

DC-DC-FP3-4.FP3-4-1 - **Survey and disease monitoring in focal countries.**

- 1) Surveillance of diseases and insect pests, study of physiological races of barley foliar blights, and the organization of global/regional trap nurseries.
- 2) Disease surveys were conducted in Morocco and the isolates of net blotch, spot blotch and scald were collected for the characterization of pathogen population.
- 3) The cropping season of 2015-16 has been exceptionally dry with severe drought. During the disease survey occasionally low incidence of net blotch, spot blotch and scald was observed.

It is important to note that the differentials sets of powdery mildew, net blotch, spot blotch, and scald were incorporated into the 3rd International Spring Barley Disease Screening Nursery (ISBDSN: 138 entries), which was constituted and distributed to 31-cooperators in 17 countries for the cropping season of 2016-2017.

A disease survey was conducted in 9-agroecological zones of Morocco and the net blotch (NB) was identified as the sole yield limiting biotic stress factor with disease prevalence of 100%. In addition, 97-singe conidial isolates of NB were prepared from the infected barley leaves which were collected during the disease survey. Preliminary analysis of 15 net blotch isolates on 16-barley differential has shown that the Moroccan NB population is quite diverse and virulent (Figure 1).

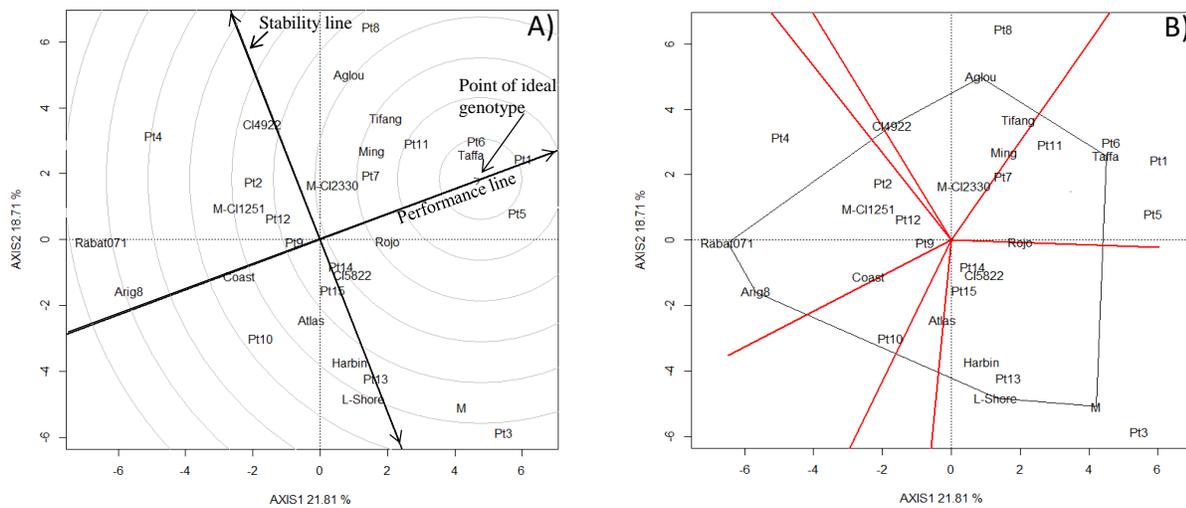


Figure 1. GGE biplot based on infection responses of 16 barley genotypes inoculated with 15 *P. teres f. teres* isolates (Pt1-15) from Morocco. A) GGE biplot showing a comparison of 16 barley genotypes in reference to the ideal genotype(s) resistant to 15 *Ptt* isolates in Morocco. B) GGE biplot polygon showing the relationship between the resistance of barley genotypes with virulence of *Ptt* isolates. The resistant genotype falls into the sector of polygon line where genotype clusters together with less virulent *Ptt* isolates.

- 4) A combined knowledge of the pathogen virulence spectrum and available sources of host resistance will assist in more intelligent resistance breeding to combat this important disease of barley.