P9.2 *Xanthomonas campestris* pv. *campestris* affecting *Brassica oleracea* in northwestern Spain: race identification and search for resistance

Margarita Lema, Marta Francisco, Pablo Velasco and Elena Cartea
Misión Biológica de Galicia – Spanish National Research Council (CSIC), P.O. Box 28 36080 Pontevedra, Spain
Corresponding author: mlema@mbg.cesga.es

Black rot, caused by *Xanthomonas campestris* pv. *campestris* (Xcc), is an important bacterial disease affecting *Brassica* crops worldwide. The seed-borne pathogen is especially damaging and destructive in warm and humid conditions. Nine races of the pathogen have been described, with races 1 and 4 being the most aggressive and widespread. In Spain no previous works concerning either the pathogen or resistance to the disease have been carried out, even though this country is an important *Brassica* consumer and producer. The objectives of this work were to identify Xcc races present in cabbage and kale crops in this area and to evaluate a *Brassica oleracea* collection for the most important races. In this study, 161 isolates from black rot infected fields were typed using an established differential series. Race 4 was the most frequent, although races 6 and 1 were also present. A collection of 256 *B. oleracea* accessions including cabbage (*capitata* group), kale (*acephala* group) and tronchuda (*costata* group) was evaluated for resistance to races 1 and 4 using a 1 (resistant) to 9 (susceptible) subjective rating scale. From the analysis of variance, statistical differences among groups were found for race 1 but, in general, the accessions showed a high level of susceptibility to both races. Two commercial cabbage accessions ('Quintal de Alsacia' and 'Balon') showed some degree of resistance to both races and one kale landrace (MBG-BRS0070) and two commercial cabbage ('Corazón de Buey' and 'Golden Acre') included plants with resistance to race 4. These are promising results since resistance to black rot in *B. oleracea* is scarce.

Keywords: black rot, cabbage, differential series, kale, sources of resistance, tronchuda