



Late blight and early blight, caused by *Phytophthora infestans* and *Alternaria* spp. respectively, severely threaten the yield and quality of potato and tomato crops in Europe and worldwide. In Europe, the cost of late blight alone, including control and losses, is estimated at about 900 M€ a year, and possibly more in a severe epidemic year like 2021. This annual cost exceeds 5 B€ globally.

**EuroBlight**, an active multi-disciplinary, multi-actor network was launched with the clear [objective](#) of identifying, assessing and combining the best tools to predict, manage and control late and early blight. For more than 25 years, **EuroBlight** has developed into a unique collaborative platform from which the challenges that early and late blight pose in Europe and worldwide can be identified and tackled. **EuroBlight** biennial workshops allow key research and extension priorities to be identified and formulated into collective Statements that underpin joint actions and international collaborations for improved IPM strategies. The 19<sup>th</sup> EuroBlight Workshop, held in Ascona (Switzerland) in May 2022, brought together over 100 participants from Europe, South America, USA, Africa, and India, in a mixed in-person and virtual meeting.

In line with its objectives, and based on the many [presentations](#) and discussions held during the Workshop, **EuroBlight** issues four 'recommendations for action' aligned with the [EuroBlight vision and strategic plan](#).

#### Recommendation 1:

*Continue and renew efforts to develop and expand IPM components*

**As a long-time actor in IPM, EuroBlight recognises the need to develop and combine a diverse array of management options for the effective and sustainable control of late and early blight. EuroBlight supports the effort to obtain the relevant information needed to build IPM strategies, including pathogen population monitoring, biocontrol, host resistance, crop/farm management alongside a set of efficacious fungicides.**

*EuroBlight will:*

- *continue its long-term involvement in population monitoring and aims to 1) expand the geographical range and cropping types covered by the survey, 2) develop 'quick response' genotyping 3) explore new, complementary markers to supplement the set of SSRs currently used, and 4) collect phenotypic information on historical and new emerging genotypes and lineages. This coordinated and long-term effort would be best supported and funded through collaborative concerted efforts and a shared infrastructure (Recommendation 3).*
- *continue to support the identification and evaluation of tools suitable for inclusion into IPM control strategies, notably host resistance, biocontrol, biostimulants, and new actives*
- *pay special attention to the tracking of primary infections, through innovative methods (spore trapping, mobile apps, sensors) and participatory research (Recommendation 3)*

#### Recommendation 2:

*Shift perspectives progressively from disease control to Crop Health Management*

**Working with diverse clones and genotypes of *P. infestans* and diverse genotypes and species of *Alternaria*, EuroBlight faces the impact of interactions and conflicting management decisions. EuroBlight recognises the need to shift from a traditional vision of managing individual diseases to a more holistic approach to crop health. A strong focus must be put on combining these components into efficient, robust, local and sustainable control strategies.**

*To promote this new, holistic and systemic vision, EuroBlight recommends:*

- *evaluating integrative systems combining diverse tools, taking advantages of the potential synergies between control solutions aimed at different diseases.*
- *participating in field demonstrations of innovative strategies and the development of a network of demonstration sites (Recommendation 3)*
- *develop integrative management tools addressing late and early blight simultaneously*
- *address the needs of various types of agriculture, such as conventional and organic production systems, with specific, tailor-made solutions and tools.*

**Recommendation 3:**

*Foster cooperation, capacity building, and shared infrastructure*

In dealing with major diseases with a worldwide distribution, which affect a range of actors (professional growers, subsistence farmers, industry, home gardeners, consumers, policy makers, etc.), EuroBlight recognises both the challenges and opportunities for a global approach to sustainable crop health management. Since its inception, EuroBlight has acted as a pan-European network, developing initiatives for a coordinated response to the challenges of sustainable control of early and late blight. EuroBlight therefore strongly supports initiatives to foster cooperation, build capacity and participatory research, and establish a permanent infrastructure able to sustain and expand the collection, integration, use and dissemination of data relevant to IPM design and validation.

*EuroBlight:*

- *offers to contribute to a European infrastructure dedicated to IPM in arable crops and welcomes ideas beyond the new, transnational initiatives currently under construction, such as a *P. infestans* Global Genetic Landscape initiative or a network of demonstration sites or farms. EuroBlight is willing to participate in setting up these initiatives and contributing to their operation and outputs.*
- *offers to use some of its generic tools for the lasting control of other major diseases of agricultural crops via this European, shared infrastructure*
- *remains a pioneer network in IPM management of major plant diseases and served as the basis for the sister networks in other regions (North America – USABlight -, Latin America - Tizón Latino - and Asia - AsiaBlight) and for other airborne diseases (EuroWheat). Cooperation between networks is essential given extensive intercontinental trade in potato and tomato, and the worldwide dissemination of invasive genotypes. EuroBlight will further strengthen its connections and commits to assisting the nascent AfricaBlight network.*

**Recommendation 4:**

*Strengthen communication, dissemination and outreach of EuroBlight goals, activities and achievements*

The range of stakeholders involved in blight management and the speed of scientific and technological innovation, makes efficient communication, dissemination and outreach critical for the rapid and widespread adoption of new, innovative solutions and systems offered by EuroBlight members. Modern communication tools offer further opportunities to best achieve this and reach all key players in Europe and worldwide.

*EuroBlight :*

- *commits to reinforce its dissemination efforts towards the academic and scientific community, breeders, extension specialists, decision makers and end-users through a communication strategy, built around four pillars: 1) a 'vision document', drafted and adopted after the Ascona workshop; 2) Workshop Statements; 3) regular press releases and annual 'EuroBlight highlights' about major achievements; 4) increased presence on social media, notably with the #EuroBlight on Twitter*
- *will consider 'key performance indicators' to measure and ascertain its impact*
- *will have a policy regarding data management and use to ensure its data and results are available to a wider audience and directly usable in participatory, open science projects.*

**Contact**

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