

Category	: International Rice Research Conference
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Title of Entry	: Cross infection between rice and wheat blast pathogen <i>Pyricularia oryzae</i> in Bangladesh
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Select only one type of presentation	: 15 minute oral presentation
Abstract	<p>: <i>Magnaporthe oryzae</i> is one of the most important plant pathogenic fungi having an exceptional capacity to change its genetic make-up resulting in new pathogenic variants (Dean et al., 2012). Besides rice blast is also a major disease of wheat (<i>Triticum aestivum</i> L.) in many South American countries (Kohli et al. 2011). The most significant symptom of wheat blast in the field is the premature bleaching of spikelets (Urashima, 2010). There are several strains of <i>M. oryzae</i> which tend to display a degree of host specificity and they have been divided into pathotypes based on their host preference (Cruz et al. 2016). Recently in 2016, in Bangladesh, wheat blast was reported for the first time in south-western districts (The Daily Star, 2016). The disease caused severe yield loss in the affected areas. The final hypothesis drawn significant attention when Tiedemann (2016) presented his experimental results in a conference held in Nepal showing that wheat blast pathogen infected rice plants. Based on this fact cross infection between rice and wheat blast fungi was investigated in a series of experiments conducted under controlled glasshouse conditions following a completely randomized design. Two rice (BRRI dhan29 and LTH) and two wheat (BARI gom25 and BARI gom26) varieties were grown in plastic trays as sole and rice-wheat mixed crop culture. Plants were artificially inoculated using virulent isolates of rice and wheat blast fungi. It was observed that irrespective of variety and crop culture technique, all the isolates of wheat blast fungus caused significant 100 % plant infection on leaf typical leaf blast symptoms appeared on wheat seedlings but no blast symptom on rice. Conversely, the test-isolates of rice blast fungus did not produce any disease reaction on wheat seedlings, though leaf blast was observed on 100% rice plants. Therefore, we conclude that rice blast pathogen population is different from those of wheat blast pathogen (<i>Pyricularia oryzae</i>) and probability of cross infection is impractical. This phenomenon of such cross infection of rice blast pathogen deserves detailed investigation in context of Bangladesh.</p> <p style="text-align: right;">Read Less»</p>

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