorate, private sector/Jordan Exporters and producers Association for fruit and vegetables (JEPA).

Since the bacterium *Xylella fastidiosa* was found to infect olive trees causing “Olive Quick Decline Syndrome” in the region of Puglia in Southern Italy, and EPPO declared the first report of *Xylella fastidiosa* in Europe in October 2013, Jordan implemented procedures to prevent the entrance of any host of *Xylella fastidiosa* to the country as reported in the regulation reported in Annex.

The scientific name and common name of imported plant material should be written on the phytosanitary certificate.

The infrastructure of the Phytosanitary & Bacteriology Laboratory in Plant Health Directorate should be upgraded for the detection of *Xylella fastidiosa* in imported plant material.

The current plans for *X. fastidiosa* are:

- survey on different host plants in Jordan;
- training;
  - technical training for staff from Plant protection and Plant Health Directorate;
  - diagnostic training for Border Staff and Extension Agents;
  - specialist training for bacteriologists and entomologists for detection techniques and methodology;
- awareness campaign for Farmers and Extension agents in cooperation with NCARE through field days, publications and media;
- upgrade of infrastructures of the Phytosanitary Laboratory including Real-time PCR, PCR, Immunofluorescence microscope.



### **Ministry of Agriculture Regulations of the Hashemite Kingdom of Jordan**

The status of regulations that have been issued in Jordan against the devastating pathogen *Xylella fastidiosa* is as follows.

According to the Agriculture law No. 13/2015 and plant quarantine regulations No. z-19/2016:

The import of seedlings from Italy, France and Iran, and from other countries in which this disease is listed as present, complies with the following conditions:

The import of seedlings from non-host plants of *Xylella fastidiosa* is allowed.

The import of seedlings from *Xylella fastidiosa* - free areas is allowed; this is mentioned in the additional declaration on the phytosanitary certificate.

The import of seedlings from host plants of *Xylella fastidiosa* from Italy, France and Iran, and from other countries in which this disease is listed as present is not allowed.

Eng. Kholoud Aranki, Director of Plant protection & phytosanitary Directorate, Ministry of Agriculture. Amman, Jordan