

Aaron J Cowieson

List of Publications by Citations

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125
papers

4,111
citations

34
h-index

60
g-index

125
ext. papers

4,788
ext. citations

3.1
avg, IF

5.94
L-index

#	Paper	IF	Citations
125	Consequences of calcium interactions with phytate and phytase for poultry and pigs. <i>Livestock Science</i> , 2009 , 124, 126-141	1.7	262
124	The effects of phytase and phytic acid on the loss of endogenous amino acids and minerals from broiler chickens. <i>British Poultry Science</i> , 2004 , 45, 101-8	1.9	251
123	Exogenous enzymes and their effects on intestinal microbiology. <i>Animal Feed Science and Technology</i> , 2012 , 173, 76-85	3	151
122	Carbohydrases, protease, and phytase have an additive beneficial effect in nutritionally marginal diets for broiler chicks. <i>Poultry Science</i> , 2005 , 84, 1860-7	3.9	150
121	Protein-phytate interactions in pig and poultry nutrition: a reappraisal. <i>Nutrition Research Reviews</i> , 2012 , 25, 1-17	7	149
120	Factors that affect the nutritional value of maize for broilers. <i>Animal Feed Science and Technology</i> , 2005 , 119, 293-305	3	141
119	Age-related influence of a cocktail of xylanase, amylase, and protease or phytase individually or in combination in broilers. <i>Poultry Science</i> , 2007 , 86, 77-86	3.9	139
118	Gastrointestinal functionality in animal nutrition and health: New opportunities for sustainable animal production. <i>Animal Feed Science and Technology</i> , 2017 , 234, 88-100	3	133
117	Super-dosing effects of phytase in poultry and other monogastrics. <i>World's Poultry Science Journal</i> , 2011 , 67, 225-236	3	122
116	Effect of exogenous enzymes in maize-based diets varying in nutrient density for young broilers: growth performance and digestibility of energy, minerals and amino acids. <i>British Poultry Science</i> , 2008 , 49, 37-44	1.9	117
115	The effect of phytase and carbohydrase on ileal amino acid digestibility in monogastric diets: complimentary mode of action?. <i>World's Poultry Science Journal</i> , 2009 , 65, 609-624	3	109
114	Phytic acid and phytase: implications for protein utilization by poultry. <i>Poultry Science</i> , 2006 , 85, 878-85	3.9	104
113	Supplementation of corn-soy-based diets with an Eschericia coli-derived phytase: effects on broiler chick performance and the digestibility of amino acids and metabolizability of minerals and energy. <i>Poultry Science</i> , 2006 , 85, 1389-97	3.9	87
112	Interactions between xylanase and glucanase in maize-soy-based diets for broilers. <i>British Poultry Science</i> , 2010 , 51, 246-57	1.9	80
111	Influence of dietary electrolyte balance and microbial phytase on growth performance, nutrient utilization, and excreta quality of broiler chickens. <i>Poultry Science</i> , 2008 , 87, 677-88	3.9	78
110	Strategic Selection of Exogenous Enzymes for Corn/soy-based Poultry Diets. <i>Journal of Poultry Science</i> , 2010 , 47, 1-7	1.6	77
109	Phytate and microbial phytase: implications for endogenous nitrogen losses and nutrient availability. <i>World's Poultry Science Journal</i> , 2009 , 65, 401-418	3	73

108	Basal endogenous losses of amino acids in protein nutrition research for swine and poultry. <i>Animal Feed Science and Technology</i> , 2016 , 221, 274-283	3	65
107	Effects of phytate and phytase on the performance and immune function of broilers fed nutritionally marginal diets. <i>Poultry Science</i> , 2008 , 87, 1105-11	3.9	62
106	A systematic view on the effect of phytase on ileal amino acid digestibility in broilers. <i>Animal Feed Science and Technology</i> , 2017 , 225, 182-194	3	58
105	Toward optimal value creation through the application of exogenous mono-component protease in the diets of non-ruminants. <i>Animal Feed Science and Technology</i> , 2016 , 221, 331-340	3	56
104	Energy utilization and growth performance of broilers receiving diets supplemented with enzymes containing carbohydrase or phytase activity individually or in combination. <i>British Journal of Nutrition</i> , 2008 , 99, 682-90	3.6	54
103	The effect of microbial phytase and myo-inositol on performance and blood biochemistry of broiler chickens fed wheat/corn-based diets. <i>Poultry Science</i> , 2013 , 92, 2124-34	3.9	53
102	Supplementation of diets containing pea meal with exogenous enzymes: effects on weight gain, feed conversion, nutrient digestibility and gross morphology of the gastrointestinal tract of growing broiler chicks. <i>British Poultry Science</i> , 2003 , 44, 427-37	1.9	48
101	Effects of exogenous xylanase on performance, nutrient digestibility, volatile fatty acid production and digestive tract thermal profiles of broilers fed on wheat- or maize-based diet. <i>British Poultry Science</i> , 2014 , 55, 351-9	1.9	45
100	The effect of conditioning temperature and exogenous xylanase addition on the viscosity of wheat-based diets and the performance of broiler chickens. <i>British Poultry Science</i> , 2005 , 46, 717-24	1.9	45
99	Prediction of ingredient quality and the effect of a combination of xylanase, amylase, protease and phytase in the diets of broiler chicks. 1. Growth performance and digestible nutrient intake. <i>British Poultry Science</i> , 2006 , 47, 477-89	1.9	44
98	Ileal digestibility and endogenous flow of minerals and amino acids: responses to dietary phytic acid in piglets. <i>British Journal of Nutrition</i> , 2009 , 102, 428-33	3.6	42
97	Influence of dietary phytic acid and source of microbial phytase on ileal endogenous amino acid flows in broiler chickens. <i>Poultry Science</i> , 2008 , 87, 2287-99	3.9	42
96	Protease supplementation of sorghum-based broiler diets enhances amino acid digestibility coefficients in four small intestinal sites and accelerates their rates of digestion. <i>Animal Feed Science and Technology</i> , 2013 , 183, 175-183	3	37
95	Strategies to enhance the performance of pigs and poultry on sorghum-based diets. <i>Animal Feed Science and Technology</i> , 2013 , 181, 1-14	3	37
94	Starch digestibility, energy utilization, and growth performance of broilers fed corn-soybean basal diets supplemented with enzymes. <i>Poultry Science</i> , 2015 , 94, 2472-9	3.9	36
93	Vitamin D fortification of eggs for human health. <i>Journal of the Science of Food and Agriculture</i> , 2014 , 94, 1389-96	4.3	36
92	Dietary protein selection in a free-ranging urban population of common myna birds. <i>Behavioral Ecology</i> , 2016 , 27, 219-227	2.3	34
91	Phytate-free nutrition: A new paradigm in monogastric animal production. <i>Animal Feed Science and Technology</i> , 2016 , 222, 180-189	3	33

90	Contribution of exogenous enzymes to potentiate the removal of antibiotic growth promoters in poultry production. <i>Animal Feed Science and Technology</i> , 2019 , 250, 81-92	3	31
89	Measurement of true ileal digestibility and total tract retention of phosphorus in corn and canola meal for broiler chickens. <i>Poultry Science</i> , 2014 , 93, 412-9	3.9	31
88	Dual effects of sodium phytate on the structural stability and solubility of proteins. <i>Journal of Agricultural and Food Chemistry</i> , 2013 , 61, 290-5	5.7	30
87	Broiler responses to supplementation of phytase and admixture of carbohydrases and protease in maize-soyabean meal diets with or without maize Distillers' Dried Grain with Solubles. <i>British Poultry Science</i> , 2010 , 51, 434-43	1.9	30
86	Effects of dietary enzymes on performance and intestinal goblet cell number of broilers exposed to a live coccidia oocyst vaccine. <i>Poultry Science</i> , 2011 , 90, 91-8	3.9	28
85	The effect of nutritional status and muscle fiber type on myogenic satellite cell fate and apoptosis. <i>Poultry Science</i> , 2014 , 93, 163-73	3.9	27
84	Measurement of true ileal phosphorus digestibility in maize and soybean meal for broiler chickens: Comparison of two methodologies. <i>Animal Feed Science and Technology</i> , 2015 , 206, 76-86	3	26
83	The effect of nutritional status on myogenic satellite cell proliferation and differentiation. <i>Poultry Science</i> , 2013 , 92, 2163-73	3.9	25
82	The effect of nutritional status on myogenic gene expression of satellite cells derived from different muscle types. <i>Poultry Science</i> , 2014 , 93, 2278-88	3.9	24
81	Effects of corn source on the relationship between in vitro assays and ileal nutrient digestibility. <i>Poultry Science</i> , 2012 , 91, 1908-14	3.9	24
80	Sensitivity of broiler starters to three doses of an enzyme cocktail in maize-based diets. <i>British Poultry Science</i> , 2008 , 49, 340-6	1.9	24
79	Effect of calcium source and particle size on the true ileal digestibility and total tract retention of calcium in broiler chickens. <i>Animal Feed Science and Technology</i> , 2017 , 224, 39-45	3	23
78	Thymidine phosphorylase and dihydropyrimidine dehydrogenase protein expression in colorectal cancer. <i>International Journal of Cancer</i> , 2001 , 94, 297-301	7.5	23
77	Measurement of true ileal calcium digestibility in meat and bone meal for broiler chickens using the direct method. <i>Poultry Science</i> , 2016 , 95, 70-6	3.9	22
76	Exploiting calcium-specific appetite in poultry nutrition. <i>World's Poultry Science Journal</i> , 2011 , 67, 587-598		22
75	Influence of enzyme supplementation of maize-soyabean meal diets on carcass composition, whole-body nutrient accretion and total tract nutrient retention of broilers. <i>British Poultry Science</i> , 2008 , 49, 436-45	1.9	22
74	Effect of dietary nonphytate phosphorus and calcium concentration on calcium appetite of broiler chicks. <i>Poultry Science</i> , 2014 , 93, 1695-703	3.9	21
73	Influence of age and duration of feeding low-phosphorus diet on phytase efficacy in broiler chickens during the starter phase. <i>Poultry Science</i> , 2019 , 98, 2588-2597	3.9	20

72	Influence of white- and red-sorghum varieties and hydrothermal component of steam-pelleting on digestibility coefficients of amino acids and kinetics of amino acids, nitrogen and starch digestion in diets for broiler chickens. <i>Animal Feed Science and Technology</i> , 2013 , 186, 53-63	3	20
71	A systematic view on the effect of microbial phytase on ileal amino acid digestibility in pigs. <i>Animal Feed Science and Technology</i> , 2017 , 231, 138-149	3	20
70	Influence of Dietary Calcium Concentration on the Digestion of Nutrients along the Intestinal Tract of Broiler Chickens. <i>Journal of Poultry Science</i> , 2014 , 51, 392-401	1.6	20
69	Functional patterns of exogenous enzymes in different feed ingredients. <i>World's Poultry Science Journal</i> , 2013 , 69, 759-774	3	20
68	Prediction of ingredient quality and the effect of a combination of xylanase, amylase, protease and phytase in the diets of broiler chicks. 2. Energy and nutrient utilisation. <i>British Poultry Science</i> , 2006 , 47, 490-500	1.9	20
67	Apparent ileal digestibility of calcium in limestone for broiler chickens. <i>Animal Feed Science and Technology</i> , 2016 , 213, 142-147	3	19
66	Effects of exogenous xylanase on performance, nutrient digestibility and caecal thermal profiles of broilers given wheat-based diets. <i>British Poultry Science</i> , 2013 , 54, 346-54	1.9	19
65	Exploratory transcriptomic analysis in muscle tissue of broilers fed a phytase-supplemented diet. <i>Journal of Animal Physiology and Animal Nutrition</i> , 2017 , 101, 563-575	2.6	18
64	Measurement of true ileal phosphorus digestibility in meat and bone meal for broiler chickens. <i>Poultry Science</i> , 2015 , 94, 1611-8	3.9	18
63	An isothermal titration calorimetry study of phytate binding to lysozyme. <i>Journal of Thermal Analysis and Calorimetry</i> , 2017 , 127, 1201-1208	4.1	17
62	Measurement of true ileal calcium digestibility in meat and bone meal for broiler chickens. <i>Animal Feed Science and Technology</i> , 2015 , 206, 100-107	3	17
61	Interaction between xylanase and phytase on the digestibility of corn and a corn/soy diet for broiler chickens. <i>Poultry Science</i> , 2017 , 96, 1204-1211	3.9	17
60	Nutritional geometry of calcium and phosphorus nutrition in broiler chicks. The effect of different dietary calcium and phosphorus concentrations and ratios on nutrient digestibility. <i>Animal</i> , 2014 , 8, 1080-8	3.1	16
59	Identifying variation in the nutritional value of corn based on chemical kernel characteristics. <i>World's Poultry Science Journal</i> , 2013 , 69, 299-312	3	16
58	Influence of chick hatch time and access to feed on broiler muscle development. <i>Poultry Science</i> , 2016 , 95, 1433-48	3.9	15
57	Effects of energy, α -amylase, and α -xylanase on growth performance of broiler chickens. <i>Animal Feed Science and Technology</i> , 2017 , 225, 205-212	3	14
56	Measurement of the true ileal calcium digestibility of some feed ingredients for broiler chickens. <i>Animal Feed Science and Technology</i> , 2018 , 237, 118-128	3	14
55	Extra-phosphoric effects of super dosing phytase on growth performance of pigs is not solely due to release of myo-inositol. <i>Journal of Animal Science</i> , 2019 , 97, 3898-3906	0.7	13

54	Time-series responses of swine plasma metabolites to ingestion of diets containing myo-inositol or phytase. <i>British Journal of Nutrition</i> , 2017 , 118, 897-905	3.6	13
53	The effect of a mono-component exogenous protease and graded concentrations of ascorbic acid on the performance, nutrient digestibility and intestinal architecture of broiler chickens. <i>Animal Feed Science and Technology</i> , 2018 , 235, 128-137	3	13
52	The impact of age and feeding length on phytase efficacy during the starter phase of broiler chickens. <i>Poultry Science</i> , 2019 , 98, 6742-6750	3.9	12
51	Graded inclusions of sodium metabisulphite in sorghum-based diets: I. Reduction of disulphide cross-linkages in vitro and enhancement of energy utilisation and feed conversion efficiency in broiler chickens. <i>Animal Feed Science and Technology</i> , 2014 , 190, 59-67	3	12
50	An assessment of the influence of macronutrients on growth performance and nutrient utilisation in broiler chickens by nutritional geometry. <i>British Journal of Nutrition</i> , 2016 , 116, 2129-2138	3.6	12
49	Influence of hatch time and access to feed on intramuscular adipose tissue deposition in broilers. <i>Poultry Science</i> , 2016 , 95, 1449-56	3.9	11
48	Energy and nutrient utilization of broiler chickens fed corn-soybean meal and corn-based diets supplemented with xylanase. <i>Poultry Science</i> , 2016 , 95, 1881-7	3.9	11
47	Preliminary assessment of including a reducing agent (sodium metabisulphite) in all-sorghum diets for broiler chickens. <i>Animal Feed Science and Technology</i> , 2013 , 186, 81-90	3	11
46	The concentration of strontium and other minerals in animal feed ingredients. <i>Journal of Applied Animal Nutrition</i> , 2013 , 2,	0.7	11
45	Increased dietary sodium chloride concentrations reduce endogenous amino acid flow and influence the physiological response to the ingestion of phytic acid by broiler chickens. <i>British Poultry Science</i> , 2011 , 52, 613-24	1.9	11
44	Using the precision-feeding bioassay to determine the efficacy of exogenous enzymes—a new perspective. <i>Animal Feed Science and Technology</i> , 2006 , 129, 149-158	3	11
43	Phosphorus equivalency of a <i>Citrobacter braakii</i> phytase in broilers. <i>Journal of Applied Poultry Research</i> , 2015 , 24, 335-342	2	10
42	Graded inclusions of sodium metabisulphite in sorghum-based diets: II. Modification of starch pasting properties in vitro and beneficial impacts on starch digestion dynamics in broiler chickens. <i>Animal Feed Science and Technology</i> , 2014 , 190, 68-78	3	9
41	Growth performance, nutrient utilisation and carcass composition respond to dietary protein concentrations in broiler chickens but responses are modified by dietary lipid levels. <i>British Journal of Nutrition</i> , 2017 , 118, 250-262	3.6	9
40	Starch digestibility and energy utilisation of maize- and wheat-based diets is superior to sorghum-based diets in broiler chickens offered diets supplemented with phytase and xylanase. <i>Animal Feed Science and Technology</i> , 2020 , 264, 114475	3	8
39	Exogenous Microbial Amylase in the Diets of Poultry: What do We Know?. <i>Journal of Applied Poultry Research</i> , 2019 , 28, 556-565	2	8
38	Influence of conditioning temperature on the postpellet recovery and efficacy of 2 microbial phytases for broiler chicks. <i>Journal of Applied Poultry Research</i> , 2013 , 22, 308-313	2	8
37	The effect of phytase and phytic acid on endogenous losses from broiler chickens. <i>British Poultry Science</i> , 2003 , 44, 23-24	1.9	8

36	Matrix values for exogenous enzymes and their application in the real world. <i>Journal of Applied Poultry Research</i> , 2020 , 29, 15-22	2	8
35	Influence of conditioning temperatures on amino acid digestibility coefficients at four small intestinal sites and their dynamics with starch and nitrogen digestion in sorghum-based broiler diets. <i>Animal Feed Science and Technology</i> , 2013 , 185, 85-93	3	7
34	Growth performance and amino acid digestibility responses of broiler chickens fed diets containing purified soybean trypsin inhibitor and supplemented with a monocomponent protease. <i>Poultry Science</i> , 2020 , 99, 5007-5017	3.9	7
33	Possible role of available phosphorus in potentiating the use of low-protein diets for broiler chicken production. <i>Poultry Science</i> , 2020 , 99, 6954-6963	3.9	6
32	Interactive effects of vitamin D3 and strontium on performance, nutrient retention and bone mineral composition in laying hens. <i>Journal of the Science of Food and Agriculture</i> , 2015 , 95, 1080-7	4.3	6
31	Effect of broiler genetics, age, and gender on performance and blood chemistry. <i>Heliyon</i> , 2020 , 6, e044096	4.6	6
30	Growth phase and dietary α -amylase supplementation effects on nutrient digestibility and feedback enzyme secretion in broiler chickens. <i>Poultry Science</i> , 2020 , 99, 6867-6876	3.9	5
29	Influence of Steam-Pelleting Temperatures and Grain Variety of Finely-Ground, Sorghum-Based Broiler Diets on Small Intestinal Starch and Nitrogen Digestion Dynamics in Broiler Chickens. <i>International Journal of Poultry Science</i> , 2014 , 13, 308-315	0.3	5
28	The influence of meat-and-bone meal and exogenous phytase on growth performance, bone mineralisation and digestibility coefficients of protein (N), amino acids and starch in broiler chickens. <i>Animal Nutrition</i> , 2016 , 2, 86-92	4.8	5
27	Efficacy of a Mono-Component Exogenous Protease in the Presence of a High Concentration of Exogenous Phytase on Growth Performance of Broiler Chickens. <i>Journal of Applied Poultry Research</i> , 2019 , 28, 638-646	2	4
26	Assessment of postcrumble addition of limestone and calcium-specific appetite in broilers during the starter phase. <i>Poultry Science</i> , 2014 , 93, 2578-91	3.9	4
25	Corn drying temperature, particle size, and amylase supplementation influence growth performance, digestive tract development, and nutrient utilization of broilers. <i>Poultry Science</i> , 2020 , 99, 5681-5696	3.9	4
24	Latent Anti-nutrients and Unintentional Breeding Consequences in Australian Varieties. <i>Frontiers in Plant Science</i> , 2021 , 12, 625260	6.2	4
23	Trends in feed evaluation for poultry with emphasis on in vitro techniques. <i>Animal Nutrition</i> , 2021 , 7, 268-281	4.8	4
22	Toward standardized amino acid matrices for exogenous phytase and protease in corn-soybean meal-based diets for broilers. <i>Poultry Science</i> , 2020 , 99, 3196-3206	3.9	3
21	Effect of coccidial challenge and vaccination on the performance, veterinary postmortem scores, and blood biochemistry of broiler chickens. <i>Poultry Science</i> , 2020 , 99, 3831-3840	3.9	3
20	The influence of the selection of macronutrients coupled with dietary energy density on the performance of broiler chickens. <i>PLoS ONE</i> , 2017 , 12, e0185480	3.7	3
19	Exogenous α -amylase improves the digestibility of corn and corn-soybean meal diets for broilers. <i>Poultry Science</i> , 2021 , 100, 101019	3.9	3

18	The influence of feed ingredients on CP and starch disappearance rate in complex diets for broiler chickens. <i>Poultry Science</i> , 2021 , 100, 101068	3.9	3
17	Contribution of purified soybean trypsin inhibitor and exogenous protease to endogenous amino acid losses and mineral digestibility. <i>Poultry Science</i> , 2021 , 100, 101486	3.9	3
16	Interactive effect of vitamin D and strontium on performance and bone composition in broiler chickens. <i>Animal Feed Science and Technology</i> , 2015 , 205, 107-115	3	2
15	Contribution of individual broilers to variation in amino acid digestibility in soybean meal and the efficacy of an exogenous monocomponent protease. <i>Poultry Science</i> , 2020 , 99, 1075-1083	3.9	2
14	Balanced nutrient density for broiler chickens using a range of digestible lysine-to-metabolizable energy ratios and nutrient density: Growth performance, nutrient utilisation and apparent metabolizable energy. <i>Animal Nutrition</i> , 2021 , 7, 430-439	4.8	2
13	Towards a digestible calcium system for broiler chicken nutrition: A review and recommendations for the future. <i>Animal Feed Science and Technology</i> , 2021 , 276, 114930	3	2
12	Monitoring Phytate Hydrolysis Using Serial Blood Sampling and Feather Myo-Inositol Levels in Broilers. <i>Frontiers in Physiology</i> , 2020 , 11, 736	4.6	1
11	Phytase catalysis of dephosphorylation studied using isothermal titration calorimetry and electrospray ionization time-of-flight mass spectroscopy. <i>Analytical Biochemistry</i> , 2020 , 606, 113859	3.1	1
10	Research Note: The effect of sequential displacement of dietary dextrose with myo-inositol on broiler chicken growth performance, bone characteristics, ileal nutrient digestibility, and total tract nutrient retention. <i>Poultry Science</i> , 2021 , 100, 993-997	3.9	1
9	Influence of barley inclusion method and protease supplementation on growth performance, nutrient utilisation, and gastrointestinal tract development in broiler starters.. <i>Animal Nutrition</i> , 2022 , 8, 61-70	4.8	1
8	Effects of protease supplementation and diet type on jejunal and ileal digestibility and total tract metabolisability of nitrogen, starch, and energy in broilers. <i>British Poultry Science</i> , 2021 , 1-9	1.9	1
7	Comparative effects of two phytases on growth performance, bone mineralization, nutrient digestibility and phytate-P hydrolysis of broilers. <i>Journal of Applied Poultry Research</i> , 2022 , 31, 100247	2	1
6	Exogenous α -amylase supplementation reduces the variability of ileal digestible energy in broiler chickens fed complete diets with maize batches of variable protein solubility. <i>Animal Feed Science and Technology</i> , 2020 , 268, 114610	3	0
5	Research Note: Delay in sampling influences the profile of phytate in gizzard digesta and ileal digestibility of phosphorus in broilers. <i>Poultry Science</i> , 2020 , 99, 5065-5069	3.9	0
4	Mathematical prediction of ileal energy and protein digestibility in broilers using multivariate data analysis. <i>Poultry Science</i> , 2021 , 100, 101106	3.9	0
3	Constraints on the modelling of calcium and phosphorus growth of broilers: a systematic review. <i>World's Poultry Science Journal</i> , 1-21	3	0
2	The geometric framework: An in vivo approach. <i>Journal of Applied Poultry Research</i> , 2014 , 23, 295-300	2	
1	Protease supplementation in maize-based diet influenced net energy and nutrient digestibility in broilers. <i>Journal of Applied Animal Nutrition</i> , 2021 , 9, 85-91	0.7	

