Richard Eckard

List of Publications by Year
in descending order

85 papers	3,446 citations	147801 31 h-index	155660 55 g-index
85 all docs	85 docs citations	85 times ranked	2781 citing authors

#	Article	IF	Citations
1	Options for the abatement of methane and nitrous oxide from ruminant production: A review. Livestock Science, 2010, 130, 47-56.	1.6	449
2	Review: Fifty years of research on rumen methanogenesis: lessons learned and future challenges for mitigation. Animal, 2020, 14, s2-s16.	3.3	265
3	Methane Emissions from Dairy Cows Measured Using the Sulfur Hexafluoride (SF6) Tracer and Chamber Techniques. Journal of Dairy Science, 2007, 90, 2755-2766.	3.4	204
4	Livestock production in a changing climate: adaptation and mitigation research in Australia. Crop and Pasture Science, 2012, 63, 191.	1.5	136
5	Grape marc reduces methane emissions when fed to dairy cows. Journal of Dairy Science, 2014, 97, 5073-5087.	3.4	132
6	Influence of cold-pressed canola, brewers grains and hominy meal as dietary supplements suitable for reducing enteric methane emissions from lactating dairy cows. Animal Feed Science and Technology, 2011, 166-167, 254-264.	2.2	113
7	Background matters with the SF6 tracer method for estimating enteric methane emissions from dairy cows: A critical evaluation of the SF6 procedure. Animal Feed Science and Technology, 2011, 170, 265-276.	2.2	84
8	Effects of feeding algal meal high in docosahexaenoic acid on feed intake, milk production, and methane emissions in dairy cows. Journal of Dairy Science, 2013, 96, 3177-3188.	3.4	79
9	A modified sulphur hexafluoride tracer technique enables accurate determination of enteric methane emissions from ruminants. Animal Feed Science and Technology, 2014, 197, 47-63.	2.2	77
10	Review: Adaptation of ruminant livestock production systems to climate changes. Animal, 2018, 12, s445-s456.	3.3	73
11	Carbon myopia: The urgent need for integrated social, economic and environmental action in the livestock sector. Global Change Biology, 2021, 27, 5726-5761.	9.5	73
12	The challenges â€“ and some solutions â€“ to process-based modelling of grazed agricultural systems. Environmental Modelling and Software, 2014, 62, 420-436.	4.5	70
13	A comparative analysis of on-farm greenhouse gas emissions from agricultural enterprises in south eastern Australia. Animal Feed Science and Technology, 2011, 166-167, 641-652.	2.2	67
14	Supplementation with whole cottonseed causes long-term reduction of methane emissions from lactating dairy cows offered a forage and cereal grain diet. Journal of Dairy Science, 2010, 93, 2612-2619.	3.4	65
15	<i>In vitro</i> screening of selected feed additives, plant essential oils and plant extracts for rumen methane mitigation. Journal of the Science of Food and Agriculture, 2014, 94, 1191-1196.	3.5	60
16	Use of Monensin Controlled-Release Capsules to Reduce Methane Emissions and Improve Milk Production of Dairy Cows Offered Pasture Supplemented with Grain. Journal of Dairy Science, 2008, 91, 1159-1165.	3.4	50
17	Process modelling to assess the sequestration and productivity benefits of soil carbon for pasture. Agriculture, Ecosystems and Environment, 2015, 213, 272-280.	5.3	47
18	Can animal genetics and flock management be used to reduce greenhouse gas emissions but also maintain productivity of wool-producing enterprises?. Agricultural Systems, 2015, 132, 25-34.	6.1	47

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19	Simulated seasonal responses of grazed dairy pastures to nitrogen fertilizer in SE Australia: Pasture production. Agricultural Systems, 2018, 166, 36-47.	6.1	47
20	A high dose of monensin does not reduce methane emissions of dairy cows offered pasture supplemented with grain. Journal of Dairy Science, 2010, 93, 5300-5308.	3.4	44
21	The concordance between greenhouse gas emissions, livestock production and profitability of extensive beef farming systems. Animal Production Science, 2016, 56, 370.	1.3	44
22	Modelling pasture management and livestock genotype interventions to improve whole-farm productivity and reduce greenhouse gas emissions intensities. Animal Production Science, 2014, 54, 2018.	1.3	43
23	Reducing the carbon footprint of Australian milk production by mitigation of enteric methane emissions. Animal Production Science, 2016, 56, 1017.	1.3	42
24	Simulated seasonal responses of grazed dairy pastures to nitrogen fertilizer in SE Australia: N loss and recovery. Agricultural Systems, 2020, 182, 102847.	6.1	41
25	Increasing ewe genetic fecundity improves whole-farm production and reduces greenhouse gas emissions intensities. Agricultural Systems, 2014, 131, 23-33.	6.1	40
26	Wheat is more potent than corn or barley for dietary mitigation of enteric methane emissions from dairy cows. Journal of Dairy Science, 2017, 100, 7139-7153.	3.4	40
27	Improving greenhouse gas emissions intensities of subtropical and tropical beef farming systems using Leucaena leucocephala. Agricultural Systems, 2015, 136, 138-146.	6.1	39
28	Effect of warming on the productivity of perennial ryegrass and kikuyu pastures in south-eastern Australia. Crop and Pasture Science, 2013, 64, 61.	1.5	36
29	The effect of changing cow production and fitness traits on net income and greenhouse gas emissions from Australian dairy systems. Journal of Dairy Science, 2013, 96, 7918-7931.	3.4	34
30	Relationship between viticultural climatic indices and grape maturity in Australia. International Journal of Biometeorology, 2017, 61, 1849-1862.	3.0	33
31	Can seasonal soil N mineralisation trends be leveraged to enhance pasture growth?. Science of the Total Environment, 2021, 772, 145031.	8.0	33
32	Greenhouse gas accounting for inventory, emissions trading and life cycle assessment in the land-based sector: a review. Crop and Pasture Science, 2012, 63, 284.	1.5	31
33	The relative profitability of dairy, sheep, beef and grain farm enterprises in southeast Australia under selected rainfall and price scenarios. Agricultural Systems, 2013, 117, 35-44.	6.1	31
34	Modelling the Effect of Diet Composition on Enteric Methane Emissions across Sheep, Beef Cattle and Dairy Cows. Animals, 2016, 6, 54.	2.3	31
35	A study of environmental and management drivers of non-CO2 greenhouse gas emissions in Australian agro-ecosystems. Journal of Integrative Environmental Sciences, 2005, 2, 133-142.	0.8	30
36	A whole farm systems analysis of greenhouse gas emissions of 60 Tasmanian dairy farms. Animal Feed Science and Technology, 2011, 166-167, 653-662.	2.2	30

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37	Climate change through the farming systems lens: challenges and opportunities for farming in Australia. Crop and Pasture Science, 2012, 63, 203.	1.5	30
38	Simulation of N2O emissions from rain-fed wheat and the impact of climate variation in southeastern Australia. Plant and Soil, 2008, 309, 239-251.	3.7	29
39	The effect of future climate scenarios on the balance between productivity and greenhouse gas emissions from sheep grazing systems. Livestock Science, 2012, 147, 126-138.	1.6	29
40	Potential impacts of climate change on soil organic carbon and productivity in pastures of south eastern Australia. Agricultural Systems, 2018, 167, 34-46.	6.1	29
41	Modelled greenhouse gas emissions from beef cattle grazing irrigated leucaena in northern Australia. Animal Production Science, 2016, 56, 594.	1.3	26
42	Modelling nitrous oxide abatement strategies in intensive pasture systems. International Congress Series, 2006, 1293, 76-85.	0.2	24
43	Declining sulphur hexafluoride permeability of polytetrafluoroethylene membranes causes overestimation of calculated ruminant methane emissions using the tracer technique. Animal Feed Science and Technology, 2013, 183, 86-95.	2.2	23
44	Nutrient density as a metric for comparing greenhouse gas emissions from food production. Climatic Change, 2015, 129, 73-87.	3.6	23
45	Does producing more product over a lifetime reduce greenhouse gas emissions and increase profitability in dairy and wool enterprises?. Animal Production Science, 2015, 55, 49.	1.3	22
46	Impacts of future climate scenarios on nitrous oxide emissions from pasture based dairy systems in south eastern Australia. Animal Feed Science and Technology, 2011, 166-167, 736-748.	2.2	21
47	The relationship between the nitrogen and nitrate content and nitrate toxicity potential ofLolium multiflorum. Journal of the Grassland Society of Southern Africa, 1990, 7, 174-178.	0.4	20
48	Impacts of future climate scenarios on the balance between productivity and total greenhouse gas emissions from pasture based dairy systems in south-eastern Australia. Animal Feed Science and Technology, 2011, 166-167, 721-735.	2.2	20
49	Adaptation responses in milk fat yield and methane emissions of dairy cows when wheat was included in their diet for 16 weeks. Journal of Dairy Science, 2018, 101, 7117-7132.	3.4	20
50	Influence of El NiÃ±o-Southern Oscillation and the Indian Ocean Dipole on winegrape maturity in Australia. Agricultural and Forest Meteorology, 2018, 248, 502-510.	4.8	20
51	Growth and Physiological Responses of Temperate Pasture Species to Consecutive Heat and Drought Stresses. Plants, 2019, 8, 227.	3.5	20
52	Effect of dietary fat supplementation on methane emissions from dairy cows fed wheat or corn. Journal of Dairy Science, 2019, 102, 2714-2723.	3.4	20
53	A partial life cycle assessment of the greenhouse gas mitigation potential of feeding 3-nitrooxypropanol and nitrate to cattle. Agricultural Systems, 2019, 169, 14-23.	6.1	20
54	The response of Italian ryegrass to applied nitrogen in the natal midlands. Journal of the Grassland Society of Southern Africa, 1989, 6, 19-22.	0.4	19

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55	Mathematical modeling for improved greenhouse gas balances, agroâ€ecosystems, and policy development: lessons from the Australian experience. Wiley Interdisciplinary Reviews: Climate Change, 2014, 5, 735-752.	8.1	19
56	Carbon-neutral wool farming in south-eastern Australia. Animal Production Science, 2016, 56, 417.	1.3	18
57	Using Leaf Temperature to Improve Simulation of Heat and Drought Stresses in a Biophysical Model. Plants, 2020, 9, 8.	3.5	17
58	Supplementing the diet of dairy cows with fat or tannin reduces methane yield, and additively when fed in combination. Animal, 2020, 14, s464-s472.	3.3	17
59	A review of whole farm-system analysis in evaluating greenhouse-gas mitigation strategies from livestock production systems. Animal Production Science, 2018, 58, 980.	1.3	15
60	Fertiliser strategies for improving nitrogen use efficiency in grazed dairy pastures. Agricultural Systems, 2018, 165, 274-282.	6.1	14
61	Higher energy concentration traits in perennial ryegrass (Lolium perenne L.) may increase profitability and improve energy conversion on dairy farms. Agricultural Systems, 2015, 137, 89-100.	6.1	13
62	Trends in wheat yields under representative climate futures: Implications for climate adaptation. Agricultural Systems, 2018, 164, 1-10.	6.1	13
63	Modelling the influence of soil carbon on net greenhouse gas emissions from grazed pastures. Animal Production Science, 2016, 56, 585.	1.3	12
64	Offsets required to reduce the carbon balance of sheep and beef farms through carbon sequestration in trees and soils. Animal Production Science, 2018, 58, 1648.	1.3	12
65	Ammonia volatilisation from grazed, pasture based dairy farming systems. Agricultural Systems, 2021, 190, 103119.	6.1	12
66	Changing patterns of pasture production in south-eastern Australia from 1960 to 2015. Crop and Pasture Science, 2020, 71, 70.	1.5	11
67	Modelling the potential of birdsfoot trefoil (Lotus corniculatus) to reduce methane emissions and increase production on wool and prime lamb farm enterprises. Animal Production Science, 2015, 55, 1097.	1.3	9
68	Effect of combining wheat grain with nitrate, fat or 3-nitrooxypropanol on in vitro methane production. Animal Feed Science and Technology, 2019, 256, 114237.	2.2	9
69	Challenges and opportunities for quantifying greenhouse gas emissions through dairy cattle research in developing countries. Journal of Dairy Research, 2021, 88, 3-7.	1.4	9
70	Simulation of N2O emissions from an irrigated dairy pasture treated with urea and urine in Southeastern Australia. Agriculture, Ecosystems and Environment, 2010, 136, 333-342.	5.3	8
71	The Influence of Climate, Soil and Pasture Type on Productivity and Greenhouse Gas Emissions Intensity of Modeled Beef Cow-Calf Grazing Systems in Southern Australia. Animals, 2012, 2, 540-558.	2.3	8
72	Temperature, but not submersion or orientation, influences the rate of sulphur hexafluoride release from permeation tubes used for estimation of ruminant methane emissions. Animal Feed Science and Technology, 2014, 194, 71-80.	2.2	8

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73	Predicting ammonia volatilization from fertilized pastures used for grazing. Agricultural and Forest Meteorology, 2020, 287, 107952.	4.8	8
74	Northern Australian pasture and beef systems. 2. Validation and use of the Sustainable Grazing Systems (SGS) whole-farm biophysical model. Animal Production Science, 2014, 54, 1995.	1.3	7
75	Spatial variation in springtime temperature index values during ENSO and IOD events shows non-equivalent phase response for viticultural regions in Australia. Agricultural and Forest Meteorology, 2018, 250-251, 217-225.	4.8	7
76	Modelling the reduction in enteric methane from voluntary intake versus controlled individual animal intake of lipid or nitrate supplements. Animal Production Science, 2014, 54, 2121.	1.3	5
77	An evaluation of carbon offset supplementation options for beef production systems on coastal speargrass in central Queensland, Australia. Animal Production Science, 2016, 56, 385.	1.3	4
78	Epilogue - Future challenges for the national climate change research strategy. Crop and Pasture Science, 2012, 63, 297.	1.5	3
79	Comparative analysis of greenhouse gas emissions from three beef cattle herds in a corporate farming enterprise. Animal Production Science, 2016, 56, 482.	1.3	3
80	An irrigated cotton farm emissions case study in NSW, Australia. Agricultural Systems, 2017, 158, 61-67.	6.1	3
81	Managing the nitrogen status of subtropical dairy pastures for production, efficiency and profit. Agricultural Systems, 2019, 176, 102677.	6.1	3
82	The Potential of Deep Roots to Mitigate Impacts of Heatwaves and Declining Rainfall on Pastures in Southeast Australia. Plants, 2021, 10, 1641.	3.5	2
83	Nitrous oxide and methane flux in Australian and New Zealand landscapes: measurements, modeling and mitigation. Plant and Soil, 2008, 309, 1-4.	3.7	1
84	Modelling Nitrogen Losses from Sheep Grazing Systems with Different Spatial Distributions of Excreta. Agriculture (Switzerland), 2012, 2, 282-294.	3.1	1
85	AÃ§Ä±k Besi SÄ±ÄŸÄ±rlarÄ±nÄ±n Sera GazÄ± Ãœretiminin HesaplanmasÄ±nda Yeni Bir AraÃ§. Kafkas Universitesi Veteriner Fakultesi Dergisi, 2014, , .	0.1	0