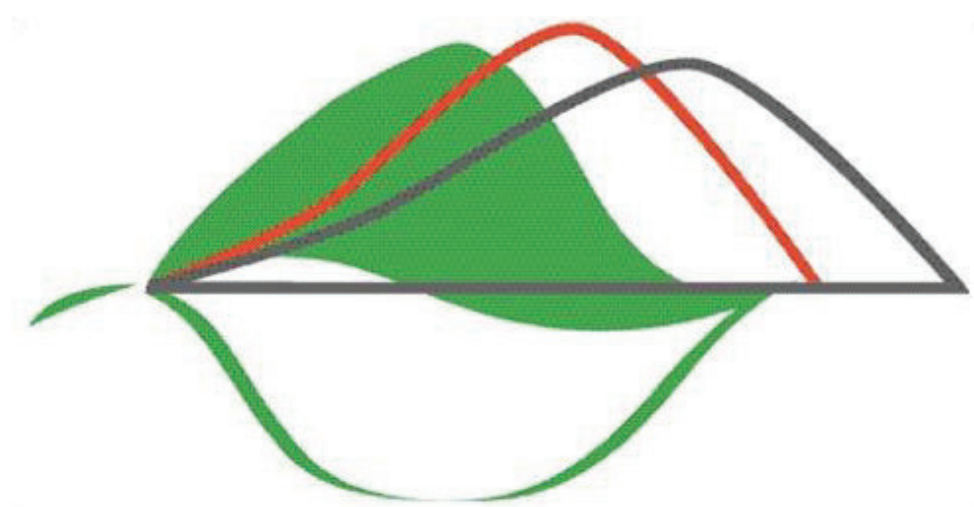


19th International Reinhardtsbrunn Symposium

Modern Fungicides and Antifungal Compounds



Friedrichroda, Germany
07th – 11th April 2019

Program and Abstracts
Update March 27, 2019

Monday, April 08, 2019 - Morning

Time	Abstr.ID	Presentation
08:00		Opening: Prof. Dr. Holger B. Deising
		Session 1: Fungicide resistance monitoring Chair: Prof. Dr. Holger B. Deising
08:15	5	Keynote 1: Susan Knight: Review of fungicide resistance management in Asia
08:45	77	Bart Fraaije: SDHI sensitivity status of UK <i>Zymoseptoria tritici</i> and <i>Pyrenophora teres</i> field populations
09:05	53	Gilberto Olaya: Fluazinam sensitivity studies on the turf pathogen <i>Clariireedia jacksonii</i> (= <i>Sclerotinia homoeocarpa</i>) in the United States
09:25	11	Alejandra Vielba-Fernández: Monitoring MBC-resistant isolates of the cucurbit powdery mildew, <i>Podosphaera xanthii</i> , using loop-mediated isothermal amplification (LAMP)
09:45	67	Pierre Hellin: Tracking the spread of key mutations in <i>Zymoseptoria tritici</i> conferring resistance to the DMI and SDHI fungicides
10:05	106	Xili Liu: Point mutations in the β -tubulin of <i>Phytophthora sojae</i> confer resistance to ethaboxam
10:25		Coffee
		Session 2: Fungicide resistance monitoring Chair: Dr. Andreas Mehl
10:45	65	Guilherme Rossato Augusti: Fungicide sensitivity in South American <i>Zymoseptoria tritici</i> field populations
11:05	37	Gerd Stammler: Evolution of SDHI adaptation in cereal pathogens in Europe
11:25	92	Steven Kildea, Joe Mulhare: Control of ramularia leaf spot of barley under Irish growing conditions
11:45	78	Nenad Trkulja: Multi-resistance of <i>Cercospora beticola</i> to MBC, DMI and QoI fungicides
12:05	99	Kevin King: Continued azole sensitivity declines and evolution of PbCYP51 in UK populations of <i>Pyrenopeziza brassicae</i> (light leaf spot of oilseed rape)
12:25	54	Odile Carisse: Field monitoring for fungicide resistance: how to improve efficiency and reliability of sampling
12:45		Lunch

Monitoring MBC-resistant isolates of the cucurbit powdery mildew, *Podosphaera xanthii*, using loop-mediated isothermal amplification (LAMP)

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Abstract ID: 11; Oral contribution

Powdery mildew, caused by the fungus *Podosphaera xanthii*, is one of the most economically important diseases affecting cucurbit crops in Spain. Currently, chemical control is the most efficient management of the disease; however, *P. xanthii* isolates resistant to multiple classes of site-specific fungicides have been reported in the Spanish cucurbit powdery mildew population. In previous studies, resistance to the Methyl Benzimidazole Carbamates (MBC) fungicides was found to be caused by the amino acid substitution E198A on β -tubulin. To detect MBC-resistant isolates in a faster, efficient and specific way than the traditional methods used to date, a loop-mediated isothermal amplification (LAMP) system was developed. Three sets of LAMP primers were designed and one set was optimized specifically to distinguish the E198A mutant genotype. The amplification products were visualized using gel electrophoresis and hydroxynaphthol blue (HNB), an azo dye that turns from violet to sky blue if the results were negative (E198) and positive (A198), respectively. Our results have proven that the LAMP technique is a specific and reproducible method that could be used to monitor MBC-resistance of *P. xanthii* in the field.