Kojo Atta Aikins

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RESEARCH

Areas: Civil and Structural Engineering · Mechanical Engineering · Soil Science · Agronomy and Crop Science · Plant Science · Environmental Chemistry

RESEARCH SUMMARY

17	525	10	11	3.06	41%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 17 publications listed below, 2013–2024. Field-weighted impact is the mean over the 17 works scored for it; 1.00 is the world average for works of the same field, type and year. 7 of the 17 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Research Associate 2026–present
School of Agriculture, Food and Wine, Adelaide University, Adelaide, Australia

Research Associate 2023–2026
STEM, University of South Australia, Adelaide, Australia

Lecturer 2013–2025
Agricultural and Biosystems Engineering, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

PhD 2016–2020
Faculty of Health, Engineering and Sciences, University of Southern Queensland, Toowoomba, Australia

MEng. Mechanical Engineering 2011–2013
Hanbat National University, Daejeon, Korea

BSc. Agricultural Engineering 2006–2010
Agricultural Engineering, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

PUBLICATIONS

Journal articles 16

1. Kodwo A. Budu, Emmanuel Y.H. Bobobee, **Kojo A. Aikins**, Albert K. Arkoh (2024). Effects of variations in speed and cutting blade projection on performance and conformity of slice thickness to the adjustment of the cutting blade projection of motorised cassava slicer. *Journal of Engineering Research*. https://doi.org/10.1016/j.jer.2024.07.004
2. Emmanuel Awuah, **Kojo Atta Aikins**, Diogenes L. Antille, Jun Zhou, Bertrand Vigninou Gbenontin, Peter Mecha, Zian Liang (2023). Discrete Element Method Simulation and Field Evaluation of a Vibrating Root-Tuber Shovel in Cohesive and Frictional Soils. *Agriculture*. https://doi.org/10.3390/agriculture13081525

3. **Kojo Atta Aikins**, Mustafa Ucgul, James B. Barr, Emmanuel Awuah, Diogenes L. Antille, Troy A. Jensen, Jacky M. A. Desbiolles (2023). Review of Discrete Element Method Simulations of Soil Tillage and Furrow Opening. *Agriculture*. https://doi.org/10.3390/agriculture13030541
4. Julius H. Kotir, Lindsay W. Bell, John A. Kirkegaard, Jeremy Whish, **Kojo Atta Aikins** (2022). Labour demand – The forgotten input influencing the execution and adoptability of alternative cropping systems in Eastern Australia. *Agricultural Systems*. https://doi.org/10.1016/j.agsy.2022.103516
5. Emmanuel Awuah, Jun Zhou, Zian Liang, **Kojo Atta Aikins**, Bertrand Vigninou Gbenontin, Peter Mecha, Nelson Richard Makange (2022). Parametric analysis and numerical optimisation of Jerusalem artichoke vibrating digging shovel using discrete element method. *Soil and Tillage Research*. https://doi.org/10.1016/j.still.2022.105344
6. **Kojo Atta Aikins**, James B. Barr, Diogenes L. Antille, Mustafa Ucgul, Troy A. Jensen, Jack M.A. Desbiolles (2021). Analysis of effect of bentleg opener geometry on performance in cohesive soil using the discrete element method. *Biosystems Engineering*. https://doi.org/10.1016/j.biosystemseng.2021.06.007
7. **Kojo Atta Aikins**, Diogenes L. Antille, Mustafa Ucgul, James B. Barr, Troy A. Jensen, Jack M.A. Desbiolles (2021). Analysis of effects of operating speed and depth on bentleg opener performance in cohesive soil using the discrete element method. *Computers and Electronics in Agriculture*. https://doi.org/10.1016/j.compag.2021.106236
8. **Kojo Atta Aikins**, Mustafa Ucgul, James B. Barr, Troy A. Jensen, Diogenes L. Antille, Jack M.A. Desbiolles (2021). Determination of discrete element model parameters for a cohesive soil and validation through narrow point opener performance analysis. *Soil and Tillage Research*. https://doi.org/10.1016/j.still.2021.105123
9. **Kojo Atta Aikins**, Troy A. Jensen, Diogenes L. Antille, James B. Barr, Mustafa Ucgul, Jack M.A. Desbiolles (2021). Evaluation of bentleg and straight narrow point openers in cohesive soil. *Soil and Tillage Research*. https://doi.org/10.1016/j.still.2021.105004
10. Gustavo F. Nardón, Guido F. Botta, **Kojo A. Aikins**, David Rivero, Fernando Bienvenido, Diogenes L. Antille (2021). Seeding System Configuration Effects on Sunflower Seedling Emergence and Yield under No-Tillage. *Soil Systems*. https://doi.org/10.3390/soilsystems5040072
11. **Kojo Atta Aikins**, James B. Barr, Mustafa Ucgul, Troy A. Jensen, Diogenes L. Antille, Jack M. A. Desbiolles (2020). No-tillage furrow opener performance: a review of tool geometry, settings and interactions with soil and crop residue. *Soil Research*. https://doi.org/10.1071/sr19153
12. **Kojo Atta Aikins**, Troy A. Jensen, Diogenes L. Antille (2020). Three-dimensional scanning of soil surface and furrow profiles using a portable and affordable unit. *Biosystems Engineering*. https://doi.org/10.1016/j.biosystemseng.2020.03.002
13. **Kojo Atta Aikins**, Diogenes L. Antille, Troy A. Jensen, John Blackwell (2018). Performance comparison of residue management units of no-tillage sowing systems: A review. *Engineering in Agriculture Environment and Food*. https://doi.org/10.1016/j.eaef.2018.12.006
14. **K. A. Aikins**, J. K. Afriyie, I. N. Amanor, S. M. Ackah, E. Y. H. Bobobee (2016). Assessment of Tractor Maintenance Practices of Tractor Operators at Ejura, Ghana. *International Journal of Science and Engineering Applications*. https://doi.org/10.7753/ijsea0505.1005
15. J. K. Afriyie, O-W. Achaw, **K. A. Aikins**, C. K. K. Sekyere, A. Bart-Plange (2016). Field Drying of Cassava in a Solar Tent Dryer equipped with a Solar Chimney. *International Journal of Science and Engineering Applications*. https://doi.org/10.7753/ijsea0503.1007
16. **KOJO ATTA AIKINS**, SANG-HYEOK LEE, JONG MIN CHOI (2013). TECHNOLOGY REVIEW OF TWO-STAGE VAPOR COMPRESSION HEAT PUMP SYSTEM. *International Journal of Air-Conditioning and Refrigeration*. https://doi.org/10.1142/s2010132513300024

Conference papers 1

1. **Kojo Atta Aikins**, Diogenes L. Antille, Troy A. Jensen, John Blackwell (2017). Advances in residue management mechanisms of zero-tillage planters. *2017 Spokane, Washington July 16 - July 19, 2017*. https://doi.org/10.13031/aim.201700449