# Houtian (Frank) Ge, Ph.D.

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## EDUCATION

Ph.D., Agricultural and Resource Economics, University of Saskatchewan, Canada

M.A., Applied Economics, University of Saskatchewan, Canada

Graduate, Monetary Policy, Chinese Academy of Social Sciences

B.A., Finance, Anhui University of Finance and Economics, China

## GRANT

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|---|---|
| "Developing temporal and spatial fresh produce database using machine learning" NIFA Research Capacity Fund (funded, $43,764) (PI) | Jan 2025-Nov 2025 |
| "Modeling Fresh Produce Supply Chain Systems in the Northeast US" USDA-ARS Research Grant (funded, $260,222) (co-PI) | Sep 2023-Aug 2026 |
| "Economic and Environmental Analysis of Expanding New York and New England Beef Cattle Production" USDA-ERS Research Grant (funded, $285,723) (co-PI) | Jul 2022-Jun 2025 |
| "Ensuring Food Safety in the US Fresh Produce Supply Chain" USDA-NIFA Research Grant (funded, $499,545) (co-PI) | Jul 2019-Jun 2023 |
| "Developing Sustainable Local Food System in New York State" New York State Department of Agriculture and Markets (funded, $225,035) (collaborator) | Jan 2023-Dec 2026 |
| "Public Food Procurement and Bid Decisions" USDA-NIFA Research Grant (pending, $566,447) (PI) | May 2026-Apr2029 |
| "Agrivoltaics for Sustainable Land Use: Synergizing Solar Energy and Grass-Fed Beef Production in the Northeastern U.S." USDA-NIFA Research Grant (pending, $ 222,631) (PI) | Jun 2026-May 2028 |

## HONORS & AWARDS & SCHOLARSHIPS

Outstanding contribution in reviewing for International Journal of Production Economics, 2017  
Canadian Journal of Agricultural Economics, Outstanding Article, 2015

## RESEARCH EXPERIENCE

**Research Associate,** Charles H. Dyson School of Applied Economics and Management

Cornell University, August 2017-present

- Project: Modeling Fresh Produce Supply Chain Systems in the Northeast US (collaborating with and funded by USDA-ARS)
- Project: Economic and Environmental Analysis of Expanding New York and New England Beef Cattle Production (collaborating with and funded by USDA-ARS)
- Project: Overcoming supply chain barriers expanding Northeast ruminant meat production (collaborating with Tufts University and Columbia University, funded by USDA-NIFA)
- Project: Design of ideal supply chain networks for local food retailers (collaborating with Arizona State University, funded by USDA-NIFA)
- Project: A spatial equilibrium model of seasonal blue water, energy and land use throughout the U.S. fresh produce value-chain to study sustainability implications of alternative diets (collaborating with and funded by USDA-ERS)
- Project: Food Quality and Safety Assurance and Risk Mitigation in Modern Food Supply Chain (funded by USDA-NIFA)
- Project: Food policy actions and vendor bid decisions (collaborating with the Colorado State University, funded by NYC's federal grant)

**Postdoctoral Scholar,** Department of Agricultural Economics, Sociology and Education, Penn State University, November 2014-July 2017

- Project: Enhancing Food Securities in the Northeast (EFSNE) through regional food system (collaborating with 16 land-grant universities and 11 institutions) --- developing food assembly and distribution strategies to enhance food security in the Northeast of the U.S. (http://agsci.psu.edu/research/food-security) (funded by USDA-NIFA-AFRI)
- Project: Assessing the Supplier Roles of Selected Fresh Produce Value Chains in the United States (collaborating with ERS/USDA and funded by USDA-NIFA)
- Project: Assessing Transition to Healthier American Diets: Implications for Food System Sustainability (collaborating with ERS/USDA)

**Research Fellow,** Lethbridge Research Centre (LRC), Agriculture and Agri-Food Canada, April 2014-October 2014

- Project: Extending Holos beyond greenhouse gas emission - towards improved resource efficiency and reduced environmental footprints in crop and livestock production systems

**Research Analyst,** Saskatoon Research Centre, Agriculture and Agri-Food Canada, October 2013 -December 2013

- Computable solutions for biochemistry database manipulation and data modeling

**Research Assistant, Department** of Agricultural and Resource Economics, University of Saskatchewan, 2005-2013

- Project: Computational modeling and simulation of complex supply chain systems/mechanism design
- Project: Workable management practices for the coexistence of GM and non-GM crops

and risk mitigation in the grain supply chain

- Project: Evaluating ecological and environmental effect of land use changes

## TEACHING & ADVISING

**Guest Lecturer,** AAE 422 at the University of Wisconsin Madison: Food Systems and Supply Chains. Fall 2023

**Lecturer**, *Simulation and Optimization Models in Agricultural and Applied Economics* (AEM 6940, graduate), Cornell University, Spring 2020

Teaching skills 4.75/5.0, Knowledge of Subject Matter: 5.0/5.0,
Classroom Climate: 4.88/5.0, Overall: 4.90/5.0

**Student Advisor** on software use, Penn State University, 2014-2017

**Guest Lecturer**, *Industrial Organization Theory* (undergraduate), University of Saskatchewan, Spring 2010

**Curriculum Designer**, *Agricultural Production Theory* (undergraduate/graduate), University of Saskatchewan, Spring 2008

**Teaching Assistant**, *Macroeconomics, Econometrics, Statistical Applications, Industrial Organization Theory*, University of Saskatchewan, 2005-2012

**Lecturer**, *Statistical Application* (undergraduate), University of Saskatchewan, Spring 2005

**Supervised Student**s (Cornell): Jiaming Xu (MS), Minhao Li (Ph.D.), Sherry Liang (Ph.D.), Kushal Reddy (MS)

## PUBLICATIONS

### Peer-reviewed journal papers

**Ge, H.,** Gómez, M, Peters, C. 2025. Overcoming Supply Chain Barriers Expanding New York and New England Beef Cattle Production. *Renewable Agriculture and Food Systems 40*(2), 1-14.

**Ge, H.,** Yi, J., Goetz, S, Cleary, R., Gómez, M. 2024. Determining the Optimal Food Hub Location in the Fresh Produce Supply Chain. *Journal of Modelling in Management* 20(2), 417-442. 10.1108/JM2-02-2024-0042

**Ge, H.,** Gómez, M., Richards, T. 2024. The Effect of Price and Assortment of Local Products on Store Performance: An Agent-Based Modeling Approach. *Journal of Agricultural Economics* 75(3), 981-1003.

Yi, J., Cohen, S., Rehkamp, S., Canning, P., Gómez, M., **Ge, H.** 2023. Overcoming Data Barriers in Spatial Agri-Food Systems Analysis: A Flexible Imputation Framework. *Journal of Agricultural Economics* 74(3), 686-701.

**Ge, H.,** Goetz, S, Cleary, R, Yi, J., Gómez, M. 2022. Facility Locations in the Fresh Produce Supply Chain: An Integration of Optimization and Empirical Methods and Solutions. *International Journal of Production Economics* 249, 108534.

**Ge, H.,** Gómez, M, Peters, C. 2021. Modeling and Optimizing Beef Supply Chain in the Northeast U.S. *Agricultural Economics* 53(5), 702-718.

**Ge, H.,** Canning, P., Goetz, S.J., Perez, A., Li, J. 2019. Embedding Economies of Scale Concepts in Models of Optimal Locations of Fresh Produce Assembly Hubs. *Agricultural and Resource Economics Review* 48(3), 365-387.

Cleary, R., Goetz, S.J., Thilmany, D., **Ge, H.** 2019. Excess Competition Among Food Hubs. *Journal of Agricultural and Resource Economics* 44(1), 141-163.

**Ge, H.**, Goetz, S.J., Gómez, M., Gray, R., Nolan, J. 2019. Modelling Testing Mechanism for Mitigating Genetically Modified Wheat Contamination Risks. *International Journal of Production Research* 57(2), *582-598.*

**Ge, H.**, Goetz, S.J., Canning, P., Perez, A. 2018. Optimal Locations of Fresh Produce Aggregation Facilities in the United States with Scale Economies. *International Journal of Production Economics* 197, 143-157.

**Ge, H.**, Canning, P., Goetz, S.J., Perez, A. 2018. Effects of Scale Economies and Production Seasonality on Optimal Hub Locations: The Case of Regional Fresh Produce Aggregation. *Agricultural Economics* 49(2), 157-169.

**Ge, H.**, Nolan, J., Gray, R., Goetz, S.J., Han, Y. 2016. Supply Chain Complexity and Risk Mitigation –A Hybrid Optimization-Simulation Model. *International Journal of Production Economics* 179, 228-238**.**

**Ge, H.**, Gray, R., Nolan, J. 2015. Agricultural Supply Chain Optimization and Complexity: A Comparison of Analytic vs Simulated Solutions and Policies. *International Journal of Production Economics* 159, 208-220.

**Ge, H.,** Nolan, J., Gray, R. 2015. Identifying Strategies to Mitigate Handling Risks in the Canadian Grain Supply Chain. *Canadian Journal of Agricultural Economics* 63(1), 101-128.

### Extensions and outreach

Thilmany, D., Cleary, R., Goetz, S.J., **Ge, H.** "Is the local food table getting crowded? Exploring the effect of food hub proliferation on viability." Regional Economic Development Institute Report 10-19, Colorado State University, 2019.

Cleary, R., Thilmany, D., Goetz, S.J., **Ge, H.** "Location, location, location: How do Competition and Local Market Conditions Influence Food Hub Viability?" Smart Marketing, Dyson School of Business, Cornell University, 2019.

### Journal papers under review

**Ge, H.,** Gómez, M, Peters, C. 2025. Economic Viability of Grass-Fed Beef Production in the Northeastern U.S. A Life-Cycle Cost Analysis. Revised and resubmitted to *Agricultural Systems*

### Working papers

**Ge, H.,** Gómez, M., Peters, C. Assessment of the Environmental Effect of Grass-Fed Beef Production in the Northeastern U.S.

Yan, M., **Ge, H.,** Gómez, M. Risk Management Strategy of Food Safety: The Case of the US Fresh Produce Supply Chain.

Yi, J., **Ge, H.,** Canning, P., Gómez, M. Developing Temporal and Spatial Resolution Database of Highly Perishable Fresh Produce Production - A Combination of Machine Learning and Economic Modeling Approaches

**Ge, H.**, Canning, P., Gómez, M. The Carbon Footprint of Fresh Produce Aggregation and

Distribution in the U.S.

**Ge, H.**, Gómez, M., Richards, T. Nash Price Equilibrium of Retail Competition with Product Assortment.

Nie, A., **Ge, H**. Firm Performance under Mergers.

**Ge, H.,** Gomez, M., Peters, C. Assessment of the Economic Viability of Grass-Fed Beef Production in the Northeastern U.S.

**Ge, H.,** Gomez, M., Peters, C. Optimizing Fresh Produce Supply Chain to Reduce Food Loss and Waste

**Ge, H.,** Jablonski, B. Simulating Bidding Strategies for Food Procurement

Reddy, K.K., **Ge, H.,** Gómez, M. Modeling Strategies to Mitigate Contamination Risks in the US Fresh Produce Supply Chain

## Conference papers and presentations

- Agricultural & Applied Economics Association (AAEA) Annual Meeting, Denver, CO, USA, July 27-29, 2025.
    1. "Modeling Strategies to Ensure Food Safety in the US Fresh Produce Supply Chains"
    2. "Modeling Strategies to Improve the Operational Efficiency of Terminal Produce Markets"
    3. "Food Policy Actions and Vendor Bid Decisions"
    4. "Optimizing the U.S. Fresh Produce Supply Chain to Reduce Food Loss"
    5. "Modeling Sustainable Fresh Produce Supply Chain Systems in the Northeastern U.S."
- The 1st Workshop on Food Waste Reduction, Munich, Germany, September 23-24, 2024. "Optimizing the U.S. Fresh Produce Supply Chain to Reduce Food Loss and Waste"
- The 7th annual meeting of the EURO Working Group on Retail Operations, Vienna, Austria, September 18-20, 2024.
    "A Nash Equilibrium Simulation Model of Price Competition and Price Premium for Local Foods"
- AAEA Annual Meeting, Washington DC, USA, July 23-25, 2023.
    1. "The Environmental Impacts and Economic Viability of Grass-Fed Beef Production in the Northeastern U.S."
    2. "Retail Intermediation and Price Premium of Local Foods"
- AAEA Annual Meeting, Anaheim, CA, USA, August 1-3, 2022.
    6. "Assessment of the Economic Viability of Grass-fed Beef Production in the Northeastern U.S."
    7. "Assessing the Carbon Footprint of Fresh Produce Assembly and Distribution in the U.S."
- AAEA Annual Meeting, Austin, TX, USA, August 1-3, 2021.
    1. "Optimal Hub Location in the U.S. Fresh Produce Supply Chain"
    2. "Retailer Performance under Mergers: A Nash Price Equilibrium Model"
- Transportation Research Forum Annual Meeting, March 6-8, 2021. "The Transportation of Fresh Produce in the U.S. Food Supply Chain – A Two-Stage Optimization Approach"
- AAEA Annual Meeting, 2020
    1. "The Carbon Footprint of Fresh Produce Aggregation and Distribution in the U.S."

2. "The Price Premium for Local Foods: A Nash Price Equilibrium Model"

- AAEA Annual Meeting, Atlanta GA, USA, July 21-23, 2019.
  1. "Modeling and Optimizing Beef Supply Chain in New York and New England"
  2. "Hub Location in the U.S. Fresh Produce Supply Chain- A Computational Optimization Model"
- AAEA Annual Meeting, Washington D.C., USA, August 5-8, 2018. "Retailer Marketing Strategy and Consumer Purchase Decision for Local Food – An Agent-Based Model"
- Northeast Agricultural and Resource Economics Association Pre-meeting Workshop, Philadelphia, PA, USA, June 8-9, 2018. "Models and Method for Hub Locations in the United States"
- AAEA Annual Meeting, Chicago, IL, USA, July 30-August 1, 2017. "Optimal Fresh Produce Hub Locations and Sizes in the United States: A Comparison of Simulation with Actual Results"
- Western Regional Science Association Annual Meeting, Santa Fe, NM, February 15-18, 2017. "Local Food Hubs: Profit Viability and Social Responsibility"
- AAEA Annual Meeting, Boston, MA, July 31 - August 2, 2016.
  1. "Modeling the Optimal Strategies for Mitigating Genetically Modified (GM) Wheat Contamination Risks in the U.S. Wheat Supply Chain"
  2. "Hub Location in Fresh Produce Supply Chains"
- Fifth International Workshop on Regional, Urban, and Spatial Economics, Chengdu, China, June 3-4, 2016. "Embedding Economies of Scale Concepts in Models of Optimal Locations of Fresh Produce Assembly Hubs"
- Southern Regional Science Association Annual Meeting, Washington D.C., USA, March 30-April 1, 2016.
  1. "Optimal Locations of Fresh Produce Supplier Hubs in the United States"
  2. "Modeling Spatial Food Supply Network Based on Geography, Distance, and Competition"
- EFSNE Final Conference, Greenbelt, MA, December 10-11, 2015. "Assessing the Scale, Location, and Cost of Fresh Produce Assembly in the United States"
- AAEA & WAEA Annual Meeting, San Francisco, CA, USA, July 31-August 2, 2015 "Assessing the Supplier Role of Selected Fresh Produce Value Chains in the United States"
- Canadian Agricultural Economics Society (CAES) Annual Conference, Newport, Rhode Island, USA, June 27-29, 2015. "Mitigating Grain Handling Risks: A Comparison of Analytic Against Simulated Results"
- CAES Annual Conference, Niagara Falls, Ontario, Canada, June 17-19, 2012. "Identifying Strategies to Mitigate Handling Risks in the Canadian Grain Supply Chain"
- CAES, Calgary, Canada, June 7-9, 2012. "A Computable General Equilibrium Model: Simulating Impacts of U.S. Cotton Subsidies on the World Cotton Market"
- IASTED International Conference on Modelling, Simulation, and Identification, Pittsburgh, USA, November 7-9, 2011. "Modelling the Optimal Testing Strategies for Preventing Wheat Handling Risks"

- International Conference on Social Sciences, Shanghai, China, October 14-16, 2011 "The Impact of U.S. Cotton Subsidies: A Computable General Equilibrium Model"
- CAES, Ottawa, Canada, June 2-5, 2011. "Grain Handling on the Prairies – Optimal Strategies for Preventing Wheat Handling Risks"

## SEMINARS AND INVITED PRESENTATIONS

- Nanjing Agricultural University, December 12, 2025
- Cornell University, USA, April 18, 2024
- University of Wisconsin Madison, USA, December 1, 2023
- Agricultural Research Service, USDA, USA, July 17, 2023
- McGill University, Canada, August 26, 2022
- Cornell University, USA, December 12, 2019
- Agriculture and Agri-Food Canada, Canada, September 7, 2018
- Cornell University, USA, May 1, 2017
- Lethbridge University, Canada, February 27, 2017
- Wuhan Naval University of Engineering, China, January 11, 2016
- Economic Research Service, USDA, August 27, 2015
- Pennsylvania State University, USA, December 5, 2014
- Lethbridge University, Canada, October 17, 2014
- Princeton University, USA, October 10, 2012
- University of Saskatchewan, Canada, September 20, 2012
- University of Saskatchewan, Canada, October 16, 2009

## CURRENT AFFILIATIONS

American Agricultural & Applied Economics Association, Canadian Economics Association, Canadian Agricultural Economics Society, Southern Regional Science Association, Western Regional Science Association, Northeast Agricultural and Resource Economics Association, Transportation Research Forum

## REFEREE SERVICES

Manuscript Review for *Agricultural Systems, American Journal of Agricultural Economics, Engineering Optimization, European Journal of Operations Research, European Review of Agricultural Economics, International Food and Agribusiness Management Review, International Journal of Production Economics, International Journal of Production Research, Journal of Food Distribution Research, Journal of Modelling in Management, Journal of the Transportation Research Forum, The Open Cybernetics and Systemics Journal, Sustainability* Grant Proposal Review for: USDA-NIFA-AFRI

## PROFESSIONAL SERVICES

Discussant

Workshop on Food Waste Reduction, 2024
Agricultural & Applied Economics Association Annual Meeting, 2020
Canadian Economics Association Annual Conference, 2011/2012

Moderator
Agricultural & Applied Economics Association Annual Meeting, 2025
Agricultural & Applied Economics Association Annual Meeting, 2016
Canadian Economics Association Annual Conference, 2012


**VOLUNTEER EXPERIENCE**

Coach (Table Tennis). YMCA, 2017-Current
Advisor, Cornell Table Tennis Club, 2021-Current
Coach (Table Tennis), DeWitt Middle School, 2018-2020
Manager, LRC Food Banks' Garden, 2014
Committee member, LRC Animal Care Committee, 2014
Board member, Chinese Language School of Saskatoon, 2013-2014
President, U of S Table Tennis Club, 2008-2013


**COMPUTER SKILLS**

Python, MATLAB, FORTRAN, GAMS, NetLogo, ArcGIS, ArcGIS Online, SQL, SAS, VBA