Dr Scott Johnson

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Employment

2007 - to date	Senior Research Scientist, Scottish Crop Research Institute, UK
2005 - 2007	Research Scientist, Scottish Crop Research Institute, UK
2002 - 2005	Postdoctoral Research Fellow, Department of Soil Science, University of Reading, UK

Education

1998 - 2001	PhD (Biology), Department of Biology, University of York, UK
1994 - 1998	BSc (Hons) Ecology (First Class), School of Life Sciences, University of Dundee, UK

Research

My research is concerned with insect-plant ecology, especially trophic interactions spanning aboveground-belowground systems. It aims to identify key mechanisms that underpin such interactions in order that they may be exploited to maintain sustainable production systems in a changing climate.

There are three interwoven themes to this research:

- Aboveground-belowground ecology
- Chemical ecology and insect behaviour
- Adapting to climate change

Measures of Esteem

- Vice President, Royal Entomological Society
- Honorary Lecturer at the University of Dundee
- Fellow (FRES) and Trustee of the Royal Entomological Society
- Council Member, European Congresses of Entomology
- Stapledon Research Fellow (2007)
- Awarded the Anne Keymer Prize by the British Ecological Society (2001)
- Editorial Board Member of *Agricultural and Forest Entomology*
- Lead editor: Johnson S.N. and Murray P.J. (2008) *Root Feeders: an Ecosystem Perspective*. CABI, Wallingford.
- Regular reviewer for ten academic journals

Latest Refereed Papers (last five years)

Johnson, S.N. & McNicol, J.W. (2010) Elevated CO_2 and aboveground-belowground herbivory by the clover root weevil. *Oecologia*, 162, 209–216.

Johnson, S.N., Gregory, P.J., McNicol, J.W., Oodally, Y., Zhang, X. & Murray, P.J. (2010) Effects of soil conditions and drought on egg hatching and larval survival of the clover root weevil (*Sitona lepidus*). *Applied Soil Ecology*, 44, 75–79.

Johnson, S.N., Hallett, P.D., Gillespie, T.L. & Halpin, C. (2010) Belowground herbivory and root toughness: a potential model system using lignin-modified tobacco. *Physiological Entomology*, (in press).

Johnson, S.N., Petitjean, S., Clark, K.E. & Mitchell, C. (2010) Protected raspberry production accelerates onset of oviposition by vine weevils (*Otiorhynchus sulcatus*). *Agricultural & Forest Entomology*, (in press)

Martin, P. & **Johnson, S.N.** (2010) Evidence that elevated CO_2 reduces resistance to the European large raspberry aphid in some raspberry cultivars. *Journal of Applied Entomology*, (in press).

Mitchell, C., **Johnson, S.N.**, Gordon, S.C., Birch, A.N.E. & Hubbard, S.F. (2010) Combining plant resistance and a natural enemy to control *Amphorophora idaei*. *Biocontrol*, (in press).

Johnson, S.N., Hawes, C. & Karley, A.J. (2009) Reappraising the role of plant nutrients as mediators of interactions between root- and foliar-feeding insects. Functional Ecology, 23, 699–706.

Gregory, P.J., **Johnson, S.N.**, Newton, A.C. & Ingram, J.S.I. (2009) Integrating pests and pathogens into the climate change/food security debate. *Journal of Experimental Botany*, 60, 2827–2838.

McMenemy, L.S., Mitchell, C. & **Johnson, S.N.** (2009) Biology of the European large raspberry aphid (*Amphorophora idaei*): its role in virus transmission and resistance breakdown in red raspberry. *Agricultural and Forest Entomology*, 11, 61–71.

Johnson, S.N., Anderson, A., Dawson, G. & Griffiths, D.W. (2008) Varietal susceptibility of potatoes to wireworm herbivory. *Agricultural and Forest Entomology*, 10, 167–174.

Johnson, S.N., Crawford, J.W., Gregory, P.J., Grinev, D.V., Mankin, R.W., Masters, G.J., Murray, P.J., Wall, D.H. & Zhang, X.X. (2007) Non-invasive techniques for investigating and modelling root-feeding insects in managed and natural systems. *Agricultural and Forest Entomology*, 9, 39–46.

Johnson, S.N., Zhang, X., Crawford, J.W., Gregory, P.J. & Young, I.M. (2007) Egg hatching and survival time of soil-dwelling insect larvae: a partial differential equation model and experimental validation. *Ecological Modelling*, 202, 493–502.

Zhang, X., **Johnson, S.N.**, Crawford, J.W., Gregory, P.J. & Young, I.M. (2007) A general random walk model for the leptokurtic distribution of organism movement: theory and application. *Ecological Modelling*, 200, 79–88.

Johnson, S.N., Birch, A.N.E., Gregory, P.J. & Murray, P.J. (2006) The 'mother knows best' principle: should soil insects be included in the preference-performance debate? *Ecological Entomology*, 31, 395–401.

Johnson, S.N. & Gregory, P.J. (2006) Chemically-mediated host-plant location and selection by root-feeding insects. *Physiological Entomology*, 31, 1–13.

Johnson, S.N., Zhang, X.X., Crawford, J.W., Gregory, P.J., Hix, N.J., Jarvis, S.J., Murray, P.J. & Young, I.M. (2006) Effects of CO_2 on the searching behaviour of the root-feeding clover weevil. *Bulletin of Entomological Research*, 96, 361–366.

Zhang, X., **Johnson, S.N.**, Gregory, P.J., Crawford, J.W., Young, I.M., Murray, P.J. & Jarvis, S.C. (2006) Modelling the movement and survival of the root-feeding clover weevil, *Sitona lepidus*, in the root-zone of white clover. *Ecological Modelling*, 190, 133–146.

Johnson, S.N., Gregory, P.J., Greenham, J.R., Zhang, X. & Murray, P.J. (2005) Attractive properties of an isoflavonoid found in white clover root nodules on the clover root weevil. *Journal of Chemical Ecology*, 31, 2223–2229.