### Prof. Ghaid Al-Rabadi

#### Personal Information

#### Address

Department of Animal Production,

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Email: ghaid.rabadi@mutah.edu.jo

Age: 43 years

**Nationality:** Jordanian

Status: Married

#### Education

#### Doctor of Philosophy (Animal Science/Animal Nutrition and Feed Technology)

[June 2007 - February 2011]

University of Queensland (top 1% of universities in the world), Brisbane, Australia Research field: Animal nutrition and feed processing.

Thesis title "Cereal processing, particle size distribution and starch digestibility in animal feed"

#### Master of Animal Nutrition and Feed Technology [August 2005 - May 2007]

Wageningen University (top 1% of universities in the world), Wageningen, Netherlands

GPA (8 out of 10, top 5%)

Research experience: effect of different coating variables and liquid addition on physio-chemical properties and palatability of food extrudates. Evaluating extruder performance using physical parameters and extrusion dependent variables.

# **Master of Science (Animal Production - Reproductive Physiology)** [September 2000 - March 2003]

Jordan University of Science & Technology, Irbid, Jordan

GPA (88.3 out of 100). Student Ranking: First

Research experience: The effect of PGF2alpha and/or PMSG treatment on reproductive performance in artificially inseminated or naturally mated Awassi ewes.

#### **Bachelor of Science (Animal Production)** [September 1996 - June 2000]

Jordan University of Science & Technology, Irbid, Jordan

GPA (83.2 out of 100). Student Ranking: Second.

#### Research Specialization

- Animal nutrition (poultry and ruminants nutrition)
- Feed technology
- Animal physiology
- Cereal science

#### Research Profile

Strong understanding in farm animal nutrition and physiology, with particular focus on animal nutrition and feed processing. Able to improvise in demanding situations and finding solutions. Combines strong academic background with a pragmatic research attitude. Industrious, reliable, pleasant team player looking for challenge

# Research projects

Research project title: characterization of dietary cation -anion balance in local animal feed products (Principle investigator).

Research project title: Improving the Utilisation of Cereals and Pulses by monogastric animals: back ground and research opportunities (Principle investigator).

Research project title: effect of large particles removal on broiler growth performance and carcass properties (Principle investigator).

Research project: Cereal processing and particle size distribution :quality control in feed industry (Principle investigator).

Research project : effect of sugar and amino acids on broilers meat quality and growth performance (Associate investigator)

#### **Employment**

**Professor** [September 2011-currently]

Dep. Of Animal Production, Mutah University, Karak, Jordan

- Teaching activities and supervision of undergraduate and postgraduate students
- Co-supervision and organization of the research activities within the team
- Preparation of research grant proposals and publication of the research results
- Supervision of animal farm unit (nutrition technical support)

#### Adjunct Research Fellow [2013-2014]

School of Agricultural & Wine Sciences, Charles Sturt University-Wagga Wagga-Australia

**Head of the Department of Animal Production** [September 2013- September 2014]

#### Faculty of Agriculture, Mutah University, Karak, Jordan

• Management and coordinating diverse work and activities at the department

#### of animal production

**Product Manager**, Provimi, Ho Chi Minh City, Vietnam [April 2010 – September] 2010]

- Developing safe and the best performance feed products for farmers
- Conducting research at farm level and data analysis.
- Technical advice, trouble shooting and provide advanced feed technology to farmers.
- Customer service and staff management.
- Product development .
- Collaboration with foreign R&D members

#### **PhD research student** [June 2007 - February 2011]

School of Animal Studies and Centre for Nutrition and Food Science, Faculty of Agriculture and Food Sciences, The University of Queensland, Brisbane, Australia Cooperative Research Centre (CRC) (full scholarship)

- Developing and optimization of new feed/grain processing methods to increase growth performance of grower Finisher animals.
- Performing intensive enzyme assays using different sources of amylases on starch digestibility in grains (Barley and Sorghum). Studying enzyme kinetics as a function of particle size.
- Determining the nutritional value of raw materials suitable for animals after processing such as pelleting and extrusion.
- Maximizing profitability via improving feed conversion ratio.
- Field Experimentation, data collection and statistical analysis.
- Lab Experimentation, data collection and analysis.
- Writing scientific articles and reports.

#### **Research Assistant** [August 2000 - March 2005]

Faculty of Agricultural, Jordan University of Science and Technology, Irbid, Jordan

- Investigated the relationship among small ruminants (sheep and goat) in term of their reproductive behaviour and the influence of male dominance on flocks.
- Investigated the interactions of environmental factors (photo-period and heat stress) and nutrition on animal reproductive performance.
- Conducted research experiments to investigate; heat detection, interval to estrus and duration, ovulation time and ovulation rate, pregnancy diagnoses using radio-immunoassay (RIA) and ultrasonography.
- Physical analysis of animal feed (pellets).
- Monitored ovarian follicular growth and development using radio immunoassay.

# Chemical analysis of animal feed and products (moisture, protein, carbohydrate, fat and ash). Full graduate Scholarship granted by Cooperative Research Centre, Australia [2007-2011] Full graduate scholarship granted by NUFFIC, Holland [2005-2007] Full graduate scholarship granted by Jordan University of Science & Technology [2000-2003] Gold Honour List for Outstanding Academic Achievement, Faculty of Agriculture, Jordan University for Science & Technology [2000] Honour List (Three Times) for Outstanding Academic Achievement. Faculty of Agriculture, Jordan University for Science & Technology [1996-2000] Publications 1. Al-Rabadi, G. J. 2007. Effect of different coating variables on physio-

- 1. **Al-Rabadi, G. J.** 2007. Effect of different coating variables on physiochemical properties and platability of pet food. Pet food magazine (issued in Dutch). Wageninegn University-The Netherlands. No. 2, June 2007, Page 12-13
- 2. **Al-Rabadi G. J.**, Gilbert, RG & Gidley M. 2009. Effect of particle size on kinetics of starch digestion in milled barley and sorghum grains by alphaamylase. Journal of Cereal Science 50, 198–204
- 3. **Al-Rabadi, G.J.**, Torley, P., Williams, B.A., Bryden, W.L., and Gidley, M.J. 2011. Particle size of milled barley and sorghum and physico-chemical properties of grain following extrusion. Journal of Food Engineering, 104 3: 464-472
- 4. **Al-Rabadi, G.J.**, Torley, P., Williams, B.A., Bryden, W.L., and Gidley, M.J. 2011. Effect of extrusion temperature and pre-extrusion particle size on starch digestion kinetics in barley and sorghum grain extrudates. Animal Feed Science and Technology, 168: 267–279.
- 5. Al-Rabadi, G.J., Torley, P., Williams, B.A., Bryden, W.L., and Gidley, M.J. 2012. Particle size heterogeneity in milled barley and sorghum grains: Effects on physico-chemical properties and starch digestibility. Journal of Cereal Science, 56 2: 396-403.
- 6. **Al-Rabadi, G. J.,** 2013. Influence of hammer mill screen size on processing parameters and starch enrichment in milled sorghum Cereal Research Communication . DOI: 10.1556/CRC.2013.0016.
- 7. **Al-Rabadi, G. J.,** 2013. Effect of hammer mill screen size on processing parameters and starch enrichment in milled barley. Jordan Journal of Agriculture Science 9;162-168.
- 8. Muhammad H. Alu'datt, **Ghaid J. Al-Rabadi**, Inteaz Alli, Khalil Ereifej, Taha

- Rababah, Mohammad N. Alhamad, Peter J. Torley. 2013. Protein coprecipitates: A review of their preparation and functional properties. Food and Bioproduct Processing 91: 327–335
- M.S. Al-Rawashdeh, G. J. Al-Rabadi, N. Al-Ameri, V. R. Mohan. 2013. Kinetics of phytic acid degradation in two accessions of velvet beans treated by UV radiation. Bull. Fac. Agric. Cario. University. 64: 389-395.
- 10. Muhammad H. Alu'datt, Ghaid J. Al-Rabadi, Khaild M. Al-Ismail, Rami M. Althnaibat, Khalil Ereifej, Taha Rababah, Mohammad N. Alhamad and Peter J. Torley. 2015. Characterization and Biological Properties of Dry Fermented Product (Jameed) Manufactured from Cow Milk: Comparison of Sun and Freeze Drying. Journal of Food Processing and Preservation. 39: 282-291.
- 11. Muhammad H. Alu'datt, Taha Rababah, **Ghaid J. Al-Rabadi**, Rami M. Althnaibat, Khalil Ereifej, Mohammad N. Alhamad Khaild M. Al-Ismail, Susan Brewer. 2014. Effect of sun and freeze drying techniques on molecular, fatty acids and therapeutic properties of fermented goat milk. Journal of Food Science and Technology. DOI: 10.1007/s13197-014-1653-7
- 12. **Ghaid J. Al-Rabadi**, Mustafa S. Al-Rawashdeh, Hasan Y. Al-Omari, Sami K. Al-khamaiseh, Muhammad H. Aludatt, Khalil I. Ereifej. 2015. Effects of corn particle size on growth performance and on the gastrointestinal morphology of broiler chickens during growing stage. Journal of Agriculture Science. 11: 451-460.
- 13. **Ghaid J. Al-Rabadi**. 2014. Kinetics of trypsin inhibitor reduction in two accessions of soaked and unsoaked velvet beans treated by UV radiation. International Journal of Agriculture and Forestry. 4: 190-194
- 14. Hasan Y. Al-Omari, Mustafa S. Al-Rawashdeh, **Ghaid J. Al-Rabadi**, Muhammad H. Aludatt, Khalil I. Ereifej. 2014 Effect of removal of large particles from milled barley on growth performance in broiler during growing stage. Bull. Fac. Agric. Cario. University . 65: 133-139.
- 15. Mohammed Ali Bdour, **Ghaid J. Al-Rabadi**, Nofal Al-Ameiri, Atif Mahadeen, Muhammad Aaludatt. 2014. Microscopy analysis of extruded and pelleted animal feed: Quality control in feed industry. Jordan Journal of Biological Science. 7:227-231.
- 16. **Al-Rabadi, G. J.**, 2014. Microscopic analysis of in vitro digested milled barley grains: influence of particle size heterogeneity. Jordan Journal of Biological Sciences. 7: 199-203.
- 17. Al-Uddatt, M., Rababah, T. M., **Al-Rabadi, G. J**, M., Ereifej, K., Gammoh, S., Masadeh, N., Troley, P., 2014. Effect of barley flour and barley isolate additional on the rheological and sensory properties of pita bread. Journal of

- Food Quality. 37: 329-338.
- 18. Ereifej, K., Feng, H., Rababah, T. M., Tashtoush, S. H., Al-Uddatt, M., Al-Rabadi, G. J., Torley, P., Alkasrawi, M., 2015. Microbiological status and nutritional composition of spices used on food preparation. Food and Nutrition Sciences. 6, 1134-1140.
- 19. Sufyan H. Tashtoush, Khalil I. Ereifej, Hao Feng, Taha M. Rababah, Muhammad H. Alu'datt, Sana Gammoh, **Ghaid J. Al-Rabadi**. 2016. Temperature and Acidified Solvent Effect on Total Anthocyanins and RP-HPLC Phenolic Acids Determination of Selected Spices Marketed in Jordan. Food and Nutrition Sciences, 7, 20-29.
- 20. Ereifej, K.I., Feng, H., Rababah, T.M., Tashtoush, S.H., Al-U'datt, M.H., Gammoh, S. and **Al-Rabadi,G.J**.(2016). Effect of Extractant and Temperature on Phenolic Compounds and Antioxidant Activity of Selected Spices. Food and Nutrition Sciences, 7, 362-370. <a href="http://dx.doi.org/10.4236/fns.2016.75038">http://dx.doi.org/10.4236/fns.2016.75038</a>.
- 21. Muhammad H. Alu'datt, Taha Rababah, Mohammad N. Alhamad, **Ghaid J. Al- Rabadi,** Carole C. Tranchant, Ali Almajwal, Stan Kubow & Inteaz Alli (2017): Occurrence, types, properties and interactions of phenolic compounds with other food constituents in oil-bearing plants, Critical Reviews in Food Science and Nutrition, 13:1-10.
- 22. **Ghaid J. Al-Rabadi**, Brenton J. Hosking, Peter J. Torley, Barbara A. Williams, Wayne L. Bryden, Sharon G. Nielsen, John L. Black, Michael J. Gidley. 2016. Regrinding large particles from milled grains improves growth performance in monogastric animals. Animal Feed Science and Technology, 233: 53-63.
- 23. **Ghaid J. Al-Rabadi**. 2017. Minerals composition of wells water in Karak, Jordan and their relation to tolerance limits in dairy cattle. J. Livestock Sci. 8: 187-190
- 24. M. Al-Hijazeen, **Ghaid J. Al-Rabadi.** 2017. Dietary energy source affecting fat deposition mechanism, muscle fiber metabolic and overall meat quality. Regulatory Mechanisms in Biosystems. 8(3), 433–437
- 25. **Ghaid Al-Rabadi** (2017). Characterization of mineral content in olive cake and bakery wastes: application in animal nutrition and bio-fuel production. Ukrainian Journal of Ecology, 7(4), 192–196.
- 26. M Al-Nawaiseh, **G Al-Rabadi**. 2018. Minerals composition of wells water and their contribution to mineral nutrition in dairy cattle: A possible approach in reducing soil salinity by reducing mineral content in manure. Ukrainian Journal of Ecology 8 (3), 71-74
- 27. **Ghaid Al-Rabadi**, Marwan Al-Hijazeen (2018). Variation in dietary cation-anion differences (DCAD) of feed ingredients in relation to milk

- fever disease in dairy cattle. Ukrainian Journal of Ecology, 8(1), 51–56.
- 28. Saddam. A. Al-Dalain, **Ghaid J. Al-Rabadi**, Rolf Nieder, Mohamed Alnawaiseh, Alwin Küsters, Peter, J. Torley, Adel H. Abdel-Ghani and Farh Al-Nasir. 2018. Plant-soil-nutrient status of vegetables and wheat grown on calcareous soil. Crop Res. 53 (3 & 4): 109-116.
- 29. **Ghaid J. Al-Rabadi**. 2018. The Influence of Regrinding Coarse Particles from Milled Corn on Mash Properties, Growth Performance and Blood Chemistry in Broilers Chickens. Jordan Journal of Agricultural Sciences, 14, 71-79.
- 30. **Ghaid J. Al-Rabadi**, Mustafa S. Al-Rawashdeh, Marwan A. Al-Hijazeen and Hasan Y. Al-Omari. 2018. Effects of Sucrose-based High-lysine Diet on Blood Chemistry, Growth Performance, and Gastrointestinal Morphology of Broiler Chickens During the Growing Stage. Journal of Poultry Science. 55: 263-268,
- 31. Mohamed Al-Naweseh and **Ghaid J. Al-Rabadi**. 2018. Minerals composition of wells water and their contribution to mineral nutrition in dairy cattle: A possible approach in reducing soil salinity. Journal of Ecology (8). 70-74. Predicting resistant starch and resistant
- 32. **Ghaid J. Al-Rabadi**. 2018. Predicting resistant starch and resistant starch type 1 from particle size distribution in raw- milled barley grains. ARPN Journal of Agricultural and Biological Science VOL. 13, NO. 11.
- 33. **Ghaid Al-Rabadi**, Farh Al-Nasir, Anwar Jiries, Rasha Al-Dmour, Osama Madanat, Saddam Al-Dalain. 2019. Polychlorinated Biphenyls Residue in Citrus and Vegetables in the Jordan Valley, Jordan Jordan Journal of Earth and Environmental Sciences. 10 (4): 247-251.
- 34. **Ghaid J. Al-Rabadi**, Marwan A. Hijazeen, Mustafa S.Al-Rawashdeh, Saddam A. AL-Dalain, Eyad Tamer, Farah Al-Nasir, Razan Haddad, Nasr Al-Rabadi . 2019. Assessment of heavy metals in milk and dairy cattle feed in Syria: Correlation analysis. Bull. Env. Pharmacol. Life Sci., (9) 43-47
- 35. **Ghaid J. Al-Rabadi**. 2019. Particle size Heterogeneity helps in Quantifying resistant starch and resistant starch type 1 in raw-milled sorghum grains. Adv. Biores., Vol 10 [4]34-39.
- 36. **Ghaid Jameel Al-Rabadi**. 2019. Effect of energy source (oil vs. sucrose) on broiler growth performance, blood chemistry and gastrointestinal morphology. Adv. Biores., Vol 10 [4] 29-33.
- 37. N Alrabadi, **G J Al-Rabadi**, KH Alzoubi. 2019. Ions composition of waste water after reverse osmosis filtration of drinking water: risk analysis and contribution to mineral nutrition. Journal of Applied Animal Research 47 (1), 582-585

- 38. **Ghaid J Al-Rabadi**, Saddam A Al-Dalain, Mustafa S Al-Rawashdeh, Mohamed Al-Nawaiseh, Adel H Abdel-Ghani, Rasha Aldmour, Khalid Al-Abbsi, Farah Al-Nasir. 2019. Proline and agronomic production responses of different barley cultivars to salinity stress: A correlation analysis. Research on Crops 20 (3), 483-487.
- 39. Saddam A Al-Dalain, Adel H Abdel-Ghani, Farah Al-Nasir, **Ghaid J Al-Rabadi**, Rasha Aldmour, Jawad A Dalaeen, Ziad B Al-Rawashdeh. 2019. Response of different Jordanian barley cultivars to different levels of potassium fertilizer in arid and semi-arid areas. Research on Crops 20 (2), 256-261
- 40. Ghaid J Al-Rabadi, Saddam A Al-Dalain, Mustafa Al-Rawashdeh, Mohamed B Al-Nawaiseh, Ezz Al-Dein Al-Ramamneh, Jawad A Dalaeen, Hammad K Aldal'in .2020. The Response of Dill Plant Morphology and Production Parameters to Different Urea Application Levels when Grown in Calcareous Soil: Correlation Analysis. Annals of Biology 36 (1), 132-135
- 41. Al-Nasir, Farh M., Anwar G. Jiries, **Ghaid J. Al-Rabadi**, Muhammad H. Alu'datt, Carole C. Tranchant, Saddam A. Al-Dalain, Nasr Alrabadi, Osama Y. Madanat, and Rasha S. Al-Dmour. "Determination of pesticide residues in selected citrus fruits and vegetables cultivated in the Jordan Valley." LWT 123 (2020): 109005.
- 42. Alrabadi, Nasr, **Ghaid J. Al-Rabadi**, Rasha Maraqa, Haneen Sarayrah, Karem H. Alzoubi, Mohammad Alqudah, and Doa'A. G. Al-u'datt. "Androgen effect on body weight and behaviour of male and female rats: novel insight on the clinical value." Andrologia (2020): e13730.
- 43. Abdel-Ghani, Adel H., Khalid Al-Abbsi, Nael Thaher, Saddam Al-Dalain, **Ghaid Al-Rabadi**, and Farah Al-Nair. "Phenotypic response of barley landrace and its wild progenitor Hordeum spontaneum from Jordan to salt stress. AJCS 14(07):1109-1120 (2020)
- 44. Saddam a. Al-Dalain, **Ghaid Al-Rabadi**, Mustafa s. Al-Rawashdeh, Mohamed b. Al-Nawaiseh1, Jawad a. Dalaeen2, Hasan Y. Al-Omari, Siad J. Al-Rabadi, Farah Al-Nasir and Rasha Aldmour.2020. Variation of Mineral Contents in Barley and Wheat Straws in Karak Governorate: Application in Ruminant Nutrition. Annals of Agri-Bio Research 25 (2): 308-313.
- 45. Nasr Al-Rabadi, Razan Haddad, Marwan A. Al-Hijazeen, Mazen Massoh, Jafar M.I. Alqudah, Anwar G. Jiries, Muhammad H. Alu'datt, Saddam A. Al-Dalain, Rasha S. Al-Dmour, Farh M. Al-Nasir, **Ghaid J. Al-Rabadi**.

- 2020. Effect of garlic powder supplementation level at different growth stages on broiler performance. Bull. Env. Pharmacol. Life Sci 9: 67-76.
- 46. Al-Hijazeen, Marwan A., Mustafa S. Al-Rawashdeh, and **Ghaid J. Al-Rabadi**. "Cooked broiler meat quality affected by different combination levels of Mediterranean medicinal plants." Animal Bioscience (2021).

# **Conference Proceedings**

**Al-Rabadi, G. J.**, Williams, B.A., Torley, P., Bryden, W.L., Nielsen, S. and Gidley, M.J. Effect of particle size on hydration properties of barley and sorghum. Australasian Science Association (APSA) Conference 2009: Manipulating Production XII (p 115)

**Al-Rabadi, G. J.**, Williams, B.A., Torley, P., Bryden, W.L., Nielsen, S. and Gidley, M.J. Effect of particle size on in vitro starch digestion of barley and sorghum by porcine  $\alpha$ -amylase. Australasian Science Association (APSA) Conference 2009: Manipulating Production XII (p 58)

**Al-Rabadi, G. J.**, Williams, B.A., Torley, P., Bryden, W.L., Nielsen, S. and Gidley, M.J. Effect of particle size on viscosity and pasting properties of milled sorghum. Australasian Science Association (APSA) Conference 2009: Manipulating Production XII (p 59)

**Al-Rabadi, G.J.**, Gilbert, R.G. and Gidley, M.J. Effect of particle size of barley and sorghum on the kinetics of in vitro starch digestion by porcine  $\alpha$ -amylase. Australasian Science Association (APSA) Conference 2009: Manipulating Production XII (p 60)

Gidley M.J., **Al-Rabadi, G.J.S.**, Dhital, S., Shrestha, A.K and Gilbert, R.G. 2010. Quantitative Relationships Between Particle Size and Amylase Digestibility for Starch Granules and Milled Grain. The 60<sup>th</sup> Australian Cereal Chemistry Conference, 19-22 September, RACV Club, Melbourne-Australia

Gidley, M. J., Pluschke, A. M., Sopade, P. A., Al-Rabadi, G. J. S., Sultan, A., Gan, C. Y., Li, X., Zhang, D. and Bryden, W. L. (2011). Sorghum grain starch digestibility: Effects of particle size and enzyme treatment. In:, Proceedings of the 22nd Annual Australian Poultry Science Symposium 2011. *Annual Australian Poultry Science Symposium (22nd, APPS, 2011)*, Sydney, Australia, (139-146). 14-16 February 2011.

# Attended conferences and Symposium

- Symposium on Cereal and Nutrition Sciences at the University of Queensland August 29-31, 2008. Australia (speaker).
- Effect of extrusion process on nutritive value of processed feed. APSA Conference, Brisbane, 2007. Australia (speaker).
- Eighth Scientific Agricultural Conference (ESAC-2018) Agricultural challenges and sustainable development Faculty of Agriculture, Mutah University Karak Jordan 15-17 October, 2018. Presented paper; Effect of removal of large particles from milled barley on growth performance in broiler during growing stage

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# Workshops and Courses

- Commercialisation workshop organised by UniQuest, Gold Coast, Australia, 2nd 3rd, March, 2009
- The Research Animal Workshop organised at The University of Queensland on 25th -29th February 2008
- Statistics workshop organised by CRC-program 1B, Brisbane Convention Centre, 2008
- Symposium on Cereal and Nutrition Sciences at the University of Queensland August 29-31, 2008
- APSA Conference, Brisbane, 2007

#### References would be provided upon request