

EUCABLIGHT and ECOPAPA

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Eucablight and Ecopapa are EU funded projects concerned with research into Late Blight (caused by *Phytophthora infestans*), a devastating disease of potato foliage and tubers.

Eucablight (A Late Blight Network for Europe): This Concerted Action, with 24 partners in 14 countries is co-ordinated by SCRI and runs for 3 years from Feb 2003. The project aims to bring added value to late blight data that already exists at a national level, through common interpretation and analysis at a European scale. For example, the integrated control of late blight with reduced inputs of fungicides could be improved if durable blight resistance was more common in commercial potato cultivars. Many sources of resistance exist, but the nature of that resistance is often poorly understood. This project uses collective expertise to compare existing practices and to suggest new standardised procedures that will allow objective comparisons of genetic resources. Currently, the European data on host resistance in Europe is fragmented, and the methods used to collect it are not well documented. We will collate such data into a readily accessible database to allow breeders and geneticists to compare or exploit sources of resistance in breeding programmes. In turn, the effective deployment of resistant commercial cultivars creates a “moving target” for *P. infestans* and can only be effective if we understand the existing pathogen population structure and can predict its ongoing evolution. Studies to date have focused on national isolate collections, and a comprehensive pan-European assessment of blight populations was lacking. Sexual reproduction is blurring the boundaries between well-defined strains and new co-dominant markers will be applied to meet this challenge. This project tackles the clear need for European standardisation and is successful in fostering international collaborations between

European laboratories and also on a global scale with institutions such as GILB (Global Initiative on Late Blight) and CEEM (Cornell-Eastern Europe-Mexico International Collaborative Project in Potato Late Blight Control). For more information visit www.eucablight.org.

Ecopapa (Enrichment of potato breeding programmes in Latin America and Europe with resistance to late blight): The main aim of this project, which ended in February 2003 was to incorporate durable resistance to late blight into germplasm of the potato breeding programmes of the participating countries, especially Bolivia, Argentina and Uruguay in order to stimulate the development of new resistant cultivars. Material from SCRI was rated highly for foliage and tuber blight resistance when trialled at several sites in Europe and South America. The breeding programmes of the partners were strengthened by the addition of exchanged material, and by the fact that this material has been evaluated for resistance at many locations and in two years. The development of markers for resistance is expected to be completed by the end of 2003. The project successfully trained additional staff, principally from South-America in using molecular markers. In addition, SCRI was responsible for phenotypic and molecular fingerprinting of *P. infestans* isolates from the participating countries: similarities and differences between pathogen populations in the six countries have been clarified, which gives indications of the value of using accessions from the different partners' countries, and on the possibilities of targeting new cultivars to more than one region.

Both these projects illustrate the added value of European and Worldwide collaborations that focus on clear strategic objectives and work together towards the integrated control of potato late blight.



Figure 1 Participants at the first annual meeting of 'Eucablight' hosted by SCRI in October 2003.