

Curriculum Vita

# Chase A. Runyan

(325)486-6758 • chase.runyan@angelo.edu

---

## SUMMARY OF QUALIFICATIONS

---

- Approachable and driven person that works well as a cooperative team member
- Strong written and oral communication skills
- Documented, successful teaching record with a broad array of subject matter
- Ability to define clear, obtainable objectives and achieve objectives
- Advance degrees emphasizing sciences that relate to beef cattle production

---

## EDUCATION

---

### Doctor of Philosophy in Animal Science

Texas A&M University

**December 15, 2013**

College Station, Texas

- Dissertation Title: Evaluation of performance in yearling crossbred steers following Bovine Viral Diarrhea Virus challenge

### Master of Science in Animal Science

Texas A&M University

**December 18, 2010**

College Station, Texas

- Thesis Title: Evaluation of immune response and performance in steers of know genetic background vaccinated and challenged with Bovine Viral Diarrhea Virus.

### Bachelor of Science in Animal Science, Option in Business

Oklahoma State University

**May 5, 2007**

Stillwater, Oklahoma

- Minors in Agricultural Economics

---

## PROFESSIONAL EXPERIENCE

---

### Associate Professor and Research Scientist

#### Agriculture Department Chair

#### Director of the Management Instruction and Research Center,

Department of Agriculture

Angelo State University

**September 2019 - Present**

- Professor of 4 courses pertaining to
  - Beef Cattle Production
  - Livestock Nutrition
  - Agriculture Animal Industries
- Responsible for academic curriculum advising of animal science students
- Undergraduate degree plan advising and Graduate Student advising faculty member
- Director of operations at the Management, Instruction, and Research Center (MIR Center)

### Assistant Professor/Research Scientist

Department of Agriculture

Angelo State University

**August 2013 – September 2019**

San Angelo, Texas

- Professor of 9 courses pertaining to

- Beef Cattle Production
- Livestock Nutrition
- Agriculture Animal Industries
- Responsible for academic curriculum advising of animal science students
  - Undergraduate degree plan advising and Graduate Student advising faculty member
- Direct all beef cattle operations for the ASU teaching and research Purebred Angus cow herd
  - Responsible for coordinating and execution of all production phases and research initiatives involving the ASU Agriculture department cow herd inventory
  - Developed and strengthened marketing channels and increased sale revenue and sale volume of ASU seedstock
  - Connect application based research objectives to regional producers by hosting field days, Cattleman's Gatherings, and Texas A&M Extension collaboration programs

**Graduate Research and Teaching Assistant**

College of Agriculture and Life Sciences, Animal Science Department  
Texas A&M University

**August 2007 - 2013**

College Station, Texas

- Responsible for planning and teaching course laboratory sections
  - ANSC 108 Introduction to Animal Science
  - ANSC 406 Beef Cattle Production and Management Labs
- Manage 6-8 member team of graduate students and other researchers to accomplish research project objectives
- Analyze data, develop presentations for information delivery

**Student Herdsman**

Purebred Beef Cattle Center  
Oklahoma State University

**July 2005 - May 2007**

Stillwater, Oklahoma

- Assisted with sale cattle preparation and annual sale organization
- Donor cow and recipient herd observation and carried out protocols of successful embryo transfer techniques
- Assisted with sale bull development programs. Specifically, provide aid with health maintenance and performance data collection

**Sale Cattle Management Intern**

Express Ranches

**Summers, 2006 & 2007**

Yukon, Oklahoma

- Recruited to assist with the preparation and promotion of sale cattle
- Participated as a member of a team responsible for breeding and selection of the bred heifer development program
- Sale bull development programs and assist with health maintenance and performance data collection
- Organized recipient herd maintenance and observations of estrus and synchronization programs

**TEACHING EXPERIENCE**

---

**Assistant Professor**

Advanced Beef Cattle 6345  
Angelo State University

**August 2013 – Present**

Agriculture Department  
San Angelo, Texas

- Lecture topics current for a graduate level beef cattle production course
- Instruction of systems based management decisions and evaluation of realized outcomes

**Assistant Professor**

Advanced Animal Nutrition 6341  
Angelo State University

**August 2013 – Present**

Agriculture Department  
San Angelo, Texas

- Lecture graduate level general nutrition course work
- In depth instruction of digestibility and utilization of feed stuffs and the impact on multiple species

**Assistant Professor**

Ruminant Nutrition 6342  
Angelo State University

**August 2013 – Present**

Agriculture Department  
San Angelo, Texas

- Lecture graduate level ruminant nutrition course work

- Added details on complexity of rumen function and rumen microbiology

**Assistant Professor**

Issues in Animal Agriculture 6335  
Angelo State University

**August 2013 – Present**  
Agriculture Department  
San Angelo, Texas

- Lecture graduate level animal issues and policy course
- Present material covering animal well-being and justification of common management practices

**Assistant Professor**

Beef Cattle Science 4343  
Angelo State University

**August 2013 – Present**  
Agriculture Department  
San Angelo, Texas

- Lecture and lab instruction of the science and holistic management programs of beef cattle

**Assistant Professor**

Applied Animal Nutrition 3342  
Angelo State University

**August 2013 – Present**  
Agriculture Department  
San Angelo, Texas

- Lecture and lab instruction of application of feedstuffs to livestock species

**Assistant Professor**

Principles of Animal Nutrition 3332  
Angelo State University

**August 2013 – Present**  
Agriculture Department  
San Angelo, Texas

- Lecture topics pertinent to nutrition fundamentals for animal science majors

**Assistant Professor**

Animal Nutrition and Feeding 3320  
Angelo State University

**August 2013 – Present**  
Agriculture Department  
San Angelo, Texas

- Lecture and lab instructor for nutrition and feeds course designed for non-animal science majors

**Assistant Professor**

General Studies 1181  
Angelo State University

**August 2013 – Present**  
Agriculture Department  
San Angelo, Texas

- Lecture instructor for incoming freshmen in the framework of a freshman orientation course

**Graduate Teaching Assistant-Lab Instructor**

Beef Cattle Production and Management 406  
Texas A&M, College of Agriculture and Life Sciences

**August 2008 – May 2013**  
Animal Science Department  
College Station, Texas

- Tailor labs to be a communications intensive course, oversee group presentations, and written projects

**Graduate Teaching Assistant-Lab Instructor**

Introduction to Animal Science 108  
Texas A&M, College of Agriculture and Life Sciences

**August 2007 – May 2013**  
Animal Science Department  
College Station, Texas

- Conduct course instruction and student interaction

**Graduate Teaching Assistant**

Stocker and Feedlot Cattle Management 408  
Texas A&M, College of Agriculture and Life Sciences

**August 2007 - May 2008**  
Animal Science Department  
College Station, Texas

- Instructed course in absence of course professor and manage “risk management game” for class

## RESEARCH ADVISING EXPERIENCE

---

### Department of Agriculture

Angelo State University

2013 - Present

San Angelo, Texas

- Major Advisor or Co-Advisor of 7 graduate assistants with project planning, data collection, analysis, and thesis completion
  - McGinnis, A. 2021.
  - Bennett, L. 2021
  - Gutierrez, D. 2021. Evaluation of prebiotic compounds and chelated mineral additives on breeding bull growth and fertility.
  - Drgac, K. 2020. Evaluation of multi-dose injectable trace mineral on growth and reproductive traits in Angus cattle.
  - Arzate, I. 2020. The effects of trace mineral administration on embryo transfer and artificial insemination success rates in Angus cattle.
  - Webb, C. 2019. Beef Heifer Development: is chronological age, order of calving, or weight gain status more important for a cow's lifetime productivity measures.
  - Chariz, C. 2019. Pregnancy Specific Protein B as a predictor of gestation length in Angus cows and heifers.
  - Sullivan, L. 2018. Evaluation of essential oil and injectable trace mineral on bull growth performance and fertility.
  - Zoeller, A. 2017. Evaluation of semen thaw procedures on artificial insemination success in first calf heifers.
  - Yurrita, S. 2017. Evaluation of dietary phytoestrogen exposure on growth, semen parameters, and reproductive anatomy development of growing Angus bulls.
  - Parker, S. 2016. Effects of background procedures and probiotic administration on weight gain in growing heifers.
  - Hughes, K. 2016. Effects of compensatory gain on success of a 7-day Co-Sync+CIDR artificial insemination protocol in beef heifers.
  - Miller, H. 2015. Effects of Isoflavones on spermatogenesis of prepuberal bulls.
  - Book, K. 2014. Safety study for RCN-F1-Vt (Sylvatic Plague Vaccine) in Cattle.
- Faculty Mentor of 5 Undergraduate Research programs
  - Pace, J.S. 2018. The effect of LongRange as an external parasite and tick treatment.
  - Kunz, K. 2018. The effect of weaning method on innate immune response and subsequent fertility measures in Angus cattle.
  - Drgac, K. 2018. Effect of essential oil mixtures on bull fertility in Angus cattle.
  - Cagle, C. 2016. Evaluation of the interacting effects of selected plant extracted compounds and ionophores on rumen protozoa populations.
  - Taveirne, C. 2016. Comparison of estrus synchronization protocols and fixed timed artificial insemination on pregnancy rate of heifers.

## ADMINISTRATIVE APPOINTMENT EXPERIENCE

---

### Angelo State University

Quality Enhancement Plan Development Committee	2020-Present
College of Science and Engineering Curriculum Committee	2019 – 2020
Teacher Education Council	2019 – 2020
Texas Higher Education Coordinating Board Animal Science FOS Committee Chairman	2019-Present
SACSCOC Institute on Quality Enhancement and Accreditation	2019
Institutional Animal Care and Use Committee (IACUC) Co-Chair	2017-Present
Animal Science Lecturer Search/Hiring Committee Chair	2017
Ranch Manager Search/Hiring Committee Chair	2016
Agriculture Department Faculty Senator	2014-2018
Institutional Animal Care and Use Committee (IACUC) Member	2013-2017

## RESEARCH APPOINTMENT EXPERIENCE

---

### Department of Agriculture

Angelo State University

2013 - Present

San Angelo, Texas

- Research interest that embraces a multidisciplinary approach to cattle production
  - Nutritional aids of bull and female fertility
  - Prenatal environmental effects on subsequent production measures in cattle
  - Characterizing beef cow lifetime productivity indicators and early life predictors
  - Interactions of inflammation and insulin sensitivity in cattle management systems
  - Non-prototypical post-weaning weight gain trajectory management strategies
  - Genetic factors involved in health status and vaccine program interaction
  - Angus Cattle foot scoring EPD development

### College of Agriculture and Life Sciences, Animal Science Department

Texas A&M University *Research Assistantship Appointment*

2009 - 2013

College Station, Texas

- Evaluation of feed intake, feeding behavior, clinical health status, rectal temperature response, hematological changes, behavior and temperament effects, and weight gain response of F<sub>2</sub> and F<sub>3</sub>, Angus × Nellore crossbred steers, of known parentage, when vaccinated and challenged with bovine viral diarrhea virus
- Served as project manager during 2009 and later trials

### College of Agriculture and Life Sciences, Animal Science Department

Texas A&M University *Research Fellowship Appointment*

2008

College Station, Texas

- Evaluation of health status and weight gain of vaccinated steers with known genetics following intranasal bovine viral diarrhea virus challenge

## PROFESSIONAL SOCIETIES

---

American Society of Animal Science  
American Registry of Professional Animal Scientists  
National Cattlemen's Beef Association  
Texas and Southwest Cattle Raisers Association  
New Mexico Cattle Growers Association  
Gamma Sigma Delta

## ACCOMPLISHMENTS AND AWARDS

---

Gamma Sigma Delta Outstanding Animal Science PhD student, Texas A&M University	2013
Ronnie L. Edwards Graduate Teaching Award, Texas A&M University	2013
Senior Leadership Award, Oklahoma State University	2007
Top 20 Animal Science Senior, Oklahoma State University	2007
Oklahoma Agriculture Leadership Encounter, Oklahoma State University	2006 - 2007
Purtle Academic Scholarship Recipient, Oklahoma State University	2006
American FFA Degree, National FFA Organization	2004
State Vice-President, New Mexico FFA Association	2002 - 2003
State Star Farmer, New Mexico FFA Association	2002

## SERVICE

---

### University

SACSCOC Institute on Quality Enhancement and Accreditation	2019
Angelo State University Institutional Animal Care and Use Committee (IACUC) Co-Chair	2017-Present
Angelo State University Animal Science Lecturer Search/Hiring Committee Chair	2017
ASU Ranch Manager Search/Hiring Committee Chair	2016
Angelo State University Faculty Senator	2014-2018
Angelo State University Institutional Animal Care and Use Committee (IACUC) Member	2013-2017

Angelo State University CDE Livestock Judging Contest Superintendent	2014-Present
Texas A&M Show Cattle Camp Director	2008 - 2013
Texas A&M Beef Cattle Association Graduate Student Advisor	2011 - 2013
National Cattleman's Beef Association Representative	2009 - 2012

### **State**

Texas Higher Education Coordinating Board Animal Science FOS Committee Chairman	2019-Present
San Angelo Livestock Show and Rodeo Junior ORB Heifer Show Superintendent	2014-2018
San Angelo Livestock Show and Rodeo Junior Angus Heifer Show Superintendent	2014-Present
San Angelo Livestock Show and Rodeo Livestock Judging Contest Superintendent	2014-Present
Texas A&M Beef Cattle Short Course Speaker	2008 - 2011
Washington County Fair Collegiate Livestock Judging Committee Official	2009 - 2010

### **National**

Western Section American Society of Animal Science Beef Cattle Symposium Committee	2014-2018
Western Section American Society of Animal Science Beef Cattle Symposium Co-Chair	2014
Houston Livestock Show and Rodeo Livestock Judging Committee Official	2014
National Cattleman's Beef Association Livestock Judging Committee Official	2011
American Angus Association Cattlemen's Boot Camp Speaker	2009

### **International**

Houston Livestock Show and Rodeo Assistant Open Cattle Show Superintendent	2017-Present
Texas International Agri-Summit Presenter and Livestock Judging Committee Official	2013
Oklahoma Agriculture Leadership Encounter Representative	2007

### **UNIVERSITY INTERNAL GRANT FUNDING AWARDS**

---

Graduate Student Research Fellowship. 2019. Evaluation of multidose injectable trace minerals on preweaning growth performance and reproductive efficiency and cattle. \$1,500.00

Undergraduate Faculty Mentored Academic Grant. 2017. The effect of LongRange as an external parasite and tick treatment. \$1,750.00

Undergraduate Faculty Mentored Academic Grant. 2017. Effect of essential oil mixtures on bull fertility in Angus cattle. \$1,750.00

Angelo State University College of Sciences and Engineering Dean Funds awarded. 2017. Funds were awarded to purchase a bovine semen analyzer. \$8,950.00

Undergraduate Faculty Mentored Academic Grant. 2017. The effect of weaning method on innate immune response and subsequent fertility measures in Angus cattle. \$1,750.00

Undergraduate Faculty Mentored Academic Grant. 2016. Comparative effects of essential oils and ionophores on rumen gas production. \$1,750.00

Graduate Student Research Fellowship. 2016. Effects of semen thaw procedures on artificial insemination success rate in 2<sup>nd</sup> calf females. \$1,500.00

Faculty Research Enhancement Program. 2015. Co-PI for funded project that investigates the effect of a purified energy supplement on performance of cattle grazing wheat forage. \$7,550.00

Undergraduate Faculty Mentored Academic Grant. 2014. Comparison of estrus synchronization protocols and fixed timed artificial insemination on pregnancy rate of heifers. \$1,750.00

## **EXTRAMURAL FUNDING**

---

USDA-NIFA-HSI. Collaboration with New Mexico State University. Project entitled “Strengthen they Ability to Graduate Hispanic Students for the Nation’s Food, Agriculture, and Natural Resource Scientific and Professional Workforce” Collaboration Grant total \$1,000,000. ASU subcontract total \$402,689. (Status is pending)

Arrow Equipment, Gallagher Equipment, and Cowboy Concierge LLC. 2015. Angelo State University cattle handling facilities upgrade/improvement donation. *Value* \$2,500.00

Texas Wildlife Service, United States Geology Service, USDA-APHIS: 2014. This partnership was developed to conduct a cattle safety study prior to field trials of a vaccine for sylvatic plague protection for prairie dogs. \$6,000.00

Lastovica Angus Farm: 2014. Angelo State University judging teams endowment gift. \$1,000.00

McCoys Lumber Supply, Priefert Ranch Equipment: 2014. Angelo State University cattle handling facilities upgrade/improvement donation. *Value* \$1,500.00

## **PROFESSIONAL PUBLICATIONS AND PRESENTATIONS**

---

Cagle, C.M., M.A. Fonseca, T.R. Callaway, C.A. Runyan, M.D. Cravey and L.O. Tedeschi. 2020. Evaluation of the effects of live yeast on rumen parameters and insitu digestibility of dry matter and neutral detergent fiber in beef cattle fed growing and finishing diets. *Applied Animal Science*. 36(1), 36-47. doi:10.15232/aas.2019-01888.

Pace, J.S. and **C.A. Runyan**. 2019. The effect of LongRange as an external parasite and tick treatment. Angelo State University Research Symposium

Knowles, A, J. Pascal, **C.A. Runyan**, J.E. Sawyer, and A.D. Herring. 2019. Carcass Characteristics of Bos indicus-Bos Taurus steers following BVDV Type 1b challenge. *J. Anim. Sci. (Suppl. 3, National Meeting ASAS)*.

Smith, P.S., **C.A. Runyan**, G.E. Carstens, J.F. Ridpath, J.E. Sawyer, and A.D. Herring. 2018. Effects of BRD vaccine treatment and temperament on feed intake, performance, and feeding behavior responses to BVDV challenge in beef steers. *American Society of Animal Science – Journal of Animal Science (Submitted. Currently being peer-reviewed and edited for journal acceptance)*

Cagle, C.M., L.O. Tedeschi, **C.A. Runyan**, T.R. Callaway, and M. Cravey. 2018. Effects of Live Yeast on beef cattle receiving high-forage diets. 2018. *Professional Animal Scientist - Journal. (Submitted. Currently being peer-reviewed and edited for journal acceptance)*

Sullivan, L.T., J.W. Dickison, C.M. Harris, M.W. Salisbury, and **C.A. Runyan**. 2018. Evaluation of essential oil and injectable trace mineral on bull growth performance and fertility. *J. Anim. Sci. (Suppl. 3, Western Section ASAS)*.

Kunz, K. and **C.A. Runyan**. 2018. Evaluation of weaning method on calf performance and cellular immune response. Angelo State University Research Symposium.

Drgac, K.M and **C.A. Runyan**. 2018. Evaluation of an essential oil mixture on yearling bull fertility traits. Angelo State University Research Symposium.

Cagle, C.M., L.O. Tedeschi., C.A. Runyan, T.R. Callaway, M.D. Cravey, and T. Kiros. 2018. Evaluation of the effects of dried live yeast on rumen pH, redox potential, in situ digestibility of dry matter, and neutral detergent fiber digestibility in growing cattle. Plains Nutrition abstract and Poster presentation.

Cagle, C.M., L.O. Tedeschi, **C.A. Runyan**, T.R. Callaway, and M.D. Cravey. 2018. Evaluation of the effects of dried live yeast on rumen pH and in-situ digestibility of dry matter in growing cattle. *J. Anim. Sci. (Suppl. 1, Southern Section ASAS)*.

Yurrita, S.Y., J.W. Dickison, M.W. Salisbury, and **C.A. Runyan**. 2018. Evaluation of age of dam and phytoestrogens on growth and semen quality measures in yearling bulls. *J. Anim. Sci. (Suppl. 1, Southern Section ASAS)*.

Harris, C.M., **C.A. Runyan**, and J.W. Dickison. 2018. The effects of dietary Octacosanol on ram semen quality parameters. *J. Anim. Sci. (Suppl. 1, Southern Section ASAS)*.

**Runyan, C.A.**, E.D. Downey-Slinker, J.F. Ridpath, T.B. Hairgrove, J.E. Sawyer, and A.D. Herring. 2017. Feed intake and weight changes in *Bos indicus-Bos Taurus* crossbred steers following Bovine Viral Diarrhea Virus Type 1b Challenge under production conditions. *Pathogens* 6:66.

Cagle, C.M. and **C.A. Runyan**. 2017. Evaluation of the comparative effects of selected plant extracted compounds and ionophores on rumen protozoa populations. Angelo State University Research Symposium.

Yurrita, S.C., S.E. Clay, S.N. Parker, **C.A. Runyan**, J.D. Sugg, and J.E. Sawyer. 2017. Effects of bacterial direct-fed microbials and feeding method of low-quality hay in drylot on subsequent wheat pasture performance by yearling beef heifers. Plains Nutrition Council abstract and poster presentation.

Taveirne, C.S., M.W. Salisbury, C.J. Owens, and **C.A. Runyan**. 2016. Comparison of estrus synchronization protocols and fixed-timed artificial insemination on pregnancy rate of heifers. Angelo State University Research Symposium.

Yurrita, S.C., H. D. Miller-Ford, J.W. Dickison, M. W. Salisbury, and **C. A. Runyan**. 2016. Effects of dietary phytoestrogens on testicular growth and semen quality characteristics in developing Angus bulls. *J. Anim. Sci. (Suppl. 3, Western Section ASAS)*.

Fang, X., E.D. Downey, **C.A. Runyan**, T.B. Hairgrove, J.E. Sawyer, W. Mwangi, C.A. Gill, and A.D. Herring. 2014. Relationships between temperament and hematological responses of crossbred steers following bovine viral diarrhea virus challenge. *J. Anim. Sci. (Suppl. 1, Southern Section ASAS)*.

**Runyan, C.A.**, X. Fang, E.D. Downey, J.E. Sawyer, T.B. Hairgrove, J.F. Ridpath, and A.D. Herring. 2014. Evaluation of weight gain and rectal temperature across vaccine type in *Bos indicus* crossbred steers challenged with bovine viral diarrhea virus. *J. Anim. Sci. (Suppl. 1, Southern Section ASAS)*.

Downey, E.D., X. Fang, **C.A. Runyan**, J.E. Sawyer, T.B. Hairgrove, J.F. Ridpath, and A.D. Herring. 2014. Vaccinated Angus-Nellore yearling steers have reduced platelet and lymphocyte decline following bovine viral diarrhea virus type 1b challenge. *J. Anim. Sci. (Suppl. 1, Southern Section ASAS)*.

Book K.M., M.J. Bodenchuk, L.A. Bodenchuk, M.W. Salisbury, T.E. Rocke, R.C. Abbott, and **C.A. Runyan**. 2014. Safety study for RCN-F1-Vt (Sylvatic Plague Vaccine) in Cattle. Center for Veterinary Biologics.

**Runyan, C.A.**, X. Fang, E. Downey, T.B. Hairgrove, J.E. Sawyer, J.G. Moreno, J.F. Ridpath, and A.D. Herring. 2013. Interactions of rectal temperature status and vaccine type with sire on weight gain and feed intake in *bos indicus* crossbred steers following Bovine Viral Diarrhea Virus challenge. *J. Anim. Sci. (Suppl. 3, National Meeting ASAS)*.

Fang, X., E. Downey, **C.A. Runyan**, J.E. Sawyer, T.B. Hairgrove, J.F. Ridpath, C.A. Gill, W. Mwangi, and A.D. Herring. 2013. Relationships of temperament, exit velocity and rectal temperature of crossbred steers challenged with bovine viral diarrhea virus. American Society of Animal Science national meetings. *J. Anim. Sci. (Suppl. 3, National Meeting ASAS)*.

Downey, E., X. Fang, **C.A. Runyan**, J.E. Sawyer, T.B. Hairgrove, J.F. Ridpath, and A.D. Herring. 2013. Anamnestic antibody response to BVDV 1b challenge in Angus-Nelore steers. *J. Anim. Sci. (Suppl. 3, National Meeting ASAS)*.



Invited Panel Speaker. Cattle Health and Health Plan Management. 2013. Texas A&M Beef Cattle Short Course.

**Runyan, C.A.**, X. Fang, E. Downey, T.B. Hairgrove, J.E. Sawyer, J.C. Bailey, J.F. Ridpath, and A.D. Herring. 2012. Feed intake, rectal temperature and weight gain in bos indicus crossbred steers challenged with bovine viral diarrhea virus. J. Anim. Sci. (Suppl. 3, National Meeting ASAS).

Fang, X., E. Downey, **C.A. Runyan**, J.E. Sawyer, T.B. Hairgrove, J.F. Ridpath, C.A. Gill, W. Mwangi, and A.D. Herring. 2012. Correlation of temperature with titer and hematological responses of crossbred steers challenged with bovine viral diarrhea virus. J. Anim. Sci. (Suppl. 3, National Meeting ASAS).

Downey, E., X. Fang, **C.A. Runyan**, J.E. Sawyer, T.B. Hairgrove, J.F. Ridpath, C.A. Gill, and A.D. Herring. 2012. Sire and vaccine treatment effects on immune response to BVDV 1b challenge. J. Anim. Sci. (Suppl. 3, National Meeting ASAS).

**Runyan, C.A.**, A.D. Herring, J.F. Ridpath, M.S. Cabaniss, C.T. Muntean, and J.E. Sawyer. 2010. Health measures in beef steers of known genetic background following BVDV challenge. J. Anim. Sci. (Suppl. 1, Southern Section ASAS).

**Runyan, C.A.**, A.D. Herring, J.F. Ridpath, M.S. Cabaniss, C.T. Muntean, and J.E. Sawyer. 2010. Feed intake and weight gain in beef steers of known genetic background following BVDV challenge. J. Anim. Sci. (Suppl. 1, Southern Section ASAS).

**Runyan, C.A.**, A.D. Herring, J.F. Ridpath, and J.E. Sawyer. 2010. Evaluation of immune response and performance of steers challenged with BVD virus. Beef Cattle Research in Texas Proceedings. Presented data at Texas A&M University Beef Cattle Short Course.

**Runyan, C.A.**, A.D. Herring, J.E. Sawyer, W.J. Horne, and J.F. Ridpath. 2009. Evaluation of performance and immune response in steers of known background challenged with bovine viral diarrhea (BVD) virus. J. Anim. Sci. (Suppl. 1, Southern Section ASAS).

## **INDUSTRY PUBLICATIONS AND PRESENTATIONS**

---

Contributing author. 2018. Producer Response and student involvement in American Angus Association foot scoring EPD development. Article in: Progressive Cattleman publication. Vol. 8. Iss. 8. p. 22-23.

Invited Speaker. 2017. Developing supplementation plans for fall and spring calving operations. Tri-County Range and Livestock Clinic Texas Agrilife Extension Program.

Runyan, C.A. 2017. Author. Vaccine Programs and herd health considerations. Article in: The Beef Master Payweight. Vol. 3, No. 1, Sec. 1. p. 1-4.

Invited Speaker. 2015. Developing a vaccine protocol and effective herd health program. Concho County Texas Agrilife Extension Beef Cattle Program.

Program Coordinator and host. 2015. Tour of ASU cattle facilities and invited speaker. Topic: Real world EPD application and management styles to express genetic potential. Texas Angus Association Cattleman's Gathering.

C.A. Runyan. 2015. The role of body condition scores and profitability of the cowherd. In: Texas Section Society for Range Management Grass Roots. Vol. 67, No. 1. p. 3-4.

Invited Panel Speaker. Graduate Student "Lunch and Learn" Program. 2014 Western Section ASAS.

Invited Speaker. 2014. Herd health considerations and utilizing beef cow body condition scoring. Coke County Texas Agrilife Extension Beef Cattle Program.