

Rajesh Jha
College of Tropical Agriculture and Human Resources
 Human Nutrition, Food and Animal Sciences
 FTE Distribution: 50% I; 40% R; 10% E

Education

<u>Degree</u>	<u>University</u>	<u>Major</u>
B.V. Sc & A. H.	Tribhuvan University, Nepal	Veterinary Science
M. Sc.	Wageningen University, the Netherlands	Livestock and Food Sector
Ph. D.	University of Saskatchewan, Canada	Animal Nutrition

Professional Appointments

<u>Title</u>	<u>Employer</u>	<u>Dates Employed</u>
Professor of Animal Nutrition	University of Hawaii at Manoa	2021 to date
Visiting Professor	University of Applied Sciences, Bingen, Germany	2022 (June to December)
Associate Professor of Animal Nutrition	University of Hawaii at Manoa	2017 to 2021
Visiting Professor	Kyoto University, Japan	2019 (summer)
Assistant Professor of Animal Nutrition	University of Hawaii at Manoa	2012 to 2017
Research Associate	University of Alberta, Canada	2009 to 2012
Graduate Research Assistant	Prairie Swine Center/ University of Saskatchewan, Canada	2006 to 2009
Livestock Expert (<i>Concurrent position</i>)	WIN project / Food and Agriculture Organization (FAO), Nepal	2001 to 2003
Livestock Development Officer	Dept. of Livestock Services, Govt. of Nepal	1997 to 2004
Technical Officer	Pakhribas Agriculture Centre, Nepal	1997

Courses Taught

Course Number and Title (credits)

- ANSC 244 / FSHN 244: Comparative Nutrition (3 cr)
- ANSC 321: Applied Animal Nutrition (3 cr)
- ANSC 491: Topics in Animal Sciences (3 cr)
- ANSC 642: Advanced Animal Nutrition (3 cr)
- ANSC 682: Advanced Topics in Animal Sciences (3 cr)
- FSHN 682: Topics in Nutritional Sciences – Monogastric Nutrition and Gut Health (3 cr)

Publications (reverse chronological order)

Books

1. F. Hassan, M. Alagwany and **R. Jha** (Eds). (2022). [Interplay of nutrition and genomics: Potential for improving performance and health of poultry](#). Lausanne: Frontiers Media SA. ISBN: 978-2-83250-523-6.
2. [Parent-offspring Integration: Gut Health and Physiological Functions of Animals](#) (2022). Co-editors: X. Kong and **R. Jha**. Lausanne: Frontiers Media SA. ISBN 978-2-88974-398-8.
3. [Nutritional Intervention for the Intestinal Health of Young Monogastric Animals](#) (2021). Co-editors: S. W. Kim and **R. Jha**. Lausanne: Frontiers Media SA. ISBN 978-2-88966-730-7.

Book Chapters/ Editorials (*corresponding author, underlined authors are my mentees)

1. **R. Jha*** and T. A. Woyengo (2022). Cereal Grains, Cereal Grain Byproducts, and Other Energy Sources in Swine Diets. In: L. I. Chiba (Ed.), Sustainable Swine Nutrition (2nd Ed.). Wiley-Blackwell Publisher, Hoboken, NJ. eISBN: 978-1-119-583-939-8. pp. 285-306. [\[LINK\]](#)
2. F. Hassan*, M. Alagwany, and **R. Jha** (2022). Editorial: Interplay of nutrition and genomics: Potential for improving performance and health of poultry. *Frontiers in Physiology- Avian Physiology*, 13:1030995. [\[PDF\]](#)
3. X. Kong and **R. Jha*** (2022). Editorial: Parent-offspring Integration: Gut Health and Physiological Functions of Animals. *Frontiers in Veterinary Science*, 8:808074. [\[PDF\]](#)

4. R. Das, P. Mishra, and **R Jha***(2021). In ovo feeding as a tool for improving performance and gut health of poultry: a review. In: X. Kong and **R. Jha** (Eds). Parent-offspring Integration: Gut Health and Physiological Functions of Animals. *Frontiers in Veterinary Science*, 8:754246. [\[PDF\]](#).
5. **R. Jha*** and S. W. Kim (2021). Editorial: Nutritional Intervention for the Intestinal Health of Young Monogastric Animals. *Frontiers in Veterinary Science*, 8:668563. [\[PDF\]](#).
6. **R. Jha***, A. K. Singh, S. Yadav, J. F. D. Berrocoso, and B. Mishra (2019). Early nutrition programming (in ovo- and post hatch-feeding) as a strategy to modulate gut health of poultry. In: S. W. Kim and **R. Jha** (Eds.), *Nutritional Intervention for the Intestinal Health of Young Monogastric Animals*. *Frontiers in Veterinary Science*, 6:82. [\[PDF\]](#).
7. B. Mishra* and **R. Jha** (2019). Oxidative stress in poultry gut: Potential challenges and intervention. In: Co-Eds: S. W. Kim, and **R. Jha**. In: S. W. Kim and **R. Jha** (Eds.), *Nutritional Intervention for the Intestinal Health of Young Monogastric Animals*. *Frontiers in Veterinary Science*, 6:60. [\[PDF\]](#).
8. **R. Jha***, J. M. Fohuse, U. P. Tiwari, L. Li, and B. P. Willing (2019). Dietary fibers and intestinal health of monogastric animals. In: S. W. Kim, and **R. Jha** (Eds.), *Nutritional Intervention for the Intestinal Health of Young Monogastric Animals*. *Frontiers in Veterinary Science*, 6:48. [\[PDF\]](#).
9. P. J. Moughan*, W. Miner-Williams, and **R. Jha** (2018). Protein digestion- amino acid digestibility. In: P. J. Moughan, and W. Hendriks (Eds.), *Feed Evaluation Science*. Wageningen Academic Publishers, the Netherlands, eISBN: 978-90-8686-854-4. pp. 173-217. [\[LINK\]](#)

Conference Proceedings (*corresponding author, underlined authors are my mentees)

1. **R. Jha*** and U. P. Tiwari (2016). Rapid techniques in feed evaluation: Scope and limitations. **Proceedings of New Zealand Poultry Industry Conference, Vol 13** (Oct 4-5, 2016), Wellington (Editors, M. R. Abdollahi and V. Ravindran). Published by the Monogastric Research Centre, Massey University, Palmerston North, New Zealand. pp. 84-102.
2. Y. S. Kim*, G. Fukumoto, M. Stevenson, M. Thorne, and **R. Jha** (2016). Carcass traits and tenderness of grass-fed beef from subtropical pastures in Hawaii. **Proceedings of 17th AAAP Animal Science Congress** (Aug 22-25, 2016), Fukuoka, Japan. pp. 1525-1529.
3. U. P. Tiwari, and **R. Jha*** (2015). Nutrient profile and in vitro digestibility of fresh and ensiled cassava in swine. **Proceedings of 3rd International Seminar on Animal Industry** (Sept 17-18, 2015), Bogor, Indonesia. pp. 248-249.
4. R. T. Zijlstra*, and **R. Jha** (2012). Novel swine feeding programs to enhance competitiveness and pork differentiation: Feedstuffs and Carbohydrates. **Advances in Pork Production**, 23:227-232.
5. R. T. Zijlstra*, P. Regmi, L. Wang, and **R. Jha** (2011) In vitro techniques to describe energy digestibility and kinetics of carbohydrate degradation of feedstuffs in pigs. **Computerized Journal of Pig Production**, 18 (3):174-176.
6. R. T. Zijlstra*, M. Swift, L. Wang, P. Regmi, J. H. Helm, and **R. Jha** (2010). Rapid methods for prediction of energy values of feedstuffs for pigs. **Proceedings of Western Nutrition Conference** (Sept 21-23, 2010), Saskatoon, SK, Canada. pp. 235-242.
7. **R. Jha***, B. Pakhrin, and R. P. Thakur (1997). Reproductive problems in pigs in the eastern hills of Nepal. **Proceedings of Second National Workshop on Livestock and Fisheries Research** (Sept 24-25, 1997), Lalitpur, Nepal. pp. 11-17.
8. I. P. Dhakal*, **R. Jha**, and H. B. Basnet (1996). Common diseases of livestock at Pathivara VDC of Sankhuwasava. **Bulletin of Veterinary Science and Animal Husbandry Nepal**, 24:95-99.

Refereed Journal Publications (*corresponding author, underlined authors are my mentees)

1. Y. Wu, **R. Jha**, A. Li, H. Liu, Z. Zhang, C. Zhang, Q. Zhai, and J. Zhang* (2022). Probiotics (*Lactobacillus plantarum* HNU082) supplementation relieves ulcerative colitis by affecting intestinal barrier functions, immunity-related genes expression, gut microbiota, and metabolic pathways in mice. **Microbiology Spectrum** (DOI: 10.1128/spectrum.01651-22). [\[PDF\]](#)
2. X. Zhang, S. Zhang, D. Li, N. Zhang, Y. Wang, M. Wang, **R. Jha***, and C. Li (2022). Niacin inhibits post-acidification of yogurt based on the mining of LDB_RS00370 biomarker gene. **Food Research International**, 162:111929. [\[PDF\]](#)
3. R. Mishra, **R. Jha**, B. Mishra, and Y. S. Kim* (2022). Maternal immunization against myostatin suppresses post-hatch chicken growth. **PLOS ONE**, 17(10): e0275753. [\[PDF\]](#)
4. R. Mishra, B. Mishra, Y. S. Kim, and **R. Jha*** (2022). Practices and issues of molting programs for laying hen: A review. **British Poultry Science**, DOI: 10.1080/00071668.2022.2059339. [\[PDF\]](#)

5. W. C. Liu, M. Y. Huang, B. Balasubramanian, and **R. Jha*** (2022). Heat stress affects jejunal immunity of yellow-feathered broilers and is potentially mediated by the microbiome. **Frontiers in Physiology- Avian Physiology**, 13:913696. [\[PDF\]](#)
6. U. P. Tiwari, R. K. Mandal, K. Neupane, B. Mishra, and **R. Jha*** (2022). Starchy and fibrous feedstuffs differ in their in vitro digestibility and fermentation characteristics and differently modulate gut microbiota of swine. **Journal of Animal Science and Biotechnology**, 13:53. [\[PDF\]](#)
7. W. C. Liu, Z. Y. Pan, Y. Zhao, Y. Guo, S. J. Qiu, B. Balasubramanian, and **R. Jha*** (2022). Effects of heat stress on productive performance, redox status, intestinal morphology and barrier-related gene expression, cecal microbiome, and metabolome in indigenous broiler chickens. **Frontiers in Physiology- Avian Physiology**, 13:890520. [\[PDF\]](#)
8. A. K. Singh, U. P. Tiwari, B. Mishra, and **R. Jha*** (2022). Effects of in ovo delivered xylo- and mannan-oligosaccharides on growth performance, intestinal immunity, cecal short-chain fatty acids, and cecal microbiota of broilers. **Journal of Animal Science and Biotechnology**, 13:13. [\[PDF\]](#)
9. A. K. Singh, B. Mishra, M. R. Bedford, and **R. Jha*** (2021). Effects of supplemental xylanase and xylooligosaccharides on production performance and gut health variables of broiler chickens. **Journal of Animal Science and Biotechnology**, 12:98. [\[PDF\]](#)
10. S. Wasti, N. Sah, C. N. Lee, **R. Jha**, and B. Mishra*. Dietary supplementation of alpha-lipoic acid mitigates the negative effects of heat stress in poultry. **PLOS ONE**, 16(7): e0254936. [\[PDF\]](#)
11. S. H. Lee, Y. B. Kim, D. H. Kim, D. W. Lee, H.G. Lee, **R. Jha**, and K. W. Lee* (2021). Dietary soluble flaxseed oils as a source of omega-3 polyunsaturated fatty acids for laying hens. **Poultry Science**, 100:101276. [\[PDF\]](#)
12. Z. Zhang, Y. Wang, Y. Zhang, K. Chen, H. Chang, C. Ma, S. Jiang, D. Huo, W. Liu, **R. Jha**, and J. Zhang* (2021). Synergistic effects of the jackfruit seed sourced resistant starch and *Bifidobacterium pseudolongum* subsp. *globosum* on suppression of hyperlipidemia in mice. **Foods**, 10:1431. [\[PDF\]](#)
13. S. Yadav, K. D. Caliboso, J. E. Nanquil, J. Zhang, H. Kae, K. Neupane, B. Mishra, and **R. Jha*** (2021). Cecal microbiome profile of Hawaiian feral chickens and pasture-raised broiler (commercial) chickens determined using 16S rRNA amplicon sequencing. **Poultry Science**, 100:101181. [\[PDF\]](#)
14. A. K. Singh, R. K. Mandal, M. R. Bedford, and **R. Jha*** (2021). Xylanase improves growth performance, enhances cecal short chain fatty acids production, and increases the relative abundance of fiber fermenting cecal microbiota in broilers. **Animal Feed Science and Technology**, 277:114956. [\[PDF\]](#)
15. N. Sah, D. L. Keuhu, V. Khadka, Y. Deng, **R. Jha**, S. Wasti, and B. Mishra* (2021). RNA sequencing-based analysis of the magnum tissues revealed the novel genes and biological pathways involved in the egg-white formation in the laying hen. **BMC Genomics**, 22:318. [\[PDF\]](#)
16. **R. Jha*** and P. Mishra (2021). Dietary fiber in poultry nutrition and their effects on nutrient utilization, performance, gut health, and on the environment: A review. **Journal of Animal Science and Biotechnology**, 12:51. [\[PDF\]](#)
17. Y. Zhao, B. Balasubramanian, Y. Guo, S. J. Qiu, and **R. Jha***, and W. C. Liu* (2021). Dietary *Enteromorpha* polysaccharides supplementation improves breast muscle rate and is associated with modification of mRNA transcriptome in broiler chickens. **Frontiers in Veterinary Science**, 8:663988. [\[PDF\]](#)
18. F. X. G. Jaramillo, D. H. Kim, S. H. Lee, S. K. Kwon, **R. Jha**, and K. W. Lee* (2021). Role of oregano and Citrus species-based essential oil preparation for the control of coccidiosis in broiler chickens. **Journal of Animal Science and Biotechnology**, 12:47. [\[PDF\]](#)
19. S. Wasti, N. Sah, A. K. Singh, C. N. Lee, **R. Jha**, and B. Mishra* (2021). Dietary supplementation of dried plum: a novel strategy to mitigate heat stress in broiler chickens. **Journal of Animal Science and Biotechnology**, 12:58. [\[PDF\]](#)
20. S. Yadav and **R. Jha*** (2021). Macadamia nut cake as an alternative feedstuff for broilers: Effect on the growth performance. **Animal Feed Science and Technology**, 275:114873. [\[PDF\]](#)
21. A. R. Ganesan, B. Balasubramanian, S. Park, **R. Jha**, I. Andretta, A. G. Bakare, and I. H. Kim* (2021). Ochratoxin A: Carry-over from animal feed into livestock and the mitigation strategies. **Animal nutrition**, 7:56-63. [\[PDF\]](#)
22. J. S. Odani*, E. M. Sox, W. Coleman, **R. Jha**, and R. Malik (2021). First documented cases of canine neuroangiostrongyliasis due to *Angiostrongylus cantonensis* in Hawaii. **Journal of the American Animal Hospital Association**, 57(1):42-46. [\[PDF\]](#)
23. D. H. Kim, H. Sadakane, Y. Nishikiori, M. Matsumura, M. Ikeda, Z. Diao, **R. Jha**, M. Murakami, T. Matsui, and M. Funaba* (2020). Factors affecting expression and transcription of uncoupling protein 2 gene. **The Journal of Veterinary Medical Science**, 82(12):1734-1741. [\[PDF\]](#)

24. [W. C. Liu](#), Y. Guo, Z. H. Zhao, and **R. Jha***, and [B. Balasubramanian*](#) (2020). Algae-derived polysaccharides promotes growth performance by improving antioxidant capacity and intestinal barrier function in broiler chickens. **Frontiers in Veterinary Science**, 7:601336. [\[PDF\]](#)
25. **R. Jha***, [R. Das](#), [S. Oak](#), and [P. Mishra](#) (2020). Probiotics (Direct-fed microbials) in poultry nutrition and their effects on nutrient utilization, growth and laying performance, and gut health: A systematic review. **Animals**, 10(10):1863. (Received [Best Paper Award 2022](#)) [\[PDF\]](#)
26. [J. Zhang](#), [K. Cai](#), [R. Mishra](#), and **R. Jha*** (2020). In ovo supplementation of chitooligosaccharide and chlorella polysaccharide affect cecal microbial community, metabolic pathways, and fermentation metabolites in broiler chickens. **Poultry Science**, 99:4476-4785. [\[PDF\]](#)
27. [H. T. Nhan*](#), T. Q. Nhu, P. M. Duc, L. H. Jung, H. Ako, and **R. Jha** (2020). Effects of dietary arachidonic acid on final maturation, spawning, and composition of gonad of black sea urchin *Diadema setosum* (Leske, 1778). **Aquaculture Nutrition**, 26:1771–1779. [\[PDF\]](#)
28. [U. P. Tiwari](#), S. A. Fleming, M. S. A. Rasheed, **R. Jha**, and R. N. Dilger* (2020). The role of oligosaccharides and polysaccharides of xylan and mannan in gut health of monogastric animals. **Journal of Nutritional Science**, 9 (e21):1-9. [\[PDF\]](#)
29. [S. Wasti](#), [N. Sah](#), [D. L. Kuehu](#), Y. S. Kim, **R. Jha**, and B. Mishra* (2020). Expression of follistatin is associated with egg formation in the oviduct of laying hens. *Animal Science Journal*, e13396:1-8. [\[PDF\]](#)
30. [C. Li](#), Z. Niu, M. Zou, S. Liu, M. Wang, X. Gu, H. Lu, H. Tian*, and **R. Jha*** (2020). Probiotics, prebiotics, and synbiotics regulate the intestinal microbiota differentially and restore the relative abundance of specific gut microorganisms. **Journal of Dairy Science**, 103:5816–5829. [\[PDF\]](#)
31. [P. Adhikari*](#), A. Kiess, R. Adhikari, and **R. Jha** (2020). Nutritional strategies to control avian coccidiosis and necrotic enteritis: A focus on intestinal health. *The Journal of Applied Poultry Research*, 29:515-534. [\[PDF\]](#)
32. [A. Needham](#), **R. Jha**, and N. K. Lincoln* (2020). The Response of Breadfruit Nutrition to Local Climate and Soil: A Review. **Journal of Food Composition and Analysis**, 88:103451. [\[PDF\]](#)
33. J. L. Yanez, T. A. Woyengo, **R. Jha**, T. A. T. G. van Kempen, and R. T. Zijlstra (2019). Nutrient digestibility of soybean products in grower-finisher pigs. **Journal of Animal Science**, 97 (11):4598-4607. [\[PDF\]](#)
34. B. J. Kerr, P. E. Urriola, **R. Jha**, J. Thomson, S. M. Curry, and G. C. Shurson (2019). Amino acid composition and digestible amino acid content in animal protein by-product meals fed to growing pigs. **Journal of Animal Science**, 97 (11):4540-4547. [\[PDF\]](#)
35. [A. K. Singh](#), [U. P. Tiwari](#), Y. Dersjant-Li, A. Awati, and **R. Jha*** (2019). Effect of a combination of xylanase, amylase, and protease and probiotics on major nutrients including amino acids and non-starch polysaccharides utilization in broilers fed different level of fibers. **Poultry Science**, 98:5571-5581. [\[PDF\]](#)
36. [S. Yadav](#), B. Mishra, and **R. Jha*** (2019). Cassava (*Manihot esculenta*) root chips inclusion in broiler chicken diets: effects on growth performance, ileal histomorphology and cecal volatile fatty acid production. **Poultry Science**, 98:4008-4015. [\[PDF\]](#)
37. [J. Yang](#), **R. Jha**, W. L. Zhang and I. H. Kim* (2019). Effects of chitooligosaccharide supplementation on egg production, egg quality and blood profiles in laying hens. **Indian Journal of Animal Research**, 53:1199-1204. [\[PDF\]](#)
38. [U. P. Tiwari](#), [A. K. Singh](#), and **R. Jha*** (2019). Fermentation characteristics of resistant starch, arabinoxylan and β -glucan and their effects on the gut microbial ecology of pigs: A review. **Animal Nutrition**, 5:217-226. [\[PDF\]](#)
39. [S. Oak](#), and **R. Jha*** (2018). The effects of probiotics in lactose intolerance: A systematic review. **Critical Reviews in Food Science and Nutrition**, 59(11):1675-1683. [\[PDF\]](#)
40. **R. Jha** and R. Zijlstra* (2019). Physico-chemical properties of purified starch affect their *in vitro* fermentation characteristics and are linked to *in vivo* fermentation characteristics in pigs. **Animal Feed Science and Technology**, 253:74-80. [\[PDF\]](#)
41. H. T. Nhan*, L. H. Jung, T. T. Thanh Hien, and **R. Jha**. Effects of different dietaries natural carotenoid sources on skin coloration of false clownfish (*Amphiprion ocellaris* Cuvier, 1830). **Aquaculture Nutrition**, 25:662-668. [\[PDF\]](#)
42. [S. Yadav](#), and **R. Jha*** (2019). Strategies to modulate the intestinal microbiota and their effects on nutrient utilization, performance, and health of poultry. **Journal of Animal Science and Biotechnology**, 10:2. (Received [Best Paper Award 2019](#) and is featured as "[Top 10 Papers in 10 Years](#)" of the Journal). [\[PDF\]](#)
43. Y. Liu, **R. Jha**, and H. H. Stein* (2018). Nutritional composition, concentration of gross energy, and *in vitro* digestibility of dry matter in 46 sources of bakery meals. **Journal of Animal Science**, 96(11):4685-4692. [\[PDF\]](#)
44. [N. Sah](#), [D. L. Keuhu](#), V. Khadka, Y. Deng, K. Peplowska, **R. Jha**, and B. Mishra* (2018). RNA sequencing-based analysis of the laying hen uterus revealed the novel genes and biological pathways involved in the eggshell biomineralization. **Nature- Scientific Reports**, 8:16853. [\[PDF\]](#)

45. [U. P. Tiwari](#), H. Chen, S. W. Kim, and **R. Jha*** (2018). Supplemental effect of xylanase and mannanase on nutrient digestibility and gut health of nursery pigs studied using both *in vivo* and *in vitro* model. **Animal Feed Science and Technology**, 245:77-90. [\[PDF\]](#)
46. [A. Mau](#), J. P. Bingham, F. Soller, and **R. Jha*** (2018). Maturation, spawning, and larval development of yellowfoot limpet (*Cellana sandwicensis* Pease, 1861) in aquaculture. **Invertebrate Reproduction and Development**, 62(4):239-247. [\[PDF\]](#)
47. [A. Mau](#) and **R. Jha*** (2018). Aquaculture of two commercially important molluscs (Abalone and Limpet): existing knowledge and future prospects. **Reviews in Aquaculture**, 10(3):611-625. [\[PDF\]](#)
48. [A. M. Haygood](#) and **R. Jha*** (2018). Strategies to modulate the intestinal microbiota of Tilapia (*Oreochromis sp.*) in aquaculture: A review. **Reviews in Aquaculture**, 10:320-333. [\[PDF\]](#)
49. **R. Jha**, and R. T. Zijlstra* (2018). Physico-chemical properties of purified fiber affect their *in vitro* fermentation characteristics and are linked to *in vivo* characteristics in pigs. **Canadian Journal of Animal Science**, 98:394-398. [\[PDF\]](#)
50. K. J. McDermid*, **R. Jha**, M. R. Rice, and G. H. Balazs (2018). Of turtles and trees: Nutritional analysis of tree heliotrope (*Heliotropium foertherianum*) leaves consumed by green turtles (*Chelonia mydas*) in Hawaii. **Micronesica**, 2:1-11. [\[PDF\]](#)
51. [A. Mau](#) and **R. Jha*** (2018). Effects of dietary protein to energy ratio on growth performance of yellowfoot limpet (*Cellana sandwicensis* Pease, 1861). **Aquaculture Reports**, 10:17-22. [\[PDF\]](#)
52. [J. D. Berrocoso](#), [S. Yadav](#), and **R. Jha*** (2017). Nitrogen corrected apparent metabolizable energy of macadamia nut cake for broiler chickens. **Animal Feed Science and Technology**, 234:65-71. [\[PDF\]](#)
53. [U. P. Tiwari](#) and **R. Jha*** (2017). Nutrients, amino acid, fatty acid and non-starch polysaccharide profile and *in vitro* digestibility of macadamia nut cake in swine. **Animal Science Journal**, 88(8):1093-1099. [\[PDF\]](#)
54. [A. K. Singh](#), [J. D. Berrocoso](#), Y. Dersjant-Li, A. Awati, and **R. Jha*** (2017). Effect of a combination of xylanase, amylase and protease on growth performance of broilers fed low and high fiber diets. **Animal Feed Science and Technology**, 232:16-20. [\[PDF\]](#)
55. B. J. Kerr*, **R. Jha**, P. E. Urriola, and G. C. Shurson (2017). Nutrient composition, digestible and metabolizable energy content, and prediction of energy for animal protein by-products in finishing pig diets. **Journal of Animal Science**, 95:2614-2626. [\[PDF\]](#)
56. [J. D. Berrocoso](#), [R. Kida](#), [A. K. Singh](#), Y. S. Kim, and **R. Jha*** (2017). Effect of *in ovo* injection of raffinose on growth performance and gut health parameters of broiler chicken. **Poultry Science**, 96:1573-1580. [\[PDF\]](#)
57. [U. P. Tiwari](#) and **R. Jha*** (2016). Nutrient profile and digestibility of tubers and agro-industrial coproducts determined using an *in vitro* model of swine. **Animal Nutrition**, 2:357-360. [\[PDF\]](#)
58. B. Turano, [U. P. Tiwari](#), and **R. Jha*** (2016). Growth and nutritional evaluation of napier grass hybrids as forage for ruminants. **Tropical Grasslands**, 4(3):168-178. [\[PDF\]](#)
59. [K. C. Surendra](#), R. Olivier, J. K. Tomberlin, **R. Jha**, and S. K. Khanal* (2016). Insect-based biorefinery: A novel approach to produce biofuel and animal feed with concurrent organic waste remediation. **Renewable Energy**, 98: 197-202. [\[PDF\]](#)
60. T. A. Woyengo, **R. Jha**, E. Beltranena, and R. T. Zijlstra* (2016). *In vitro* digestion and fermentation characteristics of canola co-products simulate their digestion in the pig intestine. **Animal**, 10:911-918. [\[PDF\]](#)
61. **R. Jha*** and [J. D. Berrocoso](#) (2016). Dietary fiber and protein fermentation in the intestine of swine and their interactive effects on gut health and on the environment: A review. **Animal Feed Science and Technology**, 212:18-26. **(All time most downloaded paper of the Journal AFST)** [\[PDF\]](#)
62. **R. Jha*** and [J. D. Berrocoso](#) (2015). Review: Dietary fiber utilization and its effects on physiological functions and gut health of swine. **Animal**, 9:1441-1452. [\[PDF\]](#)
63. **R. Jha**, T. A. Woyengo, J. Li, M. R. Bedford, T. Vasanthan, and R. T. Zijlstra* (2015). Enzymes enhance degradation of the fiber-starch-protein matrix of distillers dried grains with solubles as revealed by a porcine *in vitro* fermentation model and microscopy. **Journal of Animal Science**, 93:1039-1051. **(Highlighted on Cover page of March 2015 issue)** [\[PDF\]](#)
64. [U. P. Tiwari](#), B. Turano, and **R. Jha*** (2014). Nutritional characteristics and *in vitro* digestibility by near-infrared spectroscopy of local and hybrid napiergrass varieties grown in rain-fed and irrigated conditions. **Animal Production Science**, 54:1775-1778. [\[PDF\]](#)
65. T. A. Woyengo, **R. Jha**, E. Beltranena, A. Pharazyn, and R. T. Zijlstra* (2014). Nutrient digestibility of lentil and regular- and low-oligosaccharide, micronized full-fat soybean fed to grower pigs. **Journal of Animal Science**, 92:229-237. [\[PDF\]](#)

66. **R. Jha**, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra* (2013). Effect of increasing co-product inclusion and reducing dietary protein on growth performance, carcass characteristics, and jowl fatty acid profile of grower-finisher pigs. **Journal of Animal Science**, 91(5):2178-2191. [\[PDF\]](#)
67. **R. Jha**, A. Owusu-Asiedu, P. H. Simmins, A. Pharazyn, and R. T. Zijlstra* (2012). Degradation and fermentation characteristics of wheat co-products from flour milling in the pig intestine, studied in vitro. **Journal of Animal Science**, E-suppl. 90 (4):173-175. [\[PDF\]](#)
68. R. T. Zijlstra*, **R. Jha**, A. D. Woodward, J. Fouhse, and T. A. T. G. van Kempen (2012). Starch and fiber properties affect their kinetics of digestion and thereby digestive physiology in pigs. **Journal of Animal Science**, E-suppl. 90 (4):49-58. [\[PDF\]](#)
69. **R. Jha** and P. Leterme* (2012). Feed ingredients differing in fermentable fibre and indigestible protein content affect fermentation metabolites and faecal nitrogen excretion in growing pigs. **Animal**, 6:603-611. [\[PDF\]](#)
70. **R. Jha**, D. N. Overend, P. H. Simmins, D. Hickling, and R. T. Zijlstra* (2011). Chemical characteristics, feed processing quality, voluntary feed intake, growth performance, and energy digestibility among wheat classes fed in pelleted diets fed to weaned pigs. **Animal Feed Science and Technology**, 170:78-90. [\[PDF\]](#)
71. **R. Jha**, J. Bindelle, A. Van Kessel, and P. Leterme* (2011). In vitro fibre fermentation of feed ingredients with varying fermentable carbohydrate and protein levels and protein synthesis by colonic bacteria isolated from pigs. **Animal Feed Science and Technology**, 165:191-200. [\[PDF\]](#)
72. **R. Jha**, J. Bindelle, B. Rossnagel, A. Van Kessel, and P. Leterme* (2011). *In vitro* evaluation of the fermentation characteristics of the carbohydrate fractions of hulless barley and other cereals in the gastrointestinal tract of pigs. **Animal Feed Science and Technology**, 163:185-193. [\[PDF\]](#)
73. **R. Jha**, J. Bindelle, B. Rossnagel, A. Van Kessel, and P. Leterme* (2010). In vitro fermentation characteristics for pigs of hulless barleys differing in β -glucan content. **Livestock Science**, 133:141-143. [\[PDF\]](#)
74. E. Avelar, **R. Jha**, E. Beltranena, M. Cervantes, A. Morales, and R. T. Zijlstra* (2010). The effect of feeding wheat distiller's dried grain with solubles on growth performance and nutrient digestibility in weaned pigs. **Animal Feed Science and Technology**, 160:73-77. [\[PDF\]](#)
75. **R. Jha**, B. Rossnagel, R. Pieper, A. Van Kessel, and P. Leterme* (2010). Barley and oat cultivars with diverse carbohydrate composition alter ileal and total tract nutrient digestibility and fermentation metabolites in weaned piglets. **Animal**, 4:724-731. [\[PDF\]](#)
76. R. Pieper, **R. Jha**, P. Leterme, B. Rossnagel, W. Souffrant, and A. Van Kessel* (2008). Effect of barley and oat cultivars with different carbohydrate compositions on the intestinal bacterial communities in weaned piglets. **FEMS Microbiology Ecology**, 66:556-566. [\[PDF\]](#)

Extension Publications

1. M. DuPont, J. Odani, Y. Li, **R. Jha**, T. Kow, and J. Kahana (2020). An overview of Hawaii Egg Quality Assurance Plan for producer education and implementation programing: A New Producer Guide. UH-CTAHR Cooperative Extension Service, LM-37:1-7. [\[PDF\]](#)
2. L. Stevens, M. W. DuPont, and **R. Jha** (2019). Nutritional value of agricultural by-products of Hawaiian Islands to be used as animal feeds. **UH-CTAHR Cooperative Extension Service**, LM-34:1-9. [\[PDF\]](#)
3. M. W. DuPont, K. Cowell and **R. Jha** (2016). Banana silage: An alternative feed for swine. **UH-CTAHR Cooperative Extension Service**, LM-31:1-8. [\[PDF\]](#)
4. Y. S. Kim, G. Fukumoto, M. Stevenson, M. Thorne, and **R. Jha** (2015). Carcass traits and tenderness of Hawai'i grass-fed beef. **UH-CTAHR Cooperative Extension Service**, LM-29:1-7. [\[PDF\]](#)
5. T. A. Woyengo, **R. Jha**, E. Beltranena, A. Pharazyn, and R. T. Zijlstra (2013). Nutritive value of lentil, and regular and low-oligosaccharides full-fat soybean fed to grower pigs. **Western Hog Journal**, 34 (5):58-61.
6. **R. Jha**, P. Regmi, L. Wang, A. Pharazyn, and R. T. Zijlstra (2012). Nutrient profile and energy digestibility of wheat co-products from flour milling in growing pigs. **Western Hog Journal**, 34 (2):46-48.
7. **R. Jha**, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra (2012). The effects of increasing feed inclusions of co-products and reducing dietary crude protein on pork omega-3 fatty acid and feed cost. **Western Hog Journal**, 33 (3):46-49.
8. **R. Jha**, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra (2011). Dietary co-products may enhance pork omega-3 fatty acid and reduce feed costs without affecting carcass quality and growth. **Western Hog Journal**, 32 (5):56-58.
9. **R. Jha** and R. T. Zijlstra (2010). Performance of weaned pig is equal among wheat classes. **Western Hog Journal**, 32 (3):48-50.

10. **R. Jha**, E. Avelar, E. Beltranena, M. Cervantes, A. Morales, and R. T. Zijlstra (2010). Feeding wheat distiller's dried grain with solubles to weaned pigs. **Western Hog Journal**, 31 (5):38-39.
11. **R. Jha**, L. Johnston, J. Bindelle, A. Van Kessel, and P. Leterme (2009). *In vitro* fibre fermentation characteristics of specialty ingredients with varying non-starch polysaccharides levels. **Annual Research Report**. Prairie Swine Centre, Saskatoon, SK, Canada. pp. 44-46.
12. **R. Jha**, L. Johnston, and P. Leterme (2009). The Effect of Different Feed Ingredients on Fermentation Metabolites and Nitrogen Excretion in Pigs. **Annual Research Report**. Prairie Swine Centre, Saskatoon, SK, Canada. pp. 47-48.
13. **R. Jha**, B. Rossnagel, P. Kish, R. Pieper, A. Van Kessel, and P. Leterme (2007). Hullless barleys as health-promoters for the pig gastrointestinal tract. **Annual Research Report**. Prairie Swine Centre, Saskatoon, SK, Canada. pp. 29-30.

Abstract (underlined authors are my mentees)

1. **R. Jha** (2022). Applications of in ovo technologies in poultry production. In: Proceedings of 3rd International conference in IT-Bio Convergence System (Jan 25, 2022), Korea. pp. 17.
2. **R. Jha**, R. Das, B. Mishra, A. J. Cowieson (2021). Sources of corn and soybean meal and carbohydrase enzyme supplementation differently affect cecal volatile fatty acid production and microbiota profile in broiler chickens. *Poultry Science*, 100 (Suppl. 1): 185 (Abstract # 372).
3. **R. Jha**, R. Das, B. Mishra, A. J. Cowieson (2021). Sources of corn and soybean meal and carbohydrase enzymes supplementation differently affect growth performance and nutrient digestibility in broiler chickens. *Poultry Science*, 100 (Suppl. 1):184-185 (Abstract # 371).
4. **R. Jha**, R. Das, and P. Mishra (2021). Maternal nutrition and in ovo feeding affect gut health and performance of poultry. *Journal of Animal Science*, 99 (Suppl.3):68-68 (Abstract # 1035695).
5. G. Martinez, **R. Jha**, V. Fellner and E. van Heugten (2021). In vitro evaluation of purified fiber sources for production of short-chain fatty acids using pig cecal content as an inoculum. *Journal of Animal Science*, 99 (E-Suppl. 1):177 (Abstract # PSIII-12).
6. J. Zhang, K. Cai, R. Mishra, and **R. Jha** (2020). Effects of in ovo inoculation of chicken embryos with chitooligosaccharide and chlorella polysaccharide on the gut health parameters of broiler chickens. *Poultry Science*, 99 (Suppl. 1):41 (Abstract # 80).
7. A. K. Singh, T. Park, J. Legaspi, K. Neupane, and **R. Jha** (2020). Effect of NSPase enzyme and residual fiber from digested feed on cecal short chain fatty acids production and cecal microbiota diversity in broilers, studied in vitro. *Poultry Science*, 99 (Suppl. 1):40-41 (Abstract # 79).
8. A. K. Singh, B. Mishra, M. R. Bedford, and **R. Jha** (2020). Effects of xylanase and xylooligosaccharides supplementation on productive performance and gut health variables of broilers. *Poultry Science*, 99 (Suppl. 1):40 (Abstract # 78).
9. S. Wasti, C. N. Lee, **R. Jha**, and B. Mishra (2020). Dietary supplementation of alpha-lipoic acid mitigates the negative effects of heat stress in poultry. *Poultry Science*, 99 (Suppl. 1):85-86 (Abstract # 170).
10. R. Mishra, **R. Jha**, B. Mishra, and Y.S. Kim (2020). Effects of maternal immunization against myostatin on the post-hatch growth performance of their chicks. *Poultry Science*, 99 (Suppl. 1):27-28 (Abstract # 50).
11. B. Adhikari*, C.N. Lee, V. S. Khadka, Y. Deng, **R. Jha**, and B. Mishra (2020). RNA-sequencing based analysis of bovine endometrium during the maternal recognition of pregnancy. *SRS Virtual Abstracts*. pp 297-298 (Abstract # 2083).
12. A. MacDonald, A. Garcia-Ortega, and **R. Jha** (2020). The effect of microalgae as a fish meal and fish oil replacement on the intestinal microbiota of Tilapia (*Oreochromis niloticus* × *O. mossambicus*) aquaculture from gut health perspective. *Abstracts of the Aquaculture America 2020* (Feb 9-11, 2020) Honolulu, HI, USA. pp. 407.
13. A. Garcia-Ortega, A. MacDonald, and **R. Jha** (2020). Algal meals from *Arthrospira platensis* and *Schizochytrium limacinum* as complete replacement of fish meal, fish oil and soy protein concentrate in feeds for Tilapia. *Abstracts of the Aquaculture America 2020* (Feb 9-11, 2020) Honolulu, HI, USA. pp. 233.
14. A. K. Singh, B. Mishra, and **R. Jha** (2020). Early post-hatch feeding of resistant starch can influence cell-mediated immunity and gut microbiota diversity in broilers. *Abstracts of the International Poultry Scientific Forum* (Jan 27-28, 2020), Atlanta, GA, USA. Abstract # P338, pp. 103.
15. A. K. Singh, R. K. Mandal, M. R. Bedford, and **R. Jha** (2020). Xylanase improves growth performance, enhances cecal short chain fatty acids production and increases relative abundance of fiber fermenting cecal microbiota in broilers. *Abstracts of the International Poultry Scientific Forum* (Jan 27-28, 2020), Atlanta, GA, USA. Abstract # T180, pp. 55-56.

16. K. D. Caliboso, J. E. Nanquil, S. Yadav, H. Kae, K. Neupane, B. Mishra, and **R. Jha** (2019). Cecal microbiota profile of Hawaiian feral chickens and pasture-raised broiler chickens. **Poultry Science**, 98 (Suppl. 1):178 (Abstract # 454P).
17. A. K. Singh, U. P. Tiwari, B. Mishra, and **R. Jha** (2019). Comparative effects of *in ovo* injection of oligosaccharides (xylotriase, xyloetraose, mannotriose, and mannotetraose) on growth performance and gut health parameters of broilers. **Poultry Science**, 98 (Suppl. 1):181 (Abstract # 462P).
18. A. K. Singh, B. Mishra, and **R. Jha** (2019). Effects of early feeding with resistant starch during post-hatch on growth performance and gut health parameters of broilers. **Poultry Science**, 98 (Suppl. 1):181 (Abstract # 463P).
19. B. Mishra, N. Sah, D. L. Kuehu, S. Wasti, and **R. Jha** (2019). Transcriptional regulation of albumen biosynthesis and eggshell biomineralization in the oviduct of laying hens. **Poultry Science**, 98 (Suppl. 1):92 (Abstract # 238).
20. S. Wasti, D. L. Kuehu, N. Sah, A. K. Singh, **R. Jha**, and B. Mishra (2019). Dietary supplementation of dried plum: A novel strategy to mitigate heat stress in poultry. **Poultry Science**, 98 (Suppl. 1):248 (Abstract # 663P).
21. N. Sah, D. L. Kuehu, S. Wasti, **R. Jha**, and B. Mishra (2019). New transcriptomic insights into processes associated with formation of egg-white in the magnum of laying hens. **Poultry Science**, 98 (Suppl. 1):263-264 (Abstract # 713P).
22. L. Li, A. K. Singh, B. Mishra, and **R. Jha** (2018). Effect of *in ovo* injection of probiotic, prebiotic and synbiotic on growth performance and gut health parameters of broiler chickens. **Poultry Science**, 97 (Suppl. 1):161 (Abstract # 390P).
23. S. Yadav, Y. Li, Y. S. Kim, C. N. Lee, and **R. Jha** (2018). Effect of feeding lactic acid bacteria isolated from taro (*Colocasia esculenta*) skins on growth performance, gut microbiota and muscle growth of broiler chickens. **Poultry Science**, 97 (Suppl. 1):161 (Abstract # 389P).
24. N. Sah, D. L. Kuehu, V. S. Khadka, **R. Jha**, and B. Mishra (2018). Transcriptomic analysis of the shell gland in layers identifies novel genes in eggshell biomineralization. **Poultry Science**, 97 (Suppl. 1):220 (Abstract # 550P).
25. U. P. Tiwari, and **R. Jha** (2018). Fermentation characteristics of xylo- and manno-oligosaccharides and soluble and insoluble arabinoxylan studied using an in vitro model of swine. **Journal of Animal Science**, **96 (Suppl. 3):309** (Abstract # 474547).
26. U. P. Tiwari, B. Kerr, and **R. Jha** (2018). Nutrient and amino acids digestibility of animal protein byproduct in swine, determined using an in vitro model. **Journal of Animal Science**, **96 (Suppl. 3):312** (Abstract # 468383).
27. B. A. Castle, J. Odani, **R. Jha**, N. Ogasawara, and H. M. Zaleski (2018). Survey of disease, management and biosecurity practices of Hawaii swine farmers. **Journal of Animal Science**, **96 (Suppl. 3):53-54** (Abstract # 473800).
28. A. MacDonald, and **R. Jha**. 2018. Evaluation of cassava chips as an alternative feed ingredient in hybrid tilapia (*Oreochromis niloticus* × *O. mossambicus*) aquaculture from gut health perspective. **Proceedings of the International Symposium on Fish Nutrition and Feeding conference** (June 3-7, 2018), Las Palmas de Gran Canaria, Spain.
29. A. K. Singh, R. Kida, M. Bedford, and **R. Jha** (2017). Effect of xylanase on growth performance and cecal short-chain fatty acid production in broilers fed different levels of fiber. **Poultry Science**, **96 (E-suppl. 1):160** (abstract # 435P).
30. S. Yadav, and **R. Jha** (2017). Cassava chips as an alternative feedstuff for broiler chickens: effect on growth performance and ileal morphology. **Poultry Science**, **96 (E-suppl. 1):180** (abstract # 492P).
31. S. Yadav, K. Neupane, and **R. Jha** (2017). Macadamia nut cake as an alternative feedstuff for broiler chickens: effect on growth performance and gut microbiota profile. **Poultry Science**, **96 (E-suppl. 1):186** (abstract # 509P).
32. U. P. Tiwari, and **R. Jha** (2017). Supplementation of xylanase and mannanase influences in vitro fermentation characteristics of distiller's dried grain with solubles in the large intestine of swine. **Journal of Animal Science**, **95 (Suppl. 4):196** (Abstract # 398).
33. J. D. Berrocoso, A. K. Singh, and **R. Jha** (2016). Effect of macadamia nut cake inclusion on growth performance of pasture raised broiler chickens. **Proceedings of the World's Poultry Congress (Sept 5-9, 2016), Beijing, China. pp. 179** (Abstract # S1-0411).
34. S. Yadav, J. D. Berrocoso, and **R. Jha** (2016). Nitrogen-corrected apparent metabolizable energy value of macadamia nut cake for broiler chickens. **Poultry Science**, **95 (E-suppl. 1):131** (Abstract # 384P).
35. A. K. Singh, J. D. Berrocoso, R. Kida, Y. S. Kim, and **R. Jha** (2016). In ovo inoculation of raffinose improves hatchability, vitalizes gut mucosa and enhances immune response in broiler chickens. **Poultry Science**, **95 (E-suppl. 1):4** (Abstract # 11).
36. U. P. Tiwari, and **R. Jha** (2016). Nutrient profile and in vitro digestibility of cassava silages in swine. **Journal of Animal Science**, **94 (Suppl. 5):467** (Abstract # 992).

37. U. P. Tiwari, H. Chen, S. W. Kim, and **R. Jha** (2016). Effect of supplemental enzyme on growth performance, digesta viscosity, apparent total tract digestibility of nutrients in nursery pigs. **Journal of Animal Science**, **94 (Suppl. 5):441** (Abstract # 933).
38. U. P. Tiwari, M. Mattus, K. Neupane, and **R. Jha** (2016). In vitro fermentation characteristics of agricultural products and coproducts and its effect on the large intestinal microbiota of swine. **Journal of Animal Science**, **94 (Suppl. 5):211** (Abstract # 450).
39. C. Liu, A. K. Singh, M. Stewart, J. H. Uyehara-Lock and **R. Jha** (2016). Effects of dietary fibers on obesity related physiological parameters in C57BL/6 mice. **Journal of Animal Science**, **94 (Suppl. 5):209** (Abstract # 444).
40. B. S. McNeill, J. Odani, **R. Jha**, and H. M. Zaleski (2016). Prevalence of Brucella suis in hunting dogs in Hawai'i. **Journal of Animal Science**, **94 (Suppl. 5):79** (Abstract # 168).
41. A. M. Haygood, and **R. Jha** (2016). Evaluation of moringa leaves as a prebiotic in tilapia aquaculture from a production and health perspective. **Proceedings of The International Symposium on Fish Nutrition and Feeding** (June 5-10, 2016), Sun Valley, ID USA.
42. U. P. Tiwari, and **R. Jha** (2015). Nutrient profile and in vitro digestibility of fresh and ensiled cassava in swine. **Proceedings of 3rd International Seminar on Animal Industry** (Sept 17-18, 2015), Bogor, Indonesia. **pp 44**.
43. A. K. Singh, J. D. Berrococo, Y. Dersjant-Li, A. Awati, and **R. Jha** (2015). Effect of supplemental multi-enzymes and direct fed microbial on nutrients digestibility in broilers fed low and high fiber diets. **Poultry Science**, **94 (E-suppl. 1):9** (Abstract #22).
44. A. K. Singh, J. D. Berrococo, U. P. Tiwari, Y. Dersjant-Li, A. Awati, and **R. Jha** (2015). Effect of supplemental multi-enzymes on growth performance of broilers fed low and high fiber diets. **Poultry Science**, **94 (E-suppl. 1):129** (Abstract #386P).
45. U. P. Tiwari and **R. Jha** (2015). Nutrient profile and digestibility of macadamia nut cake as determined using an in vitro model of swine. **Journal of Animal Science**, **93 (Suppl. 3):592** (Abstract # 576).
46. U. P. Tiwari, H. M. Zaleski, and **R. Jha** (2015). Nutrient profile and digestibility of agro-industrial coproducts as determined using an in vitro model of swine. **Journal of Animal Science**, **93 (Suppl. 3):591** (Abstract # 571).
47. U. P. Tiwari, B. Turano, and **R. Jha** (2014). Nutritional characteristics and in vitro digestibility by near-infrared spectroscopy of local and hybrid napiergrass varieties grown in rain-fed and irrigated conditions. **Proceedings of the Joint ISNH/ISRP International Conference** (Sept 8-12, 2014), Canberra, Australia.
48. T. A. Woyengo, **R. Jha**, E. Beltranena, and R. T. Zijlstra (2014). In vitro digestion and fermentation characteristics and in vivo digestibility of canola co-products in the pigs. **Journal of Animal Science**, **92 (E-Suppl. 2):233-234** (Abstract # 470).
49. U. P. Tiwari, A. K. Singh, H. M. Zaleski, and **R. Jha** (2014). Nutrient profile and in vitro digestibility of tubers in swine. **Journal of Animal Science**, **92 (E-Suppl. 2):225** (Abstract # 449).
50. **R. Jha**, L. F. Wang, P. R. Regmi, A. Pharazyn, and R. T. Zijlstra (2013). Nutrient profile and in vitro vs. in vivo energy digestibility of legumes in growing pigs. **Journal of Animal Science**, **91 (E-Suppl. 2):676** (Abstract # 697).
51. **R. Jha**, P. R. Regmi, L. F. Wang, A. Pharazyn, and R. T. Zijlstra (2013). Nutrient profile and in vitro vs. in vivo energy digestibility of wheat co-products from flour milling in growing pigs. **Journal of Animal Science**, **91 (E-Suppl. 2):676** (Abstract # 696).
52. T. A. Woyengo, **R. Jha**, E. Beltranena, and R. T. Zijlstra (2013). In vitro degradation and fermentation characteristics of expeller-pressed canola meal and cold-pressed canola cake simulating the pig intestine. **Journal of Animal Science**, **91 (E-Suppl. 2):634** (Abstract # 585).
53. T. A. Woyengo, **R. Jha**, E. Beltranena, A. Pharazyn, and R. T. Zijlstra (2013). Nutritional value of lentil and micronized full-fat soybean fed to growing pigs. **Journal of Animal Science**, **91 (E-Suppl. 2):26** (Abstract # 80).
54. **R. Jha**, P. Regmi, L. Wang, A. Pharazyn, and R. T. Zijlstra (2013). Nutrient profile and energy digestibility of wheat co-products from flour milling differ in growing pigs. **Advances in Pork Production**, **24** (Abstract # 29).
55. T. A. Woyengo, **R. Jha**, E. Beltranena, A. Pharazyn, and R. T. Zijlstra (2013). Nutritional value of lentil and micronized full-fat soybean fed to growing-finishing pigs. **Advances in Pork Production**, **24** (Abstract # 21).
56. **R. Jha**, P. Leterme, A. G. Van Kessel, and R. T. Zijlstra (2012). Fermentation characteristics of fibers in the matrix of cereals (barley and oats) or isolated from cereals in the pig intestine. **Proceedings of Canadian Barley Symposium** (July 8 - 10, 2012), Calgary, AB, Canada. **pp. 17**.
57. **R. Jha**, J. Li, M. R. Bedford, C. R. Christensen, T. Vasanthan, and R. T. Zijlstra (2012). Microscopic matrix and in vitro pig model fermentation of wheat and corn distillers dried grains with solubles with supplemental

- carbohydrases and protease. Abstract for 12th **International Symposium on Digestive Physiology of Pigs** (May 29 - Jun 1, 2012), Keystone, CO, USA (Abstract # 1122).
58. **R. Jha**, A. Owusu-Asiedu, P. H. Simmins, A. Pharaayn, and R. T. Zijlstra (2012). Microscopic matrix and in vitro degradation and fermentation characteristics of wheat co-products from flour milling in the pig intestine. Abstract for 12th **International Symposium on Digestive Physiology of Pigs** (May 29 - Jun 1, 2012), Keystone, CO, USA (Abstract # 1082).
 59. R. T. Zijlstra, **R. Jha**, A. D. Woodward, J. Fouchse, and T. A. T. G. van Kempen. 2012. Starch and fiber properties affect their kinetics of digestion and thereby digestive physiology in pigs. Abstract for 12th **International Symposium on Digestive Physiology of Pigs** (May 29 - Jun 1, 2012), Keystone, CO, USA (Abstract # 1036).
 60. **R. Jha**, J. Li, M. R. Bedford, C. R. Christensen, T. Vasanthan, and R. T. Zijlstra (2012). In vitro fermentation and microscopic matrix of distillers dried grains with solubles following enzyme treatment. **Journal of Animal Science**, **90** (E-Suppl. 2):51 (Abstract # 130).
 61. **R. Jha**, J. Li, M. R. Bedford, C. R. Christensen, T. Vasanthan, and R. T. Zijlstra (2012). Enzymes enhance degradation of DDGS, revealed by in vitro gas production and microscopic examination. **Advances in Pork Production**, **23** (Abstract # 26).
 62. **R. Jha** and R. T. Zijlstra (2011). Evaluation of fermentation characteristics and volatile fatty acids production of unique fiber and starch sources using an in vitro model of the pig large intestine. **Journal of Animal Science**, **89** (E-Suppl. 2):129 (Abstract # 251).
 63. **R. Jha**, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra (2011). Dietary co-products enhance pork omega-3 fatty acid and reduce feed costs without affecting carcass quality and growth. **Advances in Pork Production**, **22** (Abstract # 27).
 64. **R. Jha**, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra (2011). Effects of dietary crude protein and co-product level on growth performance and carcass quality of grower-finisher pigs. **Advances in Pork Production**, **22** (Abstract # 26).
 65. **R. Jha**, D. N. Overend, P. H. Simmins, D. Hickling, and R. T. Zijlstra (2011). Effect of Canadian wheat classes on growth performance and energy digestibility in weaned pigs fed in pelleted diets. **Advances in Pork Production**, **22** (Abstract # 18).
 66. **R. Jha** and R. T. Zijlstra (2011). Fermentation characteristics of unique fiber and starch sources in the pig. **Advances in Pork Production**, **22** (Abstract # 17).
 67. **R. Jha**, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra (2010). Co-products inclusion in grower-finisher pig diets enhances carcass characteristics and reduces feed costs without affecting growth performance. **Proceedings of Western Nutrition Conference** (Sept 21-23, 2010), Saskatoon, SK, Canada. **pp. 318**.
 68. K. Kandel, **R. Jha**, E. Beltranena, and R. T. Zijlstra (2010). Effects of different sources of distillers dried grains with solubles on energy and protein digestibility and volatile fatty acids production in grower-finisher pigs. **Proceedings of Western Nutrition Conference** (Sept 21-23, 2010), Saskatoon, SK, Canada. **pp. 316**.
 69. **R. Jha**, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra (2010). Effects of co-products inclusion on growth performance and carcass characteristics of grower-finisher pigs. **Journal of Animal Science**, **88** (E-Suppl. 2):553-554 (Abstract # 677).
 70. R. T. Zijlstra, **R. Jha**, M. G. Young, J. F. Patience, E. Beltranena, and J. K. Htoo (2010). Effects of dietary crude protein and inclusion of co-products on growth performance and carcass characteristics of grower-finisher pigs. **Journal of Animal Science**, **88** (E-Suppl. 2):554 (Abstract # 678).
 71. **R. Jha**, J. Bindelle, B. Rossnagel, A. Van Kessel, and P. Leterme (2009). In vitro fibre fermentation characteristics of specialty ingredients with varying NSP levels. **Proceedings of Western Nutrition Conference** (Sept 23-24, 2009), Winnipeg, MB, Canada. **pp. 308**.
 72. **R. Jha**, J. Bindelle, B. Rossnagel, A. Van Kessel, and P. Leterme (2009). Fermentation characteristics in the pig intestines of hulless barleys differing in β -glucan content. **Proceedings of 11th International Symposium on Digestive Physiology of Pigs** (May 20-22, 2009), Montbriol del camp, Spain (Abstract # 209).
 73. **R. Jha**, J. Bindelle, B. Rossnagel, A. Van Kessel, and P. Leterme (2009). In vitro evaluation of the fermentation characteristics in the pig intestines of hulless barleys differing in β -glucan content. **Journal of Animal Science**, **87** (E-Suppl. 3):103 (Abstract # 210).
 74. **R. Jha**, P. Kish, A. Van Kessel, and P. Leterme (2009). Feed ingredients differing in fermentable fibre content affect nitrogen excretion and fermentation metabolites in weaned pigs. **Advances in Pork Production**, **20** (Abstract # 8).
 75. R. Pieper, **R. Jha**, P. Leterme, B. Rossnagel, W. Souffrant, and A. Van Kessel (2008). Effect of hulless barley varieties with different β -glucan content on intestinal microbiota in pigs. **Proceedings of the Society of Nutrition Physiology** (1-3 April, 2008), Göttingen, Germany. **17:102**.

76. **R. Jha**, R. Pieper, B. Rossnagel, A. Van Kessel, and P. Leterme (2008). Digestibility and fermentation parameters of barleys and oats differing in β -glucan content in the pig intestines. **Journal of Animal Science**, **86 (E-Suppl. 3):66** (Abstract # 96).
77. R. Pieper, **R. Jha**, P. Leterme, B. Rossnagel, W. Souffrant, and A. Van Kessel (2008). Effect of barley and oats β -glucans on intestinal microbiota in the pig. **Journal of Animal Science**, **86 (E- Suppl. 3):104** (Abstract # 217).
78. **R. Jha**, R. Pieper, B. Rossnagel, A. Van Kessel, and P. Leterme (2008). Effect of oats and hullless barleys differing in β -glucan content on digestibility and intestinal fermentation parameters in weaned pigs. **Advances in Pork Production**, **19** (Abstract # 13).
79. R. Pieper, **R. Jha**, A. Van Kessel, B. Rossnagel, W. Souffrant, and P. Leterme (2008). Effect of hullless barleys differing in β -glucan content on the intestinal ecology of weaned pigs. **Advances in Pork Production**, **19** (Abstract # 12).
80. K. Mai, **R. Jha**, R. P. Kwakkel, A. F. B. van der Poel, and M. W. A. Verstegen (2006). Effect of diet structure, conformation and acidification on performance of broilers. **Proceedings of 31st Annual Meeting of Dutch Speaking Nutritionists** (Apr 7, 2006), Rotterdam, The Netherlands. **pp. 56-57**.
81. **R. Jha**, G. N. Gongal, and S. N. Mahato (1999). A retrospective study of animal rabies in Nepal. Proceedings of Sixth National Veterinary Conference (Sept 22-24, 1999), Kathmandu, Nepal.

Leadership Roles (Committees, Boards, Advisory, etc.)

Professional leadership roles / service

- **Editorial board member**
 - Section Editor: [Poultry Science- Metabolism and Nutrition](#) (2019 to date)
 - Associate Editor: [Animal Nutrition- Poultry Nutrition](#) (2022 to date)
 - Associate Editor: [Frontiers in Veterinary Science- Animal Nutrition and Metabolism](#) (2018 to date)
 - Associate Editor: [Animal Science Journal](#) (2018 to date)
 - Guest Associate Editor: [Frontiers in Physiology- Avian Physiology](#) (2021 to date)
 - Editor: [Journal of Animal Science and Biotechnology](#) (2021 to date)
- **Ad-hoc reviewer of scientific journals:**
 - Poultry Science, Journal of Animal Science, Animal Feed Science and Technology, Animal, Reviews in Aquaculture, British Journal of Nutrition, Canadian Journal of Animal Science, Animal Science Journal, Animal Production Science, Livestock Science, BMC Veterinary Research, PLoS ONE.
- **Ad-hoc reviewer of grant proposals** for different organizations both from US and abroad. Few to name are UG Belgium, Teagasc Ireland, NWO Netherland, NCN Poland, CPRC Canada, NSERC Canada, OMAFRA Canada, RDAR Canada, Virginia Tech University and University of Wisconsin- Milwaukee.
- **External Evaluator of Faculty Tenure and Promotion application (2021):** University of Saskatchewan, Saskatoon, Canada
- **External Evaluator of Faculty Tenure and Promotion application (2018):** University of Agriculture Peshawar, Pakistan
- **External Examiner of PhD Dissertation- 1** (2021): Dalhousie University, Canada
- **External Examiner of PhD Dissertation- 1** (2021): University of New England, Australia
- **External Examiner of PhD Dissertation- 1** (2021): University of Manitoba, Canada
- **External Examiner of PhD Dissertation- 1** (2021): University of Guelph, Canada
- **External Examiner of PhD Dissertation- 1** (2020): Central Queensland University, Australia
- **External Examiner of PhD Dissertation- 1** (2020): University of Agriculture Peshawar, Pakistan
- **External Examiner of PhD Dissertation- 1** (2019): University of Manitoba, Canada
- **External Examiner of PhD Dissertation- 1** (2019): University of New England, Australia
- **External Examiner of PhD Dissertation- 1** (2017): University of Queensland, Australia
- **External Examiner of MS Thesis- 1** (2022): Rhodes University, South Africa
- **External Examiner of MS Thesis- 3** (2017, 2018, 2022): The University of the South Pacific, Fiji Islands
- **Expert Volunteer:** Served as an Expert Volunteer in Myanmar (June 1-19, 2016), and Nepal (Dec 9-31, 2016 and Mar 15 - Apr 1, 2018) for the USAID/Farmers to Farmers program through Winrock International
- **Chair:** Comparative Gut Physiology Program Committee of ASAS-CSAS-SSASAS Annual Meeting & Trade Show (July 14-18, 2021), Louisville, KY.
- **Member:** NE-1442- Poultry Production Systems and Well-being: Sustainability for Tomorrow (since 2017 to date)

- **Chair:** NCCC042- Committee on Swine Nutrition, USDA (2017)
- **Vice Chair:** NCCC042- Committee on Swine Nutrition, USDA (2016)
- **Secretary:** NCCC042- Committee on Swine Nutrition, USDA (2015)
- **Member:** NCCC042- Committee on Swine Nutrition, USDA (since 2013)
- **Session Chair:** for different national and international conferences
- **Judging Science Fair and Debate Tournament:**
 - I have been serving as a judge for Science Fair and Debate Tournaments at Honolulu district level and Hawaii State level regularly since 2012. So far, I have judged 28 such events in last 10 years.
- **Member-** Planning Committee, Annual NACTA (North American Colleges and Teachers of Agriculture) Conference (June 14-17, 2011), University of Alberta, Canada
- **Member** (2007-2008): University Council, University of Saskatchewan, Canada
- **Course Councilor** (2007-2008): Graduate Students Association, University of Saskatchewan, Canada
- **Chairman** (2004-2005): International Student Panel, Wageningen University, the Netherlands
- **Coordinator** (1995-1996): Forum for Technical Students, TU, Nepal
- **Acting President** (1994-1996): Free Students Union, IAAS Rampur, TU, Nepal
- **Vice President** (1992-1994): Free Students Union, IAAS Rampur, TU, Nepal

Institutional leadership roles / service

UHM- University level:

- **Senator:** Manoa Faculty Senate (2017-19, 2019- 21), UH Manoa
- **Member:** Research Advisory Committee of Vice Chancellor for Research (2017-19), UH Manoa
- **Expert panelist:** New Faculty Orientation Program Fall 2015, UH Manoa
- **Reviewer of Grant / Scholarship Application:**
 - Marshall Scholarship, UH Manoa, Fall 2017.
 - Associated Students of the University of Hawaii at Manoa's (ASUH) Spring 2012 and Fall 2015 Scholarship
 - Undergraduate Research Opportunity Program (UROP), UH Manoa Fall 2015 Scholarship
- **Judge:**
 - Oral presentation. UROP Spring Symposium (May 4, 2018), UH Manoa
 - Oral presentation. UROP Spring Symposium (May 6, 2016), UH Manoa
 - Oral presentation. UROP Spring Symposium (May 8, 2015), UH Manoa
 - Oral presentation. UROP Fall Symposium (Dec 12, 2014), UH Manoa
 - Oral presentation. UROP Spring Symposium (May 8, 2014), UH Manoa

CTAHR- College level:

- **Chair:** CTAHR Faculty Senate Executive Committee (2015-16)
- **Vice Chair:** CTAHR Senate Executive Committee (2014-2016)
- **Member:** Search committee for Interim Dean and Director of Research of CTAHR (2016), (*Hire was made*)
- **Member:** Search committee for Associate Dean and Associate Director of Research of CTAHR (2013-14), (*Hire was made*)
- **Member:** CTAHR Faculty Senate (2013-15), UH Manoa
- **Member:** CTAHR Faculty Senate Research Committee (2013-14), UH Manoa
- **Judge:**
 - Graduate Student Oral Presentation. Students' Research Symposium (2013, 2014, 2015, 2016, 2017, 2018 and 2019)

HNFAS- Department level:

- **Graduate Chair:** Animal Science Program (Fall 2016 to date)
- **Member:** Department Promotion Committee (2018-2020)
- **Chair:** Curriculum / Instruction Committee (2017-18, 2018-19, 2019-20)
- **Chair:** Search committee for Assistant Aquaculture Specialist (2019-20) (*Position frozen with University administration's order after COVID-19 situation*)
- **Member:** Search committee for Assistant Professor of Nutritional Biochemistry (2019) (*Hire was made*)
- **Member:** Curriculum / Instruction Committee (2016-17)
- **Member:** Research and Extension Committee (2012-13, 2013-14, 2014-15, 2015-16)

- **Member:** Search committee for Assistant Professor of Physiology (2015-16), (*Hire was made*)
- **Mentor:** Graduate Students Organization of HNFAS, UH Manoa
- **Facilitator** to the “Internship program in Aquaponic System (4 months)” as a Nutrition Expert for 6 interns from Rota Island. The program was co-organized by HNFAS.

Graduate Students

<u>Category</u>	<u>Current Number of Students</u>	<u>Number Graduated (Career)</u>
Chair of Master’s Committees	1	8
Chair of PhD Committees	1	4
Member of Master’s Committees	3	10
Member of PhD Committees	3	3

Grant Support

- **PI-** Effect of in ovo injection of xylo-oligosaccharides on growth performance, NSP digestibility, and gut health of broiler chickens supplemented from hatch with xylanase or a stimbiotic. AB Vista Feed Ingredients, UK. **\$64,576** (2022-23).
- **Co-PI-** Development and Promotion of Best Management Practices for Poultry Production in Hawaii. **\$33,060**. (2022-2023, PI- Dr. J. Odani, HNFAS, CTAHR). My share- 25%.
- **PI-** Sustainable and healthy poultry production in the post-antibiotic era. USDA- Multistate Fund. **\$66,189** (2021-23).
- **Co-PI-** Transcriptional regulation of egg formation in the oviduct of broiler breeder chicken. USDA-NIFA. **\$183,102** (2021-23, PI- Dr. B. Mishra, HNFAS, CTAHR). My share- 30%.
- **Co-PI-** Leveraging established research plantings of breadfruit (*Artocarpus altilis*) to understand drivers of fruit quality and its impacts on post-harvest processes and profits. USDA-AFRI. **\$479,302** (2020-25, PI- Dr. N Lincoln, TPSS, CTAHR). My share- 25%.
- **Co-PI-** Establishing a new aquaculture demonstration center at the University of Hawai’i that integrates Land Grant-Sea Grant research, extension and education services. **\$749,815** (2019-21) (PI- Dr Darren Lerner- Sea Grant College Program, UHM). my share- 25%.
- **PI-** Effect of a novel carbohydrase supplementation in corn/soy-based diets on growth performance and gut health of broiler chickens. DSM Nutritional Products AG, Switzerland. **\$94,676** (2018-20).
- **PI-** Nutrition programming of monogastric animals using alternative feedstuffs. USDA- Hatch and Smith-Lever Fund. **\$60,000** (2018-20).
- **PI-** Unrestricted gift from Ulupono Initiative Hawaii. **\$9,000** (2018).
- **Co-PI-** Maternal immunization against myostatin to enhance post-hatch broiler growth and muscle mass. USDA- Hatch fund. **\$76,316** (2018-20) (PI- Dr Y.S. Kim- HNFAS). my share- 30%.
- **Co-PI-** The use of local surveillance and analysis for Hawaii’s poultry industry. Dept of Agriculture, State of Hawaii. **\$81,730** (2018-19, PI- Mr. M. Duponte). my share- 25%.
- **PI-** Effect of xylanase enzyme and prebiotic supplementation in diets on growth performance and intestinal health parameters of broiler chickens. AB Vista Feed Ingredients, UK. **\$28,091** (2017-18).
- **Co-PI-** Analysis of oviductal functions in laying hen. USDA- Hatch fund. **\$70,000** (2017-19) (PI- Dr B. Mishra - HNFAS). my share- 25%.
- **Co-PI-** Assessing and sharing breadfruit management practices. USDA- Western SARE. **\$220,812** (2017-20, PI- Dr. N. Lincoln). my share- 20%.
- **Co-PI-** Increasing Veterinary Services for Food/Production Animals in Hawai’i. USDA-NIFA, VSGP program. **\$169,304** (2017-20, PI- Dr. J. Odani). my share- 20%.
- **PI-** Evaluating local feedstuffs for their effects on performance and gut health of poultry and fish. Ulupono Initiative Hawaii. **\$107,000** (2017, Unrestricted gift).
- **PI-** Effect of xylanase on growth performance, cecal short chain fatty acids production and gut microbiota of broilers fed different levels of fiber. AB Vista Feed Ingredients, UK. **\$28,091** (2016, Unrestricted gift).
- **Co-PI-** The Effects of Stocking Density, Forage Environment, and Climate on Animal Performance in Tropical Forage Finish Beef Production. USDA- Smith Lever fund. **\$79,794** (2016-18, PI- Dr. M. S. Thorne). my share- 20%.

- **PI-** Nutritional evaluation of local feedstuffs for swine in Hawaii. USDA- Hatch and Smith Lever fund. **\$80,000** (2015-17).
- **PI-** Evaluation of nutrient content of Hawaii-grown avocados and identification of optimal harvest period. USDA- Hatch and Smith Lever fund. **\$78,352** (2015-17). I took over this project from Dr. M. Stewart who resigned in August 2016.
- **Co-PI-** The use of agricultural byproducts for animal feeds in Hawaii. USDA- Smith Lever fund. **\$38,200** (2015-17, PI- Mr. M. Duponte). my share- 40%.
- **Co-PI-** Potentials of the anti-MSTN proteins to enhance skeletal muscle growth of animals. USDA- Hatch Fund. **\$58,938** (2015-17, PI- Dr. Y. S. Kim). my share- 30%.
- **PI-** In vitro digestibility of animal protein meals. Evonik Corporation, USA. **\$17,500** (2015, Unrestricted gift).
- **PI-** Investigating lysine absorption in the cecum of the boiler chicken- a pilot study. Massey University, New Zealand. **\$10,000** (2015, Unrestricted gift).
- **PI-** Evaluation of fibrous feedstuffs for their nutritional and functional value. Ulupono Initiative, Hawaii. **\$20,000** (2015, Unrestricted gift).
- **PI-** Enhancing nutrient utilization of corn DDGS by feed enzymes in the pig intestine. National Pork Board. **\$83,205** (2015-16).
- **PI-** Effect of feed additives on digestibility and growth performance of broilers fed high and low NSP diets. Dupont/ Danisco Animal Nutrition, UK. **\$93,391** (2013-14).
- **PI-** Nutritional evaluation of feedstuffs for sustainable and healthy animal production in Hawaii. USDA- ARS collaborative research fund (Agreement no. 58-5320-3-022). **\$265,000** (2013-18).
- **Co-PI-** Enhancing the sustainability of grass-fed beef production through the improvement of carcass and meat quality characteristics of pasture-finished cattle in Hawaii. USDA- WSARE, Professional & Producer grant. **\$49,019** (2013-16, PI- Dr. Y. S. Kim). my share- 30%.
- **Co-PI-** Evaluation of grass-finished beef production in Hawaii: evaluation of soil fertility, forage quality, and herd genetics. Ulupono Initiative Hawaii. **\$167,053** (2013-15, PI- Dr. A. Stokes). my share- 30%.
- **PI-** Evaluation of alternative feedstuffs for utilization in swine diets. USDA- Hatch and Smith Lever Fund. **\$105,742** (2013-15).
- **Co-PI-** Rural Poultry- a complete program for small scale poultry production. USDA- Smith Lever fund. **\$20,320** (2013-15, PI- Mr. M. DuPonte). my share- 30%.
- **PI-** Strengthening animal nutrition research program at the Department of HNFAS, UHM. CTAHR Instrumentation grant. **\$42,440** (2013).
- **Co-PI-** Development of drought-tolerant forage. USDA- ARS collaborative research fund (Agreement no. 58-5320-3-022). **\$45,000** (2012-13, PI- Dr. B. Turano). my share- 40%.
- **PI-** Nutrient composition and digestibility of local feedstuffs in swine. USDA- ARS collaborative research fund (Agreement no. 58-5320-3-022). **\$45,000** (2012-13).
- **Co-PI-** Gut Reactions: A pilot study linking digestive health with ethnicity and chronic disease risk in Hawaii. USDA- Hatch and Smith Lever Fund. **\$40,200** (2012-14, PI- Dr. M. Stewart). my share- 30%.

Presentations at Conferences

Presentation as Invited Speaker

International presentation (invited)

1. Fiber fermentation characteristics and their impacts on gut health of pigs and poultry. Evonik Industries (Oct 4, 2022). Hanau-Wolfgang, Germany.
2. Prebiotics in poultry nutrition to modulate gut health. Institute of Agricultural Sciences, ETH Zurich (July 13, 2022), Switzerland.
3. Sustainable poultry production systems in modern era. Nepal Veterinary Association (June 11, 2022), Bharatpur, Nepal.
4. Applications of *in ovo* technologies in poultry production. 3rd International Conference on IT-Bio Convergence System (Jan 25, 2022, virtual), Korea.
5. **Keynote speaker:** Dietary fibers to modulate intestinal health and enhance poultry production. 7th International Animal Gut Ecology and Health Symposium (Dec 13-15, 2021, virtual), Zhuhai City, Guangdong, China.

6. **Keynote speaker:** Fibrous feedstuffs in poultry diets to maintain performance and promote gut health. 9th National and 1st International Animal Sciences Congress (Sept 15-16, 2021, virtual), Iran.
7. Novel Animal Feedstuffs for Functional and Safe Human Food Production. 53rd Korean Society for Food Science of Animal Resources (KoSFA) International Symposium and Annual Meeting (May 27-29, 2021, virtual), Korea.
8. Feed enzymes and gut ecology of monogastric animals. Konkuk University (Oct 26, 2019), Seoul, South Korea.
9. Nutritional management to modulate gut health of poultry. Northwest Agriculture & Forestry University (Aug 29, 2019), Yangling, China.
10. Dietary fiber as a substrate to modulate gut health of poultry. Kyoto University (July 19, 2019), Kyoto, Japan.
11. Dietary fibers in poultry nutrition: Nutrient utilization and beyond. Tokyo University of Agriculture and Technology, (July 4, 2019), Tokyo, Japan.
12. Antibiotic free poultry production for healthy chicken. 2nd International forum on Food Nutrition and Health (June 13-15, 2019), Hebei Agricultural University, Baoding, China.
13. **Keynote speaker:** Poultry production in post-antibiotic era: Challenges and Opportunities. Workshop on safe poultry meat and egg production (April 13, 2019, via video conference), Bangladesh Agricultural University, Bangladesh.
14. **Keynote Speaker:** Dietary fiber in poultry nutrition: focus on gut health. Poultry Nutrition and Health Forum (Oct 26-28, 2018), Beijing, China.
15. Strategies to modulate the gut microbiota of Tilapia. Can Tho University (June 12, 2018), Can Tho City, Vietnam.
16. Alternative feedstuffs for cost-effective and healthy monogastric animals and fish production. Sino-US Symposium on Food, Nutrition and Health (June 5, 2018), Haikou, China.
17. Fermentable carbohydrates in poultry diet to modulate its gut health. Konkuk University (May 11, 2018), Seoul, South Korea.
18. Nutrition programming to improve gut health of broiler chickens. Northwest A&F University (Aug 11, 2017), Yangling, China.
19. Evaluation of feedstuffs and feed additives for their effects on growth performance and gut health of monogastric animals. Konkuk University (April 1, 2017), Seoul, South Korea.
20. Growing healthy chicken in post-antibiotic era". Agriculture and Forestry University (February 10, 2017, via video conference), Rampur, Nepal.
21. Probiotics in poultry nutrition. Nepal Veterinary Association (Dec 29, 2016), Kathmandu, Nepal.
22. **Keynote Speaker:** Rapid techniques for feed evaluation: Scope and limitations. New Zealand Poultry Industry Conference (Oct 4-5, 2016), Wellington, New Zealand; Organized by World Poultry Science Association, New Zealand branch.
23. Tools and techniques for nutrition and gut health studies of monogastric animals. Feed Research Institute, China Academy of Agricultural Sciences (Sept 9, 2016), Beijing, China.
24. Dietary manipulation in swine to improve gut health and the environment. Kasetsart University (Sept 23, 2015), Bangkok, Thailand.
25. Animal feed to human food: Understanding the dynamics. Asian Institute of Technology (Sept 22, 2015), Pathumthani, Thailand.
26. Alternative feedstuffs in swine and poultry feeding: Opportunities and challenges. National Institute of Animal Sciences (July 3, 2014), Suwon, South Korea.
27. Tips and tricks of presenting works via peer-reviewed publications. Nepal Veterinary Association (May 24, 2013), Kathmandu, Nepal.
28. Co-products utilization in pig diets. Alberta Pork Regional Meeting (June 11, 2012), Grand Prairie, AB, Canada.
29. Probiotics, Prebiotics, Synbiotics, and Immunobiotics: are they alternative to Antibiotics? National meeting of Nepal Veterinary Association (June 12, 2011), Kathmandu, Nepal.
30. Agriculture in Nepal: System, Issues and Options. Annual Conference of World Association of Agricultural Councils (March 10-15, 2009), Saskatoon, SK, Canada.

National presentation (invited)

31. Maternal and in ovo nutrition program affect gut health of poultry. Comparative Gut Physiology Symposium. 2021 ASAS-CSAS-SSASAS Annual Meeting & Trade Show (July 14-18, 2021), Louisville, KY, USA.
32. Fiber in Swine diets: Nutrition and Beyond. University of Arkansas Fayetteville (March 10, 2014), Fayetteville, AR, USA.

Local presentation (invited)

33. Food Security, Food Animal Production, and Antimicrobial Resistance. Graduate Seminar Series of Department of HNFAS, UH Manoa (Sept 1, 2021).
34. Feeding program for sustainable fish farming. International Mini-symposium: Approaches for experimental challenges in aquaculture research (Jan 15, 2020), UH Sea-Grant College Program, Honolulu, HI, USA.
35. Nutrition programming for cost effective, sustainable, and healthy animal production. USDA-FAS Cochran Fellowship Program (participants from Thailand) at UH Manoa (Sept 19, 2017).
36. Can probiotics mitigate the ill-effects of antibiotic ban? Graduate Seminar Series of Department of HNFAS, UH Manoa (Jan 27, 2017).
37. Sustainable animal feeding program in Hawaii: Opportunities and challenges. US Pacific Basin Agricultural Research Center (August 7, 2015), Hilo, HI, USA.
38. Feeding fermented diets using local feedstuffs to pigs and poultry. Korean Natural Farming Association (February 10, 2015), Hilo, HI, USA. Video of the presentation is available online at <https://www.youtube.com/watch?v=mEQhtruiIkw>
39. Animal feedstuffs, supplements and gut health: unlocking the potential. CTAHR- TUAT (Tokyo University of Agriculture and Technology) Research Symposium (May 14-15, 2015), UH Manoa.
40. Connecting the dots of Agriculture, Nutrition and Health: A global perspective. Graduate Seminar Series of Department of HNFAS, UH Manoa (Jan 30, 2015).
41. Effective teaching and learning: keys to consider. CTAHR Instructional Innovations Workshop, UH Manoa (Sept 11, 2013).
42. Use of fiber in swine diet- Basics to applied research. Graduate Seminar Series of Department of HNFAS, UH Manoa (Mar 18, 2013).

Podcast (*invited*):

Livestock Wala'au- Poultry Nutrition with Dr. Rajesh Jha [\[LINK\]](#)

Presentation in Professional Meetings (*Presenter)

(I am in supervisory role if I am not the presenter since 2012 when I joined UHM and underlined author(s) are my Mentees)

1. A. Chaudhary, **R. Jha**, and B. Mishra. Broiler chickens farming in the tropics: potential challenges and opportunities (**Poster**). Hawaii Agriculture Conference (Sept 27-28, 2022), Honolulu, HI, USA.
2. K. Ebisuya* and **R. Jha**. The effect of xylooligosaccharide on immune response of broilers (**Oral**). UROP Spring Symposium (Apr 22, 2022), UH Manoa, Honolulu, HI, USA.
3. **R. Jha***, R. Das, B. Mishra, and A. J. Cowieson (2021). Sources of corn and soybean meal and carbohydrase enzyme supplementation differently affect cecal volatile fatty acid production and microbiota profile in broiler chickens (**Poster**). PSA Virtual Annual Meeting (July 19-22, 2021).
4. **R. Jha***, R. Das, B. Mishra, and A. J. Cowieson (2021). Sources of corn and soybean meal and carbohydrase enzymes supplementation differently affect growth performance and nutrient digestibility in broiler chickens (**Poster**). PSA Virtual Annual Meeting (July 19-22, 2021).
5. G. Martinez*, **R. Jha**, V. Fellner, and E. van Heugten (2021). In vitro evaluation of purified fiber sources for production of short-chain fatty acids using pig cecal content as an inoculum (**Poster**). ASAS Midwest Section meeting (Mar 8-10, 2021), Omaha, NE, USA.
6. J. Zhang, K. Cai, R. Mishra, and **R. Jha*** (2020). Effects of in ovo inoculation of chicken embryos with chitoooligosaccharide and chlorella polysaccharide on the gut health parameters of broiler chickens (**Oral**). PSA Virtual Annual Meeting (July 20-23, 2020).
7. A. K. Singh*, T. Park, J. Legaspi, K. Neupane, and **R. Jha** (2020). Effect of NSPase enzyme and residual fiber from digested feed on cecal short chain fatty acids production and cecal microbiota diversity in broilers, studied in vitro (**Oral**). PSA Virtual Annual Meeting (July 20-23, 2020).
8. A. K. Singh*, B. Mishra, M. R. Bedford, and **R. Jha** (2020). Effects of xylanase and xylooligosaccharides supplementation on productive performance and gut health variables of broilers (**Oral**). PSA Virtual Annual Meeting (July 20-23, 2020).
9. S. Wasti*, C. N. Lee, **R. Jha**, and B. Mishra (2020). Dietary supplementation of alpha-lipoic acid mitigates the negative effects of heat stress in poultry (**Oral**). PSA Virtual Annual Meeting (July 20-23, 2020).
10. R. Mishra*, **R. Jha**, B. Mishra, and Y. S. Kim (2020). Effects of maternal immunization against myostatin on the post-hatch growth performance of their chicks (**Poster**). PSA Virtual Annual Meeting (July 20-23, 2020).

11. B. Adhikari*, C. N. Lee, V. S. Khadka, Y. Deng, **R. Jha**, and B. Mishra (2020). RNA-sequencing based analysis of bovine endometrium during the maternal recognition of pregnancy (**Oral**). SRS Virtual Annual Meeting (July 8-12, 2020).
12. A. MacDonald*, A. Garcia-Ortega, and **R. Jha** (2020). The effect of microalgae as a fish meal and fish oil replacement on the intestinal microbiota of Tilapia (*Oreochromis niloticus* × *O. mossambicus*) aquaculture from gut health perspective (**Poster**). Aquaculture America 2020 (Feb 9-12, 2020) Honolulu, HI, USA.
13. A. Garcia-Ortega*, A. MacDonald, and **R. Jha** (2020). Algal meals from *Arthrospira platensis* and *Schizochytrium limacinum* as complete replacement of fish meal, fish oil and soy protein concentrate in feeds for Tilapia (**Oral**). Aquaculture America 2020 (Feb 9-12, 2020) Honolulu, HI, USA.
14. A. K. Singh*, B. Mishra, and **R. Jha** (2020). Early post-hatch feeding of resistant starch can influence cell-mediated immunity and gut microbiota diversity in broilers (**Poster**). International Poultry Scientific Forum (Jan 27-28, 2020), Atlanta, GA, USA.
15. A. K. Singh*, R. K. Mandal, M. R. Bedford, and **R. Jha** (2020). Xylanase improves growth performance, enhances cecal short chain fatty acids production and increases relative abundance of fiber fermenting cecal microbiota in broilers (**Oral**). International Poultry Scientific Forum (Jan 27-28, 2020), Atlanta, GA, USA.
16. A. K. Singh*, B. Mishra, and **R. Jha** (2019). Effects of early feeding with resistant starch during post-hatch on growth performance and gut health parameters of broilers (**Poster**). PSA Annual Meeting (July 15-18, 2019), Montréal, QC, Canada.
17. A. K. Singh*, U. P. Tiwari, B. Mishra, and **R. Jha**. Comparative effects of in ovo injection of oligosaccharides (xylotriase, xyloetraose, mannotriose, and mannotetraose) on growth performance and gut health parameters of broilers (**Poster**). PSA Annual Meeting (July 15-18, 2019), Montréal, QC, Canada.
18. K. D. Caliboso, J. E. Nanquil, S. Yadav*, H. Kae, K. Neupane, B. Mishra, and **R. Jha**. Cecal microbiota profile of Hawaiian feral chickens and pasture-raised broiler chickens (**Poster**). PSA Annual Meeting (July 15-18, 2019), Montréal, QC, Canada.
19. S. Wasti*, D. L. Kuehu, N. Sah, A. K. Singh, **R. Jha**, and B. Mishra. Dietary supplementation of dried plum: A novel strategy to mitigate heat stress in poultry (**Poster**). PSA Annual Meeting (July 15-18, 2019), Montréal, QC, Canada. (Received "**Certificate of Excellence for Best Project in Metabolism and Nutrition Section**")
20. N. Sah*, D. L. Kuehu, S. Wasti, **R. Jha**, and B. Mishra. New transcriptomic insights into processes associated with formation of egg-white in the magnum of laying hens (**Poster**). PSA Annual Meeting (July 15-18, 2019), Montréal, QC, Canada.
21. B. Mishra*, N. Sah, D. L. Kuehu, S. Wasti, and **R. Jha**. Transcriptional regulation of albumen biosynthesis and eggshell biomineralization in the oviduct of laying hens (**Oral**). PSA Annual Meeting (July 15-18, 2019), Montréal, QC, Canada.
22. A. M. MacDonald*, A. Garcia, and **R. Jha**. Modulation of the intestinal histology and microbiome using microalgae as a fishmeal/fish oil replacement in the diets of tilapia (**Oral**). 31st Annual CTAHR Student Research Symposium (April 15, 2019), Honolulu, HI, USA.
23. D. L. Kuehu*, N. Sah, C. N. Lee, **R. Jha**, and B. Mishra. Heat stress impacts the health of the laying hen through altering the regulation of heat shock and reactive oxidative stress genes in the liver (**Oral**). 31st Annual CTAHR Student Research Symposium (April 15, 2019), Honolulu, HI, USA.
24. S. Wasti*, D. L. Kuehu, N. Sah, A. K. Singh, **R. Jha**, and B. Mishra. Dietary supplementation of dried plum: A novel strategy to mitigate heat stress in poultry (**Oral**). 31st Annual CTAHR Student Research Symposium (April 15, 2019), Honolulu, HI, USA.
25. S. N. Haverly*, S. Wasti, D. L. Kuehu, N. Sah, A. K. Singh, **R. Jha**, and B. Mishra. The effects of environmental heat stress on the spleens of broiler chickens (**Oral**). 31st Annual CTAHR Student Research Symposium (April 15, 2019), Honolulu, HI, USA (Received **CTAHR Best BS Student Oral Presentation Award**).
26. L. Li*, A. K. Singh, B. Mishra, and **R. Jha**. Effect of *in ovo* injection of probiotic, prebiotic and synbiotic on growth performance and gut health parameters of broiler chickens (**Poster**). PSA Annual Meeting (July 23-26, 2018), San Antonio, TX, USA.
27. S. Yadav, Y. Li, Y. S. Kim, C. N. Lee, and **R. Jha***. Effect of feeding lactic acid bacteria isolated from taro (*Colocasia esculenta*) skins on growth performance, gut microbiota and muscle growth of broiler chickens (**Poster**). PSA Annual Meeting (July 23-26, 2018), San Antonio, TX, USA.
28. N. Sah*, D. L. Kuehu, V. S. Khadka, **R. Jha**, and B. Mishra. Transcriptomic analysis of the shell gland in layers identifies novel genes in eggshell biomineralization (**Poster**). PSA Annual Meeting (July 23-26, 2018), San Antonio, TX, USA. (Received "**Certificate of Excellence for Best Project in Physiology and Reproduction Section**" and "**PSA Graduate Student Travel Award**").

29. U. P. Tiwari, and **R. Jha***. Fermentation characteristics of xylo- and manno-oligosaccharides and soluble and insoluble arabinoxylan studied using an in vitro model of swine (**Poster**). ASAS/CSAS Annual Meeting and Trade Show (July 8-12, 2018), Vancouver, BC, Canada.
30. U. P. Tiwari, B. Kerr, and **R. Jha***. Nutrient and amino acids digestibility of animal protein byproduct in swine, determined using an in vitro model (**Poster**). ASAS/CSAS Annual Meeting and Trade Show (July 8-12, 2018), Vancouver, BC, Canada.
31. B. A. Castle*, J. Odani, **R. Jha**, N. Ogasawara, and H. M. Zaleski. Survey of disease, management and biosecurity practices of Hawaii swine farmers (**Poster**). ASAS/CSAS Annual Meeting and Trade Show (July 8-12, 2018), Vancouver, BC, Canada.
32. A. MacDonald*, and **R. Jha**. Evaluation of cassava chips as an alternative feed ingredient in hybrid tilapia (*Oreochromis niloticus* × *Oreochromis mossambicus*) aquaculture from gut health perspective (**Poster**). The International Symposium on Fish Nutrition and Feeding (June 3-7, 2018), Las Palmas de Gran Canaria, Spain.
33. S. Yadav*, A. K. Singh, U. P. Tiwari, B. Mishra, and **R. Jha**. Cassava root chips an alternative to corn in broiler diet: effect on growth performance and gut health parameters (**Oral**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA (Received **HNFAS Best PhD Student Oral Presentation Award**).
34. A. K. Singh*, T. Park, J. Legaspi, K. Neupane, and **R. Jha**. Effect of fiber degrading enzyme and feed's residual fiber on cecal short-chain fatty acids production and microbial diversity as revealed by metagenomics during in vitro study in broilers (**Poster**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA.
35. U. P. Tiwari*, B. Kerr, and **R. Jha**. Nutrient profile and in vitro digestibility of nutrients (energy, protein and amino acids) of animal protein byproducts (**Oral**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA.
36. A. Mau*, J. Arios, A. Valdez, P. Nicodemus, **R. Jha**, and J. P. Bingham. Chemical Synthesis of a Novel Peptide (oGnRH) for Pheromone Stimulation of Spawning in 'Opihi (*Cellana spp.*) (**Poster**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA (Received **CTAHR 30th Annual Best PhD Student Poster Presentation Award**).
37. L. Li*, A. K. Singh, B. Mishra, and **R. Jha**. Effect of in ovo injection of probiotic, prebiotic and synbiotic on growth performance and gut health of broiler chickens (**Poster**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA.
38. D. L. Kuehu*, N. Sah, C. N. Lee, **R. Jha**, and B. Mishra. Effects of heat stress on the oviductal gene expression and egg qualities in the laying hen (**Poster**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA.
39. N. Sah*, D. L. Kuehu, V. S. Khadka, **R. Jha**, and B. Mishra. RNA sequencing of the shell gland reveals novel genes related to calcium remodeling during eggshell formation in laying hens (**Oral**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA (Received **HNFAS Best MS Student Oral Presentation Award**).
40. S. Wasti*, N. Sah, D. L. Kuehu, Y.S. Kim, **R. Jha**, and B. Mishra. Expression of follistatin and myostatin in the oviduct of laying hen (**Poster**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA.
41. B. A. Castle*, J. Odani, **R. Jha**, N. Ogasawara, H. M. Zaleski. Survey of Disease, Management and Biosecurity Practices of Hawai'i Swine Farmers (**Oral**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA (Received **Gamma Sigma Delta MS Student Oral Presentation Award**).
42. K. Rednour*, J. Yoshioka, A. M. MacDonald, K. Neupane, and **R. Jha**. Effects of replacing corn with sun-dried cassava chips in diets on the intestinal microbiota of hybrid tilapia (*Oreochromis niloticus* × *O. mossambicus*) (**Poster**). 30th Annual CTAHR/COE Student Research Symposium (April 6-7, 2018), Honolulu, HI, USA.
43. A. K. Singh*, R. Kida, M. Bedford, and **R. Jha**. Effect of xylanase on growth performance and cecal short-chain fatty acid production in broilers fed different levels of fiber (**Poster**). PSA Annual Meeting (July 17-20, 2017), Orlando, FL, USA (Received **"Certificate of Excellence for Best Project in Metabolism and Nutrition Section" and "PSA Graduate Student Travel Award"**).
44. S. Yadav*, and **R. Jha**. Cassava chips as an alternative feedstuff for broiler chickens: effect on growth performance and ileal morphology (**Poster**). PSA Annual Meeting (July 17-20, 2017), Orlando, FL, USA.
45. S. Yadav*, K. Neupane, and **R. Jha**. Macadamia nut cake as an alternative feedstuff for broiler chickens: effect on growth performance and gut microbiota profile (**Poster**). PSA Annual Meeting (July 17-20, 2017), Orlando, FL, USA.

46. U. P. Tiwari, and **R. Jha***. Supplementation of xylanase and mannanase influences in vitro fermentation characteristics of distiller's dried grain with solubles in the large intestine of swine (**Oral**). ASAS/CSAS Annual Meeting and Trade Show (July 8-12, 2017), Baltimore, MD, USA.
47. A. K. Singh*, R. Kida, M. Bedford, and **R. Jha**. Growth performance and cecal short-chain fatty acid production in broilers fed different levels of wheat bran without or with xylanase (**Oral**). 29th Annual CTAHR/COE Student Research Symposium (April 7-8, 2017), Honolulu, HI, USA (Received **CTAHR PhD Student Oral Presentation Award of Merit**).
48. U. P. Tiwari*, and **R. Jha**. Supplementation of enzymes affects in vitro fermentation characteristics of distillers dried grain with solubles in swine (**Poster**). 29th Annual CTAHR/COE Student Research Symposium (April 7-8, 2017), Honolulu, HI, USA (Received **HNFAS Best PhD Student Poster Presentation Award**).
49. A. Mau*, and **R. Jha**. The effect of protein-energy ratio in diets on the growth performance of 'opihi (*Cellana sandwicensis*) in a novel rearing system (**Oral**). 29th Annual CTAHR/COE Student Research Symposium (April 7-8, 2017), Honolulu, HI, USA (Received **CTAHR MS Student Oral Presentation Award of Merit**).
50. S. Yadav*, K. Neupane, and **R. Jha**. Macadamia nut cake as an alternative feedstuff for broiler chickens: effect on growth performance and gut microbiota (**Oral**). 29th Annual CTAHR/COE Student Research Symposium (April 7-8, 2017), Honolulu, HI, USA (Received **HNFAS Best MS Student Oral Presentation Award**).
51. J. Kai*, J. P. Bingham, A. Franke, G. Agbor, M. Stewart, and **R. Jha**. Nutrient profile of Hawaii and Cameroon grown avocados (**Poster**). 29th Annual CTAHR/COE Student Research Symposium (April 7-8, 2017), Honolulu, HI, USA.
52. N. Ogasawara*, J. Odani, **R. Jha**, B. Castle, and H. M. Zaleski. Evaluating swine herd health and farm practices in Hawaii (**Poster**). 29th Annual CTAHR/COE Student Research Symposium (April 7-8, 2017), Honolulu, HI, USA.
53. D. Inouye*, J. Miller, S. Yadav, K. Neupane, and **R. Jha**. Effect of Macadamia Nut Cake on Gut Microbial Diversity in Broiler Chickens (**Poster**). 29th Annual CTAHR/COE Student Research Symposium (April 7-8, 2017), Honolulu, HI, USA (Received **HNFAS Best BS Student Poster Presentation Award**).
54. J. D. Berrocoso, A. K. Singh, and **R. Jha***. Effect of macadamia nut cake inclusion on growth performance of pasture raised broiler chickens (**Poster**). World's Poultry Congress (Sept 5-9, 2016), Beijing, China.
55. Y. S. Kim*, G. Fukumoto, M. Stevenson, M. Thorne, and **R. Jha**. Carcass traits and tenderness of grass-fed beef from subtropical pastures in Hawaii (**Oral**). AAAP Animal Science Congress (Aug 22-25, 2016), Fukuoka, Japan.
56. U. P. Tiwari*, and **R. Jha**. Nutrient profile and in vitro digestibility of cassava silages in swine (**Poster**). ASAS/ADSA/CSAS/WSASAS Joint Annual Meeting (July 19-23, 2016), Salt Lake City, UT, USA.
57. U. P. Tiwari*, H. Chen, S. W. Kim, and **R. Jha**. Effect of supplemental enzyme on growth performance, digesta viscosity, apparent total tract digestibility of nutrients in nursery pigs (**Oral**). ASAS/ADSA/CSAS/WSASAS Joint Annual Meeting (July 19-23, 2016), Salt Lake City, UT, USA.
58. U. P. Tiwari*, M. Mattus, K. Neupane, and **R. Jha**. In vitro fermentation characteristics of agricultural products and coproducts and its effect on the large intestinal microbiota of swine (**Oral**). ASAS/ADSA/CSAS/WSASAS Joint Annual Meeting (July 19-23, 2016), Salt Lake City, UT, USA.
59. C. Liu, A. K. Singh, M. Stewart, J. H. Uychara-Lock, and **R. Jha***. Effects of dietary fibers on obesity related physiological parameters in C57BL/6 mice (**Oral**). ASAS/ADSA/CSAS/WSASAS Joint Annual Meeting (July 19-23, 2016), Salt Lake City, UT, USA.
60. B. S. McNeill, J. Odani, **R. Jha***, and H. M. Zaleski. Prevalence of *Brucella suis* in hunting dogs in Hawai'i (**Poster**). ASAS/ADSA/CSAS/WSASAS Joint Annual Meeting (July 19-23, 2016), Salt Lake City, UT, USA.
61. A. K. Singh*, J. D. Berrocoso, R. Kida, Y. S. Kim, and **R. Jha**. In ovo inoculation of raffinose improves hatchability, vitalizes gut mucosa and enhances immune response in broiler chickens (**Oral**). Poultry Science Association Annual Meeting (July 11-14, 2016), New Orleans, LA, USA.
62. S. Yadav*, J. D. Berrocoso, and **R. Jha**. Nitrogen-corrected apparent metabolizable energy value of macadamia nut cake for broiler chickens (**Poster**). Poultry Science Association Annual Meeting (July 11-14, 2016), New Orleans, LA, USA (Received **Certificate of Excellence for Best Presentation in Nutrition and Metabolism section**).
63. A. M. Haygood*, and **R. Jha**. Evaluation of moringa leaves as a prebiotic in tilapia aquaculture from a production and health perspective. The International Symposium on Fish Nutrition and Feeding (June 5-10, 2016), Sun Valley, ID, USA.
64. A. K. Singh*, J. D. Berrocoso, R. Kida, Y. S. Kim, and **R. Jha**. In ovo inoculation of raffinose improves hatchability, gut mucosal health and immune response in broiler chickens (**Oral**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA (Received **HNFAS Best PhD Student Oral Presentation Award**).

65. A. M. Haygood*, and **R. Jha**. Evaluation of moringa leaves as an alternative feed ingredient in tilapia (*Oreochromis niloticus*) aquaculture from production, gut health, and economic perspective (**Oral**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA (Received **MBBE Best PhD Student Oral Presentation Award**).
66. U. P. Tiwari*, S. W. Kim, and **R. Jha**. Effect of supplemental enzymes on growth performance, digesta viscosity, nutrient and fiber digestibility of nursery pigs (**Oral**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA.
67. S. Yadav*, J. D. Berrocso, and **R. Jha**. Apparent metabolizable energy content of Macadamia nut cake for broiler chickens (**Oral**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA (Received **HNFAS Best MS Student Oral Presentation Award**).
68. A. K. Singh*, J. D. Berrocso, J. Ludovico, and **R. Jha**. Effect of macadamia nut cake inclusion in diets on growth performance and cost of production of pasture raised broiler chickens in Hawaii (**Poster**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA (Received **Gamma Sigma Delta PhD Student Poster Presentation Award**).
69. U. P. Tiwari*, and **R. Jha**. Nutrient profile and in vitro digestibility of cassava silages in swine (**Poster**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA (Received **HNFAS Best PhD Student Poster Presentation Award**).
70. K. Butler*, G. K. Fukumoto, Y. S. Kim, and **R. Jha**. Seasonal and locational variation of nutrient profile and in vitro digestion kinetics of guinea grass and kikuyu grass for grass-fed beef production system on Hawaii Island (**Poster**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA.
71. C. Malabad*, K. Balagso, A. Haygood, K. Neupane, and **R. Jha**. Effects of in vitro fermentation of alternative feedstuffs on intestinal microbiota of chicken analyzed using 16S ribosomal DNA typing (**Oral**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA.
72. S. Mattus*, U. P. Tiwari, K. Neupane, and **R. Jha**. In vitro fermentation of Hawaiian feedstuffs and its effect on the intestinal microbiota of swine (**Poster**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA (Received **CTAHR Best BSc Student Poster Presentation Award**).
73. T. Peterson*, L. Galicia, A. Haygood, K. Neupane, and **R. Jha**. In vitro fermentation of cassava silages and its effect on the intestinal microbiota of chicken (**Poster**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA.
74. A. P. Langlois*, W. L. Ribeiro, and **R. Jha**. Nutritional value of rendered products in swine studied in vitro (**Poster**). 28th Annual CTAHR/COE Student Research Symposium (April 8-9, 2016), Honolulu, HI, USA.
75. T. Tashiro*, T. Mendiola, A. K. Singh, A. Haygood, K. Neupane, and **R. Jha**. Supplementing Enzymes and Probiotics affect Gut Microbiota of Broiler Chicken Fed Fibrous Diets (**Poster**). NIH IDeA Western Regional Conference (Oct 12-14, 2015), Coeur d'Alene, ID, USA.
76. U. P. Tiwari, and **R. Jha***. Nutrient profile and in vitro digestibility of fresh and ensiled cassava in swine (**Oral**). International Seminar on Animal Industry (Sept 17-18, 2015) Bogor, Indonesia.
77. A. K. Singh*, J. D. Berrocso, Y. Dersjant-Li, A. Awati, and **R. Jha**. Effect of supplemental multi-enzymes and direct fed microbial on nutrients digestibility in broilers fed low and high fiber diets (**Oral**). Poultry Science Association Annual Meeting (July 27-30, 2015), Louisville, KY, USA.
78. A. K. Singh*, J. D. Berrocso, U. P. Tiwari, Y. Dersjant-Li, A. Awati, and **R. Jha**. Effect of supplemental multi-enzymes on growth performance of broilers fed low and high fiber diets (**Poster**). Poultry Science Association Annual Meeting (July 27-30, 2015), Louisville, KY, USA.
79. U. P. Tiwari and **R. Jha***. Nutrient profile and digestibility of macadamia nut cake as determined using an in vitro model of swine (**Oral**). ASAS/ADSA Joint Annual Meeting (July 12-16, 2015), Orlando, FL, USA.
80. U. P. Tiwari*, H. M. Zaleski, and **R. Jha**. Nutrient profile and digestibility of agro-industrial coproducts as determined using an in vitro model of swine (**Oral**). ASAS/ADSA Joint Annual Meeting (July 12-16, 2015), Orlando, FL, USA.
81. U. P. Tiwari* and **R. Jha**. Nutritional value of macadamia nut cake for swine (**Oral**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA (Received **HNFAS Best PhD Student Oral Presentation Award**).
82. A. K. Singh*, J. D. Berrocso, Y. Dersjant-Li, A. Awati, and **R. Jha**. Supplemental multi-enzymes and probiotics enhance nutrient digestibility in broilers fed low and high fiber diets (**Oral**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA.
83. U. P. Tiwari*, H. M. Zaleski, and **R. Jha**. Nutritional value of agro-industrial co-products in swine (**Poster**). 27th Annual CTAHR/COE Student Research Symposium, Honolulu, HI, USA.

84. A. K. Singh*, J. D. Berrocoso, Y. Dersjant-Li, A. Awati, and **R. Jha**. Supplemental multi-enzymes affect growth performance of broilers fed low and high fiber diets (**Poster**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA (Received **HNFAS Best PhD Student Poster Presentation Award**).
85. A. K. Singh*, M. W. DuPonte, and **R. Jha**. Growth performance and economics of raising pastured broiler chicken fed with diet based on local feedstuffs in Hawaii (**Poster**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA.
86. C. Liu*, A. K. Singh, M. Stewart, J. Uyehara-Lock, and **R. Jha**. Effects of fibers with varying viscosity and solubility on obesity related physiological parameters of mice (**Poster**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA (Received **HNFAS Best MS Student Poster Presentation Award**).
87. K. Butler*, G. K. Fukumoto, Y. S. Kim, and **R. Jha**. Nutrient profile of leucaena and guinea grass and growth performance and carcass quality of beef cattle grazed on these pastures in Hawaii (**Poster**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA.
88. B. S. McNeill*, H. M. Zaleski, A. M. Stokes, and **R. Jha**. *Brucella suis* in hunting dogs (**Poster**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA.
89. M. Sakuda* and **R. Jha**. Nutritional value of macadamia nut cake for tilapia (*Oreochromis honorum*) (**Poster**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI (Received **HNFAS Best BSc Student Poster Presentation Award**).
90. S. Mattus*, C. Bednarczyk, U. P. Tiwari, A. Haygood, K. Neupane, and **R. Jha**. Effect of in vitro fermentation of Hawaiian feedstuffs on intestinal microbial communities of pigs (**Poster**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA.
91. T. Tashiro*, T. Mendiola, A. K. Singh, A. Haygood, K. Neupane, and **R. Jha**. Effects of Supplementing Multi-Enzymes and Probiotics on Gut Microbiota of Broiler Chicken Fed High and Low Fiber Diets (**Poster**). 27th Annual CTAHR/COE Student Research Symposium (April 10-11, 2015), Honolulu, HI, USA.
92. U. P. Tiwari, B. Turano, and **R. Jha***. Nutritional characteristics and in vitro digestibility by near-infrared spectroscopy of local and hybrid napiergrass varieties grown in rain-fed and irrigated conditions (**Oral**). Joint ISNH/ISRP International Conference (Sept 8-12, 2014), Canberra, Australia.
93. U. P. Tiwari*, A. K. Singh, H. M. Zaleski, and **R. Jha**. Nutrient profile and in vitro digestibility of tubers in swine (**Oral**). ASAS/ADSA/CSAS Joint Annual Meeting (July 20-24, 2014), Kansas City, MO, USA.
94. T. A. Woyengo*, **R. Jha**, E. Beltranena, and R. T. Zijlstra. In vitro digestion and fermentation characteristics and in vivo digestibility of canola co-products in the pigs (Oral). ASAS/ADSA/CSAS Joint Annual Meeting (July 20-24, 2014), Kansas City, MO, USA.
95. M. Sakuda* and **R. Jha**. Effect of macadamia nut cake on growth performance and carcass quality of tilapia (*Oreochromis honorum*) (**Oral**). UROP Spring Symposium (May 8, 2014), UH Manoa, Honolulu, HI, USA.
96. U. P. Tiwari*, B. Turano, and **R. Jha**. Nutritional profile and in vitro digestibility of local and hybrid napiergrass varieties grown in rain-fed and irrigated conditions (**Poster**). 26th Annual CTAHR/COE Student Research Symposium (April 11-12, 2014), Honolulu, HI, USA.
97. U. P. Tiwari*, A. K. Singh, H. M. Zaleski, and **R. Jha**. Tubers can be used as alternative feedstuffs for swine feeding in Hawaii (**Oral**). 26th Annual CTAHR/COE Student Research Symposium (April 11-12, 2014), Honolulu, HI, USA.
98. **R. Jha***, P. Wasti, K. Thapa, and C. Chan-Halbrendt. Impact of farming system on nutritional status of women and children of Chepang Community of Nepal (**Oral**). International Conservation Agriculture Conference (Dec 9-13, 2013), Battambang, Cambodia.
99. **R. Jha***, L. F. Wang, P. R. Regmi, A. Pharazyn, and R. T. Zijlstra. Nutrient profile and in vitro vs. in vivo energy digestibility of legumes in growing pigs (**Oral**). ASAS/ADSA Joint Annual Meeting (July 8-12, 2013), Indianapolis, IN.
100. **R. Jha***, P. R. Regmi, L. F. Wang, A. Pharazyn, and R. T. Zijlstra. Nutrient profile and in vitro vs. in vivo energy digestibility of wheat co-products from flour milling in growing pigs (**Oral**). ASAS/ADSA Joint Annual Meeting (July 8-12, 2013), Indianapolis, IN.
101. T. A. Woyengo*, **R. Jha**, E. Beltranena, and R. T. Zijlstra. In vitro degradation and fermentation characteristics of expeller-pressed canola meal and cold-pressed canola cake simulating the pig intestine (**Oral**). ASAS/ADSA Joint Annual Meeting (July 8-12, 2013), Indianapolis, IN, USA.
102. T. A. Woyengo*, **R. Jha**, E. Beltranena, A. Pharazyn, and R. T. Zijlstra. Nutritional value of lentil and micronized full-fat soybean fed to growing pigs (**Oral**). ASAS/ADSA Joint Annual Meeting (July 8-12, 2013), Indianapolis, IN, USA.

103. **R. Jha**, P. Regmi, L. Wang*, A. Pharazyn, and R. T. Zijlstra. Nutrient profile and energy digestibility of wheat co-products from flour milling differ in growing pigs (**Poster**). Banff Pork Symposium (Jan 15-17, 2013), Banff, AB, Canada.
104. **T. A. Woyengo***, **R. Jha**, E. Beltranena, A. Pharazyn, and R. T. Zijlstra (2013). Nutritional value of lentil and micronized full-fat soybean fed to growing-finishing pigs (**Poster**). Banff Pork Symposium (Jan 15-17, 2013), Banff, AB, Canada.
105. **R. Jha***, P. Leterme, A. G. Van Kessel, and R. T. Zijlstra. Fermentation characteristics of fibers in the matrix of cereals (barley and oats) or isolated from cereals in the pig intestine (**Oral**). 7th Canadian Barley Symposium (July 8 - 10, 2012), Calgary, AB, Canada.
106. **R. Jha***, J. Li, M. R. Bedford, C. R. Christensen, T. Vasanthan, and R. T. Zijlstra. Microscopic matrix and in vitro pig model fermentation of wheat and corn distillers dried grains with solubles with supplemental carbohydrases and protease (**Poster**). 12th International Symposium on Digestive Physiology of Pigs (May 29 - Jun 1, 2012), Keystone, CO, USA.
107. **R. Jha***, A. Owusu-Asiedu, P. H. Simmins, A. Pharazyn, and R. T. Zijlstra. Microscopic matrix and in vitro degradation and fermentation characteristics of wheat co-products from flour milling in the pig intestine (**Poster**). 12th International Symposium on Digestive Physiology of Pigs (May 29 - Jun 1, 2012), Keystone, CO, USA.
108. R. T. Zijlstra*, **R. Jha**, A. D. Woodward, J. Fohse, and T. A. T. G. van Kempen. Starch and fiber properties affect their kinetics of digestion and thereby digestive physiology in pigs (**Oral- Invited**). 12th International Symposium on Digestive Physiology of Pigs (May 29 - Jun 1, 2012), Keystone, CO, USA.
109. **R. Jha***, J. Li, M. R. Bedford, C. R. Christensen, T. Vasanthan, and R. T. Zijlstra. In vitro fermentation and microscopic matrix of distillers dried grains with solubles following enzyme treatment (**Oral**). ASAS/ADSA Midwestern Conference (Mar 19-21, 2012), Des Moines, IA, USA.
110. R. T. Zijlstra* and **R. Jha**. Novel swine feeding programs to enhance competitiveness and pork differentiation: Feedstuffs and Carbohydrates (**Oral- invited**). Banff Pork Seminar (Jan 17-20, 2012), Banff, AB, Canada.
111. **R. Jha***, J. Li, M. R. Bedford, C. R. Christensen, T. Vasanthan, and R. T. Zijlstra. Enzymes enhance degradation of DDGS, revealed by in vitro gas production and microscopic examination (**Poster**). Banff Pork Seminar (Jan 17-20, 2012), Banff, AB, Canada.
112. **R. Jha*** and R. T. Zijlstra. Evaluation of fermentation characteristics and volatile fatty acids production of unique fiber and starch sources using an in vitro model of the pig large intestine (**Oral**). ASAS/ADSA Midwestern Conference (Mar 14-16, 2011), Des Moines, IA, USA.
113. **R. Jha***, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra. Dietary co-products enhances pork omega-3 fatty acid and reduce feed costs without affecting carcass quality and growth (**Poster**). Banff Pork Seminar (Jan 18-21, 2011), Banff, AB, Canada.
114. **R. Jha***, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra. Effects of dietary crude protein and co-product level on growth performance and carcass quality of grower-finisher pigs (**Poster**). Banff Pork Seminar (Jan 18-21, 2011), Banff, AB, Canada.
115. **R. Jha***, D. N. Overend, P. H. Simmins, D. Hickling, and R. T. Zijlstra. Effect of Canadian wheat classes on growth performance and energy digestibility in weaned pigs fed in pelleted diets (**Poster**). Banff Pork Seminar (Jan 18-21, 2011), Banff, AB, Canada.
116. **R. Jha*** and R. T. Zijlstra. Fermentation characteristics of unique fiber and starch sources in the pig (**Poster**). Banff Pork Seminar (Jan 18-21, 2011), Banff, AB, Canada.
117. R. T. Zijlstra*, M. Swift, L. Wang, P. Regmi, J. H. Helm, and **R. Jha**. Rapid methods for prediction of energy values of feedstuffs for pigs (**Oral-invited**). Western Nutrition Conference (Sept 21-23, 2010), Saskatoon, SK, Canada.
118. **R. Jha***, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra. Co-products inclusion in grower-finisher pig diets enhances carcass characteristics and reduces feed costs without affecting growth performance (**Poster**). Western Nutrition Conference (Sept 21-23, 2010), Saskatoon, SK, Canada.
119. K. Kandel*, **R. Jha**, E. Beltranena, and R. T. Zijlstra. Effects of different sources of distillers dried grains with solubles on energy and protein digestibility and volatile fatty acids production in grower-finisher pigs (**Poster**). Western Nutrition Conference (Sept 21-23, 2010), Saskatoon, SK, Canada.
120. **R. Jha***, J. K. Htoo, M. G. Young, E. Beltranena, and R. T. Zijlstra. Effects of co-products inclusion on growth performance and carcass characteristics of grower-finisher pigs (**Oral**). Joint Meeting of ADSA.PSA.AMPA.CSAS.WSASAS.ASAS (July 11-15, 2010), Denver, CO, USA.
121. R. T. Zijlstra*, **R. Jha**, M. G. Young, J. F. Patience, E. Beltranena, and J. K. Htoo. Effects of dietary crude protein and inclusion of co-products on growth performance and carcass characteristics of grower-finisher pigs (**Oral**). Joint Meeting of ADSA. PSA. AMPA. CSAS. WSASAS. ASAS (July 11-15, 2010), Denver, CO, USA.

122. **R. Jha***, J. Bindelle, B. Rossnagel, A. Van Kessel, and P. Leterme. In vitro fibre fermentation characteristics of specialty ingredients with varying NSP levels (**Poster**). Western Nutrition Conference (Sept 23-25, 2009), Winnipeg, MB, Canada.
123. **R. Jha**, J. Bindelle, B. Rossnagel, A. Van Kessel, and P. Leterme*. Fermentation characteristics in the pig intestines of hullless barleys differing in β -glucan content, studied with an in vitro techniques (**Poster**). 11th International Symposium on Digestive Physiology of Pigs (May 20-22, 2009), Montbriol del camp, Spain.
124. **R. Jha***, J. Bindelle, B. Rossnagel, A. Van Kessel, and P. Leterme. In vitro Evaluation of the Fermentation Characteristics in the Pig Intestines of Hullless Barleys Differing in β -glucan Content (**Oral**). ASAS/ADSA Midwestern Conference (Mar 18-20, 2009), Des Moines, IA, USA.
125. **R. Jha***, P. Kish, A. Van Kessel, and P. Leterme. Feed Ingredients Differing in Fermentable Fibre Content Affect Nitrogen Excretion and Fermentation Metabolites in Weaned Pigs (**Poster**). Banff Pork Seminar (Jan 20-23, 2009), Banff, AB, Canada.
126. **R. Jha***, R. Pieper, B. Rossnagel, A. Van Kessel, and P. Leterme. Digestibility and Fermentation Parameters of Barley and Oats Differing in β -glucan Content in the Pig Intestines (**Oral**). ASAS/ADSA Midwestern conference (Mar 17-19, 2008), Des Moines, IA, USA.
127. R. Pieper*, **R. Jha**, P. Leterme, B. Rossnagel, W. Souffrant, and A. Van Kessel. Effect of barley and oats β -glucans on intestinal microbiota in the pig (**Oral**). ASAS/ADSA Midwestern conference (Mar 17-19, 2008), Des Moines, IA, USA.
128. **R. Jha***, R. Pieper, B. Rossnagel, A. Van Kessel, and P. Leterme. Effect of Oats and Hullless Barleys Differing in β -glucan Content on Digestibility and Intestinal Fermentation Parameters in Weaned Pigs (**Poster**). Banff Pork Seminar (Jan 15-18, 2008), Banff, AB, Canada.
129. R. Pieper*, **R. Jha**, A. Van Kessel, B. Rossnagel, W. Souffrant, and P. Leterme. Effect of hullless barleys differing in β -glucan content on the intestinal ecology of weaned pigs (**Poster**). Banff Pork Seminar (Jan 15-18, 2008), Banff, AB, Canada.
130. K. Mai*, **R. Jha**, R. P. Kwakkel, A. F. B. van der Poel, and M. W. A. Verstegen. Effect of diet structure, conformation and acidification on performance of broilers (**Poster**). 31st Annual Meeting of Dutch Speaking Nutritionists (Apr 7, 2006), Rotterdam, The Netherlands.
131. **R. Jha***, G. N. Gongal, and S. N. Mahato. A Retrospective Study of Animal Rabies in Nepal (**Oral**). Sixth National Veterinary Conference (Sept 22-24, 1999), Kathmandu, Nepal.
132. **R. Jha***, B. Pakhrin, and R. P. Thakur. Reproductive Problems in Pigs in the Eastern Hills of Nepal (**Oral**): Second National workshop on Livestock and Fisheries Research (Sept 24-25, 1997), Lalitpur, Nepal.
133. I. P. Dhakal*, **R. Jha**, and H. Basnet. Epidemiological Investigation of Common Diseases of Livestock at Pathivara VDC of Sankhuwasabha District, Nepal (**Oral**). Fifth National Veterinary Conference (Sept 11-13, 1996), Kathmandu, Nepal.