



PRACTICE ABSTRACT No. 13

Resistance of potato cultivars to *Phytophthora infestans*

PROBLEMS:

- Late blight, caused by *Phytophthora infestans* is commonly thought to be the important factor limiting yield in both conventional and organic farming (Fig. 1).
- Applying fungicides is the prevailing method for controlling late blight.
- Limited effective biological means to control late blight in organic farming.
- Scarcity of data available on yield loss caused by late blight in organic farming.



Fig.1. Damage caused by late blight development.

SOLUTIONS:

- Breeding for resistance is the most important strategy to combat late blight in organic potato production.
- Blight resistant varieties are available e.g. Sarpo mira but these tend to have poor organoleptic properties when cooked.
- Marker assisted selection (MAS) enables breeding and selection for improved and durable resistance to *P. infestans* by pyramiding and combining multiple race-specific R genes.
- Further efforts for improving tuber resistance against *P. infestans* are necessary since foliage and tuber resistance is not always correlated.

PRACTICAL RECOMMENDATIONS:

- More breeding efforts aimed at producing new potato cultivars suitable for organic conditions.
- Cultivation of potato varieties suited to local conditions.
- An increase in the share of resistant cultivars in the area of cultivation.

AUTHORS:

Beata Tatarowska (b.tatarowska@ihar.edu.pl) IHAR-PIB Poland

Jarosław Plich (j.plich@ihar.edu.pl) IHAR-PIB Poland

ECOBREED CONSORTIUM



ABOUT ECOBREED:

ECOBREED is a 5-year (2018-2023) project funded by European Union's Horizon 2020 research and innovation programme that will improve the availability of varieties and seed suitable for organic and low-input production. Activities will focus on four crop species i.e. wheat, potato, soybean and common buckwheat, selected for their potential contribution to increasing the competitiveness of the organic sector.

FOLLOW US:

www.ecobreed.eu



@EcobreedP



@ecobreed



ecobreed

IMPROVING CROPS



Funded by European Union
Horizon 2020
Grant agreement No 771367

The sole responsibility for the content of this document lies with the authors. The publication reflects the views only of the author, and the EC cannot be held responsible for any use which may be made of the information contained therein.