

Auburn University Biosystems Engineering

Controlled Environment in Agriculture Research Focus Area 2023 Publications

- Kalvakaalva, R.*, Smith, M., Prior, S.A., Runion, G.B., Ayipio, E., Blanchard, C., Wells, D., Blersch, D., Adhikari, S., Prasad, R. and Hanson, T.R., Higgins, B.T. 2023. Life cycle assessment of a decoupled biofloc aquaponics facility across seasons. *Journal of Cleaner Production*, 429, p.139356.
- Proano-Pena, G.*, Kardel, K., Blersch, D. M., & Carrano, A. L. 2023. The effect of interstitial surface spacing on algal biomass accumulation. *Algal Research*, 70, 102980.
- Kalvakaalva, R.*, Smith, M., Ayipio, E., Blanchard, C., Prior, S.A., Runion, G.B., Wells, D., Blersch, D., Adhikari, S., Prasad, R., Hanson, T.R., Wall, N., and Higgins, B.T., 2023. Mass-balance process model of a decoupled aquaponics system. *Journal of the ASABE*, 66(4): 955-967.
- Chesser, G.D., J.L. Purswell, J.D. Davis, J.K. Ward, T. Tabler, & Y. Zhao. 2023. Comparison of outside air and sol-air design temperatures for estimating insulation needs. *Appl. Engr. in Ag.* 39(4): 409-416. (doi.org/10.13031/aea.15424).
- Davis, J.D., B.D. Arnold, C.R. Smith, K.G. Griggs, M.S. Rueda, J.C. Campbell, C.M. Edge and J.L. Purswell. 2023. Field survey of trunk line heating gas leaks in commercial broiler houses. *Appl. Engr. in Ag.* 39(3): 279-283. (doi.org/10.13031/aea.15470).
- Linhoss, J.E., J.D. Davis, J.C. Campbell, J.L. Purswell, K.G. Griggs, C.M. Edge. 2023. Light intensity and uniformity in commercial broiler houses using lighting programs derived from Global Animal Partnership (GAP) lighting standards. *J. Appl. Poult. Res.* 32(1): 1-9. (doi: 10.1016/j.japr.2022.100309).
- Rowland, M.R.*, G.D. Chesser, J.E. Linhoss, J.D. Davis, J.C. Campbell, and J.L. Purswell. 2023. Field Survey of electrical grounding systems of commercial broiler houses in Mississippi and Alabama. *Appl. Engr. in Ag.* 39(2): 245-249 (doi: 10.13031/aea.15501).
- Campbell, J.C., J.D. Davis, K.G. Griggs, and C.M. Smith. Practical Applications: 5 Fan Fundamental Maintenance Tips. *Alabama Poultry*. 18(2):27-29. March 4, 2023.
- Davis, J.D., J.C. Campbell, K.G. Griggs, and C.R. Smith. Practical Applications: Dirty Pads Cost You Twice. *Alabama Poultry*. 18(1):27-29. January 1, 2023.
- Kalvakaalva, R.*, M. Smith, S.A. Prior, G.B. Runion, E. Ayipio, C. Blanchard, D. Wells, D. Blersch, S. Adhikari, R. Prasad, T. Hanson, N. Wall**, B.T. Higgins¹. 2023. Mass-Balance Process Model of a Decoupled Aquaponic System. *Journal of the ASABE*. 66(4): 955-967.
- Linhoss, J.E., Mohammadi-Aragh, M., Evans, J. 2023. Influence of pine and miscanthus biochar on the water activity and moisture sorption isotherms of used broiler litter. *Heliyon*. 9(2).
- Campbell, J.C., J.D. Davis, K.G. Griggs, and C.M. Smith. Five fan fundamental maintenance tips. *Poultry Times*. 70(12):20-23. December 25, 2023. <https://www.poultrytimes.com/issues/poultry-times-12-25-23/>
- Davis, J.D., C.M. Edge, J.C. Campbell, K.G. Griggs, and C.R. Smith. Now is the Time to Conduct an Annual Heating System Tune-up. *Alabama Poultry*. 17(5):28-29. October 1, 2023. <https://issuu.com/alabamapoultry/docs/septoct22>
- Campbell, J.C. Innovation Needs to Be with Right Questions. *Commercial Poultry Newsletter*. October 1, 2023. <https://extension.umd.edu/sites/extension.umd.edu/files/2023-10/Com%20Poultry%20News%20%20Oct%202023%20Publication%20.pdf>
- Campbell, J.C., J.D. Davis, K.G. Griggs, and C.M. Smith. NPTC: 10 hot weather tips you can use today. *Poultry Times*. 70(18)22-25. August 28, 2023. <https://www.poultrytimes.com/issues/poultry-times-8-28-23/>
- Campbell, J.C., J.D. Davis, K.G. Griggs, and C.M. Smith. Five fan fundamental maintenance tips. *Poultry Times*. 70(12)21-23. June 5, 2023. <https://www.poultrytimes.com/issues/poultry-times-6-05-23/>
- Campbell, J.C., J.D. Davis, K.G. Griggs, and C.M. Smith. Hot Weather Tips: Every pad, air leak, fan, degree counts. *Poultry Times*. 70(8):17-18. April 24, 2023.
- Campbell, J.C., J.D. Davis, K.G. Griggs, and C.M. Smith. Practical Applications: Hot-Weather Tips for Now. *Alabama Poultry*. 18(3):31-33. May 1, 2023.