

Publications

Full publication list available on [Google Scholar](#) and [ResearchGate](#)

Key Research Metrics (as of July 2025)

Metric	All Time	Since 2020
Peer-Reviewed Publications	100	46
Citations	3,257	2,361
h-index	33	25
i10-index	73	68

Full list of Publications

- *\$# Khan, N. A., Cone, J. W., Hendriks, W. H. (2009). Stability of fatty acids in grass and maize silages after exposure to air during the feed out period. *Animal Feed Science and Technology*, 154: 183–192. [Link](#)
- *\$ Khan, N. A., Habib, G., Ullah, G. (2009). Chemical composition, rumen degradability, protein utilization and lactation response to selected tree leaves as substitute of cottonseed cake in the diet of dairy goats. *Animal Feed Science and Technology*, 154: 160–168. [Link](#)
- *\$# Khan, N. A., Cone, J. W., Fievez, V., Hendriks, W. H. (2011). Stability of fatty acids during wilting of perennial ryegrass (*Lolium perenne* L.): Effect of bruising and environmental conditions. *Journal of the Science of Food and Agriculture*, 91: 1659–1665. [Link](#)
- *\$# Khan, N. A., Cone, J. W., Pellikaan, W. F., Khan, M. A., Struik, P. C., Hendriks, W. H. (2011). Changes in fatty acid content and composition in silage maize during grain filling. *Journal of the Science of Food and Agriculture*, 91: 1041–1049. [Link](#)
- *\$# Khan, N. A., Tewoldebrahn, T. A., Zom, R. L. G., Cone, J. W., Hendriks, W. H. (2012). Effect of corn silage harvest maturity and concentrate type on milk fatty acid composition of dairy cows. *Journal of Dairy Science*, 95: 1472–1483. [Link](#)
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- * Habib, G., Khan, N. A., Ali, M., Bezbihi, M. (2013). In situ ruminal crude protein degradability of by-products from cereals, oilseeds and animal origin. *Livestock Science*, 153: 81–87. [Link](#)
- Habib, G., Ali, M., Bezbihi, M., Khan, N. A. (2013). In situ assessment of ruminal dry matter degradation kinetics and effective rumen degradability of feedstuffs originated from agro-industrial by-products. *Pakistan Veterinary Journal*, 33: 466–470. [Link](#)
- * Khan, M. T., Khan, N. A., Bezbihi, M., Qureshi, M. S., Rahman, A. (2013). The nutritional value of peanut hay (*Arachis hypogaea* L.) as an alternate forage source for sheep. *Tropical Animal Health and Production*, 45: 849–853. [Link](#)

- # Peng, Q., **Khan, N. A.**, Wang, Z., Yu, P. (2014). Moist and dry heating-induced changes in protein molecular structure, protein subfractions, and nutrient profiles in camelina seeds. *Journal of Dairy Science*, 97: 446–457. [Link](#)
- # Xin, H., **Khan, N. A.**, Falk, K. C., Yu, P. (2014). Mid-infrared spectral characteristics of lipid molecular structures in *Brassica carinata* seeds: Relationship to oil content, fatty acid and glucosinolate profiles, polyphenols, and condensed tannins. *Journal of Agricultural and Food Chemistry*, 62: 7977–7988. [Link](#)
- # Yan, X., **Khan, N. A.**, Zhang, F., Yang, L., Yu, P. (2014). Microwave irradiation induced changes in protein molecular structures of barley grains: Relationship to changes in protein chemical profile, protein subfractions, and digestion in dairy cows. *Journal of Agricultural and Food Chemistry*, 62: 6546–6555. [Link](#)
- Alam, S., Shah, H. U., **Khan, N. A.**, Zeb, A., Shah, A. S., Mogan, N. (2014). Water availability and calcium propionate affect fungal population and aflatoxins production in broiler finisher feed during storage. *Food Additives and Contaminants: Part A*, 31: 1896–1903. [Link](#)
- # Bezabih, M., Pellikaan, W. F., Tolera, A., **Khan, N. A.**, Hendriks, W. H. (2014). Nutritional status of cattle grazing natural pasture in the Mid Rift Valley grasslands of Ethiopia measured using plant cuticular hydrocarbons and their isotope enrichment. *Livestock Science*, 161: 41–52. [Link](#)
- # Peng, Q., **Khan, N. A.**, Wang, Z., Yu, P. (2014). Relationship of feeds protein structural makeup in common Prairie feeds with protein solubility, in situ ruminal degradation and intestinal digestibility. *Animal Feed Science and Technology*, 194: 58–70. [Link](#)
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- # Bezabih, M., Pellikaan, W. F., Tolera, A., **Khan, N. A.**, Hendriks, W. H. (2014). Chemical composition and in vitro total gas and methane production of forage species from the Mid Rift Valley grasslands of Ethiopia. *Grass and Forage Science*, 69: 635–643. [Link](#)
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- Shahid, S., Chand, N., Khan, R. U., **Khan, N. A.**, Suhail, S. M. (2015). Alterations in cholesterol and fatty acids composition in egg yolk of Rhode Island Red × Fyoumi hens fed with hemp seeds (*Cannabis sativa* L.). *Journal of Chemistry*, Article ID 362936, 6 pages. [Link](#)
- # Ali, M., Cone, J. W., **Khan, N. A.**, Hendriks, W. H., Struik, P. C. (2015). Effect of temperature and duration of ensiling on in vitro degradation of maize silages in rumen fluid. *Journal of Animal Physiology and Animal Nutrition*, 99: 251–257. [Link](#)

- # Yu, G. Q., Warkentin, T., Zhiyuan, N., **Khan, N. A.**, Yu, P. (2015). Molecular basis of processing-induced changes in protein structure in relation to intestinal digestion in yellow and green type pea (*Pisum sativum* L.): A molecular spectroscopic analysis. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 151: 980–988. [Link](#)
- \$\$ **Khan, N. A.**, Peng, Q., Xin, H., Yu, P. (2015). Vibrational spectroscopic investigation of heat-induced changes in functional groups related to protein structural conformation in camelina seeds and their relationship to digestion in dairy cows. *Animal Production Science*, 55: 201–206. [Link](#)
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- \$\$ **Khan, N. A.**, Booker, H., Yu, P. (2015). Effect of heating method on alteration of protein molecular structure in flaxseed: Relationship with changes in protein subfraction profile and digestion in dairy cows. *Journal of Agricultural and Food Chemistry*, 63: 1057–1066. [Link](#)
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- Khan, S., Naz, S., Sultan, A., Alhidary, I. A., Abdelrahman, M. M., Khan, R. U., **Khan, N. A.**, Khan, M. A., Ahmad, S. (2016). Worm meal: A potential source of alternative protein in poultry feed. *World's Poultry Science Journal*, 72: 93–102. [Link](#)
- # Ali, M., Cone, J. W., Duinkerken, G. V., Klop, A., Blok, M. C., Bruinenberg, M., **Khan, N. A.**, Hendriks, W. H. (2016). Variation between individual cows in in situ rumen degradation characteristics of maize and grass silages. *NJAS - Wageningen Journal of Life Sciences*, 78: 167–173. [Link](#)
- * Habib, G., **Khan, N. A.**, Sultan, A., Ali, M. (2016). Nutritive value of common tree foliage for livestock in the semi-arid and arid rangelands of Northern Pakistan. *Livestock Science*, 184: 64–70. [Link](#)
- *# Ban, Y., **Khan, N. A.**, Yu, P. (2017). Nutritional and metabolic characteristics of *Brassica carinata* co-products from biofuel processing in dairy cows. *Journal of Agricultural and Food Chemistry*, 65: 5994–6001. [Link](#)
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- * Khan, K., Khan, S., **Khan, N. A.**, Ahmad, N. (2017). Production performance of indigenous rabbits under traditional and intensive production systems in northern Pakistan. *Journal of Animal and Plant Sciences*, 27: 75–81. [Link](#)

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- * Ullah, R., Khan, S., **Khan, N. A.**, Tahir, M., Ahmad, N. (2018). Effect of replacement of soybean meal by silkworm meal on growth performance, apparent metabolizable energy and nutrient digestibility in broilers at day 28 post hatch. *Journal of Animal and Plant Sciences*, 28: 1239–1246. [Link](#)
- Peng, Q. H., **Khan, N. A.**, Xue, B., Yan, T. H., Wang, Z. S. (2018). Effect of different levels of protein concentrates supplementation on the growth performance, plasma amino acids profile and mTOR cascade genes expression in early weaned yak calves. *Animal Bioscience*, 31: 218–224. [Link](#)
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- *# Sun, B., **Khan, N. A.**, Yu, P. (2018). Molecular spectroscopic features of protein in newly developed chickpea: Relationship with protein chemical profile and metabolism in the rumen and intestine of dairy cows. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 196: 168–177. [Link](#)
- # Sun, B., **Khan, N. A.**, Sun, M., Prates, L. L., Yu, P. (2018). Curve-linear relationship between altered carbohydrate traits with molecular structure and truly absorbed nutrient supply to dairy cattle in new hull-less barley (*Hordeum vulgare* L.). *Animal Feed Science and Technology*, 235: 177–188. [Link](#)
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- \$# Xin, H., **Khan, N. A.**, Sun, K., Sun, F., Rahman, S. U., Fu, Q., Li, Y., Zhang, Y., Hu, G. (2020). Batch-to-batch variation in protein molecular structures, nutritive value and ruminal metabolism in corn coproducts. *Animal Feed Science and Technology*, 263: 114428. [Link](#)
- Alam, S., **Khan, N. A.**, Muhammad, A., Jan, I., Hashmi, M. S., Khan, A., Khan, M. O. (2020). Carryover of Aflatoxin B1 from feed to broilers' tissues and its effect on chicken performance. *Fresenius Environmental Bulletin*, 29: 214–221. [Link](#)
- Khan, K., Ullah, I., Khan, N. A., Khan, S. (2020). Evaluation of mulberry (*Morus alba*) leaves as a concentrate substitute in rabbit diet: Effect on growth performance and meat quality. *Turkish Journal of Veterinary and Animal Sciences*, 44: 1136–1141. [Link](#)
- *# Xin, H., Sun, F., Sun, K., Fu, Q., Li, Y., Zhang, Y., Sadeeq, U. R., **Khan, N. A.** (2020). Batch-to-batch variation in carbohydrates molecular structures, nutritive value and ruminal metabolism in corn coproducts. *Animal Feed Science and Technology*, 263: 114458. [Link](#)
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- Qaisrani, S. N., Rizwan, M., Yaseen, G., Bibi, F., Awais, M., Sarfraz, A., **Khan, N. A.**, Naveed, S., Pasha, T. N. (2021). Effects of dietary oxidized oil on growth performance, meat quality and biochemical indices in poultry – A review. *Annals of Animal Science*, 21: 29–46. [Link](#)
- # Ban, Y., Prates, L. L., Feng, X., **Khan, N. A.**, Yu, P. (2021). Novel use of ultra-resolution Synchrotron vibrational microspectroscopy (SR-FT/VIMS) to assess carinata and canola oilseed tissues within cellular and subcellular dimensions. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 246: 118934. [Link](#)
- \$\$ Xin, H., **Khan, N. A.**, Yu, P. (2021). Steam pressure induced changes in carbohydrate molecular structures, chemical profile and in vitro fermentation characteristics of seeds from new *Brassica carinata* lines. *Animal Feed Science and Technology*, 276: 114903. [Link](#)
- \$\$ Xin, H., **Khan, N. A.**, Liu, X., Jiang, X., Sun, F., Zhang, S., Sun, Y., Zhang, Y., Li, X. (2021). Profiles of odd- and branched-chain fatty acids and their correlations with rumen fermentation parameters, microbial protein synthesis, and bacterial populations based on pure carbohydrate incubation in vitro. *Frontiers in Nutrition*, 8: 733352. [Link](#)
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- Khan, N. U., Usman, T., Sarwar, M. S., Ali, H., Gohar, A., Asif, M., Sultana, N., **Khan, N. A.**, Mobashar, M., Asar, A. S., Wanapat, M. (2022). The prevalence, risk factors analysis and evaluation of two diagnostic techniques for the detection of *Cryptosporidium* infection in diarrheic sheep from Pakistan. *PLoS ONE*, 17: e0269859. [Link](#)
- * Khan, N., Khan, S., Israr, M., Hilal, M. G., Ibrahim, M. N. M., **Khan, N. A.** (2022). Comparing Azikheli buffaloes with Nili Ravi buffaloes for morphometry, productivity and reproductivity. *Pakistan Journal of Agricultural Sciences*, 59(4): 693–701. [Link](#)
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- * Khan, R. U., Naz, S., Ullah, H., **Khan, N. A.**, Laudadio, V., Ragni, M., Piemontese, L., Tufarelli, V. (2023). Dietary vitamin D: Growth, physiological and health consequences in broiler production. *Animal Biotechnology*, 34: 1635–1641. [Link](#)
- Gul, Z., Akbar, A., Naseem, M., Achakzai, J. K., Rehman, Z. U., **Khan, N. A.** (2023). Phytonutrient and antinutrient components profiling of *Berberis baluchistanica* Ahrendt bark and leaves. *Journal of King Saud University - Science*, 35: 102517. [Link](#)
- Akbar, A., Gul, Z., Hussain, N., Al Haddad, A. H., **Khan, N. A.**, Sadiq, M. B., Sher, H. (2023). High throughput biochemical profiling, and functional potential analysis for valorization of grape peduncles. *Scientific Reports*, 13: 8328. [Link](#)
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- # Nazar, M., Xu, Q., Zahoor Ullah, M. W., **Khan, N. A.**, Iqbal, B., Zhu, D. (2023). Integrated laccase delignification with improved lignocellulose recalcitrance for enhancing enzymatic saccharification of ensiled rice straw. *Industrial Crops and Products*, 202: 116987. [Link](#)
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- \$ Zhang, X., Khan, N. A., Yao, E., Kong, F., Chen, M., Khan, R. U., Liu, X., Zhang, Y., Xin, H. (2024). Effect of growing regions on morphological characteristics, protein nutrition, rumen degradation and molecular structures of various whole-plant silage corn cultivars. *PLoS ONE*, 19: e0282547. [Link](#)
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- # Nazar, M., Tian, J., Wang, X., Wang, S., **Khan, N. A.**, Cheng, Y., Zhang, W., Xu, N., Liu, B., Ding, C. (2025). Effect of biological lignin depolymerization on rice straw enzymatic hydrolysis, anaerobic fermentation characteristics and in vitro ruminal digestibility. *International Journal of Biological Macromolecules*, 305: 141664. [Link](#)
- # Nazar, M., Tian, J., Wang, X., Wang, S., **Khan, N. A.**, Cheng, Y., Zhang, W., Xu, N., Liu, B., Ding, C. (2025). Biological delignification and anaerobic fermentation of wheat straw: A promising approach for sustainable utilization of crop straw bioresources. *Industrial Crops and Products*, 227: 120839. [Link](#)
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Conference Papers

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