# P.61 - Emerging virulences of Blumeria graminis sp. on triticale in Poland

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This study was aimed to learn about virulence structure of *Blumeria graminis* sp. occurring on triticale in Poland. For the purpose phenotypic analyses of resistance of differential wheat (n=20), triticale (n=4) and rye (n=1) cultivars (genotypes) to isolates of *B. graminis* were conducted. Wheat differentials used for this study possessed known Pm specific resistance genes. Powdery mildew diseased triticale leaves were sampled from 11 geographically different locations. In 2005 70 isolates and in 2006 and 2007 130 isolates of *B. graminis* per year were analysed by placing 5cm long leaf segments of the differential set of genotypes on benzimidazole agar. Virulence frequencies to resistance genes in wheat differential cultivars varied significantly. Relatively low frequencies were observed to resistance genes Pm4b, Pm 8 and Pm 1+2+4b+9. The largest Pm frequencies were observed to Pm 5, Pm 5+8, Pm 17, Pm 2, Pm 2+6 and, Pm 4b+8. In each year of the study since 2005 to 2007 the virulence frequencies (%) were increasing to majority of resistance genes possessed by wheat differential cultivars tested. It appeared, that *B. graminis* isolates originating from triticale much more heavily attacked wheat differential cultivars, than triticale ones.