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EDUCATIONAL BACKGROUND

Ph.D., Agricultural and Applied Economics and Financial Economics minor (Mays Business School, Dept. of Finance), Texas A&M University, College Station, Texas 1994
M.S., Agricultural Economics, University of Missouri, Columbia, Missouri 1990
B.S., Agricultural Economics, Purdue University, West Lafayette, Indiana 1988

ACADEMIC APPOINTMENTS HELD

Associate Professor (with tenure), Pennsylvania State University, 2004 – present
Assistant Professor, Pennsylvania State University, 1998 – 2004
Assistant Professor, University of Tennessee, 1995 – 1998

ARTICLES PUBLISHED IN REFEREED JOURNALS

33. Stokes, J., 2009. "The Value of the Option to Preserve Farm Real Estate," forthcoming in *Journal of Real Estate Research*.
32. Tozer, P., and J. Stokes, 2009. "Investing in Perennial Pasture Improvement – a Real Options Analysis," *Review of Agricultural Economics*, 31: 88-102.
31. Stokes, J., R. Rajagopalan, and S. Stefanou, 2008. "Investment in a Methane Digester: An Application of Capital Budgeting and Real Options," *Review of Agricultural Economics*, 30: 664-676
30. Stokes, J., J. Dressler, and L. Balasubramanyan, 2008. "Credit Risk Rating Migration and Unobserved Borrower Heterogeneity," *Agricultural Finance Review*, 68: 237-253.
29. Stokes, J., and J. Harper, 2008. "An Excel-based Decision Aid for Evaluating Financing Alternatives and Calculating the Marginal Cost of Capital," *Agricultural Finance Review*, 68: 339-348.
28. Turvey, C. and J. Stokes, 2008. "Risk, Elasticities, and the Value of Contingent Claims on Agricultural Production," *Canadian Journal of Agricultural Economics*, 56: 79-84.
27. Stokes, J., and B. Gloy, 2007. "Mortgage Delinquency Migration: An Application of Maximum Entropy Econometrics," *Journal of Real Estate Portfolio Management*, 13:153-160.
26. Choi, O., S. Stefanou, and J. Stokes, 2007. "Explaining Efficiency Differences: The Case of Agricultural Banks," *Agricultural Finance Review*, 67: 55-73.
25. Stokes, J., and B. Gloy, 2007. "Delinquency Migration and the Probability of Default", *Agricultural Finance Review*, 67: 75-85.
24. Stokes, J., P. Tozer, and J. Hyde, 2007. "Production and Economic Efficiency on Pennsylvania Dairy Farms," *Journal of Dairy Science*, 90:2555-2562.
23. Stokes, J., and P. Tozer, 2006. "Optimal Feed Mill Blending," *Review of Agricultural Economics*, 28:543-552.
22. Stokes, J., 2006. "Entry, Exit, and Structural Change in Pennsylvania's Dairy Sector," *Agricultural and Resource Economics Review* 35:357-353.
21. Stokes, J. and D. Frechette, 2006. "Food Consumption Dynamics: A Markov Chain Approach," *Agricultural Economics* 34:281-291.

20. Choi, O., S. Stefanou, and J. Stokes, 2006. "The Dynamics of Efficiency Improving Input Allocations," *Journal of Productivity Analysis* 25: 169-181.
 19. Stokes, J., 2005. "Dynamic Cash Discounts when Sales Volume is Stochastic," *The Quarterly Review of Economics and Finance* 45:144-160.
 18. Winsten, J. and J. Stokes, 2004. "Optimal Stocking Rates and Phosphorus Loading for Dairies Using Management Intensive Grazing," *Agricultural Systems* 79: 283-303.
 17. Stokes, J. and W. Nayda, 2003. "The Pricing of Revenue Assurance: Reply," *American Journal of Agricultural Economics* 85:1066-1069.
 16. Hyde, J., J. Stokes, and P. Engel, 2003. "Optimal Investment in an Automatic Milking System: An Application of Real Options," *Agricultural Finance Review* 63:75-92.
 15. Scaletta, T. and J. Stokes, 2003. "Optimal Agricultural Credit Association Branch Office Locations," *Journal of Agricultural and Applied Economics* 35: 127-141.
 14. Stokes, J. and P. Tozer, 2002. "Cost Minimization and Nutrient Management: Conflict or Compromise?" *Canadian Journal of Agricultural Economics* 50:151-169.
 13. Tozer, P. and J. Stokes, 2002. "Producer Breeding Objectives and Individual Sire Selection," *Journal of Dairy Science* 85:3518-3525.
 12. Stokes, J. and P. Tozer, 2002. "Sire Selection with Multiple Objectives," *Agricultural Systems* 73:147-164.
 11. Stokes, J. and B. Brinch, 2001. "Valuing Agricultural Mortgage-Backed Securities," *Journal of Agricultural and Applied Economics* 33:493-511.
 10. Tozer, P. and J. Stokes, 2001. "Multiple Objective Breeding Programs: Reducing Inbreeding and Maximizing Economic Returns in a Jersey Cow Breeding Program Using Multiple Objective Programming," *Journal of Dairy Science* 84: 2782-2788.
 9. Brinch, B. and J. Stokes, 2001. "Quantifying the Impact of Farmer Mac Prepayment Penalties," *Agricultural Finance Review* 61:141-166.
 8. Tozer, P. and J. Stokes, 2001. "A Multi-objective Programming Approach to Feed Ration Balancing and Nutrient Management," *Agricultural Systems* 67:201-215.
 7. Stokes, J., K. Coble, and R. Dismukes, 2000. "Producer Behavior in the Presence of an Income Stabilization Program," *Agricultural Finance Review* 60:33-59.
 6. Stokes, J., 2000. "A Derivative Security Approach to Setting Crop Revenue Coverage Insurance Premiums," *Journal of Agricultural and Resource Economics* 25:159-176.
 5. Stokes, J., 1998. "Annual Effective Interest Rates When the Term Structure is Stochastic," *Agricultural Finance Review* 58:17-31.
 4. Stokes, J., H. Ziari, M. Rister, and B. McCarl, 1998. "Meat Packing Plant Product Planning: Application of Mixed Integer Goal Programming," *Agribusiness: An International Journal* 14:171-181.
 3. Stokes, J., W. Nayda, and B. English, 1997. "The Pricing of Revenue Assurance," *American Journal of Agricultural Economics* 79:439-451.
 2. Stokes, J., J. Mjelde, and C. Hall, 1997. "Optimal Production and Marketing of Ornamental Nursery Crops From Container-Based Production Systems," *American Journal of Agricultural Economics* 79:235-245.
 1. McCarl, B., M. Rister, J. Stokes, and H. Ziari, 1996. "Improving Shadow Price Information: Obtaining Relevant Shadow Price Information From Multiple Objective Programming Problems," *American Journal of Agricultural Economics* 78:699-705.
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CURRENT WORKING PAPERS

6. Stokes, J., 2008 "The Derivative Security Value of Conservation Easement and Development Options," under review at *The Review of Derivatives Research*.
 5. Stokes, J., 2008 "The Value of the Option to Preserve Farm Real Estate," under review at *The Journal of Real Estate Finance and Economics*.
 4. Stokes, J., 2008. "Information Theoretic Generator Estimation with an Application to Ratings Process Migration," under review at the *Journal of Empirical Finance*.
 3. Balasubramanyan, L., S. Stefanou, and J. Stokes, 2008. "Declining Cost Efficiency as a Signal of Increasing Bank Vulnerability: An Information Theoretic Approach," under review at *The Quarterly Review of Economics and Finance*.
 2. Dressler, J., and J. Stokes, 2008. "Mortgage Termination at AgChoice, ACA: An Application of Survival Analysis, *Working Paper*, Penn St. University, University Park, PA.
 1. Stokes, J., and J. Dressler, 2007. "The Valuation of Price-linked Mortgages," *Working Paper*, Penn State University, University Park, PA.
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SELECTED PRESENTATIONS, FUNDING, AND OTHER CREATIVE ACCOMPLISHMENTS

Associate Editor, *Agricultural Finance Review*, 2008 to present.

- Stokes, J., and H. Moore, 2007. "Rural Credit Conditions in Pennsylvania," *American Bankers Association* commissioned study available at <http://www.aba.com>.
- Dressler, J., and J. Stokes, 2006. "Mortgage Termination: A Survival Analysis Approach with Competing Risks," in *Proceedings of Regional Committee NC-1014 Annual Meeting*, Washington, D.C., A. L. Katchova, Ed., 161-173.
- Shields, M., J. Stokes, and J. Bae, 2004. "An Analysis of Bank Consolidation Trends in Rural Pennsylvania, Selected Paper, *AAEA Annual Meeting*, Denver, CO.
- Stokes, J., 2003. "Farmer Mac's Mission in 2003," *Journal of Agricultural Lending*, 16: 23-33.
- Stokes, J., 2002. "Using Simulation to Determine Bank Capital Adequacy," *Financial Engineering News* (Nov/Dec):4-5.
- Ellinger, P., E. LaDue, D. Leatham, and J. Stokes, 2000. "Information Technology and Credit Scoring Use," in *Proceedings of Regional Committee NC-221 Annual Meeting*, Minneapolis, Minnesota, J. R. Stokes, Ed., 1-18.
- Brinch, B. and J. Stokes, 2000. "An Analysis of Farmer Mac Prepayment Penalty Designs," in *Proceedings of Regional Committee NC-221 Annual Meeting*, Minneapolis, Minnesota, J. R. Stokes, Ed., 93-131.
- Stokes, J., "Bank Capital Adequacy Simulation I," Excel-based simulation model contributed to Decisioneering, Inc.'s example model library and available at: <http://www.crystalball.com>, Banking and Credit section.
- Stokes, J., "Bank Capital Adequacy Simulation II," Excel-based simulation model contributed to Decisioneering, Inc.'s example model library and available at: <http://www.crystalball.com>, Banking and Credit section.
- Stokes, J., "Granting Credit," Excel-based simulation model contributed to Decisioneering, Inc.'s example model library and available at: <http://www.crystalball.com>, Banking and Credit section.
- Approximately **\$1 million** in grant funds since 1998 through National Research Initiative (NRI), Higher Education Challenge Grant (HECG), and other Federal and State sources.
- Approximately **30** additional publications in popular press.
- Approximately **30** presentations at national and international professional meetings.
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CONSULTING ACTIVITIES

American Bankers Association, Washington, DC, 2007-08, conducted a study of the supply of and demand for credit in Pennsylvania.

PennField Feed, Inc., Lancaster, PA 2003, developed a nonlinear optimization model for feed ration balancing resulting in significant cost savings for the client.

Federal Agricultural Mortgage Corporation (Farmer Mac), Washington DC, 2002-03, capital modeling and Basel II oversight

Capital One Financial, Inc., McLean, VA 2001-03, capital and term structure modeling and Basel II oversight.

Texas Department of Criminal Justice, Huntsville, TX, 1995, developed a multi-objective programming model to improve operational efficiency.

TEACHING RELATED ACTIVITIES (since 1998)

Member of the Penn State Graduate Faculty

Member of the Penn State Operations Research Faculty

Academic Advisor for over **200** undergraduate students

Committee Member or Committee Chair for **9** M.S., **10** Ph.D., and **3** Schreyer Honors students

COURSE DESCRIPTIONS

AGBM 407 – *Farm Planning and Financial Management*. Financial management, financial statement analysis, applications of time value of money, capital budgeting, acquisition and use of debt capital, portfolio theory, risk management techniques for small businesses, and farm real estate finance.

AGBM 408 – *Financial Decision Making for Agribusiness*. Working capital management, inventory policy, credit policy, the firm's credit granting decision and accounts receivable management, applications requiring Monte Carlo simulation.

AGEC 527 – *Quantitative Methods I*. Applications of mathematical programming, stochastic dynamic programming, and Markov chains, introduction to numerical methods for solving ordinary and partial differential equations with applications to derivative security pricing.

AEREC 590 – *Colloquium*. Continuing seminars consisting of a series of individual lectures by faculty, students, and outside speakers.

AEREC 597 – *Maximum Entropy Econometrics*. Information theoretic econometric estimation and inference with applications.

SUMMARY OF TEACHING AND SRTE¹ SCORES (1996 to present)

Course No.	Course Title	Semester/Year	Enrollment	Overall Quality of Course	Overall Quality of Instruction
<i>University of Tennessee</i>					
AGEC 412	Agricultural Finance	Spring/1996	27	3.58/5.00	3.81/5.00
AGEC 412	Agricultural Finance	Spring/1997	10	4.20/5.00	4.20/5.00
<i>Pennsylvania State University</i>					
AGEC 306	Agricultural Finance	Fall/1998	25	6.20/7.00	6.45/7.00
AGEC 306	Agricultural Finance	Fall/1999	23	6.10/7.00	6.24/7.00
AGEC 527	Quantitative Methods I	Fall/1999	5	6.75/7.00	6.75/7.00
AGEC 306	Agricultural Finance	Fall/2000	19	5.63/7.00	6.19/7.00
AGEC 527	Quantitative Methods I	Fall/2000	10	6.20/7.00	6.30/7.00
AGEC 407	Farm Plan. Fin. Man.	Fall/2001	23	5.95/7.00	6.40/7.00
AGEC 407	Farm Plan. Fin. Man.	Fall/2002	25	6.00/7.00	6.27/7.00
AGBM 408	Fin. Dec. Agri. Bus.	Spring/2003	9	6.25/7.00	6.88/7.00
AGBM 407	Farm Plan. Fin. Man.	Spring/2004	28	6.08/7.00	6.71/7.00
AGBM 408	Fin. Dec. Agri. Bus.	Spring/2004	28	6.18/7.00	6.50/7.00
AGBM 495	Internship	Summer/2004	1	-	-
AGBM 407	Farm Plan. Fin. Man.	Spring/2005	24	5.79/7.00	6.50/7.00
AGBM 408	Fin. Dec. Agri. Bus.	Spring/2005	38	5.97/7.00	6.39/7.00
AGBM 407	Farm Plan. Fin. Man.	Spring/2006	32	6.19/7.00	6.45/7.00
AGBM 408	Fin. Dec. Agri. Bus.	Spring/2006	29	5.83/7.00	6.38/7.00
AGBM 497E	Computer Lab	Spring/2006	12	-	-
AGBM 495	Internship	Summer/2004	2	-	-
AGBM 496	Honors Thesis	Fall/2006	1	-	-
AEREC 597	ME Econometrics	Fall/2006	2	-	-
AGBM 407	Farm Plan. Fin. Man.	Spring/2007	42	6.02/7.00	6.25/7.00
AGBM 408	Fin. Dec. Agri. Bus.	Spring/2007	45	6.12/7.00	6.45/7.00
AGBM 497E	Computer Lab	Spring/2007	10	-	-
AEREC 590	Colloquium	Fall/2007	18	6.20/7.00	6.30/7.00
AGBM 407	Farm Plan. Fin. Man.	Spring/2008	48	5.76/7.00	6.19/7.00
AGBM 408	Fin. Dec. Agri. Bus.	Spring/2008	43	5.67/7.00	6.15/7.00
AGBM 496	Honors Thesis	Spring/2008	2	-	-
AGBM 497E	Computer Lab	Spring/2008	8	-	-
AGBM 495	Internship	Summer/2008	1	-	-
AEREC 590	Colloquium	Fall/2008	11	6.20/7.00	6.30/7.00
AGBM 407	Farm Plan. Fin. Man.	Spring/2009	53	6.32/7.00	6.61/7.00
AGBM 408	Fin. Dec. Agri. Bus.	Spring/2009	49	6.31/7.00	6.83/7.00

¹ Student Rating of Teaching Effectiveness

STATEMENT OF TEACHING PHILOSOPHY

My overall teaching goals are to assist in the development of student's critical thinking skills and technical finance skills. Therefore, I believe it is important for student learning to create an environment where students are at ease and comfortable asking questions and seeking help with course material. To facilitate this, I have students complete an information sheet at the beginning of the semester which gives me a sense of who they are, where they are from, and the nature and extent of their academic and personal background as it pertains to finance. Students' first assignment is to complete this information sheet and they are required to turn it in to my office. That way, they know where my office is in anticipation of those times when they will require assistance. I also take pictures of students on the first day of class and will know each student by name within the first week of classes. I maintain office hours where I guarantee I will be available to students outside of class. However, students are encouraged to drop by my office anytime if they have questions about assigned material knowing that in all likelihood I will stop whatever else I am doing to help them out. Since difficult course material can foster a sense of helplessness that can sour a student on a course, I also encourage students to contact me at my home if necessary. I would rather that a student interrupts my evening than becomes so frustrated with a homework assignment that they disengage from the course.

My second goal is to immerse students in course material at a level that pushes the better students in the class. The typical course that I teach has standard lectures in an environment where comments and questions from students are encouraged. Typically, anywhere from 8-10 homework assignments and three examinations per semester can be expected. Homework assignments are rigorous, problem oriented and quantitative with a significant portion of the assignment requiring the use of Microsoft Excel to complete. For one of my undergraduate courses, I also offer an optional computer lab to assist students in mastering course content. Examinations, while an assessment mechanism to monitor student progress and performance, are also designed to further develop student knowledge about subject areas covered in class. My goal is to have students know more about the subject matter after having taken an exam than they did before taking an exam. Students are also required to take unannounced quizzes which, in addition to encouraging attendance, help keep students focused on course material thereby adding to their daily classroom experience. Class participation is also an important component of the courses that I teach. While there are many ways to be participatory, what I am really after is for students to demonstrate that they are engaged in learning course content. Regular attendance, thoughtful questions, a willingness to provide answers to my in class questions, turning complete homework assignments in on time, and demonstrating a positive attitude when faced with difficult course material are all ways to demonstrate that a student is engaged.

While students work hard in courses that I teach, they learn a lot and upon completion, my feeling is that they possess a sense of accomplishment often lacking in some of the other courses that they take. They learn the technical finance skills that can make them more competitive for or during employment, and they are also better prepared for graduate school if that is their goal. Even those students who do not choose a career in finance, in my opinion, are better able to manage their personal financial situation as a result.
