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Capacity Building And Raising Awareness In Europe And In Third Countries To Cope With *Xylella fastidiosa*

LARI

CURE-XF Kick-off Meeting
CIHEAM Bari 28-29 September, 2017

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Lebanese Agricultural Research Institute

- **short description:** LARI is a governmental organization under Minister of Agriculture Supervision established since 1957. The institute conducts applied and basic scientific research for the development and advancement of the agricultural sector in Lebanon. In addition, the institute keeps close ties to the farmers and tries to develop research activities aiming at solving their problems. The Managing Board of LARI provide researcher autonomy in selecting research projects and finance these projects completely or in collaboration with other locally or international organizations. Many international agencies and Institutes such as FAO, UNDP, ICARDA, CIHEAM-IAM BARI, CIHEAM-Chania, CNR-Italy, CNR-IBBR, CNR-ISAFOM and IFAPA collaborate and share experiences with LARI in many research projects.
- **location (s):** The LARI has at its disposal twelve experimental stations (Tal Amara, Fanar, Tourbol, Kfardan, Kfarchakhna, Abdeh, Tyr, Lebaa, Hermel, Kleiat, Hasbaya and Baakline) located in agricultural areas where subtropical and temperate corps are produced. The headquarter is Tal Amara station, in Bekaa valley.
- **staff number:** around 400 employees among them 13 researchers (PhDs).
- **Main activities:** **Six research titles: Plant science:** crop production, **crop protection,** plant breeding, seed technology, biotechnology, olive and olive oil production, pomology and viticulture, pasture and forage production, medicinal plants;
- Soil science
- Animal science
- Environmental sciences
- Food science
- Economic science

Main facilities

- **Labs:** Many different labs are involved in Plant Protection sector.
- (a) The Department of Plant Protection was established at Tal Amara station in 1998, then was developed and well equipped in order to ensure standardized and sensitive methods for identifying the major viruses, viroids, phytoplasmas, fungi and bacteria and other agents of quarantine diseases of fruit trees and vegetables. Several laboratories are present in the Department: (i) Laboratory for Plant Virology and Phytoplasma diseases; (ii) Laboratory for Plant fungal diseases; (c) Laboratory for Plant Bacterial diseases and (iv) Laboratory for molecular analysis including nucleic acids extraction, conventional PCR and electrophoresis.
- (b) Department of Plant Protection was founded at Fanar station in 2011 working on the identification and characterization (morphological and molecular) of the main fungal and bacterial diseases of fruit trees and vegetables in Lebanon.
- (c) Laboratory of entomology working on plant insects identification and rearing in Fanar station.
- **Experimental fields:** 280 hectares
- **Accomodation:** No guest house is present at LARI.

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- **Main activities on Xylella fastidiosa**

- **Projects :**

- (a) Preliminary survey on *Xylella fastidiosa* in Lebanon conducted by the Department of Plant Protection, Tal Amara and the Laboratory of Plant Fungal Diseases, Fanar.

- (b) "Preventive Measures for the Introduction and Spread of Xylella fastidiosa-Olive Quick Decline Syndrome in NENA Countries TCP/RAB/3601 project " provided and financed by FAO

- **Research activities:**

- (a) Survey on the spread of *X. fastidiosa* in Lebanon was organized in May 2014, starting from the main olive growing areas in which symptoms similar to those described for QDS were observed. Samples were collected during three vegetative seasons: spring 2014 and 2015, and fall 2014. To assess the occurrence and distribution of the pathogen in Lebanon, samples of twigs from olive trees (82), olive seedlings (26), grapevine (30), oleander (32) and ornamentals imported from Italy (48) were analysed.

- (b) Conducting a ToT by CIHEAM BARI on surveillance inspection sampling and diagnostics of *Xylella fastidiosa*; Drafting a *Xylella fastidiosa* emergency plan; Conducting an awareness workshop and training seminar to Agriculture Engineers and technicians from MoA about *Xylella fastidiosa* sampling and surveillance; Conducting farmers' seminars about *Xylella fastidiosa* in different areas of Lebanon; **Preparation of the *Xylella fastidiosa* survey plan to collect 500 samples;** Development of a *Xylella fastidiosa* awareness brochure and field guide in Arabic.

- **Publications:**

- Habib W., Nigro F., Gerges E., Jreijiri F., Al Masri Y., El Riachy M., Choueiri E., 2016. *Xylella fastidiosa* does not occur in Lebanon. *Journal of Phytopathology* 164: 395-403. Doi: 10.1111/jph.12467.

- Choueiri E. Work done and actions taken on *Xylella fastidiosa* in Lebanon . In: D'Onghia A.M.(ed.), Brunel S. (ed.), Valentini F. (ed.). *Xylella fastidiosa & the Olive Quick Decline Syndrome (OQDS). A serious worldwide challenge for the safeguard of olive trees*. Bari : CIHEAM, 2017 . p. 97-100 (Options Méditerranéennes: Série A. Séminaires Méditerranéens; n . 121)

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