

## Unravelling species and pathotypes diversity of *Pyricularia* blast pathogens affecting wheat and grasses in Minas Gerais Cerrado, Brazil (Desvendando as espécies e a diversidade de patótipos de *Pyricularia* infectando trigo e gramíneas no Cerrado de Minas Gerais, Brasil)

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*Pyricularia* spp. cause blast diseases in cereals and grasses. Studies with a global collection of strains have disentangled the complex into separate species, as well as pathotypes (host-specialized groups) within *P. oryzae*. Previous taxonomic, biological and pathogenicity studies were conducted using a contemporary collection of Brazilian strains gathered from wheat and other hosts, all bordering wheat field. We hypothesized that new knowledge on genetic diversity and evolution is gained from the analyses of larger number of strains sampled from both wheat and non-wheat hosts, at increasing distances from wheat fields, including non-wheat regions. We conducted two surveys in the state of Minas Gerais during March (planting time) and May-June (during wheat maturation). Sites located at non-wheat and two wheat regions (South and Triângulo) were visited and blast-symptomatic leaves were collected and geotagged. The samples were grouped into three categories: a) wheat or grass within/bordering a wheat field, b) grass within wheat region and c) grass at non-wheat region. In total, 176 isolates were obtained from 440 plant samples: 14.7% were obtained from wheat fields, 63% from wheat region and 21.6% from non-wheat region. Represented hosts were: *Digitaria* spp. (30.1%), *Eleusine* sp. (22.1%), *Urochloa* spp. (13%), *Cenchrus* sp. (10.2%), *Rhynchelytrum* sp. (9%), *Triticum* sp. (8%), *Panicum* sp. (5.7%), *Cynodon* sp. (1.1%), *Pennisetum* sp. (0.5%). DNA was extracted from all strains and PCR assays were conducted using CH7-BAC9 (*P. oryzae*-specific) and MoT3 (*Triticum* pathotype-specific) loci. CH7\_BAC9 was amplified from 60% of the strains, all isolates from *Triticum* sp., *Rhynchelytrum* sp., *Panicum* sp., 37/39 strains from *Eleusine* sp., 20/23 from *Urochloa* spp., 8/53 from *Digitaria* spp.. Of all *P. oryzae*, 35% (37/106) were represented by the *Triticum* pathotype (MoT) based on the amplification of the MoT3 marker. Among sampled hosts, MoT was most dominant in *Triticum* sp. (12/14 strains), *Panicum* sp. (8/10) and *Urochloa* spp. (15/20), less in *Digitaria* spp. (1/8), rare in *Eleusine* sp. (1/37). These preliminary results show a clear decline in the frequency of the *Triticum* pathotype when sampling at increasing distances from wheat fields. Ongoing studies include new isolations from plants of all sampling sites, but more from wheat, and identification of the non-*P. oryzae* species and the non-*Triticum* pathotypes.

**Palavras-chave:** Alternative hosts; Epidemiology; Wheat blast

**Apoio:** CNPq