Dott. Pierfederico La Notte

E-mail: pierfederico.lanotte@cnr.it

Communication and awareness campaigns – Citizen science

RIGENESI

SCIENCE DIPLOMACY & COMMUNICATION FOR OLIVE SECTOR REGENERATION

Citizen Science & Civic engagement

1. XylOR
2. Voluntary Monitoring of Philaenus life stage
3. Project AgriTech Task 3.3.3 Platform & Questionnaire
4. BEXYL Questionnaires for Nurseries and Stakeholders

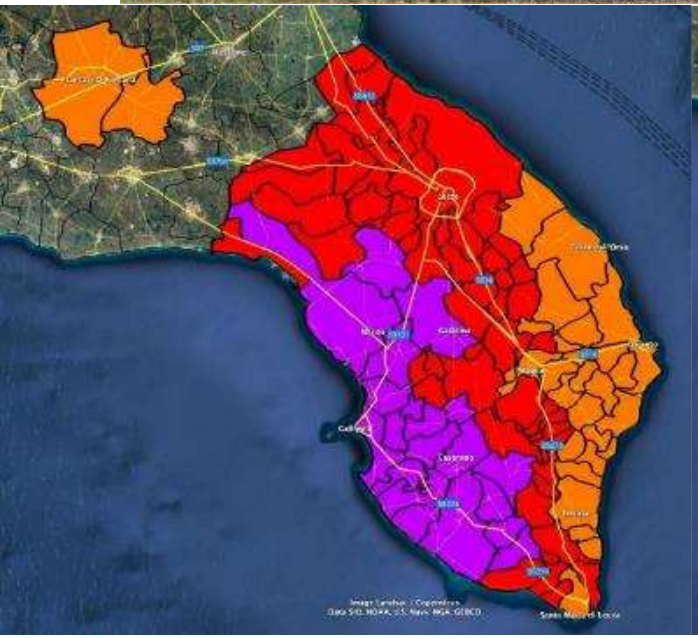
It is a CITIZEN SCIENCE initiative conceived and developed in collaboration between the Institute for Sustainable Plant Protection of the CNR and Infoxylella ®

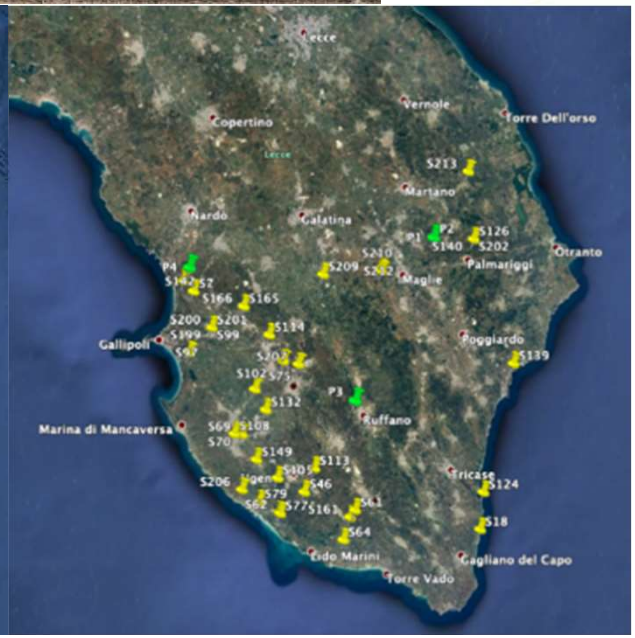
The idea consists in **directly involving citizens** in a difficult task, the search for the classic *needle in the haystack,* that is, **identifying and reporting** a few **olive trees in good vegetative state in rural, marginal, natural areas strongly affected by Xylella desiccation.**

Xylor

Follower: 1137 • Seguiti: 11

"Mi piace": 1108 • Seguiti: 6





ResiXo

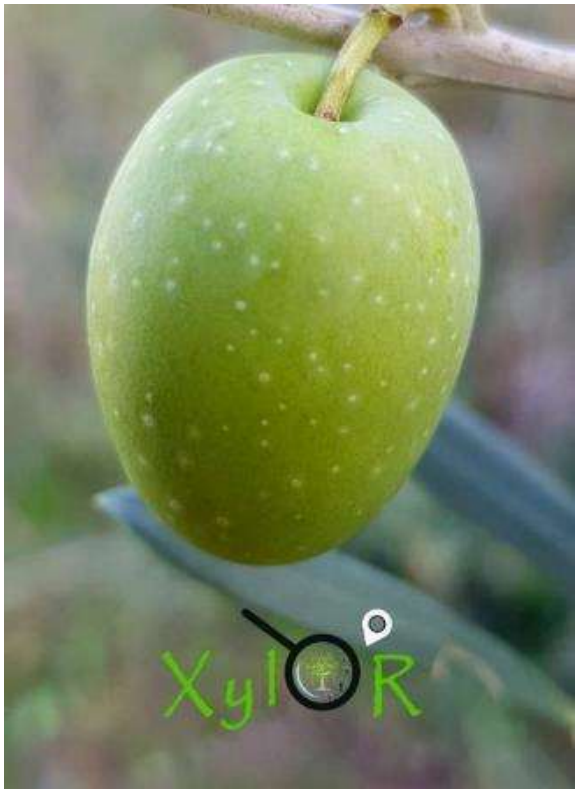
The best areas The territories that are to be explored are those **that have been affected by the longest and most severely by the droughts**
-Gallipoli area
-the **lower Ionian Salento,** especially in the province of Lecce.

We look for plants that show little or no symptoms of the disease.

VARIETIES, even minor ones, often planted by chance or for trial

SEEDLINGS WILD , or plants derived from seeds distributed randomly, especially by birds, and often raised until they pass the long juvenile stage and begin to produce olives.

Each **seedling** consists of a **unique genotype, different** from that of other plants, and **represents a POTENTIAL new variety** with characteristics that are often similar or intermediate to those of its parents: the mother plant that bears the olives, the father plant that provided the pollen carried by the wind.



Who we are addressing:

FARMERS and their ORGANIZATIONS

STUDENTS and their SCHOOLS

VOLUNTEER ASSOCIATIONS

CITIZENS WHO VISIT THE COUNTRYSIDE FOR ENTERTAINMENT (photographers, naturalists, cyclists, runners , hunters)

INDIVIDUAZIONE E SEGNALAZIONE DI PIANTE DI OLIVO RESISTENTI NELLE AREE FORTEMENTE COLPITE DA XYLELLA

XylOR

La RICERCA chiede la collaborazione della CITTADINANZA per esplorare il territorio e mettere urgentemente in sicurezza i preziosi esemplari.
4 INCONTRI per spiegare e rilanciare l'iniziativa.

- **Maglie, 14 ottobre ore 11:00. IISS "Egidio Lanoce", Via Regina Margherita n.50 (riservato alla scuola).**
- **Racale, 14 ottobre ore 17:30. SOC. AGR. COOP. ACLI, Via Prov.le Racale - Ugento Km 1,1. Aperto al pubblico.**
- **Lecce, 27 ottobre ore 10:00. IISS "Presta Columella", Via S. Pietro in Lama (riservato alla scuola).**
- **Nardò, 27 ottobre ore 18:00. Oleificio Coop. Riforma Fondiaria, via Avetrana n.4. Aperto al pubblico.**

IPSP
Istituto per la Protezione Sostenibile delle Piante
Consiglio Nazionale delle Ricerche

ACLI RACALE
Società Agricola Cooperativa

XylOR

È UN'INIZIATIVA DI CITIZEN SCIENCE
IDEATA DA IPSP-CNR ed INFOXYLELLA

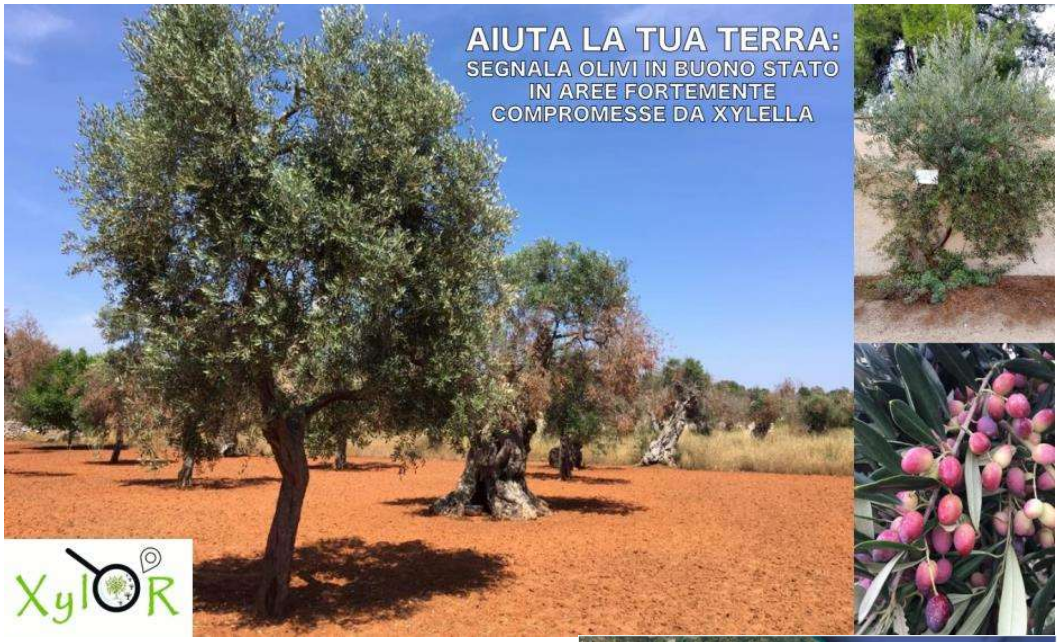
PARTECIPA ANCHE TU, AIUTA LA TUA TERRA

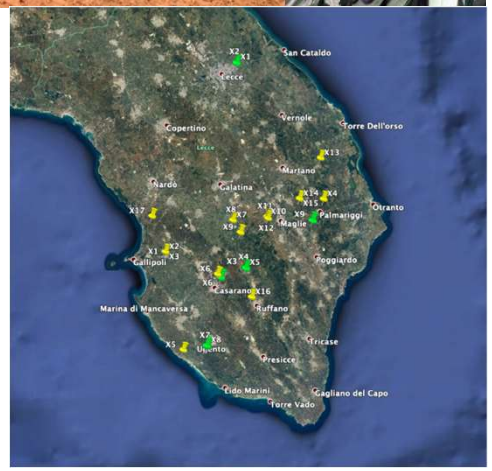
SEGNALA PIANTE DI OLIVO IN BUONO STATO
NELLE AREE FORTEMENTE DANNEGGIATE DALLA MALATTIA

A.A.A. CERCASI OLIVI RESISTENTI A XYLELLA

Per INFO cerca XylOR su

Per segnalare piante tel. 351 5990374
e-mail: xylor19@gmail.com





ResiXo

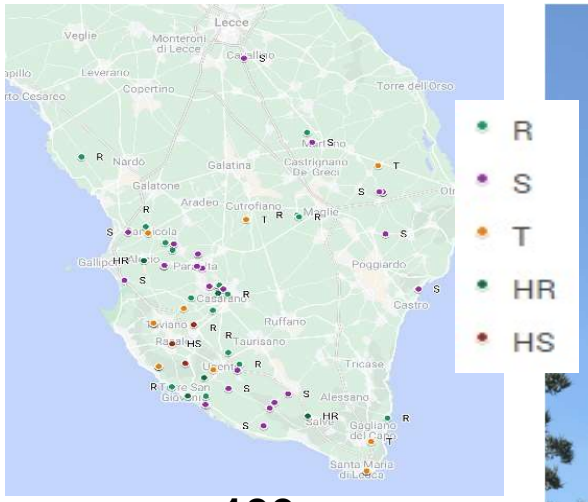
Individuazione (dall'estate 2016) di semenzali spontanei senza sintomi nelle aree infette a forte pressione di malattia/inoculo

Potenziali risultati:

- **Nuove fonti resistenza o immunità**
- **Nuove varietà, uniche nate in loco da genitori autoctoni**
- **Nuovi genitori locali per attività di incrocio**

Di migliaia di piante osservate, i primi promettenti genotipi sono sottoposti a studi di espressione genica , sono stati moltiplicati e piatati in 3 campi di valutazione

RICERCA DI PIANTE «SPONTANEE» (**incroci naturali**) SENZA SINTOMI, NELLA ZONA PIU' DEVASTATA

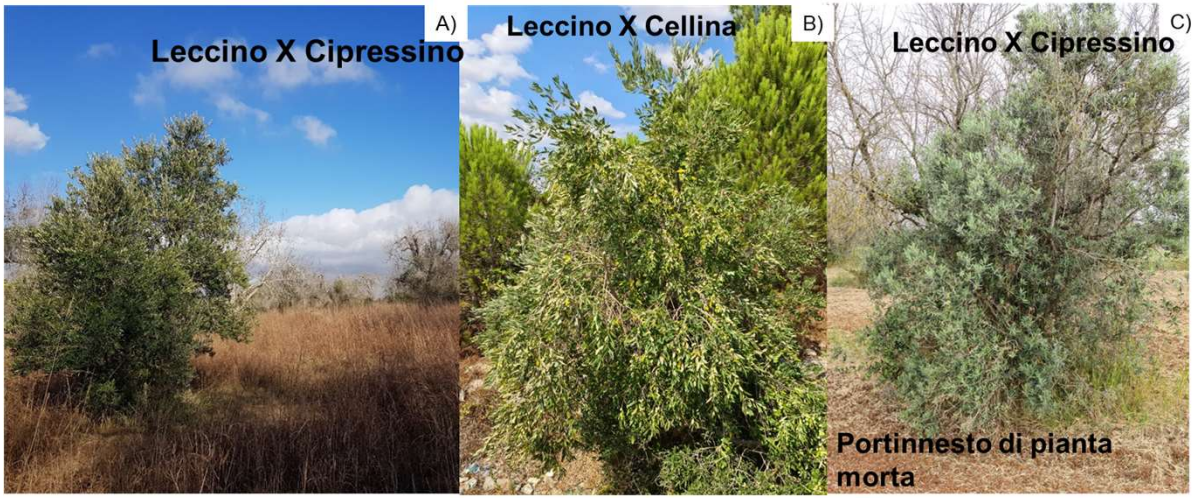


139
GENOTIPI

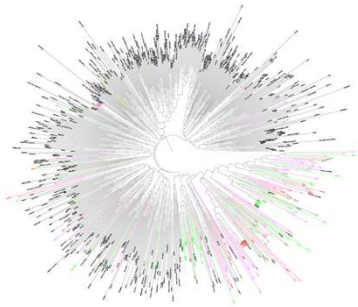
Parentali?

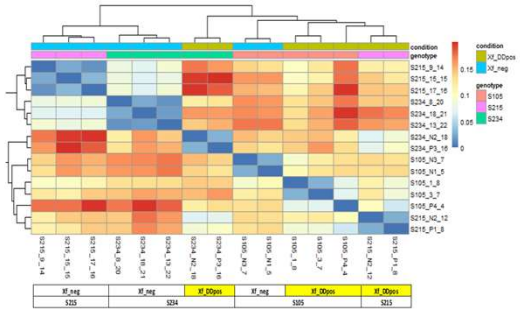
Leccino, Ogliarola, Cellina

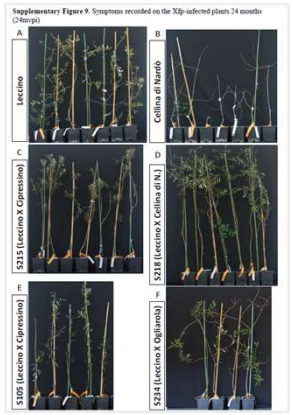
ResiXo



3 most promising resistant genotypes propagated and planted in comparison /evaluation field for the registration in the infected area







frontiers | Frontiers in Plant Science

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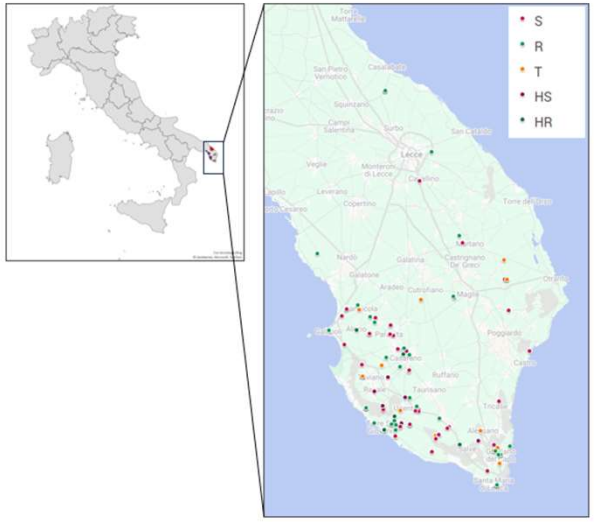
A survey in natural olive resources exposed to high inoculum pressure indicates the presence of traits of resistance to *Xylella fastidiosa* in Leccino offspring

Pierfederico La Notte[1†], Maria Saponari[1†], Soraya Mousavi[2], Roberto Mariotti[2], Raied Abou Kubaa[1], Roya Nikbakht[2], Giovanni Melcarne[3], Francesco Specchia[1], Giuseppe Altamura[4], Angela Ligorio[1], Donato Boscia[1], Antony Surano[1], Pasquale Saldarelli[1*] and Annalisa Giampetruzzi[1*]

[1]Institute for Sustainable Plant Protection, National Research Council, Bari, Italy, [2]Institute of

A



B

Year of identification	Location's score			N. of tree identified
	1	2	3	
2016	1	3	9	13
2017	2	1	31	34
2018	2		7	9
2019	2	5	5	12
2020	2		7	9
2021	4	12	12	28
2022		13	21	34
Total	13	34	92	139

C

Phenotype	Location's score			N. of tree identified
	1	2	3	
HS		1	10	11
S	6	9	38	53
T	3	7	12	22
R	3	17	27	47
HR	1		5	6
Total	13	34	92	139

Voluntary monitoring of vector's life cycle 2021

Modifica

Monitoraggio Ps Infoxylella

Gruppo Privato · Membri: 59

Invita Condividi

AAA Cercasi VOLONTARI per Monitoraggio Sputacchina

Infoxylella, in collaborazione con il CNR Istituto per la Protezione Sostenibile delle Piante (IPSP-CNR), il Centro di Ricerca, Sperimentazione e Formazione in Agricoltura "Basile Caramia" (CRSFA), l'Associazione Regionale Pugliese Tecnici e Ricercatori in Agricoltura (ARPTRA), e si spera tanti altri, vuole avviare la costituzione di un sistema capillare di monitoraggio degli stadi di sviluppo della sputacchina Philaenus spumarius, principale vettore della Xylella fastidiosa in Puglia. Il sistema di monitoraggio, riconducibile ad una iniziativa di Citizen Science, potrà essere costituito da una rete di rilevatori volontari, agronomi e agrotecnici, agricoltori, studenti, appassionati e normali cittadini i quali, seguendo semplici istruzioni e video tutorial potranno: individuare un idoneo campo/stazione di rilevamento, effettuare i rilievi sulla popolazione di sputacchina con cadenza periodica, trasmettere le fotografie ed i dati mediante whatsapp o email. Le informazioni raccolte, quasi esclusivamente di tipo qualitativo, saranno poi elaborate e trasformate in dati comunicati agli uffici regionali e restituiti al pubblico.

Quanto più numerosi saranno i rilevatori volontari, con l'ideale di avere anche più stazioni di rilevamento per ciascun comune della regione, tanto più accurata sarà la conoscenza di dettaglio degli stadi di sviluppo delle popolazioni di insetti sul territorio. Per quest'anno il progetto pilota servirà soprattutto come prova per verificare criticità e potenzialità, migliorare il sistema ed i protocolli di rilevamento/comunicazione e elaborazione dati per i prossimi anni; se saremo bravi e numerosi potremo già da questa stagione/ciclo del vettore fornire informazioni utili per un più efficiente controllo del vettore.

Monitoraggio volontario Philaenus spumarius

Scarica la Documentazione:

- Manuale di Istruzioni (Ver. 2.0 del 5 aprile 2022)
- Locandina "I WANT YOU" campagna adesione volontari (stampa e diffondi)
- Guida per Censimento Flora stazione rilevamento (Ver. 2.0 del 1 aprile 2022)
- Video-Tutorial "MONITORAGGIO SPUTACCHINA – RILIEVI PERIODICI SETTIMANALI"
- Modulo Scheda Campo/Stazione Rilevamento
- Modulo Scheda Monitoraggio
- NEW Modulo Raccolta foto malerbe/sputacchina (1 Aprile 2022)
- Schema conteggio individui (stampabile)
- Scheda Campo/Stazione Rilevamento cartacea (stampabile)
- Scheda Monitoraggio cartacea (stampabile)

https://www.youtube.com/watch?v=6bCwePgaQss

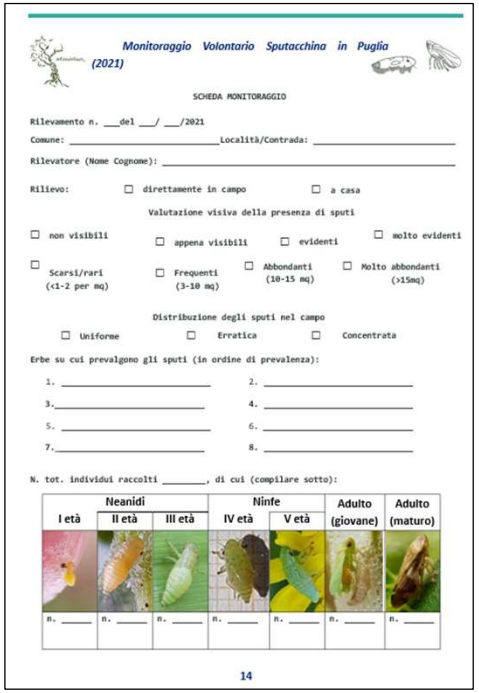
MONITORAGGIO VOLONTARIO DI PHILAENUS SPUMARIUS (2021)

- ISTRUZIONI -

Versione 1.0

Del 26 marzo 2021

Philaenus voluntary civic monitoring 2021



Monitoraggio Volontario Sputacchina in Puglia (2021)

SCHEDA MONITORAGGIO

Rilevamento n. ___del ___/ ___/2021

Comune: _____Località/Contrada: _____

Rilevatore (Nome Cognome): _____

Rilievo: ☐ direttamente in campo ☐ a casa

Valutazione visiva della presenza di sputi

☐ non visibili ☐ appena visibili ☐ evidenti ☐ molto evidenti

☐ Scarsi/rari (<1-2 per mq) ☐ Frequenti (3-10 mq) ☐ Abbondanti (10-15 mq) ☐ Molto abbondanti (>15mq)

Distribuzione degli sputi nel campo

☐ Uniforme ☐ Erratica ☐ Concentrata

Erbe su cui prevalgono gli sputi (in ordine di prevalenza):

1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____
7. _____ 8. _____

N. tot. individui raccolti _____, di cui (compilare sotto):

Neanidi			Ninfe		Adulto	Adulto
I età	II età	III età	IV età	V età	(giovane)	(maturo)
n. ____	n. ____	n. ____	n. ____	n. ____	n. ____	n. ____

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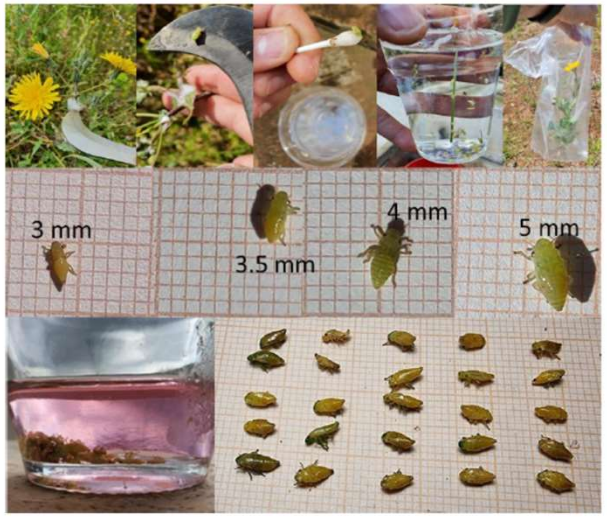


MONITORAGGIO CIVICO/VOLONTARIO DI PHILAENUS SPUMARIUS 2022

VOLUNTEERS WANTED. JOIN NOW. Donate some of your time to HELP YOUR LAND. STOP XYLELLA. LET'S FIGHT SPITTLEBUGS.

For more info

http://www.infoxylella.it/monitoraggio-volontario-philaenus-spumarius/

GUIDE FOR IDENTIFICATION OF SPONTANEOUS HERBACEOUS FLORA AT MONITORING STATIONS

CIVIC/VOLUNTARY MONITORING OF PHILAENUS SPUMARIUS 2022

Version 2.0
1 Aprile 2022

Piano Nazionale di Ripresa e Resilienza
#NEXTGENERATIONITALIA

agritech
National Center for Technology in Agriculture

Finanziato dall'Unione europea
NextGenerationEU

Ministero dell'Università e della Ricerca

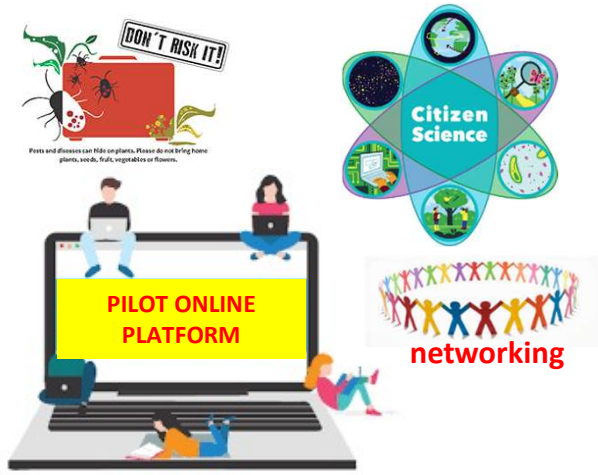
IPSP

AGRITECH Project

Spoke 3: Enabling technologies and sustainable strategies for the intelligent management of agricultural systems and their environmental impact.

Activity " Innovative strategies and networking tools for the involvement of actors and groups stakeholders on the Protection from the Plants and the risks of invasion of organisms aliens "

CASE STUDY/PILOT XYLELLA



Objectives: 1) Inform, train, and raise awareness and knowledge about sustainable plant protection and the risks and impacts of biological invasions by pathogens, parasites, and other alien plants and animals; 2) Identify research and innovation constraints and needs; 3) Improve direct citizen participation and synergistic interaction between research and stakeholders for the sustainable management of agricultural production and environmental protection.

Activities/Results:

A) develop a pilot online platform, containing a digital citizen science application for the description/surveillance/territorial reporting of alien organisms, and an interactive section to identify knowledge/technological gaps, legislative limitations, and training, research, and innovation needs;

B) produce information/communication and training materials tailored to the various parties and interest groups.

Finanziato dall'Unione europea NextGenerationEU

Ministero dell'Università e della Ricerca

Italiadomani

agritech National Research Center for Technology in Agriculture

Scan me!
Fill out the questionnaire

ACTIVITIES ALREADY STARTED

- Identification of STAKEHOLDERS
- citizen science initiatives and surveillance programs for quarantine organisms and ACTIVE INVOLVEMENT OF THE POPULATION on the topic of plant and environmental protection.
- Production of a QUESTIONNAIRE and INFORMATION MATERIAL (e.g. posters, brochures)
- Participation in PUBLIC INFORMATION EVENTS

PUBLIC EVENTS

- ENOLIEXPO Fair (Bari): Update on Xylella fastidiosa Epidemics in Puglia and presentation of preliminary results results of task 3.3.3
- Apulian Biodiversity Week (VII ed.) – Seminar “Safeguarding Biodiversity and Alien Organisms” (Noicattaro) - Raising awareness on the theme and spread of a questionnaire for task 3.3.3.
- OIC (International Olive Council) , Meeting of Advisory Committee (Siena) - Update on Xylella fastidiosa Epidemics in Puglia and presentation of preliminary results of task 3.3.3
- Aieaa Conference (Bari) - Presentation of preliminary results of task 3.3.3
- Seminar, Safeguarding Biodiversity and Alien Organisms (Barletta) - Raising awareness on the theme and spread of a questionnaire for task 3.3.3
- Posts/stories on social pages
- Article in Foglie magazine n.10/2 4 (Technical Journal) – Prevent the introduction and spread of alins organisms - La Notte P. & Labbate A.
- Locorotondo Biodiversity Fair (October 2025)
- FAI Spring Days 2025 (Cerrate Abbey , Lecce, March 22-23, 2025 – Presentation of Agritech activities and distribution of the questionnaire.
- VIII Apulian Biodiversity Week - The words of food: twenty voices to nourish agrobiodiversity (Bari 22-23/05/2025) – Presentation of the questionnaire and the Task's activities at the tables of the pomological exhibition.

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PIANO NAZIONALE DI RIPRESA E RESILIENZA

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Finanziato dall'Unione europea
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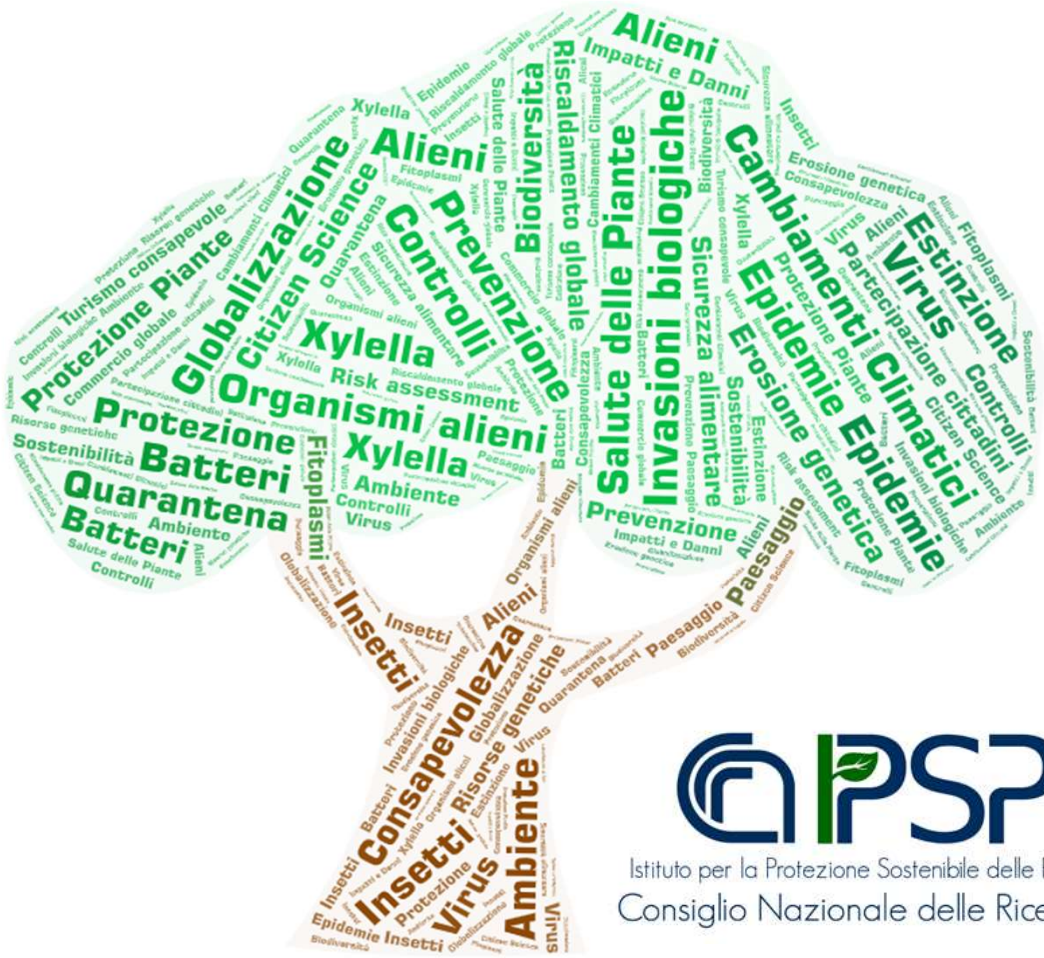


agritech
National Research Center for Technology in Agriculture

SPOKE 3

IPSP
Istituto per la Protezione Sostenibile delle Piante
Consiglio Nazionale delle Ricerche

We are committed to PROTECTING THE HEALTH OF PLANTS AND THE PLANET

You too can participate in preventing and stopping the **INVASIONS OF ALIEN ORGANISMS**

REQUEST FOR CHANGE IN BEHAVIORS
Farmer, Nurseryman, Traveler, Researcher, Consumer

agritech
National Research Center for Technology in Agriculture

LET'S PREVENT THE INTRODUCTION OF ALIEN ORGANISMS

Scan me!
Fill out the QUESTIONNAIRE

The questionnaire serves to assess the population's level of knowledge on the topic of alien invasions and, at the same time, represents an initial opportunity to inform and raise awareness among citizens.

Italiadomani
PIANO NAZIONALE DI RIPRESA E RESILIENZA

Ministero dell'Università e della Ricerca

Finanziato dall'Unione europea NextGenerationEU

SPOKE 8

Bexyl Project

"Beyond Xylella, Integrated Management Strategies for Mitigating *Xylella fastidiosa* impact in Europe"

Work package 3

Use of thermal treatments for sanitation of plants and production/trade of X. fastidiosa-free nursery materials

IPSP
Istituto per la Protezione Sostenibile delle Piante
Consiglio Nazionale delle Ricerche

ENA
EUROPEAN NURSERYSTOCK ASSOCIATION

BEXYL
BEYOND XYLELLA

Funded by the European Union

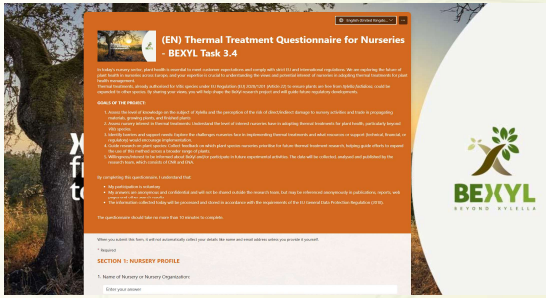
- **<u>Questionnaire</u>** for <u>Nurseries</u> about interest/ willingness to accept the new TT techniques (ENA/CNR), available online in different languages

Link to the questionnaire in different languages

ITALIAN | ENGLISH | SPANISH | FRENCH | PORTUGUESE | GERMAN | CATALAN

Scan me!

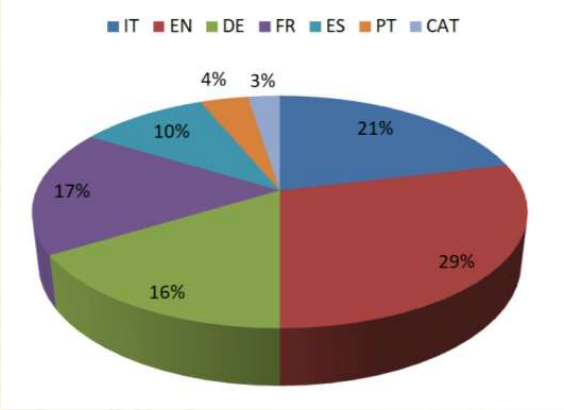
Fill out the questionnaire online

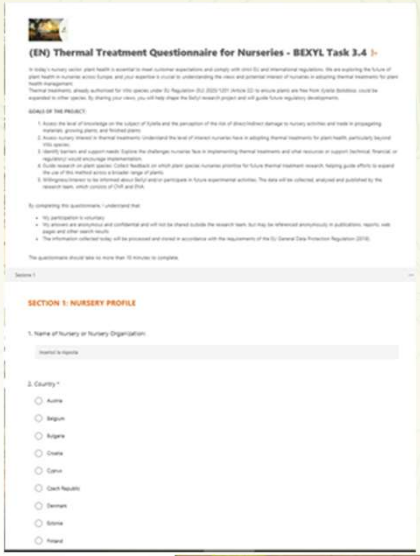


Joint and contribute to the research, your opinion is important

BEXYL

40 Questionnaires (34 from Italy)
in less than 3 months




(EN) Thermal Treatment Questionnaire for Nurseries - BEXYL Task 3.4

SECTION 1: NURSERY PROFILE

Dissemination by ENA

- 30-01-2025 ENA General Assembly meeting. Essen, Germany. Participants from 17 countries, an update on Xylella and BeXyl.
- 27-02-2025 Conference "Plant health and the future of the sector" in Lusoflora trade show, Santarém, Portugal.
- 25-06-2025 ENA General Assembly meeting. Klášter Hradiště nad Jizerou, Czech Republic. Participants from 19 countries.

Contribute of the Bexyl Partner + Social media + Technical articles

BEXYL

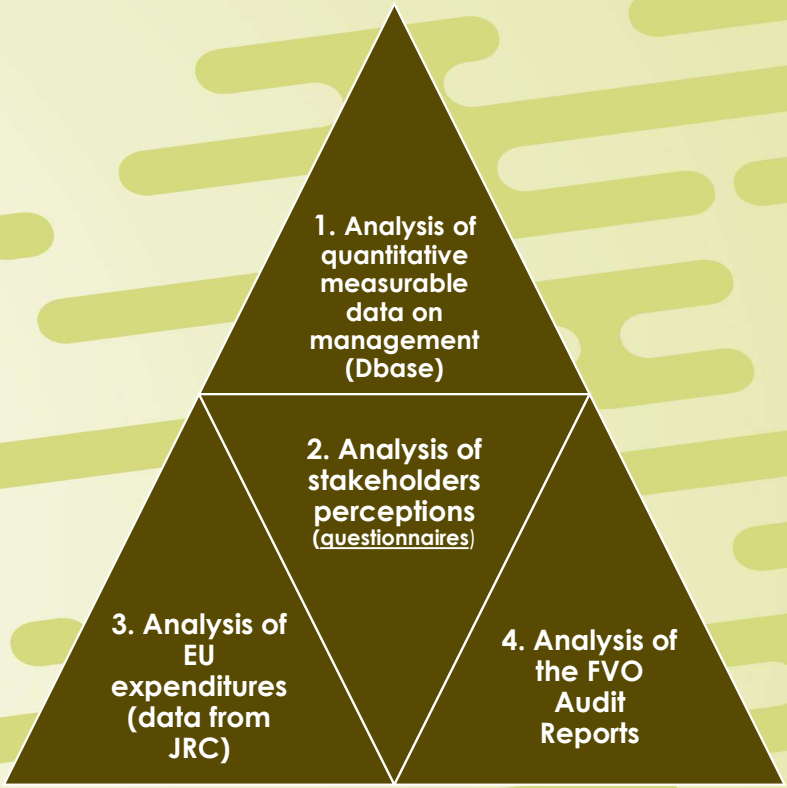
Bexyl Project

"Beyond Xylella, Integrated Management Strategies for Mitigating *Xylella fastidiosa* impact in Europe"

Funded by the European Union

Task 8.1

Analysis of results, weakness points and limits in the coordination and implementation of EU/national strategies to Xf outbreaks response

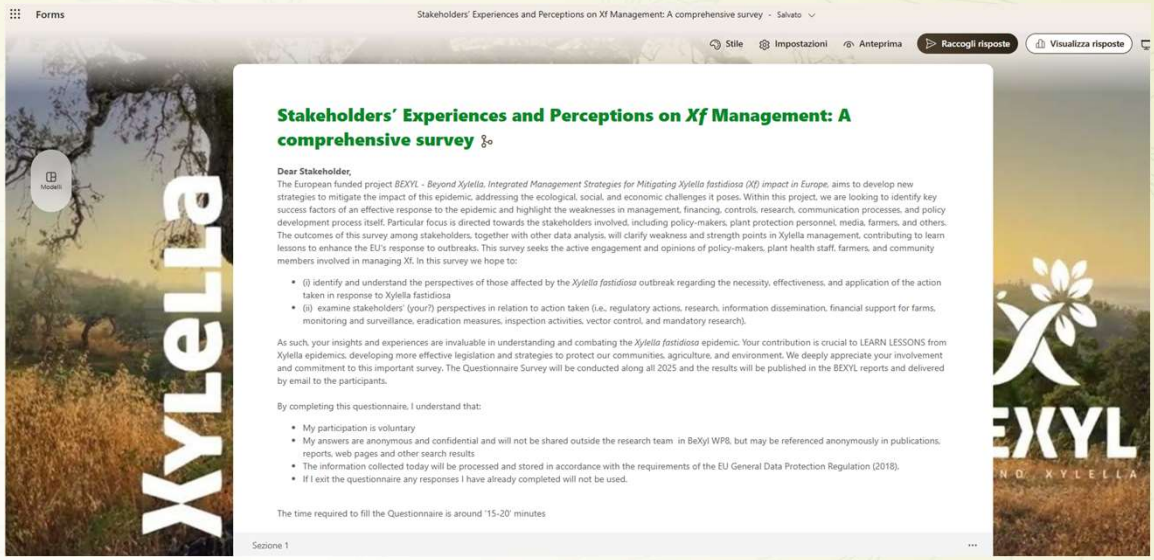


BEXYL
BEYOND XYLELLA

GENERAL OBJECTIVE is to identify key factors of success, critical points and limits in the RESPONSE to the different Xylella fastidiosa outbreaks/epidemics in Mediterranean Countries. This could be useful to LEARN THE LESSON for the improvement of legislation and strategies to limit the spread of Xf and other quarantine harmful organisms

Analysis of stakeholder's perceptions

ENGLISH ITALIAN

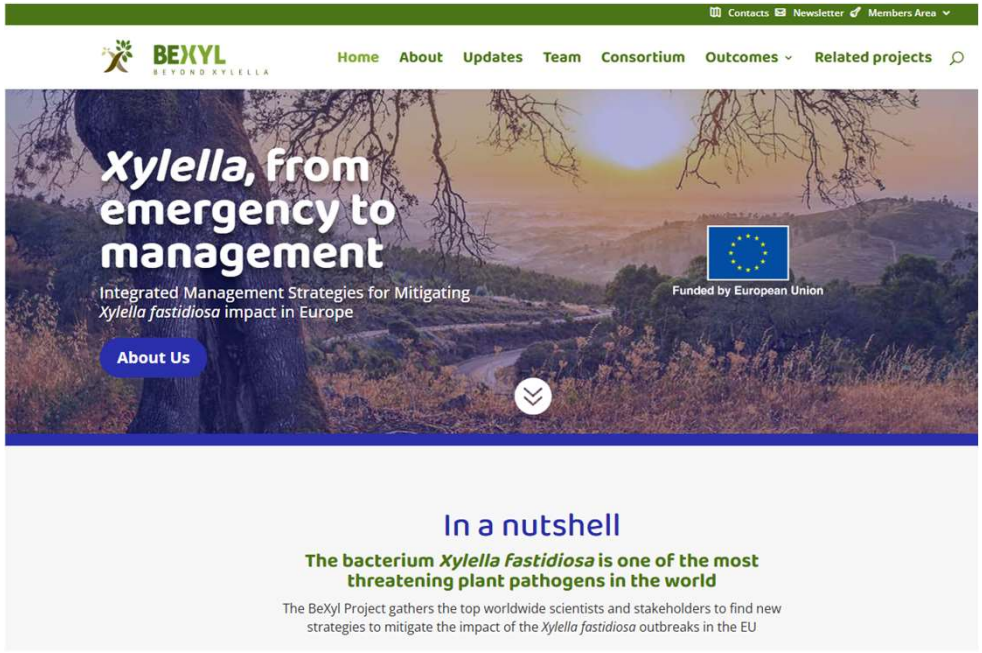


https://bexylproject.org/category/outcomes/dissemination/

Questionnaire Structure

- Identification of main target groups of stakeholders by sector: Agriculture (producers, technicians, representatives), Nurseries, Research, Tourism, Education & Training (school, university), Media.
- Personal profile (age, living place, level of study, level of knowledge of Xf theme, etc.)
- Questions about evaluation/perceptions on 9 management activities (as included in the database)
- Final open question about, proposals/suggestions

BEXYL



https://bexylproject.org/

- BEXYL Final Meeting + EFSA European Conference on XF (July 2026 – Bari)

THANK YOU!

"Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt"

RIGENESI