

## **Bruce Babcock, Iowa State University**

Bruce Babcock is a professor of economics and the director of the Center for Agricultural and Rural Development at Iowa State University. Professor Babcock is originally from Southern California. He received his B.S. in economics of resource use and his M.S. in agricultural economics from the University of California at Davis, and his Ph.D. in agricultural and resource economics from the University of California at Berkeley.

His current research projects include estimating land use changes caused by biofuels expansion, analysis of the agricultural impacts from climate change legislation, the impact of state and Federal biofuels policy on investment and production of biofuels, and the modeling of agricultural price and yield risk. Funding for these and other projects is provided by the Environmental Protection Agency, the U.S. Department of Agriculture, the National Corn Growers Association, the National Biodiesel Board, the National Milk Producers Federation, the Biobased Industry Center at Iowa State University, and the Great Lakes Bioenergy Research.

## **Curriculum Vita for Bruce A. Babcock**

568D Heady Hall  
Iowa State University  
Ames, IA 50011  
Email: babcock@iastate.edu  
FAX: (515) 294-6336

50181 Goldleaf Dr.  
Ames, IA 50014  
Home: (515) 292-3285  
Work: (515) 294-5764

### **Present position:**

Director, Center for Agricultural and Rural Development, and  
Professor, Department of Economics, Iowa State University.

### **Past Positions:**

1993-1998: Associate Professor, Department of Economics, Iowa State University.  
1990-1993: Assistant Professor, Department of Economics, Iowa State University.  
1987-1990: Assistant Professor and Extension Specialist, North Carolina State University.  
1982-1983: Research Associate, Department of Agricultural Economics, Texas A&M University.

### **Education:**

Ph.D. Agricultural and Resource Economics, University of California at Berkeley, 1987.  
M.S. Agricultural Economics, University of California at Davis, 1981.  
B.S. Economics of Resource Use, University of California at Davis, 1980

### **Major Fields of Interest:**

Agricultural markets, economics of biofuels, agricultural policy and insurance, marketing and production decisions under risk.

### **Teaching Experience:**

Graduate courses in production economics and agricultural policy, undergraduate courses in principles of economics, agribusiness management, and agricultural policy.

### **Memberships:**

American Agricultural Economics Association, Western Agricultural Economics Association  
International Agribusiness Management Association

### **Honors and Awards:**

AAEA Quality of Research Discovery for "Environmental and Distributional Impacts of Conservation Targeting Strategies," 2002.  
WAEA Outstanding JARE Article for "Bt Corn and Insect Resistance: An Economic Assessment of Refuges," 2002.  
USDA Secretary of Agriculture Award for outstanding accomplishments in the areas of agricultural public policy research and formulation, 2002.  
AAEA Distinguished Extension Program – Group for "Managing Risk and Profits," 2000.

Farm Foundation's Outstanding Public Issues Education Program Award for Iowa's Pork Industry – Dollars and Scents, 1998.

AAEA Outstanding Dissertation (honorable mention) for The Value of Weather Information in Agriculture, 1987.

Listed in the 4<sup>th</sup> Edition of Who's Who in Economics as one of the most cited economists for work published from 1990 to 2000.

#### **National Panels:**

FIFRA Scientific Advisory Panel, Environmental Protection Agency. "Projecting Domestic per-Crop-Treated with Pesticides for Dietary Assessment." 2002.

#### **Graduate Students Supervised:**

Li Zhang Ph.D. 2008

Nick Paulson Ph.D. 2007

Wen Shi, M.S. 2007

Miguel Carriquiry Ph.D ISU 2004

Silvia Secchi Ph.D. ISU 2002

Paul Mitchell, Ph.D ISU 1999

Charles Nicholson Ph.D ISU 1996

Marko Svetina M.S. ISU 2003

Andrea Stoppa M.S. ISU 1997

#### **Refereed Publications**

Hennessy, H., and B.A. Babcock. "Impacts of Ethanol on Planted Acreage in Market Equilibrium." *American Journal of Agricultural Economics*

Hayes, D., B. Babcock, J. Fabiosa, S. Tokgoz, A. Elobeid, T-H Yu, F. Dong, C. Hart, E. Chavez, S. Pan, M. Carriquiry, and J. Dumortier. "Biofuels: Potential Production Capacity, Effects on Grain and Livestock Sectors, and Implications for Food Prices and Consumers." *Journal of Agricultural and Applied Economics*, vol 41 (2009): 465-491.

Langinier, Corinne and B.A. Babcock. "Agricultural Production Clubs: Viability and Welfare Implications," *Journal of Agricultural & Food Industrial Organization: Vol. 6 (2008): Issue. 1, Article 10.*

Paulson, N.D, and B.A. Babcock. "Get a GRIP: Should Area Revenue Coverage Be Offered Through the Farm Bill or as a Crop Insurance Program?" *Journal of Agricultural and Resource Economics*, 33(2008):137-153.

Tokgoz, Hayes, A. Elobeid, J. Fabiosa, D. J. Hayes, B.A. Babcock, T. Yu, F. Dong, and C.E. Hart. "Bottlenecks, Drought, and Oil Price Spikes: Impact on U.S. Ethanol and Agricultural Sectors." *Review of Agricultural Economics*, 30(2008):604-622.

Babcock, B.A. "Distributional Implications of U.S. Ethanol Policy." *Review of Agricultural Economics*, 30(2008):533-542.

- Carriquiry, M. A., B.A. Babcock, and C. E. Hart. "Using a Farmer's Beta for Improved Estimation of Expected Yields." *Journal of Agricultural and Resource Economics*, 33(2008):62-68.
- Paulson, N. Babcock, B.A., C.E. Hart, and D.J. Hayes. "An Insurance Approach to Risk Management in the Ethanol Industry." *Agricultural and Resource Economics Review*, 37/1(April 2008):51-62.
- Marette, S., R. Clemens, and B.A. Babcock. "Recent International and Regulatory Decisions about Geographical Indications." *Agribusiness: An International Journal*, vol 24 (4) 453-472, (2008).
- Elobeid, A., S. Tokgoz, D.J. Hayes, B. A. Babcock, C. E. Hart. "Long-Run Impact of Corn-Based Ethanol on the Grain, Oilseed, and Livestock Sectors: A Preliminary Assessment, *AgBioForum*, 10(2007)11-18.
- Monchuk, D.C, J. Miranoski, D.J. Hayes, and B. A. Babcock. "An Analysis of Regional Economic Growth in The U.S. Midwest." *Review of Agricultural Economics*, 29(Spring 2007) 17-39.
- Carriquiry, M. A., and B. A. Babcock. "Reputations, Market Structure, and the Choice of Quality Assurance Systems in the Food Industry." *American Journal of Agricultural Economics*, 89(2007) 12-23.
- Hart, C.E., D. J. Hayes, and B. A. Babcock. "Insuring Eggs in Baskets: Should the Government Insure Individual Risks?" *Canadian Journal of Agricultural Economics*, 54(2006) 121-137.
- Hayes, D. J., S. Lence, and B.A. Babcock. "Geographic Indications and Farmer-Owned Brands.: Why do the U.S. and the E.U. Diasagree?" *EuroChoices*, Vol. 4 (2), August 2005, pp. 28-35.
- Carriquiry, M. A., and B. A. Babcock. "The Impact of Transportation Costs on Spatial Competition of Grain Buyers: An Iowa Case Study" *Journal of Transportation Research Forum*, 44(Summer 2005):61-76.
- Herriges, J., S. Secchi, and B.A. Babcock. "Living with Hogs in Iowa: The Impact of Livestock Facilities on Rural Residential Property Values." *Land Economics*, 81(November 2005):530-545.
- Babcock, B.A., C. E. Hart, and D. J. Hayes. "Actuarial Fairness of Crop Insurance Rates with Constant Rate Relativities." *American Journal of Agricultural Economics*, 86(2004):563-575.

- Hennessy, D., J.A. Miranowski, and B. A. Babcock. "Genetic Information in Agricultural Productivity and Product Development." *American Journal of Agricultural Economics*, 86(2004):73-87.
- Krell, R.K., L. Pedigo, and B.A. Babcock. "Comparison of Estimated Costs and Benefits of Site-Specific Versus Uniform Management for the Bean Leaf Beetle in Soybean." *Precision Agriculture*, 4(2003):401-411.
- Mitchell, P. D., T. M. Hurley, B. A. Babcock, and R. L. Hellmich. "Insuring the Stewardship of Bt Corn: A Carrot versus a Stick." *Journal of Agricultural and Resource Economics*, 27(2002):390-405.
- Hart, C. E., and B.A. Babcock. "U.S. Farm Policy and the WTO: How Do They Match Up?" *The Estey Centre Journal of International Law and Trade Policy*, 3(2002):119-139.
- Hurley, T. M., S. Secchi, B. A. Babcock, and R. Hellmich. "Managing the Risk of European Corn Borer Resistance to Bt Corn." *Environmental and Resource Economics*, 22(2002):537-558.
- Hurley, T. M., B. A. Babcock, and R. Hellmich. "Bt Corn and Insect Resistance: An Economic Assessment of Refuges." *Journal of Agricultural and Resource Economics*, 26(2001):176-194.
- Hart, C. E., B. A. Babcock, and D. J. Hayes. "Livestock Revenue Insurance." *Journal of Futures Markets*, 21(2001):553-580.
- Wu, J., D. Zilberman, and B.A. Babcock, "Environmental and Distributional Impacts of Conservation Targeting Strategies." *Journal of Environmental Economics and Management*, 41(2001):333-350.
- Wu, J. and B. A. Babcock. "Spatial Heterogeneity and the Choice of Instruments to Control Nonpoint Pollution, *Environmental and Resource Economics*, 18(2001):173-192.
- Pautsch, G. R., L. Kurkalova, Babcock, B. A., and C. L. Kling. "The Efficiency of Sequestering Carbon in Agricultural Soils." *Contemporary Economic Policy*, 19(2001):123-134.
- Wu, J., and B. A. Babcock. "Metamodeling Potential Nitrate Water Pollution in the Central United States." *Journal of Environmental Quality*, 28(1999):1916-1928.
- Wu, J., R. D. Adams, D. Zilberman, and B. A. Babcock. "Targeting Resource Conservation Expenditures." *Choices*, 2nd Quarter, 2000, 33-38.
- Paz, J.O., W.D. Batchelor, B. A. Babcock, T.S. Colvin, S.D. Logsdon, T.C. Kaspar, and D.L. Karlen. "Model-Based Technique to Determine Variable-Rate Nitrogen for Corn." *Agricultural Systems*, 61(1999) 69-75.

- Pautsch, G. R., B. A. Babcock and F. Jay Breidt. "Optimal Information Acquisition under a Geostatistical Model." *Journal of Agricultural and Resource Economics*, 24(1999): 342-366.
- Babcock, B. A. "Conflict Between Theory and Practice in Production Economics: Discussion" invited in *American Journal of Agricultural Economics*, 81(1999):719-721.
- Wu, J.-J., and B. A. Babcock. The Relative Efficiency of Voluntary vs. Mandatory Environmental Regulations." *Journal of Environmental Economics and Management*, 38(1999):158-175.
- Babcock, B. A., and G. R. Pautsch. "Moving from Uniform to Variable Nitrogen Applications on Iowa Corn: Effects on Rates and Returns." *Journal of Agricultural and Resource Economics*, 23(1998):385-400.
- Hennessy, D., and B. A. Babcock. "Information, Flexibility, and Value Added." *Information Economics and Policy*, 10(1998) 431-449.
- Fleming, R. A., B. A. Babcock, and E. Wang. "Resource or Waste? The Economics of Swine Manure Storage and Management." *Review of Agricultural Economics*, 20(1998) 96-113.
- Wu, J., and B. A. Babcock. "The Choice of Tillage, Rotation, and Soil Testing Practices: Economic and Environmental Implications." *American Journal of Agricultural Economics*, 80(1998) 494-511.
- Hennessy, D., B. A. Babcock, and D. Hayes. "The Budgetary and Producer Welfare Effects of Revenue Assurance," *American Journal of Agricultural Economics*, 79(August 1997) 1024-1034.
- Babcock, B. A., P. G. Lakshminarayan, J. Wu, and D. Zilberman. "Targeting Tools for the Purchase of Environmental Amenities." *Land Economics*, 73(1997):325-339.
- Wu, J., and B. A. Babcock. "Contract Design for the Purchase of Environmental Goods from Agriculture." *American Journal of Agricultural Economics*, 78(1996):935-945.
- Pautsch, G. R., B. A. Babcock, C. P. Baumel. "Estimating the Value of Guaranteed Rail Service." *Journal of Transportation Research Forum*, 36(1996):59-73.
- Babcock, B. A., J. Wu, P. G. Lakshminarayan and D. Zilberman. "The Economics of a Public Fund for Environmental Amenities." *American Journal of Agricultural Economics*, 78(1996):961-971.
- Babcock, B. A., A. L. Carriquiry, and H. S. Stern. "Evaluation of Soil Test Information in Agricultural Decision Making." *Applied Statistics*, 45(1996):447-461.

- O'Brien, D., M. Hayenga, and B. A. Babcock. "Deriving Forecast Probability Distributions of Harvest-Time Corn Futures Prices." *Review of Agricultural Economics*, 18(1996):167-180.
- Babcock, B. A., and D. Hennessy. "Input Demand Under Yield and Revenue Insurance." *American Journal of Agricultural Economics*, 78(1996):416-27.
- Wu, J., and B. A. Babcock. "Optimal Design of a Voluntary Green Payment Program under Asymmetric Information." *Journal of Agricultural and Resource Economics*, 20(1995):316-327.
- Babcock, B. A., and J. F. Shogren. "The Cost of Risk in Agriculture," *Agricultural Economics*, 12(1995):141-150.
- Lence, S., and B. A. Babcock. "Flexibility, Endogenous Risk, and the Protection Premium." *Theory and Decision*, 38(1995):29-50.
- Babcock, B. A., and A. M. Blackmer. "The Ex Post Relationship between Growing Conditions and Nitrogen Fertilizer Levels." *Review of Agricultural Economics*, 16(1994):441-450.
- Foster, W. E., and B. A. Babcock. "Commodity Policy, Price Incentives, and the Growth in Per-Acre Yields." *Journal of Agricultural and Applied Economics*, 25(1993):253-265.
- Babcock, B. A., W. E. Foster, and D. L. Hoag. "Land Quality and Diversion Decisions under U.S. Commodity Programs." *Review of Agricultural Economics*, 15(1993):467-476.
- Babcock, B. A., E. K. Choi, and E. Feinerman. "Risk and Probability Premiums for CARA Utility Functions." *Journal of Agricultural and Resource Economics*, 18(1993):17-24.
- Hoag, D. L., B. A. Babcock and W. E. Foster. "Field-Level Measurements of Land Productivity and Program Slippage." *American Journal of Agricultural Economics*, 75(1993):181-189.
- Babcock, B. A., and A. M. Blackmer. "The Value of Reducing Temporal Input Nonuniformities." *Journal of Agricultural and Resource Economics*, 17(1992):335-347.
- Babcock, B. A. "The Effects of Uncertainty on Optimal Nitrogen Applications." *Review of Agricultural Economics*, 14(1992):271-280.
- Babcock, B. A., and W. E. Foster. "Economic Rents under Supply Controls with Marketable Quota." *American Journal of Agricultural Economics*, 74(1992):630-637.
- Babcock, B. A., E. Lichtenberg, and D. Zilberman. "Impact of Damage Control and Quality of Output: Estimating Pest Control Effectiveness." *American Journal of Agricultural Economics*, 74(1992):163-172.

- Foster, W. E., and B. A. Babcock. "Producer Welfare Consequences of Regulating Chemical Residues on Agricultural Crops: Maleic Hydrazide and Flue-Cured Tobacco." *American Journal of Agricultural Economics*, 73(1991):1224-1232.
- Babcock, B. A., and W. E. Foster. "Measuring the Contribution of Plant Breeding to Crop Yields: Flue-Cured Tobacco, 1954 - 1987." *American Journal of Agricultural Economics*, 73(1991):850-859.
- Babcock, B. A. "Acreage Decisions under Marketing Quotas and Yield Uncertainty." *American Journal of Agricultural Economics*, 72(1990):958-965.
- Babcock, B. A., C. A. Carter, and A. Schmitz. "The Political Economy of U. S. Wheat Legislation." *Economic Inquiry*, 28(1990):335-352.
- Babcock, B. A. "The Value of Weather Information in Market Equilibrium." *American Journal of Agricultural Economics*, 72(1990):63-72.
- Foster, W. E., and B. A. Babcock. "The Effect of Government Policy on Flue-Cured Tobacco Yields." *Tobacco Science*, 34(1990):4-8.
- Babcock, B. A., and A. Schmitz. "Look for the Hidden Costs: Why Direct Subsidy Can Cost Us Less (And Benefit Us More) than a 'No-Cost' Trade Barrier." *Choices*, 4th Quarter, 1986. Also included in *The Best of Choices: 1986-1996*, published by the AAEA.
- Babcock, B. A., J. A. Chalfant, and R. N. Collender. "Simultaneous Input Demands and Land Allocation in Agricultural Production under Uncertainty." *Western Journal of Agricultural Economics*, 12(1987)207-215.
- Babcock, B. A., M. E. Rister, R.D. Kay, and J. A. Wallers. "Identifying Least-Cost Sources of Required Fertilizer Nutrients." *American Journal of Agricultural Economics*, 66(1984):385-391.

#### *Books Edited*

- Babcock, B.A., D. J. Hayes, and J. D. Lawrence. *Using Distillers Grains in the U.S. and International Livestock Industries*. Center for Agricultural and Rural Development, Iowa State University, 2008. Ames IA.
- Babcock, B. A., R. W. Fraser, and J. N. Lekakis. *Risk Management and the Environment: Agriculture in Perspective*. Kluwer Academic Publishers. 2003.

#### *Chapters in Books*

- Babcock, B., C. Hart, and A. Stoppa. "La Gestione del Rischio Nell'Agricoltura USA." Pages 99-118 in *La Gestione del Rischio in Agricoltura: Strumenti e Politiche*. F.Filippis ed. Coldiretti, Rome, Italy. 2004.

- Babcock, B., C. Hart, and A. Stoppa. "Le Strategie per la Gestione dei Rischi Agricoli e Gli Strumenti Applicabili in Italia." Pages 193-198 in *La Gestione del Rischio in Agricoltura: Strumenti e Politiche*. F. Filippini ed. Coldiretti, Rome, Italy. 2004.
- Secchi, S., and B.A. Babcock. "Pest Mobility, Market Share, and the Efficacy of Refuge Requirements for Resistance Management." Pages 94-112 in *Battling Resistance to Antibiotics and Pesticides*. R. Laxminarayan, ed. Resources for the Future, Washington, DC. 2003.
- Clark, W.R., B.L. Falk, R. A. Schmitz, and B.A. Babcock. "Projecting the Wildlife and Economic Impacts of United States Agricultural Policy Using Landscape-Level Analyses." Pages 139-43 in *Wildlife: Land, and People: Priorities for the 21<sup>st</sup> Century*. R. Field, R.J. Warren, H. Okarma, and P.R. Sievert, eds. Proceedings of the Second International Wildlife Management Congress. The Wildlife Society, Bethesda, Maryland. 2001.
- Hurley, T. M., and B.A. Babcock. "Valuing Pest Control: How Much is Due to Risk Aversion?" Chapter 8 in *Risk Management and the Environment: Agriculture in Perspective*. B.A. Babcock, R. W. Fraser and J.N. Lekakis eds. Kluwer Academic Publishers, Dordrecht, The Netherlands, 2003.
- Mitchell, Paul D., P.G. Lakshminarayan, B.A. Babcock and T. Otake. "The Impact of Soil Conservation Policies on Carbon Sequestration in Agricultural Soils of Central U.S." *Management of Carbon Sequestration*. R. Lal, J. Kimble, R. Follett and B.A. Stewart, eds. Boca Raton, FL: CRC Press. 1998
- Babcock, B. A., and P. R. Johnson. "Standards Applicable to Flue-Cured Leaf from Start of On-Farm Preparation for Sale Until Time to 'Break the Sale'." Pages 78 to 87 in *The U.S. Tobacco Marketing System: A Proceedings of a Symposium*. J. Paxton Marshall (ed.). Chicago, Illinois; American Farm Bureau Federation. June, 1989
- Beghin, J., R. C. Chang and B. A. Babcock. "The Impact of a Decrease in Producer Subsidy Equivalent on the U.S. Tobacco Industry," in *1989 Current Issues in Tobacco Economics*, vol. 3. Farrell Delman, Thomas C. Slane, and Nina Stanton (eds.). Tobacco Merchants Association of the United States, Inc: Princeton, New Jersey. 1989.

