

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

)	DOCKET NO. 09-035-23
)	Exhibit No. DPU 1.0
In the Matter of the Application of)	
Rocky Mountain Power for Authority to)	
Increase Its Retail Electric Service Rates)	
in Utah and for Approval of Its Proposed)	Direct Rate of Return Testimony
Electric Service Schedules and Electric)	and Exhibits
Service Regulations)	Dillon M. Feuz
)	
)	

**FOR THE DIVISION OF PUBLIC UTILITIES
DEPARTMENT OF COMMERCE
STATE OF UTAH**

Direct Testimony of

Dillon M. Feuz

October 8, 2009

Testimony of Dillon M. Feuz

Q. Please state your name, business address and title.

A. My name is Dillon M. Feuz; my business address is 3530 Old Main Hill, Logan, Utah 84322. I am a professor in the Applied Economics Department for Utah State University

Q. On whose behalf are you testifying?

A. The Utah Farm Bureau Federation ("FB")

Q. Please summarize your educational and professional experience.

A. I obtained a B.S. degree in Agribusiness from the University of Wyoming in 1984; an M.S. degree in Agricultural Economics from the University of Wyoming in 1986; and a PhD in Agricultural Economics from Colorado State University in 1990. I worked for 6.5 years for South Dakota State University, 10 years for the University of Nebraska-Lincoln and 3+ years for Utah State University. My expertise is in the area of agricultural marketing and farm/ranch management. My resume is attached as FB. Ex. 1.

Q. What is the purpose of your testimony in this matter?

A. First, I wish to testify to the general economic conditions facing agricultural producers in Utah, and specifically those producers who are producing irrigated crops. Secondly, I would like to comment on the minimal growth in electricity usage by irrigators in Utah.

Q. What is the current conditions and near term outlook for Utah crop producers?

A. Alfalfa hay production is the largest irrigated crop in Utah. There are over 500,000 acres harvested annually. Corn for grain and silage would be the next largest irrigated crop with about 65,000 harvested acres each year. My remarks will focus on Alfalfa, but for the most part would apply to corn as well. Alfalfa harvested in 2007 and marketed in 2007-08 had a monthly average sale price of \$139 per ton. For alfalfa harvested in 2008 and marketed in 2008-09, the average monthly price was \$160 per ton. Hay that was harvested in 2009 sold for an average of \$105 in September (All prices are from the USDA-National Agricultural Statistics Service). Prices are not likely to increase substantially over the next several months. The sharp drop in alfalfa hay prices is a result of an unprofitable dairy sector and declining profitability in the beef sector (these are both national trends as well as Utah conditions). In addition, those firms in Utah who compress and cube alfalfa for export sales have also seen a sharp decline in the export market price. The decline in profitability of these agricultural sectors are directly related to the US economy and to the economies of the countries that the US was exporting, beef, dairy, and alfalfa products. Those conditions are not likely to improve dramatically over the next several months. Therefore, I would not anticipate that Utah irrigated crop producers will see much of an increase in crop prices over the next several months.

While crop prices have decreased, many costs have increased substantially. For example fertilizer price for DAP 18-46-0 went \$442 to \$850 to \$658 per ton for 2007, 2008 and 2009, respectively (USDA-NASS). That is typical of several major input costs; they have declined from 2008 levels but are still higher than 2006 levels.

In summary, irrigated crop producers in Utah have generally seen crop prices this year that are lower than the previous two years and those lower prices will likely continue in the near future. However, their costs may have declined from 2008 levels but are generally higher than they were in 2007. I do not anticipate costs decreasing in the next several months.

Q. Has there been significant growth in the electricity use of Utah crop producers who pump their irrigation water?

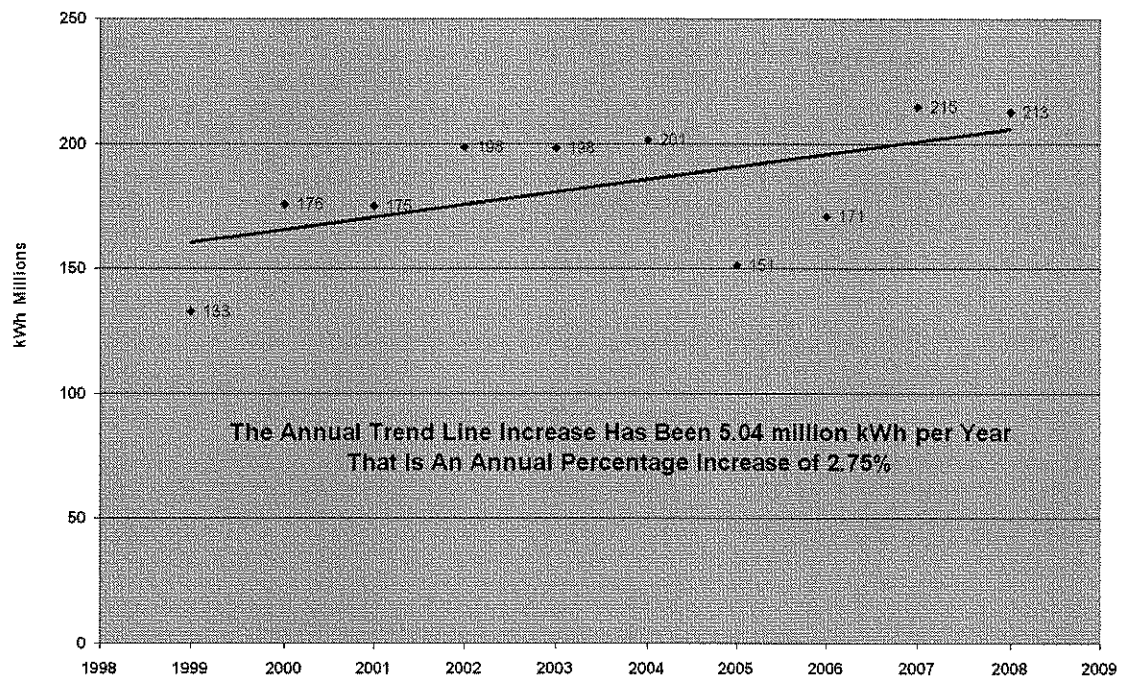
A. Utah irrigators have averaged using 183 million kWh of electricity from Rocky Mountain Power over the last ten years, 1999-2008. The lowest usage was in 1999 at 133 million kWh and the highest was in 2007 at 215 million kWh. There has been an annual trend line increase of 5.04 million kWh per year over that ten

year time frame. That is an annual percentage increase of only 2.75% based on the average for the ten years. The graph attached as FB Ex. 2, shows the trend.

Q. Does this conclude your testimony?

A. Yes.

Utah Irrigation kWh Use, 1999-2008



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and Exhibits**

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year time frame. That is an annual percentage increase of only 2.75% based on the average for the ten years. The graph attached as FB Ex. 2, shows the trend.

Q. Does this conclude your testimony?

A. Yes.

FB. Ex. 1

DILLON M. FEUZ

Applied Economics Department
Utah State University
3530 Old Main Hill
Logan, Utah 84322
(435) 797-2296

EDUCATION

Ph.D. Agricultural Economics, Colorado State University, 1990.
Major Fields: Production & Finance; Marketing & Price Analysis.

M.S. Agricultural Economics, University of Wyoming, 1986.
Primary Focus: Ranch and Range Livestock Economics.

B.S. Agricultural Business, University of Wyoming, 1984.
Graduated with honor.

EXPERIENCE

Applied Economics Department, Utah State University Professor and Extension Specialist, June 2006 to Present

Position is an Extension (55%), Research (25%), Teaching (15%), and Service (5%) appointment. Extension responsibilities are to (1) work with fellow agricultural economists and scientists from other disciplines to determine optimal livestock production systems for ranches in Utah that enhance profitability with an acceptable amount of risk; and (2) analyze national and regional cattle markets and provide continuing education on these markets. Research focus is primarily involved with marketing and management issues effecting the beef cattle industry including optimal calf marketing, cull cow feeding and marketing, and optimal ranch enterprise combinations. Teaching is in the area of agricultural marketing.

Panhandle Research & Extension Center, University of Nebraska-Lincoln Assistant/Associate/Full Professor of Agricultural Economics, July 1996 to June 2006.

Position was an Extension (50%) Research (50%) appointment. Extension responsibilities were to work with fellow agricultural economists and scientists from other disciplines to determine optimal crop and livestock production systems that enhanced the profitability of ranches/farms in the Nebraska Panhandle. Research focus was primarily involved with marketing and management issues effecting the beef industry and analyzing beef demand. Understanding the risks involved with alternative cropping systems was investigated. There was also a teaching responsibility in the Agri-business program of Western Nebraska Community College through 2001.

Economics Department, South Dakota State University Assistant/Associate Professor, Jan. 1990 to July 1996.

Position was a Research (85%) Teaching (15%) appointment. Research areas were (1) analyzing the efficiency of the slaughter cattle marketing system and evaluating alternative value based marketing

methods; (2) analyzing risk management and marketing alternatives associated with retained ownership of calves; (3) analyzing past and present prices at the Sioux Falls and other terminal markets and developing ARIMA and Econometric forecasting models; and (4) evaluating management issues involved with "sustainable" or "organic" beef production. Teaching responsibilities included Agricultural Marketing and Prices, Economics of Grain and Livestock Marketing, and Production Economics. Research and teaching responsibility also includes advising graduate and undergraduate students, and the supervision of a Research Associate.

**Department of Agricultural & Resource Economics, Colorado State University
Research and Teaching Assistant, Sept. 1987 - Jan. 1990.**

Dissertation research involved classifying farms into a set of typical farms and developing the "Farm Optimization and Financial Analysis System (FOFAS)". Teaching responsibilities were one undergraduate Farm and Ranch Management course and one course for foreign professionals with the International Farm Management Program during the summer of 1988.

**Utah State Extension Service, Rich County
Extension Agent (Temporary), May 1987 - Aug. 1987.**

Was responsible for all agricultural and 4-H programs in the county i.e., livestock health and marketing, no-till farming practices, weed control, mosquito control, 4-H camp, county fair, etc.

**Department of Agricultural Economics, University of Wyoming
Graduate Assistant,, Jan. 1985 - May 1986.**

Thesis research involved surveying ranches in Wyoming to obtain economic and production data. Constructed computerized budgets to analyze data and used linear programming to depict optimal ranch organization. Prior to thesis research, was a computer programmer for the department.

HONORS, AWARDS & MEMBERSHIPS

University of Nebraska, Institute of Agriculture & Natural Resources, Cooperative Extension, Excellence in Team Programing award, 2002

Nebraska Beef Council, Prime Promoter, 2002

Western Agricultural Economics Association, Outstanding Extension Program Award 2000.

American Agricultural Economics Association, Distinguished Extension Program Award 1997.

Western Agricultural Economics Association, Outstanding Extension Project Group Award 1997.

Member

American Agricultural Economics Association

Western Agricultural Economics Association

Gamma Sigma Delta and Sigma Xi

GRANTS

"Risk Management Education Program for Utah Producers 2009-2010" **\$264,987** from the USDA, Risk management Agency. P.I. D.M. Feuz, Oct. 1, 2009-Sept. 30, 2010.

MacAdam (PI), Feuz (co-PI). Improved beef liveweight gain using birdsfoot trefoil pasture. Natural Resources Conservation Service. Conservation Innovation Grant, Utah Component 69-8D43-9-03. **\$74,906.04** from NRCS plus \$75,126.38 cost share (MacAdam partial salary from three years, 09-10, 10-11, and 11-12). 9/30/09-9/29/12.

"Risk Management Education Program for Utah Producers 2008-2009" **\$165,000** from the USDA, Risk management Agency. P.I. D.M. Feuz, Sept. 1, 2008-Sept. 30, 2009.

"A Ranch Risk Management Tool: With Supporting Documents and Fact sheets in English and Spanish" **\$155,060** from the USDA, Risk Management Agency. P.I. D.M. Feuz. Oct 1, 2007-Sept. 30, 2010.

"Wyoming and Utah Sheepman Program" \$21,664 from the Western Center for Risk Management Education. P.I. D.M. Feuz and B.M. Feuz. Was not funded.

"Solutions to Small and Medium Sized Ranch Challenges" **\$89,914.29** Utah State University share from the National Research Initiative. P.I. M.C. Stockton, D.M. Feuz and L. Makus. September 2007-August 2011.

"Replacing Grazed Forages with Dried Distillers Grain" **\$10,000** from the Helen Porter Van Spronsen Trust. P.I. D.C. Adams, T. Klopfenstein, J.D. Volesky, D. Feuz and W. Schacht. June 2005- May 2006. Year two funding at \$10,000 based on satisfactory performance of year one.

"Integrating Extended Grazing into Beef Calving and Finishing Systems." **\$5,000** from Ralph H. Bainbridge Fund. P.I. D.C. Adams, D. Feuz, J.D. Volesky, T. Klopfenstein and R. Funston. June 2005- May 2006. Year two funding at \$5,000 based on satisfactory performance of year one.

"World Beef Project - Discerning the Value of Sensory Traits and Marketing Strategies in Export Markets for U.S. Beef." **\$150,000** from the U.S. Meat Export Federation. P.I. Chris Calkins and Dillon M. Feuz. October 2004 - September 2005.

"Evaluation of Production costs and Returns for Western Nebraska Specialty Crops with a Process for Producer Assessment of Potential New Crops." **\$24,000** from the Nebraska Department of Agriculture. P.I. Dillon M Feuz and Paul Burgener. July 2002 - June 2004.

"Biologically Intensive Areawide IPM of the Russian Wheat Aphid and Greenbug" Total value \$2.5 million, Nebraska PHREC share **\$400,000**. P.I. Norm Elliot, Paul Burgener et.al. October 2001 - September 2006.

"Nebraska Dry Edible Bean Industry." **\$2,100** from the State Line Dry Bean Grower Cooperative. P.I.'s Paul Burgener and Dillon Feuz. 2001.

"Farming and Rural Value-Added Opportunities Related to Sugar Beet Production" \$388,911 requested from FFRA-USDA. Principle Investigators: G. Brester, K. McNew and D.M. Feuz. Was not funded.

"Economic and financial Viability of U.S. Farms in a Changing Sugar Market" \$388,911 requested from IFAFS-USDA. Principle Investigators: G. Brester, K. McNew and D.M. Feuz. Was not funded.

"The Value of Beef Flavor as Influenced by Aging Method and/or Country of Origin" **\$54,300** was obtained from the Nebraska Beef Council. Oct. 1, 2000 - Sept. 30, 2001. P.I. C Calkins and D.M. Feuz.

"What Drives Consumers' Beef Purchase Decisions and Post-Purchase Satisfaction?" \$16,525 requested from the ARD Interdisciplinary Research Support Program. Principal Investigators: L. Price and D.M. Feuz. July 1, 2000 - June 30, 2001. Was not funded.

"Risk/Return of Winter Annual Grass Control Using Crop Rotations in Winter Wheat" \$31,000 requested from the USDA, Integrated Pest Management Funding. Principal Investigator: D.M. Feuz. July 1, 2000 - June 30, 2002. Was not funded.

"Profitability of Alternative Dryland Cropping Systems in the Central Great Plains." \$36,200 requested from the USDA Sustainable Agriculture Research and Education Program (SARE). Preproposal not accepted. Principal Investigators: D.M. Feuz and D.M. O'Brien. 1999.

"The Value of Beef Flavor" **\$30,000** from the National Cattlemen's Beef Association. Principle Investigators: Chris Calkins and D.M. Feuz. 1999-2000.

"Economics of Using Crop Rotation for Winter Annual Grass Control in Winter Wheat" \$33,700 requested from the USDA, Integrated Pest Management Funding. Principal Investigator: D.M. Feuz. July 1, 1999 - June 30, 2001. Was not funded.

"Taking Advantage of Winter Wheat Protein Premium through Late-Season Nitrogen Fertilization." **\$11,000** from the ARD Interdisciplinary Research Support Program. Principal Investigators: J.M. Blumenthal, D.M. Feuz and E.D. Kerr. July 1998 - June 1999.

"Economic Analysis of the Nebraska Corn-Fed Beef Program." **\$8,400** from the Nebraska Cattlemen. Principal Investigator: D.M. Feuz. Sept. 1997 - Dec. 1999.

"Comparing and Assessing Formula Pricing of Fed Cattle" **\$22,825** from the Research Institute on Livestock Pricing. Co-Investigators: Clement Ward, Oklahoma State University, Ted Schroeder, Kansas State University, Dillon Feuz, University of Nebraska. Nebraska Share \$2,975. Nov. 1997 - May 1999.

"Marketing opportunities for Nebraska cattle producers to improve economic sustainability." \$27,330 requested from IANR Interdisciplinary Research Proposal Program. Principal Investigators: Dillon Feuz and Ivan Rush. Was not funded.

"A Cost Effectiveness Evaluation of Value-Based marketing and its Commercial Application to Nebraska Beef Producers." **\$3,000** Nebraska Department of Agricultural, Sept. 1, 1997 - Nov. 21, 1997.

"Zero Tolerance: The Total Costs to the Beef Industry." **\$4,100** from the South Dakota Beef Industry Council. Principal Investigators: D.M. Feuz and J.J. Wagner. March - September, 1995.

"Selection of Management and Marketing Alternatives to Increase Profits and Reduce Risk of Cattle Producers." \$62,067 requested from the American Farm Bureau Research Foundation. Principal Investigators: D.M. Feuz, S.W. Fausti and J.J. Wagner. Proposal was not funded. 1994

"Impact of Value Based Marketing and Ultrasound Technology on Feeder Cattle Producers and Auction Markets." **\$6,500** from the Governor's Office of Economic Development through the Center for Innovation, Technology and Entrepreneurship. Principal Investigators: J.J. Wagner and D.M. Feuz. November, 1993 through October 1994.

"Economic, Social, and Environmental Feasibility of Alternative Integrated Crop-Beef Cattle Farming Systems in the Northern Plains." \$120,000 requested from the USDA Sustainable Agriculture Research and Education Program (formerly LISA). Preproposal accepted. Full proposal was not funded. 1993

"Economic, Social, and Environmental Feasibility of Alternative Integrated Crop-Beef Cattle Farming Systems in the Northern Plains." A concept paper submitted to the W.K. Kellogg Foundation, Integrated Farming Systems Initiative. \$308,000 requested. Development of full proposal was not solicited. 1992

"Economic and Environmental Impacts of "Organic" versus "Conventional" Beef Cattle Finishing in the Northern Plains." \$86,995 requested from the USDA LISA program. Pre-proposal was accepted, full proposal wasn't funded. 1992

"Increasing the Value of South Dakota's Calf Crop Through Retained Ownership and Custom Feeding." **\$30,000** from the Governor's Office of Economic Development through the Center for Innovation, Technology and Entrepreneurship. Principal Investigators: J.J. Wagner, D.M. Feuz, and R.H. Pritchard. October 1990 through July 1992.

"Sustainability of "Organic" versus "Conventional" Beef Production in the Northern Plains." \$109,580 requested from the USDA LISA program. Pre-proposal was accepted, full proposal was not funded.

REFEREED JOURNAL ARTICLES

Stockton, M.C. and D.M. Feuz. 2009. "Mad Cow Disease and Mad Changes in the US and Canadian Cull Cow Markets: A DAG Analysis." *Journal of Food Distribution Research*, 40(1):72-.

Chapman, C.K., D. Zobell, B. Godfrey, D. Feuz and R. Banner. 2008. "Measuring Impacts in Risk Management Education – The Beehive Master Beef Manager Program" *Journal of Extension*, Vol:46(5).

Griffen, W.A., T.J. Klopfenstein, G.E. Erickson, D.M. Feuz, J.C. MacDonald and D.J. Jordan. 2007. "Comparison Performance and Economics of a Long Yearling and Calf-fed System." *Professional Animal Scientist* 23(5):490-499.

Feuz, D.M., W.J. Umberger and C.R. Calkins. 2007. "The Potential for Canadian Branded Beef Steaks in the U.S. Market: Results from an Experimental Auction.", *Current Agriculture, Food & Resource Issues* 8:16-27.

Stalker, L.A., D.C. Adams, T.J. Klopfenstein, D.M. Feuz, and R.N. Funston. 2006 "Effects of pre- and postpartum nutrition on reproduction in spring calving cows and calf feedlot performance" *Journal of Animal Science*, 84: 2582-2589.

Sitz, B.M., Calkins, C.R., Feuz, D.M., Umberger, W.J., and Eskridge, K.M. 2006. "Consumer sensory acceptance and value of wet aged and dry aged beef." *Journal of Animal Science*, 84:1221-1226.

- Sitz, B.M., Calkins, C.R., Feuz, D.M., Umberger, W.J., and Eskridge, K.M. 2005. "Consumer sensory acceptance and value of domestic, Canadian, and Australian grass-fed beef steaks". *Journal of Animal Science*, 83: 2863-2868.
- Pavlista, A.D. and D.M. Feuz. 2005. "Potato Prices as Affected by Demand and Yearly Production" *American Journal of Potato Research* 82:339-343. University of Nebraska Cooperative Extension Division, Journal Series #1026.
- Feuz, D.M, W.J. Umberger, C.R. Calkins, and B. Stitz. 2004 "U.S. Consumers' Willingness to Pay for Flavor and Tenderness in Steaks as Determined with an Experimental Auction" *Journal of Agricultural and Resource Economics*, 29(3):501-516. ARD J Series #14387.
- Killinger, K.M., C.R. Calkins, W.J. Umberger, D.M. Feuz and K.M. Eskridge. 2004. "Consumer Visual Preference and Value for Beef Steaks Differing in Marbling Level and Color" *Journal of Animal Science*, 82:3288-3293. ARD J Series #14012 .
- Killinger, K.M., C.R. Calkins, W.J. Umberger, D.M. Feuz and K.M. Eskridge. 2004. "Consumer Sensory Acceptance and Value for Beef Steaks Differing in Marbling Level" *Journal of Animal Science*, 82:3294-3301. ARD J Series # 14011.
- Killinger, K.M., C.R. Calkins, W.J. Umberger, D.M. Feuz and K.M. Eskridge. 2004. "A Comparison of Consumer Sensory Acceptance and Value of Domestic Beef Steaks and Steaks from a Branded, Argentine Beef Program" *Journal of Animal Science*, 82:3302-3307. ARD J Series #14010 .
- Kniss, A., R. Wilson, P. Burgener, D. Feuz, A. Martin, C. Rice, A. Meshah, S. Miller. 2004. "Economic analysis of glyphosate-tolerant sugarbeet." *Zuckerindustrie*, 129(3):171-173.
- Kniss, A.R., R.G. Wilson, A.R. Martin, P.A. Burgener and D.M. Feuz. 2004. "Economic Evaluation of Glyphosate-Resistant and Conventions Sugar Beet." *Weed Technology* 18:388-396. ARD J Series # 14086.
- Umberger, W.J. and D.M. Feuz. 2004 "The Usefulness of Experimental Auctions in Determining Consumers Willingness-to-pay and Relative Willingness-to-pay Values for Closely Related Products" *Review of Agricultural Economics* 26(2):170-185. ARD J Series #14150.
- Mackay, W.S., J.C. Whittier, W.J. Umberger, T.G. Field, R.B. Teichert, and D.M. Feuz. 2004. "To Replace or Not to Replace: Determining Optimal Replacement Rates in Beef Cattle Operations." *Professional Animal Scientist* 20:87-93. ARD J Series #14388.
- Umberger, W.J., D.M. Feuz, C.R. Calkins and B.M. Sitz. 2003 "Country-of-Origin Labeling of Beef Products: U.S. Consumers' Perceptions" *Journal of Food Distribution Research* 34(3):103-116. ARD J Series #14386.
- Tronstad, R. and D. Feuz. 2002. "Impacts of the 2002 Drought on Western Ranches and Public Land Policies." *Western Economics Forum* 1(2):19-23.
- Umberger, W.J., D.M. Feuz, C.R. Calkins, and K. Killinger. 2002 "U.S. Consumer Preference and Willingness-to-Pay for Domestic Corn-fed Beef versus International Grass-fed Beef Measured

- through an Experimental Auction." *Agribusiness An International Journal* 18(4):491-504. ARD J. Series # 13604
- Dobbs, T.L., R.C. Shane and D.M. Feuz. 2000. "Lessons for Organic Agriculture from the Upper Midwest Organic Marketing Project." *American Journal of Alternative Agriculture*. 15(3):119-128.
- Burgener, P. and D. Feuz. 2000. "Equitable Cropshare Arrangements for Intensive Dryland Cropping Systems." *Journal of American Society of Farm Managers and Rural Appraisers*. 64(1):112-117.
- Feuz, D.M. 1999. "Market Signals in Value Based Pricing Premiums and Discounts." *Journal of Agricultural and Resource Economics*. 24(2):327-341.
- Liang, Chyi-lyi, D.M. Feuz, and R.G. Taylor. 1998. "Spatial and Varietal Price Analysis of Dry Edible Bean Markets." *International Food and Agribusiness Management Review*. 1(3):417-433.
- Fausti, S.W., D.M. Feuz, and J.J. Wagner. 1998. "Value Based Marketing for Fed Cattle: A Discussion of the Issues." *International Food and Agribusiness Management Review* 1(1):73-90.
- Feuz, D.M., and J.J. Wagner. 1996. "Retained Ownership: Understanding Performance Risk and Evaluating Marketing Alternatives." *Journal of American Society of Farm Managers and Rural Appraisers*, 60(1):65-71.
- Taylor, D.C., D.M. Feuz, and M. Guan. 1996. "Organic Versus Sustainable Fed Cattle Production: South Dakota Case Study." *American Journal of Alternative Agriculture*, (11:1):30-38.
- Wagner, J.J. and D.M. Feuz. 1995. "Predicting the Value of Feeder Cattle Placed into an Accelerated Finishing Program Under Dynamic Market Conditions." *Professional Animal Scientist*, (11):180-185.
- Fausti, S.W. and D.M. Feuz. 1995. "Production Uncertainty and Factor Price Disparity in the Slaughter Cattle Market: Theory and Evidence." *American Journal of Agricultural Economics* (77):533-540.
- Feuz, D.M., S.W. Fausti and J.J. Wagner. 1995. "Risk, and Market Participant Behavior in the U.S. Slaughter Cattle Market." *Journal of Agricultural and Resource Economics* 20(1):22-31.
- Feuz, D.M., S.W. Fausti and J.J. Wagner. 1993. "An Empirical Analysis of the Efficiency of Four Alternative Marketing Methods for Slaughter Cattle." *Agribusiness An International Journal*, vol 9(5):453-463.
- Wagner, J.J. and D.M. Feuz. 1993. "Effect of Slaughter Cattle Marketing Method on the Productions Signals Sent to Beef Producers." *Professional Animal Scientist*. vol 9:53-59
- Held, L.J., D.M. Feuz, and E.R. Edens. 1993. "A Risk Evaluation of Alternative Western Ranching Systems." *Journal of American Society of Farm Managers and Rural Appraisers*, 57(1):63-69.

Feuz, D.M. 1992. "Replacement Beef Heifer Economics: When Price and Reproductive Performance are Uncertain." *Journal of the American Society of Farm Managers and Rural Appraisers*, 56(1), pp 61-66.

Feuz, D.M. and M.D. Skold. 1991. "Typical Farm Theory in Agricultural Research." *Journal of Sustainable Agriculture*, II(2), pp 43-58.

Feuz, D.M., N.L. Dalsted, and P.H. Gutierrez. 1990. "Leasing Cows -- What is Equitable." *Journal of the American Society of Farm Managers and Rural Appraisers*, vol. 54(1), pp 21-28. April.

PUBLISHED BOOK CHAPTERS

Feuz, D.M. and W.J. Umberger. 2003. "Beef Cow-Calf Production" *The Veterinary Clinics of North America: Food Animal Practice*, Vol. 19, No. 2. Economics of the Red Meat and Dairy Industries. S.R. Koontz, Guest Editor, W.B. Saunders Company. pp. 339-363.

Fausti, S.W., and Feuz, D., 1994, "The Effect of Uncertainty on Market Structure: The South Dakota Slaughter Cattle Market", *Current Regional Issues*, Dryden Press, pp. 1-6.

PROFESSIONAL PAPERS

Feuz, D.M. C. Harris, D. Bailey and G. Halverson. 2008. "Transportation and Quality Adjusted Basis: Does the Law of One Price Hold for Feeder Cattle." Selected paper presented at the annual Western Agricultural Economics Association meeting. Big Sky, MT , June 25-27.

Wilson, R. M. Stockton and D. Feuz. 2008 "The Economic Optimal Pre-breeding Target Weight of Beef Heifers Based on Recent Animal Research." Selected paper presented at the annual Western Agricultural Economics Association meeting. Big Sky, MT , June 25-27.

Halverson, G., D. Bailey, C. Harris and D.M. Feuz. 2008. "Price Impacts of Natural and Other Certifications on Feeder Cattle Prices." Paper presented at the NCCC-134 Applied Commodity Price Analysis, Forecasting, and Market Risk Management Conference, Saint Louis, MO. April 21-22.

Feuz, D.M. 2008. "Economic Aspects of Stocker Programs." Plains Nutrition Council Spring Conference, San Antonio, TX, April 10-11.

Feuz, D.M. and M.C. Stockman. 2008. "Market Risk of Feeding Cows vs Yearling Steers: An Historical Perspective and a Simulated Future." Paper presented at the SCC-76 Economics and Management of Risk in Agriculture and Natural Resources Conference, Gulf Shores, AL, March 13-14.

Feuz, D.M. 2007. "Influence of Commodity Prices on Long-Term Nutritional Decisions." Invited Paper, Beef Symposium, Western Section American Society of Animal Science, Moscow, ID June 20.

Chapman, C.K., D.R. ZoBell, E.B. Godfrey, D. Feuz, C.V. Bagley, R.E. Banner, T.D. Cooper, D. Rothlisberger, R.M. Nelson, and L. Greenhalgh. 2007. Teaching cattle producers to manage Risk - The Beehive Master Beef Manager Program. *WSASAS Proceedings*, Vol. 58:183-185.

- Feuz, D.M., M.C. Stockton and S. Bhattacharya. 2006. "The relationship of U.S. and Canadian Cull Cow Prices to Lean Beef Prices: A DAG Analysis." Selected Paper presented at the American Agricultural Economics Association Annual Meeting, Long Beach, California, July 23-26.
- Feuz, D.M. 2006. "Optimal Cull Cow Marketing." Selected paper presented at the annual Western Agricultural Economics Association meeting. Anchorage, Alaska, June 28-30.
- Stockton, M.C. and D.M. Feuz. 2006. "Determining Causality in the Cull Cow Market: The Application of a DAG to the Sioux Falls Cattle Market." Paper presented at the NCCC-134 Conference on Applied Commodity Price Analysis, Forecasting, and Market Risk Management. Saint Louis, MO, April 17-18.
- Burgener, P.A., D. Christian, D.M. Feuz C. Halstead and S. Keeman. 2005. "Economic Evaluation of Cropping Systems for Russian Wheat Aphid and Greenbug Control in the Great Plains." Selected paper presented at the annual Western Agricultural Economics Association meeting San Francisco, CA, July 6-8.
- Feuz, D.M.. 2005. "The Economics of Carcass Weight: A Weighty Matter for the Beef Industry" Selected paper presented at the Western Ag. Econ. Association Meetings, San Francisco, CA, July 6-8.
- Mark, D.R., R. Smith, D.M. Feuz and A. Prosch. 2005. "Comparing Basis Risk in futures Hedging and Livestock Risk Protection Insurance: Implication for Use of Livestock Insurance." Presented at the NCR-134 Applied Commodity Price Analysis, Forecasting, and Market Risk Management Conference, Saint Louis, MO. April 18-19.
- Feuz, D.M., W.J. Umberger, S. Perversi, C.R. Calkins and B. Sitz. 2004. "Consumer Preference and Willingness to Pay for U.S. versus Australian and Canadian Beef" Selected paper presented at the Western Ag. Econ. Association Meetings, Honolulu, HI. June 30- July 2.
- Umberger, W.J., D.M. Feuz, C.R. Calkins and B.M. Sitz. 2003 "Consumers' Preferences and Willingness-to-Pay for Beef Originating from the U.S., Canada, and Australia" Selected paper presented at the Western Ag. Econ. Association Meetings, Denver, CO. July 11-15.
- Feuz, D.M., W.J. Umberger, C.R. Calkins, S. Perversi and B. Sitz. 2003. "The Importance of Beef Tenderness, Marbling and Production Methods to U.S. Consumers" Selected paper presented at the Western Ag. Econ. Association Meetings, Denver, CO. July 11-15.
- Burgener, P.A., D.J. Lyon, and D.M. Feuz. 2003. "How do We Get There From Here? Transition Crops for Continuous Dryland Systems on the High Plains." Selected paper presented at the annual Western Agricultural Economics Association meeting, Denver, Colorado. July 13-15, 2003.
- Umberger, W.J., D.M. Feuz, C.R. Calkins and B. Sitz. 2003. "Characteristics Affecting Consumers' Perceptions and Preferences for US versus Imported Beef Products." Paper presented at the 2003 WCC-72 Western Coordinating Committee on Agribusiness's Annual Meeting. Las Vegas, NV. June 9.

- Umberger, W.J., D.M. Feuz, C.R. Calkins and B.M. Sitz. 2003 "Country-of-Origin Labeling of Beef Products: U.S. Consumers' Perceptions" Presented at the Food & Agricultural Marketing Policy Section Conference, Washington, DC, March 20-21.
- Feuz, D.M., S. Perversi and W.J. Umberger. 2002. "Basis Variability on the Feeder Cattle Contract versus the Failed Stocker Contract." Selected paper presented at the Western Ag. Econ. Association Meetings, Long Beach, California, July 28-31.
- Burgener, P.A., D.M. Feuz, D. Kaan and D. O'Brien. 2002. "Risk and Returns for Alternative Dryland Crop Rotations in the Central Great Plains." Selected paper presented at the Western Ag. Econ. Association Meetings, Long Beach, California, July 28-31.
- Clark, R.T., B. Stolzenburg, J. Volesky, P. Reece, B. Plugge, D.C. Adams and D.M. Feuz. 2002. "Teaching Marketing and Management to an Extension Audience in an Inter-Disciplinary Setting." Selected paper presented at the Western Ag. Econ. Association Meetings, Long Beach, California, July 28-31.
- Feuz, D.M. 2001 "Economics of Young Female Management" Paper Presented at, and in the proceedings of the 2001 Range Beef Cow Symposium XVII, Casper, WY. December 11-13.
- Umberger, W.J. and D.M. Feuz. 2001. "Experimental Auctions to Elicit Value for Product Attributes" Organized Symposium paper presented at the Western Ag. Econ. Association Meetings, Logan, Utah, July 8-11, 2001.
- Burgener, P.A., D.M. Feuz, D. Kaan and D. O'Brien. 2001. "An Economic Analysis of Intensive Dryland Cropping Systems for the Central Great Plains." Selected paper presented at the Western Ag. Econ. Association Meetings, Logan, Utah, July 8-11, 2001.
- Umberger, W.J. and D.M. Feuz, 2001. "Consumer Panelist Behavior in Experimental Auctions: What Do We Learn From Their Bids?" Presented at and in the proceedings of the NCR-134 Applied Commodity Price Analysis, Forecasting, and Market Risk Management Conference, Saint Louis, MO. April 23-24.
- Umberger, W.J., D.M. Feuz, C.R. Calkins, and K. Killinger, 2001. "U.S. Consumer Preference for Domestic Corn-fed versus International Grass-fed Beef." Presented at the International Agricultural Trade Research Consortium, Trade in Livestock Products. Auckland, New Zealand, January 18-19.
- Umberger, W.J., D.M. Feuz, C.R. Calkins, and K. Killinger. 2000 "The Value of Beef Flavor: Consumer Willingness-to-Pay for Marbling in Beef Steaks." Selected paper presented at the Western Ag. Econ. Association Meetings, Vancouver, BC. June 29 - July 2.
- Feuz, D.M., W. Umberger, C. Calkins, K. Killinger. 2000. "Consumer Preference for Domestic versus International Beef." Selected paper presented at the Western Ag. Econ. Association Meetings, Vancouver, BC. June 29 - July 2.
- Burgener, P.A., D. Feuz and R. Wilson. 2000. "Economics of Transgenic Sugarbeets." Selected paper presented at the Western Ag. Econ. Association Meetings, Vancouver, BC. June 29 - July 2.

- Umberger, W.J., D.M. Feuz, C.R. Calkins and K.M. Killinger. 2000. "Consumer Preferences and Willingness-to-pay for Flavor in Beef Steaks." IAMA Agribusiness Forum, International Food and Agribusiness Management Association Meetings, Chicago, IL. June 24-25.
- Killinger, K.M., Calkins, C.R., Umberger, W.J., Feuz, D.M., and Eskridge, K.M. 2000. Consumer acceptance and value of beef differing in marbling level. Proc. Reciprocal Meat Conf., Amer. Meat Sci. Assoc. 53:121.
- Killinger, K.M., Calkins, C.R., Umberger, W.J., Feuz, D.M., and Eskridge, K.M. 2000. Consumer acceptance and value of Argentine and domestic beef. Proc. Reciprocal Meat Conf., Amer. Meat Sci. Assoc. 53:133.
- Killinger, K.M., C.R. Calkins, W.J. Umberger, D.M. Feuz and K.M. Eskridge. 2000. "Consumer visual Preferences of Marbling and Color of Fresh Beef Steaks." Abstracts American Society of Animal Science Midwestern Section, Des Moines, IA. March 13-15.
- Feuz, D.M. and W.J. Umberger. 2000 "Hedging Effectiveness and Basis Variability for different Weight Feeder Steers Using the CME Stocker and Feeder Futures." Selected paper presented at the Southern Ag. Econ. Association Meetings, Lexington, KY. January 31 - February 2.
- Umberger, W.J. and D.M. Feuz. 2000. "Basis Predictability Using the New CME Stocker Cattle Futures Contract." Selected paper presented at the Southern Ag. Econ. Association Meetings, Lexington, KY. January 31 - February 2.
- Feuz, D.M. 1999. "Market Signals in Value Based Pricing Premiums and Discounts." Selected paper presented at the Western Ag. Econ. Association Meetings, Fargo, ND. July 11-14.
- Burgener, P.A. and D.M. Feuz. 1999. "Equitable Cropshare Arrangements for Intensive Dryland Cropping Systems." Selected paper presented at the Western Ag. Econ. Association Meetings, Fargo, ND. July 11-14.
- Burgener, P.A. and D.M. Feuz. 1999. "Evaluation of Cropshare Arrangements for Alternative Dryland Cropping Systems." Paper presented at the Western Society of Crop Science meeting, Powell, WY. June 27-30.
- Umberger, W.J. and D.M. Feuz. 1999. "A Risk-Return Comparison of Retained Ownership Programs Using Alternative Hedging and Pricing Strategies." Selected paper presented at the Southern Ag. Econ. Association Meetings, Memphis, TN. Jan. 30 - Feb. 3, 1999.
- Feuz, D.M. 1998. "Market Structure and Other Implications of Increasing Organic Dairy Supply and Demand." Part of an AAEE Organized Symposium, Organic Agriculture in the Upper Midwest: Economics, Strategies, and Challenges, Annual AAEE/WAEA meeting, Salt Lake City, UT. August 2-5.
- Ward, C., D.M. Feuz and T.C Schroeder. 1998. "Price Discovery Implications from Formula (Grid) Pricing of Fed Cattle." WAEA Organized Symposium, Annual AAEE/WAEA meeting, Salt Lake City, UT. August 2-5.

- Feuz, D.M., C. Liang, and R.G. Taylor. 1998. "Marketing Margins Under Price Uncertainty - A Case Study of Dry Edible Beans." Poster presented at the WCC-72 annual meeting, Las Vegas, NV. June.
- Feuz, D.M. 1998. "Economic Implications of Showlist, Pen Level, and Individual Animal Pricing of Fed Cattle." Presented at and in the proceedings of the NCR-134 Applied Commodity Price Analysis, Forecasting, and Market Risk Management Conference, Chicago, IL, April 20-21, 1998.
- Feuz, D.M. 1997. "Pricing/Formula Grids: Which Fit and Which Don't Fit." Paper Presented at, and in the proceedings of the 1997 Range Beef Cow Symposium XV, Rapid City, SD. December 9-11.
- Feuz, D.M. 1997. "Live, In-the-Beef, or Formula: Is there a 'Best' Method for Selling Fed Cattle?" Selected paper presented at the Western Ag. Econ. Association Meetings, Reno, Nevada. July 13-16.
- Liang, C., D.M. Feuz and R.G. Taylor. 1997. "Cointegration Tests of Spatial and Variety Price Linkages in Regional Dry Bean Markets." Selected paper presented at the Western Ag. Econ. Association Meetings, Reno, Nevada. July 13-16.
- Feuz, D.M. 1997. "Pricing Fed Cattle — How Do Returns From Various Grids and Formulas Compare to Live Weight Pricing?" Presented at the 1997 NCR Extension Specialists Tri-annual Workshop: Extension's Presence and Impact Within a Changing Livestock Industry, Lincoln, Nebraska. May 19-22.
- Fausti, S.W., D.M. Feuz, and J.J. Wagner. 1997. "Value Based Marketing for Fed Cattle: A Discussion of the Issues." Presented at the Southern Agricultural Economics Association's Annual Meeting, Birmingham, AL. February.
- Fausti, S.W., D.M. Feuz, and J.J. Wagner. 1997. "Value Based Marketing for Fed Cattle: A Discussion of the Issues." Presented at the W-177, "Domestic and International Marketing Strategies for U.S. Beef," Committee Meeting, Denver, Colorado. January.
- Feuz, D.M., J.J. Wagner and K. Petik. 1996. "Strict Enforcement of Zero Tolerance: The Total Cost to the Beef Industry." Presented at the W-177, "Domestic and International Marketing Strategies for U.S. Beef," Committee Meeting, Las Vegas, Nevada. January.
- Feuz, D.M. 1995. "Marketing Cull Cows - How and When?" Paper presented at, and in the proceedings of the 1995 Range Beef Cow Symposium XIV, Gering, Nebraska. December.
- Feuz, D.M. and J.A. Schulte. 1995. "The Effect of Calf Weight & Age on Returns to Retained Ownership: A Target-MOTAD Approach." Selected paper presented at the Western Ag. Econ. Association Meetings, Rapid City, SD. July.
- Feuz, D.M. and C.E. Ward. 1995. "Industrialization of the Beef Subsector." Invited paper presented at the Western Ag. Econ. Association Meetings, Rapid City, SD. July.
- Feuz, D.M. and C.E. Ward. 1995. "Industrialization of the Beef Subsector." Presented at the Western Outlook Conference, Rapid City, SD. July.

- Feuz, D.M. 1994. "Terminal Markets for Fat Cattle: Are they 'Lemons' Markets?" Presented at, and in the proceedings of the NCR-134 Applied Commodity Price Analysis, Forecasting, and Market Risk Management Conference. April.
- Fausti, S.W., and D.M. Feuz. 1994. "Production Uncertainty and Factor Price Disparity in the Slaughter Cattle Market: Theory and Evidence". Presented at the 1994 annual meeting of the Midwest Economic Association, March.
- Feuz, D.M., J.J. Wagner and S.W. Fausti. 1993. "Revenue and Risk Associated with Alternative Slaughter Cattle Marketing Methods." Presented at, and in the proceedings of the Western Ag. Econ. Association Meetings, Edmonton, Alberta. July.
- Feuz, D.M., J.J. Wagner and L.J. Held. 1992. "Retained Ownership Revisited: The Economic Significance of Genetic Variability." Presented at, and in the proceedings of the Western Ag. Econ. Association Meetings, Colorado Springs, Colorado. July.
- Edens, E.R., L.J. Held and D.M. Feuz. 1992. "A Stochastic Dominance Evaluation of Alternative Western Ranching Systems." Presented at, and in the proceedings of the Western Ag. Econ. Association Meetings, Colorado Springs, Colorado. July.
- Feuz, D.M. and J.J. Wagner. 1992. "Four Alternative Marketing Methods for Slaughter Cattle: The Effect on Profits and the Production Signals Sent to Producers." Paper presented at the Western Regional Coordinating Committee - 72, Agribusiness Research Emphasizing Competitiveness. Las Vegas, Nevada. June.
- Wagner, J.J. and D.M. Feuz. 1991. "Retained Ownership Revisited: Balancing Market Prices and Genetic Potential." Paper presented at, and in the proceedings of the 1991 Range Beef Cow Symposium, Fort Collins, Colorado. December.
- Feuz, D.M. 1991. "1991-1992 Fed and Feeder Cattle Outlook." Paper presented at AG OUTLOOK '92, St. Paul, Minn. September.
- Feuz, D.M. 1991. "The Optimal Prebreeding Target Weight for Replacement Beef Heifers." Presented at, and in the proceedings of the Western Ag. Econ. Association Meetings, Portland, OR. July.
- Held, L.J., D.M. Feuz and E.R. Edens. 1991. "Risk-Return Relationships for Mountain Valley Ranching Systems: A Target- MOTAD Analysis." Presented at, and in the proceedings of the Western Ag. Econ. Association Meetings, Portland, OR. July.
- Feuz, D.M. and W.G. Kearl. 1989. "The On-Ranch Retained Ownership Decision -- In Periods of Relatively Low Prices Versus Relatively High Prices." Presented at, and in the proceedings of the Western Agricultural Economics Association Meetings, Coeur d'elaine, Idaho. July.

I have also published over 100 other non journal article publications and made presentations to more than 200 producer groups on various marketing and farm/ranch management issues.

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Utah Irrigation kWh Use, 1999-2008

