

Reimund Paul Rötter, Prof. Dr.

Year of birth: 1961 , Nationality: German

Tropical Plant Production Systems and Agricultural Systems Modelling, Department of Crop Sciences, Georg-August University of Göttingen, Grisebachstraße 6, 37077 Göttingen, Germany.

Curriculum vitae

Education

- 1993 Dr. rer. nat. (summa cum laude), University of Trier, Title of Dissertation: Simulation of the biophysical limitations to maize production under rainfed conditions in Kenya
- 1989 Master of Science (Physical Geography/Geo-sciences), University of Trier

Professional career

- Since 2016 Professor and Head of Division, Tropical Plant Production and Agricultural Systems Modelling (TROPAGS), Department of Crop Sciences, Faculty of Agricultural Sciences, Georg-August-University Göttingen
- 2009-2016 Professor Production Ecology & Agrosystems Modelling at Natural Resources Institute Finland (Luke)
- Since 2008 Docent in agro-ecology at Helsinki University.
- 2007 - 2008 Principal Scientist Agro-ecology, Plant Production Research, MTT Agrifood Research Finland, at Mikkeli
- 2004 - 2008 Theme leader “Land use systems and climate change”, Soil Science Centre, Alterra and Principal scientist at Environmental Sciences Group, Wageningen University, The Netherlands
- 2001-2006 Research theme coordinator “Sustainable agriculture and rural development”, North-South research program, Wageningen University
- 1996-2000 Internationally Recruited Staff, System Network coordinator for South and Southeast Asia, International Rice Research Institute, Philippines (IRRI) – seconded from Wageningen University and Research centre
- 1993- 1996 Researcher at Winand Staring Centre and Agrosystems analysis group CABO, Wageningen; Lead author IPCC, WGII; Second Assessment Report
- 1990- 1993 Research assistant and PhD student at University of Trier, Germany
- 1985- 1990 Research assistant at University of Trier, and member of the German Agricultural Team (GTZ) and the national soil fertility program (FURP); Nairobi/Kenya and Trier

Fellowships, Awards, and Honours

- 1990 Land Rheinland-Pfalz (Begabtenförderung) PhD scholarship Award
- 1992 DAAD scholarship for conducting PhD guest research at CABO/Wageningen University, The Netherlands
- 1995 Intergovernmental Panel on Climate Change (IPCC) – working on the second, fourth and fifth assessment reports (Working Group II) as lead author and reviewer on the agricultural chapters. IPCC was joint winner of the Nobel Peace Prize in 2007.
- 1999 Award by the Ministry of Agriculture and Rural Development (MARD), Vietnam for outstanding research collaboration
- 2013 Agricultural Scientist of the Year (MTT/Finland)

Professional activities

- Since 2016 Associate Editor: Field Crops Research

- Since 2012 Member of FACCE MACSUR Project Leadership Team (PLT) and co-leader CropM component
- 1997 ff Referee for a wide range of international journals: Agricultural and Forest Meteorology; Agricultural Systems; Agriculture, Ecosystems and Environment; Climatic Change; Environmental Modelling and Software; European Journal of Agronomy; Field Crops Research; Global Change Biology; Global Environmental Change; Journal of Experimental Botany; Land Use Policy; Nature Climate Change
- 1996 ff Referee for project proposals: for various Austrian, Danish, Dutch, French, Norwegian and German Research Programs

Research Interests

Climate change adaptation of crop production systems

Multi-scale integrated analysis of global change impacts on agricultural systems – with special attention to short-term climate variability and extremes

Integrated modelling and assessment of future scenarios on sustainable land use management

Evaluation and improvement of agro-ecosystem models

Uncertainty and risk assessment

for more information, see: <https://www.uni-goettingen.de/en/106511.html>

Selected Publications

1. **Rötter R.P.**, Tao, F., Höhn, J.G., Palosuo, T. (2015). Use of crop simulation modelling to aid ideotype design of future cereal cultivars. *Journal of Experimental Botany*, 66(12), 3463-3476. doi:10.1093/jxb/erv098
2. Ewert, F., **Rötter, R.P.**, Bindi, M., Webber, H., Trnka, M., Kersebaum, K.-C., Olesen, J. E., van Ittersum, M.K., Janssen, S., Rivington, M. and 12 others (2015). Crop modelling for integrated assessment of risk to food production from climate change. *Environmental Modelling & Software*, 72, 287-303. doi:10.1016/j.envsoft.2014.12.003
3. Asseng, S., Ewert, F., Martre, P., **Rötter, R.P.**, Lobell, D., Cammarano, D., Kimball, B.A., Ottmann, M.J., Wall, G.W., White, J.W., Reynolds, M.P., Aldermann, P.D., Prasad, V.V., Boote, K.J., Brisson, N., Martre, P. and 40 others (2015). Rising temperatures reduce global wheat production. *Nature Climate Change* 5, 143-147. doi: 10.1038/nclimate2470.
4. **Rötter, R.P.** (2014). Robust uncertainty. *Nature Climate Change*, 4, 251-252. doi:10.1038/nclimate2181.
5. Kassie, B.T., Van Ittersum, M.K., Hengsdijk, H., Asseng, S., Wolf, J. & **Rötter, R.P.** (2014). Climate-induced yield variability and yield gaps of maize (*Zea mays* L.) in the Central Rift Valley of Ethiopia. *Field Crops Research*, 160, 41-53.
6. Trnka, M., **Rötter, R.P.**, Ruiz-Ramos, M. Kersebaum, K.-C., Olesen, J.E. & Semenov, M.A. (2014). Adverse weather conditions for wheat production in Europe will become more frequent with climate change. *Nature Climate Change*, 4, 637-643 (doi: 10.1038/nclimate2242).
7. Asseng, S., Ewert, F., Rosenzweig, C., Jones, J.W., Hatfield, J.L., Ruane, A.C., Boote, K.J., Thorburn, P.J., **Rötter, R.P.**, Cammarano, D. and 41 others (2013). Uncertainty in simulating wheat yields under climate change. *Nature Climate Change*, 3, 827-832. (Doi: 10.1038/NCLIMATE1916).
8. **Rötter, R.P.**, Palosuo, T., Kersebaum, K.-C., Angulo, C., Bindi, M., Ewert, F., Ferrise, R., Hlavinka, P., Moriondo, M., Olesen, J.E., Takáč, J. & Trnka, M. (2012). Simulation of spring barley yield in different climatic zones of Northern and Central Europe: A comparison of nine crop growth models. *Field Crops Research*, 133, 23-36.
9. Palosuo, T., Kersebaum, K.-C., Angulo, C., Hlavinka, P., Moriondo, M., Olesen, J.E. & **Rötter, R.P.** (2011). Simulation of winter wheat yield and its variability in different climates of Europe: A comparison of eight crop growth models. *European Journal of Agronomy*, 35, 103-114.
10. **Rötter, R.P.**, Carter, T.R., Olesen, J.E. & Porter, J.R. (2011). Crop-climate models need an overhaul. *Nature Climate Change*, 1, 175-177.