

CURRICULUM VITAE

Bernard Ato Hagan, PhD

1.0 BIO-DATA:

Address: University of Energy and Natural Resources
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Profession: Lecturer (Animal Breeding and Quantitative Genetics)

Marital Status: Married

Religion: Christianity

Nationality: Ghanaian

2.0 EDUCATION AND ACADEMIC QUALIFICATION

2016 - 2020: PhD in Animal Science (Quantitative Genetics), McGill University, Montreal, Québec, Canada

2011 - 2012: Master of Science in Agriculture (Animal Breeding and Genetics), University of New England, Armidale, NSW, Australia

2000 - 2004: Bachelor of Science (Hons) Agriculture, University of Cape Coast, Cape Coast, Ghana

1996 - 1998: SSSCE Certificate (General Agriculture), Presbyterian Boys' Secondary School, Legon, Ghana

1992 - 1995: BECE (Distinction), Kaneshie Presby Junior High School, Accra, Ghana

3.0 EMPLOYMENT HISTORY:

2021 – Date: Lecturer, University of Energy and Natural Resources (UENR). Involved in teaching, research and supervision of both undergraduate and graduate students.

2013 - 2021: Research Scientist in with specialty in Animal Breeding and Genetics at the Council for Scientific and Industrial Research (CSIR-ARI). Worked as the field coordinator and project leader of Canadian International Development Agency (CIDA) and Ministry of Local Government and Rural Development sponsored project, Small Ruminant Breeding Project in 6 districts in the three northern regions of Ghana. I oversee the management of the project in all the beneficiary project communities and also the design of breeding experiments under the project. Also, involved in poultry, pig and grasscutter breed improvement programs at CSIR-ARI,

Katamanso station. Writing of proposals for research grants. I was also the sectional and scientific head of the National Feed Quality Control laboratory between 2020 and 2021.

2007 - 2013: Assistant Research Scientist at CSIR-ARI. Involved in experimental design, data collection and entry, cleaning and statistical analyses. Supervision of the Technical staffs involved in all the on-going breeding projects at the station. Studied the appropriate exposure period for male and female grasscutters under captive breeding.

2005 - 2007: Taught Mathematics and Integrated Science at Aggrey Memorial International School, a private Junior High School in Accra, Ghana. I was responsible for preparing about 80 students for the Basic Education Certificate Examination (BECE).

2001 – 2004: Taught Core Mathematics and Integrated Science at Prestige Remedial Classes at Kanda, Accra.

4.0 PROJECT MANAGEMENT EXPERIENCE

Field Coordinator and leader: Small Ruminant Breeding Programme for achieving food security and poverty reduction. Funded by Canadian International Development Agency (CIDA) and Ministry of Local Government and Rural Development (MLGRD), 2013-2016.

Team member: National Pig Breed Improvement Program. Sponsored by Animal Production Directorate of Ministry of Food and Agriculture (APD, MoFA), 2013.

Team Member: Development of Nuclear lines of broilers (ARIBRO) in Ghana which won the best Agricultural Research in 2009 National Farmers' Day Celebration.

5.0 REVIEW OF SCIENTIFIC CONFERENCE AND JOURNAL PAPERS

1. Growth characteristics of indigenous Guinea fowls (*Numida meleagris*) from Northern Ghana. Journal of Agriculture and Food Research, September, 2021.
2. Genetic characteristics of three strains of *Gallus domesticus* Linnaeus, 1758 in Nigeria using Random Amplified Polymorphic DNA (RAPD) and microsatellite DNA markers. Ghana Journal of Agricultural Science, September 2021.
3. The influence of naked neck gene on the linear body measurements and the correlation between body weight and linear body measurements of the local-exotic crossbred chickens. First Joint Ghana Society and Animal Production and Ghana Animal Science Association Conference; University for Development, Tamale, Ghana, 24th – 27th August, 2021.
4. Whole genome SNPs and SilicoDArTs sequencing of commercial crossbred chickens and indigenous chicken ecotypes from three agro-ecological zones in Ghana. First Joint

- Ghana Society and Animal Production and Ghana Animal Science Association Conference; University for Development, Tamale, Ghana, 24th – 27th August, 2021.
5. Effects of storage temperature and storage duration on quality of hatching eggs of broiler breeders. First Joint Ghana Society and Animal Production and Ghana Animal Science Association Conference; University for Development, Tamale, Ghana, 24th – 27th August, 2021.
 6. Growth characteristics of indigenous Guinea fowls (*Numida meleagris*) from Northern Ghana. First Joint Ghana Society and Animal Production and Ghana Animal Science Association Conference; University for Development, Tamale, Ghana, 24th – 27th August, 2021.
 7. Estimation of genetic parameters of growth traits of indigenous Guinea fowls (*Numida meleagris*) from Northern Ghana. First Joint Ghana Society and Animal Production and Ghana Animal Science Association Conference; University for Development, Tamale, Ghana, 24th – 27th August, 2021.
 8. Performance, haematology and serum biochemical parameters of growing grasscutters (*Thyromys swinderianus*) fed *Phyllanthus amarus* and *Pilogstigma thonngii* leaf mixture as partial replacement for soya bean meal. Net Journal of Agricultural Science, July 15, 2020.
 9. Phenotypic variance in indigenous sheep reared semi-intensively in the Tolon district of northern Ghana. Ghana Animal Science Association Conference, May 17, 2016.
 10. Effects of some fixed factors on linear body measurements in local rabbits in Northern Ghana. Ghana Animal Science Association Conference, July 8, 2016.
 11. Qualitative mutant traits within the population of indigenous chickens in Ghana. Ghana Animal Science Association Conference, July 8, 2016.
 12. Vigour in West African Dwarf kids with the first 24 hours post-partum. Ghanaian Journal of Animal Science, 20th July, 2015.
 13. Growth performance of dry sows fed diets with groundnut vines: A preliminary study. Ghanaian Journal of Animal Science, 20th July, 2015.
 14. Phenotypic characterization of the West African Dwarf (Djallonke) sheep in Tolon district. Ghanaian Society of Animal Production Scientific Conference, University of Ghana, Legon, 13th June, 2013.
 15. Effects of coat colour, ecotype, location and sex on hair density of West African Dwarf goats in Northern Ghana. Ghanaian Society of Animal Production Scientific Conference, University of Ghana, Legon, 13th June, 2013.
 16. Estimation of live weight in Djallonke sheep using body measurements. Ghanaian Society of Animal Production Scientific Conference, University of Ghana, Legon, 13th June, 2013.
 17. Effects of breed and non-genetic factors on milk yield of dual-purpose cattle in Ashanti region. Ghanaian Society of Animal Production Scientific Conference, University of Ghana, Legon, 13th June, 2013.

6.0 TEACHING EXPERIENCE

1. 2021 – Date: Lectured in courses including **Animal Genetics and Breeding II, Introduction to Animal Genetics and Breeding, Research Methods, Introduction to Animal Science, Introductory Genetics and Organic Agriculture.**
2. 2017/2019: Lectured second-year Agricultural Science students of McGill University (AGRIC 215) on the topic “Biodiversity in Agricultural Animals”.
3. Education of 56 final year students from University for Development Studies - Principles of Animal Breeding class on a practical educational tour to the Sheep Nucleus Station at Nyankpala on March, 2014.
4. Delivering of lecture to 30 final year students from University for Development Studies - Principles of Animal Breeding class at the Sheep Nucleus Station at Nyankpala, December, 2014.
5. Delivering of lecture on livestock genetic improvement to 185 final year students from University for Development Studies - Principles of Animal Breeding class at the Sheep Nucleus Station at CSIR-Animal Research Institute, Nyankpala on March, 2015.

7.0 POSITIONS HELD IN THE UNIVERSITY

- i. Department Examinations Officer (Sept. 2021 – Date)
- ii. Member of School of Agriculture and Technology Quality Assurance Sub-committee (Aug. 2021 – Date)
- iii. Chairman of the Postgraduate Programmes Development Committee for the Department of Animal Production and Health (June, 2021 – Date)

8.0 THESIS AND DISSERTATION SUPERVISION AND EXTERNAL EXAMINATIONS

I. Supervised Dissertations

Name	Research Topic	Degree	Academic Year
Bennina Pepreh, Ms.	Effects of egg size on fertility, hatchability and chick weight of local chicken in selected communities in Dormaa central municipality.	BSc	2020 – 2021
Eric Bayulee, Mr.	Examining the challenges of small ruminant	BSc	2020 – 2021

	production in Kpandai district of the Northern region of Ghana		
Zakaria Mahama, Mr.	The impact of Foot and Mouth disease on cattle production in Ghana (the case study of Bole district, Savannah Region)	BSc	2020 – 2021

II. EXTERNAL EXAMINER

Thesis Topic	Institution	Degree	Year
Phenotypic diversity and morphological characterization of local duck (<i>Anas platyrhynchos</i>) in three selected districts in the northern region of Ghana	University for Development Studies	MPhil	October, 2021

9.0 TRAINING AND WORKSHOPS ATTENDED

2022: African Animal Breeding Network (AABNet) Inaugural Training on Animal Breeding at Egerton University, Njoro, Kenya from February 21 to March 13, 2022.

2022: Innovative Teaching Practices in Higher Education for Teaching Staff at the University of Energy and Natural Resources, January 10-12, 2022.

2019: Mixed Model Workshop, American Dairy Science Association, Cincinnati, Ohio, USA, June 26-27, 2019.

2018: DNA extraction and analysis. Op+ Lait workshop at Macdonald campus of McGill University, 29th November 2018.

2018. Programming and computer algorithms in animal breeding with focus on single-step GBLUP and reality of genomic selection at University of Georgia, Athens, USA, May 7-25, 2018.

2015: Delivering systematic information on indigenous farm animal genetic resources of developing countries – Country DAGRIS. International Livestock Research Institute (ILRI), Addis Ababa, Ethiopia, November, 10-11, 2015.

2015: Facilitated a training of innovation platform livestock farmers on best practices on small ruminant supplementary feeding and stock management. Breeding stock management for improved productivity. Integrated Agricultural Research for Development (IAR4D) Innovation Platforms (IP) at Wulugu, March 20, 2015.

2014: 2nd Knowledge sharing network platform for SPIPs of FSEF, Radach Lodge, Tamale, Ghana, November 21, 2014.

2014: TEEAL and AGORA programs Training-of-Trainer Workshop organized by Savanna Agricultural Research Institute of the Council for Scientific and Industrial Research (CSIR-SARI) and supported by Cornell University Albert R. Mann Library and Information Training and Outreach Centre for Africa (ITOCA), South Africa, SARI Nyankpala station, Ghana, November, 18-20, 2014.

2014: Training course in Biometrics and data management with SAS organized by International Institute of Tropical Agriculture (IITA) under the Africa Rising-West Africa project, Little Acre Hotel, Aburi, Ghana, August 4-8, 2014.

2013: Project Results based management and results based reporting, financial management and gender policy development and gender action planning for Sub-project Implementing Partners (SPIPs) of the Food Security and Environment Facility (FSEF) Programme, CIDA-MLGRD, Radach Lodge, Tamale, Ghana, May 9-11, 2013.

2013: Knowledge sharing network platform for SPIPs of FSEF, Radach Lodge, Tamale, Ghana, May, 8, 2013.

2012: Statistical methods for genome-enabled predictions. Summer School, University of New England, Armidale, Australia, February 6-10, 2012.

2009: Workshop on Scientific Writing for Agricultural Researchers in Africa organized by Technical Centre for Agricultural and Rural Cooperation (CTA)/INSTI, Accra, Ghana, July 20-28, 2009.

2009: Workshop on Proposal Writing for Research Scientists, CSIR-ARI, January 13-14, 2009.

2007: Base Certificate in Office 2003, NIIT, Accra, Ghana, May-August, 2007.

10.0 AWARDS

2019: Op+ Lait Graduate student conference grant to attended and give an oral presentation at ADSA Annual meeting in Cincinnati, Ohio, USA.

2018: McGill Graduate Mobility Award to participate in a short course on Programming with FORTRAN at University of Georgia, Athens, Georgia, USA from May 7 – 25, 2018.

2018: McGill Graduate Excellence Fellowship at the Animal Science Department, McGill University, January-September, 2018.

2016: Ghana Education Trust Fund (GETFund) scholarship to study a PhD programme in Animal Science at the McGill University, Montreal, Canada (2016-2020).

2011: Kinghorn Prize in Genetics for 2011: Outstanding student in Genetics at the School of Environment and Rural Science, University of New England, Armidale, Australia.

2011: Australian Government Scholarship to study for a Master's program at the University of New England, Armidale, NSW, Australia.

2009: Member of the best National Agricultural Research team at the 25th National Farmers' Day Celebration in Ghana, 4th December, 2009.

11.0 MEMBERSHIP OF ASSOCIATIONS

1. African Animal Breeding Network (AABNet)
2. Ghana Society of Animal Production (GSAP)
3. Ghana Animal Science Association (GASA)
4. Ghana Science Association (GSA)
5. Research Staff Association (RSA)
6. Canadian Society of Animal Science (CSAS)
7. American Dairy Science Association (ADSA)

12.0 PUBLICATIONS

(Dissertation/Thesis)

1. **Hagan, B.A.** (2020) Genetic selection in Canadian dairy cattle. PhD Thesis, McGill University, Montreal, Canada.
2. **Hagan, B.A.** (2004). Performance of grasscutters kept under captive breeding. B.Sc. Thesis; University of Cape Coast, Ghana.
3. **Hagan, B.A.** (2012). Genotype by environment interaction in carcass and meat quality traits of sheep. M.Sc. Thesis; University of New England, Armidale, NSW, Australia.

13.0 REFEREED JOURNAL ARTICLES

1. **Hagan, B.A.**, Asumah, C., Yeboah, E.D. and Lamptey, V.K. (2022). Modeling the growth of four commercial broiler genotypes reared in the tropics. *Tropical Animal Health and Production*, 54:75-83.
2. **Hagan, B.A.**, Moro-Mendez, J. and Cue, R.I. Realized genetic selection differentials in Canadian Ayrshire, Jersey, and Brown Swiss dairy cattle populations. *Journal of Dairy Science*, 104(2):1951-1966.

3. **Hagan, B.A.** and Cue, R.I. (2020). Generation intervals in Canadian dairy cattle herds. *Canadian Journal of Animal Science*, 100:175-183. (Editor's choice).
4. **Hagan, B.A.**, Moro-Mendez, J. and Cue, R.I. (2020). Realized genetic selection differentials in Canadian Holstein dairy herds. *Journal of Dairy Science*, 103: 1651-1666.
5. Salifu, S., Osei, S.A., **Hagan, B.A.**, Cudjoe-Allegye, E.O. and Avornyo, F.K. (2018). Assessing the age of puberty of Djallonke gimmers born in rainy or dry season using progesterone measurements. *Livestock Research for Rural Development*. Volume 30, Article # 205, <http://www.lrrd.org/lrrd30/12/ssali30205.html>.
6. Salifu, S., Avornyo, K.F., Panyan, K.F. and **Hagan, B.A.** (2018). Influence of season of lambing on postpartum interval to ovarian activity in Djallonke Ewes. *International Journal of Livestock Research*, 8(8), 50-61. DOI:10.5455/ijlr.20180224114616.
7. Adu, E.K., Asafu-Adjaye, A., **Hagan, B.A.** and Nyameasem, J.K. (2017). The grasscutter: an untapped resource of Africa's grasslands. *Livestock Research for Rural Development*. Volume 29, Article #47, <http://www.lrrd.org/lrrd29/3/jnya29047.html>.
8. **Hagan, B.A.**, Asiedu, P., Salifu, S., Konlan, S.P. (2016). The economic value of genetic improvement of the Ashanti Black pig to the industry in Ghana. *Bulletin of Animal Health and Production in Africa*, 64(9), 243-254. <https://www.ajol.info/index.php/bahpa/article/view/150461.html>.
9. **Hagan, B.A.**, Nyameasem, J.K., Asafu-Adjaye, A. and Darfour-Oduro, K.A. (2016). Predicting the live weight of grasscutters using their linear body measurements. *Livestock Research for Rural Development*, 28(8), Article # 143, <http://www.lrrd.org/public-lrrd/proofs/lrrd2808/haga28143.html>.
10. **Hagan, B.A.**, Moghaddar, N., Geesink, G.H. and van der Werf, J.H.J. (2016). Genotype by environment interactions in carcass, meat quality and nutritional value traits of sheep. *Ghanaian Journal of Agricultural Science*, 50, 43-56.
11. Nyameasem, J.K., Adu, E.K., Amoah, K.O. and **Hagan, B.A.** (2015). The effect of male proximity on vaginal patency, estrous cycle length and feed intake of female grasscutters. *Tropical Animal Health and Production*, 47 (8). DOI 10.1007/s11250-015-0972-7.
12. Lamptey, V.K., **Hagan, B.A.**, Asafu-Adjaye, A., Adu-Aboagye, G., Darfour-Oduro, K.A. & Boa-Amponsem, K. (2015). Phenotypic profiles of exotic broiler genotypes in Ghana. *Journal of Animal Science Advances*, 5(9), 1392-1397.
13. **Hagan, B.A.**, Moghaddar, N., Geesink, G.H. & van der Werf, J.H.J. (2014). Genetic parameter estimates for some carcass, meat quality and nutritional value traits of sheep. *Ghanaian Journal of Animal Science*, 8(1), 150-159.
14. Asafu-Adjaye, A., Lamptey, V.K., Adu-Aboagye, G., **Hagan, B.A.** & Boa-Amponsem, K. (2014). Feeding high levels of dietary wheat bran to layer chicken during their growing and laying phase and its effect on laying performance. *Journal of The Ghana Science Association*, 15(2), 21-30.

15. Darfour-Oduro, K., **Hagan, B.A.** & Asafu-Adjaye, A. (2014). Lactation curves of Friesian-Sanga and Sanga cows in Ghana. *Livestock Research for Rural Development*, 26(10) Article #188, <http://www.lrrd.org/lrrd26/10/darf26188.htm>.
16. **Hagan, B.A.**, Nyameasem, J.K., Asafu-Adjaye, A. & Duncan, J. (2014). Effects of non-genetic factors on the birth weight, litter size and pre-weaning survivability of West African Dwarf goats in the Accra Plains. *Livestock Research for Rural Development*, 26(1), Article #13, <http://www.lrrd.org/lrrd26/1/haga26013.htm>.
17. **Hagan, B.A.**, Asafu-Adjaye, A., Adu-Aboagye, G., Lamptey, V.K. & Boa-Amponsem, K. (2013). Performance of different genotypes of commercial layer chicken fed high levels of dietary wheat bran. *Ghanaian Journal of Animal Science*, 7, 40-45.
18. **Hagan, B.A.**, Adu-Aboagye, G., Asafu-Adjaye, A., Lamptey, V., & Boa-Amponsem, K. (2013). Response of two broiler genotypes to diets containing cocoa pod husk. *Online Journal of Animal and Feed Research*, 3(1), 15-19.
19. Nkegbe, E., Assuming-Bediako, N., Aikins-Wilson, S. & **Hagan, B.A.** (2013). Meat consumption trends in some selected households in Accra Ghana. *Asian Journal of Agriculture and Food Sciences*, 1(4), 151-157.
20. **Hagan, B.A.**, Asafu-Adjaye, A., Darfour-Oduro, K.A., & Boa-Amponsem, K. (2012). Effects of male-female exposure period on some reproductive parameters of grasscutter (*Thryonomys swinderianus*) and the pre-weaning growth performance of their young ones. *Livestock Research for Rural Development*, 24(12), Article #228, <http://www.lrrd.org/lrrd24/12/haga24228.htm>.
21. Darfour-Oduro, K.A., Sottie, E.T., **Hagan, B.A.** and Okantah, S.A. (2009). Milk yield and lactation length of Ghana Sanga and its crosses with the Friesian raised under agropastoral system. *Tropical Animal Health and Production*, 42, 349-356.
22. Obese, F.Y., Darfour-Oduro, K.A., Bekoe, E., **Hagan, B.A.** and Gomda, Y. (2008). Reproductive status following artificial insemination in Sanga cows in the Accra Plains of Ghana. *Livestock Development for Rural Development*, 20(12), Article #191, <http://www.lrrd.org/lrrd20/12/obes20191.htm>.

12.0 EDITED CONFERENCE PAPERS/ABSTRACTS

1. **Hagan, B.A.**, Asumah, C., Yeboah, E.D. and Lamptey, V.K. (2021). Modeling the growth of four commercial broiler genotypes reared in the tropics. Proceedings of the 1st Joint Ghana Society and Animal Production and Ghana Animal Science Association Conference; Theme: Sustainable Rearing for Food and Jobs in the Era of COVID-19: The role of stakeholders in the Animal Industry. University for Development, Tamale, Ghana, 24th – 27th August, 2021.
2. Asumah, C., Yeboah, E.D., Inusa, S.O., **Hagan, B.A.** and Frimpong, Y.O. (2021). Management, prospects and constraints of quail farming in the Tamale Metropolis of Ghana. Proceedings of the 1st Joint Ghana Society and Animal Production and Ghana Animal Science Association Conference; Theme: Sustainable Rearing for Food and Jobs in the Era of COVID-

- 19: The role of stakeholders in the Animal Industry. University for Development, Tamale, Ghana, 24th – 27th August, 2021.
3. **Hagan, B.A.**, Moro-Mendez, J. and Cue, R.I. (2019). Realized genetic selection differentials in Canadian Ayrshire dairy cattle herds. Abstracts of the 2019 American Dairy Science Association Annual Meeting, Cincinnati, Ohio, USA, June 23-36, 2019.
 4. **Hagan, B.A.** and Cue, R.I. (2018). A tool for monitoring genetic selection differentials in dairy herds in Canada. Proceedings of the 14th International Conference on Precision Agriculture, June 24 – 27, 2018, Montreal, Quebec, Canada.
 5. **Hagan, B.A.**, Salifu, S., Panyan, E., Lamptey, V.K., Asafu-Adjaye, A., Agombire, M.B., Adams, M., Boa-Amponsem, K. and Karbo, N. (2016). Influence of both genetic and non-genetic factors on the performance of lambs under on-station conditions. Proceedings of the 33rd Biennial Conference of Ghana Animal Science Association “Climate smart animal husbandry systems: Key to improving animal production”. University for Development Studies, Tamale, Ghana. 3rd-6th August, 2016.
 6. Lamptey, V.K., Asafu-Adjaye, A., **Hagan, B.A.**, Adu-Aboagye, G. and Boa-Amponsem, K. (2016). Feeding high levels of wheat bran during the growing period on laying performance of layer chicken. Proceedings of the 33rd Biennial Conference of Ghana Animal Science Association “Climate smart animal husbandry systems: Key to improving animal production”. University for Development Studies, Tamale, Ghana. 3rd-6th August, 2016.
 7. **Hagan, B.A.** and Dwumah, K. (2015). Effects of environmental factors on birth weight, litter size and pre-weaning survivability on Djallonke sheep in the Accra Plains. Proceedings of the 19th Biennial Conference of Ghana Society of Animal Production, University of Cape Coast, Cape Coast, Ghana, 5-8th August, 2015. Theme: Climate Change and Livestock Development.
 8. Konlan, S.P., Addah, W., Dei, H.K. and **Hagan, B.A.** (2014). Evidence of emerging feed market in Northern Ghana for ruminant production. Proceedings of the 32nd Biennial Conference of Ghana Animal Science Association, International Conference Centre, University for Development Studies, Central Administration, Tamale. 20th – 22nd August, 2014.
 9. Adu, E.K., Asafu-Adjaye, A. and **Hagan, B.A.** (2013). The grasscutter: An untapped resource of Africa’s grasslands. Proceedings of the 22nd International Grassland Congress “Revitalising grasslands to sustain our communities”. Sydney, New South Wales, Australia, 15th – 19th Septmeber, 2013.
 10. **Hagan, B.A.**, Moghaddar, N., Geesink, G.H. and van der Werf, J.H.J. (2013). Genotype by environment interactions in carcass, meat quality and nutritional value traits in sheep. Proceedings of 18th Biennial Conference of Ghana Society of Animal Production, College of Agriculture and Consumer Sciences, University of Ghana, Legon. 24th – 26th July, 2013.

11. Lamptey, V.K., **Hagan, B.A.**, Asafu-Adjaye, A., Adu-Aboagye, G., Darfour-Oduro, K.A. and Boa-Amponsem, K. (2013). Phenotypic profiles of exotic broiler genotypes in tropical environment. Proceedings of 18th Biennial Conference of Ghana Society of Animal Production, College of Agriculture and Consumer Sciences, University of Ghana, Legon. 24th – 26th July, 2013.
12. Asafu-Adjaye, A., Lamptey, V.K., Adu-Aboagye, G., **Hagan, B.A.** & Boa-Amponsem, K. (2013). Feeding high levels of dietary wheat bran to layer chicken during their growing and laying phase and its effects on laying performance. Proceedings of 18th Biennial Conference of Ghana Society of Animal Production, College of Agriculture and Consumer Sciences, University of Ghana, Legon. 24th – 26th July, 2013.
13. **Hagan, B.A.**, Asafu-Adjaye, A., Darfour-Oduro, K.A., & Boa-Amponsem, K. (2010). Effects of male-female exposure period on some reproductive parameters of grasscutter (*Thryonomys swinderianus*) and the pre-weaning growth performance of their young ones. Proceedings of the 30th Biennial Conference of Ghana Animal Science Association held at CSIR-Animal Research Institute, Katamanso, Ghana on August, 2010.

12.0 UNEDITED CONFERENCE PAPERS

1. **Hagan, B.A.** and Cue, R.I. (2018). Generation intervals in Canadian dairy cattle. Annual Scientific Meeting of Op+Lait. Macdonald campus of McGill University, Montreal, 28th November, 2018.
2. **Hagan, B.A.**, Boa-Amponsem, K., Karbo, N. & Panyan, E. (2014). Small Ruminant Breeding Programme for achieving food security and poverty reduction in the three northern regions of Ghana. Mining and Agriculture Symposium: From Resource to Development Driver organised by Australian Awards Africa held at Speke Resort Munyonyo, Kampala, Uganda, 8-10th October, 2014.

13.0 TECHNICAL REPORTS

1. **Hagan, B.A.** and Boa-Amponsem, K. (2015). Profile of selected livestock farmers in seven districts of Northern Ghana. Technical Report submitted to National Coordinator, Food Security and Environmental Facility (FSEF), CIDA/MLGRD. March, 2015.
2. **Hagan, B.A.**, Boa-Amponsem, K. and Karbo, N. (2014). Small Ruminant Breeding Programme for achieving Food Security and Poverty Reduction in the Northern, Upper East and West Regions. Third Quarter Report Submitted to the National Coordinator of Food Security and Environmental Facility (FSEF), CIDA/MLGRD. January-March, 2014.
3. Aboe, P.A.T., Botchwey, V., Domozoro, C., **Hagan, B.A.**, Sam, K.O., Lamptey, V., Asafu-Adjaye, A., Munkaila, L. and Panyan, E.K. (2013). Baseline study of the Small Ruminant Industry in the Northern, Upper East and Upper West Regions of Ghana.

Report (Preliminary) Submitted to Project Co-ordinator. CSIR-Animal Research Institute, Frafraha. 15th September, 2013.

4. **Hagan, B.A.**, Boa-Amponsem, K. and Karbo, N. (2013). Small Ruminant Breeding Programme for achieving Food Security and Poverty Reduction in the Northern, Upper East and West Regions. First Quarter Report Submitted to the National Coordinator of Food Security and Environmental Facility (FSEF), CIDA/MLGRD. June-August, 2013.

13.0 BULLETINS/HANDBOOKS/PAMPHILETS/LEAFLETS/MANUAL

1. **Hagan, B.A.** (2014). Cloning animals – the technical issues surrounding the low success rate in animals cloning. GSAP Newsletter, Vol. 12, Issue 1, January, 2014.
2. **Hagan, B.A.** and Boa-Amponsem, K. (2014). Guidelines for the management of Small Ruminant Breeding Flock: Multiplier Edition. Small Ruminant Breeding Programme for achieving Food Security and Poverty Reduction in the Northern, Upper East and West Regions of Ghana. Training manual for multiplier farmers.

14.0 PERSONAL SKILLS AND COMPETENCE

1. Good communication skills acquired from the various seminars I have attended in the course of my work and my leadership role at my church. Also, good analytical skills.
2. Ability to tolerate varied views acquired during my work as a class teacher in Junior High School. During my undergraduate days, I voluntarily worked at a public school and government hospital during vacations. This and many other services won me Head of State Award (Silver Medal Division).
3. Computer proficiency in Microsoft office professional and statistical software packages (WOMBAT, DMU, MiX99, Genstat, ASReml, SAS, R and SPSS). Excellent ability in navigation through the Internet.
4. Writing of scientific reports, publications and project proposals has developed my writing skills.
5. Teaching skills through the teaching and lecturing of courses to both High school and University students.
6. A good football player during my Junior High School days. This sport has developed my perseverance and teamwork ability.

15.0 HOBBIES

1. Listening to music, playing football and site seeing.

16.0 REFEREES

1. Dr. Kwame Boa-Amponsem
(Chief Research Scientist)
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2. Prof. E. K. Adu
(Former Director, Chief Research Scientist)
CSIR-Animal Research Institute
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3. Rev. Stephen Azundem
(Minister of religion)
Ghanaian Presbyterian Church of Montreal
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