Accademia
di Agricoltura
di Torino
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Popillia japonica
the killer beetle that
likes to hitchhike

GUIDELINES

for communication

content outreach feedback

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Sommario

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Foreword

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1.1. Guidelines objectives and background

In 2014, the presence of the allochthonous insect *Popillia japonica*, commonly known as the Japanese beetle, was reported for the first time in continental Europe. This one is considered among the most harmful to various crops, ornamental plants, and turfgrasses. Its presence is currently concentrated in north-western Italy and the Canton Ticino.

Accademia di Agricoltura di Torino is actively contributing to raising awareness of the danger of the infestation for the territory. In 2024, it launched the European Erasmus+ project "SOS Popillia"[1] in the area of school education, as part of its dissemination efforts. The project stems from the realisation that **only by knowing the problem an effective defence can be implemented.** Chemical and biological pest control, although effective in some cases, is very expensive today and often not permitted for environmental reasons. For this reason, **it is essential to focus on widespread communication and active involvement of the population.** The education, information and widespread communication programme aims to raise the awareness of every citizen, regardless of their role in civil society, so that they can make a concrete contribution to the reduction of popillia, eliminating any beetles they may encounter.

An effective communication strategy on *Popillia japonica* must be based on clarity, accessibility and timeliness of information. **Experiences already undertaken by public bodies and institutions provide useful hints for defining approaches replicable and adaptable to different contexts.**

The path developed during the "SOS Popillia" project demonstrates how well-structured communication, supported by practical and easily accessible tools, can facilitate collaboration among institutions, professionals and citizens, improving the effectiveness of containment measures.

Developed as part of the project, these short Guidelines are designed to provide an overview of communication strategies related to popillia infestation. The aim is to raise awareness of the extent of the problem, provide operational guidance for the recognition and management of the infestation and promote coordinated action between the various actors involved. They could be an integral part of future beetle control programmes, providing a common orientation for awareness-raising campaigns and the construction of effective and coordinated communication strategies.

In order to define the methodological basis and contents of the Guidelines, the project started the information phase with two pilot meetings in Piedmont, addressed to target audiences with different levels of awareness. In one case, farmers and local administrators discussed the risk posed by *Popillia japonica* in an area where the beetle is present but not yet at critical levels. In the other, the meeting

[1] "SOS Popillia: defence from the beetle threatening Europe" project
http://accademiadiagricoltura.it/sos-popillia-la-difesa-dal-coleottero-che-minaccia-l-europa/
http://erasmus-plus.ec.europa.eu/projects/search/details/2023-2-IT02-KA210-SCH-000178557

involved scholars and experts, including several members of the Order of Doctors in Agricultural and Forestry Sciences. In parallel, participation in a regional agricultural fair offered a further opportunity to raise awareness among farmers and promote good containment practices.

These initial initiatives marked the start of a wide-ranging information programme, comprising 33 territorial events dedicated to raising awareness on popillia: 11 aimed at Italian and French agricultural schools with a focus on knowledge and prevention of the problem, and the remaining 22 aimed at a broader public through territorial dissemination meetings. These include, in addition to the two initial experimental events, nineteen meetings with stakeholders from the agricultural sector, distributed among the project partners, and a final roundtable in Turin.

After the first pilot meetings in the Asti and Turin areas – in Albugnano with an audience composed of farmers, public administration officials and researchers, and in Grugliasco with Doctors in Agricultural and Forestry Sciences, teachers and students – the Italian dissemination programme gradually expanded, reaching different locations in Piedmont and involving different targets in terms of education, age and professional role. In areas with a strong agricultural vocation, such as Alba, Asti, Chieri, Ovada and Rosignano Monferrato, the activities favoured discussions with sector operators, teachers and students from local agricultural institutes. In Moncalieri, Montegrosso d'Asti and Turin, on the other hand, the focus also extended to senior citizens, thanks to the collaboration with the University of the Third Age – a very active reality on environmental and sustainability topics. In other contexts, such as Mondovì, Settimo Vittone and Tortona, the meetings fostered dialogue between farmers, representatives of professional agricultural organisations, municipal technicians and public green management staff, creating opportunities to compare different experiences and competences.

At the same time, the partner schools promoted information meetings both in Piedmont and mainly in Auvergne-Rhône-Alpes, bringing this cross-border emergency to operational contexts such as village and agricultural fairs, to extend the involvement and dissemination of good practices. The French partner also participated in the "Salon International de l'Agriculture 2025" in Paris with a teacher and some students, who were the protagonists of a speech addressed to winegrowers, arboriculturists, farmers and other professionals in the sector. The experience represented a significant opportunity for the young people to acquire technical and communication skills, as well as to engage directly with a heterogeneous audience, thus strengthening their self-confidence, awareness and spirit of initiative.

This inclusive approach contributed to raising awareness, reaching a wide and diverse audience. And the sum of these experiences offered concrete insights for the development of the Guidelines, allowing the communication strategy on popillia to be refined in a more targeted and effective way.

The document therefore addresses a wide audience:

- Private citizens who may come into contact with the insect in their gardens, during walks in natural areas, or through the purchase of infested plants;
- Citizens or operators passing through infested areas, even without any direct link to agricultural activities, who could unwittingly become vectors of *Popillia japonica* – as it is the case, for example, with lorry drivers or motorists passing through affected areas who, during a stop, unwittingly carry beetles on their vehicles or goods, thus contributing to the spread of the insect over long distances and accelerating its geographical expansion;
- Students and young people interested in agriculture, environmental sustainability and integrated pest management practices;
- Agricultural and plant nursery workers, directly affected by the economic and production damage caused by the insect;
- Local authorities, Regional Phytosanitary Services and other public bodies involved in the management of public green areas;
- Environmental operators – professionals and volunteers working in environmental conservation and natural area management;
- Media and science communicators – journalists, bloggers and popularisers dealing with issues related to agriculture, sustainability and environmental protection;
- Researchers, scientific experts and plant protection technicians studying ethology and infestation dynamics;
- International public – organisations, research institutions and agricultural operators in Countries at risk of infestation.

These subjects have different skills, interests and levels of involvement in the infestation management. **For effective and targeted communication, it is essential to understand the specific needs of each target audience.** The aim is to provide the necessary knowledge to recognise the pest and the damage it can cause, to encourage active participation in infestation monitoring and management, and to promote responsible behaviour to limit its spread.

1.1.1. Importance of the problem

Accidentally introduced into continental Europe, the *Popillia japonica* beetle – one of the most invasive insects in North America and a serious threat to hundreds of plant species – was officially detected for the first time in 2014, although the extent of the infestation suggests that it probably arrived at least three or four years earlier; it is able to spread and establish itself rapidly in a wide range of different environments and climates.

In Europe there are no natural limiters and being polyphagous and particularly gregarious, it causes serious damage to crops in colonised areas; and it attacks not only vineyards and agricultural fields, but also sports ones. So far, it has infested an area of 7500 km2 and advances by ≈10 km per year, substantially damaging agriculture (Piedmont Region data, 2019). It is a formidable flyer, but it does not disdain other means of transport: it "hitchhikes" on cars and lorries, moving quickly in summer.

A serious scourge, therefore, for agriculture, turf and the landscape, representing an emergency for plant health in Europe.

1.1.2. Regulatory context

Included by the European Commission in the list of priority harmful organisms (*Delegated Regulation 2019/1702*), the popillia is subject to particular attention from the European Union, which has issued specific regulations such as the *Directive 2000/29/EC* of the Council on the protection of plants against harmful organisms or the *Regulation (EU) 2016/2031*, which governs surveillance measures and responses in the event of phytosanitary emergencies, and it has also financed the H2020 "IPM Popillia" project[2] with ≈5.5 million euros.

To further strengthen the regulatory framework, the Commission has more recently adopted *Implementing Regulation (EU) 2023/1584*, which introduces specific measures to prevent the establishment and spread of *Popillia japonica* Newman, as well as for its eradication and containment within delimited areas of the Union's territory.

In Italy, the Ministry of Health has issued a compulsory control order for the beetle, as per *Ministerial Decree 2018/33*, which outlines the measures and requirements for the safe use of plant protection products by non-professional users.

[2] Horizon 2020 "IPM Popillia - Integrated Pest Management of the invasive Japanese Beetle, *Popillia japonica*" project
http://cordis.europa.eu/project/id/861852
http://www.popillia.eu/

National and regional action plans – such as those of the Piedmont Region[3], the Lombardy Region[4] and the Emilia-Romagna Region[5], which are particularly detailed and operational, also intervene to regulate the infestation. In 2024, Italy further strengthened its system to combat the infestation by adopting, with a special ministerial decree, the National Contingency Plan for the priority pest *Popillia japonica* Newman, implementing Article 25 of *Regulation (EU) 2016/2031*. The Plan provides for coordinated measures for the containment and eradication of the insect, including restrictions on the transport of plant material, reporting obligations for operators and the application of targeted phytosanitary interventions, with the aim of containing the spread of the insect and reducing agricultural and environmental damage.

1.1.3. Impact of the infestation

Infestation by *Popillia japonica* has serious agricultural and environmental consequences. Adults feed on the leaves, flowers and fruit of over 300 plant species[6] (Fleming 19722[7]), significantly damaging tree crops, vineyards, permanent meadows and ornamental plants. The larvae, on the other hand, live in the soil and feed on the roots, compromising the vitality of herbaceous plants and turfgrasses.

The infestation therefore manifests itself on two levels: underground, linked to the presence of the larvae, which damage the roots – mainly of grasses – and make lawns and turf particularly vulnerable to further damage caused by wild animals, such as birds and wild boar, attracted by these food sources; and aerial, with the adults that, once they have flickered, disperse rapidly and feed on the epigean parts of the plants, such as leaves, flowers and fruit of a wide range of plant species.

In addition to direct damage to agricultural production, the massive presence of popillia alters ecological balances, putting local biodiversity at risk. Irrigated green areas, such as parks, roadsides and public gardens, can become hotbeds for larval development, favouring the spread of the insect even far from rural settings.

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[3] "Normativa Coleottero scarabeide del Giappone (*Popillia japonica* Newman)", *Regione Piemonte*, <https://tinyurl.com/yezxffnk>

[4] "Aggiornamento dell'area delimitata per la presenza di *Popillia japonica* Newman in Lombardia", "Piano 2021-2025 per la protezione dell'aeroporto di Malpensa dall'organismo nocivo *Popillia japonica* Newman", "Obbligo di iscrizione al registro reginale fitosanitario per i produttori di tappeti erbosi che operano sul territorio regionale", "Procedura per l'autorizzazione della movimentazione dei tappeti erbosi al di fuori dall'area delimitata durante il periodo di volo di *Popillia japonica*", *Regione Lombardia*, <https://tinyurl.com/ypyws4f3>

[5] "Procedure di attuazione per il contrasto e il controllo di *Popillia japonica* per l'anno 2025 e successivi (Bollettino Ufficiale)", *Regione Emilia-Romagna, Fitosanitario e difesa delle produzioni*, <https://tinyurl.com/5d6hzc33>

[6] Several authoritative sources confirm that the popillia feeds on over 300 plant species, causing significant damage to both agriculture and the environment. For example: "*Popillia japonica* Newman, 1841 - Piante ospiti e danni", *Regione Piemonte, Assessorato Agricoltura, Caccia e Pesca - Direzione Agricoltura Settore Fitosanitario*, <https://tinyurl.com/397sz7ne>; "*Popillia japonica* - Descrizione dell'insetto", *Regione Emilia-Romagna, Fitosanitario e difesa delle produzioni*, <http://agricoltura.regione.emilia-romagna.it/fitosanitario/avversita/schede/avversita-per-nome/popillia>; "Organismi nocivi invasivi: il coleottero giapponese", *Confederazione Svizzera, National Centre for Climate Services - Servizio fitosanitario Ticino*, <http://www.nccs.admin.ch/nccs/it/home/settori/agricoltura/tematica-prioritaria-organismi-nocivi/popillia-japonica.html>

[7] Fleming WE (1972) Biology of the Japanese beetle. USDA Tech Bull 1449:1-129

The ecological pressure exerted by the invasive species compromises the survival of some native species and may require the extraordinary deployment of resources for control and emergency management.

1.1.4. Open challenges in managing the infestation

The management of the *Popillia japonica* infestation poses several challenges that make a strategic and well-coordinated approach essential. These challenges stem from the peculiarities of popillia's biology and ethology, which make it unique among agricultural pests.

One of the main challenges in the management of popillia is the insect's high speed of spread, combined with its extraordinary ability to adapt to new environments, which makes the control and containment of the infestation particularly complex.

This is compounded by several aggravating factors:

- Absence of natural limiters;
- High mobility of the insect, capable of moving independently over long distances;
- Extreme voracity of the adults, which attack a wide variety of crops;
- Gregarious behaviour: attracted by pheromones and kairomones, hundreds of adults concentrate on the same plant, defoliating it completely within a few days;
- Limited effectiveness of authorised insecticides, due to their reduced persistence, which makes repeated treatments necessary throughout the entire adult flight period (around three months), and their mode of action mainly by contact, with low effectiveness by ingestion;
- Negative environmental impact related to the use of insecticides;
- Low or no efficacy of products permitted in organic farming;
- Difficult to control larvae in the soil.

The seriousness of the damage also varies according to the agricultural context: it is particularly high in irrigated areas, such as permanent meadows or maize and soya cultivation, which offer particularly favourable conditions for ovideposition, while it tends to be more contained in hilly contexts where these crops are not present.

Added to all this is the need for effective communication: reaching different audiences with clear and relevant messages is not easy, especially considering that the issue involves both experts in the field and ordinary citizens. In addition, there is a real risk that the general population will underestimate the seriousness of the problem, not immediately perceiving it as an urgent threat to agriculture and the environment, or, on the contrary, will make inappropriate use of insecticides when the adults first appear, sometimes unknowingly generating more harm than good. For this reason, **targeted and well-structured communication plays an essential role in raising awareness and mobilising all the actors involved.**

These difficulties highlight the need for operational and accessible guidelines to support coordinated and effective action.

1.2. Importance of communication in the *Popillia japonica* phytosanitary emergency

The rapid spread of *Popillia japonica* threatens agriculture and biodiversity, making clear and timely communication essential. Correct information not only helps to recognise the insect and contain the infestation, but also optimises resources and stimulates collective action.

Well-structured dissemination helps to recognise and counteract the problem in a timely manner, and allows institutions, operators and citizens to be involved in coordinated action to deal with the emergency strategically, efficiently and effectively.

Communicating a phytosanitary emergency requires balancing information and awareness-raising, avoiding both sensationalism and underestimation of the problem.

Clarity of message is essential: anyone coming into contact with the information must quickly understand the nature of the threat, the risks involved and the measures to be taken. For this, it is useful to adopt simple language, accessible even to those without technical skills, without sacrificing scientific accuracy.

The variety of target audiences requires an adaptation of communication channels and strategies. Technical experts benefit from specialised publications and training sessions, while citizens can be reached with information campaigns, social media, videos and infographics. In addition, actively involving the public, e.g. through participatory reporting and monitoring, increases a sense of responsibility and fosters a more effective collective response.

A crucial aspect is the management of emotions related to the emergency: while it is necessary to emphasise the seriousness of the problem, it is important to avoid unjustified alarmism that could generate panic or disinterest. Providing reliable, up-to-date information with practical solutions builds confidence and encourages appropriate behaviour. However, it should be noted that it is not easy to draw balanced attention to the problem: until one experiences it directly, one tends to underestimate it; on the contrary, once one enters an infested area, it is easy to fall into overreaction. This was confirmed in some meetings with stakeholders of the "SOS Popillia" project: in some cases, representatives of horticulture-related bodies even chose not to communicate on the issue, considering the emergency marginal or unimportant.

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Principles of an effective communication

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Effective communication is not just a set of techniques, but a strategic and dynamic process, capable of adapting to different audiences with clear, relevant messages based on authoritative sources.

Such an approach, combined with the conscious use of digital and traditional tools and the careful management of emotions and perceptions, is crucial to activate knowledge, behaviour and resources in the management of a phytosanitary emergency of this magnitude.

It is also very important to differentiate communication according to the state of the infestation: in areas already affected, it is necessary to focus on practical and timely actions, while **in areas still free of pests, the priority is preventive awareness and early warning.**

2.1. Clarity, accessibility and adaptation to target audiences

Communicating a phytosanitary emergency, such as that of *Popillia japonica*, requires clarity and accessibility of content. Messages must be simple and direct, understandable for both experts and non-experts. If scientific terminology is used, it must be accompanied by clear explanations to ensure that even those without technical knowledge can understand the urgency of the problem and the action to be taken. The format of materials is also crucial: videos, images and infographics can make content more accessible, facilitating understanding, especially for younger audiences or those less familiar with technical language.

The use of language and channels appropriate to the target audience is essential. Students and young farmers respond best to dynamic content on social media or educational apps, while technicians and operators prefer specialised documents, seminars or webinars. Institutional actors need clear and concise dossiers to quickly assess data and implications. **Adapting tone, format and channel to each group improves the effectiveness of communication and encourages greater dissemination of information.**

Modulating messages according to the target audience is therefore essential for effective communication: each audience has a different perception of the problem, influenced by their direct experience and role. Farmers need to be informed about economic damage and prevention strategies, while citizens need to be made aware of the environmental impact and the importance of reporting outbreaks.

Understanding the needs of each audience increases the effectiveness of communication, stimulating concrete and responsible responses.

Countering misinformation is essential for effective communication. In a context where fake news can distort the perception of the problem, it is necessary to ensure that the information communicated is accurate, up-to-date and based on scientific data, citing reliable sources. It is also crucial to promptly correct false or misinterpreted news with transparency: this not only reinforces public trust, but also promotes the sharing of knowledge that is essential for dealing with the *Popillia japonica* infestation.

2.1.1. Communicating the popillia problem to a general public

To tackle a large-scale infestation such as that of popillia, technical solutions are not enough: **clear, concrete and effective communication to a generic audience is essential, so that everyone can understand the problem and contribute to its management.**

Avoiding overly technical language helps to capture the audience's attention and stimulate an active response.

First, it is important to explain the problem in simple words, avoiding complex scientific terms or explaining them in an accessible way. For example, instead of saying that Popillia japonica is an invasive beetle belonging to the beetle family, it may be more effective to describe it as "a voracious insect that damages plants and crops because it feeds on the leaves and roots of many plant species".

Using concrete, everyday examples helps to bring the problem closer to people. Saying that the insect can destroy the leaves of fruit trees, vines and roses "in the garden at home" makes the threat immediately understandable, because it touches on the direct experience of those who have a vegetable garden or simply love greenery.

Another key element is to stimulate active participation by clearly explaining what each citizen can do. Rather than just conveying the idea of a threat, it is useful to provide practical advice: "if you notice a cluster of these insects on your plants, you can pick them up by hand and soak them in soapy water, a simple but effective method for limiting their spread".

To make the message even more effective, it is useful to use different communication formats – such as videos, pictures and infographics. A photograph of the insect flanked by a drawing showing the damage it causes to plants can be much more immediate than a long text description. Short videos on social media, perhaps with an expert or farmer showing how to recognise it and what to do, are powerful tools for reaching a wide audience.

Finally, it is important to avoid sensationalism and scaremongering. Saying that *Popillia japonica* is a serious threat to agriculture is correct, but presenting it as an "irreversible disaster" or a "scourge" could generate panic rather than empowerment. **The right tone is that of clear and realistic**

information, which makes people understand the seriousness of the problem but also conveys the idea that everyone can do their part to contain it.

2.2. Digital and traditional tools for outreach

For effective outreach, it is essential to integrate digital and traditional tools.

Digital channels, such as social media, e-learning and webinars, make it possible to quickly reach a wide audience with targeted content: videos – perhaps live – of (in)formative events, posts with captivating images and online resources can engage students and professionals with dynamic and in-depth learning. As a confirmation of the growing effectiveness of digital channels, the experience of the "SOS Popillia" project offers a significant example. In just a few months, the videos of the (in)formative seminars on *Popillia japonica* published on the *Accademia di Agricoltura di Torino*'s YouTube channel have reached about a thousand views: a significant result, especially considering the technical and specialised nature of the content, which demonstrates how even complex topics can be widely disseminated through well-calibrated digital tools.

At the same time, printed materials such as brochures, posters and pocket guides remain essential at trade fairs, local events or field meetings where access to digital devices may be limited, while seminars, hands-on workshops and face-to-face meetings encourage direct interaction and a deeper understanding of the issue.

Combining digital and traditional tools makes it possible to create a hybrid approach, capable of responding to the needs and preferences of a diverse audience. This integration is particularly effective in ensuring that information is accessible even to those with limited technological skills or living in areas with poor connectivity. Furthermore, **a multi-channel approach amplifies the reach of messages, increasing the likelihood that the content reaches the right audience at the right time** (Lomaestro, 20211[8]; Nicastre, 2022[9]).

[8] "Multichannel Marketing: cos'è davvero l'approccio multi-canale", *Greta Lomaestro*, *Digital4 - Nextwork360*, <https://tinyurl.com/8sckpxw9>, *cit.* "Il marketing multicanale non può limitarsi a diffondere un messaggio nel maggior numero di posti possibile. Bisogna tenere conto delle specificità di ogni piattaforma, della maggiore efficacia di un certo tipo di contenuto o di feature su un mezzo di comunicazione piuttosto che su un altro." (en) "Multichannel marketing cannot be limited to spreading a message in as many places as possible. It is necessary to take into account the specific characteristics of each platform and the greater effectiveness of certain types of content or features on one medium rather than another."

[9] "Importance of a Multi-Channel Communication Strategy for Organizations", *Mark Nicastre*, *Fitler Square Strategies*, <https://tinyurl.com/4dwt2p8s>, *cit.* "Multichannel communication increases the likelihood of your message being recognized and understood, thereby expanding the reach of your message."

2.3. Sensitivity and management of alarmism

Communicating a plant health emergency requires a balance between urgency and reassurance, avoiding alarmism that may generate panic.

In this regard, useful indications can be drawn from communication strategies adopted in other health emergency contexts. For example, during the Covid-19 pandemic, the importance of balancing the urgency of information with the need to avoid alarmism emerged. "The biggest misconception in risk communication is that the task of institutions is to reassure citizens to avoid panic. Don't do that. And above all, do not try to do so by downplaying the danger. In fact, the problem is often apathy, not alarmism" (Sturloni, 2020[10]). This approach suggests that, even in the case of phytosanitary emergencies, **it is crucial to communicate with transparency and clarity,** emphasising the proactive role of each stakeholder and providing accurate and timely information **without minimising the risks, in order to avoid both panic and indifference.**

Instead of focusing only on negative effects, it is useful to highlight successes in containing the infestation and good practices that have proven effective. **Balanced communication helps to keep attention high, while building the community's confidence and ability to deal with the problem with awareness, without feeling helpless or overwhelmed.**

To best manage public sensitivity and prevent overreactions, it is useful to adopt **communication strategies** that convey the message in a clear and balanced manner.

First and foremost, it is important to avoid generating panic. The problem must be presented objectively, highlighting not only the risks, but also the solutions available and the contribution each group can make to address it. The use of overly alarmist terms, such as "imminent ecological catastrophe", must be avoided at all costs.

Another key aspect is to promote a sense of shared responsibility. Actively involving recipients, highlighting their role in preventing and containing the infestation, helps to reinforce a sense of participation and commitment and encourages proactive behaviour.

Finally, transparency and constant updates play a crucial role in maintaining public confidence. Providing regular information on progress, e.g. on cleared areas or reduced sightings, helps to give a sense of control and further motivate people to cooperate.

An example of clear and balanced institutional communication is the "Emergency phytosanitary measures to combat the spread of *Popillia japonica*" published by the Italian National Phytosanitary

[10] "Quali sono gli errori da evitare quando si comunica lo stato di emergenza a un paese", *Giancarlo Sturloni*, Wired Italia, <https://tinyurl.com/4f4njyzy>

Service. This document provides detailed guidelines on the action to be taken, helping to disseminate reliable and technically accurate information to avoid both underestimation and unjustified alarmism (Servizio Fitosanitario Nazionale, 2025)[11].

[11] "Misure fitosanitarie di emergenza per il contrasto alla diffusione di *Popillia japonica*", *Servizio Fitosanitario Nazionale*, <http://protezionedellepiante.it/popillia_misure-di-contrasto/>

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Strategies and tools for communication

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Effective communication is based on the targeted use of tools, the excellence of speakers and the careful planning of campaigns. The combination of these elements not only helps to disseminate information on *Popillia japonica*, but also creates fertile ground for collaboration and collective commitment, which are crucial in tackling this phytosanitary emergency.

3.1. Selection of the most effective channels of dissemination

Communication on popillia infestation is not only about content, but also about the means through which the message is conveyed. Choosing the right tools is essential to reach audiences effectively, calibrating each channel according to target audience and context.

Social media are ideal for engaging young students with visual and dynamic content, such as short (in)formative videos, images and interactive stories. In parallel, in local contexts or during local events, traditional materials such as brochures and posters offer an immediate visual and user-friendly medium.

To raise awareness among a wider audience, explanatory videos and social campaigns are valuable tools, while for technicians and professionals, (in)formative seminars, webinars, specialised e-newsletters and technical articles are more suitable, providing insights and operational knowledge.

Finally, in-person events such as trade fairs, demo days and meetings in schools allow direct interaction with the target audience, reinforcing the impact of the message.

A strategy that integrates digital and traditional tools, coupled with well-designed content, ensures that the message not only reaches, but is understood and received effectively by different audiences.

Campaign planning requires clear objectives, target audience mapping and targeted strategies.

To engage local communities, in-person events such as school meetings or park days offer direct interaction with experts. In particular, agricultural institutes – but also other high schools – represent a universe of subjects that are particularly sensitive to the issue: students and teachers, once informed, in turn become disseminators of the message, contributing to widespread dissemination through their peers and families.

On a wider scale, dissemination materials, radio spots, articles and (in)formative videos disseminated online can amplify the message, also with the support of web agencies.

A key aspect is message consistency: the use of multiple channels must ensure uniformity to avoid misunderstandings.

Furthermore, it is crucial to stimulate active public participation, for example by promoting competitions in agricultural schools for innovative ideas on monitoring the infestation, or as the Horizon 2020 project "IPM Popillia"[12] did with an app to report sightings of the beetle.

Finally, analysing feedback and interactions on social media allows us to understand what works and what can be improved and thus to assess the effectiveness of the campaign and refine strategies, adapting them to the ever-changing public needs.

3.2. Role of speakers and quality of information content

In addition to the choice of tools, a crucial element of infestation communication is the quality of the information resources and speakers involved. **The credibility of the person conveying the message is often decisive for its impact.**

Speakers, whether agronomists, researchers or technicians with field experience, must not only demonstrate competence, but also convey empathy and engage the audience. It is essential that they know how to modulate language according to context and target audience, moving from detailed explanations for professionals to a more popular approach for young people and the general public. Information resources – such as brochures, videos and presentations – need to be up-to-date, based on verified data and visually appealing, with intuitive images and infographics to enhance understanding of the message.

To further strengthen the effectiveness of communication, it is recommended to involve the officials of the regions concerned, whose expertise and availability can represent an added value for information interventions. In northern Italy, an equally valuable contribution can come from academics at *Accademia di Agricoltura di Torino* and DiSAFA[13] or the universities of Milan and Pavia, who are leading figures in agricultural research.

3.3. Awareness campaign planning and management

An effective awareness-raising campaign requires a well-defined strategy, capable of involving the public and stimulating concrete action.

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[12] See note 2, page 8

[13] "Dipartimento di Scienze Agrarie, Forestali e Alimentari" – (en) Department of Agricultural, Forestry and Food Sciences of the University of Turin
http://www.disafa.unito.it/

The first step is to identify the objectives: raising awareness of the problem, promoting good prevention and management practices, and stimulating collaboration between citizens, farmers and institutions.

The choice of communication channels is crucial and must adapt to the different targets. Social media and multimedia content (videos, infographics, interactive posts) can reach a wide audience, while information events, webinars and meetings on the ground foster direct dialogue with professionals and local communities.

The campaign must be clear, accessible and constantly updated to keep attention high. The use of testimonials that address the infestation in the field with concrete data reinforces the credibility of the message. In this regard, the 2020-2022 Communication Plan of the National System for Environmental Protection[14] emphasises the importance of involving testimonials in environmental communication activities, including emergency situations, to promote a widespread culture of sustainability and enhance environmental benefits, using people known for their influence and authoritativeness.

Finally, it is crucial to monitor the impact of the initiative through feedback and analysis of interactions in order to optimise future awareness-raising activities.

3.4. Communication strategies for specific targets

In order to ensure an effective impact, communication on *Popillia japonica* infestation must be tailored to different target groups, taking into account their needs, prior knowledge and the role they can play in the management of the problem. Each target group requires different tools and languages in order to receive information in a clear and applicable manner.

General audience

The active involvement of the general public is essential for the monitoring and timely reporting of outbreaks. Effective communication must focus on clear and immediate messages, using accessible language and practical tools. It is useful to provide illustrative guides to help recognise the insect and the damage it causes to plants, as well as promoting direct reporting channels, such as dedicated apps or emergency numbers of the Regional Phytosanitary Services.

[14] "Piano di comunicazione SNPA 2020-2022", *Sistema Nazionale per la Protezione dell'Ambiente*, <http://snpambiente.it/chi-siamo/atti-fondamentali/piano-di-comunicazione-snpa-2020-2022/>

A concrete example of targeted communication is the information campaign carried out by the Lombardy Region in 2021 at Milan Malpensa airport. The initiative made travellers and airport operators aware of measures to combat *Popillia japonica*, highlighting the consequences of failing to take action. To reach airport staff and ensure effective coordination, the campaign was also disseminated through the monthly *Safety Committee*, while other communication tools were used to inform the public.[15]

A second, equally effective example is the campaign promoted by the Piedmont Region in service stations located in infested areas and buffer zones. Here, multilingual posters invite truck drivers and motorists to carefully check their vehicles after a stop, to remove any beetles that may have settled. A simple but fundamental gesture to avoid the accidental spread of the insect over long distances.

Young agricultural students, educators and schools

Young people being trained in the agricultural sector represent the future generation of professionals who will have to face and prevent phytosanitary emergencies such as *Popillia japonica* and can become promoters of good practices.

Involving them in an active learning process can make them protagonists from the earliest years of training. Interactive teaching materials, ranging from digital content to practical exercises, are ideal tools to deepen their understanding of the topic. *Citizen Science* initiatives[16] and applied research projects can stimulate their interest and raise their awareness. One example, again, is the participatory survey, where farmers, hikers or ordinary citizens report sightings of popillia specimens through the dedicated IPM app[17], thus contributing to the mapping and management of the problem. Updated maps and the geographical distribution of the insect can be consulted on the websites of the regional phytosanitary services, such as those of the Piedmont Region[18] or the Lombardy Region[19]. In addition, laboratories and practical workshops offer the opportunity to directly apply theoretical knowledge, developing concrete skills in infestation management.

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[15] "Piano 2021-2025 per la protezione dell'aeroporto di Malpensa dall'organismo nocivo *Popillia japonica*", *Regione Lombardia, Servizio Fitosanitario*, <https://tinyurl.com/3526bjnf>

[16] Scientific activities open to voluntary contributions from citizens, who collaborate with researchers in the collection, analysis and/or interpretation of data. Recognised at European level, they promote dialogue between science and society, democratise knowledge and improve the quality of data on a large scale. In the case of *Popillia japonica* monitoring, *Citizen Science* (or "participatory science") is a valuable tool for strengthening environmental surveillance, thanks to the widespread collection of reports across the territory.

[17] Refer to page 21

[18] "D.D. 11 novembre 2024, n. 853 - Aggiornamento dell'area delimitata per la presenza di *Popillia japonica* Newman in Piemonte", *Regione Piemonte, Settore Fitosanitario e servizi tecnico-scientifici*, <https://tinyurl.com/jya67pem>

[19] "D.d.s. 4 novembre 2024, n. 16480 - Aggiornamento dell'area delimitata per la presenza di *Popillia japonica* Newman in Lombardia. Abrogazione d.d.s. 30 ottobre 2023, n. 16820", *Regione Lombardia, Servizio Fitosanitario - Bollettino Ufficiale*, <https://tinyurl.com/h5vy8wxc>

Green area managers, farmers, plant nursery and agricultural professionals

Being in the front line of infestation management, farmers and green operators need concrete tools to contain the spread of *Popillia japonica* and protect crops. Communication to them must be technical, clear and oriented towards practical and effective solutions. It is essential to ensure access to up-to-date information on sustainable control methods, regulations and intervention procedures, as well as to provide direct support through technical advice and training sessions.

Special attention should be paid to public green operators, as gardens, parks and urban roundabouts, often regularly watered, are ideal environments for adult females to lay their eggs. These areas, if not adequately monitored, can become true hotbeds of new colonies, favouring the spread of the infestation even in urban contexts.

In this context, it is important to remember that each affected Region issues specific regulations, especially for nurserymen, who are considered potential vectors of the infestation. The sale of pot plants, especially if they are destined for other areas of the country or abroad, may in fact represent an active channel for the spread of popillia, since larvae may be present in the substrates, which, once they arrive at their destination, give rise to new infestations.

An example of a targeted communication strategy is the one adopted by the Emilia-Romagna Region, which has involved greenery managers, sports and golf course managers, professional farmers and garden and vegetable garden hobbyists, disseminating information materials and organising specific meetings. In consideration of the seriousness of the infestation, local administrators, such as the mayors of the affected areas, and other institutional subjects able to contribute to the coordinated management of the problem were also involved. In addition, the Regional Phytosanitary Sector has produced a popular video for the recognition and management of the insect, which is available online for public consultation, contributing to the widespread dissemination of information and strengthening collaboration between citizens and operators in the sector (Regione Emilia-Romagna, 2025).[20]

Even in the urban sphere, the role of public green managers is crucial, as highlighted by the case of the city of Turin, where popillia infestation requires different strategies between the centre and the hilly area, with timing and incidence also varying according to heat islands, influenced by morphology and altitude.

Turin, the first Italian city in terms of percentage of green space relative to municipal area, has a vast urban green heritage. However, the operational framework has revealed a structural management criticality: the growing disconnect between the academic world, which often draws up theoretical models that are difficult to apply, and those who manage green areas on a daily basis, who are often

[20] See note 5, page 9

forced to operate with limited resources and in emergency conditions, with negative impacts on the quality and health of the green heritage.

Effective communication towards this target audience must therefore take into account the operational complexity, promoting greater integration between local authorities, research and green operators, and supporting environmental education together with participatory, sustainable and far-sighted planning – able to address phytosanitary, climatic and environmental challenges in a shared way, and to guarantee an efficient, resilient and inclusive urban green.

Environmental operators

Popillia japonica infestation poses a threat not only to agriculture but also to biodiversity. Environmental workers can play a key role in detecting and containing outbreaks in natural areas. It is important for them to receive targeted training on how to recognise the insect's presence in natural ecosystems and how to protect native flora. In addition, tools for collecting and sharing data, such as infestation maps and online databases, can improve the ability to monitor and coordinate among different geographical areas.

Researchers and technicians

Scientific research professionals are the driving force behind the development of new strategies for popillia control. To maximise the effectiveness of their work, it is essential to promote the sharing of results and facilitate access to up-to-date databases. Collaboration with public and private entities allows new solutions to be tested and intervention strategies to be optimised. Fostering communication between scientists and other actors involved in infestation management helps to ensure an evidence-based approach and improve responsiveness to the problem.

Media and science communicators

The media and science communicators play a key role in disseminating information on a large scale. It is therefore essential to provide them with clear, up-to-date and verifiable communication materials, enriched with images, infographics and videos that facilitate their understanding and dissemination through traditional and digital channels. Facilitating direct contact with experts in the field for in-depth information also helps to ensure accurate information based on reliable sources.

Local institutional actors and decision-makers

Local governments and policymakers play a central role in the infestation management, coordinating monitoring and promoting awareness, prevention and containment campaigns. To support them, it is essential to provide them with clear operational guidelines, standardised information materials that can be used to inform both agricultural operators and the public, and tools for evaluating effectiveness – such as periodic reports and impact analyses – useful for guiding decisions and improving intervention strategies.

International audience

Popillia japonica infestation is not limited to a single territory, but represents a challenge on an international scale: it is a cross-border issue.

Collaboration among different countries is essential to contain the spread of the beetle and share the most effective strategies. To facilitate this process, it is useful to provide guidelines translated and adapted to local contexts, as well as to promote cooperation networks for the exchange of experiences and good practices. Participation in international monitoring and control programmes makes it possible to develop coordinated strategies and improve the management of the problem at global level.

Adapting communication to different targets is crucial to ensure effective dissemination of information and maximise the impact of infestation prevention and control actions. Choosing the right tools and language for each target audience makes it possible to transform information into concrete action, contributing to the protection of the environment and agricultural activities.

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Management of communication emergencies

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1785

Dealing with a phytosanitary emergency such as the spread of *Popillia japonica* requires not only technical action, but also timely and transparent communication. **Informing clearly and quickly helps to prevent panic, guide effective action and counteract misinformation before it spreads.** To manage such a crisis, generic declarations are not enough: we need precise protocols, immediate answers to the most critical questions and a strategy that combines prevention and reaction. Only in this way can emergency communication be transformed from a weak link into a decisive tool in the fight against the infestation.

4.1. Answers to frequently asked questions

A well-structured compilation of frequently asked questions (FAQ[21]) is an essential tool for clearly and immediately answering the public's main concerns, reducing uncertainties and misunderstandings.

Organised by topic and written in accessible language, FAQs should first address general issues – for example, *Is Popillia japonica dangerous to humans?* or *Why is it considered an emergency?* – and then delve into concrete actions, such as recognising the insect and reporting it – *How can I distinguish it from similar insects?*, *What should I do if I find it?*. Publishing them both online, on websites and social media, and in print at information events ensures widespread dissemination and greater communication effectiveness.

Identifying the problem

The first question many people ask is: *What is Popillia japonica?*. This invasive beetle poses a serious threat to agriculture and the environment as it feeds on numerous plant species, causing significant damage to crops and natural ecosystems. Explaining clearly why it is dangerous and providing pictures and detailed descriptions makes it easier to recognise and avoid confusion with similar insects.

Immediate actions

One of the main concerns of those who discover the presence of the beetle is to understand what to do: *If I find an adult specimen or a larva, what should I do?*. FAQs should offer simple and practical instructions on how to collect and identify the beetle, as well as indicate the official channels for reporting an infestation. It is useful to explain the importance of reporting, which allows the spread of the insect to be monitored and targeted action to be taken.

[21] Frequently Asked Questions

Prevention

Many people wonder how to avoid unintentionally spreading the beetle. FAQs should clarify the precautions to be taken, such as checking plants and soil before moving them to other areas and adopting good agricultural practices to reduce the risk of propagation. In addition, it is useful to indicate which plant species are particularly at risk, so that farmers and gardeners can pay more attention to the most vulnerable plants.

Technical interventions

Farmers and professionals need more specific information on infestation management.

A frequent question is: *Who is responsible for control interventions?*. The FAQs must clarify the role of the institutions and bodies in charge of managing the emergency, indicating competences and responsibilities between the Region, the Phytosanitary Services and other local authorities.

Another fundamental aspect concerns control strategies: *Which products or techniques can I use for control?*. It is important to provide up-to-date information on the most effective and sustainable methods, in compliance with stringent European regulations. These include biological treatments and targeted agronomic practices. For example, field trials have shown that slightly delaying cultural interventions, such as pruning, allows the beetle population to reach a significant presence threshold, thus making the use of authorised phytosanitary treatments more effective and targeted. Furthermore, advances in integrated pest management suggest planning combined interventions capable of acting on popillia and other pathogens simultaneously, optimising time and reducing the overall number of treatments. **Coordinating these actions with those already planned against other phytophagous can increase their overall effectiveness and reduce the impact on crops.**

Are pheromone traps really useful for containing the infestation? This is a frequently asked question, also in light of their widespread commercial promotion. However, their use is generally not recommended in areas that are already infested: they tend to fill up quickly and lose their effectiveness if not managed continuously. Moreover, **the attractiveness of pheromones can paradoxically increase the risk of infestation in surrounding areas. This side effect makes their use counterproductive if not managed with extreme care and skill. Indiscriminate use by private individuals can also interfere with official monitoring. Strategies currently available include "attract and kill" traps, targeted use of insecticides and low-impact products, but controlling the infestation remains complex and is still being tested.** Monitoring is based on devices with sex pheromones and food attractants, which are useful for identifying intervention thresholds. However, even experimental "attract and kill" devices, equipped with nets or surfaces impregnated with insecticide, show limited effectiveness in the presence of very high populations. New devices are currently being tested: these are traps that, activated by pheromones, kill the insect on contact, thus reducing the need to empty and manage the collected material. However, they are not yet available on a commercial scale.

Legislation

Finally, questions about regulation are essential for those who own infested land: *Are there any legal obligations in case of infestation?*. FAQs should clarify the legal requirements, specifying any reporting obligations, required actions and possible sanctions for those who do not take the necessary measures.

Organising the FAQs in a clear and accessible manner allows the public's doubts to be answered quickly, avoiding misinformation and promoting more effective management of the infestation.

4.2. Strategies against fake news and disinformation

Communication emergencies often generate fertile ground for the spread of fake news and disinformation, which can undermine public trust and further complicate crisis management. To counter these phenomena, **it is essential to actively monitor communication channels, identifying fake news at an early stage and intervening with clear and verifiable corrections.**

Collaborating with authoritative sources – such as universities, research institutions and institutional organisations – ensures the credibility of the information disseminated.

Furthermore, it is useful to create educational content that helps the public recognise fake news, promoting a **critical approach to information circulating online**.

The use of transparent communication campaigns on social media can further strengthen the fight against disinformation, creating an **open, two-way communication channel between institutions and citizens** and enabling the dissemination of clear, verifiable and accessible content to a wide audience.

4.3. Communication in high alert situations

When the situation calls for a high level of alert, communication must be immediate and clear, avoiding an overly reassuring attitude – one of the most common errors in risk communication – **as well as excessive alarmism about risks that are not real.** This is essential to ensure a coordinated and reliable flow of information, avoiding alarmist tones that could generate panic.[22]

A single official point of reference for the dissemination of information ensures consistency in messages, while tools such as press releases, public briefings, push notifications and social media updates enable real-time information.

Activating hotlines or messaging services helps address specific concerns, offering human contact that reduces anxiety and uncertainty.

In times of high alert, well-managed communication not only informs but also guides the public towards collaborative and proactive behaviour, which is crucial in dealing with the emergency.

4.3.1. A narrative experiment: a hypothetical case of crisis communication

In the following scenario, we imagine how a Region might deal with the spread of Popillia japonica with an innovative approach to communication. Although this case is fictitious, it is based on real principles of management of phytosanitary emergencies and effective communication strategies.

In recent years, Region XYZ has tackled the advance of the Japanese beetle with a hybrid approach: scientific, participatory and narratively effective. This case offers food for thought on how a phytosanitary crisis can challenge institutional communication strategies, requiring a flexible and innovative approach.

Here is how the story unfolded, between challenges and innovative solutions.

When *Popillia japonica* appeared in XYZ in 2021, the first press releases – full of technicalities – confused rather than informed: farmers underestimated the problem, citizens raised false alarms. The region soon realised that a change of pace was needed.

[22] "Salute e ambiente: la comunicazione del rischio", *Provincia Autonoma di Trento - Assessorato alla Salute e Solidarietà sociale*, *World Health Organization - Regional Office for Europe*, <https://tinyurl.com/53aa9wxr>

In 2022, it adopted a clearer and more accessible language: intuitive infographics replaced the technical bulletins, pharmacies and libraries became collection points for warnings, and the slogan "Let's stop popillia together" involved the public. The result? More reports, fewer misidentifications.

In 2023, an interactive map incentivised the participation of municipalities, while in 2024, the "Popillia Hunter" app – which rewarded the most active citizens – led to tens of thousands of verified reports in just a few months: a replicable model, turning alarm into collective action.

Lessons learnt

The experience of Region XYZ shows that **a phytosanitary crisis requires flexible communication, capable of adapting to the public and rapid changes in the situation.** Correcting initial mistakes, integrating digital tools and adopting an engaging narrative made the communication strategy more effective.

The case also highlights that **communication must not only be reactive, but also preventive: building a culture of awareness and active involvement is crucial to address future emergencies with greater readiness and impact.**

Although related to the broader issue of climate change, the Ministry of Environment and Energy Security's National Adaptation Strategy reiterates the importance of effective communication and awareness-building among stakeholders.[23] These principles also fully apply to the management of phytosanitary crises such as the *Popillia japonica* infestation, where **the timeliness of information, the active involvement of the various actors and a clear and coherent communication strategy are essential tools for containing the emergency and promoting appropriate behaviour. In this context, agricultural schools and local communities play a strategic role: on the one hand as privileged recipients of awareness-raising actions, and on the other as multipliers of the message, thanks to their ability to spread awareness among families, colleagues and territories.**

[23] "Strategia Nazionale di Adattamento ai Cambiamenti Climatici", *Ministero dell'Ambiente e della Tutela del Territorio e del Mare*, <https://tinyurl.com/4rmnyhv9>

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Conclusions and recommendations

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5.1. Towards a shared and conscious management

Managing *Popillia japonica* infestation is a complex challenge that requires commitment, knowledge and collaboration at all levels of the community. **Effective and up-to-date communication can raise awareness among citizens, institutions and agricultural operators, facilitating a timely and coordinated response to limit the spread of the beetle and promote an active role in protecting the environment, agricultural economy and biodiversity.**

An example of a structured approach is represented by the initiatives adopted by the Emilia-Romagna Region, which has provided information meetings and materials dedicated to different categories of stakeholders, including green area managers, plant nursery operators, professional farmers and hobbyists. Moreover, to ensure effective management of the phytosanitary emergency, the Region has promoted coordination between local administrations, phytosanitary consortia and other institutional bodies. These actions demonstrate how clear information and coordination between public and private bodies can strengthen the capacity to respond to the problem (Emilia-Romagna Region, 2025).[24]

The Piedmont Region has also activated information campaigns aimed at both agricultural operators and citizens, providing multilingual information materials, a technical information video accessible online[25], constant updates on its institutional website, and installing information signs at strategic points in the territory – such as service stations and logistic hubs in infested areas or buffer zones. Particular attention has been paid to the role of nurserymen, with targeted regulations and controls to prevent the accidental spread of the beetle through the sale of pot plants. The Regional Plan also provides for operational measures such as the positioning of "attract and kill" traps and detailed indications for monitoring and reporting.

The Lombardy Region, then, in addition to publishing up-to-date information through the portal of the Phytosanitary Service, has experimented with targeted actions in airports, such as the awareness campaign carried out at Milan Malpensa airport. The initiative involved both travellers and airport staff through effective communication conveyed also through the *Safety Committee* channels, helping to reduce the risk of the beetle spreading via air transport.[26]

These regional examples show how **targeted communication strategies and active participation, integrated with regulatory and control actions**, can be decisive tools for a shared and effective management of the *Popillia japonica* emergency.

[24] See note 5, page 9
[25] http://www.youtube.com/watch?v=CQ4ebcBxXXI
[26] Refer to page 23

These Guidelines are a starting point to standardise communication strategies, guaranteeing clear, coherent and adapted messages to the different targets. Their effectiveness will depend on the ability to implement and update the recommendations as the situation and scientific knowledge evolve.

We call on everyone to actively collaborate, contributing skills, resources and commitment to meet this challenge together. Only with a collective effort will it be possible to contain the spread of Popillia japonica and safeguard our territory for future generations.

5.2. Summary of good practices of targeted communication

How to convey information about a phytosanitary emergency caused by an insect? Effective communication on *Popillia japonica* must be based on strategies capable of reaching different audiences with clear and incisive messages.

From the experience gained in the "SOS Popillia" project[27] a fundamental good practice has emerged: integrating dissemination and training in school and vocational courses.

Involving agricultural schools and technical institutes in practical educational activities strengthens the awareness of young people, who can become promoters of good practice right from their initial training. **The inclusion of specific modules in the curricula allows knowledge on popillia containment to be consolidated over time. At the same time, ongoing education for farmers and technicians, through targeted training events and updates, ensures widespread dissemination of the most effective strategies.**

During the preparatory phase of the project, it emerged that the *Popillia japonica* problem was practically absent from the training programmes of agricultural schools. The development of educational activities, particularly in the context of the two intensive training campuses, highlighted how direct experience in the field is irreplaceable for understanding the phenomenon. Simply observing the invasion of the beetle on crops – with the fruit visibly damaged and the flying insects settling on clothes and hair – had a much stronger impact than theory alone. Although the insect is harmless to humans, the physical discomfort caused by direct contact helps convey the true extent of the infestation.

For this reason, **it could prove useful to inform teachers – particularly at agricultural institutes – about the period when the beetle begins to develop and take flight, by promoting visits to demonstration centres or infested fields. Offering the possibility of directly observing the**

[27] See note 1, page 5

insect's behaviour represents a high-impact educational opportunity, capable of strengthening students' awareness and involvement.

In addition to the educational experiences in the field, effective communication also requires careful and strategic preparation: anticipating doubts and questions, using targeted visual content, adapting language to different audiences and ensuring consistency and quality in materials are key to building trust, improving understanding and promoting informed behaviour.

Anticipating critical questions – Anticipating the audience's main objections or doubts in advance enables a timely and effective response, reducing the risk of misinformation. A FAQ section with frequently asked questions helps provide quick answers and build trust.

Encourage the use of visual content – The impact of photos, videos and infographics is greater than long, complex texts. For example, images showing the difference between *Popillia japonica* and other common beetles facilitate recognition of the insect and improve the effectiveness of communication.

Adapt the message to different target groups – Communication must be tailored to the target audience. Farmers need practical guidance and operational solutions, while a broader audience may benefit from a popular and accessible approach, with a focus on environmental impacts and prevention strategies.

We can distinguish in particular two key categories among agricultural professionals: members of professional bodies and farmers themselves. The former show a strong interest in control techniques, their compatibility with current regulations, the availability of plant protection products and, of course, costs. Since they follow several companies, they need cross-sectoral information and timely updates. Farmers, on the other hand, focus their attention on the crops they grow: for example, small fruit growers have to deal with the impossibility of treating fruit during harvest; wine growers have to manage massive attacks on leaves, with different margins of operation; in hazelnut groves, infestation can overlap with other pests, making an integrated strategy advisable.

With regard to the school audience and citizens, simple but scientifically correct language is essential. In agricultural schools, direct experience in the field has proved to be a particularly effective tool: seeing the damage caused by popillia on plants and observing the beetle in flight has had a much stronger impact than just the classroom lesson. A culture of environmental prevention can also be promoted in non-agricultural schools through creative activities – such as workshops, educational games and competitions.

Finally, for citizenship, communication must focus on concreteness and proximity: campaigns in local markets, popular events in parks and content on social media make the message more accessible and facilitate word of mouth.

In all cases, emotional involvement – through stories, testimonies and images – helps turn information into awareness.

Ensure consistency and quality in awareness-raising materials and initiatives – Careful preparation of content and information events is essential to maintain clarity and consistency in the message. Defining objectives, key topics and communication tools in advance helps make each intervention more effective and targeted, avoiding inconsistencies or gaps in dissemination.

Systematic application of these practices improves the effectiveness of communication, fostering greater awareness and a more coordinated response to the spread of popillia.

5.3. Suggestions for improving future dissemination

In concluding these Guidelines, it is good to reflect on opportunities for improvement in future communication.

Managing *Popillia japonica* infestation is not only a technical issue, but also a collective effort involving institutions, citizens and professionals. In order to ensure that communication strategies are effective in the long term, they need to be adapted to the changing needs of different communities and make complementary use of available resources.

Here are some pointers for refining and making communication more effective in the subsequent stages of the emergency.

For more informed and inclusive communication, it is crucial to tailor messages to the needs and perceptions of different target groups, both local and professional: the message must be shaped to meet their expectations and capacity for understanding. Innovative digital tools and traditional resources must be used in a complementary way to reach everyone, from young people on social media to professionals via webinars and technical materials.

Transparency is crucial: regular updates and continuous communication increase trust and community engagement. *Citizen Science* initiatives[28] are invaluable for collecting real-time data and involving the population in the management of the problem, making each individual feel part of the solution and increasing scientific and environmental awareness.

[28] Refer to page 23

Finally, it is essential to verify sources to avoid misinformation and correct any errors in a timely manner, while maintaining a reassuring and purposeful tone.

In summary, **effective communication must integrate clarity, inclusiveness and constant updates, actively involving the community, encouraging correct actions while reducing the risk of chaos.** This is crucial for the management of phytosanitary emergencies such as the *Popillia japonica* infestation, where timeliness and quality of communication are crucial to the response. The Ministry of Health's Italian "National Pandemic Risk Communication Plan" emphasises the importance of communication that is structured, transparent, timely and oriented towards the active involvement of the population.[29] Although it was drawn up to deal with human health emergencies related to communicable infectious diseases, the principles it proposes are transversal and are also fully applicable in the phytosanitary sphere, as in the case of the popillia infestation. The Italian SNPA Guidelines of the National System for the Protection of the Environment[30] also emphasise that timely, transparent and coordinated communication is essential to effectively manage environmental emergencies, ensuring the active involvement of the community and reducing the risk of misinformation. **Communication does not just inform: it has the power to stimulate correct actions. The more accurate it is, the less room it leaves for uncertainty.**

[29] "Piano nazionale di comunicazione del rischio pandemico - Quadro strategico, strutturale e procedurale 2023-2028 ad interim", *Ministero della Salute*, <https://tinyurl.com/3ckatan2>

[30] Refer to page 22

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1785

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Sitography

The following sources were consulted from January to June 2025.

- "Misure fitosanitarie di emergenza per il contrasto alla diffusione di *Popillia japonica*", *Servizio Fitosanitario Nazionale*, <http://protezionedellepiante.it/popillia_misure-di-contrasto/>
- "*Popillia japonica* Newman, 1841 - Piante ospiti e danni", *Regione Piemonte, Assessorato Agricoltura, Caccia e Pesca - Direzione Agricoltura Settore Fitosanitario*, <https://tinyurl.com/397sz7ne>
- "Normativa Coleottero scarabeide del Giappone (*Popillia japonica* Newman)", *Regione Piemonte*, <https://tinyurl.com/yezxffnk>
- "D.D. 11 novembre 2024, n. 853 - Aggiornamento dell'area delimitata per la presenza di *Popillia japonica* Newman in Piemonte", *Regione Piemonte, Settore Fitosanitario e servizi tecnico-scientifici*, <https://tinyurl.com/jya67pem>
- "*Popillia japonica* - Descrizione dell'insetto", *Regione Emilia-Romagna, Fitosanitario e difesa delle produzioni*, <https://tinyurl.com/2k8tym4u>
- "Procedure di attuazione per il contrasto e il controllo di *Popillia japonica* per l'anno 2025 e successivi (Bollettino Ufficiale)", *Regione Emilia-Romagna, Fitosanitario e difesa delle produzioni*, <https://tinyurl.com/5d6hzc33>
- "D.d.s. 4 novembre 2024, n. 16480 - Aggiornamento dell'area delimitata per la presenza di *Popillia japonica* Newman in Lombardia. Abrogazione d.d.s. 30 ottobre 2023, n. 16820", *Regione Lombardia, Servizio Fitosanitario - Bollettino Ufficiale*, <https://tinyurl.com/h5vv8wxc>
- "D.d.u.o. 1 aprile 2019, n. 4438 - Obbligo di iscrizione al registro reginale fitosanitario per i produttori di tappeti erbosi che operano sul territorio regionale", *Regione Lombardia, Servizio Fitosanitario - Bollettino Ufficiale* - Serie Ordinaria n. 14 - Venerdì 05 aprile 2019, <https://tinyurl.com/4h9xtw62>
- "D.d.u.o. 6 agosto 2018, n. 11648 - Procedura per l'autorizzazione della movimentazione dei tappeti erbosi al di fuori dall'area delimitata durante il periodo di volo di *Popillia japonica*", *Regione Lombardia, Servizio Fitosanitario - Bollettino Ufficiale* - Serie Ordinaria n. 33 - Giovedì 16 agosto 2018, <https://tinyurl.com/3xacu6an>
- "Piano 2021-2025 per la protezione dell'aeroporto di Malpensa dall'organismo nocivo *Popillia japonica*", *Regione Lombardia, Servizio Fitosanitario*, <https://tinyurl.com/3526bjnf>
- "Organismi nocivi invasivi: il coleottero giapponese", *Confederazione Svizzera, National Centre for Climate Services - Servizio fitosanitario Ticino*, <https://tinyurl.com/ym3zbjhw>

- “Piano di comunicazione SNPA 2020-2022”, *Sistema Nazionale per la Protezione dell’Ambiente*, <http://snpambiente.it/chi-siamo/atti-fondamentali/piano-di-comunicazione-snpa-2020-2022/>
- “Piano nazionale di comunicazione del rischio pandemico - Quadro strategico, strutturale e procedurale 2023-2028 ad interim”, *Ministero della Salute*, <https://tinyurl.com/3ckatan2>
- “Salute e ambiente: la comunicazione del rischio”, *Provincia Autonoma di Trento - Assessorato alla Salute e Solidarietà sociale*, *World Health Organization - Regional Office for Europe*, <https://tinyurl.com/53aa9wxr>
- “Strategia Nazionale di Adattamento ai Cambiamenti Climatici”, *Ministero dell’Ambiente e della Tutela del Territorio e del Mare*, <https://tinyurl.com/4rmnyhv9>
- “Progetto Erasmus+ SOS Popillia: la difesa dal coleottero che minaccia l’Europa”, *Accademia di Agricoltura di Torino*, <http://accademiadiagricoltura.it/sos-popillia-la-difesa-dal-coleottero-che-minaccia-l-europa/>
- “Progetto Erasmus+ SOS Popillia: la difesa dal coleottero che minaccia l’Europa”, *Erasmus+ Project Results Platform*, <http://erasmus-plus.ec.europa.eu/projects/search/details/2023-2-IT02-KA210-SCH-000178557>
- “Progetto Horizon 2020 IPM Popillia: Integrated Pest Management of the invasive Japanese Beetle, *Popillia japonica*”, <http://www.popillia.eu/>
- “Progetto Horizon 2020 IPM Popillia: Integrated Pest Management of the invasive Japanese Beetle, *Popillia japonica*”, *CORDIS - EU research results, Publications Office of the European Union*, <http://cordis.europa.eu/project/id/861852>

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Attribution

We thank *Gilles San Martin* of Namur, Belgium, for the photo of the *Popillia japonica* beetle, licensed under CC BY-SA 2.0 via Wikimedia Commons, used to make the project logo.

Disclaimer

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About the European project "SOS Popillia"

"SOS Popillia" is a small-scale European Erasmus+ project, coordinated by [Accademia di Agricoltura di Torino](), in partnership with [Scuola Agraria Salesiana]() of Lombriasco (Turin, Italy) and the "Lycée Agricole Costa de Beauregard" of [Fondation du Bocage]() of Chambéry (France).

Started at the beginning of February 2024 and expected to end in late July 2025, the project has a duration of 18 months. The objective is to promote the sharing of good European practices for the management and containment of *Popillia japonica*, an invasive insect that is highly damaging to agriculture and the environment.

Through educational and dissemination activities aimed at students, teachers, farmers and citizens, the project aims to develop knowledge, stimulate preventive attitudes, strengthen collective awareness on the importance of environmental protection and adaptation to climate change, and promote active commitment to sustainable development.

"SOS Popillia" is not a research project, but an initiative with a strong educational, popular and communicative vocation, designed to make the most up-to-date and useful information on preventing and combating the infestation accessible and widely disseminated.

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[31] See note 1, page 5

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