Aaron J Cowieson

List of Publications by Year
in descending order

125 papers	5,544 citations	94433 37 h-index	88630 70 g-index
125 all docs	125 docs citations	125 times ranked	2656 citing authors

#	Article	IF	Citations
1	Consequences of calcium interactions with phytate and phytase for poultry and pigs. Livestock Science, 2009, 124, 126-141.	1.6	340
2	The effects of phytase and phytic acid on the loss of endogenous amino acids and minerals from broiler chickens. British Poultry Science, 2004, 45, 101-108.	1.7	291
3	Gastrointestinal functionality in animal nutrition and health: New opportunities for sustainable animal production. Animal Feed Science and Technology, 2017, 234, 88-100.	2.2	232
4	Exogenous enzymes and their effects on intestinal microbiology. Animal Feed Science and Technology, 2012, 173, 76-85.	2.2	202
5	Carbohydrases, protease, and phytase have an additive beneficial effect in nutritionally marginal diets for broiler chicks. Poultry Science, 2005, 84, 1860-1867.	3.4	190
6	Factors that affect the nutritional value of maize for broilers. Animal Feed Science and Technology, 2005, 119, 293-305.	2.2	185
7	Proteinâ€“phytate interactions in pig and poultry nutrition: a reappraisal. Nutrition Research Reviews, 2012, 25, 1-17.	4.1	185
8	Age-Related Influence of a Cocktail of Xylanase, Amylase, and Protease or Phytase Individually or in Combination in Broilers. Poultry Science, 2007, 86, 77-86.	3.4	175
9	Super-dosing effects of phytase in poultry and other monogastrics. World's Poultry Science Journal, 2011, 67, 225-236.	3.0	157
10	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. British Poultry Science, 2008, 49, 37-44.	1.7	153
11	Phytic Acid and Phytase: Implications for Protein Utilization by Poultry. Poultry Science, 2006, 85, 878-885.	3.4	130
12	The effect of phytase and carbohydrase on ileal amino acid digestibility in monogastric diets: complimentary mode of action?. World's Poultry Science Journal, 2009, 65, 609-624.	3.0	128
13	Interactions between xylanase and glucanase in maize-soy-based diets for broilers. British Poultry Science, 2010, 51, 246-257.	1.7	114
14	Supplementation of Cornâ€“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. Poultry Science, 2006, 85, 1389-1397.	3.4	108
15	Strategic Selection of Exogenous Enzymes for Corn/soy-based Poultry Diets. Journal of Poultry Science, 2010, 47, 1-7.	1.6	100
16	Influence of Dietary Electrolyte Balance and Microbial Phytase on Growth Performance, Nutrient Utilization, and Excreta Quality of Broiler Chickens. Poultry Science, 2008, 87, 677-688.	3.4	98
17	Basal endogenous losses of amino acids in protein nutrition research for swine and poultry. Animal Feed Science and Technology, 2016, 221, 274-283.	2.2	94
18	Phytate and microbial phytase: implications for endogenous nitrogen losses and nutrient availability. World's Poultry Science Journal, 2009, 65, 401-418.	3.0	91

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19	A systematic view on the effect of phytase on ileal amino acid digestibility in broilers. Animal Feed Science and Technology, 2017, 225, 182-194.	2.2	88
20	Toward optimal value creation through the application of exogenous mono-component protease in the diets of non-ruminants. Animal Feed Science and Technology, 2016, 221, 331-340.	2.2	79
21	Effects of Phytate and Phytase on the Performance and Immune Function of Broilers Fed Nutritionally Marginal Diets. Poultry Science, 2008, 87, 1105-1111.	3.4	75
22	The effect of microbial phytase and myo-inositol on performance and blood biochemistry of broiler chickens fed wheat/corn-based diets. Poultry Science, 2013, 92, 2124-2134.	3.4	71
23	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. British Poultry Science, 2003, 44, 427-437.	1.7	63
24	Energy utilization and growth performance of broilers receiving diets supplemented with enzymes containing carbohydrase or phytase activity individually or in combination. British Journal of Nutrition, 2008, 99, 682-690.	2.3	63
25	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. British Poultry Science, 2006, 47, 477-489.	1.7	58
26	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. British Poultry Science, 2014, 55, 351-359.	1.7	58
27	The effect of conditioning temperature and exogenous xylanase addition on the viscosity of wheat-based diets and the performance of broiler chickens. British Poultry Science, 2005, 46, 717-724.	1.7	55
28	Influence of Dietary Phytic Acid and Source of Microbial Phytase on Ileal Endogenous Amino Acid Flows in Broiler Chickens. Poultry Science, 2008, 87, 2287-2299.	3.4	54
29	Ileal digestibility and endogenous flow of minerals and amino acids: responses to dietary phytic acid in piglets. British Journal of Nutrition, 2009, 102, 428-433.	2.3	54
30	Strategies to enhance the performance of pigs and poultry on sorghum-based diets. Animal Feed Science and Technology, 2013, 181, 1-14.	2.2	51
31	Phytate-free nutrition: A new paradigm in monogastric animal production. Animal Feed Science and Technology, 2016, 222, 180-189.	2.2	51
32	Protease supplementation of sorghum-based broiler diets enhances amino acid digestibility coefficients in four small intestinal sites and accelerates their rates of digestion. Animal Feed Science and Technology, 2013, 183, 175-183.	2.2	50
33	Contribution of exogenous enzymes to potentiate the removal of antibiotic growth promoters in poultry production. Animal Feed Science and Technology, 2019, 250, 81-92.	2.2	50
34	Vitamin D fortification of eggs for human health. Journal of the Science of Food and Agriculture, 2014, 94, 1389-1396.	3.5	49
35	Measurement of true ileal digestibility and total tract retention of phosphorus in corn and canola meal for broiler chickens. Poultry Science, 2014, 93, 412-419.	3.4	44
36	Starch digestibility, energy utilization, and growth performance of broilers fed corn-soybean basal diets supplemented with enzymes. Poultry Science, 2015, 94, 2472-2479.	3.4	41

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37	Dietary protein selection in a free-ranging urban population of common myna birds. Behavioral Ecology, 2016, 27, 219-227.	2.2	40
38	Broiler responses to supplementation of phytase and admixture of carbohydrases and protease in maizeâ€"soyabean meal diets with or without maize Distillersâ€™ Dried Grain with Solubles. British Poultry Science, 2010, 51, 434-443.	1.7	39
39	Measurement of true ileal phosphorus digestibility in maize and soybean meal for broiler chickens: Comparison of two methodologies. Animal Feed Science and Technology, 2015, 206, 76-86.	2.2	38
40	Dual Effects of Sodium Phytate on the Structural Stability and Solubility of Proteins. Journal of Agricultural and Food Chemistry, 2013, 61, 290-295.	5.2	37
41	A systematic view on the effect of microbial phytase on ileal amino acid digestibility in pigs. Animal Feed Science and Technology, 2017, 231, 138-149.	2.2	37
42	Effects of dietary enzymes on performance and intestinal goblet cell number of broilers exposed to a live coccidia oocyst vaccine. Poultry Science, 2011, 90, 91-98.	3.4	35
43	Influence of age and duration of feeding low-phosphorus diet on phytase efficacy in broiler chickens during the starter phase. Poultry Science, 2019, 98, 2588-2597.	3.4	35
44	Effects of corn source on the relationship between in vitro assays and ileal nutrient digestibility. Poultry Science, 2012, 91, 1908-1914.	3.4	33
45	Effect of calcium source and particle size on the true ileal digestibility and total tract retention of calcium in broiler chickens. Animal Feed Science and Technology, 2017, 224, 39-45.	2.2	33
46	The effect of nutritional status and muscle fiber type on myogenic satellite cell fate and apoptosis. Poultry Science, 2014, 93, 163-173.	3.4	31
47	Effect of dietary nonphytate phosphorus and calcium concentration on calcium appetite of broiler chicks. Poultry Science, 2014, 93, 1695-1703.	3.4	29
48	Extra-phosphoric effects of super dosing phytase on growth performance of pigs is not solely due to release of myo-inositol. Journal of Animal Science, 2019, 97, 3898-3906.	0.5	29
49	Sensitivity of broiler starters to three doses of an enzyme cocktail in maize-based diets. British Poultry Science, 2008, 49, 340-346.	1.7	28
50	Functional patterns of exogenous enzymes in different feed ingredients. World's Poultry Science Journal, 2013, 69, 759-774.	3.0	28
51	Measurement of true ileal calcium digestibility in meat and bone meal for broiler chickens using the direct method. Poultry Science, 2016, 95, 70-76.	3.4	28
52	The impact of age and feeding length on phytase efficacy during the starter phase of broiler chickens. Poultry Science, 2019, 98, 6742-6750.	3.4	28
53	The effect of nutritional status on myogenic satellite cell proliferation and differentiation. Poultry Science, 2013, 92, 2163-2173.	3.4	27
54	Influence of Dietary Calcium Concentration on the Digestion of Nutrients along the Intestinal Tract of Broiler Chickens. Journal of Poultry Science, 2014, 51, 392-401.	1.6	27

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55	The effect of nutritional status on myogenic gene expression of satellite cells derived from different muscle types. Poultry Science, 2014, 93, 2278-2288.	3.4	27
56	Exploratory transcriptomic analysis in muscle tissue of broilers fed a phytaseâ€supplemented diet. Journal of Animal Physiology and Animal Nutrition, 2017, 101, 563-575.	2.2	27
57	Influence of enzyme supplementation of maizeâ€“soyabean meal diets on carcase composition, whole-body nutrient accretion and total tract nutrient retention of broilers. British Poultry Science, 2008, 49, 436-445.	1.7	26
58	An isothermal titration calorimetry study of phytate binding to lysozyme. Journal of Thermal Analysis and Calorimetry, 2017, 127, 1201-1208.	3.6	26
59	Exploiting calcium-specific appetite in poultry nutrition. World's Poultry Science Journal, 2011, 67, 587-598.	3.0	25
60	Apparent ileal digestibility of calcium in limestone for broiler chickens. Animal Feed Science and Technology, 2016, 213, 142-147.	2.2	25
61	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. British Poultry Science, 2006, 47, 490-500.	1.7	24
62	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. Animal Feed Science and Technology, 2013, 186, 53-63.	2.2	24
63	Effects of exogenous xylanase on performance, nutrient digestibility and caecal thermal profiles of broilers given wheat-based diets. British Poultry Science, 2013, 54, 1-9.	1.7	24
64	Influence of chick hatch time and access to feed on broiler muscle development. Poultry Science, 2016, 95, 1433-1448.	3.4	24
65	Measurement of the true ileal calcium digestibility of some feed ingredients for broiler chickens. Animal Feed Science and Technology, 2018, 237, 118-128.	2.2	24
66	Thymidine phosphorylase and dihydropyrimidine dehydrogenase protein expression in colorectal cancer. International Journal of Cancer, 2001, 94, 297-301.	5.1	23
67	Measurement of true ileal phosphorus digestibility in meat and bone meal for broiler chickens. Poultry Science, 2015, 94, 1611-1618.	3.4	23
68	Measurement of true ileal calcium digestibility in meat and bone meal for broiler chickens. Animal Feed Science and Technology, 2015, 206, 100-107.	2.2	22
69	Identifying variation in the nutritional value of corn based on chemical kernel characteristics. World's Poultry Science Journal, 2013, 69, 299-312.	3.0	21
70	Time-series responses of swine plasma metabolites to ingestion of diets containing<i>myo-</i>inositol or phytase. British Journal of Nutrition, 2017, 118, 897-905.	2.3	21
71	Effects of energy, Î±-amylase, and Î²-xylanase on growth performance of broiler chickens. Animal Feed Science and Technology, 2017, 225, 205-212.	2.2	20
72	Growth performance and amino acid digestibility responses of broiler chickens fed diets containing purified soybean trypsin inhibitor and supplemented with a monocomponent protease. Poultry Science, 2020, 99, 5007-5017.	3.4	20

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73	Phosphorus equivalency of a Citrobracter braakii phytase in broilers. Journal of Applied Poultry Research, 2015, 24, 335-342.	1.2	19
74	Energy and nutrient utilization of broiler chickens fed corn-soybean meal and corn-based diets supplemented with xylanase. Poultry Science, 2016, 95, 1881-1887.	3.4	19
75	Interaction between xylanase and phytase on the digestibility of corn and a corn/soy diet for broiler chickens. Poultry Science, 2017, 96, 1204-1211.	3.4	19
76	Nutritional geometry of calcium and phosphorus nutrition in broiler chicks. The effect of different dietary calcium and phosphorus concentrations and ratios on nutrient digestibility. Animal, 2014, 8, 1080-1088.	3.3	18
77	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. Animal Feed Science and Technology, 2018, 235, 128-137.	2.2	18
78	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. Animal Feed Science and Technology, 2020, 264, 114475.	2.2	18
79	Exogenous Microbial Amylase in the Diets of Poultry: What do We Know?. Journal of Applied Poultry Research, 2019, 28, 556-565.	1.2	17
80	Trends in feed evaluation for poultry with emphasis on inÂvitro techniques. Animal Nutrition, 2021, 7, 268-281.	5.1	17
81	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. Animal Feed Science and Technology, 2014, 190, 59-67.	2.2	16
82	Matrix values for exogenous enzymes and their application in the real world. Journal of Applied Poultry Research, 2020, 29, 15-22.	1.2	16
83	Effect of broiler genetics, age, and gender on performance and blood chemistry. Heliyon, 2020, 6, e04400.	3.2	16
84	Corn drying temperature, particle size, and amylase supplementation influence growth performance, digestive tract development, and nutrient utilization of broilers. Poultry Science, 2020, 99, 5681-5696.	3.4	15
85	Possible role of available phosphorus in potentiating the use of low-protein diets for broiler chicken production. Poultry Science, 2020, 99, 6954-6963.	3.4	15
86	The concentration of strontium and other minerals in animal feed ingredients. Journal of Applied Animal Nutrition, 2013, 2, .	0.9	14
87	An assessment of the influence of macronutrients on growth performance and nutrient utilisation in broiler chickens by nutritional geometry. British Journal of Nutrition, 2016, 116, 2129-2138.	2.3	14
88	Influence of hatch time and access to feed on intramuscular adipose tissue deposition in broilers. Poultry Science, 2016, 95, 1449-1456.	3.4	14
89	Using the precision-feeding bioassay to determine the efficacy of exogenous enzymesâ€"A new perspective. Animal Feed Science and Technology, 2006, 129, 149-158.	2.2	13
90	Increased dietary sodium chloride concentrations reduce endogenous amino acid flow and influence the physiological response to the ingestion of phytic acid by broiler chickens. British Poultry Science, 2011, 52, 613-624.	1.7	12

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91	Preliminary assessment of including a reducing agent (sodium metabisulphite) in â€˜all-sorghumâ€™ diets for broiler chickens. Animal Feed Science and Technology, 2013, 186, 81-90.	2.2	12
92	Growth performance, nutrient utilisation and carcass composition respond to dietary protein concentrations in broiler chickens but responses are modified by dietary lipid levels. British Journal of Nutrition, 2017, 118, 250-262.	2.3	12
93	Towards a digestible calcium system for broiler chicken nutrition: A review and recommendations for the future. Animal Feed Science and Technology, 2021, 276, 114930.	2.2	12
94	The effect of phytase and phytic acid on endogenous losses from broiler chickens. British Poultry Science, 2003, 44, 23-24.	1.7	11
95	Interactive effects of vitamin D₃ and strontium on performance, nutrient retention and bone mineral composition in laying hens. Journal of the Science of Food and Agriculture, 2015, 95, 1080-1087.	3.5	11
96	Influence of conditioning temperature on the postpellet recovery and efficacy of 2 microbial phytases for broiler chicks. Journal of Applied Poultry Research, 2013, 22, 308-313.	1.2	10
97	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. Animal Feed Science and Technology, 2014, 190, 68-78.	2.2	10
98	Growth phase and dietary Î±-amylase supplementation effects on nutrient digestibility and feedback enzyme secretion in broiler chickens. Poultry Science, 2020, 99, 6867-6876.	3.4	10
99	Comparative effects of two phytases on growth performance, bone mineralization, nutrient digestibility and phytate-P hydrolysis of broilers. Journal of Applied Poultry Research, 2022, 31, 100247.	1.2	9
100	Contribution of individual broilers to variation in amino acid digestibility in soybean meal and the efficacy of an exogenous monocomponent protease. Poultry Science, 2020, 99, 1075-1083.	3.4	8
101	Effect of coccidial challenge and vaccination on the performance, veterinary postmortem scores, and blood biochemistry of broiler chickens. Poultry Science, 2020, 99, 3831-3840.	3.4	8
102	Exogenous Î±-amylase improves the digestibility of corn and cornâ€"soybean meal diets for broilers. Poultry Science, 2021, 100, 101019.	3.4	8
103	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. Animal Nutrition, 2021, 7, 430-439.	5.1	8
104	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. Animal Feed Science and Technology, 2013, 185, 85-93.	2.2	7
105	Toward standardized amino acid matrices for exogenous phytase and protease in cornâ€"soybean mealâ€"based diets for broilers. Poultry Science, 2020, 99, 3196-3206.	3.4	7
106	Latent Anti-nutrients and Unintentional Breeding Consequences in Australian Sorghum bicolor Varieties. Frontiers in Plant Science, 2021, 12, 625260.	3.6	7
107	Contribution of purified soybean trypsin inhibitor and exogenous protease to endogenous amino acid losses and mineral digestibility. Poultry Science, 2021, 100, 101486.	3.4	7
108	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. Animal Nutrition, 2016, 2, 86-92.	5.1	6

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109	Efficacy of a Mono-Component Exogenous Protease in the Presence of a High Concentration of Exogenous Phytase on Growth Performance of Broiler Chickens. Journal of Applied Poultry Research, 2019, 28, 638-646.	1.2	6
110	Influence of barley inclusion method and protease supplementation on growth performance, nutrient utilisation, and gastrointestinal tract development in broiler starters. Animal Nutrition, 2022, 8, 61-70.	5.1	6
111	Interactive effect of vitamin D and strontium on performance and bone composition in broiler chickens. Animal Feed Science and Technology, 2015, 205, 107-115.	2.2	5
112	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. Poultry Science, 2021, 100, 993-997.	3.4	5
113	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. International Journal of Poultry Science, 2014, 13, 308-315.	0.1	5
114	Assessment of postcrumble addition of limestone and calcium-specific appetite in broilers during the starter phase. Poultry Science, 2014, 93, 2578-2591.	3.4	4
115	The influence of the selection of macronutrients coupled with dietary energy density on the performance of broiler chickens. PLoS ONE, 2017, 12, e0185480.	2.5	4
116	Monitoring Phytate Hydrolysis Using Serial Blood Sampling and Feather Myo-Inositol Levels in Broilers. Frontiers in Physiology, 2020, 11, 736.	2.8	4
117	Exogenous Î±-amylase supplementation reduces the variability of ileal digestible energy in broiler chickens fed complete diets with maize batches of variable protein solubility. Animal Feed Science and Technology, 2020, 268, 114610.	2.2	4
118	The influence of feed ingredients on CP and starch disappearance rate in complex diets for broiler chickens. Poultry Science, 2021, 100, 101068.	3.4	4
119	Effects of protease supplementation and diet type on jejunal and ileal digestibility and total tract metabolisability of nitrogen, starch, and energy in broilers. British Poultry Science, 2022, 63, 386-394.	1.7	3
120	Constraints on the modelling of calcium and phosphorus growth of broilers: a systematic review. World's Poultry Science Journal, 2021, 77, 775-795.	3.0	3
121	Research Note: Delay in sampling influences the profile of phytate in gizzard digesta and ileal digestibility of phosphorus in broilers. Poultry Science, 2020, 99, 5065-5069.	3.4	1
122	Phytase catalysis of dephosphorylation studied using isothermal titration calorimetry and electrospray ionization time-of-flight mass spectroscopy. Analytical Biochemistry, 2020, 606, 113859.	2.4	1
123	Mathematical prediction of ileal energy and protein digestibility in broilers using multivariate data analysis. Poultry Science, 2021, 100, 101106.	3.4	1
124	The geometric framework: An in vivo approach. Journal of Applied Poultry Research, 2014, 23, 295-300.	1.2	0
125	Protease supplementation in maize-based diet influenced net energy and nutrient digestibility in broilers. Journal of Applied Animal Nutrition, 2021, 9, 85-91.	0.9	0