



Profile of Seth Koranteng Agyakwah (PhD)

Dr Seth Koranteng Agyakwah is an experienced Research Scientist of the Council for Scientific and Industrial Research's (CSIR) Water Research Institute (WRI) and a Lecturer at the CSIR College of Science and Technology (CCST). Dr S.K. Agyakwah is the Officer-in-Charge of the CSIR- Water Research Institute's Aquaculture Research and Development Centre (ARDEC) at Akosombo, Ghana. Born in 1973 in Koforidua, Ghana, he was trained generally in Fisheries Science, with specialization in Fish Population Genetics, Fish Breeding, Aquaculture Development and Fisheries Ecology and Management. He holds BSc degree in Biological Sciences (1999) from Kwame Nkrumah University of Science and Technology, MPhil degree in Fisheries Sciences (Population Genetics) (2004) from the University of Ghana and PhD in Fisheries Sciences (Fisheries Management) (2010) also from University of Ghana. Dr S.K. Agyakwah's work experience in Aquaculture development, fish seed improvement, fish hatchery development and management, broodstocks performance management and commercial production of fingerlings and table-size fish dates back from the year 2000 when first employed as an Assistant Research Officer at the CSIR - Water Research Institute. He has worked on several donor funded and Government of Ghana projects. These include; WorldFish - INGA Genetic Improvement project in the development, improvement and dissemination of fast growing 'Akosombo' strain of the Nile Tilapia from 2003 to present, for the advancement of aquaculture in Ghana and West African Sub-region, The trans-national Tilapia Volta Project (TIVO) (2009-2012), Swiss' SNP-FiBL-Ghana Development and utilization of Black Soldier fly larval meal for sustainable Aquaculture in West Africa, CGIAR's Challenge Program for Water and Food (CP-34) in the Volta Lake, by assessing catch and reproductive characteristics of the Lake's fisheries between 2005 and 2009; World Bank-COTVET capacity building of fish farmers and World Bank – MoFAD's West Africa Regional Fisheries Program (WARFP). Dr. S.K.

Agyakwah has been involved in the development of National Aquaculture Policy, Regulations and Standards. He has served on several National committees of the Ministry of Fisheries and Aquaculture Development of Ghana. He superintends over the selective breeding and improvement of the robust and domesticated “Akosombo” strain of the Nile Tilapia *Oreochromis niloticus* for

aquaculture production.

He is presently coordinating in Ghana, the NWO-WOTRO CGIAR supported Fish seed value chain systems improvement project, and also assembling natural populations of catfishes (e.g. *Clarias sp* and *Bagrus sp.*

) for performance assessment that may lead to development of ‘new’ products for the aquaculture industry.

ONGOING RESEARCH

- Accelerating aquaculture development in Ghana through sustainable Nile Tilapia seed production and dissemination. The Netherlands – CGIAR Research Program (NWO-WOTRO CGIAR project). 2019 to 2021.

- Genetic diversity and structure among farmed Nile tilapia populations in Ghana. Funded by Environmental Protection Agency, Ghana.

- Performance assessment of Nile tilapia broodstocks under different management strategies.

- Culture performance evaluation of populations of the African catfish and Bagrid catfishes.

- Fish feed handling and storage, its implications for food security. CSIR Competitive Research Grant Scheme

- Development, packaging and evaluation of Black soldier fly larval meal for aquaculture development. Swiss SNPs funded project in collaboration with FiBL, Switzerland.

SELECTED PUBLICATIONS

- Eniade, A.A., D.O. Odedeyi, A.O. Bello-Olusoji, O.T. Adebayo, and S.K. Agyakwah (2019).

Population structure, fecundity and morphological characteristics of *M. vollohovenii* (Herklots, 1857) on lower volta river basin channel, Ghana.

African Journal of Biological Sciences

.

Vol.

1(1):

1 - 11

.

- Borovski, T., R. Tadmor-Levi, J. Shapiro, G. Rubinstein, S.K. Agyakwah, G. Hulata and L. David (2018). Historical and recent reductions in genetic variation of the *Salmo gairdneri* population in the Sea of Galilee. *Conservation Genetics*

.

<https://doi.org/10.1007/s10592-018-1102-7>

. © Springer Nature B.V.

- Ewusie, E. A., P. K. Kwapong, G. Ofosu-Budu, C. Sandrock, A. Akumah, E. Nartey, C. Teye-Gaga, S. K. Agyakwah and N. Adamtey (2018). Development of Black Soldier Fly, *Hermetia illucens* (Diptera)

Stratiomyidae

) in Selected Organic Market Waste Fractions in Accra, Ghana
Asian Journal of Biotechnology and Bioresource Technology

. Article no. AJB2T.42371

Vol. 4(1):

1-16 pp.

- Eniade, A.A., D.O. Odedeyi, A.O. Bello-Olusoji, O.T. Adebayo, and S.K. Agyakwah, (2018). Aspects of Habitat Ecology of *Macrobrachium vollenhovenii* (Herklots, 1857) on the Lower Volta River, Ghana. *Journal of Biological Studies*.

Vol.1(1)

: pp 76-89.

<https://onlinejbs.com/>

- Lind, C.E., A. Safari, S.K. Agyakwah, F.Y.K. Attipoe, G.O. El-Naggar, A. Hamzahd, G. Hulata, N.A. Ibrahim, H.L. Khaw, N.H. Nguyen, A.O. Maluwa, M. Zaid, T. Zake, R.W. Ponzoni (2015). Differences in sexual size dimorphism among farmed tilapia species and strains undergoing genetic improvement for body weight. *Aquaculture Reports*.

Vol. 1

, pp 20-27.

©

Elsevier.

- Dankwa, H.R., S.K. Agyakwah, K. Agbogah, J. Kolding, E. K. Abban, and E. Amerdome

(2014). Catch composition and efficiency of major fishing gears used in stratum II of the Volta Lake – implications for managing the fisheries. *Ghana Journal of Science*, **54** pp 83-92.

- Asante, K.A., S. Takahashi, T. Itai, T. Isobe, G. Devanathan, M. Muto, S.K. Agyakwah, S. Adu-Kumi, A. Subramanian and S. Tanabe, (2013). Occurrence of halogenated contaminants in inland and coastal fish from Ghana: levels, dietary exposure assessment and human health implications. *Ecotoxicology and Environmental Safety*, **94** pp 123–130.

- Dankwa, H.R., S. Agyakwah, K. Agbogah, E. K. Abban and J. Kolding (2011). Review of catch trends and changes in fish species composition of the Volta Lake during its 45 years of existence. *Ghana Journal of Science*, **51** pp 43-50.

EDITED TECHNICAL AND CONFERENCE REPORTS

- Rurangwa, E., Agyakwah, S.K., Boon, H. and Bolman, B.C. (2015). Development of Aquaculture in Ghana: Analysis of the fish value chain and potential business case. IMARES-Wageningen, UR The Netherlands, Report No. C021/15. CSIR/WRI/ERR/ER/2015/1. [http://ghana.nlembassy.org/binaries/content/assets/postenweb/g/ghana/embassy-of-the-kingdom-of-the-netherlands-in-accra/import/products and services/trade information/trade and economy/wur--aquaculture-report.pdf](http://ghana.nlembassy.org/binaries/content/assets/postenweb/g/ghana/embassy-of-the-kingdom-of-the-netherlands-in-accra/import/products%20and%20services/trade%20information/trade%20and%20economy/wur--aquaculture-report.pdf)

- Attipoe, FK, Mensah, ET-D, Agyakwah, S.K (2015). Use of improved “Akosombo” strain of Nile Tilapia for cage culture in Ghana: A model of Technology transfer to Ghanaian Fish Farmer. Technical Report 1, CSIR/WRI/ERR/FKA/2015/1.

- Attipoe, F.Y.K., J. Blay Jr., S. Agyakwah, R.W. Ponzoni, H.L. Khaw and E.K. Abban (2013). Genetic parameters and response to selection in the development of Akosombo strain of the Nile tilapia, *Oreochromis niloticus* in the Volta Basin, Ghana. 10th International Symposium on Tilapias in Aquaculture (ISTA10), 6 -10 October 2013, Jerusalem, Israel.

- Borovski, T., G. Rubinstein, J. Shapiro, S.K. Agyakwah, G. Hulata and L. David (2013). Low genetic variation and the decline in population size of *Sarotherodon galilaeus* in the Sea of Galilee.

10th

International Symposium on Tilapias in Aquaculture (ISTA10)
, 6 -10 October 2013, Jerusalem, Israel.

- Asante K.A., Takahashi S., Itai T., Isobe T., Devanathan G., Dapaah-Siakwan S., Agyakwah S.K. and Tanabe S. (2011). Assessment of Human Exposure to PCBs and BFRs through Fish Consumption in Ghana. DIOXIN 2011, 31st International Symposium on Halogenated Persistent Organic Pollutants. 21 - 25 August 2011 Brussels, Belgium. Paper No. 1929.

- Agyakwah, S.K., Dankwa H.R., Abban E.K., Karikari, A.Y. and Brummett R. (2011). Fish

catch assessment in a tropical reservoir towards improved fisheries management: A case study in a segment of the Volta Lake. Ghana Science Association 27th Biennial Conference Book of Abstracts. 82 pp.

- Attipoe, F.Y.K. and Agyakwah, S.K. (2008). Status of catfish farming and research in Ghana. (P 23 – 32). *In: R.W. Ponzoni and N.H. Nguyen (eds.), "Proceedings of a Workshop on the Development of a Genetic Improvement Program for the African Catfish *Clarias gariepinus*"*. WorldFish Center Conference Proceedings Number 1889. The WorldFish Center, Penang, Malaysia. 130 pp.
- Agyakwah S.K. (Contributor), (2006). Review of Volta Lake characteristics and fish production since its formation *(a component of Challenge Program on Water and Food – CP 34: Improved Fisheries Productivity and Management in Tropical Reservoirs)*. E.K. Abban and H.R. Dankwa (eds.) Water Research Institute. Tech. Rep. WRI/TR No. 75. 47 pp.
- Abban E.K., Agyakwah S.K. and Falk T.M. (2004). Evaluation of early life culture performance of Ghanaian populations of *Sarotherodon melanotheron* (Teleostei, Cichlidae). *In: E.K. Abban, C.M.V. Casal, P. Dugan and T.M. Falk (eds.) Biodiversity, Management and Utilization of West African Fishes. WorldFish Center Conference Proceedings, No. 1718, 63 pp.*
- Abban E.K., Agyakwah S.K. and Falk T.M. (2004). Socio-economic importance of Tilapiine Fishes (Teleostei, Cichlidae). *In: E.K. Abban, C.M.V. Casal, P. Dugan and T.M. Falk (eds.) Biodiversity, Management and Utilization of West African Fishes. WorldFish Center Conference Proceedings, 63 pp.*