

CURRICULUM VITAE

NAME

Brick, Mark A

ADDRESS

Soil and Crop Sciences
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(970) 491-6551

EDUCATION

1980 Ph D, U OF MINNESOTA

1975 MS, UNIV OF ARIZONA

1972 BS, U OF WISCONSIN

OTHER POSITIONS

1993 - Present Professor, Colorado State University.

1985 - 1993 Associate Professor, Colorado State University.

(August 1, 2015 - Present) Department Chairperson, Department

PUBLISHED WORKS

Books

Schwartz, H. F., Brick, M. A., Harveson, R. M., Franc, G. D. (2004). In Schwartz, H.F., Brick, M. A., Harveson, R. M., Franc, G. D. (editors) (Ed.), *Dry bean production and integrated pest management Regional Bull* (pp. 167). Fort Collins, Colorado: CSU, Bulletin No 562A.

Refereed Journal Articles

Kleintop, A. E., Myers, J. R., Echeverria, D., Thompson, H. J., Brick, M. A. (2016). Total Phenolic Content and Associated Phenotypic Traits in a Diverse Collection of Snap Bean Cultivars. *Journal of the American Society for Horticultural Science*, 141(1), 3-11.

Brick, M. A. (2014). A reference genome for common bean and genome-wide analysis of dual domestications. *Nature Genetics*, 46, 707-713. www.nature.com

Webb, K., Case, J., Brick, M. A., Otto, K., Schwartz, H. F. (2013). Cross pathogenicity and vegetative compatibility of *Fusarium oxysporum* isolated from sugar beet. *Plant Disease*, 97, 1200-1206.

Porch, T. G., Beaver, J. S., Brick, M. A. (2013). Registration of tepary germplasm with multiple-stress tolerance, TARS-Tep 22 and TARS-Tep 32. *Journal of Plant Registrations*.

- Webb, K. M., Case, A. J., Brick, M. A., Otto, K., Schwartz, H. F. (2013). Cross pathogenicity and vegetative compatibility of *Fusarium oxysporum* isolated from sugar beet. *Plant Disease*, 97(9), 1200-1206.
- (2012). Cell signaling pathways associated with a reduction in mammary cancer burden by dietary common bean (*Phaseolus vulgaris* L). *Carcinogenesis*, 33(1), 226-32.
- (2012). Hepatic Expression of Stress and Toxicity related genes in response to increasing amounts of dietary dry bean. *British Journal of Nutrition*, 108, S37-S45.
- (2011). Evaluation of diversity among common beans (*Phaseolus vulgaris* L) from two centers of domestication using 'omics' technologies. *BMC Genomics*, 11, 686.
- (2011). Registration of Croissant pinto bean. *Journal of Plant Registrations*, 5(3), 299-303.
- Brick, M. A., Ogg, J. B., Schwartz, H. F., Johnson, J. J., Judson, F. M., Singh, S. P., Miklas, P. N., Corrales, M. P. (2011). Registration of 'Croissant' Pinto Bean. *J of Plant Registration*, 5, 5-Jan.
- (2010). Germplasm evaluation for resistance to bacterial wilt in common bean, 2008-2009. *Plant Disease Management Reports*, 4, 2-Jan.
- (2010). Metabolomic and Functional Genomic Analyses Reveal Varietal Differences in Bioactive Compounds of Cooked Rice. *PLoS ONE*, 5(9), e12915.
- (2010). Molecular Targets and Metabolomic Signatures Associated with Inhibition of Experimental Mammary Cancer by Bean (*Phaseolus vulgaris*, L). *Submitted to Cancer Prevention Research*.
- (2010). Molecular targets and metabolomic signatures associated with inhibition of experimental mammary cancer by bean (*Phaseolus vulgaris*, L). *Cancer Prevention research; In review*.
- (2010). Validation of Molecular Markers Linked to White Mold Resistance From Common Bean Parent G122. *Euphytica - in review*.
- (2009). Chemical Composition and Mammary Cancer Inhibitory Activity of Dry Bean. *Crop Science*, 49, 179-186.
- (2008). Inheritance of long chain fatty acid content in rapeseed (*Brassica napus* L). *Euphytica*, 164, 583-592.
- (2008). Mechanisms Associated with Dose-Dependent Inhibition of Rat Mammary Carcinogenesis by Dry Bean (*Phaseolus vulgaris*, L). *J Nutr*, 138, 2091-2097.
- (2008). Registration of Drought-Tolerant, Rust-Resistant, High-Yielding Pinto Bean Germplasm Line CO46348. *J Plant Regist*, 2, 120-124.
- Brick, M. A., Ogg, J. B., Singh, S. P., Schwartz, H. F., Johnson, J. J., Corrales, M. P. (2008). Registration of Drought-Tolerant, Rust-Resistant, High-Yielding Pinto Bean Germplasm Line CO46348. *J Plant Regist*, 2, 120-124.
- (2007). Quantitative trait loci linked to white mold resistance in common bean. *Crop Sci*, 47, 2285-2294.
- (2007). Quantitative trait loci linked to white mold resistance in common bean. *Crop Sci*, 47, 2285-2294.
- (2007). Seventy-five years of breeding dry bean of the western USA. *Crop Sci*, 47, 981-989.

- Maxwell, J. J., Brick, M. A., Byrne, P. F., Schwartz, H. F., Shan, X., Ogg, J. B., Hensen, P. A. (2007). Quantitative trait loci linked to white mold resistance in common bean. *Crop Sci*, 47, 2285-2294.
- (2006). Reaction to three races of Fusarium wilt in the Phaseolus vulgaris core collection. *Crop Sci*, 46, 1245-1252.
- (2006). Reaction to three races of fusarium wilt in the Phaseolus vulgaris core collection. *Crop Sci*, 46, 1245-1252.
- Brick, M. A., Byrne, P. F., Schwartz, H. F., Ogg, J. B., Otto, K., Fall, A. L., Gilbert, J. (2006). Reaction to three races of fusarium wilt in the Phaseolus vulgaris core collection. *Crop Sci*, 46, 1245-1252.
- (2005). Registration of 'Grand mesa' pinto. *Crop Sci*, 45, 413-413.
- Brick, M. A., Schwartz, H. F., Ogg, J. B., Johnson, J. J., Judson, F. M. (2005). Registration of 'Grand mesa' pinto. *Crop Sci*, 45, 413.
- (2004). RAPD and SCAR markers linked to the Ur-6 Andean gene controlling specific rust resistance in common bean. *Crop Sci*, 44, 1799-1807.
- (2003). Characterization of Fusarium oxysporum isolates from common bean and sugar beet using pathogenicity assays and random-amplified polymorphic DNA markers. *J Phytopathol*, 151, 352-360.
- (2003). Traits associated with dry edible bean (Phaseolus vulgaris L) productivity under diverse soil moisture environments. *Euphytica*, 133, 339-347.
- Cramer, R. A., Byrne, P. F., Brick, M. A., Panella, L., Wickliffe, E., Schwartz, H. F. (2003). Characterization of Fusarium oxysporum isolates from common bean and sugar beet using pathogenicity assays and random-amplified polymorphic DNA markers. *J Phytopathol*, 151, 352-360.
- (2002). Registration of 'Shiny Crow' black bean. *Crop Sci*, 42, 1751-1752.
- (2002). Registration of three early maturity anasazi-type common bean germplasms with resistance to Bean common mosaic virus. *Crop Sci*, 42, 672-672.
- Brick, M. A., Schwartz, H. F., Ogg, J. B., Johnson, J. J., Judson, F. M., Pearson, C. H. (2002). Registration of 'Shiny Crow' black bean. *Crop Sci*, 42, 1751-1752.
- Brick, M. A., Ogg, J. B., Miklas, P. N., Schwartz, H. F., Judson, F. M. (2002). Registration of three early maturity anasazi-type common bean germplasms with resistance to Bean common mosaic virus. *Crop Sci*, 42, 672.
- (2001). Detection and mapping of a major locus for Fusarium Wilt resistance in common bean. *Crop Sci*, 41, 1494-1498.
- (2001). Registration of 'Montrose' pinto bean. *Crop Sci*, 41, 260-260.
- Fall, A. L., Byrne, P. F., Jung, G., Coyne, D. P., Brick, M. A., Schwartz, H. F. (2001). Detection and mapping of a major locus for Fusarium Wilt resistance in common bean. *Crop Sci*, 41, 1494-1498.
- Brick, M. A., Schwartz, H. F., Ogg, J. B., Johnson, J. J., Judson, F. M. (2001). Registration of 'Montrose' pinto bean. *Crop Sci*, 41, 260.

- (2000). Inheritance of resistance to fusarium wilt in two common bean races. *Crop Sci*, 40, 954-958.
- Cross, H., Brick, M. A., Schwartz, H. F., Panella, L. W., Byrne, P. F. (2000). Inheritance of resistance to fusarium wilt in two common bean races. *Crop Sci*, 40, 954-958.
- (1999). Relationships between productivity and carbon isotope discrimination among dry bean lines and F-2 progeny. *Euphytica*, 105, 239-250.
- (1998). Comparison of selection indices to identify productive dry bean lines under diverse environmental conditions. *Field Crop Res*, 58, 15-23.
- (1996). Effects of bed width, planting arrangement, and plant population on seed yield of pinto bean cultivars with different growth habits. *J Prod Agric*, 9, 79-82.
- (1995). Inheritance of Resistance to a Colorado Race of Fusarium-Oxysporum F-Sp Phaseoli in Common Beans. *Plant Dis*, 79, 279-281.
- (1995). Registration of Arapaho Pinto Bean. *Crop Sci*, 35, 1511-1512.
- (1995). Registration of Fisher Pinto Bean. *Crop Sci*, 35, 1511-1511.
- Salgado, M. O., Schwartz, H. F., Brick, M. A. (1995). Inheritance of Resistance to a Colorado Race of Fusarium-Oxysporum F-Sp Phaseoli in Common Beans. *Plant Dis*, 79, 279-281.
- Brick, M. A., Wood, D. R., Schwartz, H. F., Pearson, C. H., Ogg, J. B., Ballarin, N., Shanahan, J. F. (1995). Registration of Arapaho Pinto Bean. *Crop Sci*, 35, 1511-1512.
- Fisher, A. G., Brick, M. A., Wood, D. R., Stack, M., Schwartz, H. F., Ogg, J. B., Pearson, C. H., Shanahan, J. F., Ballarin, M. (1995). Registration of Fisher Pinto Bean. *Crop Sci*, 35, 1511.
- (1994). Resistance to Fusarium-Oxysporum F-Sp Phaseoli in Tepary Beans (*Phaseolus-Acutifolius*). *Plant Dis*, 78, 357-360.
- Salgado, M. O., Schwartz, H. F., Brick, M. A., Corrales, M. P. (1994). Resistance to Fusarium-Oxysporum F-Sp Phaseoli in Tepary Beans (*Phaseolus-Acutifolius*). *Plant Dis*, 78, 357-360.
- (1993). Response of Seed Yield and Yield Components in Mixtures of Dry Edible Bean. *Field Crop Res*, 33, 283-292.
- (1992). Acid Soil Stress Tolerance in Tissue-Culture Derived Sorghum Lines. *Crop Sci*, 32, 324-327.
- (1992). Characterization and Density of Trichomes on 3 Common Bean Cultivars. *Econ Bot*, 46, 299-304.
- (1991). Registration of 3 Germplasm Lines of Pinto Bean. *Crop Sci*, 31, 1100-1101.
- (1991). Response of Alfalfa to Bidirectional Selection for Root Bark Area and Xylem Vessel Diameter. *Can J Plant Sci*, 71, 427-435.
- (1991). Transferring Invitro Technology to the Field. *Bio-Technol*, 9, 143-146.
- Brick, M. A., Wood, D. R., Ballarin, M., Schwartz, H. F., Peairs, F. B., Ogg, J. B., Echols, J. W. (1991). Registration of 3 Germplasm Lines of Pinto Bean. *Crop Sci*, 31, 1100-1101.

- (1990). Compatibility of Cicer Milkvetch in Mixtures with Cool-Season Grasses. *Agron J*, 82, 262-266.
- (1989). Registration of Bill-Z Pinto Bean. *Crop Sci*, 29, 488-488.
- Wood, D. R., Ballarin, M., Schwartz, H. F., Brick, M. A., Pearson, C. H. (1989). Registration of Bill-Z Pinto Bean. *Crop Sci*, 29, 488.
- (1987). Dryland Stand Establishment and Seed Production of Revegetation Species. *Crop Sci*, 27, 1303-1305.
- (1987). Establishment of Cicer Milkvetch with 4 Cool-Season Grasses. *Crop Sci*, 27, 810-812.
- (1984). Inheritance and Anatomy of a Narrow Leaflet Trait in Alfalfa. *Crop Sci*, 24, 787-790.
- (1981). Inheritance and Ontogeny of a Lobed-Cambium Trait in Alfalfa Roots. *J Hered*, 72, 419-422.

Refereed Chapters in Books

- Brick, M. A. (2014). Eible Grain Legumes. In In: S. Smith, B. Diers, J. Specht, and B. Carver (ed). (Ed.), *Yield Gains in major U.S. field crops*. (1st ed., vol. 1). Madison WI: CSSA Special Publications. www.crops.org

Non-Refereed Journal Articles

- Kleintop, A. M., Dimas, E. A., Thompson, H. J., Brick, M. A., Myers, J. R. (2015). Total Phenolic Content and Associated Phenotypic Traits in a Diverse Collection of Snap Bean Cultivars. *J. AMER. SOC. HORT. SCI.* 141(1):1-9. 2015(141(1)), 1-9.
- Brick, M. A., Schwartz, H. F., Ogg, J. B., Judson, F. M., Johnson, J. J. (2015). Registration of ‘Long’s Peak’ Pinto Bean. *Journal of Plant Registrations*(9:279-282).
- Brick, M. A., Heuberger, A. (2015). Proteome characterization of leaves in common bean. *Proteome Proteomes*(2015).
- Johnson, J. J., Hain, J. P., Sauer, S. M., Larson, K., Jahn, C. E., Turner, M., Bartolo, M. E., Davidson, J. W., Brick, M. A., Schwartz, H. F., Vigil, M., Meyer, R., Jewell, K. S. (2014). 2013 Colorado Spring Crop Variety Performance Trial Results. *High Plains Journal*.
- Kleintop, A. E., Echeverria, D., Brick, L. A., Thompson, H. J., Brick, M. A. (2013). Adaptation of the AOAC 2011.25 integrated total dietary fiber assay to determine the dietary fiber and oligosaccharide content of dry edible beans. *Journal of agricultural and food chemistry*, 61(40), 9719-26.
- (2012). Popping and Yield Characteristics of Nuña Bean Lines Developed for Temperate Climates. *Agron J*, 104, 1574-1578.
- (2012). Registration of tepary germplasm with multiple-stress tolerance, TARS-Tep 22 and TARS-Tep 32. *Journal of Plant Registrations Published on-line*.
- (2011). Comparison of Seed Coat Luster in a Recombinant Inbred Line of Shiny and Opaque Black beans. *Agronomy Abstracts Presented at the annual meeting of Crop Science Society of America, October 16-20, San Antonio, TX*.
- (2011). CSU Releases New Pinto Croissant. *Colorado Bean News*, 24(2), 2.
- (2011). Dietary Fiber Content of Dry Edible Beans. *Colorado Bean News*, 24(2), 7-Jun.

- (2011). Evaluation of Heirloom Bean Production in Northern Colorado. *Colorado Bean News*, 24(1), 10.
- (2011). Molecular Markers Linked to Quantitative Trait Loci For Resistance to Fusarium Wilt in Common Bean. *Agronomy Abstracts Presented at the annual meeting of Crop Science Society of America, October 16-20, San Antonio, TX.*
- (2011). Release of Shiny Black Pearl. *Ann Rep Bean Improv Coop.*
- (2009). Chemical Composition and Mammary Cancer Inhibitory Activity of Dry Bean. *Crop Science*, 49, 179–186.
- (2009). Reaction of common bean cultivars to new races of the bean rust pathogen from Michigan and North Dakota and to other important races. *Ann Bean Improv Coop Fort Collins, CO October 25-27.*

Non-Refereed Chapters in Books

- Brick, M. A. (2015). Common Bean. In: Grain Legumes,. *Grain Legumes, A.M. De Ron (Ed.), Series Handbook of Plant Breeding*. New York: Series Handbook of Plant Breeding, Springer Science+Business Media, New York.
- Brick, M. A. (2015). Classification, development and varietal descriptions. *Dry Bean Pest Management and Production*. CSU, UW, NE.
- Brick, M. A., Schwartz, H. F. (2015). Crop Rotation. *Dry Bean anagement and Producton*. CSU.
- Brick, M. A., Dimaa, E., Thompson, H. J., Adrienne, K. (2014). Dietary fiber content in dry edible bean cultivars. *no. NA: Annual Report Bean Improvement Coop.*
- Schwartz, H. F., Brick, M. A. (2015). In H. F. Schwartz and M. A. Brick (Ed.), *Dry Bean Health Management and Production, 3rd Ed.* (3rd ed., pp. 1-160). Fort Collins, Colorado: Colorado State University.
- (2012). *Breeding for Slow Darkening Bright Pinto Beans* (2nd ed., vol. 25, pp. 10-Aug). Colorado Bean News.
- (2012). *Dietary Fiber and Oligosaccharide Content in a Diverse Collection of Dry Edible Beans*. Abstract Crop Science Society of America Annual Meeting, October 20-25, Cincinatti, OH.
- (2012). *Irrigation Efficiency Effects* (2nd ed., vol. 25, pp. 9). Colorado Bean News.
- (2012). *Making Better Decisions, 2012 Colorado Dry Bean Variety Performance*. Colorado State University Agric Exp Stn Technical Report TR 12-12 November.
- (2012). *Molecular Markers Linked to Quantitative Trait Loci for Resistance to Fusarium Wilt Race 6 in Common Bean*. Crop Science Society of America annual meetings, Oct 21-24, Cincinatti OH.
- (2012). *Plant Arrangement Can Enhance Bean Yield* (1st ed., vol. 25, pp. 5). Colorado Bean News.
- (2012). *Plant arrangement enhances dry bean production for some varieties* (vol. 55, pp. 65-67). Ann Rept Bean Improv Coop.
- (2012). *Release of Long's Peak Pinto Bean* (1st ed., vol. 25, pp. 8). Colorado Bean News.

- (2012). *Variation in Total Dietary Fiber Content among Dry Edible Bean Cultivars*. Abstract Western Society of Crop Science Annual Meeting, July 11-13, Pullman, WA.
- (2012). *Variation in total dietary fiber content in dry edible bean cultivar/lines* (vol. 55, pp. 57-58). Annu Rep Bean Improv Coop.
- Johnson, J. J., Brick, M. A., Schwartz, H. F., McMillan, M. S., Sauer, S. M., Bartolo, M. E., Davidson, J. W., Hain, J. P., Jewell, K. S., Ogg, J. B., Andales, A. A., Otto, K. (2012). *Making Better Decisions –2012 Colorado Dry Bean Variety Performance Trials*. Colorado State University Agric Exp Stn Technical Report TR 12-12, 14 pp.
- (2011). *Dietary fiber content of dry edible beans* (2nd ed., vol. 24, pp. 7-Jun). Colorado Bean News.
- (2011). *Dietary Fiber Content of Dry Edible Beans based on the 2009 method* (vol. 54, pp. 5-Apr). Annu Rep Bean Improv Coop.
- (2011). *Evaluation of Heirloom Beans for Production in Northern Colorado*. Ann Rep Bean Improv Coop.
- (2011). *Introgression of Resistance to White Mold Derived from Multiple Sources of Common and Scarlet Runner Bean*. USDA Sclerotinia Initiative Workshop Minneapolis, MN Jan 19-21.
- (2011). *Making Better Decisions, 2011 Colorado Dry Bean Variety Performance*. Colorado State University Agric Exp Stn Technical Report TR 11-10 November.
- (2011). *On-farm validation of cultural practice adjustments to improve white mold management in dry bean irrigation systems*. USDA Sclerotinia Initiative Workshop Minneapolis, MN Jan 19-21.
- (2011). *Plant Arrangement Enhances Dry Bean Production for Some Varieties*. Ann Rep Bean Improv Coop.
- (2011). *Variation for dietary fiber content in dry edible beans*. Oral Presentation at the biennial meeting of the Bean Improvement Cooperative October 3- November 2, San Juan, Puerto Rico.
- (2011). *Variation for dietary fiber content in dry edible beans*. Oral Presentation at the Western Society of Crop Science Meetings, June 20-22, 2011, Laramie, WY *Presenter Published abstract in American Society of Agronomy Abstracts, 2011, Madison, WI.
- Johnson, J. J., Brick, M. A., Schwartz, H. F., Andales, A. A., Bartolo, M. E., Hain, J. P., Jewell, K. S., Sauer, S. M., McMillan, M. S., Ogg, J. B., Otto, K. (2011). *Making Better Decisions – 2011 Dry Bean Variety Performance Trials*. Colorado State University Agric Exp Stn Technical Report TR11-10, 12 pp.
- (2010). *Bean Root Health* (vol. 23, pp. 4). Colorado Bean News.
- (2010). *Dry Bean Variety Performance Trials*. Colorado State University Agric Exp Stn Technical Report TR 10-09, 15 pp.
- (2010). *Evaluation of Heirloom Dry Bean Market Classes to Promote Genetic Diversity*. Abstracts; ASA-CSSA-SSSA International Annual Meeting, Long Beach, CA Oct 31-Nov 4.
- (2010). *Genetic Resistance to White Mold Derived From Multiple Sources of Common and Scarlet Runner Bean*. Abstracts; ASA-CSSA-SSSA International Annual Meeting, Long Beach, CA Oct 31-Nov 4.
- (2010). *Genetic Resistance to White Mold Derived From Multiple Sources of Common Bean and Scarlet Runner Bean*. USDA Sclerotinia Initiative Workshop Minneapolis, MN Jan 20-22.

- (2010). *Genomic and Metabolomic Profiling of a Rice Core Collection That Exhibit Variable Effects On Lymphoma*. Abstracts; ASA-CSSA-SSSA International Annual Meeting, Long Beach, CA Oct 31-Nov 4.
- (2010). *Metabolite variation in genetically distinct rice cultivars: Implications for human nutrition and health*. Proceedings from the Annual Meeting of the Western Society of Crop Science meeting, June 22-24, Fort Collins, CO.
- (2010). *Molecular markers associated with fusarium wilt resistance in common bean*. Proceedings from the Annual Meeting of the Western Society of Crop Science meeting, June 22-24, Fort Collins, CO.
- (2010). *On-farm validation of cultural practices adjustments to improve white mold management in dry bean irrigation systems*. USDA Sclerotinia Initiative Workshop Minneapolis, MN Jan 20-22.
- (2010). *Production Tips from: Dry Bean Production, Pest Mgmt* (vol. 23, pp. 5). Colorado Bean News.
- (2010). *Strategies and Challenges Finding the Next Generation of Plant Breeders: The BeanCAP Effort*. Abstracts; ASA-CSSA-SSSA International Annual Meeting, Long Beach, CA Oct 31-Nov 4.
- (2009). *Breeding Dry Beans (Phaseolus vulgaris L) for Cancer inhibitory activity: A new facet in contemporary crop improvement*. Abstracts: ASA-CSSA-SSSA International Annual Meeting, Pittsburgh, PA Nov 1-5.
- (2009). *Cross Pathogenicity of Fusarium Oxysporum f Sp Betae On Sugar Beet and Common Bean*. Abstracts; ASA-CSSA-SSSA International Annual Meeting, Pittsburgh, PA Nov 1-5.
- (2009). *Cultivar, Plant Spacing and Fungicide Effects upon White Mold Management in Dry Bean*. USDA Sclerotinia Initiative Workshop. Minneapolis, MN Jan 21-24.
- (2009). *Dry Bean Variety Performance Trials*. Colorado State University Agric Exp Stn Technical Report TR 09-06, 20 pp.
- (2009). *Fertilizing Dry Beans*. Fact Sheet No 0539 Colorado State University Extension.
- (2009). *Metabolite variation in genetically distinct rice cultivars: Implications for human nutrition and health*. Abstracts; ASA-CSSA-SSSA International Annual Meeting, Pittsburgh, PA Nov 1-5.
- (2009). *Molecular markers associated with fusarium wilt resistance in common bean*. Abstracts; ASA-CSSA-SSSA International Annual Meeting, Pittsburgh, PA Nov 1-5.
- (2009). *Reaction of common bean cultivars to new races of the bean rust pathogen from Michigan and North Dakota and to other important races*. Abstract, Annual meeting of the Bean Improvement Cooperative, Fort Collins, CO October 25-27.
- (2009). *Resistance to bacterial wilt in the Phaseolus core collection* (vol. 52, pp. 68-69). Ann Rept Bean Improv Coop.
- (2009). *Utilization of Interspecific Inbred Backcross Lines to Improve Resistance to White Mold in Common Bean Germplasm*. USDA Sclerotinia Initiative Workshop. Minneapolis, MN Jan 21-24.
- (2009). *Was Rydberg right? Evidence for Distichlis stricta as a species distinct from D. spicata*. Botany conference - Snowbird, UT, July 25-29.
- (2009). *White mold resistance derived from an interspecific backcross dry bean population*. Abstracts;

ASA-CSSA-SSSA International Annual Meeting, Pittsburgh, PA Nov 1-5.

(2008). *Bean effects on breast cancer* (vol. 21, pp. 1). Colorado Bean News.

(2008). *Dry Bean Variety Performance Trials*. Colorado State University Agric Exp Stn Technical Report TR 08-12, 24 pp.

(2008). *Fusarium wilt and yellows of sugar beet and dry bean*. Fact Sheet No 2950 Colorado State University Extension, Fort Collins, CO.

(2008). *Improve Yield with High Quality Seed*. Fact Sheet No 0303 Colorado State University Extension , Fort Collins, CO.

(2008). *Release of Croissant pinto bean* (vol. 21, pp. 1). Colorado Bean News.

(2007). *Quantitative trait loci linked to white mold resistance in common bean*. 5th Annual Sclerotinia Initiative Meeting, Jan 17-19, Minneapolis, MN.

AES Report/Bulletin

Brick, M. A., Pearson, C. H. (2015). Post-Harvest. In Howard F. Schwartz and Mark A. Brick (Ed.), *Dry Bean Pest Management & Production* (pp. 61-63). Colorado State University, University of Nebraska, University of Wyoming.

Johnson, J. J., Brick, M. A., Schwartz, H. F., McMillan, M. S., Sauer, S. M., Bartolo, M. E., Davidson, J. W., Hain, J. P., Jewell, K. S., Ogg, J. B., Andales, A. A., Otto, K. (2013). *Making Better Decisions – 2013 Colorado Dry Bean Variety Performance Trials* (13-5 ed., pp. 14). Fort Collins, Colorado: CSU Agr. Exp. Station.

Article in Popular or Trade Magazine

Schwartz, H. F., Brick, M. A., Ogg, J. B., McMillan, M. S. (2015). *Agronomic practices enhance pinto bean production under semi-arid conditions* (vol. 58, pp. 115-116). Ann. Rept. Bean Improv. Coop..

CE Report/Bulletin/Factsheet

Schwartz, H. F., Panella, L. W., Brick, M. A., Byrne, P. F. (2013). *Fusarium Wilt and Yellows of Sugar Beet and Dry Bean*. CSU Bulletin.

Magazine/Trade Publication

Johnson, J. J., Hain, J. P., Sauer, S. M., Larson, K., Jewett, F. G., Jahn, C. E., Turner, M., Bartolo, M. E., Davidson, J. W., Brick, M. A., Schwartz, H. F., Vigil, M., Jewell, K. S. (2012). *2012 Colorado Spring Crop Variety Performance Trial Results*. High Plains Journal.

Manuscript

Kleintop, A., Echeverria Moreno, D., Brick, L. A., Thompson, H. J., Brick, M. A. (2013). *Adaptation of the AOAC 2011.25 Integrated Total Dietary Fiber Assay to Determine the Dietary Fiber and Oligosaccharide Content of Dry Edible Bean..* J. Food Ag Chemistry.

Brick, M. A. (2013). *QTL analysis of canning quality and color retention in black beans (Phaseolus vulgaris L.)..* Mol Breeding.

Research Report

Heuberger, A. L., Robison, F. M., Prenni, J. E., Schwartz, H. F., Brick, M. A. (2014). *Changes in primary and secondary metabolism associated with tolerance to Sclerotinia sclerotiorum in dry bean* (vol. 57, pp. 59-60). Ann. Rept. Bean Improv. Coop..

Schwartz, H. F., Brick, M. A., Ogg, J. B., McMillan, M. S. (2014). *Enhancement of dry bean production by soil ripping and irrigation interval* (vol. 57, pp. 149-150). Ann. Rept. Bean Improv. Coop..

Schwartz, H. F., Brick, M. A., Ogg, J. B., McMillan, M. S. (2013). *Double row arrangement enhances pinto bean production for upright cultivars* (vol. 56, pp. 143-144). Ann. Rept. Bean Improv. Coop..

Technical Report

Pearson, C. H., Brick, M. A., Smith, J. (2015). Planting. In Howard F. Schwartz and Mark A. Brick (Ed.), *Dry Bean Pest Management & Production (3rd ed.)* (3rd edition ed., pp. 23-27). Colorado State University, University of Nebraska, University of Wyoming.

PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS

November 2015, "Genomic regions and candidate genes associated with dietary fiber and oligosaccharide content in dry edible bean", Annual Meeting Crop Science Society of America, convention center.

October 15, 2015, "Can Staple Food Crops Reduce the Incidence of Chronic Disease", US House of Representative Thursday seminar, Coalition for Agricultural Research, US House of Representatives Office Building.

October 15, 2015, "Can Staple Food Crops Reduce the Incidence of Chronic Disease", US Senate Building, Consortium for Agricultural Research, Russel Senate Building.

September 13, 2015, "DISCOVERING THE GENETIC ARCHITECTURE OF DIETARY FIBER AND OLIGOSACCHARIDE CONTENT IN COMMON BEAN (PHASEOLUS VULGARIS)", 150 th Anniversary of Mendel, Mendel Museum.

June 15, 2015, "Breeding Dry Edible Beans for Improved Human Health", Bush Breeders Summit, Bush Brothers Beans, Bush headquarters.

December 4, 2014, "Can We Breed Staple Food Crops to Improve Human Health", North Dakota Soil and Water Conservation Society Annual meeting, North Dakota SCS, (Presenter) Brick, M. A., Mandan, ND.

November 3, 2014, "Mass spectrometry-based metabolic profiling reveals small molecules associated with physiological resistance to Sclerotinia sclerotiorum in dry edible bean", Annual Meeting of Crop Science Society, Crop Science, (Presenter) Heuberger, A. L., Long Beach, CA.

July 2014, "Dry beans exhibit variation in metabolomic profiles associated with resistance to white mold", American Phytopathological Assn., Minneapolis.

July 9, 2014, "Dietary fiber content in dry edible bean cultivars", Western Society of Crop Science, Bozeman MT, peer-reviewed/refereed.

March 27, 2014, "Health Benefits of Dry Beans", Nucleum conference, Monterrey Technological, Monterrey, Mexico.

2012, "Dry Bean Variety Review at Dry Bean Field Day, Lucerne, Colorado".

2012, "Dry Bean Variety Review at Dry Bean Field Day, Yuma Colorado".

2011, "Dry Bean Research at CSU. Presented at Field Days, SW CO Agricultural Research Center. August, 2011."

2011, "Dry Bean Update: New Varieties and Resistances. 2011 Ag Production Workshop. March 8, Delta CO."

2011, "Profits Go up With Upright Beans, Presented to annual meeting of the Rocky Mountain Bean Dealers Assn. March 5, 2011".

2011, "Review of Dry Bean Varieties. Dry Bean Field Day, Lucerne, CO. August 22, 2011."

2010, "Genes, Gene Mapping and Genomics: Tools to Improve Dry Edible Beans in the 21st Century".

2009, "Brick, M.A. 2009. Origin and Importance of dry edible bean. Invited lecture: Thornton-Massa lecture series. Colorado State University. November 15, 2009."

OTHER ACTIVITIES/ACCOMPLISHMENTS – PUBLICATIONS/SCHOLARLY RECORD

Brick, M. A., Ogg, J. B. "Plant Variety Protection for Long's Peak." (Submitted: April 2013, Application: April 2015).

"Plant Variety Protection Certificate for variety Shiny Black Pearl," Licensed to: Lee Bean and Seed, MN. (Submitted: 2010, Application: 2010, Approved: 2010, Licensed: 2010).

"Plant Variety Protection Certificate for variety Croissant." (Submitted: 2009, Application: 2009, Approved: 2009, Licensed: 2009).

"Plant Variety Protection Certificate for variety Grand Mesa." (Submitted: 2002, Application: 2002, Approved: 2002, Licensed: 2002).

"Plant Variety Protection Certificate for variety Shiny Crow." (Submitted: 2002, Application: 2002, Approved: 2002, Licensed: 2002).

"Plant Variety Protection Certificate for variety Montrose." (Submitted: 2000, Application: 2000, Approved: 2000, Licensed: 2000).

(September 6, 2013 - September 6, 2031). Plant Variety Protection, USDA-PVP Office.

(August 11, 2011 - August 11, 2029). Plant Variety Protection Certificate, USDA PVP Office.

(August 3, 2009 - August 3, 2027). Plant Variety Protection, USDA PVP Office.

TEACHING:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
2016	Spring	HORT495 - Independent Study	18	5
2016	Spring	SOCR411 - Large Seeded Legume Seed Production	1	3
2016	Spring	SOCR411 - Large Seeded Legume Seed Production	1	0
2016	Spring	SOCR330 - Principles of Genetics	3	154
2016	Spring	SOCR530 - Scientific Writing	1	0
2016	Spring	SOCR792 - Seminar	1	6
2015	Fall	HORT460 - Plant Breeding	3	14
2015	Fall	SOCR460 - Plant Breeding	3	10
2015	Fall	HORT460 - Plant Breeding - Recitation	0	7
2015	Fall	HORT460 - Plant Breeding - Recitation	0	7
2015	Fall	SOCR460 - Plant Breeding - Recitation	0	10
2015	Fall	SOCR460 - Plant Breeding - Recitation	0	0
2015	Fall	SOCR492 - Seminar	1	35
2015	Fall	SOCR792 - Seminar	1	4
2015	Spring	SOCR411 - Large Seeded Legume Seed Production	1	2
2015	Spring	SOCR330 - Principles of Genetics	3	142
2015	Spring	SOCR530 - Scientific Writing	1	5
2015	Spring	SOCR411 - Seed Processes: Legume Seed Production	1	0
2015	Spring	SOCR699 - Thesis	18	1
2014	Fall	SOCR411 - Large Seeded Legume Seed Production	1	2
2014	Fall	SOCR411 - Large Seeded Legume Seed Production	1	1
2014	Fall	SOCR730 - Topics in Plant Breeding and Genetics	1	8
2014	Summer	SOCR411 - Large Seeded Legume Seed Production	1	0
2014	Summer	SOCR486 - Practicum	4	0
2014	Spring	SOCR411 - Large Seeded Legume Seed Production	1	1
2014	Spring	SOCR330 - Principles of Genetics	3	136
2014	Spring	SOCR530 - Scientific Writing	1	6
2014	Spring	SOCR411 - Seed Processes: Legume Seed Production	1	2
2014	Spring	HORT784 - Supervised College Teaching	18	6
2014	Spring	SOCR699 - Thesis	18	1
2013	Fall	SOCR495 - Independent Study	18	7
2013	Fall	SOCR411 - Large seeded Legume Seed Production	1	2
2013	Fall	SOCR411 - Large Seeded Legume Seed Production	1	0
2013	Fall	SOCR411 - Large Seeded Legume Seed Production	1	2
2013	Fall	SOCR699 - Thesis	18	5
2013	Fall	SOCR730 - Toics in Plant Breeding	1	5
2013	Fall	SOCR730 - Topics in Plant Breeding and Genetics	1	5
2013	Summer	SOCR486 - Practicum	4	1
2013	Spring	SOCR495 - Independent Study	18	8
2013	Spring	SOCR411 - Large Seeded Legume Seed Production	1	4
2013	Spring	SOCR486 - Practicum	4	6
2013	Spring	SOCR330 - Principles of Genetics	3	143
2013	Spring	BSPM530 - Scientific Writing	1	8
2013	Spring	SOCR530 - Scientific Writing	1	7
2012	Fall	SOCR495 - Independent Study	18	7

2012	Fall	SOCR411 - Large Seeded Legume Seed Production	1	2
2012	Fall	SOCR411 - Seed Processes: Legume Seed Production	1	1
2012	Fall	SOCR699 - Thesis	18	7
2012	Summer	SOCR411 - Seed Processes: Legume Seed Production	1	2
2012	Spring	SOCR411 - Large Seeded Legume Seed Production	1	1
2012	Spring	SOCR486 - Practicum	4	5
2012	Spring	SOCR330 - Principles of Genetics	3	169
2012	Spring	BSPM530 - Scientific Writing	1	6
2012	Spring	SOCR530 - Scientific Writing	1	9
2012	Spring	SOCR411 - Seed Processes: Legume Seed Production	1	3
2011	Fall	SOCR411 - Large Seeded Legume Seed Production	1	0
2011	Fall	SOCR486 - Practicum	4	5
2011	Summer	SOCR799 - Dissertation	18	1
2011	Summer	SOCR411 - Seed Processes: Legume Seed Production	1	0
2011	Spring	SOCR799 - Dissertation	18	9
2011	Spring	SOCR795 - Independent Study	18	3
2011	Spring	SOCR486 - Practicum	4	1
2011	Spring	SOCR330 - Principles of Genetics	3	173
2011	Spring	SOCR411 - Seed Processes: Legume Seed Production	1	1
2011	Spring	SOCR792 - Seminar	1	6
2011	Spring	SOCR784 - Supervised College Teaching	18	6
2011	Spring	SOCR699 - Thesis	18	13
2010	Fall	SOCR799 - Dissertation	18	12
2010	Fall	SOCR411 - Large Seeded Legume Seed Production	1	1
2010	Fall	SOCR411 - Seed Processes: Legume Seed Production	1	2
2010	Fall	SOCR792 - Seminar	1	8
2010	Summer	SOCR486 - Practicum	4	0
2010	Summer	SOCR411 - Seed Processes: Legume Seed Production	1	0
2010	Summer	SOCR411 - Seed Processes: Legume Seed Production	1	0
2010	Spring	SOCR799 - Dissertation	18	7
2010	Spring	SOCR495 - Independent Study	18	7
2010	Spring	SOCR486 - Practicum	4	4
2010	Spring	SOCR330 - Principles of Genetics	3	141
2010	Spring	SOCR411 - Seed Processes: Legume Seed Production	1	0
2010	Spring	SOCR792 - Seminar	1	8
2009	Fall	SOCR799 - Dissertation	18	9
2009	Fall	SOCR480A2 - Seed Processes: Large Legume Seed Production	1	1
2009	Fall	SOCR480A2 - Seed Processes: Large Legume Seed Production	1	1
2009	Fall	SOCR792 - Seminar	1	6
2009	Fall	SOCR730 - Topics in Plant Breeding and Genetics	1	8
2009	Spring	SOCR486 - Practicum	4	2
2009	Spring	SOCR330 - Principles of Genetics	3	113
2009	Spring	SOCR480A2 - Seed Processes: Large Legume Seed Production	1	0
2009	Spring	SOCR699 - Thesis	18	7
2008	Fall	SOCR796 - Group Study	18	5
2008	Spring	SOCR796 - Group Study	18	10
2008	Spring	SOCR795 - Independent Study	18	4
2008	Spring	SOCR330 - Principles of Genetics	3	146
2008	Spring	SOCR699 - Thesis	18	7
2007	Fall	SOCR487 - Internship	12	9

2007	Fall	SOCR486 - Practicum	4	3
2007	Fall	SOCR330 - Principles of Genetics	3	165
2007	Fall	SOCR330 - Principles of Genetics - Honors	3	0

Guest Lectures:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u># of Guest Lectures</u>	<u>Delivery Mode</u>
2015	Fall	FSHNseminar - Seminar	1	Face to Face
2015	Fall	SOCR792 - Seminar	1	Face to Face
2015	Fall	SOCR100 - SOCR 100 General Crops	1	
2015	Spring	SOCR100 - General Crops	1	
2014	Spring	SOCR725 - Quantitative Inheritance	1	Face to Face

Tenure and Promotion Evidence of Teaching Effectiveness (Tenure and Promotion Input)

Development of New Courses

SOCR 460 fall 2015

Development of New Teaching Techniques

SOCR 460 Labs

Integration of Service Learning

Conference/Workshop Assessments

Participation in Professional Development Activities Related to Teaching

Professional Consultation Related to Teaching

Other Evidence

EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS

Field Day

Dry Bean Field day. Yuma, CO. Number of times program was made: 2. Total number of participants: 22. Percent Responsible: 33%. 2012.

Presentation

Bean Improvement in the 21st Century. Adult, Denver, Co. Number of times program was made: 1. Total number of participants: 120. Percent Responsible: 100%. 2nd Quarter 2014.

Bean Breeding for Slow Darkening Pinto beans. Denver, CO. Total number of participants: 101. Percent Responsible: 100%. 2012.

COMMITTEES

Universit Student Appeals Panel, (January 2010 - Present).

(2012).

(2011).

(2010).

(2010).

(2010).

(2010).

Co-chair, Crops for Health Committee, College of Agricultural Sciences, (2007 - 2010).

Member, Faculty Council Committee on Intercollegiate Athletics, (2004 - 2010).

ARDEC Advisory Panel, (2011 - Present).

Associate Department Head, Soil and Crop Sciences, (2011 - Present).

Member S&C Resident Instruction Advisory Panel, (2011 - Present).

ARDEC Advisory Committee 2008, 2009, 2010, (1991 - 2013).

Co-chair, Crops for Health Committee, College of Agricultural Sciences, (2007 - 2010).

Member, Faculty Council Committee on Intercollegiate Athletics, (2004 - 2010).

Acting Department Head, (August 1, 2015 - Present).

Associate Department Head, Soil and Crop Sciences, (August 15, 2011 - Present).

ARDEC Advisory Panel, (2011 - Present).

Member S&C Resident Instruction Advisory Panel, (2011 - Present).

Awards Committee S&C, (January 2006 - Present).

Awards Committee, (January 1, 2001 - Present).

Member RI panel Dep. Soil and Crop Sciences, (2000 - December 31, 2015).

ARDEC Advisory Committee 2008, 2009, 2010, (1991 - 2012).

Co-chair, Crops for Health Committee, College of Agricultural Sciences, (2007 - 2010).

Member, Faculty Council Committee on Intercollegiate Athletics, (2004 - 2010).

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

National Association of Plant Breeders. (January 2010 - Present).

Soil Science Society of America. (January 1, 2014 - January 1, 2015).

American Association for the Advancement of Science. (2011 - 2013).

Bean Improvement Cooperative. (1985 - 2013).

American Society of Agronomy. (1971 - 2013).

Crop Science Society of America. (1971 - 2013).

Science Direct. (November 2015).

Colorado Bean News. (December 1, 2014).

Under the Flatirons. (October 22, 2014).

CSA News. (July 29, 2014).

Colorado Bean News. (January 1, 2014).

Program Organizer, Crop Science Society of America. (2015 - Present).

Nonvoting member Board of Directors, Crop Science. (2012 - Present).

Reviewer, Ad Hoc Reviewer, Field Crops Research. (2012 - Present).

Reviewer, Ad Hoc Reviewer, Netherlands Organization for Scientific research. (2012 - Present).

Reviewer, Ad Hoc Reviewer, NIFA. (2012 - Present).

Member, Travel to Ethiopia to develop research partnerships. (2012 - Present).

USDA Annual Meeting of the Sclerotinia Initiative, Minneapolis, MN. (2012 - Present).

W-6 Regional Committee,, Corvallis, OR. (2012 - Present).

Western Society of Crop Science, Pullman, WA. (2012 - Present).

Member, American Association for the Advancement of Science. (2011 - Present).

Annual Meeting Sclerotinia Initiative, Minneapolis, MN. (2011 - Present).

Annual Meeting W-2150 Regional Project, San Juan, ZZ. (2011 - Present).

Annual Meeting W-6 Regional Committee, Via remote delivery, CO. (2011 - Present).

ARDEC Advisory Panel. (2011 - Present).

Associate Department Head, Soil and Crop Sciences. (2011 - Present).

Bean Improvement Cooperative, Biennial Meeting, San Juan, ZZ. (2011 - Present).

BioMed Central. (2011 - Present).

Chair, Awards Committee S&C. (2011 - Present).

Colorado Seed Growers Assn., Loveland, CO. (2011 - Present).

Crop Science. (2011 - Present).

Crop Science Society of America, San Antonio, TX. (2011 - Present).

Dry Bean Planning Grant, Tuscon, AZ. (2011 - Present).

Euphytica. (2011 - Present).

Jordon University of Science and Tech. (2011 - Present).

Member S&C Resident Instruction Advisory Panel. (2011 - Present).

Rocky Mountain Bean Dealers, Denver, CO. (2011 - Present).

Member, University Student Grievance Committee. (2011 - Present).

Volunteer AG Day 2011. (2011 - Present).

Agronomy Journal. (2010 - Present).

American Society of Agromomy, Crop Scienc Society of America, Long Beach,, CA. (2010 - Present).

Annual Meeting of the Sclerotinia Initiative, Minneapolis, MN. (2010 - Present).

Biomedical Central. (2010 - Present).

Canadian Journal of Plant Science. (2010 - Present).

Colorado Seed Growers Association, Loveland, CO. (2010 - Present).

Crop Science. (2010 - Present).

Dry Bean Planning Grant, East Lansing, MI. (2010 - Present).

Dry Bean Planning Grant, Davis, CA. (2010 - Present).

Iowa State University. (2010 - Present).

Journal of Genetics. (2010 - Present).

Journal of Plant Registrations. (2010 - Present).

National Assoc. of Plant Breeders, Johnston, IA. (2010 - Present).

Member, National Association of Plant Breeders. (2010 - Present).

Rocky Mountain Bean Dealers Annual Conference, Denver, CO. (2010 - Present).

Sultan Oaboos University, (2010 - Present).

USDA in-house reviews. (2010 - Present).

Chairperson, Crop Science Society of American. (January 1, 2015 - December 30, 2016).

Program Coordinator, Regional bean nurseries, Fort Collins. (March 1, 2015 - November 30, 2015).

Colorado Seed Growers Assn., Loveland, CO. (2012 - 2014).

Officer, President/Elect/Past, Officer. (2011 - 2014).

Reviewer, Ad Hoc Reviewer, NIFA. (June 2014 - July 2014).

Officer, President/Elect/Past, Crop Science Society of America. (January 2012 - February 2014).

Editor, Associate Editor, Academy Science Society. (2010 - 2013).

Collaborator USDA-ARS Dry Bean research at Michigan State University. Collaboration with Dr. Karen Cichy "Improved Food Quality in Dry Beabns Using Genetic and Molecular Markers". (2010 - 2013).

Co-chair, Crops for Health Committee, College of Agricultural Sciences. (2007 - 2013).

Member RI panel Dep. Soil and Crop Sciences. (2000 - 2013).

ARDEC Advisory Committee 2008, 2009, 2010. (1991 - 2013).

Colorado Seed Growers Association. (1990 - 2013).

Member, Bean Improvement Cooperative. (1985 - 2013).

Member, American Society of Agronomy. (1971 - 2013).

Member, Crop Science Society of America. (1971 - 2013).

APLU Convocation, Washington DC, DC. (2012).

Reviewer, Ad Hoc Reviewer, BREAD. (2012).

Member, Travel to China to enhance exchange between CSU and China Agricultural University. (2012).

Reviewer, Ad Hoc Reviewer, Natural Sciences and Engineering Research Council of Canada. (August 1, 2012 - September 1, 2012).

Member, Visit to Sarotov University in Russia to Build Capacity and Relationships. (2011).

Review promotion documents:

Reviewed promotion documents for Allan Knapp, Iowa State University

Reviewed promotion documents for Leonard Lauriault, New Mexico State University

Reviewed Research Grant Proposal for Natural Sciences and Engineering Research Council of Canada. (2010).

Member, Faculty Council Committee on Intercollegiate Athletics. (2004 - 2010).

Officer, President/Elect/Past, Western Society of Crop Science. (2008 - 2009).

OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH

McGraw Hill Publishing. (2010).

Pearson Publishing CO. (2010).

Interaction with Industry, Colorado Dry Bean Administrative Committee. (1998 - 2015).

Northern Colorado food Distribution Center. (2012 - Present).

Northern Colorado Food Distribution Center. (2011 - Present).

Board Member, Crop Science Society of America. (January 1, 2010 - Present).

Northern Colorado Food Distribution Center. (2010 - Present).

Discussant, Colorado Dry Bean Administrative Committee. (January 1, 1998 - Present).

Attended board meetings and advised on bean related activities, Colorado Dry Bean Administrative Committee, Denver, CO. (January 1, 1996 - Present).

Board Member, Colorado Seed Growers Assn, CO. (January 1, 2000 - December 31, 2015).

Bean Field Days. (September 5, 2015 - September 6, 2015).

Colorado Seed Growers Association. (1990 - 2013).

Fort Collilns High Schoool. (January 1, 2010 - January 1, 2013).
