



VITA

Donald A. Llewellyn, Ph.D.

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EDUCATION

A. Degrees Earned

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| 2006 | Ph.D., Ruminant Nutrition, Kansas State University, Manhattan, KS. |
| 2003 | M.S., Animal Science, Ruminant Nutrition, Kansas State University, Manhattan, KS. |
| 1981 | B.S., Animal Science (Production Option), Oklahoma State University, Stillwater, OK. |

B. Certificates and Licenses

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| 2011—present | Public Operator, Pesticide License, Washington State Department of Agriculture |
| 1983 | Artificial Insemination Technician, Select Sires. |

EMPLOYMENT

A. University Related

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| May 15, 2011 – present | Assistant Professor, Regional Livestock Specialist
Washington State University/Benton County
Extension, Kennewick, WA
Affiliate Faculty, WSU Department of Animal
Sciences |
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January 1, 2009 – May 14, 2011	Assistant Professor, Eastern Kentucky University, Richmond, KY
July 1, 2006 – December 31, 2008	Director of Farms/Assistant Professor Eastern Kentucky University, Richmond, KY
2002 – 2006	Research Assistant, Commercial Cow/Calf Unit, Kansas State University, Manhattan, KS
2000 – 2001	Graduate Research Assistant, Department of Animal Sciences and Industry, Kansas State University, Manhattan, KS

B. Other

1981 – 2000	Co-owner, co-manager, and corporate officer of family-owned wheat farm and cattle operation, Amber Hills Ranch, Inc., Llewellyn Farms, Inc., J. H. Llewellyn Warehouse Co., Wilbur, WA.
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HONORS AND AWARDS

2015	Achievement Award for Excellence in Extension Programming, National Association of County Agricultural Agents (NACAA), Sioux Falls, SD, July 14, 2015.
2015	Achievement Award, Washington Extension Agents and Specialists Association (WEASA), Spokane, WA, July 2015.
2014	Team Interdisciplinary Award, Washington State Biofuels Cropping Systems, College of Agricultural, Human, and Natural Resource Sciences, Washington State University, Pullman, WA.
2011	Affiliate Faculty, Department of Animal Sciences, Washington State University, Pullman, WA.
2011	Graduate Faculty, Kansas State University, Manhattan, KS
2009	Golden Apple Teaching Award, nomination, Eastern Kentucky University Housing, Richmond, KY
2007	Associate Graduate Faculty, Eastern Kentucky University, Richmond, KY
2007	Adjunct Faculty Status, Department of Animal Sciences and Industry, Kansas State University, Manhattan, KS
2006	Graduate Education and Research Scholars' Community (GEAR), Eastern Kentucky University, Richmond, KY

GRANTS, CONTRACTS, AND FUND GENERATION¹

A. Grants and Contracts

- 2015 Novel agronomic and integrated end uses of dual-purpose canola in sustainable production systems. USDA NIFA Supplemental and Alternative Crops Grant. \$209,687. **P.I.: D. A. Llewellyn** and Co-PI's: S. C. Fransen, G. Wang, R. Ondoua, D. White, and D. Senior (2016-2018) **(1, 2, 3, 4, 5, \$209,687)**. Submitted and in review.
- 2015 High Quality Beef: A Niche Market for Small and Medium Sized Farms. USDA NIFA AFRI Grant. \$479,995. P.I.: Min Du and Co-PI's: S. Neibergs, J. Busboom, M. Nelson and **D. Llewellyn** (2016-2019) **(2, 3, 4, 5; \$95,999)**. Funded.
- 2015 Intercropping Frosty Berseem Clover with Alfalfa, Grassland of Oregon, \$2,000. P.I.: S. Norberg, Co-P.I.: **D. Llewellyn**, Collaborators: S. Fransen and J. Neibergs. (04/15-4/16) **(5, \$200)**.
- 2015 Soybean Morphology Impact on Soybean Hay Quality, Grant County Crop Improvement, \$3,000. P.I.: S. Norberg, Co-P.I.: **D. Llewellyn**, Collaborators: S. Fransen and J. Neibergs. (04/15-4/16) **(5, \$300)**.
- 2015 Yield, Feed Quality and Total Productivity of Teff Overseeded in Timothy. International Plant Nutrition Institute, \$5,000. P.I.: S. Norberg, Co-P.I.: **D. Llewellyn**, Collaborators: S. Fransen and J. Neibergs. (03/14-4/15) **(5, \$500)**.
- 2014 Evaluation of ensiling characteristics, forage quality, and in situ digestion of Canola silage for beef and dairy production systems. Washington State Biofuels Cropping Systems Grant. \$10,500. P.I.: **D. A. Llewellyn** and Collaborators: S. Fransen, and S. Norberg. (2014–2016) **(1, 2, 3, 4, 5, \$10,500)** Funded.
- 2014 Evaluation of ensiling characteristics, forage quality, and in situ digestion of Canola silage for beef and dairy productions systems. \$24,525. Washington State University Extension Special Project Grant. P.I.: **D. A. Llewellyn** and Collaborators: S. Fransen, and S. Norberg. (2014-2016) **(1, 2, 3, 4, 5, \$24,525)** Funded. **Note: This grant is to replace funding which was declined by WSU following the Western SARE Grant PI's departure from WSU.**
- 2014 Sustainable cropping systems for dual-purpose biennial Canola. Western SARE Grant. \$256,397. P.I.: K. Desta and Co-P.I.s: M. Brady, **D. A. Llewellyn**, and K. Sowers. (2014 –2015) **(2, 3, \$22,500)**. Funded. Note:

¹Key to indicators or description of contributions to Grants, Contracts and Fund Generation: 1 = Provided the initial idea; 2 = Developed research/program design and hypotheses; 3 = Authorship of grant application; 4 = Developed and/or managed budget; 5 = Managed personnel, partnerships, and project activities.

The decision was made by WSU Administration to return the grant to Western SARE because the PI sought employment elsewhere.

- 2014 Yield, Feed Quality and Total Productivity of Teff Overseeded in Timothy Washington Hay Growers Association \$13,250. P.I.: S. Norberg, Co-P.I.: **D. Llewellyn**, Collaborators: S. Fransen, K. Desta, and J. Neibergs. (03/14-04/15) **(5, \$1,000)**. Funded.
- 2014 Feed Quality and Total Productivity of Soybeans for Hay and Forage, Grant County Crop Improvement \$3,000. P.I.: S. Norberg, Co-P.I.: **D. Llewellyn**, Collaborators: S. Fransen, K. Desta, and J. Neibergs. (04/14-4/15) **(5, \$300)**. Funded.
- 2013 Low-stress cattle handling training and vide development: Improving understanding and implementation to manage risk to humans and cattle. Western Center for Risk Management Education. \$32,272. P.I.: S. M. Smith and Co-P.I.: **D. A. Llewellyn**. (2014 – 2015) **(2, 5, \$250 mileage)**. Funded.
- 2013 Feed quality of corn silage with or without soybean intercropping. WSU Extension ANR Internal Ag Program Special Projects Grant. \$6,900. CoP.I.'s: **D. A. Llewellyn** and O. S. Norberg. (2013 – 2014) **(2, 3, 4, \$3,450)**. Funded.
- 2013 Bovine respiratory disease risk reduction from “Bloodlines to fence lines.” Western Center for Risk Management Education Grant. \$51,954. P.I.: D. A. Moore and CoP.I.: A. Allen and Collaborators: C. Beus, D. Collins, J. DeVries, F. Hendrix, T. Hudson, S. Kerr, **D. A. Llewellyn**, D. Nelson, S. Smith, and J. R. Wenz. (2013—2014) **(2, \$250)**. Funded.
- 2013 Using the biointensive technique of intercropping Teff (*Eragrostis tef*) into Timothy to improve the economic sustainability of Timothy. BIOAg Grant. Washington State University Biologically Intensive Agriculture & Organic Farming (BIOAg). \$40,000. P.I.: O. S. Norberg and Co-P. I.'s: **D. A. Llewellyn**, K. Desta, J. S. Neibergs, and S. C. Fransen. (2013-2014) **(2, 3, 4, \$6,400)**. Funded.
- 2013 Yield, Feed Quality and Total Productivity of Soybeans for Hay and Forage, Grant County Crop Improvement, \$3,000. P.I.: S. Norberg, Co-P.I.: **D. Llewellyn**, Collaborators: S. Fransen, K. Desta, and J. Neibergs. (04/13-4/14) **(5, \$300)**
- 2012 Yield, feed quality and total productivity of Teff overseeded in Timothy. Washington State Hay Growers Association. \$13,250. P.I.: O. S. Norberg and Co-P.I.s: **D. A. Llewellyn**, S. C. Fransen, K. Desta, and J. S. Neibergs. (2012-2013) **(2, \$1,000 for travel and forage quality work)**. Funded.
- 2012 Low-stress cattle handling training: Identifying and managing risk in the work force and cattle herd. Western Center for Risk Management

Education. \$28,683. P.I.: S. M. Smith and Co-P.I.s: T. Platt and **D .A. Llewellyn**. (2012-2013) **(2, \$250 travel)** Funded.

- 2012 Developing research and production information to evaluate camelina and canola in a sustainable cropping, bio-fuel processing and livestock feeding system. BioAg Grant. Washington State University. \$19,650. P.I.: **D. A. Llewellyn** and Co-P.I.s: O. S. Norberg, J. S Neibergs, and S. C. Fransen. (6/2012—6/2014) **(1, 2, 3, 4, 5, \$19,650)**. Funded.
- 2012 Bovine respiratory disease prevention from bloodline to fence line. USDA/NIFA. \$10,000. P.I.: D. Moore and Co-P.I.s: A. J. Allen, C. Beus, E. Field, J. Field, R. Kasimanickam, **D. A. Llewellyn**, J. S. Neibergs, S. M. Smith, J. Wenz, and D. Nelson. (2012) **(2, \$250 travel)**. Funded
- 2010 Biomass screening analysis: Rapid characterization of feedstock for Biofuels applications. Sponsored by ECU Center for Renewable and Alternative Fuel Technologies, Federal. \$86,625. P.I.: **D. A. Llewellyn** and Co-P.I.: D. L. Smith. (2010) **(1, 2, 3, 4, 5, \$86,625)**.
- 2009 The transition to Biofuel feedstock production in Kentucky. Sponsored by Kentucky Agricultural Development Board, State. \$220,000. P.I.: **D. A. Llewellyn** and Co-P.I.s: B. R. Pratt and J. F. O'Connor. (2009-2010) **(1, 2, 3, 4, 5, \$110,000)**

B. Gifts and Awards

- 2015 Highland Specialty Grains, Moses Lake, WA. Forage and silage quality Research. \$11,000.
- 2014 Highland Specialty Grains, Moses Lake, WA. Forage quality research. \$1,400.

C. Program Revenue Generation and Sponsorships

- 2015 Benton County Cattlemen's Association, support for Beef Education Award. \$250.
- 2014 Benton County Cattlemen's Association, support for Beef Education Award. \$500.
- 2013 Benton County Cattlemen's Association, support for Beef Education Award. \$250.
- 2012 Benton County Cattlemen's Association, support for Beef Education Award. \$250.

D. MOA's and funding secured from Public, Non-profit, and Private entities

E. Unfunded Grant Proposals – Summarized by Year

Year	Total Grants	Total Dollars
2015	1	3,999,497
2014	3	188,122
2013	4	1,310,978
2012	2	170,483

- 2015 Utilization of sustainable and biologically-intensive beef production systems for soil fertility and nutrient management. WSU BIOAg Grant. Washington State University, CSANR. \$39,945. P.I.: **D. A. Llewellyn** and Co-PI: Steve Fransen; Collaborator: Gary Rohwer. (2016-2017). **(1, 2, 3, 4, 5, \$39,945)**. .
- 2015 Moisture stress and its impact on alfalfa production systems: sustaining food production, exports and food security. USDA NIFA AFRI grant. \$3,999,497. Co-P.I.: D.A. Llewellyn and Collaborators: S. Fransen, S. Arispe, W. Buhrig, M. Bohle, T. DelCurto, O. McDougal, J.S. Neibergs, G. Rohwer, D. Senior, G. Shewmaker, L. Yu, D. White, and T. Wilson. (2016-2019) **(2, 3, 4, 5, \$795,873)**. Will be resubmitted.
- 2014 Instrumentation to support effective applied research in ruminant nutrition. WSU New Faculty Seed Grant, Washington State University. \$29,240. P.I.: **D. A. Llewellyn** (5/2014 – 8/2015) **(1, 2, 3, 4, 5, \$29,240)**.
- 2014 Destabilization of the hay industry through drought and deficit irrigation induced plant chemical changes II: The effect of inadequate water on metabolism of Alfalfa forage by ruminants. BioAg Grant. Washington State University. \$39,976. P.I.: **D. A. Llewellyn** and Co-P.I.: S .C. Fransen. (2014) **(1, 2, 3, 4, 5, \$39,976)**
- 2014 Using the bio intensive technique of intercropping Teff (*Eragrostis tef*) into Timothy to improve the economic sustainability of Timothy. BIOAg Grant. Washington State University Biologically Intensive Agriculture & Organic Farming (BIOAg). \$39,983. P.I.: O. S. Norberg and Co-P.I.s: **D. A. Llewellyn**, K. Desta, J. S. Neibergs, and S.C. Fransen. (2014) **(2, 3, \$14,750)**
- 2014 Destabilization of the hay industry through drought and deficit plant chemical changes. Emerging Research Issues for Washington Agriculture 2014 Internal Competitive Grant Program. Washington State University. Two-year budget = \$78,923. P.I.: **D. A. Llewellyn** and Co-P.I.: S.C. Fransen. (2014-2015) **(1, 2, 3, 4, 5, \$78,923)**.

- 2013 Drought effects on Pacific Northwest (PNW) hay production, quality, and utilization. Western SARE Research and Education Grant Pre-Proposal. \$271,733. P.I.: **D. A. Llewellyn** and Co-P.I.: S. Fransen. (2014-2015) **(1, 2, 3, 4, 5, \$271,733)**.
- 2013 Evaluation of an economical *in situ* fiber digestion system for forages. National Forage Testing Association. \$9,977. P.I.: **D. A. Llewellyn** and Co-P.I.: G. Rohwer. (2014) **(1, 2, 3, 4, 5, \$9,977)**.
- 2013 The development of adaptive management tool for livestock producers in the Pacific Northwest to respond to climate variability. USDA NIFA AFRI Climate Variability and Change Grant. \$999,268. P.I.: K. Johnson and Co-P.I.s: J. Adam, G. Hoogenboom, B. Lamb, M. Liu, and **D. A. Llewellyn**. (9/2013-8/2017) **(2, TBD)**.
- 2013 Evaluating the influence of plant stress on forage quality and feeding value for ruminant diets. 2013 New Faculty Seed Grant. Washington State University, Office of Grant and Research Development. \$29,992. P.I.: **D. A. Llewellyn**. (2013-2014) **(1, 2, 3, 4, 5, \$29,992)**
- 2012 Graduate assistantship in extension: Applied research and outreach Training. WSU CAHNRS Internal Extension Grant Proposal. \$50,000. P.I.: **D. A. Llewellyn**, D.A. and Co-P.I.: O. S. Norberg, S. C. Fransen, and J. S. Neibergs. (2013-2014) **(1, 2, 3, 4, 5, \$50,000)**
- 2012 Yield, feed quality and total productivity of soybeans for hay and forage alone and intercropped with corn. Washington State Dairy Products Commission. \$49,000. P.I.: O. S. Norberg, O.S. and Co-P.I.s: **D. A. Llewellyn**, S. C. Fransen, K. Desta, C. Benedict, J. S. Neibergs. (2012-2013) **(2, \$14,000)**.
- 2012 Advancing beef cattle nutrition, reproduction, health, and food safety through applied production systems research and extension. New Faculty Seed Grant. Washington State University. \$21,500. P.I.: **D. A. Llewellyn**. **(1, 2, 3, 4, 5, \$21,500)**
- 2012 Utilization of camelina and canola in a sustainable cropping, bio-fuel processing and livestock feeding system. 2012 Western SARE Professional + Producer Grant, \$49,983. P.I.: **D. A. Llewellyn** and Co-P.I.s: O. S. Norberg, J. S. Neibergs, S. Fransen, and C. Beus. (2013-2014) **(1, 2, 3, 4, 5, \$49,983)**

PUBLICATIONS AND CREATIVE WORK²

A. Peer-reviewed Journal Articles. (The journal must have a professional organization or corporate entity with an editor that manages a blind, peer review process.)

Norberg, O. S., **D. A. Llewellyn**, S. C. Fransen, and S. Neibergs. 2016. Irrigated corn (*Zea mays* L.) production and quality as influenced by intercropping with soybean (*Glycine max* L. Merr.) at different planting rates and maturity groups. *Agron. J.* **(3, 6)** Submitted 5/3/2016 and in review. Submittal acknowledgment included in supplemental materials.

Llewellyn, D. A. 2016. Promotion and tenure in Extension: Staying the course for the mid-term review. *J. Human Sci. Ext.* **(1, 2, 3, 4, 5, 6)** Submitted 4/22/2016 and in review. Submittal acknowledgment included in supplemental materials.

Llewellyn, D. A., R. Sero, E. Walker, J. S. Neibergs, J. P. Driver, and J. Smith. 2016. A successful youth beef exhibitor program: Reviewing history, industry milestones, education, and 35 years of carcass excellence. *J. of NACAA.* **(1, 2, 3, 4, 5, 6)** Accepted for publication on 5/6/2016. Acceptance e-mail included in supplemental materials.

Llewellyn, D. A., and T. T. Marston. 2016. Case Study: Influence of fall liquid protein supplementation on performance of beef cows grazing native range. *J. of NACAA.* **(1, 2, 3, 4, 5, 6)** Accepted for publication 5/6/2016. Acceptance e-mail included in supplemental materials.

Llewellyn, D. A., G. Rohwer, O.S. Norberg, E. Kimura, J.S. Neibergs, and S.C. Fransen. 2015. Case Study: Evaluating farm processed canola and camelina meals as protein supplements for beef cattle. *J. of NACAA*, 8(2), available online at <http://www.nacaa.com/journal/index.php?jid=545> **(1, 2, 3, 4, 5, 6)**

Llewellyn, D. A., E. A. K. Schlickau, T. T. Marston, K. W. Harborth, R. M. Breiner, J. A. Unruh, and M. E. Dikeman. 2013. Influence of early weaning beef cows on the performance of male progeny and the need for winter protein supplementation. *Agricultural Sciences* 4(12):701-708. **(1, 2, 3, 4, 5, 6)**

Llewellyn, D. A. 2013. Finding first-year success in Extension: Navigating stakeholder needs and institutional expectations. *J. Human Sci. Ext.* 1(1):115-124. **(1, 2, 3, 4, 5, 6)**

Llewellyn, D. A., T. T. Marston, K. L. Teutemacher, J. J. Higgins, and T. Melgarejo. 2010. Evaluation of low molecular weight fractions and crude enzyme preparation from a *Trichoderma* cellulase complex as a treatment for fibrous feeds. *Anim. Feed Sci. Tech.* 160:39-48. **(1, 2, 3, 4, 5, 6)**

Wallace, J. O., L. C. Hollis, C. D. Reinhardt, J. F. Coetzee, D. G. Renter, **D. A. Llewellyn**, and T. T. Marston. 2007. Failure to eliminate the *Anaplasma marginale* carrier state in beef cows following multiple treatments with long-acting injectable oxytetracycline. *The Bovine Practitioner* 41(2):84-87. **(3, 4, 6)**

Llewellyn, D. A., R. C. Cochran, T. T. Marston, D. M. Grieger, C. G. Farmer, and T. A. Wickersham. 2006. Influence of limited fall protein supplementation on

²Key to indicators or description of contributions to Publications and Creative Work: 1 = Developed the initial idea; 2 = Obtained or provided funds or other resources; 3 = Collected data; 4 = Analyzed data; 5 = Wrote/created product; 6 = Edited product.

- performance and forage utilization by beef cattle grazing low-quality native grass pastures. *Anim. Feed Sci. Tech.* 127:234-250. **(1, 3, 4, 5, 6)**
- Arroquy, J. I., R. C. Cochran, M. Villarreal, T. A. Wickersham, **D. A. Llewellyn**, E. C. Titgemeyer, T. G. Nagaraja, D. E. Johnson, and D. Gnad. 2004. Effect of level of rumen degradable protein and type of supplemental non-fiber carbohydrate on intake and digestion of low-quality grass hay by beef cattle. *Anim. Feed Sci. Tech.* 115:83-99. **(3)**
- Arroquy, J. I., R. C. Cochran, , T. A. Wickersham, **D. A. Llewellyn**, E. C. Titgemeyer, T. G. Nagaraja, and D. E. Johnson. 2004. Effects of type of supplemental carbohydrate and source of supplemental rumen degradable protein on low quality forage utilization by beef steers. *Anim. Feed Sci. Tech.* 115:247-263. **(3)**

B. Peer-reviewed Extension Publications.

- Neibergs, J. S., J. P. Driver, and **D. A. Llewellyn**. 2015. Valuing canola and camelina biodiesel byproduct meal as a livestock protein supplement. WSU Extension Fact Sheet FS193E. Washington State University Extension, Pullman, WA. **(2, 3, 4, 5, 6)**.
Accepted for publication 8/5/2015 and in press.
- Norberg, O. S., and **D. A. Llewellyn**. 2014. Nitrate poisoning in ruminants. WSU Extension Fact Sheet FS139E. Washington State University Extension. Pullman, WA. **(5, 6)**
- Llewellyn, D. A.**, and O.S. Norberg. 2014. Prussic acid poisoning in livestock. WSU Extension Fact Sheet FS129E. Washington State University Extension, Pullman, WA. **(1, 2, 5, 6)**
- Bush, M. R., C. Wohleb, S. Rondon, T. Waters, L. DuToit, and **D. A. Llewellyn**. 2013. Blister Beetles: Pest or beneficial predator? WSU Extension Fact Sheet FS113E. Washington State University Extension, Pullman, WA. **(5, 6)**
- Llewellyn, D. A.**, S. M. Smith, and M. Du. 2012. Feeding beef cattle II: Fetal programming—rethinking cow/calf feeding programs. WSU Extension Fact Sheet EM060E. Washington State University Extension, Pullman, WA. **(1, 2, 5, 6)**
- Llewellyn, D. A.** 2012. Feeding beef cattle I: The realities of low-quality forages. Extension Manual EM053E. Washington State University Extension, Pullman, WA, USA. **(1, 2, 3, 5, 6)**
- Harborth, K. W., T. T. Marston, and **D. A. Llewellyn**. 2006. Comparison of corn and grain sorghum dried distiller grains as protein supplements for growing beef heifers (pp. 3-6). Manhattan, Kansas: Report of Progress 959, Ag. Exp. Sta. Kansas State University. **(3, 4, 6)**
- Hollis, L. C., **D. A. Llewellyn**, K. L. Teutemacher, T. T. Marston, and M. W. Sanderson. 2006. Performance of calves born to beef cows seropositive but subclinical for bovine Leukosis virus (pp. 31-32). Manhattan, Kansas: Report of Progress 959, Ag. Exp. Sta., Kansas State University. **(3, 6)**
- Breiner, R. M., **D. A. Llewellyn**, and T. T. Marston. 2005. Effect of adding Aureomycin[®] for anaplasmosis control or Rumensin[®] to mineral supplements on summer beef cowherd performance. (pp. 50-53). Kansas State University, Manhattan, KS: Report of Progress 943, Agricultural Experiment Station. **(3, 6)**

- Harborth, K. W., **D. A. Llewellyn**, and T. T. Marston. 2005. Influence of early weaning and winter protein supplementation on weight and condition score of spring-calving beef cows grazing native tallgrass prairie (pp. 65-68). Manhattan, Kansas: Report of Progress 943, Ag. Exp. Sta., Kansas State University. **(3, 4, 6)**
- Marston, T. T., L. C. Hollis., **D. A. Llewellyn**, and G. L. Stokka. 2004. Effect of route of administration of a commercially available *Mannheimia (Pasteurella) haemolytica* vaccine on titer levels (pp. 91-93). Manhattan, Kansas: Report of Progress 923, Ag. Exp. Sta., Kansas State University. **(3)**
- Llewellyn, D. A.**, B. T. Gray, T. T. Marston, and C. A. Bandyk. 2004. Influence of fall protein supplementation with a self-fed liquid supplement on performance of beef cows grazing tallgrass-prairie range (pp. 21-26). Manhattan, Kansas: Report of Progress 923, Ag. Exp. Sta., Kansas State University. **(3, 4, 5, 6)**
- Hollis, L. C., D. Gnad, T. T. Marston, **D. A. Llewellyn**, and G. Palmer. 2004. Failure to eliminate the carrier state of *anaplasma marginale* by using long-acting injectable oxytetracycline (pp. 94-96). Manhattan, Kansas: Report of Progress 923, Ag. Exp. Sta., Kansas State University. **(3)**
- Arroquy, J. I., R. C. Cochran, M. Villarreal, T. A. Wickersham, **D. A. Llewellyn**, E. C. Titgemeyer, and D. E. Johnson. 2003. Effect of supplemental carbohydrate type and amount of ruminally degradable protein on utilization of tallgrass-prairie hay by beef steers (pp. 152-155). Manhattan, Kansas: Report of Progress 908, Ag. Exp. Sta., Kansas State University. **(3)**
- Marston, T. T., **D. A. Llewellyn**, L. C. Hollis, and J. W. Homm. 2003. Effects of castration age and a growth implant during suckling on weaning and preconditioned weights (pp. 69-71). Manhattan, Kansas: Report of Progress 908, Ag. Exp. Sta., Kansas State University. **(3, 4, 6)**
- Llewellyn, D. A.**, R. C. Cochran, T. T. Marston, C. G. Farmer, and T. A. Wickersham. 2003. Influence of low-level fall protein supplementation on forage intake, diet digestion, and selection by beef steers grazing tallgrass-prairie range. (pp. 143-146). Report of Progress 908, Ag. Exp. Sta., Kansas State University. **(1, 3, 4, 5, 6)**
- Llewellyn, D. A.**, R. C. Cochran, T. T. Marston, D. M. Grieger, C. G. Farmer, T. A. Wickersham, and D. D. Simms. 2003. Influence of low-level supplementation with a high-protein feed on performance of beef cows grazing tallgrass-prairie range during the fall. (pp. 137-142). Manhattan, Kansas: Report of Progress 908, Ag. Exp. Sta., Kansas State University. **(1, 3, 4, 5, 6)**
- Arroquy, J. I., R. C. Cochran, T. A. Wickersham, and **D. A. Llewellyn**. 2002. Effect of source of carbohydrate and degradable intake protein in supplements on low-quality forage utilization by steers (pp. 159-161). Manhattan, Kansas: Report of Progress 890, Ag. Exp. Sta., Kansas State University. **(3)**

C. Peer-reviewed Curricula and Training Manuals (Published curricula and training manuals that have been formally peer reviewed by WSU Extension or another institution.)

D. Published Books, Book Chapters, or Monographs (Specify when an entry was peer reviewed according to the criteria described in A or B above.)

E. Creative Scholarship in Juried Events. (Abstracts, Posters, and Published Papers in Proceedings of a Professional Meeting or Conference. (Note: These are generally not peer reviewed but they may be peer approved or selected through a process.)

- Llewellyn, D.A.**, O.S. Norberg, E. Kimura, G. Rohwer, and S.C. Fransen. 2015. Feed quality and ensiling characteristics of corn silage with or without soybean intercropping. National Association of County Agricultural Agents (NACAA) Annual Meeting and Professional Improvement Conference (AM/PIC). Sioux Falls, SD. July 12-16, 2015. **(2, 3, 4, 5, 6)**
- Kerr, S., **D. Llewellyn**, D. Moore, A. Allen, J. Wenz, S. Neibergs, S. Smith, T. Hudson, C. Beus, and S. Poisson. 2015. Bovine respiratory disease risk reduction from bloodlines to fencelines. 2015 Extension risk Management Education National Conference. Minneapolis, MN, April 29-30, 2015. **(3, 4, 5, 6)**
- Llewellyn, D.A.**, O.S. Norberg, E. Kimura, G. Rohwer, and S.C. Fransen. 2015. Feed quality and ensiling characteristics of corn silage with or without soybean intercropping. Washington State University Academic Showcase. March 27, 2015. **(2, 3, 4, 5, 6)**
- Norberg, O.S., **D. Llewellyn**, K. Desta, S. Fransen and J. Neibergs. 2014. Intercropping Irrigated Corn and Soybeans for Silage. American Society of Agronomy Meeting, Long Beach, CA. November 3-5, 2014. Peer Reviewed. **(3, 4)**
- Moore, D., A. Allen, S. Kerr, C. Beus, **D. Llewellyn**, D. Nelson, S. Smith, J. Wenz, T. Hudson, W. Hendrix and S. Poisson. Delivery and evaluation of the BRD curriculum and on-farm assessment of BRD risk from the Washington State University Extension BEEF Team. Bovine Respiratory Disease Symposium 2014: New approaches to Bovine Respiratory Disease, prevention, management, and diagnosis. Denver, CO. July 30-31, 2014. **(5, 6)**
- Beus, C., M. Nelson, **D. A. Llewellyn**, and J. Busboom. 2014. Conference proceedings. 2014 WSU Beef Production Conference. Washington State University Extension, Yakima, WA. June 13-14, 2014. **(1, 5, 6)**
- Llewellyn, D. A.**, G. L. Rohwer, JD Rosman, O. S. Norberg, and S. C. Fransen. 2014. Chemical composition and in situ degradability of on-farm processed Canola and Camelina meals. 2014 Academic Showcase, Washington State University. Pullman, WA. March 28, 2014. **(1, 2, 3, 4, 5, 6)**
- Moore, D., A. Allen, S. Kerr, C. Beus, **D. Llewellyn**, D. Nelson, S. Smith, J. Wenz, T. Hudson, W. Hendrix, and S. Poisson. 2014. Delivery and evaluation of the BRD curriculum and on-farm assessment of BRD risk from the Washington State University Extension BEEF Team. 2014 Academic Showcase, Washington State University. Pullman, WA. March 28, 2014. **(5, 6)**
- Llewellyn, D. A.**, JD Rosman, G. L. Rohwer, O. S. Norberg, and S. C. Fransen. 2014. Evaluating Camelina and Canola meals as protein supplements for growing beef heifers. 2014 Direct Seed & Oilseed Cropping Systems Conference. Kennewick, WA. January 20-22, 2014. **(1, 2, 3, 4, 5, 6)**

- Neibergs, J. S., **D. A. Llewellyn**, J. P. Driver, and S. A. George. 2014. Beef cattle winter feed and protein supplement cost calculator. 2014 Direct Seed & Oilseed Cropping Systems Conference. Kennewick, WA. January 20-22, 2014. **(2, 6)**
- Norberg, O. S., E. Creech, **D. A. Llewellyn**, K. G. Desta, S. C. Fransen, and J. S. Neibergs. 2013. Soybeans for hay production. ASA, CSSA, & SSSA International Annual Meetings. Tampa, FL. November 3-6, 2013. **(3, 6)**
- Norberg, O. S., E. Creech, **D. A. Llewellyn**, K. G. Desta, S. C. Fransen, and J. S. Neibergs. 2013. Soybeans for Hay Production. Western Society of Crop Science Annual Meeting. Pendleton, OR. June 11-12, 2013. **(3, 6)**
- Desta, K., H. Collins, W. L. Pan, S. C. Fransen, O. S. Norberg, and **D. A. Llewellyn**. 2012. Double cropping irrigated biennial canola with green pea for biodiesel feedstock, crop diversification and animal feed. Washington State Energy Program. Northwest Bioenergy Research Symposium. Seattle, WA. November 13-14, 2012. **(6)**
- Norberg, O. S., E. Creech, **D. A. Llewellyn**, K. Desta, and S. C. Fransen. 2012. Soybeans for forage production in the West. NACAA Western Section Professional Improvement Conference. Twin Falls, ID. October 3-4, 2012. **(3)**
- Llewellyn, D. A.**, G. E. Selby, D. L. Smith, N. C. Tice, S. R. Smith, Jr., M. L. D. Smith, and M. M. Selby. 2010. Influence of pretreatment method on subsequent enzymatic saccharification of mature Alamo switchgrass. Washington, D.C.: Biotechnology Industry Organization (BIO). **(1, 2, 3, 4, 5, 6)**
- Llewellyn, D. A.**, and G. E. Selby. 2010. Biomass production and agriculture: Opportunities and challenges. Lexington, Kentucky: Campus Community Partnerships for Sustainability Conference. **(1, 2, 3, 4, 5, 6)**
- Llewellyn, D. A.**, G. E. Selby, and M. M. Selby. 2010. A survey of agricultural biomass resources to support a cellulosic-based, algae biofuel industry in Kentucky. Richmond, Kentucky: ECU/Undergraduate Presentation Showcase. **(1, 2, 3, 4, 5, 6)**
- Harborth, K. W., **D. A. Llewellyn**, and T. T. Marston. 2005. Influence of early weaning on the requirement for winter protein supplementation of spring-calving beef cows grazing native tallgrass prairie. *J. Anim. Sci.*, 83, suppl.2, 57. **(1, 3, 4, 5, 6)**
- Llewellyn, D. A.**, B. T. Gray, T. T. Marston, and C. A. Bandyk. 2004. Effect of fall protein supplementation with a self-fed liquid supplement on performance of beef cows grazing tallgrass-prairie range. *J. Anim. Sci.*, 82, suppl. 1, T181. **(1, 3, 4, 5, 6)**
- Llewellyn, D. A.**, R. C. Cochran, T. T. Marston, D. M. Grieger, C. G. Farmer, and T. A. Wickersham. 2003. Effect of low-level fall protein supplementation on the performance of beef cows grazing tallgrass-prairie range. *J. Anim. Sci.*, 81, suppl. 2, 308. **(1, 3, 4, 5, 6)**
- Llewellyn, D. A.**, R. C. Cochran, T. T. Marston, C. G. Farmer, and T. A. Wickersham. 2003. Influence of low-level protein supplementation on forage intake, diet digestion and selection by beef steers grazing tallgrass-prairie range during the fall. *J. Anim. Sci.*, 81, suppl. 1, W151. **(1, 3, 4, 5, 6)**
- Arroquy, J. I., R. C. Cochran, T. A. Wickersham, and **D. A. Llewellyn**. 2002. Effect of carbohydrate types and supplemental degradable intake protein sources on low-quality forage utilization by beef steers. *J. Anim. Sci.*, 80, suppl. 2, 247. **(3)**

Arroquy, J. I., R. C. Cochran, M. Villarreal, T. A. Wickersham, **D. A. Llewellyn**, E. C. Titgemeyer, and D. E. Johnson. 2002. Effect of level of supplemental degradable intake protein and carbohydrate types on low-quality forage utilization by beef steers. Proc. West. Sec., Am. Soc. Anim. Sci., 53rd ed., 129. **(3)**

F. Educational Digital Media (Videos, computer programs, mobile apps, dynamic web-pages, social media, blogs, online modules, decision aids, email list-serves, etc.) (Designate products that received formal peer-review with a * and indicate the entity managing the review.)

*Smith, S. M., **D. A. Llewellyn**, and T. Platt. 2014. Low-Stress Cattle Handling Review: Understanding & Working With Cattle Instinct. Video. WSU Extension PRV01, Pullman, WA. **(6)**

WSU/American Angus Association Cattlemen's Boot Camp. Radio interview. Northwest Ag Information Network. Greg Martin, Reporter. "Open Range" has 31 radio stations in Washington, Oregon, and Idaho. The broadcast area is home to 2.5 million cattle and 4.4 million people, AgInfo.net, March 24, 2016. **(1, 5)**

WSU 2014 Beef Conference promo. 2014. Radio interview. Northwest Ag Information Network. Kaydee Gilkey, Reporter. "Open Range" has 31 radio stations in Washington, Oregon, and Idaho. The broadcast area is home to 2.5 million cattle and 4.4 million people, AgInfo.net, March 20, 2014. **(1, 5)**

Preparing livestock for cold weather. 2013. Radio interview. Northwest Ag Information Network. Kaydee Gilkey, Reporter. "Open Range" has 31 radio stations in Washington, Oregon, and Idaho. The broadcast area is home to 2.5 million cattle and 4.4 million people, AgInfo.net, December 9, 2013. **(1, 5)**

WSU Extension, Benton-Franklin County, Animal page. 2011 to present. <http://county.wsu.edu/benton-franklin/agriculture/animals/Pages/default.aspx> **(1, 5)**

WSU Extension, Benton-Franklin County, Faculty Page, **Don Llewellyn**, 2011 to present. <http://county.wsu.edu/benton-franklin/staff/llewellyn/Pages/default.aspx> **(1, 5)**

G. Other Publications and Creative Works (Those products that did not receive formal peer review, and include popular press articles, newsletters, and other written works)

Norberg, O.S., D.A. Llewellyn, S.C. Fransen, and J.S. Neibergs. 2016. Determining Nitrogen Needs in Timothy Hay Production. Progressive Forage Grower. April 1, 2016. **Invited Article** <http://www.progressiveforage.com/forage-types/other-forage/determining-nitrogen-needs-in-timothy-hay-production> **(3, 6)**

Norberg, O.S., D.A. Llewellyn, S.C. Fransen, and J.S. Neibergs. 2016. Testing To Determine In-Season Nitrogen Needs in Timothy Hay Production. Basin Business Journal. January 6th, 2016. http://www.columbiabasinherald.com/basin_business_journal/testing-to-determine-in-season-nitrogen-needs-in-timothy-hay/article_3f9e0b52-b4d3-11e5-8b12-07dceeb4fda8.html **(3, 6)**

- Llewellyn, D. A.** 2014. Early Weaning and Cow Performance: An addition to the cattle producers' toolkit. in "The Ketch Pen", Washington Cattlemen's Association, July issue, 2014. **(2, 3, 4, 5, 6)**
- 2014 Beef Management Calendar. WSU Livestock Extension Team. Washington State University Extension, Pullman, WA. Published Fall 2013. **(5, 6)**
- Llewellyn, D. A.** 2013. Fertilizer management for small acreages. Washington Animal Ag Team Newsletter. Washington State University Extension. Summer 2013 issue. **(1, 5)**
- Allen, A. J., and **D. A. Llewellyn.** 2013. Vaccination use to reduce BRD in cow/calf operations. Washington Animal Ag Team Newsletter. Washington State University Extension. Spring 2013 issue. **(6)**
- Norberg, O. S., and **D. A. Llewellyn.** 2013. Nitrate poisoning in livestock, in "The Ketch Pen", Washington Cattlemen's Association, September issue, 2013. **(6)**
- Norberg, O. S., and **D. A. Llewellyn.** 2013. Nitrate poisoning in livestock, in Basin Business Journal, July issue, 2013. **(6)**
- Llewellyn, D. A.,** and A. J. Allen. 2013. Feeding the pregnant cow for optimal calf health and resistance to Bovine Respiratory Disease, in the "Ketch Pen", Washington Cattlemen's Association, February issue, 2013. **(1, 5)**
- Llewellyn, D. A.,** and A. J. Allen. 2012. Managing the pregnant cow for optimal calf health. BRD Project Fact Sheet--curriculum. Available online through WSU Veterinary Medicine Extension. **(5, 6)**
<http://extension.wsu.edu/vetextension/brd/Pages/Factsheets.aspx> **(1, 5, 6)**
- Allen, A. J, and **D. A. Llewellyn.** 2012. Effective use of vaccinations on cow/calf operations to reduce the incidence of bovine respiratory disease. BRD CAP Project Fact Sheet--curriculum. Available online through WSU Veterinary Medicine Extension. <http://extension.wsu.edu/vetextension/brd/Pages/Factsheets.aspx> **(5, 6)**
- Llewellyn, D. A.** and A. J. Allen. 2012. Feeding the pregnant cow for optimal calf health and resistance to bovine respiratory disease. Washington Animal Ag Team Newsletter. Washington State University Extension. December 2012. **(1, 5)**
- Llewellyn, D. A.** 2012. USDA beef grading—An overview, in "The Ketch Pen", Washington Cattlemen's Association, December issue, 2012. **(1, 3, 5)**
- Llewellyn, D. A.** 2012. Forage testing for livestock operations. Washington Animal Ag Team Newsletter. Washington State University Extension. October 2012. **(1, 5)**
- Llewellyn, D. A.** 2012. Forage testing for beef cattle operations: Analysis of harvested and standing forage, in "The Ketch Pen", Washington Cattlemen's Association, October issue, 2012. **(1, 5)**
- Llewellyn, D. A.,** and O. S. Norberg. 2012. Prussic acid poisoning in livestock. Washington Animal Ag Team Newsletter. Washington State University Extension. August 2012. **(1, 5, 6)**
- Norberg, O. S., and **D. A. Llewellyn.** 2012. Nitrate poisoning in livestock. Washington Animal Ag Team Newsletter. Washington State University Extension. August 2012. **(6)**

- Llewellyn, D. A.** 2012. Some thoughts on birth weight and calving ease direct EPDs in sire selection, in “The Ketch Pen”, Washington Cattlemen’s Association, July issue, 2012. **(1, 5)**
- Llewellyn, D. A.** 2012. Setting up for reproductive success, in “The Ketch Pen”, Washington Cattlemen’s Association, April issue, 2012. **(1, 5)**
- Llewellyn, D. A.** 2012. Rethinking beef cow feeding programs: Fetal Programming, in “The Ketch Pen”, Washington Cattlemen’s Association, February issue, 2012. **(1, 3, 5)**
- Llewellyn, D. A.** 2012. Rethinking beef cow feeding programs: Fetal Programming. Washington Animal Ag Team Newsletter, Washington State University Extension, January 2012. **(1, 3, 5)**
- Llewellyn, D. A.** 2011. Opportunities with low-quality forages, in “The Ketch Pen”, Washington Cattlemen’s Association, December issue, 2011. **(1, 3, 5)**
- Llewellyn, D. A.** 2011. Alternative corn utilization strategies. Washington Animal Ag Team Newsletter, Washington State University Extension. October, 2011. **(1, 5)**
- Llewellyn, D. A.** 2011. Cow/calf management decisions in response to rising production costs. Washington Animal Ag Team Newsletter, Washington State University Extension. July, 2011. **(1, 5)**
- Johnson, C. B., and **D. A. Llewellyn.** 2010. Science activities for kids/biofuels and alternative energy—curriculum development. Center for Renewable and Alternative Fuel Technologies (CRAFT), Eastern Kentucky University, Richmond, KY **(1, 5, 6)**

PRESENTATIONS

A. International

B. National

- Llewellyn, D. A. 2016. Educating beef cattle producers in nutrition and low quality forages: A dozen questions to assist in choosing feeding programs. CHS Nutrition Meeting, Payback University. Hood River, OR. February 24, 2016. Invited oral presentation.
- Llewellyn, D. A. 2013. Educating beef cattle producers in nutrition and low quality forages: A dozen questions to assist in choosing feeding programs. Vitalix Annual Sales Meeting. Denver, CO. April 4, 2013. Invited oral presentation.
- Llewellyn, D. A., G. E. Selby, B. R. Pratt. 2010. A survey of agricultural biomass resources to support a cellulosic-based, algae biofuel industry in Kentucky. Southeast BIOMASS Conference and Expo, Atlanta, GA. BBI International. (November 3, 2010). Invited oral presentation and panel discussion.
- Llewellyn, D. A. 2005. American International Charolais Junior National Leadership Conference, Peace in the ruminant stomach: Cow and microbes living in harmony, Hutchinson, Kansas. (June 20, 2005). Invited oral presentation.

C. State

- Llewellyn, D. A. 2016. A model for engaging youth in applied research and outreach: Impact and legacy. Western Extension Leadership Development (WELD) Seminar: Innovative project presentation. Anchorage, AK. May 17, 2016.
- Llewellyn, D. A. 2016. Quality assurance training for youth livestock producers. Dayton, WA. April 30, 2016.
- Llewellyn, D. A. 2016. Emergency feeding after a drought or wildfire: Answering the short- and long-term questions. WSU Extension and American Angus Association Cattlemen's Boot Camp. Pasco, WA. April 15, 2016. Invited presentation.
- Llewellyn, D. A. 2016. Feed quality and ensiling characteristics of corn silage with or without soybean intercropping. Pacific Northwest Regional Forage Research/Extension Meeting. Prosser, WA. March 21, 2016.
- Llewellyn, D. A. 2016. Feed quality and ensiling characteristics of corn silage with or without soybean intercropping. Washington State Dairy Federation Meeting. Richland, WA. March 11, 2016.
- Walker, E. V., and Llewellyn, D. A. 2015. Emergency feeding and alternative feedstuffs for beef cattle. Presentation and discussion panel. Washington Cattlemen's Association Annual Convention. Cle Elum, WA. November 14, 2015.
- Llewellyn, D. A. 2015. Ruminant nutrition and feeding your goat. Goat Academy. Goldendale, WA. May 16, 2015.
- Llewellyn, D. A. 2015. Practical nutrition: Making forages work. Klickitat County Cattlemen's Association. Goldendale, WA. May 13, 2015.
- Llewellyn, D.A. 2015. Utilization of winter Canola for seed and silage. Pacific Northwest Regional Forage Research/Extension Meeting. Pasco, WA. March 20, 2015.
- Llewellyn, D.A. 2015. Utilization of winter Canola for seed and silage. Washington Oilseed Cropping Systems Annual Meeting. Pullman, WA. February 26, 2015.
- Llewellyn, D. A. 2015. Practical Nutrition: Making forages work. Highland Specialty Grains Associate Meeting. Spokane Ag Expo & Pacific Northwest Farm Forum, Spokane, WA. February 3, 2015.
- Llewellyn, D. A. 2015. Biennial Canola for seed and silage research update. Washington Oilseed Cropping Systems meeting. Kennewick, WA. January 22, 2015.
- Llewellyn, D. A. 2015. Biennial winter Canola grown under irrigation for seed and silage. 2015 Pacific Northwest Oilseed & Direct Seed Cropping Systems Conference. Kennewick, WA. January 21, 2015.

- Llewellyn, D. A. 2014. Educating beef cattle producers in nutrition and low-quality forages: A dozen questions to assist in choosing feeding programs. Washington State University Beef Production Conference. Yakima, WA. June 13, 2014.
- Llewellyn, D. A. 2014. Canola silage for beef and dairy productions systems. Washington Oilseed Cropping Systems Annual Meeting, Pullman, WA. February 21, 2014.
- Llewellyn, D. A. 2014. Youth PQA Plus Training. Washington State Swine Information Day. Moses Lake, WA. February 7, 2014.
- Llewellyn, D. A. 2014. Getting Philosophical: Beef Cow Nutrition Then and Now. McLean Ranches. Moses Lake, WA. January 5, 2014. Invited Presentation.
- Llewellyn, D. A. 2013. Managing the pregnant cow for optimum calf health. Extension BRD Team workshop and curriculum delivery. Cattlemen's College. Washington Cattlemen's Association Annual Convention, Pasco, WA. November 13, 2013.
- Llewellyn, D. A. 2013. Managing the pregnant cow for optimum calf health. Extension BRD Team workshop and curriculum delivery. Producer meeting. Bridgeport, WA. November 2, 2013.
- Llewellyn D. A. 2013. Where does oilseed meal fit in livestock feeding systems? Washington State University Oilseed Production and Marketing Conference. Kennewick, WA. January 22 and 23, 2013.
- Llewellyn, D. A. 2012. The WSU Beef Team BRD Project. Introduction to new Extension programming. Washington Cattlemen's Association Annual Convention, Cle Elum, WA, November 9, 2012.
- Llewellyn, D. A. 2012. Beef Cow Feeding Programs and Their Effect on Fetal Development. Okanogan County Cattle Producer's Educational Workshop. Omak, WA, October 25, 2012.
- Llewellyn, D. A. 2012. Nutritional Considerations for the Cow Herd. Kittitas County Fencing and Pasture Field Day. Cle Elum, WA, May 12, 2012.
- Llewellyn, D. A. 2012. Cow Nutrition and Fetal Programming. Benton County Cattlemen's Association. Prosser, WA, March 13, 2012.
- Llewellyn, D. A. 2012. Research and Extension Focus Update. Regional Forage Research/Extension Meeting. Kennewick, WA, March 7, 2012.
- Llewellyn, D. A. 2012. Rethinking Cow/Calf Feeding Programs: Fetal Programming. Klickitat County Cattlemen's Association. Centerville, WA. February 23, 2012.
- Llewellyn, D. A. 2012. Cow Nutrition and Fetal Programming. Yakima County Cattlemen's Association. Union Gap, WA. February 14, 2012.

- Llewellyn, D. A. 2012. Biennial canola for forage and ecosystem improvement in dryland cropping systems. Oilseed Crop Production Workshop, Odessa, WA, January 24, 2012.
- Llewellyn, D. A. 2011. Feeding for profit, Grant County Beef Information Day, George, WA, December 14, 2011.
- Llewellyn, D. A. 2011. Interests and opportunities for beef cattle extension in Washington State, Washington Cattlemen's Association Annual Convention, Walla Walla, Washington, November 10, 2011.
- Llewellyn, D. A. 2011. The realities of low-quality forages, Cattle Producers of Washington, Annual Meeting, Moses Lake, WA, October 21, 2011.
- Llewellyn, D. A. 2011. Interests and opportunities for beef cattle extension in Washington State, Seminar Series, Washington State University, Department of Animal Sciences. September 19, 2011.
- Llewellyn, D. A., B. R. Pratt. 2010. Kentucky Agricultural Development Board, The transition to biofuel feedstock production in Kentucky, Kentucky Agricultural Development Board, Louisville, Kentucky. (August 20, 2010).
- Llewellyn, D. A., G. E. Selby. 2010. Campus Community Partnerships for Sustainability Conference, Biomass production and agriculture: Opportunities and challenges, University of Kentucky/Transylvania University/Bluegrass Community and Technical College, Lexington, Kentucky. (April 17, 2010).
- Llewellyn, D. A. 2007. Rockcastle County Young Producers Meeting. Supplementation strategies and by-product feeds, Mount Vernon, KY. (March 12, 2007).

D. Local

- Llewellyn, D. A. 2016. Youth PQA Plus Training. Kennewick, WA, May 21, 2016.
- Llewellyn, D. A. 2016. Youth PQA Plus Training. Kennewick, WA, March 23, 2016.
- Llewellyn, D. A. 2016. Youth PQA Plus Training. Kennewick, WA, February 17, 2016.
- Llewellyn, D. A. 2015. Steer of Merit Awards Program for the Benton Franklin Fair. Pasco, WA. November 2, 2015.
- Llewellyn, D. A. 2015. Lamb of Merit Awards Program for the Columbia Basin Junior Livestock Show. Education for youth lamb exhibitors. Connell, WA, October 19, 2015.
- Llewellyn, D. A. 2015. Introduction of graduate training program; Extension Programming and Research Update. Franklin County Commissioners Public Meeting. Pasco, WA, August 5, 2015.

- Llewellyn, D. A. 2015. Introduction of graduate training program; Extension Programming and Research Update. Benton County Commissioners Public Meeting. Prosser, WA, August 4, 2015.
- Llewellyn, D. A. 2015. Youth PQA Plus Training. Kennewick, WA, May 16, 2015.
- Llewellyn, D. A. 2015. Youth PQA Plus Training. Kennewick, WA, March 16, 2015.
- Llewellyn, D. A. 2015. Youth PQA Plus Training. Kennewick, WA, February 24, 2015.
- Llewellyn, D. A. 2014. Steer of Merit Awards Program for the Benton Franklin Fair and the Columbia Basin Junior Livestock Show. Beef and carcass education. Columbia Basin College, Pasco, WA. October 27, 2014.
- Llewellyn, D. A. 2014. Extension Programming and Research Update. Franklin County Commissioners Public Meeting. Pasco, WA, August 27, 2014.
- Llewellyn, D. A. 2014. Extension Programming and Research Update. Benton County Commissioners Public Meeting. Prosser, WA, August 26, 2014.
- Llewellyn, D. A. 2014. Youth PQA Plus Training. Kennewick, WA, June 23, 2014.
- Llewellyn, D. A. 2014. Ruminant nutrition and feeding your market goat. 4-H Goat Workshop. Franklin County Extension Office. May 31, 2014.
- Llewellyn, D. A. 2014. Youth PQA Plus Training. Kennewick, WA, May 17, 2014.
- Llewellyn, D. A. 2014. Nutritional considerations for the cow herd: New ways of thinking about beef cow nutrition. Columbia County Cattlemen's Association Meeting. Dayton, WA, April 1, 2014.
- Llewellyn, D. A. 2014. Youth PQA Plus Training. Columbia Basin College. Pasco, WA, March 17, 2014.
- Llewellyn, D. A. 2014. Steer of Merit and WSU Beef Conference Update. Franklin County Cattlemen's Association Meeting. Connell, WA, March 11, 2014.
- Llewellyn, D. A. 2014. Wrangler's 4-H Club presentation—Steer Selection and Management. Pasco, WA, March 9, 2014.
- Llewellyn, D. A. 2014. Youth PQA Plus Training. Columbia Basin College. Pasco, WA, February 25, 2014.
- Llewellyn, D. A. 2013. Lamb of Merit Awards Program for the Columbia Basin Junior Livestock Show. Practical production education for youth lamb exhibitors. Connell, WA, November 4, 2013.
- Llewellyn, D. A. 2013. Steer of Merit Awards Program for the Benton Franklin Fair and the Columbia Basin Junior Livestock Show. Beef and carcass education. Columbia Basin College, Pasco, WA. October 21, 2013.
- Llewellyn, D. A. 2013. The WSU BRD Team Project curriculum delivery. Benton County Cattlemen's Association. Prosser, WA, October 8, 2013.

Llewellyn, D. A. 2013. Youth PQA Plus Training. Kennewick, WA, June 26, 2013. Two Sessions (Morning and Evening).

Llewellyn, D. A. 2013. Extension Programming and Research Update. Franklin County Commissioners Public Meeting. Pasco, WA, June 5, 2013.

Llewellyn, D. A. 2013. Extension Programming and Research Update. Benton County Commissioners Public Meeting. Prosser, WA, June 4, 2013.

Llewellyn, D. A. 2013. Youth PQA Plus Training. Pasco, WA, May 8, 2013.

Llewellyn, D. A. 2013. Ruminant Nutrition for 4-H participants. Joint 4-H club meeting. Keewaydin Library, Kennewick, WA, April 23, 2013.

Llewellyn, D. A. 2013. Youth PQA Plus Training. Kennewick, WA, April 17, 2013.

Llewellyn, D. A. 2013. Youth PQA Plus Training. Kennewick, WA, April 9, 2013.

Llewellyn, D. A. 2013. Youth PQA Plus Training. Kennewick, WA, February 4, 2013.

Llewellyn, D. A. 2013. Youth PQA Plus Training. Kennewick, WA, January 29, 2013.

Llewellyn, D. A. 2013. 4-H Club Beef Cattle Nutrition presentation. Mesa, WA, January 28, 2013.

Llewellyn, D. A. 2012. The WSU Beef Team BRD Project. Introduction to new Extension programming. Benton County Cattlemen's Association. Prosser, WA, November 13, 2012.

Llewellyn, D. A. 2012. Columbia Basin Junior Livestock Show Lamb of Merit Awards Program. Practical education for youth lamb exhibitors. Connell, WA, October 29, 2012.

Llewellyn, D. A. 2012. Benton Franklin Fair and Columbia Basin Junior Livestock Show Steer of Merit Awards Program. Beef and carcass education. Pasco, WA, October 22, 2012.

Llewellyn, D. A. 2012. Youth PQA Plus Training. Kennewick, WA, July 9, 2012.

Llewellyn, D. A. 2012. Youth PQA Plus Training. Kennewick, WA, June 5, 2012.

Llewellyn, D. A. 2012. Extension Programming and Research Update. Franklin County Commissioners Public Meeting. Pasco, WA, May 16, 2012.

Llewellyn, D. A. 2012. Extension Programming and Research Update. Benton County Commissioners Public Meeting. Prosser, WA, May 15, 2012.

Llewellyn, D. A. 2012. Youth PQA Plus Training. Kennewick, WA, April 23, 2012.

Llewellyn, D. A. 2012. Youth PQA Plus Training. Kennewick, WA, April 17, 2012.

Llewellyn, D. A. 2012. Youth PQA Plus Training. Kennewick, WA, April 12, 2012.

Llewellyn, D. A. 2012. Youth PQA Plus Training. Kennewick, WA, March 27, 2012.

Llewellyn, D. A. 2012. Youth PQA Plus Training. Kennewick, WA, March 26, 2012.

- Llewellyn, D. A. 2012. Cow nutrition and fetal programming. Benton County Cattlemen's Association. March 13, 2012.
- Llewellyn, D. A. 2011. Columbia Basin Junior Livestock Show Lamb of Merit Awards Program. Practical education for youth lamb exhibitors. Connell, WA, November 7, 2011.
- Llewellyn, D. A. 2011. Benton Franklin Fair and Columbia Basin Junior Livestock Show Steer of Merit Awards Program. Beef and carcass education. Pasco, WA. October 25, 2011.
- Llewellyn, D. A. 2009. Science activities for middle school students, Madison Middle School/Gifted Programs, Richmond, KY, December 8, 2009.
- Llewellyn, D. A. 2009. Sustainable and localized agriculture. Model Laboratory School, Richmond, KY, October 6, 2009.

UNIVERSITY INSTRUCTION

A. Credit Courses Taught

Washington State University

ANIM_SCI 474 Beef Cattle Production, spring 2016

Eastern Kentucky University

AGR 125: Principles of Animal Science, fall 2010

AGR 126: Animal Science Laboratory, fall 2010

AGR 130, Principles of Agronomy, fall 2006, 2007, 2008, 2009

AGR 131, Agronomy Laboratory, fall 2006, 2007, 2008, 2009

AGR 210, Agricultural Measurements, fall 2007, 2008, 2009

AGR 312, Forages, spring 2007, 2009, 2011

AGR 319, Renewable and Sustainable Energy, spring 2011

AGR 327, Beef Production, spring 2008, 2010

AGR 340, Conservation of Agricultural Resources, spring 2008, 2010

AGR 345, Sustainable Agroecosystems, spring 2009

AGR 372F, Forage Analysis Lab, spring 2007, 2009

AGR 411, Senior Seminar, fall 2010

B. Additional Teaching

C. Advising (Graduate Students and Student Interns)

- 2015 to present Ely Walker, graduate student, Co-Chair of committee, WSU Department of Animal Sciences
- 2015 to present Natalie Shaw, graduate student, committee member, WSU Department of Crop and Soil Sciences.
- 2013 Mentor for Senior Project, JD Rosman, applied ruminant nutrition research and Extension, Wilbur High School, Wilbur, WA.
- 2007-2011 Undergraduate students (approximately 45 per semester), Eastern Kentucky University, Richmond, KY.
- 2009-2010 Undergraduate research and directed student learning (10 students).
- April 28, 2009 Advisor for Capstone Presentations, Dept. of Agriculture; College of Business and Technology, Eastern Kentucky University, Richmond, KY. (3 students)

PROFESSIONAL SERVICE

A. University

- 2015-2016 Planning Committee, WSU/American Angus Association, "Cattlemen's Boot Camp", Pasco, WA, April 15-16, 2016.
- 2013-2014 Planning Committee, WSU Beef Production Conference: "Tools and Techniques for the Future", Yakima, WA, June 13-14, 2014.
- 2013-2014 Planning Committee, 2014 WSU Extension Joint Program Unit Meeting.
- 2013-2014 Benton County Noxious Weed Control Board, Ex-Officio Member.
- 2013 WSU Extension Committee to review *Professional Expectations Matrix for County Directors*.
- 2012 to present Benton County Cattlemen's Association representative to the Washington Cattlemen's Association Research and Beef Cattle Improvement Committee.
- 2011 Undergraduate Advising Committee. Eastern Kentucky University, Richmond, KY.
- 2006-2011 Institutional Animals Care and Use Committee (IACUC). Eastern Kentucky University, Richmond, KY.
- 2006- 2011 Student internship, scholarship, and job placement activities. (32)
- 2006-2011 Student recruitment activities. (10)
- 2006-2011 Coordinate activities with public schools, advisor to education. Eastern Kentucky University, Richmond, KY.

- 2006-2011 Department of Agriculture Liaison to ECU Libraries. Eastern Kentucky University, Richmond, KY.
- 2009-2011 Department of Agriculture Scholarship Committee. Eastern Kentucky University, Richmond, KY.
- 2009-2011 Department of Agriculture Academic Practices Committee. Eastern Kentucky University, Richmond, KY.
- 2007-2009 Member Professional Skills Conference committee. Eastern Kentucky University, Richmond, KY.
- December 20, 2008 Commencement Marshal, Eastern Kentucky University, Richmond, KY.

B. Professional Society

- 2014 to present, WSU representative to Multi/State Activity W-1012. Improving ruminant use of forages in sustainable production systems for the Western U.S.
- 2013 to present, Ruminant Nutrition Committee for the 2014 Joint Annual Meeting (JAM) of the American Dairy Science Association, American Society of Animal Science, and Canadian Society of Animal Science, July 20-24, 2014 in Kansas City, Missouri.

C. Community

- 2013 Judge, Extemporaneous Speaking, FFA Sub-District Contest, Kennewick, WA, March 4, 2013.
- 2013 Chaperone for Kamiakin FFA Chapter to the Washington State FFA Convention. Pullman, WA, May 10-12, 2013.
- 2012 to present Kennewick Agriculture Advisory Committee, Kennewick School District, Kennewick, WA.
- 2011 Volunteer. Krochet Kids, Costa Mesa, CA. December 4, 2011 to December 7, 2011.
- 2011 Agricultural consultant for historical biography. Author: Carol Edgemon Hipperson. Spokane, WA.
- 2009-2011 Board Secretary/Deacon, Community Christian Church. Richmond, KY.
- 2008-2010 Coach, Richmond Little League, Richmond, KY

D. Review Activities (journal article reviews and editorial service)

2015	WSU Extension FastTrack, 2 reviews.
2015	Review of manuscript, Oregon State University Cattle Producer's Handbook, completed July 31, 2015.
2015	Prior Learning Evaluator, Antioch University, Seattle, WA. Review of Animal Welfare Assessment by Wendy McCauley, completed June 15, 2015.
2015	International, abstract reviews, Joint Annual Meeting, American Society of Animal Science, American Dairy Science Association, 54 reviews.
2014	WSU Extension FastTrack, 4 reviews.
2014	College/University. Peer-review of Pacific Northwest Extension Publication. 1 review.
2014	International, abstract reviews, Joint Annual Meeting, American Society of Animal Science, American Dairy Science Association, Canadian Society of Animal Science, 108 reviews.
2013	WSU Extension FastTrack, 1 review.
2013	International journal, Animal Feed Science and Technology. 1 review.
2012	International journal, Animal Feed Science and Technology. 1 review.
2012	College/University. Peer-review of Pacific Northwest Extension Publication from University of Idaho. Cattlemen's Vaccine Handling and Management Guidelines.
2009-2011	Animal use protocols, ECU Institutional Animal Care and Use Committee (IACUC). Committee member and designated reviewer. Eastern Kentucky University, Richmond, KY.

ADMINISTRATIVE RESPONSIBILITY

(A brief listing of administrative duties and responsibilities)

PROFESSIONAL & SCHOLARLY ORGANIZATION AFFILIATIONS

2011 – present	Washington Extension Agents and Specialists Association
2011 – present	National Association of County Agricultural Agents
2011 – present	Washington Cattlemen's Association
2011 – present	Benton County Cattlemen's Association
2000 – present	American Society of Animal Science

PROFESSIONAL DEVELOPMENT

(This section includes additional courses for credit, in-service training, and other major professional development activities)

Western Extension Leadership Development (WELD) VIII Intern. Nominated by WSU Extension. Accepted into program 12/17/2014. (Term 2015-2016).

Nitrogen Management and Climate Change Mitigation in Pacific Northwest Cropping Systems. Webinar with Georgine Yorgey, Associate in Research at WSU's Center for Sustaining Agriculture and Natural Resources (CSANR). Webinars co-produced by the Regional Approaches to Climate Change for Pacific Northwest Agriculture Project (REACCH) and WSU's Center for Sustaining Agriculture and Natural Resources (CSANR), Pullman, WA. April 17, 2014.

Public Operator Pesticide License Recertification. Washington State Department of Agriculture, Kennewick, WA, January 21, 2014.

Developing measures to audit welfare of cattle and pigs. Webinar with Temple Grandin, Colorado State University. Food Seminars International. March 19, 2013.

Public Operator Pesticide License Recertification. Washington State Department of Agriculture, Pasco, WA, December 5, 2012.

Productive Proposal Writing Series, presented by the Washington State University Office of Grant and Research Development (OGRD). WSU Benton County Extension and WSU Tri-Cities. September 13, 2012 to November 15, 2012.

Planning for Meaningful Evaluation (PME) Course. Presented by Washington State University Extension and the National Oceanic and Atmospheric Administration (NOAA). WSU Spokane, WA. September 19 and 20, 2012.

Beef Cattle Economics, Quarterly Webinar Series, Presented by Dr. Glynn Tonsor, Kansas State University, May 1, 2012.

Youth PQA Plus Training and exam. National Pork Board. March 12-13, 2012.

Beef Cattle Economics, Quarterly Webinar Series, Presented by Dr. Glynn Tonsor, Kansas State University, February 7, 2012.

Write Winning Grants Seminar, Presented by Dr. Stephen Russell, sponsored by the WSU Office of Research, Pullman, WA, January 31, 2012.

Evaluation Based Program Development Workshop, Washington State University Extension, Professional Development, WSU Spokane Campus, Spokane, WA, November 30, 2011 to December 2, 2011.

Washington State University, CAHNRS and WSU Extension All Faculty Conference, Pullman, WA, October 4, 2011 to October 6, 2011.

Northwest Applied Reproductive Technologies Conference, Boise, ID, September 29, 2011 to October 1, 2011.

Public Operator Pesticide License Training. Washington State Department of Agriculture. July 2011.

Homeland Security Region 8 Foreign Animal Disease Tabletop Exercise. May 24, 2011.

Webinar, ASAS Western Section Symposium: Perinatal programming of offspring. American Society of Animal Science-Western Section., Denver, Colorado. (July 14, 2010).
International Biomass Conference and Expo, BBI International, Minneapolis, Minnesota. (May 4, 2010 - May 6, 2010).

Masters of Beef Advocacy Program (MBA), National Cattlemen's Beef Association, Centennial, Colorado. (March 9, 2010 - April 10, 2010).
Completed the Masters of Beef Advocacy Program.

EKU Grant Development Course, EKU Sponsored Programs, Eastern Kentucky University, Richmond, KY. (September 1, 2009 - December 1, 2009).

K-State Beef Conference, Kansas State University, Manhattan, Kansas. (August 7, 2008 - August 8, 2008). Focused on managing annual cow costs.

Graduate Education and Research Scholars' Community (GEAR), EKU, Richmond, KY. (August 15, 2006 - December 15, 2006). Competitive selection.