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## Research interests

A Professor in Agriculture and Climate Change, with research interests in carbon sequestration, agricultural greenhouse gas mitigation and adaptation. A soil and environmental scientist, with a long established history of research in nitrogen and carbon cycling and soil management in a range of crop and soil systems. A significant involvement in EU funded research programmes, and recently co-ordinated Legume-Futures an EU Framework project on the role of legumes in farming systems. A participant in the recent projects on Marginal Abatement Cost Curves, and in an EU project on climate change adaptation. Currently expanding research activities on greenhouse gas mitigation in China and South Asia.

## Qualifications

PhD, University of Aberdeen  
Award Date: 1 Jun 1985

Bachelor, University of Exeter  
Award Date: 30 Jun 1981

## Research outputs

**Effect of nutritional variation and LCA methodology on the carbon footprint of milk production from Holstein Friesian dairy cows: Uncertainty and Allocation Effect Milk Footprints**

March, MD., Hargreaves, PR., Rees, RM. & Sykes, AJ., 30 Apr 2021, In: *Frontiers in Sustainable Food Systems*. 5, 588158.

**Legume-modified rotations deliver nutrition with lower environmental impact**

Costa, M., Reckling, M., Chadwick, D. R., Rees, RM., Saget, S., Williams, M. & Styles, D., 13 Apr 2021, (First published) In: *Frontiers in Sustainable Food Systems*. 5, 656005.

**Increasing the Ambition of Climate Change Mitigation in Agriculture whilst Meeting the Sustainable Development Goals (SDGs) and Food Policy Aims**

Heidecke, C., Wollenberg, E. & Rees, RM., 9 Apr 2021, In: *Frontiers in Sustainable Food Systems*.

**Cropping system design can improve nitrogen use efficiency in intensively managed agriculture**

Zhang, C., Rees, RM. & Ju, X., 1 Jul 2021, In: *Environmental Pollution*. 280, 116967.

**Bacterial communities in paddy soils changed by milk vetch as green manure: A study conducted across six provinces in South China**

Gao, S., Cao, W., Zhou, G. & Rees, R. M., Aug 2021, In: *Pedosphere*. 31, 4, p. 521-530 10 p.

**The effect of antecedence on empirical model forecasts of crop yield from observations of canopy properties**

Florence, A., Revill, A., Hoad, SP., Rees, RM. & Williams, M., 18 Mar 2021, (First published) In: *Agriculture*. 11, 3, 258.

**Reducing N<sub>2</sub>O emissions with enhanced efficiency nitrogen fertilizers (EENFs) in a high yielding spring maize system**

Lyu, X., Wang, T., Song, X., Zhao, C., Rees, RM., Liu, Z., Xiaotang, J. & Siddique, K., 15 Mar 2021, In: *Environmental Pollution*. 273, 116422.

**Combining process modelling and LAI observations to diagnose winter wheat nitrogen status and forecast yield**

Revell, A., Myrriotis, V., Florence, A., Hoad, SP., Rees, RM., MacArthur, A. & Williams, M., 10 Feb 2021, (First published) In: *Agronomy*. 11, 2, 314.

**Estimating maximum fine-fraction organic carbon in UK grasslands**

Paterson, K., Cloy, JM., Rees, RM., Baggs, E. M., Martineau, H., Fornara, D., MacDonald, A. J. & Buckingham, S., 27 Jan 2021, (First published) In: *Biogeosciences*. 18, 2, p. 605-620 16 p.

**Using milk vetch (*Astragalus sinicus* L.) to promote rice straw decomposition by regulating enzyme activity and bacterial community**

Zhou, G., Gao, S., Chang, D., Rees, RM. & Cao, W., Jan 2021, In: *Bioresource Technology*. 319, 124215.

**Evaluating the potential of legumes to mitigate N<sub>2</sub>O emissions from permanent grassland using process-based models**

Fuchs, K., Merbold, L., Buchmann, N., Bellocchi, G., Bindi, M., Brilli, L., Conant, R., Dorich, C. D., Ehrhardt, F., Fitton, N., Grace, P., Klumpp, K., Liebig, M., Lieffering, M., Martin, R., Newton, P. CD., Rees, RM., Recous, S., Smith, P., Soussana, JF. & 2 others, Topp, CFE. & Snow, V., Dec 2020, In: *Global Biogeochemical Cycles*. 34, 12, p. 1-36 36 p., e2020GB006561.

**Green manuring inhibits nitrification in a typical paddy soil by changing the contributions of ammonia-oxidizing archaea and bacteria**

Gao, S., Zhou, G., Rees, R. M. & Cao, W., Dec 2020, In: *Applied Soil Ecology*. 156, 103698.

**Carbon substrates exert a stronger role than mineral nitrogen application in structuring soil diazotroph communities during Chinese milk vetch growth**

Yang, L., Rees, RM., Nie, J., Xu, C. & Cao, W., 2 Oct 2020, (First published) In: *Applied Soil Ecology*. 158, 103778.

**Representing crop rotations in life cycle assessment: a review of legume LCA studies**

Costa, M., Chadwick, D. R., Saget, S., Rees, RM., Williams, M. & Styles, D., 1 Oct 2020, In: *International Journal of Life Cycle Assessment*. 25, p. 1942-1956 15 p.

**Co-incorporation of rice straw and leguminous green manure can increase soil available nitrogen (N) and reduce carbon and N losses: An incubation study**

ZHOU, G., CAO, W., BAI, J., XU, C., ZENG, N., GAO, S., REES, R. M. & DOU, F., Oct 2020, In: *Pedosphere*. 30, 5, p. 661-670 10 p.

**A model-data fusion approach to analyse carbon dynamics in managed grasslands**

Myrriotis, V., Blei, E., Clement, R., Jones, SK., Keane, B., Lee, M. A., Levy, P. E., Rees, RM., Skiba, U. M., Smallman, T. L., Toet, S. & Williams, M., Sep 2020, In: *Agricultural Systems*. 184, 102907.

**Global research alliance N<sub>2</sub>O chamber methodology guidelines: Considerations for automated flux measurement**

Grace, P., van der Weerden, T., Rowlings, D., Scheer, C., Brunk, C., Kiese, R., Butterbach-Bahl, K., Rees, RM., Robertson, P. & Skiba, U. M., Sep 2020, In: *Journal of Environmental Quality*. 49, 5, p. 1126-1140 15 p.

**Global Research Alliance N<sub>2</sub>O chamber methodology guidelines: Flux calculations**

Venterea, R., Petersen, S., de Klein, C. AM., Noble, A., Rees, RM., Gamble, J., Parkin, T. & Pedersen, A., Sep 2020, In: *Journal of Environmental Quality*. 49, 5, p. 1141-1155 15 p.

**Regional land use efficiency and nutritional quality of protein production**

Leinonen, I., Iannetta, P. PM., MacLeod, M., Rees, RM., Russell, W., Watson, CA. & Barnes, AP., Sep 2020, In: *Global Food Security*. 26, 100386.

**Management of rice straw with relay cropping of Chinese milk vetch improved double-rice cropping system production in southern China**

Zhou, X., Liao, Y., Rees, RM., Cao, W., Nie, J. & Li, M., Aug 2020, In: *Journal of Integrative Agriculture*. 19, 8, p. 2103-2115 13 p.

**Quantifying uncertainty and bridging the scaling gap in the retrieval of leaf area index by coupling Sentinel-2 and UAV observations**

Revill, A., Florence, A., MacArthur, A., Hoad, SP., Rees, RM. & Williams, M., 6 Jun 2020, (First published) In: Remote Sensing. 12, 11, 20 p., 1843.

**Vertisols and cambisols had contrasting short term greenhouse gas responses to crop residue management**

Badagliacca, G., Rees, RM., Giambalvo, D. & Saia, S., 14 May 2020, (First published) In: Plant, Soil and Environment. 66, 5, p. 222-233 12 p.

**Towards country-specific nitrous oxide emission factors for manures applied to arable and grassland soils in the UK**

Thorman, R. E., Nicholson, F. A., Topp, CFE., Bell, M., Cárdenas, L. M., Chadwick, D. R., Cloy, JM., Misselbrook, T. H., Rees, RM., Watson, C. J. & Williams, J. R., 12 May 2020, In: Frontiers in Sustainable Food Systems. 4, 62.

**Understanding and quantifying carbon cycling in managed grasslands through model-data fusion**

Myrriotis, VM., Clement, R., Jones, SK., Keane, B., Lee, M., Levy, P. E., Rees, RM., Skiba, U. M., Smallman, T. L., Toet, S., Williams, M. & Blei, E., 4 May 2020, (First published) p. 4984. 1 p.

**Isolating the effect of soil properties on agricultural soil greenhouse gas emissions under controlled conditions**

Miller, G. A., Rees, RM., Griffiths, BS. & Cloy, JM., 1 Apr 2020, In: Soil Use and Management. 36, 2, p. 285-298 14 p.

**Mitigating nitrous oxide emissions from agricultural soils by precision management**

Rees, RM., Maire, JM., Florence, A., Cowan, N., Skiba, U. M., van der Weerden, T. & Ju, X., 2 Mar 2020, In: Frontiers of Agricultural Science and Engineering. 7, 1, p. 75-80 6 p.

**Nitrogen fertiliser interactions with urine deposit affect nitrous oxide emissions from grazed grasslands**

Maire, JM., Krol, D., Pasquier, D., Cowan, N. J., Skiba, U. M., Rees, RM., Reay, D. S., Lanigan, G. J. & Richards, K. G., 1 Mar 2020, In: Agriculture, Ecosystems and Environment. 290, 106784.

**Characterising the biophysical, economic and social impacts of soil carbon sequestration as a greenhouse gas removal technology**

Sykes, AJ., MacLeod, M., Eory, V., Rees, RM., Payen, FP., Myrriotis, VM., Williams, M., Sohi, S., Hillier, J., Moran, D., Manning, D., Goglio, P., Seghetta, M., Williams, A., Harris, J., Dondini, M., Walton, J., House, J. & Smith, P., Mar 2020, In: Global Change Biology. 26, 3, p. 1085-1108 24 p.

**Response to Comment on "oxygen Regulates Nitrous Oxide Production Directly in Agricultural Soils"**

Song, X., Ju, X., Topp, C. F. E. & Rees, R. M., 7 Feb 2020, (First published) In: Environmental Science and Technology. 54, 4, p. 2556-2557 2 p.

**Multi-model evaluation of nitrous oxide emissions from an intensively managed grassland**

Fuchs, K., Merbold, L., Buchmann, N., Bretscher, D., Brilli, L., Fitton, N., Topp, CFE., Klumpp, K., Lieffering, M., Martin, R., Newton, P. CD., Rees, RM., Rolinski, S., Smith, P. & Snow, V., Jan 2020, In: Journal of Geophysical Research. 125, 1, e2019JG005261.

**Co-incorporation of Chinese milk vetch (*Astragalus sinicus* L.) and rice (*Oryza sativa* L.) straw minimizes CH<sub>4</sub> emissions by changing the methanogenic and methanotrophic communities in a paddy soil**

Zhou, G., Gao, S., Xu, C., Zeng, N., Rees, RM. & Cao, W., 21 Dec 2019, (First published) In: European Journal of Soil Science.

**Oxygen regulates nitrous oxide production directly in agricultural soils**

Song, X., Ju, X., Topp, CFE. & Rees, RM., 5 Nov 2019, In: Environmental Science & Technology. 53, 21, p. 12539-12547 9 p.

**The sensitivity of soil organic carbon pools to land management varies depending on former tillage practices**

Miller, G., Rees, RM., Griffiths, BS., Ball, BC. & Cloy, JM., Nov 2019, In: Soil and Tillage Research. 194, p. 236-242 7 p.

**Weakened growth of cropland N<sub>2</sub>O emissions in China associated with nationwide policy interventions**

Shang, Z., Zhou, F., Smith, P., Saikawa, E., Ciais, P., Chang, J., Tian, H., Del Grosso, S., Ito, A., Chen, M., Wang, Q., Bo, Y., Cui, X., Castaldi, S., Juszczak, R., Kasimir, A., Magliulo, V., Medinets, S., Medinets, V., Rees, RM. & 2 others, Wohlfahrt, G. & Sebbatini, S., Nov 2019, In: *Global Change Biology*. 25, 11, p. 3706-3719 14 p.

**Understanding uncertainty in the carbon footprint of beef production**

Sykes, AS., Rees, RM. & Topp, CFE., 10 Oct 2019, In: *Journal of Cleaner Production*. 234, p. 423-435 13 p.

**Comparative analysis of nitrogen accounting models with particular reference to agriculture**

Buckingham, S., Crooks, W., Dolan, S., Dragosits, U., Eory, V., Rees, RM. & Topp, CFE., Oct 2019, *Climate Exchange*.

**Just the tonic! Legume biorefining for alcohol has the potential to reduce Europe's protein deficit and mitigate climate change**

Lienhardt, T., Black, K., Saget, S., Costa, M., Chadwick, D., Rees, RM., Williams, M., Spillane, C., Iannetta, P., Walker, G. & Styles, D., Sep 2019, In: *Environment International*. 130, 11 p., 104870.

**The value of Sentinel-2 spectral bands for the assessment of winter wheat growth and development**

Revill, A., Florence, A., MacArthur, A., Hoad, SP., Rees, RM. & Williams, M., 31 Aug 2019, (First published) In: *Remote Sensing*. 11, 17, 19 p., 2050.

**Modelling nutrient cycles in agriculture and their environmental impacts**

Sykes, AS., Topp, CFE. & Rees, RM., 26 Aug 2019, *Assessing the environmental impact of agriculture*. Weidema, B. (ed.). Cambridge: Burleigh Dodds Science Publishing Limited: Series in Agricultural Science, 69 p.

**A critical review of the impacts of cover crops on nitrogen leaching, net greenhouse gas balance and crop productivity**

Abdalla, M., Hastings, A., Cheng, K., Yue, Q., Chadwick, D., Espenberg, M., Truu, J., Rees, RM. & Smith, P., Aug 2019, In: *Global Change Biology*. 25, 8, p. 2530-2543 14 p.

**Data for life cycle assessment of legume biorefining for alcohol: Data article - refers to: Just the tonic! Legume biorefining for alcohol has the potential to reduce Europe's protein deficit and mitigate climate change, Environment International, Volume 130, September 2019, 104870**

Lienhardt, T., Black, K., Saget, S., Costa, M., Chadwick, D., Rees, RM., Williams, M., Spillane, C., Iannetta, P., Walker, G. & Styles, D., Aug 2019, In: *Data in Brief*. 25, 104242.

**Effects of the nitrification inhibitor DMPP (3,4-dimethylpyrazole phosphate) on gross N transformation rates and N<sub>2</sub>O emissions**

Zhu, G., Ju, X., Zhang, J., Muller, C., Rees, RM., Thorman, R. & Sylvester-Bradley, R., Aug 2019, In: *Biology and Fertility of Soils*. 55, 6, p. 603-615 13 p.

**Corrigendum to "Improving model prediction of soil N<sub>2</sub>O emissions through Bayesian calibration" (Science of the Total Environment (2018) 624 (1467–1477), (S0048969717336355), (10.1016/j.scitotenv.2017.12.202))**

Myrgiotis, V., Williams, M., Topp, C. F. E. & Rees, R. M., 10 Jun 2019, In: *Science of the Total Environment*. 668, p. 1342 1 p.

**Gross N transformation rates and related N<sub>2</sub>O emissions in Chinese and UK agricultural soils**

Zhu, G., Song, X., Ju, X., Zhang, J., Muller, C., Sylvester-Bradley, R., Thorman, R., Bingham, IJ. & Rees, RM., 20 May 2019, In: *Science of the Total Environment*. 666, p. 176-186 11 p.

**Crop straw incorporation interacts with N fertilizer on N<sub>2</sub>O emissions in an intensively cropped farmland**

Xu, C., Han, X., Ru, S., Cardenas, LM., Rees, RM., Wu, D., Wu, W. & Meng, F., 1 May 2019, In: *Geoderma*. 341, p. 129-137 9 p.

**Modelling biological N fixation and grass-legume dynamics with process-based biogeochemical models of varying complexity**

Fitton, N., Bindi, M., Brilli, L., Cichota, R., Dibari, C., Fuchs, K., Huguenin-Elie, O., Klumpp, K., Lieffering, M., Lüscher, A., Martin, R., McAuliffe, R., Merbold, L., Newton, P., Rees, RM., Smith, P., Topp, CFE. & Snow, V., May 2019, In: European Journal of Agronomy. 106, p. 58-66 9 p.

#### **Lysine supply is a critical factor in achieving sustainable global protein economy**

Leinonen, I., Iannetta, PPM., Rees, RM., Russell, W., Watson, CA. & Barnes, AP., 24 Apr 2019, In: Frontiers in Sustainable Food Systems. 3, 27.

#### **Estimating the soil N<sub>2</sub>O emission intensity of croplands in northwest Europe**

Myrriotis, VM., Williams, M., Rees, RM. & Topp, CFE., 18 Apr 2019, In: Biogeosciences. 16, 8, p. 1641-1655 15 p.

#### **Nitrogen use efficiency and nitrous oxide emissions from five UK fertilised grasslands**

Cardenas, LM., Bhogal, A., Chadwick, DR., McGeough, K., Misselbrook, T., Rees, RM., Thorman, RE., Watson, CJ., Williams, JR., Smith, KA. & Calvet, S., 15 Apr 2019, In: Science of the Total Environment. 661, p. 696 - 710 15 p.

#### **Non-additive responses of soil C and N to rice straw and hairy vetch (*Vicia villosa roth L*) mixtures in a paddy soil**

Zhou, G., Cao, W., Bai, J., Xu, C., Zeng, N., Gao, S. & Rees, RM., 1 Mar 2019, In: Plant and Soil. 436, 1-2, p. 229-244 16 p.

#### **Do UK grasslands have the ability to sequester more carbon?**

Paterson, K., Buckingham, S., Cloy, JM., Rees, RM. & Baggs, E. M., 2019.

#### **Diazotroph abundance and community structure are reshaped by straw return and mineral fertilizer in rice-rice-green manure rotation**

Yang, L., Bai, J., Zeng, N., Zhou, X., Liao, Y., Lu, Y., Rees, RM., Nie, J. & Cao, W., 26 Dec 2018, (First published) In: Applied Soil Ecology. 136, p. 11-20 10 p.

#### **Chinese cropping systems are a net source of greenhouse gases despite soil carbon sequestration**

Gao, B., Huang, T., Ju, X., Gu, B., Huang, W., Xu, L., Rees, RM., Powlson, DS., Smith, P. & Cui, S., Dec 2018, In: Global Change Biology. 24, 12, p. 5590 - 5606 17 p.

#### **Nitrous oxide emissions increase exponentially when optimum nitrogen fertilizer rates are exceeded in the North China plain**

Song, X., Liu, M., Ju, X., Gao, B., Su, F., Chen, X. & Rees, RM., 6 Nov 2018, In: Environmental Science and Technology. 52, 21, p. 12504 - 12513 10 p.

#### **UAV-based approaches for crop parameter retrievals**

Florence, A., Hoad, SP., Rees, RM., Revill, A., MacArthur, A. & Williams, M., 5 Nov 2018, (First published).

#### **The contribution of cattle urine and dung to nitrous oxide emissions: quantification of country specific emission factors and implications for national inventories**

Chadwick, DR., Cardenas, LM., Dhanoa, MS., Donovan, N., Misselbrook, T., Williams, JR., Thorman, RE., McGeough, KL., Watson, CJ., Bell, M., Anthony, SG. & Rees, RM., 1 Sep 2018, In: Science of the Total Environment. 635, p. 607 - 617 11 p.

#### **The use of biogeochemical models to evaluate mitigation of greenhouse gas emissions from managed grasslands**

Sándor, R., Ehrhardt, F., Brilli, L., Carozzi, M., Recous, S., Smith, P., Snow, V., Soussana, J-F., Dorich, CD., Fuchs, K., Fitton, N., Gongadze, K., Klumpp, K., Liebig, M., Martin, R., Merbold, L., Newton, PCD., Rees, RM., Rolinski, S. & Bellocchi, G., 12 Jun 2018, (First published) In: Science of the Total Environment. 642, p. 292 - 306 15 p.

#### **Archaea are the predominant and responsive ammonia oxidizing prokaryotes in a red paddy soil receiving green manures**

Gao, S., Chang, D., Zou, C., Cao, W., Gao, J., Huang, J., Bai, J., Zeng, N., Rees, RM. & Thorup-Kristensen, K., 11 Jun 2018, (First published) In: European Journal of Soil Biology. 88, p. 27 - 35 9 p.

**Identifying urine patches on intensively managed grassland using aerial imagery captured from remotely piloted aircraft systems**

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**Remotely Piloted Aircraft Systems (RPAS) application for mapping nitrogen deposition over intensively grazed grassland**

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**Frontiers in climate smart food systems: outlining the research space**

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**Soil carbon and land use in Scotland**

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**Improving model prediction of soil N<sub>2</sub>O emissions through Bayesian calibration**

Myrghiotis, V., Williams, M., Topp, C.F.E. & Rees, R.M., 27 Dec 2017, (First published) In: *Science of the Total Environment*. 624, p. 1467 - 1477 11 p.

**A systematic approach to identifying key parameters and processes in agroecosystem models**

Myrghiotis, V., Rees, R.M., Topp, C.F.E. & Williams, M., 26 Dec 2017, (First published) In: *Ecological Modelling*. 368, p. 344 - 356 13 p.

**Modelling spatial and inter-annual variations of nitrous oxide emissions from UK cropland and grasslands using DailyDayCent**

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**Critical review of the impacts of grazing intensity on soil organic carbon storage and other soil quality indicators in extensively managed grasslands**

Abdalla, M., Hastings, A., Chadwick, D.R., Jones, D.L., Evans, C.D., Jones, M.B., Rees, R.M. & Smith, P., 6 Nov 2017, (First published) In: *Agriculture, Ecosystems and Environment*. 253, p. 62 - 81 20 p.

**A comparison of farm-level greenhouse gas calculators in their application on beef production systems**

Sykes, A.J., Topp, C.F.E., Wilson, R.M., Reid, G. & Rees, R.M., 15 Oct 2017, In: *Journal of Cleaner Production*. 164, p. 398 - 409 12 p.

**A time-series of methane and carbon dioxide production from dairy cows during a period of dietary transition**

Lee, M.A., Todd, A., Sutton, M.A., Chagunda, M.G.G., Roberts, D.J. & Rees, R.M., 30 Sep 2017, (First published) In: *Cogent Environmental Science*. 3, 1385693.

**Mitigating nitrous oxide and manure-derived methane emissions by removing cows in response to wet soil conditions**

van der Weerden, T.J., Laurenson, S., Vogeler, I., Beukes, P.C., Thomas, S.M., Rees, R.M., Topp, C.F.E., Lanigan, G. & de Klein, C.A.M., Sep 2017, In: *Agricultural Systems*. 156, p. 126 - 138 13 p.

**Physical location of black carbon in grassland soil and its implication for SOM modelling**

Miller, G., Rees, R.M., Griffiths, B.S., Sohi, S.P., Garnett, M.H., Ascough, P.L. & Cloy, J.M., Sep 2017, (First published).

**The nitrogen, carbon and greenhouse gas budget of a grazed, cut and fertilised temperate grassland**

Jones, S.K., Helfter, C., Anderson, M., Coyle, M., Campbell, C., Famulari, D., Di Marco, C., van Dijk, N., Tang, Y.S., Topp, C.F.E., Kiese, R., Kindler, R., Siemens, J., Schrupf, M., Kaiser, K., Nemitz, E., Levy, P.E., Rees, R.M., Sutton, M.A. & Skiba, U.M., 24 Apr 2017, (First published) In: *Biogeosciences*. 14, 8, p. 2069 - 2088 20 p.

**An assessment of factors controlling N<sub>2</sub>O and CO<sub>2</sub> emissions from crop residues using different measurement approaches**

Badagliacca, G., Ruisi, P., Rees, RM. & Saia, S., 13 Apr 2017, (First published) In: *Biology and Fertility of Soils*. 53, 5, p. 1 - 8 8 p.

**Pea cultivar and wheat residues affect carbon/nitrogen dynamics in pea-triticale intercropping: a microcosms approach**

Scalise, A., Pappa, VA., Gelsomino, A. & Rees, RM., 21 Mar 2017, (First published) In: *Science of the Total Environment*. 592, p. 436 - 450 15 p.

**Nitrogen and phosphorus losses from legume-supported cropping**

Williams, M., Pappa, V. A. & Rees, R., 2017, *Legumes in Cropping Systems*. Murphy-Bokern, D., Stoddard, FL. & Watson, C. A. (eds.). CABI International, p. 37-54 18 p.

**Sustainable intensification of agriculture: impacts on sustainable soil management**

Rees, RM., Griffiths, BS., McVittie, A., Ginzky, H. (ed.), Dooley, E. (ed.), Heuser, IL. (ed.), Kasimbazi, E. (ed.), Markus, T. (ed.) & Qin, T. (ed.), 2017, *International Yearbook of Soil Law and Policy 2017*. Ginzky, H., Dooley, E., Heuser, IL., Kasimbazi, E., Markus, T. & Qin, T. (eds.). Springer, Vol. 2. p. 7 - 16 10 p.

**Conservation agriculture practices reduce the global warming potential of rainfed low N input semi-arid agriculture**

Tellez-Rio, A., Vallejo, A., Garcia-Marco, S., Martin-Lammerding, D., Tenorio, JL., Rees, RM. & Guardia, G., 29 Dec 2016, (First published) In: *European Journal of Agronomy*. 84, p. 95 - 104 10 p.

**A comparative nitrogen balance and productivity analysis of legume and non-legume supported cropping systems: the potential role of biological nitrogen fixation**

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**The impact of ploughing intensively managed temperate grasslands on N<sub>2</sub>O, CH<sub>4</sub> and CO<sub>2</sub> fluxes**

Drewer, J., Anderson, M., Levy, PE., Scholtes, B., Helfter, C., Parker, J., Rees, RM. & Skiba, UM., 19 Aug 2016, (First published) In: *Plant and Soil*. 411, 1, p. 193 - 208 16 p.

**Model evaluation in relation to soil N<sub>2</sub>O emissions: an algorithmic method which accounts for variability in measurements and possible time lags**

Myrghiots, V., Williams, M., Rees, RM., Smith, KE., Thorman, RE. & Topp, CFE., 15 Jul 2016, (First published) In: *Environmental Modelling and Software*. 84, p. 251 - 262 12 p.

**Quantifying N<sub>2</sub>O emissions from intensive grassland production: the role of synthetic fertilizer type, application rate, timing and nitrification inhibitors**

Bell, M., Cloy, JM., Topp, CFE., Ball, BC., Bagnall, A., Rees, RM. & Chadwick, DR., 2016, (First published) In: *Journal of Agricultural Science*. 154, 5, p. 812 - 827 16 p.

**Regional trends in Scottish advisory soil acidity and phosphorus results: significance of management history, land use and soil attributes**

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