

Sally L. Noll

Professor

Poultry (Turkeys) Science

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Education

Ph.D., University of Minnesota, 1985

M.S., University of Minnesota, 1978

Research Interests

Nutrition and feeding of market turkeys; Management, health and stress interactions in market turkeys; Improving poultry waste utilization production.

Teaching Responsibilities

University of Minnesota

ANSC 1403: Companion Animal Nutrition (guest lecturer)
ANSC 4605: Poultry Production Systems Management (guest lecturer)
ANSC 4609: Animal Production Systems (guest lecturer)
ANSC 8320: Concepts in Nutritional Physiology (guest lecturer)
CVM 6820: Avian Core (lecturer)

University of Wisconsin (Undergraduate Poultry Science Center of Excellence)

Animal Sciences 511: Breeder and Hatchery Management (Two weeks, summer)

Extension and Outreach Programs

Minnesota Nutrition Conference - Poultry Section
Poultry Schools
Turkey Media Day

Affiliated Centers/Organizations/Appointments

Poultry Science Association (Associate Editor)
NE-1022 Regional Research Project - Poultry Production Systems

Publications (2001-2005)

Refereed Articles

Hester, P.Y., C.Z. Alvarado, S.F. Bilgili, J.H. Denton, A.M. Donoghue, A. Giesen, B.M. Hargis, J.W. Kessler, F.N. Madison, G.W. Malone, P. Mavrolas, S.L. Noll, A.J. Pescatore, C.A. Ricks, F.E. Robinson, R.B. Shirley, M. Sifri, M.O. Smith, R.H. Stonerock, J.L. Wilson, M.J. Wineland, M.M. Beck, and W.W. Saylor. 2005. Planning our future: The Poultry Science Association strategic plan. *Poultry Sci.* 84(12):1814-1815.

Grimes, J., S. Noll, J. Brannon, J.L. Goodwin, J.C. Smith, and R.D. Rowland. 2004. Effect of a chelated calcium proteinate dietary supplement on the reproductive performance of large white turkey breeder hens. *J. Applied Poultry Res.* 13:639-649.

Jirjis, F.F., S.L. Noll, D.A. Halvorson, K.V. Nagaraja, F. Martin, and D.P. Shaw. 2004. Effects of bacterial coinfection on the pathogenesis of avian pneumovirus infection in turkeys. *Avian Dis.* 48(1):34-49.

Martinez Amezcua, C., C.M. Parsons, and S.L. Noll. 2004. Content and relative bioavailability of phosphorus in distillers dried grains with solubles in chicks. *Poultry Sci.* 83:971-976.

Tucker, M.P., N.J. Nagle, E.W. Jennings, K.N. Ibsen, A. Aden, Q.A. Nguyen, K.H. Kim, and S.L. Noll. 2004. Conversion of distiller's grain into fuel alcohol and a higher-value animal feed by dilute-acid pretreatment. *Appl. Biochem. Biotechnol.* 113-116:1139-1159.

Velayudhan, B.T., V.C. Lopes, S.L. Noll, D.A. Halvorson, and K.V. Nagaraja. 2003. Avian pneumovirus and its survival in poultry litter. *Avian Dis.* 47(3):764-768.

Jirjis, F.F., S.L. Noll, D.A. Halvorson, K.V. Nagaraja, and D.P. Shaw. 2002. Pathogenesis of avian pneumovirus infection in turkeys. *Vet. Pathol.* 39(3):300-310.

Jirjis, F.F., S.L. Noll, D.A. Halvorson, K.V. Nagaraja, E.L. Townsend, S.M. Goyal, and D.P. Shaw. 2002. Rapid detection of avian pneumovirus in tissue culture by microindirect immunofluorescence test. *J. Vet. Diag. Invest.* 14(2):172-175.

Shin, H.J., F.F. Jirjis, M.C. Kumar, M.K. Njenga, D.P. Shaw, S.L. Noll, K.V. Nagaraja, and D.A. Halvorson. 2002. Neonatal avian pneumovirus infection in commercial turkeys. *Avian Dis.* 46(1):239-244.

Jirjis, F.F., S.L. Noll, D.A. Halvorson, K.V. Nagaraja, and D.P. Shaw. 2001. Immunohistochemical detection of avian pneumovirus in formalin-fixed tissues. *Vet. Diag. Invest.* 13(1): 13-16.

Jirjis, F.F., S.L. Noll, F. Martin, D.A. Halvorson, K.V. Nagaraja, and D.P. Shaw. 2001. Vaccination of turkeys with an Avian Pneumovirus Isolate from the United States. *Avian Dis.* 45:1006-1013.

Book Chapters

Consortium (2003). A Report for the Animal Agriculture Alliance (AAA): Criteria for the Evaluation of Animal Care Guidelines (Turkeys). 2003. (Contributor). Consortium, Federation of Animal Sciences Societies, Savoy, IL. (CD, committee publication, not for public distribution at this time.)

Invited Papers, Conference Proceedings, Research Reports

Shurson, J., S. Noll, and J. Goihl. 2005. Corn by-product diversity and feeding value to non-ruminants. Proc. 66th Minnesota Nutrition Conf. and Technical Symp.: Future of Corn in Animal Feed. University of Minnesota, St. Paul. pp. 50-68.

Noll, S.L. 2004. DDGs in poultry diets – Does it make sense? Proc. Midwest Poultry Federation Conv., St. Paul, MN. pp. 6-10.

Noll, S.L. 2004. DDGs – Nutritional value for poultry. Proc. California Animal Nutrition Conf., Fresno, CA. pp. 115-122.

Noll, S.L. 2004. Optimum amino acid ratios and alternative protein sources for growing turkeys. Proc. 25th Western Nutrition Conf., Saskatoon, Saskatchewan, Canada. pp.179-188.

Noll, S.L., C.M. Parsons, C.M. Amezcua, B. Walters, T. Ergul, and J. Brannon. 2004. DDGs quality – Still a concern? Proc. Multistate Poultry Feeding and Nutrition, and Health and Management Conf., Indianapolis, IN. Seven pages (CD format, no page numbers assigned).

Noll, S.L., V. Stangeland, G. Speers, C.M. Parsons, and J. Brannon. 2004. Feeding DDGS to market turkeys. Proc. Multistate Poultry Feeding and Nutrition, and Health and Management Conf., Indianapolis, IN. Six pages (CD format, no page numbers assigned).

Johnston, L.J., S. Noll, A. Renteria, and J. Shurson. 2003. Feeding by-products high in concentration of fiber to nonruminants. Proc. 3rd Natl. Alternative Feeds Symp., Kansas City, MO. Nov. 2003. pp. 169-186.

Noll, S.L. 2003. Alternative feed ingredients for poultry: Turkeys. Proc. 50th Maryland Nutrition Conf. for Feed Manufacturers, University of Maryland. pp. 71-79. March 2003.

Noll, S.L. 2002. Feeding for live performance and breast meat yield. Proc. Multistate Poultry Nutrition and Feeding Conf., Indianapolis, IN. Universities of Kentucky, Illinois, Michigan State, Purdue and Ohio State Cooperating.
(<http://ag.ansc.purdue.edu/poultry/multistate/publication.htm>)

Noll, S.L., V. Stangeland, G. Speers, J. Brannon, and J. Kalbfleisch. 2002. Betaine and breast meat yield in turkeys. Proc. Multistate Poultry Nutrition and Feeding Conf., Indianapolis, IN. Universities of Kentucky, Illinois, Michigan State, Purdue and Ohio State Cooperating.
(<http://ag.ansc.purdue.edu/poultry/multistate/publication.htm>)

Noll, S.L., V. Stangeland, G. Speers, J. Brannon, B. Walters, and J. Kalbfleisch. 2002. Improving breast meat yield in tom turkeys with betaine. Proc. Carolina Poultry Nutrition Conf., North Carolina State University, Raleigh. pp. 13-19.

Noll, S.L. 2001. Nutrition and management effects on growth and breast meat yield. Proc. 24th Technical Turkey Conf., Leyburn, England. pp. 47-51.

Noll, S.L. 2001. Turkey husbandry practices. Symp. Paper: The Science Behind Poultry Husbandry. Proc. 52nd North Central Avian Disease Conf. pp. 2-6.

Noll, S.L., V. Stangeland, G. Speers, and J. Brannon. 2001. Distillers grains in poultry diets. Proc. 62nd Minnesota Nutrition Conf., Bloomington, MN. pp. 53-61.

Presentations at Professional Meetings

- Noll, S.L. 2005. Corn DDGS as an ingredient in poultry ration. SD Poultry Industries Assn. Informational Producer Meeting. May 2005.
- Noll, S.L. 2005. USA Coban trials. Elanco Technical Turkey Conf. Minneapolis, MN. Aug. 2005.
- Noll, S.L. 2005. Improving the nutritional value of corn distillers dried grains with solubles. Vaccine Protocol Evaluation. MTGA Turkey Research Review Meeting/APV Symp., Willmar, MN. Oct. 2005.
- Noll, S. 2004. DDGs characteristics: Color and amino acid digestibility. 8th Annual Distillers Grains Technology Council Symp., Louisville, KY. May 2004.
- Noll, S. 2004. DDGS and poultry feeding considerations. National Corn to Ethanol Research Center, Southern Illinois University, Edwardsville, IL. Nov. 2004.
- Noll, S.L. 2003. Turkey performance – How to assess. Northwest Supply Company Producer Seminar, St. Cloud, MN. Feb. 2003.
- Noll, S.L. 2003. Turkey loadout and transport. Annual Animal Handling and Stunning Conf., AMI Foundation, Kansas City, MO. Feb. 2003.
- Noll, S.L. 2003. Alternative feed ingredients for poultry: Turkeys. 50th Maryland Nutrition Conf. for Feed Manufacturers, University of Maryland. March 2003.
- Noll, S.L. 2003. Feeding value of DDGs for poultry. U.S. Grains Council, Spain Trade Group, St. Paul, MN, Nov. 2003.
- Noll, S.L. 2003. DDGs in turkey diets. Iowa Turkey Day, Iowa Turkey Federation, Des Moines, IA. Dec. 2003.
- Noll, S.L. 2002. University of Minnesota turkey nutrition program – Research and value. Northwest Supply Company Producer Seminar, St. Cloud, MN. Feb. 2002.
- Noll, S.L. 2002. Nutrition and managements effects on growth and breast meat yield of toms. Midwest Poultry Federation Convention, St. Paul, MN. March 2002.
- Noll, S.L. 2002. Practicality of using distillers grains in poultry rations. 6th Distillers Grains Symp., Distillers Grains Technology Council, Inc., Louisville, KY. May 2002.
- Noll, S.L. 2002. Feeding for live performance and breast meat yield. Multistate Poultry Nutrition and Feeding Conf., Indianapolis, IN. Universities of Kentucky, Illinois, Michigan State, Purdue and Ohio State Cooperating. May 2002.
- Noll, S.L. 2002. Betaine and breast meat yield in turkeys. Multistate Poultry Nutrition and Feeding Conf., Indianapolis, IN. Universities of Kentucky, Illinois, Michigan State, Purdue and Ohio State Cooperating. May 2002.
- Noll, S.L. 2001. Turkey husbandry practices. Symp. Paper: The Science Behind Poultry Husbandry. 52nd North Central Avian Disease Conf., Grand Rapids, MI.

Noll, S.L. 2001. Nutrition and management effects on growth and breast meat yield. 24th Technical Turkey Conf., Leyburn, England.

Noll, S.L. 2001. Value of DDGS in poultry diets. 62nd Minnesota Nutrition Conf., Bloomington, MN. Sep. 2001.

Noll, S.L. 2001. Feeding DDGs to Poultry. Ethanol Co-Products Workshop, National Corn Growers Assn., Lincoln, NE.

Noll, S.L. 2001. Growing turkeys using dry mill co-products. Feeding Distillers Grains and Solubles – ICN Information and Training Session. Iowa Dept. of Agriculture and Land Stewardship, Ames, IA.

Abstracts

Noll S.L., J. Brannon, J.L. Kalbfleisch, and K.D. Roberson. 2005. Metabolizable energy value for corn distillers dried grains with solubles in turkey diets. *Poultry Sci.* 84 (Suppl. 1):12.

Abe, C., N.J. Nagle, C. Parsons, J. Brannon, and S.L. Noll. 2004. High protein corn distiller dried grains as a feed ingredient. *Poultry Sci.* 83(Suppl. 1): 264.

Noll, S.L., J. Brannon, and J.S. Sands. 2004. Market tom turkey performance and dietary phytase inclusion. *Poultry Sci.* 83(Suppl. 1): 320.

Noll, S.L., J. Brannon, and V. Stangeland. 2004. Market turkey performance and inclusion level of corn distillers dried grains with solubles. *Poultry Sci.* 83(Suppl. 1): 321.

Remus, J.C., S.L. Noll, E.E.M. Pierson, and M. Hruby. 2004. Does supplementation of betaine affect the plasma profile of transmethylation/transsulfuration-associated amino acids in turkeys? SPSS Meeting Abstracts. *Poultry Sci.* 83:1810.

Amezcus, C.M., C.M. Parsons, and S.L. Noll. 2003. Content and bioavailability in distillers dried grains with solubles. *Poultry Sci.* 82 (Suppl. 1): 36.

Ergul, T., C. Martinez Amezcus, C.M. Parsons, B. Walters, J. Brannon, and S.L. Noll. 2003. Amino acid digestibility in corn distillers dried grains with solubles. *Poultry Sci.* 82 (Suppl. 1):70.

Ergul, T., S.L. Noll, P.B. Addis, and G.A. Reineccius. 2003. High oleic acid corn in turkey diets: carcass fatty acid composition. *Poultry Sci.* 82 (Suppl. 1): 17.

Nagle, N.J., K. Ibsen, M.P. Tucker, B.S. Dien, V. Singh, R.A. Moreau, K.B. Hicks, N.N. Nichols, D.B. Johnson, M.A. Cotta, Q.A. Nguyen, S.L. Noll, and R.J. Bothast. 2003. More miles per bushel: Converting wet DG and corn fiber to ethanol and high protein animal feed. FEW.

Noll, S.L., C. Abe, and J. Brannon. 2003. Nutrient composition of corn distiller dried grains with solubles. *Poultry Sci.* 82 (Suppl. 1): 71.

Noll, S.L., V. Stangeland, G. Speers, C.M. Parsons, and J. Brannon. 2003. Market tom turkey response to protein and threonine. *Poultry Sci.* 82 (Suppl. 1): 73.

Tucker, M.P., N.J. Nagle, E. Jennings, A. Quang, K. Nguyen, H. Kim, K. Ibsen, and S. Noll. 2003. Hydrolyzed distiller's grain production, fermentation and animal feeding trials. 25th Symposium for Fuels and Chemicals, DOE, Breckenridge, CO.

Noll, S.L., V. Stangeland, and J. Brannon. 2002. Performance response of market turkeys to methionine and betaine. *Poultry Sci.* 81(Suppl. 1): 56.

Noll, S.L., V. Stangeland, G. Speers, C. Parsons, and J. Brannon. 2002. Utilization of canola meal and distiller grains with solubles in market turkey diets. *Poultry Sci.* 81(Suppl. 1): 92.

Buttles, T.J., J. Kalbfleisch, S.L. Noll, and B.S. Walters. 2001. Influence of measurement position on the color values of turkey breast meat. *Poultry Sci.* 80 (Suppl. 1):299.

Ergul, T., P.B. Addis, J. Brannon, M.L. Endres, and S.L. Noll. 2001. High oleic acid corn in turkey diets: carcass composition and parts yield of market tom turkeys. *Poultry Sci.* 80 (Suppl. 1):327.

Halvorson, D.A., H.J. Shin, F.F. Jirjis, M.C. Kumar, M.K. Njenga, D.P. Shaw, S.L. Noll, E.L. Townsend, and K.V. Nagaraja. 2001. Is avian pneumovirus egg transmitted? Proc. 52nd North Central Avian Disease Conf. p. 40 (Abstract).

Jirjis, F.F., S.L. Noll, D.A. Halvorson, K.V. Nagaraja, and D.P. Shaw. 2001. Avian pneumovirus immunoprophylaxis: Preliminary studies using the U.S. isolate. Proc. 52nd North Central Avian Disease Conf. p. 41 (Abstract).

Jirjis, F.F., S.L. Noll, D.A. Halvorson, A. Back, K.V. Nagaraja, and D.P. Shaw. 2001. Factors affecting pathogenesis of avian pneumovirus in turkeys. AVMA Annual Mtg. p. 36.

Kalbfleisch, J., V. Stangeland, J. Brannon, and S. Noll. 2001. Lysine, threonine, and arginine supplementation and effects on performance of young tom turkeys raised in a summer environment. *Poultry Sci.* 80 (Suppl. 1):47.

Producer Oriented Publications, Factsheets, Newsletters

Noll, S.L. and J. Brannon. 2005. Influence of dietary protein level and inclusion level of DDGs on performance of market tom turkeys. *Gobbles* (June Issue).

Bennett, R.S., F. Jirjis, H. Lwamba, B. Velayudhan, K.V. Nagaraja, S. Noll, M.K. Njenga, and D.A. Halvorson. 2003. APV infection model. *Gobbles* 60 (8): 10, 12.

Noll, S.L. 2003. [Corn distillers dried grains for poultry](#). University of Minnesota, Department of Animal Science, DDGS Website.

Noll, S.L. and J. Brannon. 2003. Strategies for maximizing breast meat yield of turkeys – DDGs and limiting amino acids. *Gobbles* 60 (8): 18-19.

Bennett, R.S., H. Lwamba, B. Velayudhan, K.V. Nagaraja, S. Noll, M.K. Njenga, and D.A. Halvorson. 2002. Establishment of an APV infection model. *Gobbles* 59 (8): 4-5.

Noll, S.L., V. Stangeland, G. Speers, J. Brannon, and C. Parsons. 2002. Utilization of corn dried distiller grains and threonine in market tom turkey diets – Impact on performance and carcass yield. *Gobbles* 59 (8): 20-21.

Halvorson, D.A., K.V. Nagaraja, D.P. Shaw, M.K. Njenga, S.L. Noll, and R. Bennett. 2001. Control of viral respiratory diseases of turkeys. *Gobbles* 58 (8): 9-10.

Noll, S.L. 2001. Handling of turkeys. *Turkey Health School Workbook*.

Noll, S.L. 2001. Preventing losses due to heat stress. *Poultry Newsletter*, Northwestern Supply Co., Vol. 6, Issue 2, p. 3.

Noll, S.L. 2001. Winter tom airsacculitis. *Turkey Health School Workbook*.

Noll, S.L., V. Stangeland, G. Speers, and J. Brannon. 2001. Strategies to maximize breast meat yield in heavy toms- feeding distillers' grains with solubles. *Gobbles* 58 (8): 20-21.