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Title:	HR-MAS NMR-based metabolomic approach to study the effect of fungicidal stress on wheat seed germination
Authors:	Gogna, N. (/jspui/browse?type=author&value=Gogna%2C+N.) Dorai, K. (/jspui/browse?type=author&value=Dorai%2C+K.)
Keywords:	Fungicidal stress Germination cycle HR-MAS NMR spectroscopy Metabolite fingerprinting
Issue Date:	2015
Publisher:	Indian Academy of Sciences
Citation:	Current Science, 108 (9) pp. 1694-1701
Abstract:	The plant metabolome is sensitive to variations in the growth environment, as evidenced by metabolomic profiling. Changes in the levels of specific metabolites can be quantified via high-resolution magic angle spinning (HR-MAS) nuclear magnetic resonance (NMR) spectroscopy and can help identify key meta-bolic pathways related to environmental stress. We study here the metabolic response of wheat seeds to fungicidal stress during germination. A delay in ger-mination and a decrease in percentage germination were observed for fungicide-treated seeds. Our work validates the use of HR-MAS NMR spectroscopy as a novel method to gain quantitative information about the influences of micro-stresses on nutritional back-grounds in plants.
URI:	https://www.jstor.org/stable/24905536?seq=1#metadata_info_tab_contents (https://www.jstor.org/stable/24905536?seq=1#metadata_info_tab_contents) http://hdl.handle.net/123456789/3061 (http://hdl.handle.net/123456789/3061)
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