Dr. Saad M. Hussein

B.Sc., M.Sc., Ph.D.

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EDUCATION

Doctor of Philosophy in Animal and Veterinary Sciences | College of Agriculture, Forestry and Life Sciences | Clemson University, South Carolina, USA, Dec 2020.

- Major Field of Study: Animal and Veterinary Sciences / Animal Nutrition
- Dissertation: Simulated and applied precision feeding system of high and low forage diets with different fatty acid sources and sequences of dietary fat concentration in in-vitro and in-vivo studies.
- Advisor: Dr. Gustavo J. Lascano.
- GPA: 3.28 / 4.00.
- Average: 82%

Master of Science in Animal Production | College of Agriculture | University of Tikrit | Tikrit, Iraq, Oct 2012.

- Major Field of Study: Animal Nutrition / Ruminant Nutrition
- Thesis: The effect of using different ratios of pomegranate peel powder with two levels of concentrate diet on the digestibility and performance of the Awassi Lambs.
- Advisor: Dr. Taher A. Shujaa.
- Average: 84%

Bachelor of Science in Animal Resources | College of Agriculture | University of Kirkuk | Kirkuk, Iraq, July 2009.

- Average: 81% (Rank: 3rd out of 43 students with Honors and Distinction).

EMPLOYMENT & TEACHING EXPERIENCE

Head of the Scientific Division | College of Agriculture | University of Kirkuk | Kirkuk, Iraq (Sep 2025 – Present).

Assistant Professor | Department of Animal Production | College of Agriculture | University of Kirkuk | Kirkuk, Iraq (Feb 2025 – Present).

- Ruminant Nutrition.
- Dairy Cattle.
- Feeds and Rations.

Assistant Professor | Department of Administrative and Financial | Ministry of Higher Education and Scientific Research | Baghdad, Iraq (Dec 2023 – February 2025).

Department Coordinator | Department of Optometry Techniques | College of Medical Technique | University of Al-Kitab | Kirkuk, Iraq (May 2023 – Dec 2023).

Examination Committee Member | Department of Medical Laboratories Techniques | College of Medical Technique | University of Al-Kitab | Kirkuk, Iraq (May 2023 – Dec 2023).

Lecturer | Department of Medical Laboratories Techniques | College of Medical Technique | University of Al-Kitab | Kirkuk, Iraq (May 2023 – Dec 2023).

- Biology.
- Physiology.

Lecturer | Department of Biology Sciences | College of Sciences | University of Al-Kitab | Kirkuk, Iraq (May 2023 – Dec 2023).

- Zoology.
- Botany.

Lecturer | Department of Animal Production | College of Agriculture | University of Kirkuk | Kirkuk, Iraq (Mar 2022 – May 2023).

- Ruminant Nutrition.
- Dairy Cattle.
- Sheep and Goat Production.

Research Associate | Analytical Laboratory and Scientific Research Department | Quality Control Assurance | Discover Fresh Foods Inc. (formerly Duke Foods), South Carolina, USA (Jan 2021 – Jan 2022).

- Assist Discover Fresh Foods Analytical Laboratory and Scientific Research Department in the process of getting the ISO accreditation for the lab.
- Perform microbiological analyses for finished products "RTE" and ingredients such as Listeria monocytogenes, Listeria spp., E. coli, Coliforms, Lactic acid bacteria, aerobic bacteria, molds, and yeasts.
- Perform the chemical analyses for finished products "RTE" such as moisture content, viscosity, water activity, and pH.
- Writing data and technical reports, maintaining lab safety, batch records/protocols and/or laboratory notebooks, and inventories.

Research Associate | Research and Development Department | Quality Control Assurance | Discover Fresh Foods Inc. (formerly Duke Foods), South Carolina, USA (Jan 2021 – Jan 2022).

- Assist the Research and Development Department with making Pet Foods (Dog Foods) for the first time in the production lines.
- Cooperate with product development by conducting the sensory evaluation and enhancing product color, flavor, and texture.
- Conduct shelf-life studies.
- I gained knowledge and got training about quality assurance and standards, raw materials dispensing, and preparing product samples for internal or external evaluation.

Graduate Teacher of Record | Animal and Veterinary Sciences Department | College of Agriculture, Forestry and Life Sciences | Clemson University, South Carolina, USA (Aug 2020 – Dec 2020).

- Applied Animal Nutrition | AVS 3750.
- Applied Animal Nutrition Laboratory | AVS 3751 (Instructor).

Graduate Teaching Assistant | Animal and Veterinary Sciences Department | College of Agriculture, Forestry and Life Sciences | Clemson University, SC, USA (Aug 2018 – Dec 2020).

- Advanced Animal Physiology I | AVS 4650 – 6650.
- Field Crops-Forages | AVS / PES 4230 – 6230.
- Contemporary Issues in Animal Science | AVS 4150.
- Domestic Animal Behavior | AVS 4100.

Lecturer | Department of Animal Resources | College of Agriculture | University of Kirkuk | Kirkuk, Iraq (Dec 2012 – Dec 2014).

- Animal Nutrition.
- Forages and Rations.
- Principles of Animal Production.
- Meat Science.

RESEARCH EXPERIENCE

- Screening unsaturated fat sources included in diets with different dietary fat concentrations using in-vitro and in-vivo methods.
    - Conducted a dual-flow continuous culture fermenter project.
    - Conducted a gas production system project.
    - Used gas chromatography to identify the volatile fatty acids (VFA).
    - Used a spectrophotometer to measure ammonia concentration, starch, D and L lactate, allantoin, and uric acid.
- The use of by-products to replace conventional ingredients based on the production system and geographical location.
    - Conducted a project using dietary poultry fat as a by-product on Holstein and Jersey dairy heifers precision fed.
    - Collected rumen (cannula), fecal, urine samples (urine device), and rumen evacuation.
    - Conducted a dual-flow continuous culture fermenter project.
    - Used nitrogen 15 (15N) to measure the microbial protein synthesis.
- Understanding the relationships between forage to concentrate ratios (F:C) when nutrients are provided precisely to meet the requirements of dairy ruminant animals.
    - Conducted a dual-flow continuous culture fermenter project.
    - Used a fiber analyzer to measure the neutral detergent fiber (NDF) and acid detergent fiber (ADF).

- Studying the differences between the dairy breed (Holstein and Jersey) when raising dairy heifers under a precision feeding system.
    - Conducted an in-vivo animal project to study the effects of precision feeding Holstein and Jersey dairy heifers a gradual increase of dietary poultry fat on total-tract nutrient digestibility and rumen fermentation parameters.
- Understanding crude protein protection, rumen undegradable protein, rumen degradable protein, and microbial protein synthesis.
    - Conducted a project using a pomegranate peel powder as a source of tannin on sheep.
    - Collected rumen (oral device), fecal samples (digestion bag), and blood samples.
- Using in-vitro and in-vivo methods to identify optimal carrier methods that enhance nutritional contributions to the animal.
- Nutrient utilization to improve feed efficiency, and reduce metabolic costs of energy and protein.
- Graduate Research Assistant.
    - Conducted a study with Phibro Animal Health Corporation by feeding direct-fed microbial (DFM) to dual flow continuous culture fermenter.

SCHOLARSHIPS & AWARDS

Fully funded Ph.D. Scholarship | The Higher Committee of Education Development (HCED) | Prime Minister office | Baghdad, Iraq (2015 - 2020).

The 2nd place prize in Graduate Poster Competition, College of Agriculture, Forestry and Life Sciences | Graduate Research and Discovery Symposium (GRADS) | Clemson University, SC, USA (2019).

The 1st place prize by The Hope | Project to award outstanding students | Organization of the Iraqi Forum | Baghdad, Iraq (2009).

The 3rd place prize | Final cumulative score across the 2005-2009 undergraduate group | Department of Animal Resources | College of Agriculture | University of Kirkuk | Kirkuk, Iraq.

TECHNICAL SKILLS

In-Vitro Dual Flow Continuous Culture (Fermenters) (2015 - 2020).

Agilent Gas Chromatography (GC) (2015 - 2020).

Enzymatic Assays (Spectrophotometer) (2010 - 2020).

ANKOM RF Gas Production System (2015 - 2020).

ANKOM 200 Fiber Analyzer (2015 - 2020).

Kjeldahl Apparatus, Soxhlet Extractor, Muffle Furnace, and Wiley Mill (2010 - 2020).

Freeze Dryer (Harvest Right) (2015 - 2020).

Collect Rumen Samples (Cannula, and Oral Device) (2010 - 2020).

Collect Fecal Samples (Digestion Bag), and Urine Samples (Urine Device) (2010 - 2020).

Collect Blood Samples (Jugular Vein, and Coccygeal Vein) (2010 - 2020).

Data Ranger, Skid Steers, Calan Gates, and Robotic Milking System (2015 - 2020).

SOFTWARES

ChemStation Software (2015 - 2020).

Gen5 Reader Software (2015 - 2020).

Statistical Software (SAS and JMP) proficiency (2015 - Present).

Master Sheet Program (Student grades) (2010 - Present).

Microsoft Office Software, and Adobe Software (2010 - Present).

CPM-Dairy Ration Formulation Software (2015-2020).

Genesis R&D Food Formulation and Nutrition Labeling Software (2021- 2022).

IACUC and AUP protocols (2015-2020).

TRAININGS & CERTIFICATES

Teaching Proficiency Test Certificate | University of Kirkuk | Kirkuk, Iraq (2023).

Introduction to Surgical Research | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2018 - 2021).

Farm Animals | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2015 - 2020).

Wild Animals | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2015 - 2020).

Lab Animal Welfare Course | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2015 - 2020).

Lab Animals | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2015 - 2020).

General Zoonotic Training | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2015 - 2020).

Basic Course for Research Investigators, Graduate Students, and Animal Care Staff | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2015 - 2020).

Reducing Pain and Distress in Laboratory Mice and Rats | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2015 - 2020).

Working with Rats in Research Settings | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2015 - 2020).

NIH Recombinant DNA (rDNA) Guidelines | Collaborative Institutional Training Initiative (CITI Program) | Clemson University | Clemson, SC, USA (2018 - 2021).

Human Vulnerability Training | Sandia National Laboratories | Miami, FL, USA (2020).

Chem/Bio Lab Design Training | Sandia National Laboratories | Albuquerque, NM, USA (2019).

Introductory Laboratory Security Training | Sandia National Laboratories | Atlanta, GA, USA (2019).

Blood Born Pathogen Training (BBP) | Clemson Research Safety | Clemson University | Clemson, SC, USA (2015).

Biohazardous Waste Training | Clemson Research Safety | Clemson University | Clemson, SC, USA (2015).

Hazardous Waste Training | Clemson Research Safety | Clemson University | Clemson, SC, USA (2015).

Chemical Hygiene Plan Training (CHP) | Clemson Research Safety | Clemson University | Clemson, SC, USA (2015).

Hazard Communication Training (HazCom) | Clemson Research Safety | Clemson University | Clemson, SC, USA (2015).

Radiation Worker Training | Clemson Research Safety | Clemson University | Clemson, SC, USA (2015).

Respiratory Protection Training | Clemson Research Safety | Clemson University | Clemson, SC, USA (2015).

X-ray Training | Clemson Research Safety | Clemson University | Clemson, SC, USA (2015).

Checkpoint: Data Security & Privacy (EDU) | Law Room – Inspired Employer Solutions | Clemson University | Clemson, SC, USA (2017).

Driver Improvement Program | American Automobile Association (AAA) | Clemson University | Clemson, SC, USA (2019).

Certificate of Completion of Master's Level of Intensive English Program for Academic Purposes (ELS Level 112) | University Center | Greenville, SC, USA (2015).

IC3 (Internet and Computing Core Certification) | University of Kirkuk | Kirkuk, Iraq (2014).

Teaching Methods Certificate | University of Kirkuk | Kirkuk, Iraq (2013).

CONFERENCES & WORKSHOPS

The 1st National Conference for Alumni of Iraqi Scholarship Programs | Baghdad, Iraq (April 15th, 2025).

American Dairy Science Association (ADSA) Annual Meeting | Virtual Annual Meeting, USA (Jun 22-24, 2020).

American Dairy Science Association Southern Regional Student Affiliate Division (ADSA-SAD) Annual Meeting | Clemson, SC, USA (Feb 27-29, 2020).

Human Vulnerability Training | Sandia National Laboratories | Miami, FL, USA (Feb 14-16, 2020).

Chem/Bio Lab Design Training | Sandia National Laboratories | Albuquerque, NM, USA (Dec 13-16, 2019).

Introductory Laboratory Security Training | Sandia National Laboratories | Atlanta, GA, USA (Oct 18-20, 2019).

American Dairy Science Association (ADSA) Annual Meeting | Cincinnati, OH, USA (Jun 23-26, 2019).

Graduate Research and Discovery Symposium (GRADS) | Clemson University, SC, USA (Apr 3-4, 2019).

36th ADSA Discover Conference | Lipids in Dairy Nutrition: From Feed to Milk Fat | Itasca, IL, USA (May 28-31, 2019).

American Society of Animal Science (ASAS) | Innovate, influencing the future of animal-sourced foods | Braselton, GA, USA (Sept 9-11, 2018).

American Dairy Science Association (ADSA) Annual Meeting | Knoxville, TN, USA (Jun 24-27, 2018).

American Dairy Science Association (ADSA) Annual Meeting | Pittsburgh, PA, USA (Jun 25-28, 2017).

The 1st Scientific Conference for College of Agriculture and Veterinary Medicine | Tikrit University, Iraq (Mar 25-26, 2013).

PROFESSIONAL MEMBERSHIPS

Reviewer in Frontiers in Veterinary Science | Switzerland| (2025 - Present).

Reviewer in African Journal of Food, Agriculture, Nutrition and Development (AJFAND) | Kenya | Africa | (2025 - Present).

Reviewer in Kirkuk University Journal for Agricultural Sciences (KUJAS) | Kirkuk, Iraq (2025 - Present).

Reviewer in International Journal of Animal Science and Livestock Production (IJASLP) | United States | (2023 - Present).

Reviewer in Advances in Science, Technology and Engineering Systems Journal (ASTESJ) | United States | (2021 - Present).

Reviewer in the Journal of Agricultural Science | The Canadian Center of Science and Education, Canada | (2021 - Present).

Clemson Alumni Association | Clemson University | (2020 - Present).

American Dairy Science Association (ADSA) (2015 - 2021).

American Society of Animal Science (ASAS) (2016 - 2021).

Animal and Veterinary Sciences Graduate Student Association (AVSGSA) | Clemson University | (2015 - 2020).

Ruminant Nutrition Research Team (RNRT) | Clemson University | (2015 - 2020).

VOLUNTEER EXPERIENCE

Graduate Student Assistant | American Dairy Science Association Southern Regional Student Affiliate Division (ADSA-SAD) Annual Meeting | Clemson, SC, USA (2020).

Graduate Student Assistant | 36th ADSA Discover Conference | Lipids in Dairy Nutrition: From Feed to Milk Fat | Itasca, IL, USA (2019).

Social Activity Chair | Animal and Veterinary Sciences Graduate Student Association (AVSGSA) | Clemson University, SC, USA (2016 - 2017).

Food Sensory Evaluation Panelist | Food and Packaging Sciences Department | Clemson University, SC, USA (2018).

Agricultural Cooperative Development International / Volunteers in Overseas Cooperative Assistance (ACDI / VOCA) | Apprenticeship Program for Youth | Kirkuk, Iraq (2010).

LANGUAGES

- **English** (Full Professional Proficiency).
- **Arabic** (Native).

PEER REVIEWED PUBLICATIONS

S. M. Hussein, T. C. Jenkins, M. J. Aguerre, W. C. Bridges, G. J. Lascano. 2025. **Simulating Precision Feeding of High-Concentrate Diets with High-Fat Inclusion and Different Plant-Based Saturated, Unsaturated, and Animal Fat Sources in Continuous Culture Fermenters.** *Animals*, 15, 2406. https://doi.org/10.3390/ani15162406.

S. M. Hussein, M. J. Aguerre, T. C. Jenkins, W. C. Bridges, and G. J. Lascano. 2024. **Screening Dietary Fat Sources and Concentrations Included in Low- and High-Forage Diets Using an In Vitro Gas Production System.** *Fermentation*, 10, 506. https://doi.org/10.3390/fermentation10100506.

M. Toledo, **S. M. Hussein**, M. Pena, M. J. Aguerre, W. Bridges, and G. J. Lascano. 2024. **Effects of Caffeine Doses on Rumen Fermentation Profile and Nutrient Digestibility Using a Lactating Cow Diet under Continuous Cultures Conditions.** *Ruminants*, 4,406-417. https://doi.org/10.3390/ruminants4030029.

M. A. Mohammed, **Saad M. Hussein**, and A. S. Shaker. 2023. **Effect of adding garlic powder and local red sumac to quail diets on productive performance and some blood biochemical characteristics during the growth stage in cages**. IOP Conf. Ser.: Earth Environ. Sci. 1262, 072113. ICMTAS. https://doi:10.1088/1755-1315/1262/7/072113.

Ismail Younis Al-Hadeedy, Questan Ali Ameen, Ahmed Sami Shaker, Ali Hasan Mohamed, Mostafa Waleed Taha, and **Saad M. Hussein**. 2023. **Using the principal component analysis of body weight in three genetic groups of Japanese quail**. IOP Conf. Ser.: Earth Environ. Sci. 1252,012148. ICCMAT. https://doi:10.1088/1755-1315/1252/1/012148.

Suarez-Mena, F.J., G.J. Lascano, **S.M. Hussein**, and A.J. Heinrichs. 2019. **Effect of dry distillers grains with solubles and forage dietary concentration in precision-fed heifer diets: Mineral apparent absorption and retention.** Appl. Anim. Sci. 35: 169-176.

S. M. Hussein, T. C. Jenkins, M. J. Aguerre, W. C. Bridges, and G. J. Lascano. **Effects of precision feeding Holstein and Jersey heifers a gradual increase of dietary poultry fat on total-tract nutrient digestibility and rumen fermentation parameters.** (In prep).

S. M. Hussein, M. J. Aguerre, N. A. Gomez, W. C. Bridges, and G. J. Lascano. **The effects of substituting true protein with non-protein nitrogen in the diets of Holstein dairy heifers precision-fed different forage to concentrate ratios.** (In prep).

S. M. Hussein, T. C. Jenkins, C. Lee, W. C. Bridges, and G. J. Lascano. **Simulating precision feeding of high and low forage diets with increasing poultry fat inclusion in continuous culture fermenters.** (In prep).

Lascano, G.J., R.N. Klopp, **S.M. Hussein**, and D. McCurdy. 2019. Invited Paper: **Insights in nutrition programs for the developing ruminant.** Proc. of International Animal Production Symposium. Archivos Latinoamericanos de Produccion Animal (ALPA) Journal. 26: 1-8.

Saad M. Hussein and T. A. Shujaa. **The Effect of Using Different Ratios of Pomegranate Peels Powder on Performance and Digestibility in Awassi Lambs.** Journal Tikrit University for Agricultural Sciences Vol. 13, No. 3, 2013 (JTUAS).

Saad M. Hussein and T. A. Shujaa. **The Effect of Using Different Ratios of Pomegranate Peels Powder on Performance and Some Blood Characteristics in Awassi Lambs.** 1st Scientific Conference for College of Agriculture and Veterinary Medicine - Tikrit University 25 - 26 Mar 2013.

PROCEEDINGS

Louisa E. Koch, Brandon M. Koch, Rebecca N. Klopp, **Saad M. Hussein**, Maria J. Oconitrillo, Rickie Hughes, Meghan Courey, Ansley Sackett, Thomas C. Jenkins, and Gustavo J. Lascano. 2018. **Replacing dietary starch with a combination of sugar and soluble fiber in combination with soybean oil alters lactating performance in Holstein dairy cows.** American Dairy Science Association (ADSA) Annual Meeting, Knoxville, TN, USA. (Abstract).

L. E. Koch, B. M. Koch, **S. M. Hussein**, V. R. Trutwin, T. C. Jenkins, C. Soderholm, J. Linn, J. Albrecht, and G. J. Lascano. 2017. **Effects of combinations of prilled fatty acids with or without potassium carbonate on fermentation and biohydrogenation intermediates in continuous culture fermenters.** American Dairy Science Association (ADSA) Annual Meeting | Pittsburgh, PA, USA. (Abstract).

L. E. Koch, B. M. Koch, R. N. Klopp, **S. M. Hussein**, V. R. Trutwin, and G. J. Lascano. 2017. **Effects of replacing corn with different levels of starch degradability with beet pulp as a source of soluble fiber on fermentation in continuous culture.** American Dairy Science Association (ADSA) Annual Meeting | Pittsburgh, PA, USA. (Abstract).

L. E. Koch, B. M. Koch, R. N. Klopp, **S. M. Hussein**, V. R. Trutwin, and G. J. Lascano. 2017. **Starch degradability in combination with sugar alters fermentation in continuous culture.** American Dairy Science Association (ADSA) Annual Meeting | Pittsburgh, PA, USA. (Abstract).

ORAL PRESENTATIONS

S.M. Hussein, S. Twyman, M. Toledo, O. Thomas, J. Echesabal, R.M. Stockler, M.J. Aguerre, G.J. Lascano. 2020. **Effects of precision feeding Holstein and Jersey heifers a gradual increase of dietary poultry fat on nutrient digestibility.** American Dairy Science Association (ADSA) Virtual Annual Meeting, USA.

S.M. Hussein, S. Simmons, J. Sinkevitch, H. Oswalt, G. Loughlin, G.J. Lascano. 2019. **Simulating precision feeding of high and low forage diets with increasing poultry fat inclusion alters fermentation in continuous culture.** American Dairy Science Association (ADSA) Annual Meeting, Cincinnati, OH, USA.

S.M. Hussein, M. X. Toledo, S. Twyman, O. Thomas, G. J. Lascano. 2019. **Simulating precision feeding of high concentrate diets with high-fat inclusion and different unsaturated fat sources in continuous culture fermenters.** American Dairy Science Association (ADSA) Annual Meeting, Cincinnati, OH, USA.

POSTER PRESENTATIONS

S.M. Hussein, S. Twyman, M. Toledo, O. Thomas, J. Echesabal, R.M. Stockler, M.J. Aguerre, G.J. Lascano. 2020. **Effects of precision feeding Holstein and Jersey heifers an increasing**

poultry fat inclusion on rumen fermentation parameters. American Dairy Science Association (ADSA) Virtual Annual Meeting, USA.

S.M. Hussein, M. X. Toledo, S. Twyman, O. Thomas, J. Echesabal, G.J. Lascano. 2019. **Screening unsaturated fat sources included to low and high forage diets with different fat dietary concentrations using an *in vitro* gas production system.** Graduate Research and Discovery Symposium (GRADS). Clemson University, SC, USA.

S.M. Hussein, M.X. Toledo, J. Echesabal, S. Twyman, S. Simmons, J. Sinkevitch, G. Loughlin, G.J. Lascano. 2019. **Dose response of caffeine on fermentation and nutrient utilization in continuous culture fermenters.** American Dairy Science Association (ADSA) Annual Meeting, Cincinnati, OH, USA.

REFERENCES

1. **Gustavo Lascano, PhD,**
   Associate Professor,
   Animal and Veterinary Sciences Department,
   College of Agriculture, Forestry, and Life Sciences,
   122 Poole Agricultural Center,
   Clemson University,
   Clemson, SC 29634, USA.
   Phone: 864-656-1745
   Email: glascan@clemson.edu

2. **Thomas Jenkins, PhD,**
   Emeritus Professor,
   Animal and Veterinary Sciences Department,
   College of Agriculture, Forestry, and Life Sciences,
   117 Poole Agricultural Center,
   Clemson University,
   Clemson, SC 29634, USA.
   Phone: 864-653-0315
   Email: tjnkns@clemson.edu

3. **Matias Aguerre, PhD,**
   Assistant Professor,
   Animal and Veterinary Sciences Department,
   College of Agriculture, Forestry, and Life Sciences,
   120 Poole Agricultural Center,
   Clemson University,
   Clemson, SC 29634, USA.

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Associate Professor,
Dean Assistant for Administrative and Financial Affairs,
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5. **Ismail Younis, PhD,**
Associate Professor,
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6. **Collin Wolhar, MS, CFS,**
Director of Research and Development,
Quality Control Assurance Department,
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Easley, SC 29642, USA.
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