

Category	: International Rice Research Conference
Select Theme	: Disruptive technologies and innovations
Endorsement email	:
Keyword 1	: Innovation systems
Keyword 2	:
Keyword 3	:
Title of Entry	: New chemical seed treatment control strategy for rice blast disease using natural plant defense
Presenting author	: Dr. Oliver Guth
Presenting author email	: oliver.guth@bayer.com
Co author 1	: Dr. Christian Zupanc
Co author 2	: Leo Hawood
Co author 3	: Jason Tighe
Co author 4	: Casper van-Rooijen
Co author 5	:
Co author 6	:
Co author 7	:
Co author 8	:
Co author 9	:
Co author 10	:
Co author 11	:
Co author 12	:
Co author 13	:
Co author 14	:
Affiliation presenting author	: Bayer SEA Pte Ltd, 63 Chulia Street, Singapore 049514, Singapore
Affiliation 1	: Bayer AG, Alfred-Nobel-Str. 50, 40789 Monheim, Germany
Affiliation 2	: Bayer CropScience, Inc., Canlubang Industrial Estate, Laguna 4028, Philippines
Affiliation 3	: Bayer Thai Company Limited, 130/1 North Sathon Road, Bangkok 10500, Thailand
Affiliation 4	: Bayer AG, Alfred-Nobel-Str. 50, 40789 Monheim, Germany
Affiliation 5	:
Affiliation 6	:
Affiliation 7	:
Affiliation 8	:

Affiliation 9	:
Affiliation 10	:
Affiliation 11	:
Affiliation 12	:
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Select only one type of presentation	: 15 minute oral presentation

Abstract : Rice blast is one the most common rice diseases and often requires repeated spray application of a fungicidal product. With a trend towards increasing farm sizes and labor scarcity in many Asian countries there is a need for new innovative tools to allow farmers to manage their rice crop with less work and higher efficiency. The use of seeds pre-treated with a fungicide and / or insecticide directly at the seed company for protection against pests and diseases in the early crop stages is common practice in many broad-acre crops allowing farmers to enjoy peace of mind for a few weeks after sowing. However, in rice this technology is not yet widely established as most seed treatments will be washed off during soaking. Bayer now has invented a potential game-changing technology allowing for the industrial treatment of dry rice seeds based on the chemical Isotianil under the brand name ROUTINE combined with a polymeric film-coating to keep the active ingredient on the seed even during soaking. Isotianil activates the plant's natural self-defense mechanism and protects the young plant from infestation with rice blast disease until late tillering stage as Bayer researchers could demonstrate successfully in numerous field trials across Asia. On top, they could show strong benefits in terms of early crop establishment such as enhanced root growth and greener and more vigorous plants. With the addition of the strobilurine Trifloxystrobin Bayer has added control of bakanae and sheath blight to the spectrum of Isotianil and offers now also a ready-mix seed treatment called ROUTINE START that allows for control of all major diseases in rice in the first 60 days and replacement of 1-2 foliar sprays. Isotianil based seed treatments have already received registration in Taiwan, Malaysia, Vietnam and Japan and other rice countries will follow. Bayer is currently establishing collaborations with leading seed suppliers to offer best-in-class, well-protected, high yielding seed solutions for the benefit of the Asian rice farmers. Bayer plans to further extend this offering with the addition of a seed-applied insecticide for the control of stem borer and leaf folder in the following years.

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