Pekka Huhtanen

List of Publications by Year in Descending Order

140 papers	6,627 citations	44 h-index	78 g-index
145 ext. papers	7,764 ext. citations	3 avg, IF	5.98 L-index

#	Paper	IF	Citations
140	Review: Problems in determining metabolisable protein value of dairy cow diets and the impact on protein feeding. *Animal*, **2022**, 100539	3.1	0
139	A meta-analysis of faecal output and nutrient composition, and potential methane emission from manure of dairy cows. *Animal Feed Science and Technology*, **2021**, 282, 115120	3	0
138	The effects of gradual replacement of barley with oats on enteric methane emissions, rumen fermentation, milk production, and energy utilization in dairy cows. *Journal of Dairy Science*, **2021**, 104, 5617-5630	4	4
137	Residual carbon dioxide as an index of feed efficiency in lactating dairy cows. *Journal of Dairy Science*, **2021**, 104, 5332-5344	4	1
136	Postpartum responses of dairy cows supplemented with cereal grain or fibrous by-product concentrate. *Livestock Science*, **2021**, 248, 104506	1.7	
135	The use of an upgraded GreenFeed system and milk fatty acids to estimate energy balance in early-lactation cows. *Journal of Dairy Science*, **2021**, 104, 6701-6714	4	2
134	Replacement of barley with oats and dehulled oats: Effects on milk production, enteric methane emissions, and energy utilization in dairy cows fed a grass silage-based diet. *Journal of Dairy Science* , **2021**, 104, 12540-12552	4	0
133	The effects of energy metabolism variables on feed efficiency in respiration chamber studies with lactating dairy cows. *Journal of Dairy Science*, **2020**, 103, 7983-7997	4	9
132	Ruminal metabolism of ammonia N and rapeseed meal soluble N fraction. *Journal of Dairy Science*, **2020**, 103, 7081-7093	4	5
131	Short communication: Variation in feed efficiency hampers use of carbon dioxide as a tracer gas in measuring methane emissions in on-farm conditions. *Journal of Dairy Science*, **2020**, 103, 9090-9095	4	4
130	Metabolisable energy of grass and red clover silages fed to sheep at maintenance level. *Animal*, **2020**, 14, 753-762	3.1	1
129	Effects of ensiling time on corn silage neutral detergent fiber degradability and relationship between laboratory fiber analyses and in vivo digestibility. *Journal of Dairy Science*, **2020**, 103, 2333-2346	4	6
128	Modelling effects of carcass weight, dietary concentrate and protein levels on the CH4 emission, N and P excretion of dairy bulls. *Livestock Science*, **2020**, 232, 103896	1.7	4
127	Effects of different barley and oat varieties on methane production, digestibility, and fermentation pattern in vitro. *Journal of Dairy Science*, **2020**, 103, 1404-1415	4	7
126	Between-cow variation in the components of feed efficiency. *Journal of Dairy Science*, **2020**, 103, 7968-7982	4	11
125	Between-cow variation in milk fatty acids associated with methane production. *PLoS ONE*, **2020**, 15, e0235357	3.7	2
124	Enteric methane emission can be reliably measured by the GreenFeed monitoring unit. *Livestock Science*, **2019**, 222, 31-40	1.7	13

123	Modelling feed intake and milk yield responses to different grass ley harvesting strategies. *Grass and Forage Science*, **2019**, 74, 509	2.3	1
122	Invited review: Nitrogen in ruminant nutrition: A review of measurement techniques. *Journal of Dairy Science*, **2019**, 102, 5811-5852	4	56
121	Predicting feed intake and feed efficiency in lactating dairy cows using digesta marker techniques. *Animal*, **2019**, 13, 2277-2288	3.1	2
120	A heritable subset of the core rumen microbiome dictates dairy cow productivity and emissions. *Science Advances*, **2019**, 5, eaav8391	14.3	87
119	Comparison of Methods to Measure Methane for Use in Genetic Evaluation of Dairy Cattle. *Animals*, **2019**, 9,	3.1	21
118	Symposium review: Uncertainties in enteric methane inventories, measurement techniques, and prediction models. *Journal of Dairy Science*, **2018**, 101, 6655-6674	4	56
117	Prediction of enteric methane production, yield, and intensity in dairy cattle using an intercontinental database. *Global Change Biology*, **2018**, 24, 3368-3389	11.4	92
116	Effect of dietary fish oil supplements alone or in combination with sunflower and linseed oil on ruminal lipid metabolism and bacterial populations in lactating cows. *Journal of Dairy Science*, **2018**, 101, 3021-3035	4	20
115	Effect of soya bean oil supplementation and forage type on methane production and fibre digestibility using the in vitro gas production system. *Grass and Forage Science*, **2018**, 73, 368-380	2.3	3
114	Effects of intraruminal urea-nitrogen infusions on feed intake, nitrogen utilization, and milk yield in dairy cows. *Journal of Dairy Science*, **2018**, 101, 9004-9015	4	9
113	Ruminal metabolism of grass silage soluble nitrogen fractions. *Journal of Dairy Science*, **2018**, 101, 279-294	4	14
112	Predicting omasal flow of nonammonia N and milk protein yield from in vitro-determined utilizable crude protein at the duodenum. *Journal of Dairy Science*, **2018**, 101, 1164-1176	4	6
111	Effects of replacement of late-harvested grass silage and barley with early-harvested silage on ruminal digestion efficiency in lactating dairy cows. *Journal of Dairy Science*, **2018**, 101, 1177-1189	4	1
110	Review: Selecting for improved feed efficiency and reduced methane emissions in dairy cattle. *Animal*, **2018**, 12, s336-s349	3.1	31
109	In vitro investigation of the ruminal digestion kinetics of different nitrogen fractions of 15N-labelled timothy forage. *PLoS ONE*, **2018**, 13, e0203385	3.7	3
108	Letter to the Editor: Challenging one sensor method for screening dairy cows for reduced methane emissions. *Journal of Dairy Science*, **2018**, 101, 9619-9620	4	4
107	Milk production and methane emissions from dairy cows fed a low or high proportion of red clover silage and an incremental level of rapeseed expeller. *Livestock Science*, **2017**, 197, 73-81	1.7	4
106	Effects of heat treatment on protein feeds evaluated in vitro by the method of estimating utilisable crude protein at the duodenum. *Journal of Animal Physiology and Animal Nutrition*, **2017**, 101, 1259-1272	2.6	11

105	Short-term effects of soybean oil supplementation on performance, digestion, and metabolism in dairy cows fed sugarcane-based diets. *Journal of Dairy Science*, **2017**, 100, 4435-4447	4	13
104	Effects of replacement of late-harvested grass silage and barley with early-harvested silage on milk production and methane emissions. *Journal of Dairy Science*, **2017**, 100, 5228-5240	4	8
103	Between-cow variation in digestion and rumen fermentation variables associated with methane production. *Journal of Dairy Science*, **2017**, 100, 4409-4424	4	29
102	Evaluation of a gas in vitro system for predicting methane production in vivo. *Journal of Dairy Science*, **2017**, 100, 8881-8894	4	25
101	Effect of dietary supplementation with heat-treated canola meal on ruminal nutrient metabolism in lactating dairy cows. *Journal of Dairy Science*, **2017**, 100, 8004-8017	4	8
100	Effects of ruminal digesta retention time on methane emissions: a modelling approach. *Animal Production Science*, **2016**, 56, 501	1.4	23
99	Prediction of rumen fiber pool in cattle from dietary, fecal, and animal variables. *Journal of Dairy Science*, **2016**, 99, 5345-5357	4	14
98	Dietary fish oil supplements depress milk fat yield and alter milk fatty acid composition in lactating cows fed grass silage-based diets. *Journal of Dairy Science*, **2015**, 98, 5653-71	4	47
97	Nordic dairy cow model Karoline in predicting methane emissions: 2. Model evaluation. *Livestock Science*, **2015**, 178, 81-93	1.7	13
96	New recommendations for the ruminal in situ determination of indigestible neutral detergent fibre. *Animal Feed Science and Technology*, **2015**, 205, 31-41	3	23
95	Nordic dairy cow model Karoline in predicting methane emissions: 1. Model description and sensitivity analysis. *Livestock Science*, **2015**, 178, 71-80	1.7	19
94	A comparison of ruminal or reticular digesta sampling as an alternative to sampling from the omasum of lactating dairy cows. *Journal of Dairy Science*, **2015**, 98, 3274-83	4	6
93	Comparison of methods to determine methane emissions from dairy cows in farm conditions. *Journal of Dairy Science*, **2015**, 98, 3394-409	4	94
92	Evaluation of between-cow variation in milk urea and rumen ammonia nitrogen concentrations and the association with nitrogen utilization and diet digestibility in lactating cows. *Journal of Dairy Science*, **2015**, 98, 3182-96	4	41
91	Comparison of rumen fluid inoculum vs. faecal inoculum on predicted methane production using a fully automated in vitro gas production system. *Livestock Science*, **2015**, 181, 65-71	1.7	6
90	Effects of soybean meal or canola meal on milk production and methane emissions in lactating dairy cows fed grass silage-based diets. *Journal of Dairy Science*, **2015**, 98, 8093-106	4	26
89	The development of a model to predict BW gain of growing cattle fed grass silage-based diets. *Animal*, **2015**, 9, 1329-40	3.1	12
88	Evaluation of different feed intake models for dairy cows. *Journal of Dairy Science*, **2014**, 97, 2387-97	4	15

87	A meta-analytical evaluation of the regulation of voluntary intake in cattle fed tropical forage-based diets. *Journal of Animal Science*, **2014**, 92, 4632-41	0.7	33
86	Compartmental flux and in situ methods underestimate total feed nitrogen as judged by the omasal sampling method due to ignoring soluble feed nitrogen flow. *British Journal of Nutrition*, **2014**, 111, 535-46	3.6	223
85	Evaluation of protein supplementation for growing cattle fed grass silage-based diets: a meta-analysis. *Animal*, **2014**, 8, 1653-62	3.1	21
84	An evaluation of the performance and efficiency of nitrogen utilization in cattle fed tropical grass pastures with supplementation. *Livestock Science*, **2014**, 162, 141-153	1.7	123
83	Predicting feeding value of forage maize hybrids harvested at different maturities and sites. *Journal of Animal and Feed Sciences*, **2014**, 23, 269-278	1.5	5
82	Effect of forage conservation method on ruminal lipid metabolism and microbial ecology in lactating cows fed diets containing a 60:40 forage-to-concentrate ratio. *Journal of Dairy Science*, **2013**, 96, 2428-2447	4	24
81	Short communication: measurements of methane emissions from feed samples in filter bags or dispersed in the medium in an in vitro gas production system. *Journal of Dairy Science*, **2013**, 96, 4643-6	4	7
80	Effect of diet composition and incubation time on feed indigestible neutral detergent fiber concentration in dairy cows. *Journal of Dairy Science*, **2013**, 96, 1715-26	4	55
79	Effect of forage conservation method on plasma lipids, mammary lipogenesis, and milk fatty acid composition in lactating cows fed diets containing a 60:40 forage-to-concentrate ratio. *Journal of Dairy Science*, **2013**, 96, 5267-89	4	20
78	Development of equations for predicting methane emissions from ruminants. *Journal of Dairy Science*, **2013**, 96, 2476-2493	4	145
77	Effects of NaOH-treated wheat and a mixture of barley and oats on the voluntary feed intake and milk production in dairy cows. *Livestock Science*, **2013**, 154, 103-111	1.7	5
76	An overview of silage research in Finland: from ensiling innovation to advances in dairy cow feeding. *Agricultural and Food Science*, **2013**, 22, 35-56	2	35
75	Comparison of feed intake and milk production responses in continuous and change-over design dairy cow experiments. *Livestock Science*, **2012**, 143, 184-194	1.7	27
74	Development of an in vitro method for determination of methane production kinetics using a fully automated in vitro gas systemÂ modelling approach. *Animal Feed Science and Technology*, **2012**, 174, 190-200	3	28
73	Production responses of lactating dairy cows fed silage-based diets to changes in nutrient supply. *Livestock Science*, **2012**, 148, 146-158	1.7	22
72	A meta-analysis of variability in continuous-culture ruminal fermentation and digestibility data. *Journal of Dairy Science*, **2012**, 95, 5299-5307	4	40
71	Evaluation of the Nordic dairy cow model Karoline in predicting methane production. *Acta Agriculturae Scandinavica - Section A: Animal Science*, **2012**, 62, 295-299	0.6	
70	Comparison of in vitro and in situ methods in evaluation of forage digestibility in ruminants. *Journal of Animal Science*, **2012**, 90, 3162-73	0.7	25

69	Dietary fish oil supplements modify ruminal biohydrogenation, alter the flow of fatty acids at the omasum, and induce changes in the ruminal Butyrivibrio population in lactating cows. *Journal of Nutrition*, **2012**, 142, 1437-48	4.1	69
68	Development of non-linear models for predicting enteric methane production. *Acta Agriculturae Scandinavica - Section A: Animal Science*, **2012**, 62, 254-258	0.6	1
67	Dairy farm nutrient management model: 2. Evaluation of different strategies to mitigate phosphorus surplus. *Agricultural Systems*, **2011**, 104, 383-391	6.1	19
66	Dairy farm nutrient management model. 1. Model description and validation. *Agricultural Systems*, **2011**, 104, 371-382	6.1	13
65	Evaluation of canola meal as a protein supplement for dairy cows: A review and a meta-analysis. *Canadian Journal of Animal Science*, **2011**, 91, 529-543	0.9	92
64	Ruminal large and small particle kinetics in dairy cows fed red clover and grass silages harvested at two stages of growth. *Animal Feed Science and Technology*, **2010**, 155, 86-98	3	235
63	Quantifying ruminal digestion of organic matter and neutral detergent fiber using the omasal sampling technique in cattle--a meta-analysis. *Journal of Dairy Science*, **2010**, 93, 3203-15	4	43
62	Quantifying ruminal nitrogen metabolism using the omasal sampling technique in cattle--a meta-analysis. *Journal of Dairy Science*, **2010**, 93, 3216-30	4	66
61	The effect of harvesting strategy of grass silage on digestion and nutrient supply in dairy cows. *Journal of Dairy Science*, **2010**, 93, 3253-63	4	21
60	A meta-analysis of passage rate estimated by rumen evacuation with cattle and evaluation of passage rate prediction models. *Journal of Dairy Science*, **2010**, 93, 5890-901	4	60
59	Journal of Agricultural Science. *Journal of Agricultural Science*, **2010**, 148, 117-118	1	2
58	In vitro method for determining the ruminal degradation rate of rapeseed meal protein using 15N isotope labelled ammonia nitrogen. *Animal Feed Science and Technology*, **2009**, 153, 88-100	3	4
57	A meta-analysis of the effects of dietary protein concentration and degradability on milk protein yield and milk N efficiency in dairy cows. *Journal of Dairy Science*, **2009**, 92, 3222-32	4	189
56	A meta-analysis of feed digestion in dairy cows. 1. The effects of forage and concentrate factors on total diet digestibility. *Journal of Dairy Science*, **2009**, 92, 5019-30	4	70
55	A meta-analysis of feed digestion in dairy cows. 2. The effects of feeding level and diet composition on digestibility. *Journal of Dairy Science*, **2009**, 92, 5031-42	4	73
54	The effect of cutting time of grass silage in primary growth and regrowth and the interactions between silage quality and concentrate level on milk production of dairy cows. *Livestock Science*, **2008**, 116, 171-182	1.7	51
53	Utilization and partition of dietary nitrogen in dairy cows fed grass silage-based diets. *Journal of Dairy Science*, **2008**, 91, 3589-99	4	70
52	Effect of incremental levels of sunflower-seed oil in the diet on ruminal lipid metabolism in lactating cows. *British Journal of Nutrition*, **2008**, 99, 971-83	3.6	88

51	Evaluation of concentrate factors affecting silage intake of dairy cows: a development of the relative total diet intake index. *Animal*, **2008**, 2, 942-53	3.1	36
50	In vitro gas production profiles to estimate extent and effective first-order rate of neutral detergent fiber digestion in the rumen. *Journal of Animal Science*, **2008**, 86, 651-9	0.7	29
49	Evaluation of the factors affecting silage intake of dairy cows: a revision of the relative silage dry-matter intake index. *Animal*, **2007**, 1, 758-70	3.1	357
48	Cell wall digestion and passage kinetics estimated by marker and in situ methods or by rumen evacuations in cattle fed hay 2 or 18 times daily. *Animal Feed Science and Technology*, **2007**, 133, 206-227	3	27
47	Volatile fatty acid proportions and microbial protein synthesis in the rumen of cattle receiving grass silage ensiled with different rates of formic acid. *Grass and Forage Science*, **2006**, 61, 282-292	2.3	31
46	Recent developments in forage evaluation with special reference to practical applications. *Agricultural and Food Science*, **2006**, 15, 293	2	99
45	Lypsylehmien kestävyyden vaikutukset maidontuotantoon ja rehun hyväksikäyttöön. *Suomen Maataloustieteellisen Seuran Tiedote*, **2006**, 1-7	1	2
44	Effects of silage made from primary or regrowth grass and protein supplementation on dairy cow performance. *Livestock Science*, **2005**, 96, 269-278		12
43	Prediction of silage composition and organic matter digestibility from herbage composition and pepsin-cellulase solubility. *Agricultural and Food Science*, **2005**, 14, 154	2	11
42	Critical aspects of feed protein evaluation systems for ruminants. *Journal of Animal and Feed Sciences*, **2005**, 14, 145-170	1.5	11
41	Prediction of indigestible cell wall fraction of grass silage by near infrared reflectance spectroscopy. *Animal Feed Science and Technology*, **2004**, 115, 295-311	3	59
40	Evaluation of milk urea nitrogen as a diagnostic of protein feeding. *Journal of Dairy Science*, **2004**, 87, 386-98	4	199
39	Effect of dietary fish oil on biohydrogenation of fatty acids and milk fatty acid content in cows. *Animal Science*, **2003**, 77, 165-179		297
38	Determination of digesta flow entering the omasal canal of dairy cows using different marker systems. *British Journal of Nutrition*, **2003**, 90, 41-52	3.6	34
37	Comparison of heat-treated rapeseed expeller and solvent-extracted soya-bean meal as protein supplements for dairy cows given grass silage-based diets. *Animal Science*, **2003**, 77, 305-317		41
36	Relationships between silage fermentation characteristics and milk production parameters: analyses of literature data. *Livestock Science*, **2003**, 81, 57-73		38
35	Prediction of the digestibility of the primary growth of grass silages harvested at different stages of maturity from chemical composition and pepsin-cellulase solubility. *Animal Feed Science and Technology*, **2003**, 103, 97-111	3	50
34	Prediction of the digestibility of primary growth and regrowth grass silages from chemical composition, pepsin-cellulase solubility and indigestible cell wall content. *Animal Feed Science and Technology*, **2003**, 110, 61-74	3	24

33	Supplementing barley or rapeseed meal to dairy cows fed grass-red clover silage: I. Rumen degradability and microbial flow1. *Journal of Animal Science*, **2002**, 80, 2176-2187	0.7	54
32	Supplementing barley or rapeseed meal to dairy cows fed grass-red clover silage: II. Amino acid profile of microbial fractions1. *Journal of Animal Science*, **2002**, 80, 2188-2196	0.7	237
31	Digestive processes of dairy cows fed silages harvested at four stages of grass maturity. *Journal of Animal Science*, **2002**, 80, 1986-98	0.7	95
30	Prediction of the relative intake potential of grass silage by dairy cows. *Livestock Science*, **2002**, 73, 111-130		78
29	Effect of forage conservation method, concentrate level and propylene glycol on intake, feeding behaviour and milk production of dairy cows. *Animal Science*, **2002**, 74, 383-397		235
28	Effect of casein infusion in the rumen, duodenum or both sites on factors affecting forage intake and performance of dairy cows fed red clover-grass silage. *Journal of Dairy Science*, **2002**, 85, 909-18	4	20
27	Quantitation of the flow of soluble non-ammonia nitrogen entering the omasal canal of dairy cows fed grass silage based diets. *Animal Feed Science and Technology*, **2002**, 96, 203-220	3	41
26	Effect of forage conservation method, concentrate level and propylene glycol on diet digestibility, rumen fermentation, blood metabolite concentrations and nutrient utilisation of dairy cows. *Animal Feed Science and Technology*, **2002**, 97, 1-21	3	52
25	Effects of level of nitrogen fertilizer application and various nitrogenous supplements on milk production and nitrogen utilization of dairy cows given grass silage-based diets. *Animal Science*, **2001**, 73, 541-554		32
24	Comparison of the ruminal metabolism of nitrogen from 15N-labeled alfalfa preserved as hay or as silage. *Journal of Dairy Science*, **2001**, 84, 2738-50	4	30
23	Determination of reticulo-rumen and whole-stomach digestion in lactating cows by omasal canal or duodenal sampling. *British Journal of Nutrition*, **2000**, 83, 67-77	3.6	370
22	Responses to graded postruminal doses of histidine in dairy cows fed grass silage diets. *Journal of Dairy Science*, **2000**, 83, 2596-608	4	49
21	Determination of reticulo-rumen and whole-stomach digestion in lactating cows by omasal canal or duodenal sampling. *British Journal of Nutrition*, **2000**, 83, 67-77	3.6	7
20	Effects of Supplementation of a Grass Silage and Barley Diet with Urea, Rapeseed Meal and Heat-moisture-treated Rapeseed Cake on Omasal Digesta Flow and Milk Production in Lactating Dairy Cows. *Acta Agriculturae Scandinavica - Section A: Animal Science*, **1999**, 49, 179-189	0.6	8
19	Response of dairy cows fed grass silage diets to abomasal infusions of histidine alone or in combinations with methionine and lysine. *Journal of Dairy Science*, **1999**, 82, 2674-85	4	115
18	Silages harvested at different stages of grass growth v. concentrate foods as energy and protein sources in milk production. *Animal Science*, **1999**, 69, 251-263		57
17	Comparison of the protein evaluation systems of feeds for dairy cows. *Livestock Science*, **1998**, 55, 33-46		29
16	Grass maturity effects on cattle fed silage-based diets. 2. Cell wall digestibility, digestion and passage kinetics. *Animal Feed Science and Technology*, **1997**, 67, 19-35	3	45

15	Omasal sampling technique for assessing fermentative digestion in the forestomach of dairy cows. *Journal of Animal Science*, **1997**, 75, 1380-92	0.7	131
14	Effects of physical treatment of barley and rapeseed meal in dairy cows given grass silage-based diets. *Agricultural and Food Science*, **1996**, 5, 399-412	2	13
13	The effects of concentrate energy source on the milk production of dairy cows given a grass silage-based diet. *Animal Science*, **1995**, 60, 31-40		23
12	Comparison of methods, markers, sampling sites and models for estimating digesta passage kinetics in cattle fed at two levels of intake. *Animal Feed Science and Technology*, **1995**, 52, 141-158	3	73
11	The use of internal markers to predict total digestibility and duodenal flow of nutrients in cattle given six different diets. *Animal Feed Science and Technology*, **1994**, 48, 211-227	3	286
10	The substitution of barley by other carbohydrates in grass silage based diets to dairy cows. *Animal Feed Science and Technology*, **1993**, 41, 279-296	3	8
9	The effects of forage preservation method and proportion of concentrate on nitrogen digestion and rumen fermentation in cattle. *Grass and Forage Science*, **1993**, 48, 146-154	2.3	56
8	The effects of forage preservation method and proportion of concentrate on digestion of cell wall carbohydrates and rumen digesta pool size in cattle. *Grass and Forage Science*, **1993**, 48, 155-165	2.3	52
7	The effects of concentrate energy source and protein content on milk production in cows given grass silage ad libitum. *Grass and Forage Science*, **1993**, 48, 347-355	2.3	19
6	The effects of barley vs. barley fibre with or without distillers solubles on site and extent of nutrient digestion in cattle fed grass-silage-based diet. *Animal Feed Science and Technology*, **1992**, 36, 319-337	3	19
5	Sucrose supplements in cattle given grass silage-based diet. 3. Rumen pool size and digestion kinetics. *Animal Feed Science and Technology*, **1991**, 33, 275-287	3	27
4	The effects of barley, unmolassed sugar-beet pulp and molasses supplements on organic matter, nitrogen and fibre digestion in the rumen of cattle given a silage diet. *Animal Feed Science and Technology*, **1988**, 20, 259-278	3	73
3	The Nordic dairy cow model, Karoline - development of volatile fatty acid sub-model.1-14		4
2	The Nordic dairy cow model, Karoline - description.383-406		11
1	The Nordic dairy cow model, Karoline - evaluation.407-415		2