Sensitivity of *Magnaporthe oryzae* populations to fungicides over a 25-year time frame in Brazil
(Sensibilidade de populações de *Magnaporthe oryzae* à fungicidas em 25 anos no Brasil)

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The changes in fungicide resistance frequency of the rice blast fungus *Magnaporthe oryzae* were monitored by examining an assembly of 60 isolates collected over a period of 25 years in conventional growers´ rice fields. Initially, the *in vitro* sensitivity of all isolates to fungicides Azoxystrobyn, Tryciclazole, Trifloxystrobin+Tebuconazole and Tebuconazole was measured. Over the 25-year (1989-2014) time frame, a gradual rise in the EC_{50} estimates for mycelial growth sensitivity was observed for all fungicides, but most strikingly for Azoxystrobin. The older isolates were much more sensitive to the fungicides tested when compared to the more contemporary isolates. Sequencing of the amplified cyt *b* fragment distinguished two haplotypes, H1 and H2. Haplotype H1 (six isolates, collected in 2014) displayed the G to C transversion at codon 143 (resulting in change G143A), linked to the resistance phenotype QoI-R. Haplotype H2 (40 isolates), gathered the isolates sensitive to QoI. Anti-resistance strategies should be immediately adopted to avoid an increase the frequency of resistant isolates in *Magnaporthe oryzae* populations in Brazil.

Palavras-chave: Chemical control; EC50; G143A
Apoio: Apoio: CNPq