

# Lyazzat Sanat

Nelson Hall 4343  
2801 Founders Dr Raleigh, NC 27607, US

Email: [lsanat@ncsu.edu](mailto:lsanat@ncsu.edu)

Website: <https://lyazzatsanat.github.io>

## EDUCATION

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Ph.D. in Economics, North Carolina State University, Raleigh, NC 2021 – 2026 (expected)

- Committee: Profs. Roderick M. Rejesus (Advisor), Barry Goodwin, Jeffrey Dorfman, & Zachary Brown

B.A. in Economics (with honors), Nazarbayev University, Astana, Kazakhstan 2017 – 2021

## RESEARCH FIELDS

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Agricultural Economics, Environmental Economics, Natural Resource Economics

## JOB MARKET PAPER

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*“Promoting Cover Crop Use in the United States: The Role of State-led Incentive Programs,”*  
with Roderick M. Rejesus

- **Abstract:** This study examines the role of state-led conservation programs in promoting cover crop adoption in the United States (US). Utilizing county-level satellite data on cover crop acres from 16 US states between 2005 and 2020, our study employs a staggered difference-in-differences (DiD) framework to estimate the impacts of these programs on cover crop uptake. The findings reveal that state programs significantly increase initial short-term adoption of cover crops. However, there is evidence that the strong initial adoption impact of state programs is generally not sustained over the longer term several years after the introduction of the state program. Bolstering state-level conservation programs offers a practical pathway to accelerate cover crop adoption rates and meet environmental goals in the short-term, especially since these programs are flexibly designed and tailored to local needs. Nonetheless, program design adjustments or new policy instruments may be needed to sustain further adoption over the long-run.

## WORKING PAPERS

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*“Yield and Economic Impacts of Enhanced Efficiency Nitrogen Fertilizers: Evidence from a Bayesian Meta-Analysis,”*  
with Roderick M. Rejesus & Alex L. Woodley, Accepted at **Journal of Agricultural and Resource Economics**

*“Evaluating the Impact of Pandemic Cover Crop Program on Cover Crop Adoption,”* with Roderick M. Rejesus

## WORK IN PROGRESS

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*“Optimal Control of Joint Soil Capital and Groundwater Stock”*

## RESEARCH EXPERIENCE

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Research Assistant for Prof. Roderick M. Rejesus, NC State University, Raleigh, NC 2023 – Present

- Beyond Yield: A Comprehensive Evaluation of Enhanced Efficiency Fertilizers for Reducing Nitrous Oxide Emissions and Ammonia Volatilization in Corn Systems.

Research Assistant for Prof. Maxim Goryunov, Nazarbayev University, Astana, Kazakhstan 2020 – 2021

- Information Acquisition and Processing in Coordination Games.

## TEACHING EXPERIENCE

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Independent Instructor, NC State University	2022 – 2023
<ul style="list-style-type: none"><li>Principles of Microeconomics (EC 201): Spring 2023, Summer 2023</li></ul>	
Graduate Teaching Assistant, NC State University	2022
<ul style="list-style-type: none"><li>Fundamentals of Economics (EC 205): Fall 2022</li></ul>	
Tutor, Nazarbayev University	2020
<ul style="list-style-type: none"><li>Econometrics I (ECON 301): Fall 2020</li></ul>	

## FELLOWSHIPS, AWARDS AND GRANTS

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Conference Travel Grant, ARE Department, NC State University	2023, 2024, 2025
Travel Fellowship, UC Berkeley Summer School in Environmental & Energy Economics	2023
Provost's Doctoral Fellowship, NC State University	2021–2022
Merit-Based Full Academic Scholarship, Nazarbayev University	2016–2021

## PRESENTATIONS

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SAEA Annual Meeting (Louisville, KY)	2026
AAEA Annual Meeting (Denver, CO)	2025
AAEA Annual Meeting (New Orleans, LA), NC State University (Raleigh, NC)	2024
AAEA Annual Meeting (Washington, DC)	2023
Environmental & Energy Economics Summer School (UC Berkeley)	2023

## REFeree SERVICE

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Journal of Agricultural and Resource Economics

## OTHER INFORMATION

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Programming: R, STATA, MATLAB, SAS, Python, ArcGIS, zTree

Language: English (fluent), Kazakh (native), Russian (fluent), Spanish (intermediate)

## REFERENCES

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### **Prof. Roderick M. Rejesus (Advisor)**

*Department Extension Leader, Professor and Extension Specialist*  
Dept. of Agricultural & Resource Economics  
NC State University, Raleigh, NC  
rmrejesu@ncsu.edu

### **Prof. Zachary S. Brown**

*Associate Professor*  
Dept. of Agricultural & Resource Economics  
& Genetic Engineering & Society Center  
zsbrown2@ncsu.edu

### **Prof. Barry Goodwin**

*William Neal Reynolds Distinguished Professor*  
Dept. of Agricultural & Resource Economics  
NC State University, Raleigh, NC  
bkgoodwi@ncsu.edu