

Curriculum Vitae

Sergio A. Soto-Navarro

Education:

Ph.D., New Mexico State University, May 1999

Major: Animal Science with Emphasis in Ruminant Nutrition

M.S., Autonomous University of Baja California

Major: Animal Production Systems (Ruminant Nutrition)

B.S., Autonomous University of Baja California

Major: Animal Science, Major Animal Nutrition

Professional Experience:

Professor, New Mexico State University, July 2015 to Present.

Associate Professor, New Mexico State University, July 2010 to 2015.

Assistant Professor, New Mexico State University, April 13, 2004 to June 30 2010.

Post-Doctoral Fellow, North Dakota State University, March 2002 - March 2004; Mentor Dr. Joel Caton.

Post-Doctoral Position, Langston University, E (Kika) de la Garza Institute for Goat Research, March 1999 - February 2002; Mentor Dr. Arthur Goetsch.

TEACHING AT NMSU:

ANSC 507. Laboratory Techniques in Nutrition

ANSC 512. Research Methods in Animal Science

ANSC 621. Metabolic Functions and Dysfunctions

ANSC 625. Nutrient Metabolism I. Mineral, Vitamin, and Nitrogen Metabolism

ANSC 626. Nutrient Metabolism II. Carbohydrates, Lipids, and Energetics

AFFILIATIONS:

American Registry of Professional Animal Scientists

American Society of Animal Science

Gamma Sigma Delta Honor Society of Agriculture

REFERRED JOURNAL ARTICLES:

Rojo-Rubio, R., Avendaño Reyes, L., Albaran, B., Vazquez, J. F., Soto-Navarro, S. A., Guerra, J. E., Macias-Cruz, U. 2018. Zilpaterol hydrochloride improves growth performance and carcass traits without affecting wholesale cut yields of hair sheep finished in feedlot. J. App. Anim. Res. 46:375-379.

- Manriquez, O. M., Montano, M. F., Calderon, J. F., Valdez, J. A., Chirino, J. O., Gonzalez, V. M., Salinas-Chavira, J., Mendoza, G. D., Soto-Navarro, S. A., Zinn, R. A. 2016. Influence of wheat straw pelletizing and inclusion rate in dry rolled or steam-flaked corn-based finishing diet on characteristics of digestion for feedlot cattle. *Asian Australas J. Anim. Sci.* 29: 823-829.
- Lopez, R., Pulsipher, G. D., Guerra-Liera, J. E., Soto-Navarro, S. A., Balstad, L. A., Petersen, M. K., Dhuyvettter, D. V., Brown, M. S., Krehbiel, C. R. 2016. Effects of fat and/or methionine hydroxy analog added to a molasses-urea-based supplement on ruminal and postruminal digestion and duodenal flow of nutrients in beef steers consuming low-quality lovegrass hay. *J. Anim. Sci.* 94:2485-2496.
- Macias Cruz, U., Avendaño Reyes, L., Perez, R., Alvarez Valenzuela, F. D., Correa Calderon, A. Correa Calderon, Gonzalez Rios, H., Soto-Navarro, S. A., Mellado, M. 2016. Growth and carcass characteristics of lambs finished with zilpaterol hydrochloride in grazing alfalfa. *Revista Mexicana de Ciencia Pecuaria*, 7:243-252.
- Davila-Ramirez, J. L., Macias-Cruz, U., Torrenetera-Olivera, N. G., Gonzalez-Rios, H., E. A. Peña-Ramos, **Soto-Navarro, S. A.**, and R., Avendaño-Reyes, L. 2015. Feedlot performance and carcass traits of hairbreed ewe lambs in response to zilpaterol hydrochloride and soybean oil supplementation. *J. Anim. Sci.* 93:3189-3196.
- Macias-Cruz, U., S. Perard, R. Vicente, F. D. Alvarez, N. G. Torrenetera-Olivera, H. Gonzalez-Rios, **S. A. Soto-Navarro**, R. Rojo, C. A. Meza-Herrera, and L. Avendaño-Reyes. 2014. Effects of free ferulic acid n productive performance, blood metabolites, and carcass characteristics of feedlot finishing ewe lambs. *J. Anim. Sci.* 92:5762-5768.
- Ponce, C. H., M. S. Brown, J. B. Osterstock, N. A. Cole, T. E. Lawrence, **S. Soto-Navarro**, J. MacDonald, B. D. Lambert, and C. Maxwell. 2014. Effects of wet corn distiller's grains with solubles on visceral organ mass, trace mineral status, and polioencephalomalacia biomarkers of individually-fed cattle. *J. Anim Sci.* 92:4034-4036.
- Soto-Navarro, S. A.**, R. Lopez, C. Sankey, B. M. Capitan, B. P. Holland, L. A. Balstad, and C. K. Krehbiel. 2014. Comparative digestibility by cattle versus sheep: Effect of forage quality. *J. Anim. Sci.* 92:1621-1629.
- Davila-Ramirez, J. L., Macias-Cruz, U., Torrenetera-Olivera, N. G., Gonzalez-Rios, H., **Soto-Navarro, S. A.**, Rojo-Campos, R., Avendaño-Reyes, L. 2014. Effects of zilpaterol hydrochloride and soybean oil supplementation on feedlot performance and carcass characteristics of hair-breed ram lambs. *J. Anim. Sci.* 92:1182-1192.
- Utsumi, S. A., Cibils, A. F., Estell, R. E., **Soto-Navarro, S. A.**, Chen, L., Hallford, D. M. 2013. Effects of adding protein, condensed tannins, and polyethylene glycol to diets of sheep and goats fed one-seed juniper and low quality roughage. *Small Rumin. Res.* 112:56-68.
- Macias-Cruz, U., Alvarez-Valenzuela, F. D., **Soto-Navarro, S. A.**, Aguilera-Tepato, E., Avendaño-Reyes, L. 2013. Effect of zilpaterol hydrochloride on feedlot performance, nutrient intake, and digestibility in hair-breed sheep. *J. Anim. Sci.* 91:1844-1849.
- Martinez-Perez, M. F., Calderon-Mendoza, D., Islas, A., Encinias, A. M., Loya-Olguin, F., **Soto-Navarro, S. A.** 2013. Effect of corn dry distiller grains plus solubles supplementation level on performance and digestion characteristics of steers grazing native range during forage growing season. *J. Anim. Sci.* 91:1350-1361.
- Conway, L. K., Hallford, D. M., **Soto-Navarro, S. A.** 2012. Effects of wet corn gluten feed and yellow grease on digestive function of cattle fed steam-flaked corn-based finishing diets. *Animal Feed Science and Technology*. 178:20-26.

- Beall, J. A., Gonzalez-Simental, J. A., **Soto-Navarro, S. A.**, Flores, N., Fedio, W. M. 2012. The effect of calcium chloride on the microbiological characteristics of fermented chile pepper (*Capsicum annuum* cv. mesilla cayenne) mash. *J. Agric. Sci. Tech.* 17:1113-1118.
- Soto-Navarro, S. A.**, Encinias, A. M., Bauer, M. L., Lardy, G. P., Caton, J. S. 2012. Feeding value of field pea as a protein source in forage based-diets fed to beef cattle. *J. Anim. Sci.* 90:585-591.
- Avendaño-Reyes, L., Macias-Cruz, U., Álvarez-Valenzuela, F. D., Aguilera-Tepato, A., Torrenera-Olivera, N. G., **Soto-Navarro, S. A.** 2011. Effects of zilpaterol hydrochloride on growth performance, carcass characteristics, and wholesale cut yield of hair-breed ewe lambs. Consuming feedlot diets under moderate environmental conditions. *J Anim. Sci.* 89:4188-4194
- Contreras-Govea, F., **S. A. Soto-Navarro**, D. Calderon-Mendoza, M. A. Marsalis, L. M. Lauriault. 2011. Dry matter yield and nutritive value of cowpea and lablab in the Southern High Plains of the USA. *Forage and Grazinglands*.
- Soto-Navarro, S. A.**, Islas, A. 2011. Effect of dried distillers grains with solubles supplementation level on forage intake and characteristics of digestion of beef heifers grazing small grain pasture. *J. Anim. Sci.* 89:1229-1237.
- Quintero-Elisea, J. A., Macías-Cruz, U., Álvarez-Valenzuela, F. D., Correa-Calderón, A., González-Reyna, A., Lucero-Magaña, F. A., Avendaño-Reyes, L., **Soto-Navarro, S. A.** 2011. The effects of time and dose of pregnant mare serum gonadotropin (PMSG) on reproductive efficiency in hair sheep ewes. *Tropical Animal Health and Production*/Springer, 43:1567-1573.
- Islas, A. and S. A. Soto-Navarro. 2010. Effect of dried distillers grains with solubles supplementation level on forage intake and characteristics of digestion of beef heifers grazing small grain pasture. *J. Anim. Sci.* 2010 : jas.2009-2757v1-20092757.
- Neville, T. L., D. A. Redmer, P. P. Borowicz, J. J. Reed, M. A. Ward, M. L. Johnson, J. B. Taylor, S. A. Soto-Navarro, K. A. Vonnahme, L. P. Reynolds, and J. S. Caton. 2010. Maternal dietary restriction and selenium supply alters messenger ribonucleic acid expression of angiogenic factors in maternal intestine, mammary gland, and fetal jejunal tissues during late gestation in pregnant ewe lambs. *J. Anim. Sci.* 88: 2692-2702.
- Meyer, A. M., J. J. Reed, K. A. Vonnahme, S. A. Soto-Navarro, L. P. Reynolds, S. P. Ford, B. W. Hess, and J. S. Caton. 2010. Effects of stage of gestation and nutrient restriction during early to mid-gestation on maternal and fetal visceral organ mass and indices of jejunal growth and vascularity in beef cows. *J. Anim. Sci.* 88: 2410-2424.
- Islas, A., T. Edwards, and S. A. Soto-Navarro. 2010. Effects of digestible fiber and yellow grease supplementation to steers grazing small-grain pasture on grazing and feedlot finishing performance. *The Professional Animal Scientist*. 26:498-503.
- Correa-Calderon, A., M. Morales, L. Avendaño, C. Leyva, F. Rivera, R. Diaz, and S. Soto-Navarro. 2010. Artificial cooling as an alternative to increase productivity and welfare of steers under heat stress. *Arq. Bras. Med. Vet. Zootec.* 62(5):1199-1205.
- Santiago A., Utsumi, Andrés F. Cibils, Richard E. Estell, **Sergio A. Soto-Navarro**, and Dawn Van Leeuwen. 2009. Seasonal changes in one-seed juniper intake by sheep and goats in relation to protein supplements and plant secondary metabolites. *Small Ruminant Research*. 81:152-162.
- Macías-Cruz, U., F. D. Álvarez-Valenzuela, A. Correa-Calderón, L. Molina-Ramirez, A. González-Reyna, S. A. **Soto-Navarro**, L. Avendaño-Reyes. 2011. Pelibuey ewe

- productivity and subsequent pre-weaning lamb performance using hair-sheep breeds under a confinement system. *J. Appl. Anim. Res.* 36:255-260.
- Loya-Olguin, F., L. Avendaño, A. M. Encinas, D. A. Walker, N. A. Elam, and **S. A. Soto-Navarro**. 2008. Influence of slice baling on feeding value of alfalfa hay in receiving and finishing diets for feedlot cattle. *J. Anim. Sci.* 86:2749-2755.
- Chabot, D. A., C. D. Chabot, L. K. Conway, and **S. A. Soto-Navarro**. 2008. Effect of fat supplementation and wheat pasture maturity on forage intake and digestion characteristics of steers grazing wheat pasture. *J. Anim. Sci.* 86:1263-1270.
- Ward, M. A., T. L. Neville, J. J. Reed, J. B. Taylor, D. M. Hallford, **S. A. Soto-Navarro**, K. A. Vonnahme, D. R. Redmer, L. P. Reynolds, and J. S. Caton. 2008. Effects of selenium supply and dietary restriction on maternal and fetal metabolic hormones in pregnant ewe lambs. *J. Anim. Sci.* 86:1254-1262.
- Neville, T. L., M. A. Ward, J. J. Reed, **S. A. Soto-Navarro**, S. L. Julius, P. P. Borowicz, J. B. Taylor, D. R. Redmer, L. P. Reynolds, and J. S. Caton. 2008. Effect of level and source of dietary selenium on maternal and fetal body weight, visceral organ mass, cellularity estimates, and jejuna vascular in pregnant ewe lambs. *J. Anim. Sci.* 86:890-901.
- Gilbery, T. C., G. P. Lardy, **S. A. Soto-Navarro**, M. L. Bauer, and V. L. Anderson. 2007. Effects of field peas, chickpeas, and lentils on rumen fermentation, digestion, microbial protein synthesis and feedlot performance in receiving diets for beef cattle. *J. Anim. Sci.* 85:3045-3053.
- Gilbery, T. C., G. P. Lardy, **S. A. Soto-Navarro**, M. L. Bauer, and J. S. Caton. 2006. Effects of corn condensed distillers solubles supplementation on ruminal fermentation, digestion, and in situ disappearance in steers consuming low quality hay. *J. Anim. Sci.* 84:1468-1480.
- Leupp, J. L., G. P. Lardy, **S. A. Soto-Navarro**, M. L. Bauer, and J. S. Caton. 2006. Effects of canola seed supplementation on intake, digestion, duodenal protein supply, and microbial efficiency in steers fed forage-based diets. *J. Anim. Sci.* 84:499-507.
- Soto-Navarro, S. A.**, A. L. Goetsch, T. Sahlu, and R. Puchala. 2006. Effect of level and source of supplemental protein in a concentrate-based diet on sites of digestion and small intestinal amino acid disappearance in Boer H Spanish wether goats. *Small Rum, Res.* 65:85-100.
- Soto-Navarro, S. A.**, R. Puchala, T. Sahlu, and A. L. Goetsch. 2006. Effects of dietary ratios of fish and blood meals on sites of digestion, small intestinal amino acid disappearance and growth performance of meat goat wethers. *Small Rum. Res.* 64:255-267.
- Schroeder, J. W., M. L. Bauer, and **S. A. Soto-Navarro**. 2005. Wet corn gluten feed fed fresh or stored and supplemented with rumen undegradable protein in the diets of lactating dairy cows. *The Professional Animal Scientist.* 21:254-262.
- Bengochea, W. L., G. P. Lardy, M. L. Bauer, and **S. A. Soto-Navarro**. 2005. Effect of grain processing degree on intake, digestion, ruminal fermentation, and performance characteristics of steers fed medium-concentrate growing diets. *J. Anim Sci.* 83:2815-2825.
- Leupp, J. L., J. S. Caton, **S. A. Soto-Navarro**, and G. P. Lardy. 2005. Effects of cooked molasses blocks and fermentation extract or brown seaweed meal inclusion on intake, digestion, and microbial efficiency in steers fed low-quality hay. *J. Anim Sci.* 83:2938-2945.
- Soto-Navarro S. A.**, M. H. Knight, J. S. Caton, V. Burke, M. L. Bauer, and G. P. Lardy. 2004.

- Influence of energy supplementation on intake, digestion, ruminal fermentation and microbial efficiency in nursing beef calves. *J. Anim. Sci.* 82:3560-3566.
- Gelvin, A. A., G. P. Lardy, **S. A. Soto-Navarro**, D. G. Landblom, and J. S. Caton. 2004. Effect of field pea-base creep feed on intake, digestibility, ruminal fermentation, and performance by nursing calves grazing native range in western North Dakota. *J. Anim. Sci.* 82:3589-3599.
- Soto-Navarro S. A.**, T. L. Lawler, J. B. Taylor, L. P. Reynolds, J. J. Reed, J. W. Finley, and J. S. Caton. 2004. Effect of high selenium wheat on visceral organ mass, and intestinal cellularity and vascularity in finishing beef steers. *J. Anim. Sci.* 82:1788-1793.
- Soto-Navarro S. A.**, G. J. Williams, M. L. Bauer, G. P. Lardy, D. Landblom, and J. S. Caton. 2004. Effect of field pea replacement level on intake and digestion in beef steers fed byproduct-base medium concentrate diets. *J. Anim. Sci.* 82:1855-1862.
- Goetsch A. L., G. Detweiler, T. Sahlu, R. Puchala, R. C. Merkel, and **S. A. Soto-Navarro**. 2004. Effect of diet quality and age of meat goats wethers on early subsequent growth while grazing wheat forage. *Small Ruminant Res.* 51:57-64.
- Soto-Navarro S. A.**, A. L. Goetsch, T. Sahlu, and R. Puchala. 2004. Effect of level and source of supplemental protein in a concentrate based diet on growth performance of Spanish _ Boer wethers. *Small Ruminant Res.* 51:101-106.
- Soto-Navarro S. A.**, A. L. Goetsch, T. Sahlu, and R. Puchala. 2003. Effect of level and source supplemental protein in a concentrate-based diet on growth performance of Boer H Spanish wether goats. *Small Ruminant Res.* 51:101-106.
- Wuliji, T., A. L., Goetsch, T. Sahlu, R. Puchala, **S. Soto-Navarro**, R. C. Merkel, G. Detweiler, and T. Gipson. 2003. Effects of different quality diets consumed continuously or after a lower quality diet on characteristics of growth of young Spanish goats. *Small Ruminant Res.* 50:83-96.
- Wuliji, T., A. L., Goetsch, R. Puchala, T. Sahlu, R. C. Merkel, D. Detweiler, **S. Soto-Navarro**, J. Lou, and T. Shenkoru. 2003. Relationships between body composition and shrunk body weight and urea space in growing goats. *J. Appl. Anim. Res.* 23:1-24.
- Soto-Navarro S. A.**, A. L. Goetsch, T. Sahlu, R. Puchala, and L. J Dawson. 2003. Effect of ruminally degraded nitrogen source and level in a high concentrate diet on site of digestion in Boer × Spanish wether goats. *Small Ruminant Res.* 50:117-128.
- Puchala, R., S. G. Pierzynowski, T. Wuliji, A. L. Goetsch, **S. A. Soto-Navarro**, and T. sahu 2003. Effects of prolactin administration to a perfused area of the skin of Angora goats. *J. Anim. Sci.* 81:279-284.
- Puchala, R., S. G. Pierzynowski, T. Wuliji, A. L. Goetsch, T. Sahlu, M. Lachica and **S. A. Soto-Navarro**. 2002. Effects of small peptides or amino acids infused to a perfused area of the skin of Angora goats on mohair growth. *J. Anim. Sci.* 80:1097-1104.
- Soto-Navarro, S. A.**, C. R. Krehbiel, G. C. Duff, M. L. Galyean, M. L. Brown and R. L. Steiner. 2000. Influence of feed intake fluctuation and feeding frequency on nutrient digestion, rate of passage, and fermentation profiles in limit-fed steers. *J. Anim. Sci.* 78:2215-2222.
- Soto-Navarro, S. A.**, G. C. Duff, C. R. Krehbiel, M. L. Galyean, and K. J. Malcom-Callis. 2000. Influence of feed intake fluctuation, feeding frequency, time of feeding, and rate of gain on performance in limit-fed steers. *Prof. Anim. Sci.* 16:13-20.
- Brown, M. S., M. L. Galyean, G. C. Duff, D. M. Hallford, and **S. A. Soto-Navarro**. 1998. Effects of degree of processing and nitrogen source and level on starch availability and in vitro fermentation of corn and sorghum grain. *Prof. Anim. Sci.* 14:83-94.

PROCEEDINGS:

- Jesus J. Figueroa-Zamudio, Ulises A. Sánchez-Sandoval, Jorge A. Rodela, Susana Urias, and Sergio A. Soto-Navarro. 2018. Effect of processing of supplemental corn on metabolizable protein of beef cows consuming low-quality forage. *Transl. Anim. Sci.* 2:S117-S120.
- Ulises A Sánchez-Sandoval, Jorge A Rodela, Jesus J Figueroa-Zamudio, Susana Urias, and **Sergio A Soto-Navarro**. 2018. Effects of monensin supplementation and wheat pasture maturity on forage intake and digestion characteristics of cows grazing winter wheat pasture. *Transl. Anim. Sci.* 2:S112-S116.
- Rodela J. A., C. A. Hebbert, and S. A. Soto-Navarro. Effect of fish meal supplementation on forage intake and metabolizable protein of beef cows grazing winter wheat pasture. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 68:235-238.
- Hebbert, C. S., M. A. Lopez-Baca, L. Avendaño-Reyes, U. Macias-Cruz, and S. A. Soto-Navarro. Effect of processing of supplemental corn on metabolizable protein of beef cows grazing Winter wheat pasture. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 67:69-72.
- Stewart, W. C., Whitney, T. R., Scholljegerdes, E. J., Hallford, D. M., Soto-Navarro, S. A., Naumann, H. D. 2015. Effects of feeding ground juniper to gestating ewes on pre- and postpartum ewe performance, serum. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 66:10-16.
- Stewart, W. C., Whitney, T. R., Scholljegerdes, E. J., Hallford, D. M., Soto-Navarro, S. A., Naumann, H. D. (2015). Effects of feeding ground juniper to gestating ewes on pre- and postpartum ewe performance, serum. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 66: 283-287.
- Soto-Navarro, S. A. 2014. Manejo de Ganado de Reciente Arribo a la Engorda. Mazatlan, Sinaloa: Universidad Autonoma de Baja California and Universidad Autonoma de Sinaloa
- Amraga, F. M., Caballero, J. D., Soto-Navarro, S. A. 2014. Effects of wheat middling supplementation on metabolizable protein of heifers grazing Winter wheat pasture. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 65:154-157.
- Caballero, J. D., Graves, J. R., Scholljegerdes, E. J., Schutz, J. S., Hubbert, M. E., Soto-Navarro, S. A. 2013. Effects of Zuprevo as mass medication of receiving cattle on feedlot performance and health. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 64:230-233.
- Beckman, M. K., Tracey, L. N., Shelley, C. L., Miller, N. P., Norman, K. L., Marchetti, K. H., Scholljegerdes, E. J., Soto-Navarro, S. A., Loest, C. A., Ivey, S. L. 2013. Evaluation of the novel feedstuff, lipid extracted algae, for ruminant animals in forage and concentrate diets. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 64: 55-59.
- Allataifeh, F. A., Sawalhah, M. N., Soto-Navarro, S. A., Loest, C. A. 2013. Visceral organ mass and jejunum cell proliferation of lambs fed alfalfa hay, locoweed, and feed additives. *Proc. West. Sec. Amer. Soc. Anim. Sci.* 64:405-408.
- Caballero, J. D., Soto-Navarro, S. A. 2013. Factores que afectan la incidencia de complejo respiratorio bovino o fiebre de embarque en los corrales de engorda (Factors that affect the incidence of bovine respiratory disease in feedlots cattle) (vol. 23). Mexicali, BC: Universidad Autonoma de Baja California.
- Shelly, C. L., M. Pimienta, J. Caballero, J. Brown-Silva, S. L. Lodge-Ivey, and S. A. Soto-Navarro. 2012. Effect of corn oil or corn protein supplementation on performance and

- rumen fermentation characteristics of feedlot lambs consuming a 90% concentrate diet containing 30% DDGS. Proc. West. Sec. Amer. Soc. Anim. Sci. 63: 283-287.
- Beckman, M. K., L. N. Tracey, N. Miller, K. Norman, K. Marchetti, E. J. Scholljegerdes, S. A. Soto-Navarro, C. A. Loest, and S. L. Lodge-Ivey. 2012. Digestibility of algal biofuel co-product in a forage diet. Proc. West. Sec. Amer. Soc. Anim. Sci. 63: 93-97.
- Castillo, F., Y. Diaz, A. Islas, M. F. Martinez-Perez, N. J. Dupass, and S. A. Soto-Navarro. 2011. Effect of level of dry distillers grains plus soluble and supplementation of organic copper on fatty acid composition in feedlot lambs. Proc. West. Sec. Amer. Soc. Anim. Sci. 62: 345-348.
- Terpening, C., G. Orosco, P. P. Borowicz, M. S. Brown, C. H. Ponce, J. B. Osterstock, R. Yunuzova, and S. A. Soto-Navarro. 2011. Effect of level of wet distiller grains and organic copper supplementation on visceral organ mass, and intestinal cellularity and vascularity in finishing beef steers. Proc. West. Sec. Amer. Soc. Anim. Sci. 62: 193-196.
- Martínez-Pérez, M. F., D. Calderón-Mendoza, F. Loya-Holguin, A. Soto-Gaspar de Alba, C. Murdock, A. M. Encinias, S. A. Soto-Navarro. 2010. Supplemental corn dry distiller grains plus solubles on performance of steers grazing native range. Proc. West. Sec. Amer. Soc. Anim. Sci. 61: 179-181.
- Martínez-Pérez, M. F., D. Calderón-Mendoza, N. J. Dupass, A. Islas, J. Armendáris, A. M. Encinias, F. Loya-Holguin, S. A. Soto-Navarro. 2010. Effect of supplemental corn dry distiller grains plus soluble on digestibility of steers grazing native range during summer growing season. Proc. West. Sec. Amer. Soc. Anim. Sci. 61: 227-231.
- Valdez, J. A., M. F. Montaño, J. F. Calderón, O. M. Manríquez, M. A. Lopez, V. M. González. A. Pérez, J. Salinas, and S. A. Soto-Navarro. Effect of wheat straw level and processing method on site and extent of digestion by cattle consuming finishing feedlot diets. Proc. West. Sec. Amer. Soc. Anim. Sci. 61: 247-250.
- Calderon-Mendoza, D., A. Islas, M. F. Martinez-Perez, J. Armendariz, F. E. Contreras-Govea, S. Angadi, M. Marsalis, L. Lauriault, and **S. A. Soto-Navarro**. 2009. Adaptation of warm season annual legumes for forage in southeastern New Mexico. Proc. West. Sec. Amer. Soc. Anim. Sci. 60: 227-229.
- Martinez-Perez, M. F., D. Calderon-Mendoza, F. Loya-Holguin, C. Murdock, A. M. Encinias, and **S. A. Soto-Navarro**. 2009. Supplemental corn dry distillers grains plus solubles on performance of steers grazing native range. Proc. West. Sec. Amer. Soc. Anim. Sci. 60: 223-226.
- Orosco, G., M. F. Martinez-Perez, Y. Diaz, J. M. Garcia-Madrid, A. Islas, and **S. A. Soto-Navarro**. 2009. The feed value of dry distillers grains plus solubles in 90% concentrate diets for feedlot lambs. Proc. West. Sec. Amer. Soc. Anim. Sci. 60: 411-413.
- Meyer, A. M., J. J. Reed, K. A. Vonnahme, L. P. Reynolds, **S. A. Soto-Navarro**, B. W. Hess, S. P. Ford, and J. S. Caton. 2008. Effect of nutrient restriction in early gestation beef cows on maternal and fetal intestinal mass and jejuna proliferation, vascularity, and morphology. Proceedings, Western Section, American Society of Anim. Sci. 59: 378-382.
- Diaz, Y., A. Islas, D. M. Hallford, L. E. Camacho, J. M. Benavidez, and **S. A. Soto-Navarro**. 2008. Effect of level of dry distillers grains plus solubles on serum hormone concentration in feedlot lambs. Proceedings, Western Section, American Society of Anim. Sci. 59: 343-345.

- Islas, A., M. Horvath, L. E. Camacho, and **S. A. Soto-Navarro**. 2008. Effect of Dry distillers grains plus solubles supplementation level on forage intake and characteristics of digestion of beef heifers grazing wheat pasture. Proceedings, Western Section, American Society of Anim. Sci. 59: 225-230.
- Luna-Nevarez, P., D. VanLeeuwen, D. W. Bailey, R. M. Enns, **S. A. Soto-Navarro**, G. A. Silver, and M. G. Thomas. 2008. Altered growth curve characteristics and pregnancy rate levels in 34 years of Brangus cattle production in Chihuahuan Desert. Proceedings, Western Section, American Society of Anim. Sci. 59: 57-60.
- Martinez, C. H., T. S. Edrington, J. D. Thomas, T. T. Ross, **S. Soto-Navarro**, R. R. Redden, B. J. Herron, and D. T. Yates. 2007. Prevalence of salmonella and E. coli 0157:H7 in large herd dairies in southern United States and Northern Mexico. Proceedings, Western Section, American Society of Anim. Sci. 58: 119-121.
- Islas, A., T. Edwards, and **S. A. Soto-Navarro**. 2007. Effect of tallow supplementation to steers grazing wheat pasture on grazing and feedlot performance. Proceedings, Western Section, American Society of Anim. Sci. 58: 240-244.
- Loya-Olguin, F., A. M. Encinias, D. A. Walker, N. A. Elam, L. Avendaño-Reyes, and **S. A. Soto-Navarro**. 2007. Influence of slice baling alfalfa hay on digestive function of steers consuming a feedlot finishing diet. Proceedings, Western Section, American Society of Anim. Sci. 58: 315-319.
- Camacho, L. E., **S. A. Soto-Navarro**, J. M. Benavidez, R. L. Knight, M. J. McBee, F. O. Loya, L. D. Abercrombie, and D. M. Hallford. 2006. Feedlot performance and serum metabolic hormone profiles in lambs receiving four levels of soybean meal supplementation. Proceedings, Western Sec, American Society of Anim. Sci. 57: 382-386.
- Chabot, D., C. Chabot, L. K. Conway, and **S. Soto-Navarro**. 2006. Effect of fat supplementation of steers grazing wheat pasture on forage intake and digestion characteristics. Proceedings, Western Sec, American Society of Anim. Sci. 57: 306-312.
- Encinias, A. M., D. A. Walker, C. W. Murdock, L. A. Reeves, K. J. Malcolm-Callis, and **S. Soto-Navarro**. 2006. Effects of prophylactic administration of ceftiofur crystalline free acid on health and performance of newly received beef calves. Proceedings, Western Sec, American Society of Anim. Sci. 57: 160-163.
- Endecott, R. L., S. L. Lodge-Ivey, K. K. Kane, L. M. Dixon, B. R. Schilling, M. E. Giacomini, **S. Soto-Navarro**, C. A. Loest, D. E. Hawkins, and M. K. Petersen. 2006. Diet quality impacts on ewe nutrient partitioning. Proceedings, Western Sec, American Society of Anim. Sci. 57: 302-305.
- Giacomini, M. E., S. Utsumi, S. L. Lodge-Ivey, A. Cibils, **S. Soto-Navarro**, R. L. Endecott, and M. K. Petersen. 2006. Assessing the nutritive value of One-seed Juniper in sheep. Proceedings, Western Sec, American Society of Anim. Sci. 57: 256-259.
- Islas, A., L. E. Camacho, K. Beebe, **S. Soto-Navarro**, J. M. Benavidez, R. L. Knight, M. J. McBee, F. O. Loya, L. D. Abercrombie, and D. M. Hallford. 2006. Effects of urea supplementation level on performance of Suffolk lambs consuming a high concentrate diet. Proceedings, Western Sec, American Society of Anim. Sci. 57: 358-362.
- Loya-Olguin, F., A. M. Encinias, D. A. Walker, N. A. Elam, and **S. Soto-Navarro**. 2006. Influence of slice bailing alfalfa hay on hay quality and digestive function of steers consuming a feedlot finishing diet. Proceedings, Western Sec, American Society of Anim. Sci. 57: 354-357.

- Borowicz, P. P., M. A. Ward, J. S. Caton, **S. A. Soto-Navarro**, D. A. Redmer, J. B. Taylor, and L. P. Reynolds. 2005. Effects of supranutritional levels of selenium (SE) on vascular density and cell proliferation in the sheep placenta. Proceedings, Western Section, American Society of Anim. Sci. 56: 329-332.
- Covey, T. L., D. A. Walker, K. J. Malcolm-Callis, J. F. Gleghorn, K. W. Ridenour, J. D. Thurman, G. R. Culp, **S. A. Soto-Navarro**, L. K. Morrison, and D. M. Hallford. 2005. Feedlot performance, carcass characteristics, and health responses of steers fed inorganic and organic sources of copper, manganese, and zinc. Proceedings, Western Section, American Society of Anim. Sci. 56: 387-391.
- Julius, S. L., J. S. Caton, M. A. Ward, **S. A. Soto-Navarro**, D. A. Redmer, K. A. Vonnahme, P. P. Borowicz, J. B. Taylor, and L. P. Reynolds. 2005. Effect of level and source of selenium on growth and cellular proliferation of maternal jejunal tissue in growing pregnant ewe lambs. Proceedings, Western Section, American Society of Anim. Sci. 56: 352-355.
- Loya-Olguin, F., D. A. Walker, K. J. Malcolm-Callis, M. Encinas, and **S. A. Soto-Navarro**. 2005. Influence of slice baling hay on performance of newly-received feedlot steer calves. Proceedings, Western Section, American Society of Anim. Sci. 56: 457-460.
- Morrison, L. K., **S. A. Soto-Navarro**, D. A. Walker, K. J. Malcolm-Callis, J. F. Gleghorn, P. J. Defoor, T. L. Covey, and D. M. Hallford. 2005. Influence of dietary fat on digestive function of beef steers fed a steam-flaked corn-based finishing diet containing wet corn gluten feed. Proceedings, Western Section, American Society of Anim. Sci. 56: 397-400.
- Ward, M. A., J. S. Caton, J. B. Taylor, **S. A. Soto-Navarro**, K. A. Vonnahme, J. J. Reed, D. A. Redmer, and L. P. Reynolds. 2005. Effect of level and source of dietary Se of Se concentrations in maternal and fetal tissues of pregnant yearling ewes. Proceedings, Western Section, American Society of Anim. Sci. 56: 413-416.
- Soto-Navarro S. A.** Producción de trigo con doble propósito: Pastoreo y grano. XV Reunión Anual Internacional Sobre Producción de Carne y Leche en Climas Aridos. Mexicali, BC. Mex. (Invited). Pages 87-94. October 20-21, 2005.
- Camacho M.L., McBee J.M., Knight L.R., Ambergrombie D.L., Hallford M.D., Loya O. F., **Soto-Navarro S.A.** Effects of ruminally degraded protein level in a high concentrate diet on performance of Rambouillet lambs. XV Reunión Anual Internacional Sobre Producción de Carne y Leche en Climas Aridos. Mexicali, BC. Mex. (Poster). Page 176-180. October 20-21, 2005.
- Bengochea, W. L., M. L. Bauer, G. P. Lardy, and **S. A. Soto-Navarro**. 2004. Effects of barley processing for backgrounding diets on performance in beef steers. Proceedings, Western Section, American Society of Anim. Sci. 55: 386-388.
- Escue, S. G., M. L. Bauer, **S. A. Soto-Navarro**, T. C. Gilberry, and G. P. Lardy. 2004. Effect of supplementing ruminally undegradable fiber to feedlot steers on fecal nutrient fractions and fecal ammonia emissions. Proceedings, Western Section, American Society of Anim. Sci. 55: 137-140.
- Gilbery, T. C., **S. A. Soto-Navarro**, G. P. Lardy, M. L. Bauer, and J. S. Caton. 2004. Effects of condensed distillers soluble supplementation on in situ disappearance rate of switchgrass hay in steers consuming low quality hay. Proceedings, Western Section, American Society of Anim. Sci. 55:397-400.

- Leupp, J. L., G. P. Lardy, **S. A. Soto-Navarro**, M. L. Bauer, and J. S. Caton. 2004. Effects of canola seed supplementation on steers fed low-quality hay. Proceedings, Western Section, American Society of Anim. Sci. 55: 339-343.
- Soto-Navarro, S. A.**, T. C. Gilbery, G. P. Lardy, M. L. Bauer, and J. S. Caton. 2004. Effects of corn condensed distillers soluble supplementation on intake and digestion in beef steers consuming low-quality hay. Proceedings, Western Section, American Society of Anim. Sci. 55: 335-338.
- Ward, M. A., J. S. Caton, J. B. Taylor, T. L. Lawler, D. M. Hallford, **S. Soto-Navarro**, D. A. Redmer, and L. P. Reynolds. 2004. Effect of level and source of selenium on maternal and fetal metabolic hormones in pregnant yearling ewes. Proceedings, Western Section, American Society of Anim. Sci. 55: 367-370.
- Malcolm-Callis, K. J., G. C. Duff, M. L. Galyean, M. W. Wiseman, D. A. Walker, and **S. A. Soto-Navarro**. 1999. Effects of urea concentration on performance and health receiving and finishing beef cattle. Proceedings, Western Section, American Society of Anim. Sci. 50: 279-284.
- Burgwald-Balstad, L. A., C. R. Krehbiel, G. D. Pulsipher, M. K. Petersen, K. K. Kane, D. E. Hawkins, B. M. Capitan, **S. A. Soto-Navarro**, J. E. Sawyer, and R. C. Waterman. 1999. Effect of increasing undegradable intake protein on visceral organ mass, digest a ph and enzyme activity in heifers fed sudan grass hay. Proceedings, Western Section, American Society of Anim. Sci. 50: 250-253.
- Soto-Navarro, S. A.**, G. C. Duff, M. L. Galyean, K. J. Malcom-Callis, and C. R. Krehbiel. 1997. Influence of feed intake fluctuation and frequency of feeding on performance in limit-fed steers. Proceedings, Western Section, American Society of Anim. Sci. 48: 168-171.
- Soto-Navarro, S. A.**, M. L. Galyean, G. C. Duff, K. J. Malcom-Callis, and C. R. Krehbiel. 1997. Effects of roughage, fat, and ionophore level on finishing steer performance. Proceedings, Western Section, American Society of Anim. Sci. 48: 123-128.
- Zinn, R. A., C. F. Adam, R. Barrajas, J. Rosalez, **S. Soto**, and M. S. Tamayo. 1994. Effects of moldy steam-flaked corn on characteristics of ruminal and total tract digestion in steers. Proceedings, Western Section, American Society of Anim. Sci. 45: 321-323.

ABSTRACTS:

- Hebbert, C. S., M. A. Lopez-Baca, L. Avendaño-Reyes, U. Macias-Cruz, and S. A. Soto-Navarro. 2016. Effect of processing of supplemental corn on metabolizable protein of beef cows grazing Winter wheat pasture. J. Anim. Sci. 94, E-Suppl. 5:5.
- Ward, M., A. F. Summers, S. Roscano, J. Beard, S. A. Soto-Navarro and D. M. Hallford. 2016. Effects of predation on cortisol and progesterone levels in gestating ewes. J. Anim. Sci. 94, E-Suppl. 5:41.
- Morgan, T. D., Salazar, A. L., Scholljegerdes, E. J., Loest, C. A., White, L. M., Melgar, F. R., Soto-Navarro, S. A., Winsco, K. N., Ivey, S. L. 2015. Comparison of titanium dioxide vs. chromic oxide as an external marker to estimate fecal output in horses. (vol. 66, pp. 85). Champaign, IL: American Society of Animal Science
- Amraga, F. M., Caballero, J. D., Soto-Navarro, S. A. 2014. Effects of wheat middling supplementation on metabolizable protein of heifers grazing Winter wheat pasture. Champaign, IL: Journal of Animal Science.

- Gunter, S. A., Faulkner, D. B., Meyer, A. M., Scholljegerdes, E. J., Sprinkle, J. E., Soto-Navarro, S. A., Coleman, S. W. 2013. Difficulties associated with predicting forage intake by grazing beef cows. *J. Anim. Sci.* 91, pp. 437(Abstr.).
- Beckman, M. K., Tracey, L. N., Shelley, C. L., Norman, K. L., Marchetti, K. H., Scholljegerdes, E. J., Loest, C. A., Soto-Navarro, S. A., Ivey, S. L. 2013. Influence of lipid-extracted algae on intake and digestibility of a concentrate diet. *J. Anim. Sci.* 91, (Suppl. 1):139.
- Shelly, C. L., M. Pimienta, J. Caballero, J. Brown-Silva, S. L. Lodge-Ivey, and S. A. Soto-Navarro. 2012. Effect of corn oil or corn protein supplementation on performance and rumen fermentation characteristics of feedlot lambs consuming a 90% concentrate diet containing 30% DDGS. *J. Anim. Sci.* 90, E-Suppl. 3:244.
- Beckman, M. K., L. N. Tracey, N. Miller, K. Norman, K. Marchetti, E. J. Scholljegerdes, S. A. Soto-Navarro, C. A. Loest, and S. L. Lodge-Ivey. 2012. Digestibility of algal biofuel co-product in a forage diet. *J. Anim. Sci.* 90, E-Suppl. 3:154.
- Castillo, F., Y. Diaz, A. Islas, M. F. Martinez-Perez, N. J. Dupass, and S. A. Soto-Navarro. 2011. Effect of level of dry distillers grains plus soluble and supplementation of organic copper on fatty acid composition in feedlot lambs. *J. Anim. Sci.* 89, E-Suppl. 2:196.
- Terpening, C., G. Orosco, P. P. Borowicz, M. S. Brown, C. H. Ponce, J. B. Osterstock, R. Yunuzova, and S. A. Soto-Navarro. 2011. Effect of level of wet distiller grains and organic copper supplementation on visceral organ mass, and intestinal cellularity and vascularity in finishing beef steers. *J. Anim. Sci.* 89, E-Suppl. 2:193.
- Martínez-Pérez, M. F., D. Calderón-Mendoza, F. Loya-Holguin, A. Soto-Gaspar de Alba, C. Murdock, A. M. Encinias, S. A. Soto-Navarro. 2010. Supplemental corn dry distiller grains plus solubles on performance of steers grazing native range. *J. Anim. Sci.* 88(E-Suppl. 2): 685 (Abstr.).
- Martínez-Pérez, M. F., D. Calderón-Mendoza, N. J. Dupass, A. Islas, J. Armendáris, A. M. Encinias, F. Loya-Holguin, S. A. Soto-Navarro. 2010. Effect of supplemental corn dry distiller grains plus soluble on digestibility of steers grazing native range during summer growing season. *J. Anim. Sci.* 88(E-Suppl. 2): 872 (Abstr.).
- Valdez, J. A., M. F. Montaño, J. F. Calderón, O. M. Manríquez, M. A. Lopez, V. M. González. A. Pérez, J. Salinas, and S. A. Soto-Navarro. Effect of wheat straw level and processing method on site and extent of digestion by cattle consuming finishing feedlot diets. *J. Anim. Sci.* 88(E-Suppl. 2): 712 (Abstr.).
- Calderon-Mendoza, D., A. Islas, M. F. Martinez-Perez, J. Armendariz, F. E. Contreras-Govea, S. Angadi, M. Marsalis, L. Lauriault, and **S. A. Soto-Navarro**. 2009. Adaptation of warm season annual legumes for forage in southeastern New Mexico. *J. Anim. Sci.* 87(E-Suppl. 3): 162 (Abstr.).
- Martinez-Perez, M. F., D. Calderon-Mendoza, F. Loya-Holguin, C. Murdock, A. M. Encinias, and **S. A. Soto-Navarro**. 2009. Supplemental corn dry distillers grains plus solubles on performance of steers grazing native range. *J. Anim. Sci.* 87(E-Suppl. 3): 148 (Abstr.).
- Orosco, G., M. F. Martinez-Perez, Y. Diaz, J. M. Garcia-Madrid, A. Islas, and **S. A. Soto-Navarro**. 2009. The feed value of dry distillers grains plus solubles in 90% concentrate diets for feedlot lambs. *J. Anim. Sci.* 87(E-Suppl. 3): 168 (Abstr.).
- Meyer, A. M., J. J. Reed, K. A. Vonnahme, L. P. Reynolds, **S. A. Soto-Navarro**, B. W. Hess, S. P. Ford, and J. S. Caton. 2008. Effect of nutrient restriction in early gestation beef cows on maternal and fetal intestinal mass and jejuna proliferation, vascularity, and morphology. *J. Anim. Sci.* 86(E-Suppl. 3): 158 (Abstr.).

- Diaz, Y., A. Islas, D. M. Hallford, L. E. Camacho, J. M. Benavidez, and **S. A. Soto-Navarro**. 2008. Effect of level of dry distillers grains plus solubles on serum hormone concentration in feedlot lambs. *J. Anim. Sci.* 86(E-Suppl. 3): 155 (Abstr.).
- Islas, A., M. Horvath, L. E. Camacho, and **S. A. Soto-Navarro**. 2008. Effect of Dry distillers grains plus solubles supplementation level on forage intake and characteristics of digestion of beef heifers grazing wheat pasture. *J. Anim. Sci.* 86(E-Suppl. 3): 150 (Abstr.).
- Luna-Nevarez, P., D. VanLeeuwen, D. W. Bailey, R. M. Enns, **S. A. Soto-Navarro**, G. A. Silver, and M. G. Thomas. 2008. Altered growth curve characteristics and pregnancy rate levels in 34 years of Brangus cattle production in Chihuahuan Desert. *J. Anim. Sci.* 86(E-Suppl. 3): 131 (Abstr.).
- Diaz, Y., A. Islas, D. Hallford, and **S. A. Soto-Navarro**. 2008. Feed value of dry distillers grains plus solubles for feedlot lambs. *J. Anim Sci.* 86(E-Suppl. 3): 123 (Abstr.).
- Martinez, C. H., T. S. Edrington, J. D. Thomas, T. T. Ross, **S. Soto-Navarro**, R. R. Redden, B. J. Herron, and D. T. Yates. 2007. Prevalence of salmonella and *E. coli* 0157:H7 in large herd dairies in southern United States and Northern Mexico. *J. Anim. Sci.* 85(Suppl. 2): 167 (Abstr.).
- Islas, A., T. Edwards, and **S. A. Soto-Navarro**. 2007. Effect of tallow supplementation to steers grazing wheat pasture on grazing and feedlot performance. *J. Anim. Sci.* 85(Suppl. 2): 177 (Abstr.).
- Loya-Olguin, F., A. M. Encinias, D. A. Walker, N. A. Elam, L. Avendaño-Reyes, and **S. A. Soto-Navarro**. 2007. Influence of slice baling alfalfa hay on digestive function of steers consuming a feedlot finishing diet. *J. Anim. Sci.* 85(Suppl. 2): 157 (Abstr.).
- Camacho, L. E., **S. A. Soto-Navarro**, J. M. Benavidez, R. L. Knight, M. J. McBee, F. O. Loya, L. D. Abercrombie, and D. M. Hallford. 2006. Feedlot performance and serum metabolic hormone profiles in lambs receiving four levels of soybean meal supplementation. *J. Anim. Sci.* 84(Suppl. 2): 166 (Abstr.).
- Chabot, D., C. Chabot, L. K. Conway, and **S. Soto-Navarro**. 2006. Effect of fat supplementation of steers grazing wheat pasture on forage intake and digestion characteristics. *J. Anim. Sci.* 84(Suppl. 2): 159 (Abstr.).
- Encinias, A. M., D. A. Walker, C. W. Murdock, L. A. Reeves, K. J. Malcolm-Callis, and **S. Soto-Navarro**. 2006. Effects of prophylactic administration of ceftiofur crystalline free acid on health and performance of newly received beef calves. *J. Anim. Sci.* 84(Suppl. 2): 161 (Abstr.).
- Endecott, R. L., S. L. Lodge-Ivey, K. K. Kane, L. M. Dixon, B. R. Schilling, M. E. Giacomini, **S. Soto-Navarro**, C. A. Loest, D. E. Hawkins, and M. K. Petersen. 2006. Diet quality impacts on ewe nutrient partitioning. *Proceedings, J. Anim. Sci.* 84(Suppl. 2): 159 (Abstr.).
- Giacomini, M. E., S. Utsumi, S. L. Lodge-Ivey, A. Cibils, **S. Soto-Navarro**, R. L. Endecott, and M. K. Petersen. 2006. Assessing the nutritive value of One-seed Juniper in sheep. *J. Anim. Sci.* 84(Suppl. 2): 164 (Abstr.).
- Islas, A., L. E. Camacho, K. Beebe, **S. Soto-Navarro**, J. M. Benavidez, R. L. Knight, M. J. McBee, F. O. Loya, L. D. Abercrombie, and D. M. Hallford. 2006. Effects of urea supplementation level on performance of Suffolk lambs consuming a high concentrate diet. *J. Anim. Sci.* 84(Suppl. 2): 155 (Abstr.).
- Loya-Olguin, F., A. M. Encinias, D. A. Walker, N. A. Elam, and **S. Soto-Navarro**. 2006.

- Influence of slice bailing alfalfa hay on hay quality and digestive function of steers consuming a feedlot finishing diet. *J. Anim. Sci.* 84(Suppl. 2): 154 (Abstr.).
- Utsumi, S., A. Cibils, R. Estell, **S. Soto Navarro**. 2006. Uso del pastoreo de ovejas y cabras como herramienta para manejar la invasión de tascate. Resúmenes del III Simposium Internacional de Pastizales. Chihuahua, México, 9-11 Agosto, 2006. p.13.
- Utsumi, S., A. Cibils, R. Estell, **S. Soto Navarro**, T. Ross, S. Ivey, M. Giacomini, S. Cox, M. Rubio. 2006. One seed juniper intake by sheep and goats supplemented with degradable or by-pass protein. Fourteenth Wildland Shrub Symposium. Cedar City, UT. June 6-8, 2006.
- Utsumi, S., A. Cibils, R. Estell, Y F Wang, **S. Soto Navarro**. 2006. Influence of protein supplements on juniper intake by goats and sheep. Society for Range Management, NM Section winter meeting. Las Cruces, January 11-12, 2006.
- Borowicz, P. P., M. A. Ward, J. S. Caton, **S. A. Soto-Navarro**, D. A. Redmer, J. B. Taylor, and L. P. Reynolds. 2005. Effects of supranutritional levels of selenium (SE) on vascular density and cell proliferation in the sheep placenta. *J. Anim. Sci.* 83(Suppl. 2): 104 (Abstr.).
- Covey, T. L., D. A. Walker, K. J. Malcolm-Callis, J. F. Gleghorn, K. W. Ridenour, J. D. Thurman, G. R. Culp, **S. A. Soto-Navarro**, L. K. Morrison, and D. M. Hallford. 2005. Feedlot performance, carcass characteristics, and health responses of steers fed inorganic and organic sources of copper, manganese, and zinc. *J. Anim. Sci.* 83(Suppl. 2): 111(Abstr.).
- Julius, S. L., J. S. Caton, M. A. Ward, **S. A. Soto-Navarro**, D. A. Redmer, K. A. Vonnahme, P. P. Borowicz, J. B. Taylor, and L. P. Reynolds. 2005. Effect of level and source of selenium on growth and cellular proliferation of maternal jejunal tissue in growing pregnant ewe lambs. *J. Anim. Sci.* 83(Suppl. 2): 108(Abstr.).
- Loya-Olguin, F., D. A. Walker, K. J. Malcolm-Callis, M. Encinias, and **S. A. Soto-Navarro**. 2005. Influence of slice baling hay on performance of newly-received feedlot steer calves. *J. Anim. Sci.* 83(Suppl. 2): 130(Abstr.).
- Morrison, L. K., **S. A. Soto-Navarro**, D. A. Walker, K. J. Malcolm-Callis, J. F. Gleghorn, P. J. Defoor, T. L. Covey, and D. M. Hallford. 2005. Influence of dietary fat on digestive function of beef steers fed a steam-flaked corn-based finishing diet containing wet corn gluten feed. *J. Anim. Sci.* 83(Suppl. 2): 111(Abstr.).
- Ward, M. A., J. S. Caton, J. B. Taylor, **S. A. Soto-Navarro**, K. A. Vonnahme, J. J. Reed, D. A. Redmer, and L. P. Reynolds. 2005. Effect of level and source of dietary Se of Se concentrations in maternal and fetal tissues of pregnant yearling ewes. *J. Anim. Sci.* 83(Suppl. 2): 128(Abstr.).
- Borowicz, P. P., M. L. Johnson, A. T. Grazul-Bilska, **S. A. Soto-Navarro**, M. A. Borowicz, D. A. Redmer and L. P. Reynolds. Correlation between vascularization parameters and expression of mRNA for vascular endothelial growth factor (VEGF), angiopoetins (ANG), and their receptors (R). 96th Annual Meeting of the North Dakota Academy of Sciences, Fargo, ND, vol. 58, p. 52, 2004.
- Borowicz, P.P., M.L. Johnson, A.T. Grazul-Bilska, **S.A. Soto-Navarro**, M.A. Borowicz, D.A. Redmer, L.P. Reynolds. 2004. Modeling the relationships among quantitative measures of placental angiogenesis and expression of mRNA for vascular endothelial growth factor (VEGF), angiopoietins (ANG), and their receptors (R). *Biol. Reprod.* 70(Suppl. 1):xxxx,

abstr. no. 499.

- Bedgar, S. E., J. W. Schroeder, M. W. Chichlowski, M. Bauer, and **S. A. Soto-Navarro**. 2004. Ruminal characteristics and rate site and extent of digestion of dairy diets supplemented with canola fed to holstein steers. *J. Anim. Sci.* 82(Suppl. 1): 215(Abstr.).
- Pamp, B. W., M. Bauer, G. P. Lardy, and **S. A. Soto-Navarro**. 2004. Digestion of barley-based high-grain diets supplemented with rumen degradable proteins in steers. *J. Anim. Sci.* 82(Suppl. 1): 437(Abstr.).
- Bengochea, W. L., M. L. Bauer, G. P. Lardy, T. C. Gilbery, and **S. A. Soto-Navarro**. 2004. Influence of degree of barley processing on digestive functions in steers. *J. Anim. Sci.* 82(Suppl. 2): 97(Abstr.).
- Bengochea, W. L., M. L. Bauer, G. P. Lardy, and **S. A. Soto-Navarro**. 2004. Effects of barley processing for backgrounding diets on performance in beef steers. *J. Anim. Sci.* 82(Suppl. 2): 131(Abstr.).
- Escue, S. G., M. L. Bauer, G. P. Lardy, and **S. A. Soto-Navarro**. 2004. Influence of substrate and buffer ph on fiber digestion kinetics in vitro. *J. Anim. Sci.* 82(Suppl. 2): 91(Abstr.).
- Escue, S. G., M. L. Bauer, **S. A. Soto-Navarro**, T. C. Gilberry, and G. P. Lardy. 2004. Effect of supplementing ruminally undegradable fiber to feedlot steers on fecal nutrient fractions and fecal ammonia emissions. *J. Anim. Sci.* 82(Suppl. 2): 112(Abstr.).
- Gilbery, T. C., **S. A. Soto-Navarro**, G. P. Lardy, M. L. Bauer, and J. S. Caton. 2004. Effects of corn condensed distillers soluble supplementation on in situ forage disappearance rate in steers consuming low-quality hay. *J. Anim. Sci.* 82(Suppl. 2): 130(Abstr.).
- Johnson, B. M., J. L. Leupp, J. S. Caton, G. P. Lardy, **S. A. Soto-Navarro**, and M. L. Bauer. 2004. Effects of cooked molasses blocks and inclusion of a fermentation or seaweed extract on in situ forage nutrient disappearance in steers fed low-quality hay. *J. Anim. Sci.* 82(Suppl. 2): 106(Abstr.).
- Lardy, G. P., W. L. Bengochea, M. L. Bauer, T. C. Gilbery, and **S. A. Soto-Navarro**. 2004. Effects of grain processing for backgrounding diets on performance of beef steers. *J. Anim. Sci.* 82(Suppl. 2): 94(Abstr.).
- Leupp, J. L., J. S. Caton, G. P. Lardy, **S. A. Soto-Navarro**, and M. L. Bauer. 2004. Effects of cooked molasses blocks and fermentation or seaweed extract inclusion on intake, digestion, and microbial efficiency in steers fed low-quality hay. *J. Anim. Sci.* 82(Suppl. 2): 100(Abstr.).
- Leupp, J. L., G. P. Lardy, **S. A. Soto-Navarro**, M. L. Bauer, and J. S. Caton. 2004. Effects of canola seed supplementation on steers fed low-quality forage. *J. Anim. Sci.* 82(Suppl. 2): 128(Abstr.).
- Soto-Navarro, S. A.**, T. C. Gilberry, G. P. Lardy, M. L. Bauer, and J. S. Caton. 2004. Effects of corn condensed distillers soluble supplementation on intake and digestion in beef steers consuming low-quality hay. *J. Anim. Sci.* 82(Suppl. 2): 128(Abstr.).
- Soto-Navarro, S. A.**, G. J. Williams, J. B. Taylor, J. W. Finley, and J. S. Caton. 2004. Effects of selenium source on characteristics of selenium digestibility in finishing beef steers. *J. Anim. Sci.* 82(Suppl. 2): 104(Abstr.).
- Ward, M. A., J. S. Caton, J. B. Taylor, L. P. Reynolds, and **S. A. Soto-Navarro**. 2004. Effect of level and source of selenium on mass and growth of maternal vesicular tissues in growing pregnant ewe lambs. *J. Anim. Sci.* 82(Suppl. 2): 91(Abstr.).
- Soto-Navarro S. A.**, G. J. Williams, M. L. Bauer, G. P. Lardy, D. L. Lanblom, and J. S. Caton.

2003. Effect of field peas inclusion on in situ disappearance rate of grass hay, soybean hulls, and field peas in beef steers fed medium concentrate diets. *J. Anim. Sci.* 81 (Suppl. 1):335 (Abstr.).
- Goetsch A. L., G. Detweiler, T. Sahlu, R. Puchala, R. C. Merkel, and **S. A. Soto-Navarro**.
2003. Effect of diet quality and age of meat goat wethers on early subsequent growth while grazing wheat forage. *J. Anim. Sci.* 81 (Suppl. 1):326 (Abstr.).
- Wuliji T., A.L. Goetsch, T. Sahlu, R. Puchala, **S. A. Soto-Navarro**, R. C. Merkel, G. Detweiler, and T. A. Gipson. 2003. Effects of different quality diets consumed continuously or after a lower quality diet on characteristics of growth of young Spanish goats. *J. Anim. Sci.* 81(Suppl. 1):325 (Abstr.).
- Soto-Navarro S. A.**, T. L. Lawler, J. B. Taylor, L. P. Reynolds, J. J. Reed, and J. S. Caton.
2003. Effect of high selenium wheat on carcass weight, visceral organ mass and intestinal growth in finishing beef steers. *J. Anim. Sci* 81 (suppl 2):95 (Abstr.).
- Williams, G. J., **S. A. Soto-Navarro**, M. L. Bauer, G. P. Lardy, D. Landblom, and J. S. Caton.
2003. Effects of field pea inclusion on intake and digestion in beef steers fed medium concentrate diets. *J. Anim. Sci* 81 (suppl 2):112 (Abstr.).
- Wuliji, A. L. Goetsch, R. Puchala, **S. A. Soto-Navarro**, R. C. Merkel, G. Detweiler, T. Gipson, and T. Sahlu. 2001. Feed intake, digestibility, and growth of spanish goats consuming different quality diets. *J. Anim. Sci.* 79:(Suppl. 1) 414 (Abstr.).
- Prieto, I., A. L. Goetsch, **S. A. Soto-Navarro**, V. Banskalieva, M. Cameron, R. Puchala, L. G. Dawson, and S. W. Coleman. 2000. Effects of dietary protein level on performance of weaned Boer crossbred and Spanish wethers. *J. Anim. Sci.* 78 (Suppl. 1):125 (Abstr.).
- Puchala, R., S. G. Pierzynowski, T. Wuliji, A. L. Goetsch, **S. A. Soto-Navarro**, T. Sahlu, and M. Lachica. 2000. Dipeptides or their amino acids administered to a perfused area of the skin in Angora goats. *J. Anim. Sci.* 78 (Suppl. 1):269 (Abstr.).
- Burgwald-Balstad, L. A., C. R. Krehbiel, G. D. Pulsiper, M. K. Petersen, K. K. Kane, D. E. Hawkins, B. M. Capitan, **S. A. Soto-Navarro**, J. E. Sawyer, and R. C. Waterman. 1999. Effects of increasing undergradable intake protein on viseral organ mass, digesta pH and enzyme activity in heifers fed sudan grass hay. *J. Anim. Sci.* 77 (Suppl. 1):102 (Abstr.).
- Malcolm-Callis, K. J., G. C. Duff, M. L. Galyean, M. D. Wiseman, D. A. Walker, and **S. A. Soto-Navarro**. 1999. Effects of urea concentration on performance and health of receiving and finishing beef cattle. *J. Anim. Sci.* 77 (Suppl. 1):112 (Abstr.).
- Soto-Navarro, S. A.**, G. C. Duff, Malcolm-Callis, and C. R. Krehbiel. 1998. Influence of rate of gain and feed intake fluctuation on performance in limit-fed steers. *Proc. Plains Nutr. Council Spring conf.* p-100.
- Soto-Navarro, S. A.**, C. R. Krehbiel, G. C. Duff, M. L. Galyean, and M. A. Brown. 1998. Influence of feed intake fluctuation and frequency of feeding on rate of passage and total tract digestibility in limit-fed steers. *J. Anim. Sci.* 76 (Suppl. 1): 330 (Abstr.).
- Brown, M. S., M. L. Galyean, G. C. Duff, D. M. Hallford, and **S. A. Soto-Navarro**. 1997. In vitro ammonia concentration of corn and sorghum as influenced by the degree of processing and nitrogen source and level. *J. Anim. Sci.* 75 (Suppl.1):253 (Abstr.).
- Brown, M. S., M. L. Galyean, G. C. Duff, D. M. Hallford, and **S. A. Soto-Navarro**. 1997. In vitro dry matter disappearance and starch availability of corn and sorghum grain as influenced by the degree of processing and nitrogen source and level. *J. Anim. Sci.* 75 (Suppl. 1):259 (Abstr.).

- Brown, M. S., M. L. Galyean, G. C. Duff, D. M. Hallford, and **S. A. Soto-Navarro**. 1997. In vitro pH changes of corn and sorghum as influenced by the degree of processing and nitrogen source and level. *J. Anim. Sci.* 75 (Suppl.1):253 (Abstr.).
- Soto-Navarro, S. A.**, G. C. Duff, M. L. Galyean, K. J. Malcom-Callis, and C. R. Krehbiel. 1997. Effects of roughage, fat, and ionophore level on finishing steer performance. *J. Anim. Sci.* 75(Suppl. 1):122 (Abstr.).
- Soto-Navarro, S. A.**, G. C. Duff, M. L. Galyean, K. J. Malcom-Callis, and C. R. Krehbiel. 1997. Influence of feed intake fluctuation and frequency of feeding on performance in limit-fed steers. *J. Anim. Sci.* 75(Suppl. 1):119 (Abstr.).
- Zinn, R. A., C. F. Adam, R. Barajas, J. Rosalez, **S. Soto**, and M. S. Tamayo. 1994. Effects of moldy steam-flaked corn on characteristics of ruminal and total tract digestion in steers. *J. Anim. Sci.* 45(Suppl. 1):321 (Abstr.).