

## Darrell Bosch

Professor

Department of Agricultural and Applied Economics, Virginia Tech  
(540) 231-5265, bosch@vt.edu

### Education and Training

Ph.D.	Agricultural Economics	University of Minnesota	1984
M.S.	Agricultural Economics	University of Tennessee	1980
B.A.	Political Science	Central College	1971

### Research and Professional Experience

1999-present	Professor, Dept. of Agric. and Applied Econ., Virginia Tech.
1990-1999	Associate Professor, Dept. of Agric. and Applied Econ., Virginia Tech.
1984-1990	Assistant Professor, Department of Agric. and Applied Econ., Virginia Tech.
1980-1984	Research Assistant, Dept of Agric. and Applied Econ., Univ. of Minnesota.
1978-1980	Research Assistant, Dept. of Agric. Econ. and Rural Soc., Univ. of Tennessee.

### Professional Activities

#### *Scientific Contributions*

Book chapters: 5; Refereed journal articles: 62; Conference proceedings articles: 15; Conference proceedings edited: 1; Peer reviewed journal abstracts: 17; Other abstracts: 7; Book reviews: 5; Invited presentations: 39

#### *Teaching (2012-2021)*

AAEC 3014 Analytical Methods in Applied Economics: 3 hrs (2012—2020)  
AAEC 5114 Applied Microeconomic Theory: 3 hrs (2012—2015) (with Peterson)  
AAEC 5104 Research Project Planning: 1 hr (2012-2022)  
ALS/NR 4614 Watershed Assessment, Management, and Policy: 2 hrs (2012—2022) (with Schoenholtz, McGuire)  
AAEC 3015 SANREM Ecuador Internship Program: 1 hr (2013 and 2022) (with Alwang, Norton, Chen, Laroche)

#### *Advising*

Major or Co-Major Advisor to 11 Ph.D. (10 completed) and 22 M.S. (21 completed) students.

### Synergistic Activities

*Advisor to Chesapeake Research Consortium* optimization tool for water quality, 2016-2018.  
*Co-Editor*, Journal of Agricultural and Applied Economics, 2010-2013 (with Mary Marchant)  
*Associate Editor*, Journal of Soil and Water Conservation, 2009-2012  
*Program Chair*, Integrated Decision-Making for Watershed Management Symposium: Processes and Tools. Hosted by Virginia Tech in Chevy Chase, Md., January 7-9, 2001.  
*Editorial Council Member*, Southern Journal of Agricultural Economics, 1990-1992.

### Honors and Awards

Lifetime Achievement Award, Southern Agricultural Economics Association, 2018  
Honorable Mention, Land, Water and Env. Econ. Section Outstanding Poster for “Costs of Meeting Water Quality Goals under Climate Change in Urbanizing Watersheds: Difficult

Run, Virginia” (with J. Giuffria, D. Taylor, and N. Alamdari) Agricultural and Applied Economics annual meeting, Boston, July 30-August 2, 2016.  
Visiting Scholar at LAMETA (Institute of Applied and Theoretical Economics), Montpellier, France, January-July, 2008.  
Agricultural and Resource Economics Review Outstanding Journal Article 2007 (with T. Metcalfe, J. Pease, M. Alley, and S. Phillips)  
Soil and Water Conservation Society honorable mention for Best Journal of Soil and Water Conservation Feature Article, 1999 (with L. S. Van Dyke, J. W. Pease, and J. C. Baker).  
Agricultural Economics Association of South Africa (AEASA) award for best published article in 1995 (with James H. F. Botes and L. Klopper Oosthuizen).  
SSJ de Swart Award from AEASA for best published article in *Agrekon* in 1994 (with James H. F. Botes and L. Klopper Oosthuizen).  
Visiting Scholar, Resources and Technology Division, Economic Research Service, U.S. Department of Agriculture, August 1992-July 1993.

### **Grants Received**

Total Awards: \$16,206,275; PI/PD: \$463,553; Co-PI: \$15,742,722  
*Current*: Thriving Agricultural Systems in Urbanized Landscapes with co-PI W. Thomason. USDA-NIFA via subcontract from Penn State U. (David Abler, PI). \$663,452  
Agronomic, Post-harvest, and Economic Evaluation of Strawberry Cultivars in High Tunnel and Open Field Production. with co-PIs J. Samtani and T. Taghavi. USDA Specialty Crop Block Grant. \$59,070.

### **Collaborators and Affiliations (2018-2022)**

Taghavi, T., Sample, D., Hanigan, M., Onufrieva, K., Samtani, Mbarushimana, J.C., Xu, Y., Wagena, M.B., Easton, Z.M., White, R., Thomason, W., Hu, Chenyang, Zhang, W. *Virginia Tech*; Collick, A.S. *U. Md., Eastern Shore*; Ball, W.J., Trommutter, M., *Chesapeake Research Consortium; Johns Hopkins U.*; Ellis, J.H., Hobbs, B., *Johns Hopkins U.*, McGarity, A.E., *Swarthmore U.*; Van Houtven, G.L., *RTI International*; Linker, L.C.; Kaufman, D.E., Shenk, G.W., Bhatt, G., Asplen, K.W., Devereux, O.H., Rigelman, *USEPA Chesapeake Bay Program*.

### **Selected Refereed Journal Publications (2013-2021)**

\* denotes former/current students

Kaufman, D.E., G.W. Shenk, G. Bhatt, K.W. Asplen, O.H. Devereux, J.R. Rigelman, J.H. Ellis, B.F. Hobbs, D.J. Bosch, G.L. Van Houtven, A.E. McGarity, L.C. Linker, W.P. Ball. 2021. Supporting More Cost-Effective Watershed Management Strategies for Chesapeake Bay with a Modeling and Optimization Framework. *Environmental Modelling and Software*. 144.105141 <https://doi.org/10.1016/j.envsoft.2021.105141>  
Xu, Y. \*, D.J. Bosch, M.B. Wagena, A.S. Collick, and Z.M. Easton. 2020. Reducing Nitrogen Control Costs by Within- and Cross-county Targeting. *Journal of Environmental Management*. 263(2020) 110333. <https://doi.org/10.1016/j.jenvman.2020.110333>  
Xu, Y. \*, D. J. Bosch, M.B. Wagena, A.S. Collick, and Z.M. Easton. 2019. Meeting Water Quality Goals by Spatial Targeting of Best Management Practices under Climate Change. *Environmental Management*. 63(2): 173-184. DOI: 10.1007/s00267-018-01133-8. <http://link.springer.com/article/10.1007/s00267-018-01133-8>  
Bosch, D.J., M.B. Wagena, A.C. Ross, A.S. Collick, and Z.M. Easton. 2018. Meeting Water Quality Goals under Climate Change in Chesapeake Bay Watershed, USA. *Journal of the*

- American Water Resources Association. 1-19, <https://doi.org/10.1111/1752-1688.12684>.
- Cao, X.\*, D.J. Bosch, and J.W. Pease. 2017. Recycling Irrigation Water on Ornamental Nursery Operations: Will Consumer Premiums Compensate for Growers' Costs? *HortScience*. 52(12) (December):1780–1789. doi: 10.21273/HORTSCI12125-17
- Giuffria, J.M.\*, D.J. Bosch, D.B. Taylor, and N. Alamdari\*. 2017. Costs of Water Quality Goals under Climate Change in Urbanizing Watersheds: Difficult Run, Virginia. *Journal of Water Resources Planning and Management* 143(9): 04017055 12 pp. 10.61/(ASCE)WR.1943-5452.0000782.
- Ferraro, N.\*, D.J. Bosch, J.W. Pease, and J. S. Owen. 2017. Costs of Capturing and Recycling Irrigation Water in Container Nurseries. *HortScience* 52(23): 258-263.
- Pan, A., D.J. Bosch, and H. Ma. 2017. Assessing Water Poverty in China Using Holistic and Dynamic Principal Component Analysis. *Social Indicators Research* doi:10.1007/s11205-015-1191-3. URL <http://link.springer.com/article/10.1007/s11205-015-1191-3>
- Cultice, A.\*, D. J. Bosch, J.W. Pease, K.J. Boyle, and W. Xu\*. 2016. Horticultural Growers' Willingness to Adopt Recycling of Irrigation Water. *Journal of Agricultural and Applied Economics*. 48(1): 99-118.
- Tanellari, E.\*, D. Bosch, K. Boyle, and E. Mykerezi\*. 2015. On Consumers' Attitudes and Willingness to Pay for Improved Drinking Water Quality and Infrastructure. *Water Resources Research*. 51: 47–57, doi:10.1002/2013WR014934.
- D'Alessio, Nicole\*, David Hartter, Kevin Boyle, Darrell Bosch, and James Pease (2015). Adding Value to Ornamental Plants. *American Nurseryman*. January 2015. pp 16-18.
- Bosch, Darrell, James Pease, Robert Wieland, and Doug Parker. Perverse Incentives with Pay for Performance: Cover Crops in the Chesapeake Bay Watershed. *Agricultural and Resource Economics Review*. 42:3 (December 2013): 491-507.
- Lee, J., E. Kleczyk, D. J. Bosch, A. M. Dietrich, V. K. Lohani, and G.V. Loganathan. Homeowners' Decisionmaking In A Premise Plumbing Failure-Prone Area. *Journal of American Water Works Association* 105(No. 5): May 2013: E236-E241. <https://doi.org/10.5942/jawwa.2013.105.0071>