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BEYOND XYLELLA

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1. INTRODUCTION

All Beneficiaries recognize that all research activities ongoing in BeXyl must comply with ethical principles and relevant national, EU and international legislation regardless of the country in which the research is carried out, including the highest standards of research integrity as set under Horizon Europe Program.

Continuing the series of committed ethical deliverables, this document describes the main ethical issues related to the research activities conducted during the 3rd reporting period. This **Deliverable 11.4** is the 4th and final Ethics Report in the OEI series. Detailed information on the ethical dimension of the project was provided in **Deliverable 11.1 -** OEI - Requirement No. 1, while the activities performed and evaluated during the 1st and 2nd reporting periods were reported in **Deliverable 11.2 -** OEI - Requirement No. 2 and **Deliverable 11.3 -** OEI - Requirement No. 3, respectively.

During previous reporting periods, the External Independent Ethics Advisor, Dr. **Ilja Richard Pavone**, from the 'Interdepartmental Center for research Ethics and Integrity (CID Ethics)' CNR, BioLaw Unit, Italy, and the Ethics Mentor, Dr. **María M. López**, reviewed the ethical dimensions of the project and provided recommendations concerning the treatment of human participants, personal data protection, animal welfare, cooperation with non-EU countries, biosecurity, biocontainment, environmental protection and research integrity.

Thus, when the 2nd reporting period was close to completion, the Independent External Ethics Advisor and the Ethics Mentor were consulted again on the following points:

- Appropriate treatment of **human** participants;
- Appropriate treatment of **animals**;
- Appropriate treatment and protection of **personal data**;
- Appropriate cooperation with non-EU countries including materials and data exchanged.
- Biosecurity, biocontainment and environmental protection;
- Research integrity, quality management and other ethical issues identified by the experts.

Following this consultation, only the Ethics Mentor provided comments to the activities performed, together with further advice and recommendations to maintain high ethical standards in BeXyl. These comments and recommendations were included in Deliverable 11.3 - OEI - Requirement No. 3. They are addressed below in Section 3 of the present deliverable, indicating the actions taken by the consortium or, where applicable, the rationale for the approach adopted.

Finally, Ethics Advisor and the Ethics Mentor were consulted again to review the ethical aspects covered in this final deliverable. Their final comments and assessment are reflected in Section 4 of the present document.

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2. CURRENT ACTIVITIES PERFORMED TO MAINTAIN HIGH ETHICAL STANDARDS IN BEXYL

This section summarises the activities and safeguards maintained during the 3rd reporting period. The structure follows the previous OEI reports to ensure continuity and traceability across the project lifetime.

2.1 Humans (H)

The BeXyl consortium continued to ensure respect for people and human dignity, fair distribution of the benefits and burdens of research, and protection of the rights, values and interests of research participants.

During the final reporting period, the activities involving human participants were mainly related to WP8, including interviews, focus groups and surveys with stakeholders involved in *Xylella fastidiosa* outbreak management, agricultural value chains, risk perception, socioeconomic impacts and adoption of integrated pest management measures. In addition, during this final reporting period a structured consultation of experts was carried out under WP7 for the evaluation of the candidate IPM schemes developed in the project, the results of which are reported in Deliverable 7.3.

Participants were informed about the purpose of the research, the voluntary nature of participation, the type of information collected, the intended use of the data, and their right to withdraw. Informed consent was obtained before participation, using forms or consent statements adapted to the local context, language and participant group.

Information collected from participants was anonymised or pseudonymised, as appropriate, and results were reported only in aggregated form. Individual responses were not reported in a way that could allow participants to be identified.

During the 3rd Reporting Period, the Human groups involved have been mainly stakeholders:

- First group participating in Interviews and Focus Groups related to **Task 8.2 "Understanding stakeholder knowledge, and attitudes, and the co-design of technology uptake support"**.
- Second group participating at surveys for the **Task 8.4 "Socioeconomic analysis of *Xylella fastidiosa* impacts and adoption of IPM measures"**.
- Third group participating in the expert evaluation of the candidate IPM schemes developed under **Task 7.5 "Development of efficient and sustainable IPM schemes for the management of Xylella fastidiosa"**, reported in Deliverable 7.3.

All participants involved in the surveys were required to provide informed consent before participating in interviews or focus groups. Each interviewee signed an informed consent form, available either in English or in the relevant local language. All collected information is anonymized, and results are reported only in an aggregated format, ensuring that individual responses cannot be traced back to participants.

The Forestry Commission Research Agency (P30-FCRA) and the Joint Research Centre (P28-JRC) retain templates of all consent forms used in their respective interviews.

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For the interviews conducted under Task 8.2 by P30-FCRA, a tailored consent statement was developed for each case study area. The consent statement used in the third case study area, in Salento, Italy, is provided in **Annex 1**.

Similarly, for the focus groups, consent forms were specifically adapted to reflect the nature of each target group. The version used in Salento is included in **Annex 2**.

All data collection for Task 8.4 has been concluded. The participants had to grant informed consent before responding to the survey and where informed of the data protection policy with regards to their data that is aligned to the general European Commission one. Moreover, for sensitive items participants were always given the option to not respond. As an attachment to this document, we provide the relevant sections of the questionnaires implemented where informed consent was requested (see **Annex 3**) as well as the data protection policy that respondents could see (**Annex 4**).

The activities carried out within Task 7.5 involved the voluntary participation of experts in the evaluation of candidate IPM schemes developed within the work package. Participants were invited by email by Project coordinator (P1-CSIC) in the name of P7-UNIBS and were informed about the purpose of the activity, namely to collect expert judgement on the technical suitability, feasibility and implementation potential of the proposed IPM schemes. Participation was voluntary, and experts confirmed their willingness to participate either by replying to the invitation email and/or by completing the evaluation form. The information collected consisted only of expert assessments, comments and technical opinions on the proposed IPM schemes. Results are analysed and reported only in aggregated and anonymised form, ensuring that individual responses are not identifiable in project outputs, deliverables or publications.

Consistently with this approach, **Deliverable 7.3** reports the composition of the expert panel only by country, institution and professional role (risk managers, researchers, professors, extensionists, consultants and nursery producers), without disclosing individual names, and presents all scores as aggregated descriptive statistics.

2.2 Personal data (POPD)

As in previous reporting periods, the main processing of personal data was associated with **WP8 "Ecological, social and economic impacts of *Xf* and outbreak management approaches"** particularly Task 8.2 and Task 8.4. In addition, a limited processing of personal data took place under **WP7-Task 7.5 "Development of efficient and sustainable IPM schemes for the management of *Xylella fastidiosa*"** in connection with the expert evaluation of the candidate IPM schemes reported in Deliverable 7.3.

The data collected included information required to characterise participants or farms, such as age, education, farm size, income category, country or region, and opinions, attitudes and preferences concerning *X. fastidiosa* management. When sensitive or potentially intrusive questions were included, participants were given the option to select "prefer not to answer" or to skip the question.

The consortium maintained the principles of data minimisation, purpose limitation, transparency, confidentiality and secure storage. Personal data were stored separately from

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research data where appropriate, linked only through secure coding systems, and accessed only by authorised researchers.

Where data were collected through external contractors or institutional survey systems, the responsible partner retained oversight of the questionnaire, sampling and recruitment procedures, and ensured that the processing complied with the applicable ethical approvals and data protection requirements.

No personal data were processed for purposes incompatible with those described in the consent forms. No direct identification of data subjects was required for the scientific objectives of the surveys; therefore, Article 11 of Regulation (EU) 2016/679 remained applicable where relevant.

The **Task 8.2 "Understanding stakeholder knowledge, and attitudes, and the co-design of technology uptake support"** has three phases of data collection:

1. BeXyl stakeholder mapping survey completed during 1st reporting period.
2. Key informant interviews, realized in Cordoba Alicante and Salento for the 2nd reporting period. The consent statements for the case studies conducted in Córdoba, Spain and Alicante, Spain were provided in Deliverable 11.2 and 11.3. The version used for **'Salento'** case study area is attached in **Annex 1**. Each consent form was adapted to ensure appropriateness for the context (location, type of data collected, participant group).
3. Interviews and Focus groups with Stakeholders in Cordoba, Alicante and Salento. Focus groups with a range of Stakeholders identified as being key in the olive or almond value chain: growers and producers of plants (farms, nurseries) and crop processors (cooperatives, industry association representatives, private mills. As example, consent form used for Salento is available at **Annex 2.**

Personal data are being retained alongside research data and linked solely via a secure and separate cipher code. Also, to remain transparent and compliant, participants are informed about:

- How, when, and where their personal data will be stored.
- Who will access it and for what purpose.
- If and with whom the data will be shared.
- Under what conditions the data will be securely destroyed—either upon participants' request or when it's no longer needed.

The **Task 8.4 "Socioeconomic analysis of *Xf* impacts and adoption of IPM measures"** involve the processing of personal data collected through interviews, based on prior informed consent as described above.

Ethical approval for the experiment was obtained from Universita Politecnica dell Marche for the surveys in Italy and Spain both for farmers and citizens (see **Annex 5**).

The **Task 7.5** "**Development of efficient and sustainable IPM schemes for the management of *Xylella fastidiosa***" involved only limited processing of personal data for organisational and administrative purposes, i.e., the names, professional affiliation and email addresses of experts invited to participate in the evaluation of IPM schemes. No sensitive personal data were requested or collected. The evaluation forms collected expert judgements on the

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proposed IPM schemes, based on technical criteria described in the relevant project materials, and did not request private or sensitive information from participants. Access to identifiable information is restricted to the project partners directly involved in organising and analysing the evaluation activity. The results of the evaluations are anonymised and reported only in aggregated form. Individual names are not associated with specific scores, comments or judgements in the reported results (See **Deliverable 7.3**).

This processing is limited to contact and affiliation data of professionals acting in their institutional capacity, is based on their consent to take part in the consultation, and falls outside the special categories of data referred to in Article 9 of Regulation (EU) 2016/679. As in WP8, the principles of data minimisation, purpose limitation, confidentiality and secure storage were applied, and the identification data were kept separately from the evaluation scores used in the analysis.

2.3 Animals (A)

The animal-related component of BeXyl concerns the use of canine olfactory detection within **WP2 "New strategies and improved methods for surveillance, early detection and monitoring of *X. fastidiosa*"** and specifically in **Task 2.6. "Use of canine olfactory detection of *X. fastidiosa* at inspection ports, nursery and field scale and its vectors"**.

The consortium maintained the welfare principles described in previous OEI deliverables. Dog validation activities were based on positive reinforcement, reward-based learning and passive indication behaviour. Punishment-based methods were not used. The requirements established in Directive 2010/63/UE which aims to improve the welfare of animals used in scientific procedures has been considered in the research program.

Training or validation sessions, where conducted, were organised to avoid pain, fear, distress or unnecessary fatigue. Dogs were allowed rest periods, access to water and an appropriate working environment. Sessions were adapted to environmental conditions, particularly temperature, and were avoided when conditions were unsuitable for animal welfare.

The activities were conducted in collaboration with trained handlers and, where relevant, with the Italian National Canine Association (ENCI) or equivalent professional expertise. Dogs were not required to come into direct contact with infected plant material, soil or foliage during passive indication.

2.4 Non-EU Countries (NEC)

Exchange of material among BeXyl partners including non-EU countries

The participation of partners located in non-EU countries continued to provide scientific added value by enabling work with local *X. fastidiosa* strains, host plants and epidemiological contexts without unnecessary movement of infectious material into the EU.

All exchanges of biological material during the final reporting period were managed in accordance with the applicable EU and national regulations, including Regulation (EU) 2016/2031 and Commission Delegated Regulation (EU) 2019/829 where relevant. Exchanges

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involving viable *X. fastidiosa* cultures, potentially infected plant material or other regulated material were carried out only by authorised institutions and, where required, under Letters of Authority or equivalent permits issued by the competent phytosanitary authorities.

Non-infectious material, including DNA preparations, heat-killed material, protein extracts or preserved non-infective insect samples, was exchanged only where it did not contain viable quarantine organisms. Such exchanges were nevertheless documented to ensure traceability.

All correspondence, permits, shipping documentation and records of exchanges were retained in the BeXyl shared repository and are available for verification by competent authorities if requested.

Finally, exchanges of plant materials within the EU have complied with the official Plant Passport mark, to allow their introduction and movement to demonstrate that this consignment is free from quarantine pests and meets the required tolerance levels for regulated non-quarantine pests.

Detailed information of the different types of material including *X. fastidiosa* strains, insect vectors, plant material and plants for planting that have been exchanged within BeXyl project during the third reporting period is provided in **Annex 6**. A summary of all the interchanges during the entire duration of BeXyl project is shown at **Table 1** (24 interchanges).

All the exchanges of infectious or non-infectious material among BeXyl partners and within this reporting period have been properly documented, the correspondence and files are kept in a dedicated directory of the BeXyl shared folder, and available for any verification by the competent Plant Health Authority.

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Table 1. Summary of all the types of material interchanged (IC) within BeXyl project in each reporting period (RP).

Nº IC Total	Nº IC 1st RP	Nº IC 2nd RP	Nº IC 3rd RP	Type of material	Origin	Destination	Permit required
43	28	14	1	*Xylella fastidiosa* strains	EU	EU	Yes
11	7	4		*X. fastidiosa* strains	Non-EU	EU	Yes
6	4	2		*X. fastidiosa* strains	EU	Non-EU	Yes
1			1	*X. fastidiosa* strains	Non-EU	Non-EU	No
4	4			Non-pathogenic Fungal strains	EU	EU	No
2	2			Seeds	EU	EU	No
3	3			Seeds	EU	Non-EU	No
12	4	6	2	Plant samples (Potentially infected by *X. fastidiosa*)	EU	EU	Yes
4		2	2	Plant samples (non-infected by *X. fastidiosa*)	EU	Non-EU	No
5		5		Plant Samples (non-infected by *X. fastidiosa*)	EU	EU	No
9	5	3	1	Plant extracts (Potentially infected by *X. fastidiosa* but with cells dead)	EU	EU	No
6	1	5		Non-infective vector samples	EU	EU	No
9	4	2	3	Plants for planting	EU	EU	Yes
2		2		Plants for planting inoculated with SynComs	EU	EU	No
1	1			Plants for planting	Non-EU	Non-EU	No
30	19	7	4	Plant DNA samples	EU	EU	No
9	3		6	Plant DNA samples	Non-EU	EU	No
2	2			Plant DNA samples	Non-EU	Non-EU	No
4		2	2	Bacterial strains	EU	EU	No
1		1		Protein lysates of *X. fastidiosa* strains	EU	Non-EU	No
2			2	Functional Peptide	EU	EU	No

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2.5 Other ethical issues reported by the Ethics mentor and Ethics advisor

The following cross-cutting ethical issues were monitored during the final reporting period, following the recommendations received in previous OEI reports.

2.5.1 Quality management System (QMS)

The consortium continued to promote good research practice, research integrity and traceability of results. In response to the ethics advisors' recommendation to assess the presence of a Quality Management System (QMS), the consortium partners were consulted. Most institutions do not operate under a formal QMS, primarily due to the highly diverse nature of the research processes they manage. Nevertheless, many partners reported the existence of institutional codes of good research practice, which serve as the foundational framework guiding their research activities. Examples included:

- P1-CSIC (Coordinator): P1-CSIC has established a Code of Scientific Practices (www.csic.es/sites/default/files/2023-01/cbpc_csic2021.pdf; available in Spanish and English).
- P3-UCO (University of Córdoba): The P3-UCO has adopted a Code of Responsible Practices and Integrity in Research (BOUCO 2015/00559).
- P8-INRAE (Institut National de Recherche pour l'Agriculture, l'Alimentation et l'Environnement) does not have any quality certification, but it follows a quality politics that is available here: https://www.inrae.fr/actualites/politique-qualite-inrae-2023-2027
- P28-JRC (Joint Research Centre): The P28-JRC operates an Integrated Management System (JRC-IMS), which incorporates the Internal Control Framework and harmonizes requirements from various ISO standards.

Although not all partners operate under a formal QMS, several institutions apply internal codes of scientific practice, codes of responsible research conduct or integrated management systems.

Partners were reminded that research data, protocols, permits, ethical approvals and relevant correspondence must be retained in appropriate institutional or project repositories. This is particularly relevant for activities involving regulated organisms, human-participant data or materials exchanged between institutions.

2.5.2 Biosecurity and Biocontainment

All activities involving *X. fastidiosa* in the BeXyl project are conducted in full compliance with the highest standards of **biosecurity, biosafety, and biocontainment**, as required for working with a regulated quarantine plant pathogen.

All experimental activities under controlled conditions involving viable *X. fastidiosa* cells, infected plant material or experimental vectors were conducted under the biosecurity and

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biocontainment conditions described in previous OEI deliverables. Partners working with viable material used authorised facilities and followed the conditions established by their competent National Plant Protection Organisations.

No BeXyl partner was authorised to conduct activities that could increase the risk of unintended spread of *X. fastidiosa*. Field activities involving infected material or vectors were restricted to legally permitted demarcated areas or authorised experimental contexts.

The consortium-maintained documentation on pathogen acquisition, strain identity, storage, use, transport, waste decontamination and disposal. Procedures for containment, incident prevention and risk mitigation remain applicable throughout the final reporting period.

Taken together, these measures ensured continuity with the biosecurity and biocontainment framework described in the previous OEI deliverables. In particular, Deliverable 11.3 provided detailed information on how BeXyl partners addressed the following aspects: Quarantine Facilities and Research Permits

- Applicable Laws and Regulations
- Institutional Oversight and Training
- Field Work and Vector Studies
- Data and Documentation Transparency
- Continuous Risk Assessment and Adaptation

2.5.3 Environmental protection and biodiversity

Environmental protection and biodiversity preservation remained cross-cutting ethical commitments of the project. Field surveys, sampling, microbial work and plant-material collection were designed to minimise ecological disturbance and to comply with local, national and EU requirements.

Project activities continued to promote responsible use of resources, reduction of unnecessary travel through online meetings where feasible, digital distribution of materials and avoidance of unnecessary printed documentation or single-use materials during project events.

Potential management strategies arising from BeXyl results were considered not only in terms of efficacy but also in terms of proportionality, sustainability and compatibility with ecosystem protection.

2.5.4 Compliance with Biosecurity Regulations and Ethical Standards in Plant Health Emergencies

BeXyl continued to follow the biosecurity provisions applicable to *X. fastidiosa* as a Union quarantine pest and to apply the ethical principles for plant health emergencies promoted by the International Society for Plant Pathology.

The consortium maintained its commitment to alert competent authorities of relevant findings, report information accurately, share biomaterials and data responsibly, collaborate with relevant experts and acknowledge the work of other scientists and institutions.

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3. FOLLOW-UP and actions taken TO THE ETHICS MENTOR'S RECOMMENDATIONS FROM DELIVERABLE 11.3

This section presents the follow-up to the further advice and recommendations provided by the Ethics Mentor in Deliverable 11.3 – OEI - Requirement No. 3. The recommendations are addressed in tabular format to facilitate traceability between each comment, the corresponding consortium response and the actions taken during the final reporting period. Only comments requiring a specific response or follow-up action are included in the table. For the remaining ethical aspects, no additional action was required, and the relevant ethical standards continued to be maintained throughout the final reporting period.

Table 2. Follow-up to the Ethics Mentor's recommendations from Deliverable 11.3.

Ethics mentor's recommendations	BeXyl response
'As apparently there are many partners without any Quality or Management System, it is suggested to propose to their organizations to try to implement some minimum bases for a system of quality and ethical behaviour in spite of the highly diverse nature of the research processes they manage. The four partners who are already involved in some kind of quality system could inform them about the bases for beginning the process'.	The consortium acknowledges this recommendation and agrees that minimum quality-assurance and ethical-behaviour principles are relevant for all partners, even where a formal Quality Management System is not in place. BeXyl partners have been reminded of the importance of maintaining basic procedures for documentation, traceability, data integrity, secure record keeping, compliance with applicable regulations and adherence to institutional codes of good research practice. However, the formal implementation of a Quality Management System remains the responsibility of each partner organisation and depends on its institutional policies, legal framework, available resources and type of research activities. Within the scope of BeXyl, the Project Coordinator has encouraged partners without a formal quality system to discuss internally whether such minimum procedures can be implemented or strengthened. Partners already operating under, or aligned with, institutional quality or management frameworks has served as internal references by sharing practical examples of basic procedures supporting this process.
'A new suggestion is related to the use of AI by the partners because the use of AI systems or techniques could be discussed in the context of the different Tasks. Some authors indicate that the manner in	**Regulatory context.** When the BeXyl proposal was submitted (2021) and when the project started (1 September 2022), no binding EU legislation specifically regulating artificial intelligence was in force: the applicable framework consisted of

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Ethics mentor's recommendations	BeXyl response
which an AI solution is deployed or used, may change the ethical characteristics of the system. Consequently (i) indicate if could AI system/technique stigmatise or discriminate against people (based on sex, race, ethnic social origin, age, disability, sexual orientation, religion, political affiliation, etc.) in the context of this project and (ii) indicate if the AI system/technique interact, replace or influence human decision-making processes (e.g. issues affecting well-being or human rights, or economic, social or political decisions'.	Regulation (EU) 2016/679 (GDPR), the ethics requirements of Horizon Europe and non-binding guidance, in particular the Ethics Guidelines for Trustworthy AI (2019), the ALTAI assessment list (2020) and the Commission guidance on Ethics By Design (2021); the proposal for an AI Act (COM(2021) 206, 21 April 2021) created no obligations for beneficiaries at that time. Regulation (EU) 2024/1689 (Artificial Intelligence Act) subsequently entered into force on 1 August 2024 and became generally applicable on 2 August 2026, while the revised ALLEA European Code of Conduct for Research Integrity (2023) and the Living guidelines on the responsible use of generative AI in research (2024, subsequently updated) added explicit expectations of transparency, human responsibility and accountability. The consortium has followed these developments and reviewed its practices accordingly. **Position of BeXyl under the Artificial Intelligence Act.** The consortium acknowledges this recommendation. AI-based or machine-learning approaches used in BeXyl are applied as research and analytical tools, mainly for the processing and interpretation of scientific or technical data, including remote/proximal sensing, modelling, diagnostics, epidemiological analyses or decision-support research related to *Xylella fastidiosa*. Analytical tools addressed to end users, such as the Decision Support System reported in Deliverable 7.3, are rule-based decision trees without autonomous or self-learning components. These tools are not used to classify, profile, rank or make decisions about individual persons or social groups. Therefore, within the scope of the project, the AI systems or techniques used are not expected to stigmatise or discriminate against people on the basis of sex, race, ethnic or social origin, age, disability, sexual orientation, religion, political affiliation or any other protected characteristic. Where social or socioeconomic data are collected in WP8, the analyses are based on informed consent, anonymisation or aggregation, and are used to understand stakeholder perceptions, impacts and adoption barriers, not to make decisions about

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Ethics mentor's recommendations	BeXyl response
	individuals. No automated decision-making producing legal or similarly significant effects on individuals in the sense of Article 22 of Regulation (EU) 2016/679 has been carried out, and no special categories of personal data under Article 9 have been processed for AI-based analyses. AI tools, where used, do not replace human decision-making processes. Outputs from modelling, remote sensing or analytical workflows are interpreted by researchers and may contribute to scientific evidence, risk assessment, surveillance design or management discussions. However, they remain decision-support outputs and do not have autonomous authority to determine regulatory, economic, social or political decisions. Any use of AI-derived results in policy or management contexts would require expert interpretation, validation, transparency about assumptions and limitations, and assessment by the competent authorities or relevant decision-makers. The AI-based components used in BeXyl fall within the research exemptions of Articles 2(6) and 2(8) of Regulation (EU) 2024/1689, and none of them corresponds to a prohibited practice under Article 5 or to a high-risk use case listed in Annex III. Should any component be further developed into a product or service placed on the Union market after the end of the project, the corresponding obligations would have to be assessed by the entity acting as provider at that time. Where generative AI tools were used in the preparation of project outputs, their use was limited to supporting tasks such as language editing or restructuring text drafted by the authors: no AI system is credited as an author, no scientific content, data, results or references were generated by such tools, all outputs were validated by the responsible researchers, and confidential or personal project data were not uploaded to external services. The authors retain full responsibility for the content of BeXyl deliverables and publications. The consortium therefore considers that the use of AI systems or techniques in BeXyl does not raise direct

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Ethics mentor's recommendations	BeXyl response
	risks of discrimination, stigmatisation or replacement of human decision-making, provided that outputs continue to be used as research evidence and decision-support information under human oversight. The consortium considers that its use of AI is consistent with the obligations of Regulation (EU) 2024/1689 applicable to research activities and with the research integrity standards currently in force, and that any future development of these tools beyond the project would require a new assessment under the framework applicable at that time.
'The final suggestion is a cross-cutting issue to reflect about the potential misuse of some of the obtained results, because *X. fastidiosa* is a quarantine priority pathogen affecting more than six hundred host plants. The research most vulnerable to misuse is research that: i) provides knowledge, materials and technologies that could be channelled into crime or terrorism, ii) could result in chemical, biological, radiological or nuclear weapons and the means for their delivery, and iii) involves developing surveillance technologies that could curtail human and civil rights, etc. As bioterrorism involves the deliberate release of bioweapons to cause death or disease in humans, animals, or plants. it is possible that some research in the BeXyl project can involve materials, methods or technologies or generates knowledge that could be misused for unethical purposes. Although the risk of misuse of research can never be eliminated, it can be minimised by recognising such risks in good time and taking the right precautions when necessary'.	The consortium acknowledges this recommendation and recognises that research on a quarantine priority plant pathogen such as *X. fastidiosa* may raise dual-use or misuse considerations. BeXyl activities are directed towards prevention, surveillance, diagnosis, risk assessment, host resistance, vector management, biological control and sustainable disease management. The project does not aim to increase pathogenicity, host range, transmissibility, environmental persistence or intentional dissemination of *X. fastidiosa*, nor does it develop surveillance technologies intended to monitor or profile individuals. Therefore, the misuse risk is considered low under the conditions of the project. Nevertheless, precautions have been maintained throughout BeXyl. Activities involving viable *X. fastidiosa*, infected plant material or potential vectors have been restricted to authorised partners, approved facilities or legally permitted demarcated areas. Exchanges of regulated material have required the relevant authorisations and have been documented to ensure traceability. Non-infectious material has been used whenever possible. The consortium has also applied secure storage, access control, transport documentation, waste decontamination, incident prevention and compliance with EU and national phytosanitary regulations. Research outputs are disseminated in scientific and management contexts, with appropriate interpretation and without enabling unauthorised handling or spread of the pathogen.

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Ethics mentor's recommendations	BeXyl response
	Overall, the consortium considers that potential misuse risks have been recognised and minimised through legal compliance, biosecurity, material traceability, responsible communication and ethical oversight.

4. FINAL ASSESSMENT AND COMMENTS FROM THE ETHICS MENTOR AND THE ETHICS ADVISOR

On 20 July 2026, the BeXyl Project Manager sent the ethics report for the final reporting period to both the External Ethics Advisor and the Ethics Mentor.

The Ethics Mentor responded favourably, and the Ethics Adviser indicated a lack of availability to review it before the deadline of the Deliverable, due to the summer break; therefore, this deliverable only includes the review by the Ethics Mentor.

The information provided below is a verbatim copy of what was submitted by the External Mentor Dr. M. López.

4.1. Summary of the activities performed

4.1.1. Human

The consortium has provided all the information required and as indicated in the previous reports for Deliverable 11.2, the human groups involved in the project comprised consortium partners, stakeholders participating in interviews, and participants in Focus groups and other interviews.

The consortium partners obtained all the required approval documents from the respective national and local ethics committees or other relevant bodies before the start of the project. There is no new information concerning changes in the partners or in their activities.

Participants from two stakeholder groups were requested to provide informed consent before participation: one group participating in interviews and focus groups related to Task 8.2, and another group participating in surveys conducted under Task 8.4. The information collected was anonymised, and the results were reported only in an aggregated format.

The Forestry Commission Research Agency (P30-FCRA) and the Joint Research Centre (P28-JRC) retain templates of all consent forms. The consent statements used provided to the participants, were considered appropriate and are available in Deliverable 11.4. The consent forms were specifically adapted to reflect the nature of each target group, and the information provided to the different participants was also considered appropriate.

To the best of the mentor's knowledge, no claims or complaints have been submitted by partners, stakeholders or the European Commission concerning the consent forms or the information obtained.

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4.1.2. Personal data

In line with the General Data Protection Regulation (GDPR) of the European Union, appropriate measures and protocols were put in place during the three reporting periods to prevent unauthorised access to, and processing of, any personal data collected. These measures ensure that participants are neither harmed nor disadvantaged. Partner 30 (FCRA) was registered as a data controller.

During the third reporting period, two tasks within WP8 made use of personal data: Task 8.2, led by P30-FRCA, and Task 8.4, led by P28-JRC. Task 8.2 involves the collection of information from farmers/citizens to assess their attitudes, preferences and opinions on different aspects. Regarding the interviews and focus groups with stakeholders identified as key actors in the olive and almond value chains, consent forms were completed. Information on the storage of personal data, including who can access the data, under what circumstances they may be shared, and the conditions for their destruction, was also indicated and it was considered appropriate.

As far as this mentor is aware, no claims concerning personal data have been submitted by partners or stakeholders, or by the Commission.

4.1.3. Animals

Under Task 2.6, 'Use of canine olfactory detection of *Xylella fastidiosa* at inspection ports, nursery and field scale and its vectors', BeXyl has investigated the effectiveness of canine olfactory detection for the identification of *X. fastidiosa*. Animal welfare during dog training was ensured in collaboration with the Italian National Canine Association (ENCI), avoiding training techniques that could cause fear or pain or otherwise negatively affect the welfare of the dogs.

The training material consisted of potted olive plants throughout the cultivation cycle. Training sessions involved lines of 10 plants, some of which were healthy, while one or more plants infected with *X. fastidiosa* subsp. *pauca* ST53 from Apulia (Italy) were mixed among them. The training protocol was described in detail in Deliverable D11.1.

The videos provided clearly show that the methodology is dog-friendly and that good detection results were obtained. According to the expert trainers, the dogs showed no signs of stress or abnormal behaviour. All the questions raised in the previous reports about the training protocol have been satisfactorily addressed and, consequently, there are no new remarks concerning the methodology used for this sensitive canine diagnostic approach.

4.1.4. Non-EU Countries

Exchanges of scientific material

As reported in Deliverable 11.3 of the project, exchanges of different types of infected and non-infected biological material were carried out, with details provided in the respective reports. These exchanges were considered necessary by the consortium partners during project implementation to achieve specific milestones and they are scientifically and ethically justified. The detailed information on the exchanges performed during the project was

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considered correct, based on the experience of this mentor, as the exchanged material was required for carrying out different assays by the partners.

The material exchanged included different types of biological material: *X. fastidiosa* strains, non-infective insect vectors, plants inoculated with SynComs (synthetic microbial communities), artificially assembled microbial communities, plant material and plants for planting, plant extracts, plant DNA samples, bacterial strains, and protein lysates. All exchanges complied with EU legislation concerning the possession and handling of quarantine plant pathogens, in particular Regulation (EU) 2016/2031 and Commission Delegated Regulation (EU) 2019/829. As indicated in the previous reports, all exchanges were properly documented, and the corresponding documentation and files are kept in a dedicated directory of the BeXyl portal.

Partners receiving living bacterial cells or infectious material had previously confirmed that they had operational facilities approved as quarantine facilities by their respective National Plant Protection Organisations (NPPOs), and had requested and obtained the necessary Letters of Authorisation (LoAs) for their import. For all field experiments carried out in several EU countries, plants bearing the appropriate Phytosanitary Passport were used.

Following a suggestion from this mentor, updated protocol on the risk associated with handling *X. fastidiosa* within the BeXyl project was prepared. The objective was to ensure that the highest standards of biosecurity, biosafety, and biocontainment were applied by all the partners, as required when working with a priority quarantine plant pathogen, particularly when handling live bacterial cultures, infected plant material, or experimental vectors.

It was understood that all research collaborators working with viable *X. fastidiosa* cells or in planta material operated under authorisation from their respective NPPOs. These authorisations restricted the BeXyl experimentation to certified quarantine facilities specifically approved for working with such pathogen.

Information to EU authorities about new outbreaks

Information on several new reports of *X. fastidiosa* was available during the project and was provided by the different NPPOs. BeXyl partners in the different countries affected by the problem were informed of the detection of new outbreaks of *X. fastidiosa* or were directly involved in the diagnostic work.

Regarding this topic, no specific recommendations were made in this or previous reports, as there is extensive EU legislation that should be strictly complied by all the NPPOs, and, according to the information received, this has been the case. In addition to the biosecurity provisions established by the EU legislation, BeXyl also follows the Code of Ethics for Plant Emergencies proposed by the International Society for Plant Pathology (ISPP), in accordance with its five standards.

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4.2. Comments on previous recommendations to maintain high ethical standards in BeXyl

4.2.1. Humans

Excellence and professional ethics in research projects are essentially based on the honesty and professional integrity of the consortium partners involved. Good research practice allows the quality and integrity of research data to be verified, provides a transparent basis for evaluation, and contributes to optimise the research.

In this context, a recommendation in a previous report concerned the existence of a Quality Management System (QMS), which supports quality assurance at various stages of the research cycle. The consortium partners were therefore consulted on this matter. The general consensus was that most institutions do not operate under a formal QMS, although several partners reported the existence of institutional codes of good research practice. Four consortium partners provided information on their support for quality assurance and their commitment to research integrity, even in the absence of a formal Quality Management System (QMS). These were P1-CSIC, P3-UCO, P8-INRAE and P28-JRC.

As many partners did not have a formal quality or management system, they were advised that it would be appropriate to establish some minimum requirements for a system covering quality and research ethics, and this has already been implemented. The four partners mentioned above, which already had some form of quality system in place, informed the other partners about the minimum requirements for such a system and encouraged them to make progress in this direction.

4.2.2. Personal data

No further comments or remarks related to this item at the end of the project.

4.2.3. Animals

There are no new comments or remarks about the methodology and the results utilised for this sensitive canine diagnostic method.

4.2.4. Non-EU Countries

Material exchanges and biosecurity.

The material exchanges were realised according to the EU legislation and no specific problems have been reported to this mentor. However, in the first report there was a suggestion, related to Biosecurity and Biocontention aspects that are very relevant in the case of *X. fastidiosa* and its vectors. Consequently, a suggestion of preparing an updated common protocol on Risk of the handling of *X. fastidiosa* in the BeXyl project, was made. The objective was to work under the highest standards of biosecurity, biosafety, and biocontainment, as required for working with an EU priority quarantine plant pathogen. It was well known that all partners working with viable *X. fastidiosa* strains or in planta material operate under authorization by their respective NPPOs that limit experimentation to certified quarantine

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facilities specifically approved for working with *X. fastidiosa*. But they need a comprehensive Risk Mitigation Plan that addresses not only containment procedures but also emergency protocols, incident reporting mechanisms, and ongoing risk assessments.

Each partner institution involved in EU quarantine-level work with *X. fastidiosa* has biosafety officers for overseeing compliance with regulatory requirements and internal biosafety policies. In addition, all personnel involved in handling the pathogen or infected materials received mandatory training in: i) biosafety procedures and personal protective equipment, ii) emergency response and incident containment, iii) waste decontamination and sample transport protocols and iv) ethical considerations related to dual-use research and public safety. In addition, the field studies are conducted in coordination with national surveillance and containment programs in the different places. According to BeXyl Grant Agreement, incidences, if any, should require a report that could also be shared with the other partners.

Environmental protection.

There are also general measures taken by all the partners to reduce the project's environmental footprint, in order to minimize the negative impact of the project proposals and results on the global climatic change. BeXyl research on *Xylella fastidiosa*, has also considered the ecological impacts of control strategies: potential interventions that could be the applications from project results have been evaluated not only for efficacy but also for sustainability and compatibility with ecosystem preservation. Consequently, the environmental protection and biodiversity and sustainability issues have been well managed in the BeXyl project. Regarding to the work of the partners on the impact related the environment, two examples are shown because P1-CSIC and P8-INRAE have undertaken various actions to limit their impact on the environment.

4.3. General advices and recommendations to the BeXyl partners

The advices and recommendations have the goal to continuously improving the ethics performances of the tasks related to humans, animals and environment through internal awareness campaigns and training in good practices, according to the BeXyl Grant Agreement, as well as the integration of sustainability metrics into research planning and evaluation. The prevention of the malevolent use of research results, including fabrication, falsification and plagiarism in proposing and performing tasks, in reporting research results or in reviewing research, has also required attention by all the partners.

Related to the responsible use of AI by the consortium partners, the use of AI systems or techniques has been proposed to be discussed in the context of the different Tasks. The participants were asked if AI system/technique had stigmatised or discriminated against people (based on sex, race, ethnic social origin, age, disability, sexual orientation, religion, political affiliation, etc.) in BeXyl and if the AI system/technique interact, replace or influence human decision making processes (e.g. issues affecting well-being or human rights, or economic, social or political decisions).The consortium considers that its use of AI systems or techniques by the partners does not raise direct risks of any type of discrimination, stigmatisation or replacement or human decision-making.

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The prevention of the malevolent use of research results of the BeXyl project, including fabrication, falsification and plagiarism in proposing, performing, or in reporting research results or in reviewing research has also required attention by the consortium. *X. fastidiosa* is an EU quarantine priority pathogen affecting more than six hundred host plants and the evaluation of the potential misuse of some of the obtained results, has shown that the investigation most vulnerable to misuse is research that: i) provides knowledge, materials and technologies that could be channelled into crime or terrorism, ii) could result in chemical, biological, radiological or nuclear weapons and the means for their delivery, and iii) involves developing surveillance technologies that could curtail human and civil rights, etc. Although the risks of misuse of research can never be eliminated, they have been minimised in BeXyl by recognising such risks in advance and taking the necessary preventive protection measures when necessary, through legal compliance, biosecurity, traceability, responsible communication and ethical oversight.

4.4. Final Remarks

This document describes the main ethical issues related to the research activities conducted in BeXyl. Detailed information on the ethical dimension of the project is provided in the Deliverable 11.1 - OEI - Requirement No. 1 and the activities performed and its evaluation regarding to the three reporting periods were described in the Deliverable 11.2 - OEI - Requirement No. 2, Deliverable 11.3- OEI Requirement No. 3 and finally in Deliverable 11.4.

The ethic aspects indicated in the Deliverables 11.1, 11.2, 11.3 and 11,4 of BeXyl are considered very valuable and the information provided by the coordination team has always been complete and detailed. All the questions, doubts and suggestions indicated in my previous reports have been appropriately answered. The consortium has provided information about the methodology utilised in several items and about the results obtained and this has made now possible to clarify some details related to ethical aspects that were unclear or not available at the time of the previous reports. In parallel with the scientific achievements that are very significant, the environmental protection, biodiversity and sustainability issues have been discussed and optimised in the BeXyl project.

The consortium is promoting a biosafety culture where risk assessment is not treated as a static or theoretical exercise but a dynamic one following the scientific advances. The procedures and protocols have been regularly re-evaluated and this is essential to avoid the possible escapes of *X. fastidiosa* from the research facilities to the field.

It is worth noting the excellent collaboration between all the partners in the scientific tasks and also in the ethical aspects of this project because they have been learning together and sharing their experiences. During the three periods reported, the Coordinating Team has made considerable efforts to follow the suggestions of this mentor to improve the ethical aspects and the partners have accepted their suggestions. They have continued providing the necessary information and documents, which I will keep strictly confidential. I thank all of them for their collaboration.

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ANNEX 1: Consent for BeXyl Key Informant Interviews (FCRA)

Forest Research

BeXyl Intervista: Modulo di consenso

Descrizione del progetto e dichiarazione di consenso:
Il team di ricerca sociale di BeXyl realizzerà interviste per comprendere le prospettive degli attori coinvolti nel settore olivicolo del Salento. I risultati fanno parte di uno studio finalizzato ad informare ricercatori e responsabili politici sulle dimensioni sociali della futura strategia di Gestione Integrata per la futuro controllo dei patogeni/parassiti, ed in particolare della *Xylella fastidiosa*. I dati saranno raccolti, analizzati e pubblicati dal team di Forest Research. All'inizio o in qualsiasi altro momento puoi interrompere l'intervista senza problemi o alcuna conseguenza negativa.

Grazie mille per la vostra partecipazione, il vostro aiuto/contributo è molto importante e apprezzato.

Contattaci per eventuali domande sulla ricerca:
Rachel Orchard, Forest Research. Email: Rachel.Orchard@forestresearch.gov.uk
Grace van der Wielen, Forest Research. Email: Grace.Wielen@forestresearch.gov.uk

Si prega di leggere attentamente le seguenti dichiarazioni: indicare **Sì** se si è d'accordo e si partecipa:

1. Comprendo che la mia partecipazione è **volontaria** e posso revocare il mio consenso in qualsiasi momento prima del 30 giugno 2025 senza conseguenze negative.	☐ Sì	☐ No
2. Comprendo che le mie risposte sono **riservate**, il che significa che le registrazioni audio e le trascrizioni non saranno condivise al di fuori del team di ricerca forestale.	☐ Sì	☐ No
3. Comprendo che le mie risposte saranno **anonime**, il che significa che non conterranno il tuo nome o indirizzo. Accetto che le mie parole possano essere citate in forma anonima in pubblicazioni, rapporti, pagine web e altri risultati di ricerca.	☐ Sì	☐ No
4. Comprendo che l'**audio** della conversazione sarà **registrato**, utilizzando un dispositivo digitale in modo che l'intervista possa essere trascritta, e sono d'accordo. Questo sarà archiviato in modo sicuro e separato da qualsiasi informazione sensibile.	☐ Sì	☐ No
5. Comprendo che le informazioni raccolte oggi saranno trattate e archiviate in conformità con i requisiti del Regolamento generale sulla protezione dei dati (2018) e del Codice etico per la Forest Research.	☐ Sì	☐ No

Firma: ..... Data: .....

Nome: .....

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ANNEX 2: Consent for BeXyl Focus Group (FCRA)

Forest Research

BeXyl Gruppo di dialogo: Modulo di consenso

Descrizione del progetto e dichiarazione di consenso:
Il team di ricerca sociale di BeXyl realizzerà un gruppo di dialogo per comprendere le prospettive di agricoltori e tecnici sulla gestione dei parassiti nel caso di un'azienda agricola o di un appezzamento di mandorle e uliveti nel Salento. I risultati fanno parte del caso di studio per informare scienziati e responsabili politici sulle dimensioni sociali della futura strategia Gestione Integrata per la futura gestione dei parassiti, in particolare della *Xylella fastidiosa*. I dati saranno raccolti, analizzati e pubblicati dal team di Forest Research. All'inizio dei gruppo di dialogo, puoi partire in qualsiasi momento senza un dod e senza conseguenze negative.

Grazie mille per la vostra partecipazione, il vostro sostegno è molto apprezzato.

Contattaci per domande di ricerca:
Rachel Orchard, Forest Research. Email: Rachel.Orchard@forestresearch.gov.uk
Grace van der Wielen, Forest Research. Email: Grace.Wielen@forestresearch.gov.uk

Si prega di leggere attentamente le seguenti dichiarazioni: indicare **Sì** se si è d'accordo e si partecipa:

1. Comprendo che la mia partecipazione è **volontaria** e posso revocare il mio consenso in qualsiasi momento prima del 30 giugno 2025 senza conseguenze negative.	☐ Sì	☐ No
2. Comprendo che le mie risposte sono **riservate**, il che significa che le registrazioni audio e le trascrizioni non saranno condivise al di fuori del team di ricerca forestale.	☐ Sì	☐ No
3. Comprendo che le mie risposte saranno **anonime**, il che significa che non conterranno il tuo nome o indirizzo. Accetto che le mie parole possano essere citate in forma anonima in pubblicazioni, rapporti, pagine web e altri risultati di ricerca.	☐ Sì	☐ No
4. Comprendo che la conversazione sarà **registrata audio**, utilizzando un dispositivo digitale in modo che gruppo di dialogo possa essere trascritta, e sono d'accordo. Questo sarà archiviato in modo sicuro e separato da qualsiasi informazione identificabile.	☐ Sì	☐ No
5. Comprendo che le informazioni raccolte oggi saranno trattate e archiviate in conformità con i requisiti del Regolamento generale sulla protezione dei dati (2018) e del Codice etico per la Forest Research.	☐ Sì	☐ No

Firma: ..... Data: .....

Nome: .....

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ANNEX 3: Consent for Citizens Questionnaire (JRC)

Section 1. Introduction.

Dear participant,

We are inviting you to a survey to understand citizens' preferences for the restoration of areas which landscape and agricultural system have been (or are at risk of being) severely affected by Xylella fastidiosa (Xylella in short). The survey is open to all citizens currently having their residency in Italy. The survey is conducted by the European Commission in collaboration with the Bexyl Project, a research initiative focused on combating Xylella.

The results will inform policies and improve support for growers using integrated pest management strategies and will help shape future decisions concerning Xylella in your country, from both agricultural and cultural perspectives. They will be disseminated through EU channels, Bexyl project publications, and stakeholder meetings.

The survey will take approximately 20 minutes to complete.

Data will be anonymised and used solely for the purposes of this research, in line with the European Commission's standards for data protection and privacy. Before starting the survey, you will be asked to read and accept our Privacy Statement, which details our data handling practices and your rights as a participant.

Your participation is voluntary. If you have any questions or need further information, please do not hesitate to contact us. We greatly appreciate your time and valuable contribution to this important research.

To obtain more information about how we process your data, click here

The European Commission and the BEXYL Project Team.

S.0 Would you be interested in participating?
1. Yes
2. No [close the survey (record the refusal) or reschedule]

1

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ANNEX 4: Privacy Statement for respondents (JRC)

The data protection policy for respondents in Italy (Apulia) and Spain (Alicante) is available in this link: https://saco.csic.es/s/3seKnkjZ9ymGJ63

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ANNEX 5: Ethical Approval for BeXyl Interviews (JRC)

Prot.n.0197788 del 08/09/2025 - AOO: CLE - Classif.III/11

UNIVERSITÀ
POLITECNICA
DELLE MARCHE

Ancona, 8th September 2025

TO WHOM IT MAY CONCERN

Based on documents provided by Prof. Gianfranco Romanazzi on 24th July 2025 concerning the research project entitled: "Survey on growers and citizens' preferences on pest management for *Xylella Fastidiosa*", which will be carried out in collaboration with Marwa Moumni, Simone Piancatelli, Lucrezia D'Ortenzio and Mehdiye Tunç, the Research Ethics Committee of the Università Politecnica delle Marche

CERTIFIES

that the described research design complies with the Research Integrity Code of the Università Politecnica delle Marche which is available at: https://www.univpm.it/Entra/Ateneo/Associazioni_e_comitati/Comitato_Etico_per_la_ricerca_di_Ateneo/Regolamento_del_Comitato_Etico_per_la_Ricerca_di_Ateneo/L/1.

According to art. 4 of the Research Ethics Committee Regulations of the Università Politecnica delle Marche, this certification does not replace those that, according to the law, must be issued by Ethics Committees for clinical trials, by Ethics Committees of other bodies, such as hospitals, or by the Committee in charge of animal welfare established at the Università Politecnica delle Marche.

The President of the Research Ethics Committee
of the Università Politecnica delle Marche
Prof. Marco Gatti

Comitato etico per la ricerca di Ateneo
ricerca.etica@univpm.it
www.univpm.it

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ANNEX 6: Detailed List of all types of Materials Interchanged in the 3rd RP

Type of material interchanged	Description	Institution requesting the sample				Sending Institution				Permit required	Status of shipment	Origin	Destination
		Partner Number	Address	Contact Researcher	Date of request	Partner Number	Address	Contact Researcher	Date of reception				
DNA samples	In solution, dry, etc.	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	jun-25	P10-UC	UC Berkeley, 335 Hilgard Hall, Berkeley, CA 94720, USA	Rodrigo Almeida	sep-25	No (Declaration of content, no harzasous material, etc.)	Received	Non EU	EU
DNA samples	In solution, dry, etc.	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	jul-25	P27-INTA	Instituto Nacional de Tecnología Agropecuaria (INTA), RIVADAVIA 1439, Buenos Aires, ARG	Patricia Tolocka	sep-25	No (Declaration of content, no harzasous material, etc.)	Received	Non EU	EU
DNA samples	In solution, dry, etc.	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	apr-26	P21- IRFAP	TRAGSA, Empresa de Transformación Agraria, Delde Baleares, 07005, Palma de Majorca, Spain	Eduardo Moralejo	may-26	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU
DNA samples	In solution, dry, etc.	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	apr-26	P5-CNR	CNR – Istituto per la Protezione Sostenibile delle Piante (IPSP). Via Giovanni Amendola 122/D 70126 (Bari) Italia	María Saponari	may-26	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU
DNA samples	In solution, dry, etc.	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	may-26	P15-APTA-IAC	Agencia Paulista de tecnologia dos Agronegocios Centro de Citricultura Sylvio Moreira 158 (Cascalho), Cordeirópolis, SP	Helvecio Coletta	june-26	No (Declaration of content, no harzasous material, etc.)	Received	Non EU	EU
DNA samples	In solution, dry, etc.	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	may-26	P5-CNR	CNR – Istituto per la Protezione Sostenibile delle Piante (IPSP). Via Giovanni Amendola 122/D 70126 (Bari) Italia	María Saponari	jun-26	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU
DNA samples	In solution, dry, etc.	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	jun-26	P5-CNR	CNR – Istituto per la Protezione Sostenibile delle Piante (IPSP). Via Giovanni Amendola 122/D 70126 (Bari) Italia	María Saponari	jul-26	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU
DNA samples	In solution, dry, etc.	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	jun-26	P27-INTA	Instituto Nacional de Tecnología Agropecuaria (INTA), RIVADAVIA 1439, Buenos Aires, ARG	Patricia Tolocka	jul-26	No (Declaration of content, no harzasous material, etc.)	Received	Non EU	EU
Plants for planting	almond trees	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	sep-25	P25-AIBE	Agromillora Iberia, S.L.U. (AIBE), C/ El Rebato, s/n, SUBIRATS 08739, Spain	Mireia Bordas	oct-25	LoA and MTA approved	Received	EU	EU
Freeze-dried samples of viable bacterial strains	5 x freeze-dried samples of bacterial cultures of xylem-inhabiting beneficial bacteria	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	mar-26	P22-ACIES	Acies Bio d.o.o. Tehnološki park 21 SI-1000 Ljubljana, Slovenia	Tina Kogej	jun-26	No (Declaration of content, non-hazardous material)	Received	EU	EU

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Type of material interchanged	Description	Institution requesting the sample				Sending Institution				Permit required	Status of shipment	Origin	Destination
		Partner Number	Address	Contact Researcher	Date of request	Partner Number	Address	Contact Researcher	Date of reception				
DNA samples	In solution, dry, etc.	P5-CNR	CNR– Institute for Sustainable Plant Protection (IPSP), Via Amendola 165/A, 70126 Bari, Italy	Maria Saponari	mar-26	P15-APTA-IAC	Agencia Paulista de tecnologia dos Agronegocios Centro de Citricultura Sylvio Moreira 158 (Cascalho), Cordeirópolis, SP	Helvecio Coletta	mar-26	LoA approved	Received	non-EU	EU
Functional peptide	liophylized	P5-CNR	Cosiglio Nazionale delle Ricerche, Via Amendola 165/A - 70126 BARI (ITALY)	Maria Saponari/Crescenza D	may-25	P4-UdG	Universitat de Girona Plaça Sant Doménec 3, 17004, Girona, Spain	Emilio Montesinos	may-25	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU
Plant samples	Portion of leaves heat dessicated and grinded	P9-AU	Auburn University, Rouse Life Sciences Building, Auburn, Alabama , USA 36849	Leonardo De La Fuente	may-25	P2 - IVIA	Instituto Valenciano de Investigaciones Agrarias Carretera de Moncada km 0,7. 46113 Moncada, València	Ester Marco	sep-25	No (Declaration of content, no harzasous material, etc.)	Received	EU	Non EU
Plant samples	Portion of leaves	P9-AU	Auburn University, Alabama AL 36849, USA	Leonardo de la Fuente	nov-25	P1-CSIC	Instittute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	nov-25	No (Declaration of content, no harzasous material, etc.)	Received	EU	Non EU
Plant samples	Portion of stems, leaf petiols, branches (frozen)	P12-LMU	Ludwig-Maximilians-Universitaet Muenchen (LMU), Geschwister Scholl Platz 1, Muenchen 80539, Germany	Silke Robatzek	feb-26	P1-CSIC	Instittute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	mar-26	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU
Plant samples	Portion of Stem	P13-AIT	AIT Austrian Institute Of Technology Gmbh (AIT), Giefinggasse 4, Wien 1210, Austria	Stéphane Compant	jun-26	P1-CSIC	Instittute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	jul-26	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU
Freeze-dried samples of viable bacterial strains	5 x freeze-dried samples of bacterial cultures of xylem-inhabiting beneficial bacteria	P17- CRSFA	Responsabile Centro di Saggio "Basile Caramia" Via Cisternino, 281 70010 Locorotondo (Ba) Italy	Crescenza Dongiovanni	feb-26	P22-ACIES	Acies Bio d.o.o. Tehnološki park 21 SI-1000 Ljubljana, Slovenia	Tina Kogej	feb-26	No (Declaration of content, non-hazardous material)	Received	EU	EU
Plant Extracts	In PBS, extraction buffer, etc.	P18 - IFAPA	Instituto Andaluz De Investigaciony Formacion Agraria Pesquera Alimentaria y de la Produccion Ecologica (IFAPA), Avenida Grecia s/n Edf Atvo Los Bermejales, Sevilla 41012, Spain	Angjelina Belaj	jun-26	P5-CNR	CNR – Istituto per la Protezione Sostenibile delle Piante (IPSP). Via Giovanni Amendola 122/D 70126 Bari (BA) Italia	Maria Saponari	jul-26	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU

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Type of material interchanged	Description	Institution requesting the sample				Sending Institution				Permit required	Status of shipment	Origin	Destination
		Partner Number	Address	Contact Researcher	Date of request	Partner Number	Address	Contact Researcher	Date of reception				
Plants for planting	olive trees	P21-IRFAP	LaboratoriOficialdeSanitat Vegetal de les Illes Balears (LOSVIB) C/ Eusebi Estada 14507009Palma(+34)971 17 61 00 ext. 62762	Diego Olmo	abr-26	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	apr-26	LoA and MTA approved	Received	EU	EU
Functional peptide	liophylized	P21-IRFAP	Laboratori Oficial de Sanitat Vegetal de les Illes Balears. (LOSVIB) C/ Eusebi Estada 145 07009 Palma (+34) 971176100 ext-62762. Spain	Diego Olmo	may-25	P4_UdG	Universitat de Girona Plaça Sant Domènec 3, 17004, Girona, Spain	Emilio Montesinos	may-25	No (Declaration of content, no harzasous material, etc.)	Received	EU	EU
DNA samples	In solution, dry, etc.	P27-INTA	Instituto Nacional de Tecnología Agropecuaria (INTA), RIVADAVIA 1439,	Patricia Tolocka	mar-26	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004	Blanca B. Landa	apr-26	No (Declaration of content, no harzasous material, etc.)	Received	Non EU	EU
Plants for planting	Olive tree Almond tree Orange tree Spanish broom Rosemary Lavender Grapevine	Plantas Continental	C. Posadas, s/n, 14730 Rivero de Posadas, Córdoba	Jesús Moreno	mar-25	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	mar-25	LoA and MTA approved	Received	EU	EU
Xylella fastidiosa strains	In culture plates	Laboratorio Nacional de Sanidad Vegetal	Laboratorio Nacional de Sanidad Vegetal C/ Montirón, 154 27002, Lugo	Irene Suarez	may-25	P1-CSIC	Institute for Sustainable Agriculture (CSIC) Avenida Menéndez Pidal s/n, 14004 Córdoba (España)	Blanca B. Landa	nov-25	Yes (LoA)	Received	EU	EU
Xylella fastidiosa strains	In culture plates, liohylized, cell suspensions, etc		Rehovot, Israel	Iftach Mazor	jan-26	P11-ARO-VOL	Rishon LeZion, Israel	Ofir Bahar	jan-2026	No (Declaration of content, no harzasous material, etc.)	Received	Non EU	Non EU

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