

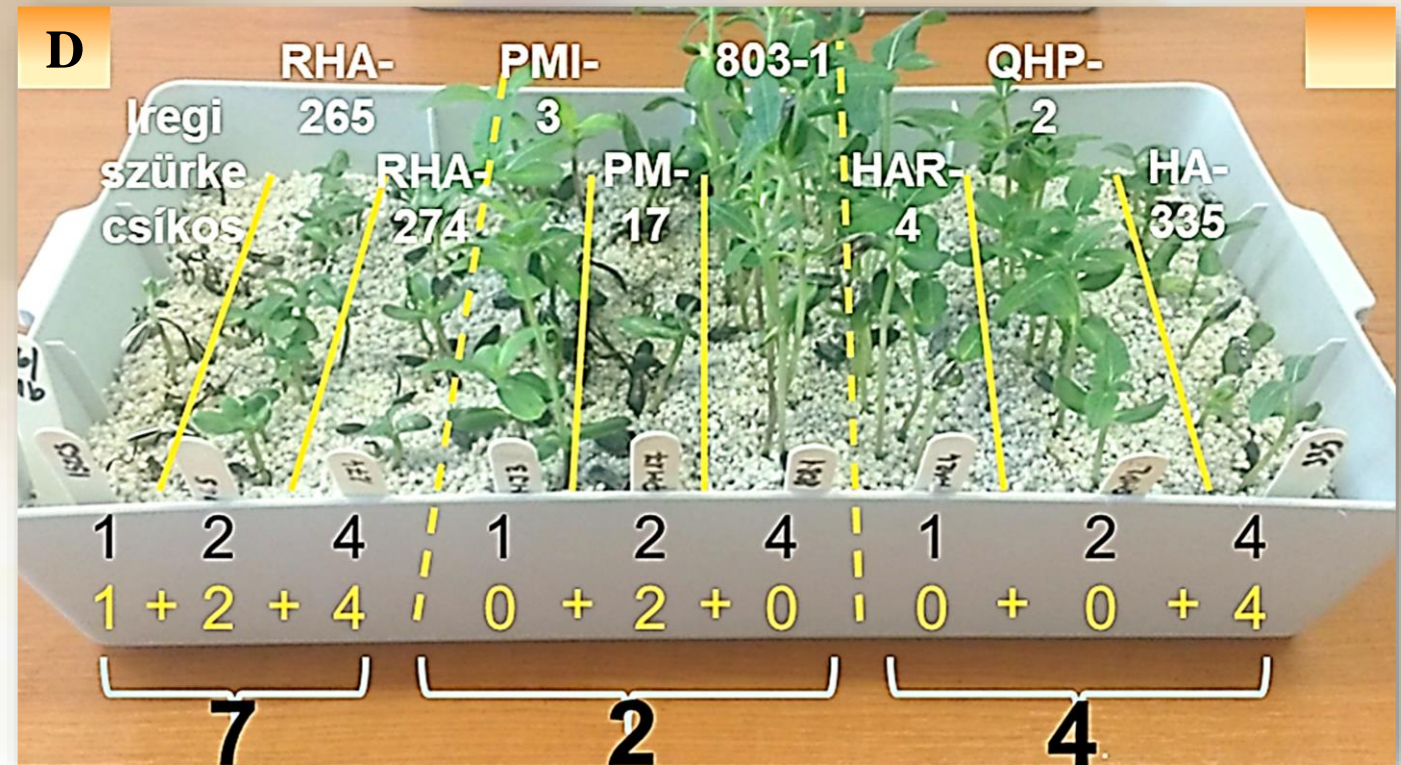
OCCURRENCE OF PLASMOPARA HALSTEDII (SUNFLOWER DOWNY MILDEW) PATHOTYPES IN HUNGARY

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METHODS MATERIALS

- ❖ Field samples: Hungary (A) (2012-19)
- ❖ Plants: sunflower hybrids (Pl6), volunteers
- ❖ Disease assesment:
 1. cotyledon (B)
 2. true leaves (C)
- ❖ Pathotype characterization: differential lines, CVF (D)



RESULTS DISCUSSION

- ❖ Highly virulent pathotypes, 704, 714 were dominant, 724, 734 smaller extent (A)
- ❖ Less virulent pathotypes (700, 710, 730), also in Europe (B)
- ❖ Shift in the virulence character of *P. halstedii* (C) compared to previous years (before 2010)
- ❖ Broader use of IPM can slow down the evolution of new pathotypes

