

# CLAY P. MATHIS, PHD

## Curriculum Vitae

MSC 137, Kleberg Ag Building, Rm. 124

Kingsville, TX 78363-8202

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### EDUCATION

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<b>PhD</b>	1998	<b>Kansas State University</b>	Ruminant Nutrition
<b>M.S.</b>	1995	<b>Texas A&amp;M University</b>	Physiology of Reproduction
<b>B.S.</b>	1993	<b>Texas A&amp;M University</b>	Animal Science

### CURRENT EMPLOYMENT

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<b>Employer:</b>	<b>Texas A&amp;M University-Kingsville</b>		
<b>Title:</b>	Director and Endowed Chair, King Ranch® Institute for Ranch Management ( <b>KRIRM</b> )		
<b>Appointment:</b>	100% Administration; 2016 to present 75% Administration / 25% Teaching; 2010 to 2016		

### PREVIOUS EMPLOYMENT

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<b>Employer:</b>	<b>New Mexico State University (NMSU)</b>		
<b>Title:</b>	Professor and Extension Livestock Specialist	<b>100% Extension;</b>	2007 to 2010
<b>Title:</b>	Associate Professor and Extension Livestock Specialist	<b>100% Extension;</b>	2004 to 2007
<b>Title:</b>	Assistant Professor and Extension Livestock Specialist	<b>100% Extension;</b>	1998 to 2004

### AWARDS

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<b>Distinguished Service Award</b>	NMSU Extension Specialists' Association; 2010
<b>Applied Research Award</b>	Western Section of American Society of Animal Science; 2007
<b>Extension Award</b>	Western Section of American Society of Animal Science; 2005
<b>Beef Research Fellowship</b>	Purina Mills; 1997

### ADMINISTRATIVE, TEACHING, AND OUTREACH ACCOMPLISHMENTS AT KRIRM

2010 TO PRESENT

- **Graduated 29 students with a M.S. degree in Ranch Management** (Chair of 18) that currently manage almost **100,000 cows** (average 4,000 cows) on **4.7 million acres** (average 162,000 acres) of rangeland and wildlife habitat in 12 states; which includes **managers of four of the 20 largest cow-calf operations** in the United States
- Led graduate students and faculty in the completion of **over 100 service-learning projects** providing production and business management recommendations to **more than 50 partnering ranches** in North and South America
- Coordinated **90 ranching educational lectureships and symposia** attended by 4,400 participants from 38 states and 5 countries

- Increased the KRIRM service network by expanding the previously Texas-based lectureship series to include outreach events in **Florida, Oklahoma, Montana, South Dakota, and Colorado**
- Achieved consistent **annual outreach attendance growth of 5%** from 2010 to 2020, while **increasing annual average attendee satisfaction from 4.58 to 4.82** (five-point scale)
- Created the **KRIRM Excellence in Ag Leadership Program** in partnership with the National Cattlemen’s Beef Association to **develop the decision-making and leadership skills** of high potential leaders in the beef cattle industry through workshops and individualized coaching
- Created a successful model for **employing experienced practitioners** in teaching and outreach to maintain KRIRM productivity through and after a prolonged university-wide hiring freeze
- Secured **\$5 million** in external gifts, grants, and event revenue to support the KRIRM mission
- **Secured a \$19.5 million bequest pledge of an 8,000-acre ranch to Texas A&M University Kingsville for KRIRM teaching, research, and outreach.**

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## TEACHING EXPERIENCE

### Graduate Courses - Texas A&M University-Kingsville (2010-2016)

RAMT 5351	Systems Approach to Natural Resources Problem Solving
RAMT 5305	Graduate Research Project: Leadership of graduate student research
RAMT 5350	Practicum in Ranch Management
RAMT 5695	Advanced Problems in Ranch Management

### Graduate Student Advising

M.S. Committees Chaired	18
M.S. Committee Member	31
Doctoral Committee Member	12

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## EXTENSION EFFORTS DURING EMPLOYMENT AT NMSU

1998 to 2010

### BEEF PROGRAMS

- USDA Grant: “Improving Calf Well-Being: An Integrated Approach” (**Co-PI**)
- Southwest Beef Symposium (**Coordinator**)
- New Mexico Standardized Performance Analysis (**Coordinator**)
- New Mexico Ranch to Rail (**Coordinator**)
- New Mexico Beef Quality Assurance (**Coordinator**)
- eXtension Community of Practice: Cattle Clearinghouse (**NM Representative**)
- New Mexico Cattle Growers’ Short Course (**Coordinator**)
- Western Beef Resource Committee; Reproduction Section (**Chairman**)

### APPLIED RESEARCH PROJECTS

- Preconditioning and Feedlot Health Projects (4)
- Cull Cow Feeding Projects (3)
- Evaluation of Niche Market Targeted Finishing Programs for Beef Steers
- New Mexico Forage Mineral Survey

### SHEEP PROGRAMS

- New Mexico Range Ram Test (**Coordinator**)
- State and National Wool Shows

### 4-H AND YOUTH EDUCATION

- Livestock Skillathon Contests
- Livestock and Wool Judging Contests

### GENERAL LIVESTOCK PROGRAMS

- Extension Response and Consultation
- Range Improvement Task Force
- Aggie Notes Column in *New Mexico Stockman* magazine (**Coordinator**)

## COMMITTEES AND COMMITTEE ASSIGNMENTS

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### National & Regional Committees

U.S Roundtable for Sustainable Beef (2015 to present)

- Board of Directors
  - Secondary Board Member (2015 to 2017)
  - Interim Board Member (2015)
- Sustainable Solutions Working Group Executive Committee (2015 to 2018)

U.S. Sustainable Beef Working Group (2014 to 2015)

National Cattlemen's Beef Association:

- BQA Advisory Committee (2013 to present)
  - National BQA Standardization Committee (2021 to present)
- National Beef Quality Audit Strategy Task Force (2016)
- Producer Education Strategic Task Force (2014)
- Beef Focus Advisory Group (2014 to present)
- Sustainable Grazing Symposium Planning Committee (2013)
- Western Region IRM Working Group (2003 to 2010)
- BQA State Coordinators Committee (1999 to 2010)
  - Animal Identification Committee (2003; **Vice-Chairman**)

eXtension Community of Practice: Cattle Clearinghouse (2006 to 2010)

Federation of Animal Science Societies

- Joint Extension Education Workshop Committee (2006 to 2008)

American Society of Animal Science

- Extension Education Committee (2006 to 2008)
- American Society of Animal Science Western Section
  - Extension Committee (2000 to 2002; 2009 to 2011; **2002 Chairman**)
  - Awards Committee (2006 to 2008)
  - Executive Committee (2002, 2004)
  - Advisory and Coordinating Committee (2002 to 2005) - **2004 Chairman**

National 4-H Livestock Skillathon Contest Committee (2000 to 2007)

National Beef InfoBase Committee (2000 to 2002) - **New Mexico Ambassador**

Western Beef Resource Committee (WBRC; 1999 to 2010)

### State Committees

East Foundation Professional Advisory Group (2012 to present)

New Mexico Beef Industry Improvement Committee (2009 to 2010)

- Health Subcommittee
- Extension Service Collaboration Subcommittee

National Animal Identification System Stakeholder Advisory Committee to the New Mexico Livestock Board (2006 to 2010)

New Mexico Scrapie Certification Board (2005 to 2010)

New Mexico Cattle Growers Beef Quality Assurance Task Force (2000 to 2006)

Southern New Mexico State Fair Quality Assurance Control Committee (2002 to 2003)

Southern New Mexico State Fair Livestock Committee (2001 to 2002)

### University, College, and Departmental Committees

Texas A&M University - Kingsville

Department of Animal Sciences and Veterinary Technology Chair Search (2019)

College of Agriculture, Environmental, and Human Sciences Dean Search (2016 to 2017)

Agriculture Business Faculty Search Committee (**2012 Chair**, 2014, 2016, 2017)

Promotion and Tenure Review Committee. Department of Agriculture, Agribusiness and Environmental Science (2010 to 2018; **2011 Chair; 2014 Chair**)

TAMUK Long-term Budget Committee (2012 to 2013)

TAMUK University Advancement Committee (2010 to 2012)

New Mexico State University

NMSU Faculty Senate (2007 to 2010)

Extension Plant Sciences Department Promotion and Tenure Evaluation Committee (2009 to 2010)

Extension Animal Sciences and Natural Resources Promotion and Tenure Committee (2009 to 2010)

College of ACES Performance Evaluation Committee (2009)

NMSU Extension Specialist Promotion and Tenure Evaluation Committee (2008 to 2010)

College of Agriculture and Home Economics Distance Education Committee (2007 to 2010)

Committee on NMSU Extension Faculty Appointment Conversion to 9-months (2008) - **Chairman**

Uniting NMSU Online Committee (2004 to 2006)

All-Extension Conference Planning Team (2004, 2005, 2009)

Corona Range and Livestock Research Center Steering Committee (2003 to 2010)

Ad Hoc All College Conference Review Committee (2003)

NMSU eXtension Committee (2002 to 2006)

All College Conference Planning Committee (2001 to 2003) - **2003 Co-Chairman**

Sustainable Animal and Rangeland Resources Program Committee (2001 to 2007)

Range Improvement Task Force (1998 to 2010)

Cattle Growers Short Course Planning Committee (1998 to 2010; **Coordinator**, 2004 to 2010)

NMSU Faculty Search Committees (11; **Chairman** of two)

NMSU Graduate Faculty (1999 to 2010)

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

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National Cattlemen's Beef Association

Texas and Southwestern Cattle Raisers Association

United States Roundtable for Sustainable Beef

Global Roundtable for Sustainable Beef

American Society of Animal Science

American Registry of Professional Animal Scientists

CattleFax

Plains Nutrition Council

Texas Wildlife Association

## EXTRAMURAL FUNDING

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### Gifts, Grants, and Contracts supporting the King Ranch® Institute for Ranch Management

2021 – Jan 1 to Aug 31	\$ 140,500
2020	\$ 471,506
2019	\$ 19,732,060
2018	\$ 749,155
2017	\$ 615,285
2016	\$ 366,866
2015	\$ 601,756
2014	\$ 420,110
2013	\$ 324,085
2012	\$ 306,398
2011	\$ 244,944
2010	\$ 600,290
<b>Total</b>	<b>\$24,528,955</b>

1. Gifts and Grants < \$25,000. 2021. Gifts (3) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$27,500.**
2. KRIRM Ranching Legacy Annual Membership. 2021. Gifts (11) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$38,000**
3. South Texas Charity Weekend, Inc. 2021. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$75,000.**
4. Gifts and Grants < \$25,000. 2020. Gifts (14) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$67,500.**
5. South Texas Charity Weekend, Inc. 2020. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$50,000.**
6. East Foundation. 2020. Contract to support KRIRM Research Scientist 2020 to 2024. Texas A&M University-Kingsville. **\$354,006.**
7. Gifts and Grants < \$25,000. 2019. Gifts (11) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$45,150.**
8. South Texas Charity Weekend, Inc. 2019. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$50,000.**
9. Anonymous Ranch Gift and Operating Endowment Bequest Pledge. 2019. Gift to TAMUK Foundation to support the mission of KRIRM. **\$19,500,000.**
10. South Texas Charity Weekend, Inc. 2019. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$187,000.**
11. Gifts and Grants < \$25,000. 2018. Gifts (6) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$33,500.**
12. KRIRM Lectureship and Symposia. 2018. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$80,655.**
13. East Foundation. 2018. Gift to support KRIRM Fellowship from 2018 to 2022. Texas A&M University-Kingsville. **\$240,000.**
14. Holt CAT Foundation. 2018. Gift to support Holt Cat Symposium at KRIRM. Texas A&M University-Kingsville. **\$50,000.**
15. South Texas Charity Weekend, Inc. 2018. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$195,000.**
16. Enbridge, Inc. 2018. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$50,000.**
17. Julianna and Peter Holt. 2018. Gift to support Holt Cat Symposium at KRIRM. Texas A&M University-Kingsville. **\$100,000.**
18. Gifts and Grants < \$25,000. 2017. Gifts (12) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$74,400.**

19. KRIRM Lectureship and Symposia. 2017. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$82,885.**
20. Burnett Foundation (Four Sixes Ranch). 2017. Gift to support KRIRM Fellowship. Texas A&M University-Kingsville. **\$250,000.**
21. East Foundation. 2017. Gift to support KRIRM Fellowship. Texas A&M University-Kingsville. **\$48,000.**
22. South Texas Charity Weekend, Inc. 2017. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$60,000.**
23. Texas Farm Credit. 2017. Pledge fulfillment to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$100,000.**
24. Gifts and Grants < \$25,000. 2016. Gifts (6) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$13,800.**
25. KRIRM Lectureship and Symposia. 2016. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$93,066.**
26. South Texas Charity Weekend, Inc. 2016. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$60,000.**
27. Richard G. and Susan Sugden. 2016. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$100,000.**
28. Texas Farm Credit. 2016. Pledge fulfillment to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$100,000.**
29. Gifts and Grants < \$25,000. 2015. Gifts (6) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$30,466.**
30. KRIRM Lectureship and Symposia. 2015. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$61,290.**
31. Nancy Ann and Ray L. Hunt. 2015. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$50,000.**
32. Ag Reserves Inc. 2015. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$250,000.**
33. Yarborough Foundation. 2015. Gift to support Endowed Chair at KRIRM. Texas A&M University-Kingsville. **\$50,000.**
34. South Texas Charity Weekend, Inc. 2015. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$60,000.**
35. Texas Farm Credit. 2015. Pledge fulfillment to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$100,000.**
36. Gifts and Grants < \$25,000. 2014. Gifts (4) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$10,700.**
37. KRIRM Lectureship and Symposia. 2014. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$75,410.**
38. Ag Reserves Inc. 2014. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$62,500.**
39. Saunders Real Estate. 2014. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$37,500.**
40. South Texas Charity Weekend, Inc. 2014. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$60,000.**
41. Ag Reserves Inc. 2014. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$37,000.**
42. Texas AgFinance. 2014. Pledge fulfillment to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$100,000.**
43. Gifts and Grants < \$25,000. 2013. Gifts (4) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$50,000.**
44. KRIRM Lectureship and Symposia. 2013. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$64,085.**
45. Ag Reserves Inc. 2013. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$50,000.**
46. South Texas Charity Quail Hunts. 2013. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$60,000.**

47. Texas AgFinance. 2013. Pledge fulfillment to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$100,000.**
48. Gifts and Grants < \$25,000. 2012. Gifts (7) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$65,000.**
49. KRIRM Lectureship and Symposia. 2012. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$81,398.**
50. South Texas Charity Quail Hunts. 2012. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$60,000.**
51. Texas AgFinance. 2012. Pledge fulfillment to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$100,000.**
52. Gifts and Grants < \$25,000. 2011. Gifts (2) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$15,000.**
53. KRIRM Lectureship and Symposia. 2011. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$69,944.**
54. South Texas Charity Quail Hunts. 2011. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$60,000.**
55. Texas AgFinance. 2011. Pledge fulfillment to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$100,000.**
56. Gifts and Grants < \$25,000. 2010. Gifts (4) to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$25,350.**
57. KRIRM Lectureship and Symposia. 2010. Registration fees to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$44,940.**
58. Ag Reserves Inc. 2010. Donation to King Ranch Institute for Ranch Management to create Deseret Scholarship Endowment fund. **\$500,000.**
59. Ag Reserves Inc. 2010. Gift to support King Ranch Institute for Ranch Management. Texas A&M University-Kingsville. **\$30,000.**

#### **Grants Funded – New Mexico State University**

**NMSU Total: \$592,230**

Total Gifts < \$25,000. Gifts (10) to support NMSU Cooperative Extension Programing. New Mexico State University. **\$24,750.**

Löest, C. A., **C. P. Mathis**, M. K. Petersen, and J. E. Sawyer. 2005. USDA-NRI. Development of methods and decision-making tools to enable stakeholders to improve calf well-being: An integrated approach. Funded for **\$397,505.**

Rasby, R., G. Selk, and J. Whittier. 2006. eXtension Community of Practice: Cattle Clearinghouse. Funded by eXtension for **\$50,000.** NMSU Cooperating Investigator: **C. P. Mathis.**

Gipson, T. A., R. Merkel, R. Parker, **C. P. Mathis**, and C. Balok. 2001. Animal Production Food Safety Outreach Program for Small Beef, Sheep and Goat Producers in New Mexico and Oklahoma. Funded by USDA-FSIS for **\$60,000.**

Gipson, T. A., R. Merkel, R. Parker, **C. P. Mathis**, and C. Balok. 2002. Animal Production Food Safety Outreach Program for Small Beef, Sheep and Goat Producers in New Mexico and Oklahoma. Funded by USDA-FSIS for **\$60,000.**

## LISTING OF PUBLICATIONS

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<u>Publication Type</u>	<u>No. Publications</u>
Peer-reviewed (including Book Chapters)	39
Extension Guides, Circulars, and Proceedings	69
Research Proceedings and Research Reports	57
Abstracts	37

### Peer-Reviewed

1. Bennett, D., and **C. P. Mathis**. 2021. Custodians of Two Interests: Navigating Economic Realities and Opportunities in Stewarding Private Lands. *The Art and Science of Private Land Stewardship*. Submitted Aug, 2021.
2. Turner, B. L., M. Goodman, R.V. Machen, **C. P. Mathis**, R. Rhoades, & B. Dunn. 2020. Results of beer game trials played by natural resource managers versus students: Does age influence ordering decisions?. *Systems*, 8(4), 37. doi.org/10.3390/systems8040037.
3. Navarre, C., A. Daniels, M. Johnston, **C. P. Mathis**, T. Perrett, D. Posey, A. Ramirez, A. Stough-Hunter, C. Telgen, D. Welch, N. Olynk Widmar. 2020. Council for Agricultural Science and Technology (CAST). 2020. Impact of recruitment and retention of food animal veterinarians on the U.S. Food Supply. Issue Paper 67. CAST, Ames, Iowa.
4. Mulliniks, J. T., J. E. Sawyer, C. A. Löest, F. Harrellson, **C. P. Mathis**, S. H. Cox, and M. K. Petersen. 2015. Effects of late gestation body weight change and condition score on progeny feedlot performance. *Anim. Prod. Sci.* <http://dx.doi.org/10.1071/AN15025>.
5. Rhoades, R.D., K. C. McCuiston, and **C. P. Mathis**. 2014. A Systems Approach to Ranching: Finding Leverage to Mitigate Drought. *Rangelands*. December 2014. Vol. 36, No. 6, 2-6.
6. Bohnert, D. and **C. P. Mathis**. 2014. Supplementation of beef cattle consuming forage-based diets. *Cow-Calf Management Guide and Cattle Producers' Library*. CL-328.
7. McCuiston, K., M. Grigar, D. B. Wester, R. Rhoades, **C. P. Mathis**, and L. Tedeschi. 2014. Can we predict forage nutritive value with weather parameters? *Rangelands*. 36:2-9.
8. R. D. Rhoades, J. J. Livsey, K. C. McCuiston, and **C. P. Mathis**. 2013. Employee management on large ranches. *Rangelands*. 35(2):1-10.
9. Mulliniks, J. T. **C. P. Mathis**, S. H. Cox, and M. K. Petersen. 2013. Supplementation strategy during late gestation alters steer progeny health in the feedlot without affecting cow performance. *Anim. Feed Sci. Technol.* 185:126-132.
10. Mulliniks, J. T., J. E. Sawyer, **C. P. Mathis**, S. H. Cox, and M. K. Petersen. 2012. Winter supplementation during late gestation influences cow and steer progeny performance. *J. Anim. Sci.* 90:5099-5106
11. McCuiston, K. C., J. Johnson-Livsey, D. Wilmeth, D. Probert, B. Dunn, R. Rhoades, and **C. P. Mathis**. 2011. Case Study: A Systems Analysis of Cattle Morbidity in a Niche Market Beef Cooperative. *J. Agric., Food Syst. and Comm. Dev.* 2:289-286.
12. Waggoner, J. W., C. A. Löest, J. L. Turner, **C. P. Mathis**, and D. M. Hallford. 2009. Effects of dietary protein and bacterial lipopolysaccharide infusion on nitrogen metabolism and hormonal responses of growing beef steers. *J. Anim. Sci.* 87:3656-3668.
13. **Mathis, C.P.**, S. H. Cox, C. A. Löest, M. K. Petersen, and J. T. Mulliniks. 2009. Pasture preconditioning calves at a higher rate of gain improves feedlot health but not post-weaning profit. *Prof. Anim. Sci.* 25:475-480.
14. Waggoner, J. W., C. A. Löest, **C. P. Mathis**, D. M. Hallford, and M. K. Petersen, M. D. Remmenga. 2009. Effects of supplemental rumen-protected methionine and bacterial lipopolysaccharide on nitrogen metabolism and hormonal responses of growing beef steers. *J. Anim. Sci.* 87:681-692.
15. Van E. Nolte, J., C. A. Löest, A. V. Ferreira, J. W. Waggoner, and **C. P. Mathis**. 2008. Limiting amino acids for growing lambs fed a diet low in ruminally undegradable protein. *J. Anim. Sci.* 86: 2627-2641.
16. Olson, K. C., R. C. Cochran, E. C. Titgemeyer, **C. P. Mathis**, T. J. Jones, and J. S. Heldt. 2008. Prediction of the energy content of tallgrass prairie hay. *J. Anim. Sci.* 86: 1372:1381.



17. **Mathis, C. P.**, S. H. Cox, C. A. Löest, M. K. Petersen, R. L. Endecott, A. M. Encinias, and J. C. Wenzel. 2008. Comparison of Low-input Pasture to High-input Drylot Backgrounding on Performance and Profitability of Beef Calves through Harvest. *Prof. Anim. Sci.* 24:169-174.
18. Cabrera, V. E., **C. P. Mathis**, R. E. Kirksey, T. T. Baker. 2008. Case Study: Development of New Mexico Dairy Manure, a Seasonal Prediction Model for Manure Excretion by Dairy Cattle. *Prof. Anim. Sci.* 24:175-183.
19. **Mathis, C. P.**, and J. E. Sawyer. 2007. Nutritional Management of Grazing Beef Cows. *Vet. Clin. Food Anim.* 23:1-19.
20. Waggoner, J. W., **C. P. Mathis**, C. A. Löest, J. E. Sawyer, F. T. McCollum, III, and J. P. Banta. 2007. Case Study: Impact of morbidity in finishing beef steers on feedlot average daily gain, carcass characteristics, and carcass value. *Prof. Anim. Sci.* 23:174-178.
21. **Mathis, C. P.**, D. W. Bohnert, and J. E. Sawyer. 2006. Supplementation Strategies for Grazing Beef Cattle. *Cow-Calf Management Guide and Cattle Producers' Library.* CL-318.
22. Sawyer, J. E., **C. P. Mathis**, R. E. Kirksey, and L. A. Lauriault. 2006. Production alternatives for market beef cow value enhancement. *Prof. Anim. Sci.* 22:132-138.
23. Waterman, R. C., J. E. Sawyer, **C. P. Mathis**, D. E. Hawkins, G. B. Donart, and M. K. Petersen. 2006. Effects of supplements that contain increasing amounts of metabolizable protein with or without Ca-propionate salt in young beef cows. *J. Anim. Sci.* 84:433-446.
24. Sawyer, J. E., **C. P. Mathis**, and B. Davis. 2004. Adding value to culled beef cows. *J. Anim. Sci.* 82:3646-3653.
25. Farmer, C. G., B. C. Woods, R. C. Cochran, J. S. Heldt, **C. P. Mathis**, K. C. Olson, E. C. Titgemeyer, and T. A. Wickersham. 2003. Effect of supplementation frequency and supplemental urea level on dormant tallgrass-prairie hay intake and digestion by beef steers and parturition performance of beef cattle cows grazing dormant tallgrass-prairie. *J. Anim. Sci.* 82:884-894.
26. **Mathis, C. P.**, J. E. Sawyer, R. Waterman, and C. A. Löest. 2003. Urea in Range Cattle Supplements. *Cow-Calf Management Guide and Cattle Producers' Library.* CL-321.
27. Sawyer, J. E., **C. P. Mathis**, C. A. Löest, D. A. Walker, K. J. Malcolm-Callis, L. A. Blan and R. Taylor. 2003. Case Study: Niche-targeted versus conventional finishing programs for beef steers. *Prof. Anim. Sci.* 19:188-194.
28. Rogers, C. A., T. W. Drummond, R. Flores, **C. P. Mathis**, and M. L. Looper. 2003. Case Study: Estrous characteristics are influenced by prostaglandin administration in beef heifers. *Prof. Anim. Sci.* 19:19-22.
29. Farmer, C. G., R. C. Cochran, D. D. Simms, J. S. Heldt, and **C. P. Mathis**. 2001. Impact of divergent wheat milling byproducts in supplements on the forage use and performance of beef cattle consuming low quality, tallgrass-prairie forage. *J. Anim. Sci.* 79:2472-2480.
30. **Mathis, C. P.**, R. C. Cochran, E. S. Vanzant, I. E. O. Abdelgadir, J. S. Heldt, K. C. Olson, D. Johnson, J. Caton, D. Faulkner, G. Horn, S. Paisley, R. Mass, K. Moore, and J. Halgerson. 2001. A collaborative study evaluating in situ and in vitro techniques for estimating protein degradability of different forages. *Anim. Feed Sci. Technol.* 93:31-42.
31. **Mathis, C. P.**, H. E. Hawkins, L. R. Sprott, D. K. Lunt, and D. W. Forrest. 2001. Pregnancy Rate in Beef Heifers after Synchrony to Random or Programmed Estrous Cycles. *J. Anim. Sci.* 79:561-567.
32. **Mathis, C. P.**, and J. E. Sawyer. 2000. Beef Cow Production Efficiency in Western Rangelands. *Cow-Calf Management Guide and Cattle Producers' Library.* CL-732.
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#### **Dissertation/Thesis**

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