

Basheer M. Nusairat

Contact Information

Assistant Professor of Poultry Nutrition
Department of Animal Production
Jordan University of Science and Technology
P.O. Box 3030, Irbid 22110, Jordan
Telephone: +962-2-7201000 ext. 22272
Fax: +962-2-7201078
E-mail: bmnusairat@just.edu.jo



Education

North Carolina State University, Raleigh, NC

Ph.D. in Poultry Science with Minor in Nutrition, May 2015

Dissertation topic: Soybean meal varieties, enzymes, and corn particle size effects on performance of broilers

Jordan University of Science and Technology, Irbid, Jordan

M.S. in Animal Production and Poultry Nutrition, January 2008

Thesis: Dietary supplementation of garlic (*Allium sativum*): influence on performance parameters, meat quality, and humoral immune response in broiler chicks

Jordan University of Science and Technology, Irbid, Jordan

B.S. in Animal Production, June 2002

Studied and assisted in conduct of research under student employment system

Teaching Experience

Jordan University of Science and Technology, College of Agriculture, Department of Animal Production, Jordan

Assistant Professor, September 2018 - present

Undergraduates Courses:

AP 232 Feed and Feeding

AP 313 Broiler Production

AP 315 Table and Hatchery Egg Production

AP 431 Poultry Farm Management and Technology

AP314 Poultry Nutrition

AP 491 Seminar

Graduates Courses:

AP715 Advanced Poultry Nutrition

Teaching and Research Assistant, 2011 – 2014

North Carolina State University, Prestage Department of Poultry Science, Raleigh, NC

Lectures in PO 406/506-Physiological Aspects of Poultry Management

Teaching and Research Assistant, 2006 – 2008

Jordan University of Science and Technology, College of Agriculture, Department of Animal Production, Jordan

Lectures in AP 311 Sheep Production and AP 334 Feed Analysis

Research and Interest:

- 1- Feed additives in poultry nutrition; such as enzymes, direct fed-microbials, minerals, amino acids, and vitamins
- 2- Using alternative feed ingredients
- 3- Antibiotic free production
- 4- Poultry management; feeding program, lighting, ventilation, cooling, vaccination, and heat stress
- 5- Broiler breeder and Incubation management
- 6- Feed milling

Research Grant and Funds

1. Evaluation of different levels of vitamins on growth performance and carcass characteristics of broiler chicken. (Funded, \$13,340 Principal investigator (PI)).
2. The efficacy of essential oils in improving egg production, egg quality, blood chemistry and gut health of laying hens. (Funded, \$9,160 Principal investigator (PI)).
3. Effect of Corn Particle Size and Phytogenic Feed Additives on Broiler Performance, Gut Morphology and Pathogen Load in the Gastrointestinal Tract (GIT). (Funded, \$7,260 Principal investigator (PI)).

Industry Experience

BioResource International, Inc. Durham, NC, USA

R&D Department, Animal Nutritionist, April, 2015 – September 2018

Suleiman Amayreh Company, Zarqa, Jordan

Feed Mill Production Manager, 2006 – 2010 (Part-time while pursuing M.S. Degree)

Arab Company for Livestock Development (ACOLID), Azraq, Jordan

Supervisor of Broiler Grand Parent Farms, 2004 – 2005

Suleiman Amayreh Company, Zarqa, Jordan

Supervisor of Broiler Breeder Farms, 2002 – 2004

Research Experience and Publications

Ph.D. Dissertation:

Nusairat, B. M. 2015. Effect of soybean meal varieties, phytase enzyme, and particle size of corn on the performance of broilers. PhD. Dissertation, North Carolina State University, Raleigh, USA.

M.S. Thesis:

Nusairat, B. M. 2008. Dietary supplementation of garlic (*Allium sativum*): influence on performance parameters, meat quality, and humoral immune response in broiler chicks. M.S. Thesis, Jordan University of Science and Technology, Irbid, Jordan.

Journal Articles:

1. **Nusairat, B.,** and J. J. Wang. 2020. Xylanase and Direct-Fed Microbials (DFM) Potential for Improvement of Live Performance, Energy Digestibility, and Reduction of Environmental Microbial Load of Broilers. *Frontiers in Veterinary Science*, 7, 1014

2. D. Joardar, K. A. Livingston, F. W. Edens, **B. Nusairat**, R. Qudsieh, M. L. Livingston, and J. Brake. 2020. Effect of Limestone Particle Size and Potassium Supplementation on Live Performance, Blood Physiology and Breast Muscle Myopathy of Male Broiler Chickens. *Frontiers in Veterinary Science*, 7, 983
3. M. Arguelles-Ramos, **B. Nusairat**, R. Qudsieh, and J. Brake. 2020. Effect of phytase inclusion in broiler breeder diets during early lay on fecal and egg characteristics. *Braz. J. Poult. Sci.*, 22 (1)
4. S. Majeed, **B. Nusairat**, D. Joardar, R.I. Qudsieh, F. Edens, J. Broomhead, M. Lanahan and J. Brake. 2020. Corn-Expressed Phytase Influence on Broiler Growth Performance. *Int. J. Poult. Sci.* 19: 330-337
5. M. D. Obeidat, B. S. Obeidat, **B Nusairat**, and R. Al-Shareef. 2020. Fattening performance and carcass traits of Baladi and Shami-Baladi kids. *Vet. World*, 13 (1), 21
6. H. Al-Tamimi, K. Z. Mahmoud, A. Al-Dawood, **B. Nusairat**, and H. Bani Khalaf. 2019. Thermotolerance of Broiler Chicks Ingesting Dietary Betaine and/or Creatine. *Animals* 9(10): 742
7. B. S. Obeidat, M. A. Mayyas, A. Y. Abdulllah, M. S. Awawdeh, R. I. Qudsieh, M. D. Obeidat, **B. Nusairat**, K. Z. Mahmoud, S. G. Haddad, F. A. Al-Lataifeh, M. Ata, M. A. Abu Ishmais, and A. E. Aljamal. 2019. The potential use of layer litter in Awassi lamb diet: Its effects on carcass characteristics and meat quality. *Animals*. 9(10): 782
8. **Nusairat, B.**, J. McNaughton, J. Tyus, and J. J. Wang. 2018. Combination of xylanase and bacillus direct-microbials, as an alternative to antibiotic growth promoters, improves live performance and gut health in sub-clinical challenged broilers. *Int. J. Poult. Sci.* 17: 362-366
9. **Nusairat, B.**, R. Qudsieh, and J. Brake. 2018. Use phytase to enhance nutritional value of broiler breeder diets. *Int. J. Poult. Sci.* 17: 211-220
10. **Nusairat, B.**, M. Arguelles-Ramos, and J. Brake. 2018. Effect of the inclusion of phytase in broiler breeder diets on fecal characteristics and egg quality. *Int. J. Poult. Sci.* 17 (1): 1-7
11. Xu, Y., C. R. Stark, P. R. Ferket, C. M. Williams, **B. Nusairat**, and J. Brake. 2015. Evaluation of litter type and dietary coarse ground corn inclusion on broiler live performance, gastrointestinal tract development, and litter characteristics. *Poult Sci.* 94: 362-370.
12. Abdullah, A. Y., R. I. Qudsieh, and **B. Nusairat**. 2011. Effect of crossbreeding with exotic breeds on meat quality of Awassi lambs. *Livestock Sci.* 142: 121–127.
13. Abdullah, A. Y., K. Z. Mahmoud, **B. Nusairat**, and R. I. Qudsieh. 2010. Small intestinal histology, production parameters, and meat quality as influenced by dietary supplementation of garlic (*Allium sativum*) in broiler chicks. *Italian J. Anim. Sci.* 9:e80: 414-419.

Abstracts (Conferences):

1. R. Qudsieh, Y. M. Lin, **B. Nusairat**, and J. J. Wang. 2021. The efficacy of combined xylanase and direct-fed-microbial in commercially-raised broilers. *Poult Sci.* 100 (E-Suppl. 1): 33.
2. Page, S., J. McNaughton, **B. Nusairat**, J. Tyus, and J. J. Wang. 2019. Comparative effects of a xylanase-direct-fed microbial feed additive and a commercial coccidiostat on live performance, intestinal and environmental pathogens, and apparent metabolizable energy of broilers fed corn-soy-based

- diets and challenged with *Clostridium perfringens* and *Eimeria spp.* Poult Sci. 98 (E-Suppl. 1): 54.
3. **Nusairat, B.**, Al-Yonis, K. Z. Mahmoud, B. S. Obeidat, S. G. Haddad, and A. Y. Al-Azzeh. 2019. Effect of dietary lipase supplementation on energy utilization of broiler chickens. Poult Sci. 98 (E. Suppl. 1): 93.
 4. K. Z. Mahmoud, A. M. Al-Swalqeh, H. J. Al-Tamimi, and **B. Nusairat**. 2019. Betaine Supplementation Improves Water Balance and Meat Quality of Broiler Chicks. Poult Sci. 98 (E-Suppl. 1): 96.
 5. Page, S., J. McNaughton, **B. Nusairat**, J. Tyus, and J. J. Wang. 2018. Effect of a commercial xylanase-probiotic blend on live performance, gut health, and environmental pathogen of broilers fed corn-soy-based diets. Poult Sci. 97 (E-Suppl. 1): 310.
 6. **Nusairat, B.**, M. Shwartz, J. Tyus, and J. J. Wang. 2018. Effects of a commercial xylanase-direct-fed-microbial feed additive on gut health and livability of broilers raised under severe coccidiosis challenge conditions. Poult. Sci. 97 (E-Suppl. 1): 123.
 7. **Nusairat, B.**, J. McNaughton, F. Zhou, and J. J. Wang. 2017. Effect of xylanase, probiotic and their combination on performance, intestinal lesion observation in response to *Eimeria* and *Clostridium perfringens* challenges. Poult Sci. 96 (E-Suppl. 1): 110.
 8. **Nusairat, B.**, T. Sooksridang, J. Tyus, and J. J. Wang. 2017. Effect of a commercial xylanase supplemented to reduced-energy, corn-soy-based diets on live performance of broilers raised in SE Asia. Poult Sci. 96 (E-Suppl. 1): 291.
 9. **Nusairat, B.**, A. C. Fahrenholz, P. W. Plumstead, S. Marouf, and J. Brake. 2015. Effect of adding phytase to broiler diets containing low phytate-low stachyose and normal phytate soybean meal on live performance and total phosphorus digestibility. Poult Sci. 94 (E-Suppl. 1): 226.
 10. **Nusairat, B.**, A. C. Fahrenholz, P. W. Plumstead, and J. Brake. 2015. Evaluation of effects of phytase in broiler breeder rearing and laying diets on fecal phosphorus and constitution. Poult Sci. 94 (E-Suppl. 1): 94.
 11. **Nusairat, B.**, C. R. Stark, and J. Brake. 2014. Effect of adding phytase to low phytate and normal phytate SBM diets on male broiler live performance, phosphorus digestibility, bone ash, and bone strength. Poult. Sci. 93 (E-Suppl. 1): 203.
 12. Qudsieh, R. I., D. P. Smith, **B. Nusairat**, and J. Brake. 2014. Effect of zinc sulfate or zinc sulfite marination on color of raw and cooked meat. Page 129 in Proc. 67th Reciprocal Meat Conference, 15-18 June, Madison, WI.
 13. **Nusairat, B.**, A. C. Fahrenholz, P.W. Plumstead, and J. Brake. 2014. Use of 6-phytase derived from *Buttiauxella spp.* to enhance nutritional value of broiler breeder diets. Poult. Sci. 93 (E-Suppl. 1): 14.
 14. Qudsieh, R. I., **B. Nusairat**, D. P. Smith, and J. Brake. 2013. Cook yield, shear value, and color of breast fillets from broilers fed diets containing different levels of zinc, copper, and Roxarsone. Poult. Sci. 92 (E-Suppl. 1): 205.
 15. Qudsieh, R. I., **B. Nusairat**, D. P. Smith, and J. Brake. 2013. Effect of zinc and sex on broiler blood zinc protoporphyrin, raw marrow color, and cooked meat color. Poult. Sci. 92 (Suppl. 1): 205.
 16. **Nusairat, B.**, J. Brake, C. R. Stark, and S. Yahav. 2013. Effects of phytase enzyme in combination with 50% coarse corn in broiler diets containing low phytate versus normal phytate soybean meal on male broiler live performance, development of the gizzard and proventriculus, and total phosphorus digestibility. Poult. Sci. 92 (E-Suppl. 1): 197.
 17. **Nusairat, B.**, C. R. Stark, and J. Brake. 2013. Effect of adding phytase to low phytate and normal phytate SBM diets on male broiler performance and gizzard weight. Poult. Sci. 92 (E-Suppl. 1): 14.

18. **Nusairat, B.**, R. I. Qudsieh, C. R. Stark, V. R. Pantalone, and J. Brake. 2012. Effect of low phytate and normal phytate soybean meal and dietary corn particle size on male broiler performance and nutrient digestibility to 21 days of age. *Poult. Sci.* 91 (Suppl. 1): 188.
19. **Nusairat, B.**, R. I. Qudsieh, C. R. Stark, S. Yahav, and J. Brake. 2012. Effect of low phytate and normal phytate soybean meal varieties and corn particle size on male broiler performance and development of the gizzard and proventriculus to 21 days of age. *Poult. Sci.* 91 (Suppl. 1): 20.
20. Qudsieh, R. I., **B. Nusairat**, D. P. Smith, and J. Brake. 2012. Effect of zinc, copper, and Roxarsone on growth performance of broilers. *Poult. Sci.* 91 (Suppl. 1): 21.
21. **Nusairat, B.**, P. W. Plumstead, P. Kwanyuen, A. B. Leytem, and J. Brake. 2011. Phytase affects the optimum calcium:phosphorus ratio in broilers. *Poult. Sci.* 90 (Suppl. 1): 36.

Blogs and Technical Articles:

A- Blogs:

1. **Nusairat, B.** Sep. 2015. The Good and Bad of Plant-Based Alternative Feed Ingredients Part 1: By-Products of Plant Origin. <http://briworldwide.com/the-good-and-bad-of-plant-based-alternative-feed-ingredients/>
2. **Nusairat, B.** Oct. 2015. The Good and Bad of Alternative Feed Ingredients Part 2: By-Products of Animal Origin. <http://briworldwide.com/the-good-and-bad-of-alternative-feed-ingredients-part-2-by-products-of-animal-origin/>
3. **Nusairat, B.** Nov. 2015. Why Does Enzyme Thermostability Matter? <http://briworldwide.com/why-does-enzyme-thermostability-matter/>
4. **Nusairat, B.** Jan. 2016. How to Improve Confidence in Enzyme Evaluation Trials. <http://briworldwide.com/how-to-improve-confidence-in-enzyme-evaluation-trials/>
5. **Nusairat, B.** Feb. 2016. How to Improve Confidence in Enzyme Evaluation Trials. Part 2. <http://briworldwide.com/how-to-improve-confidence-in-enzyme-evaluation-trials-2/>
6. **Nusairat, B.** May. 2016. How Enzyme Stability Impacts Efficacy. <http://briworldwide.com/how-enzyme-stability-impacts-efficacy/>

B- Technical Articles

1. Tyus, J., and **Nusairat, B.** Feb. 2016. Xylanase Improve Gut Health in Poultry. All About Feed Magazine. <http://www.allaboutfeed.net/Feed-Additives/Articles/2016/2/Xylanase-improves-gut-health-in-poultry-2757219W/>
2. **Nusairat, B.** Jun. 2017. Why Does Enzyme Thermostability Matter. <https://en.engormix.com/feed-machinery/articles/why-does-enzyme-thermostability-t40652.htm>
3. **Nusairat, B.** Jul. 2017. How Enzyme Stability Impacts Efficacy. <https://en.engormix.com/feed-machinery/articles/how-enzyme-stability-impacts-t40653.htm>

Organizations:

- Agricultural Engineers Association. Amman, Jordan, 2002 – present
- Al Husun Cultural Club, 2002 – present
- Poultry Science Association, 2011 – present
- World's Poultry Science Association, 2011 – present

Reviewer for the Following Journals:

- Reviewer for Jordan Journal of Agricultural Sciences
- Reviewer for the Animal Nutrition Journal
- Reviewer for the Journal Applied of Poultry Research
- Moderator and judge student presentation for PSA 2015 Nutrition session
- Serve as judge for student presentation for IPSF/IPPE 2018 Physiology, Endocrinology and Reproduction session

Awards:

- Jones-Hamilton Company. PSA Graduate Student Travel Award, July, 2014.

Certificates:

- Certificate in Feed Milling, NCSU, 2014.
- Certificate of Accomplishment in Teaching (CoAT), NCSU, 2014.

Workshops:

- Critical thinking and creative thinking. Academic Development and Quality Assurance Center, JUST, Jordan, January 2021
- Early Academics Development Program. Jointly organized by JUST and British Council Amman Jordan, 2019
- Advanced Sales Training, Durham NC, USA 2018
- NCSU Broiler Breeder Research Workshop, Raleigh NC, USA 2018
- New Horizons Computer Learning Centers, Excel 2010 Workshops Parts 2 and 3, Durham NC, USA September 2015.
- NCSU Broiler Breeder Research Workshop, Raleigh NC, USA 2011, 2012, and 2014
- Carolina Poultry Nutrition Conference, Durham NC, USA 2011, 2012, and 2013
- Carolina Feed Industry Association Poultry Nutrition School, Raleigh NC, USA 2014
- Twenty-Sixth Annual Graduate Student Professional Development Workshop, Chapel Hill NC, USA 2012

Skills:

- Experience in feed formulation softwares
- Experience in SAS data analyses
- General computer knowledge and Microsoft Office applications