

# BIOGRAPHY

2012-07-01.



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## Title and name

Prof. Michael John Jeger

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## Nationality

British.

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## Panel

Plant Health.

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## Education

1975 - BA Biology and Mathematics, Open University, UK; 1976 - BPhil Computation in the Life Sciences, University of York, UK; 1979 - PhD Plant Pathology/Agricultural Botany, University College of Wales, Aberystwyth, UK

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## Scientific and risk assessment experience

-Epidemiology of plant virus diseases: especially modelling virus transmission processes and control interventions

-Mathematical modelling of biological control mechanisms for foliar plant pathogens as a basis for determining synergy of action

-Network models of plant disease epidemics in the horticultural nursery trade as a basis for control interventions

-Plant diseases and their role in regulating plant population dynamics in natural grassland communities.

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## Main scientific publications

(last three years):

Jeger M, Chen Z, Cunningham E, et al, 2012. Population biology and epidemiology of plant virus epidemics: from tripartite to tritrophic interactions. EUR J PL PATHOL, 133, 3-23.

Moslonka-Lefebvre M, Harwood T, Jeger MJ, et al, 2012. SIS along a continuum (SISc) epidemiological modelling and control of diseases on directed trade networks. MATH BIOSCI, 236, 44-52.

Jeger MJ, Chen Z, Powell G, et al, 2011. Interactions in a host plant-virus-vector-parasitoid system: modelling the consequences for virus transmission and disease dynamics. VIRUS RES, 159, 183-193.

Xu X, Jeffries P, Pautasso M, Jeger M, 2011. A numerical study of combined use of two biocontrol agents with different biocontrol mechanisms in controlling foliar pathogens. *PHYTOPATHOLOGY*, 101, 1024-1031.

Moslonka-Lefebvre M, Finley A, Dorigatti I, Dehnen-Schmutz K, Harwood T, Jeger MJ [et al](#), 2011. Networks in plant epidemiology: from genes to landscapes, countries, and continents. *PHYTOPATHOLOGY*, 101, 392-403.

Pautasso M, Xu XM, Jeger MJ, [et al](#), 2010. Disease spread in small-size directed trade networks: the role of hierarchical categories. *J APPL ECOL*, 47, 1300-1309.

Pautasso M, Moslonka-Lefebvre M, Jeger MJ, 2010. The number of links to and from the starting node as a predictor of epidemic size in small-size directed networks. *ECOL COMPLEX*, 7, 424-432.

Salama NKG, Edwards GR, Heard MS, Jeger MJ, 2010. The suppression of reproduction of *Tragopogon pratensis* infected by the rust fungus *Puccinia hysterium*. *FUNGAL ECOL*, 3, 406-408.

Xu XM, Salama N, Jeffries P, Jeger MJ, 2010. Numerical studies of biocontrol efficacies of foliar plant pathogens in relation to the characteristics of a biocontrol agent. *PHYTOPATHOLOGY*, 100, 814-821.

Moslonka-Lefebvre M, Pautasso M, Jeger MJ, 2009. Disease spread in small-size directed networks: epidemic threshold, correlation between links to and from nodes, and clustering. *J THEOR BIOL*, 260, 402-411.

Xu XM, Harwood TD, Pautasso M, Jeger MJ, 2009. Spatio-temporal analysis of an invasive plant pathogen (*Phytophthora ramorum*) in England and Wales. *ECOGRAPHY*, 32, 504-516.

Jeger MJ, Madden LV, van den Bosch F, 2009. The effect of transmission route on plant virus epidemic development and disease control. *J THEOR BIOL*, 258, 198-207.

Jeger MJ, Jeffries R, Elad Y, [et al](#), 2009. A generic theoretical model for biological control of foliar plant diseases. *J THEOR BIOL*, 256, 201-214.