VICTOR M. IZZO, PH.D.

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EDUCATION

University of Vermont *Ph.D., Plant and Soil Science, 2014*
Drexel University *M.S., Bioscience and Biotechnology, 2003*
State University of New York at Geneseo *B.S., Chemistry, 1999*

MOTIVATION AND PHILOSOPHY

As an educator, researcher, and agroecologist, I believe that engagement in research is a key component of university education. Despite my current university workload credited solely to administration, teaching, and advising, I lead an active extramurally funded research program focused on the development and application of agroecological practices. Though much of this work is un-compensated during my 9-month contract, as I am only able to receive compensation for my research during the summer, I am fully committed to continuing my research as I believe that an active research program is essential for creating an enriching and dynamic teaching environment.

RESEARCH INTERESTS

Broadly, my research interests fall into three integrated, yet distinct areas: (1) agricultural entomology, (2) applied agroecology, and (3) participatory action research. My research looks to identify the most pressing and actionable field-level issues facing growers and producers within the region, develop research questions that are testable at the farm and landscape scale, and provide user-centric outreach for the application of any practices developed via our research. All of this work is done in direct collaboration with extension professionals, farmers, and students.

PROFESSIONAL APPOINTMENTS

Senior Lecturer, Dept. of Agriculture, Landscape, and Design (ALE) *08/2015 – Present*
University of Vermont, Burlington, VT

Director and Co-Founder – Vermont Entomology and Participatory Action Research Team (VEPART) *09/2017 – Present*
University of Vermont, Burlington, VT

Lecturer, Department of Environmental Policy *08/2014 – 05/2017*
Champlain College, Burlington, VT

Biology Teacher, Greengates – The British International School *08/2010 – 08/2011*
Mexico City, Mexico

Biology and Physics Teacher, The American School of Mexico *08/2007 – 08/2008*
Mexico City, Mexico

PROFESSIONAL LEADERSHIP POSITIONS

Co-Director, Environmental Studies Program *07/2023 – Present*
University of Vermont, Burlington, VT

Head of Undergraduate Education, Institute for Agroecology *03/2023 – Present*
University of Vermont, Burlington, VT

SERVICE

Internal:

- UVM College of Agriculture and Life Sciences (CALS) – Co-Chair, CALS Curriculum Committee (2019 – Present)
- UVM ALE Department – Undergraduate Affairs (2018 – Present)
- UVM Environmental Studies Program – Chair, Curriculum Committee (2023 – Present)
- UVM ALE Department – Staff and Faculty Search Committee Member (2022 & 2023)
- UVM Extension Master Gardener Program – Instructor (2018 – Present)
- UVM CTL Faculty Associate – Member (2021)
- UVM Contemplative Faculty – Member (2022)

External:

- Vermont Farm to Plate – Executive Board Member (2024 – Present)
- Vermont Farm to Plate – Curator and Facilitator: Education, Labor, and Workforce Development Topic Exchange (2023 – Present)
- Associate Editor – Frontiers in Sustainable Food Systems (2022 – Present)

EXTRAMURAL FUNDING

Accumulated Research Funding Since 2019: $2.11 million

Recently Funded Projects:

Evaluating new paper-mulch alternatives to plastic mulch on Northeastern vegetable farms
Principal Investigator | Northeast SARE | 2025–2028 | $199,680

Assessing and Mitigating the Impact of Invasive Earthworms on Small Vegetable and Nursery Farms
Co-Principal Investigator | Northeast SARE | 2025–2028 | $249,800

The changing landscape of allium pest management on Vermont diversified vegetable farms
Principal Investigator | Vermont Agency of Agriculture, Food & Markets (VAAFM) | 2024–2026 | $39,024

Collaborative Research: ORCC: Climate change responses in a globally invasive insect
Collaborator (PI: Dr. Joaquin Nunez, UVM Dept. Biology) | NSF, Division of Integrative Organismal Systems | 2025–2029 | $500,796

Evaluation of Delayed Potato Planting for the Management of Insect and Disease Incidence on Northeastern Diversified Farms
Principal Investigator | Northeast SARE | 2023–2026 | $188,658

Vermont Pest and Disease Monitoring and Scouting Program
Principal Investigator | Vermont Vegetable and Berry Growers Association (VVBGA) | 2021–Present | $3,000/year

Development of above- and below-ground strategies using entomopathogenic fungi and RNAi for control of root crop pests
Principal Investigator | Northeast SARE | 2022–2025 | $199,710

Training and High-Impact Research Internships through Vermont Extension
Co-Principal Investigator (w/ Scott Lewins and Karen Nordstrom) | USDA AFRI Education and Workforce Development | 2021–2026 | $500,000

Field assessment of a novel behavioral disruptor for spotted wing Drosophila management in Northeastern berry crops
Principal Investigator | Northeast SARE Partnership Grant | 2021–2023 | $29,999

Evaluation of swede midge tolerance and resistance among four popular kale varieties

Co-Principal Investigator (w/ Scott Lewins) | New England Vegetable and Berry Growers Association | 2021 | $2,000

Biological and Cultural Tactics for the Control of Wireworms in Root Crops

Principal Investigator | Northeast SARE Research and Education | 2020–2022 | $116,189

Attract-and-Kill Strategies for Sustainable Striped Cucumber Beetle Management

Collaborator/Sub-award Recipient (w/ Anna Wallingford, UNH) | Northeast SARE Research and Education | 2020–2022 | $180,375

Strategies for Leek Moth Control on Diversified Vegetable Farms

Principal Investigator | Northeast SARE Research and Education | 2019–2021 | $102,799

PUBLICATIONS

ORCID: https://orcid.org/0000-0002-0254-1105

Co-Authored Textbook:

Mendez, V.E., S.R. Gliessman, V.M. Izzo, and Engles, E. Agroecology: The Ecology of Sustainable Food Systems. 4th Edition. CRC Press/Taylor & Francis: Boca Raton, FL. (2022)

Refereed Journals (Published and Peer-Reviewed):

Izzo, V.M., S.A. Lewins, and M. Nouri Aiin. "On-farm evaluation of swede midge, Contarinia nasturtii (Diptera: Cecidomyiidae), susceptibility among four popular kale varieties." Journal of Economic Entomology, toae304. (2025). https://doi.org/10.1093/jee/toae304

Brevik, S.D. Schoville, A. Muszewska, B. Pelissie, Z. Cohen, V. Izzo, Y.H. Chen, M. Keena. "Transposable elements differ between geographic populations of the Colorado potato beetle, Leptinotarsa decemlineata (Coleoptera: Chrysomelidae)." Environmental Entomology 52(6):1162–1171. (2023). doi: 10.1093/ee/nvad105

Kinnebrew, E., C.K. Molander, S. Wilcox Warren, C.E. Horner, V.M. Izzo, S.A. Lewins, R. Maden, G.L. Galford and V.E. Mendez. "Tradeoffs of a rising agroecological practice: addressing uncertainty around tarping with participatory action research and mixed methods." Agroecology and Sustainable Food Systems. (2022)

Nordstrom, K.L., C.E. Horner, V.E. Mendez, V. Izzo, N. Carpenter, J.W. Faulkner and M. Caswell. "An Undergraduate Agroecology Research Fellows Program Engages Co-learning Through Participatory Action Research." Frontiers in Sustainable Food Systems 5:10. (2022). https://doi.org/10.3389/fsufs.2021.760995

Horner, C.E., C. Morse, N. Carpenter, K.L. Nordstrom, J.W. Faulkner, T. Mares, E. Kinnebrew, M. Caswell, V. Izzo, V.E. Mendez, S.A. Lewins and N. McCune. "Cultivating Pedagogy for Transformative Learning: A Decade of Undergraduate Agroecology Education." Frontiers in Sustainable Food Systems 5(412). (2022)

Izzo, V.M., Y.H. Chen, S.D. Schoville, C. Wang, D.J. Hawthorne. "Origin of Pest Lineages of the Colorado Potato Beetle (Coleoptera: Chrysomelidae)." Journal of Economic Entomology, tox367. (2018) [Runner-Up Editor's Choice Award, Entomological Society of America]

Izzo, V.M., J. Armstrong, D.H. Hawthorne, Y.H. Chen. "Time of the Season: The effect of photoperiodism on host mediated cues for diapause induction in an insect herbivore, Leptinotarsa decemlineata." Ecological Entomology 39(1):75–82. (2014) [Runner-Up Editor's Choice Award, ESA]

Izzo, V.M., D.H. Hawthorne, Y.H. Chen. "Geographic variation in winter hardiness of a common agricultural pest, Leptinotarsa decemlineata, the Colorado potato beetle." Evolutionary Ecology 28(3):505–520. (2014)

Izzo, V.M., N. Mercer, J. Armstrong, Y.H. Chen. "Variation in host usage among geographic populations of Leptinotarsa decemlineata, the Colorado potato beetle." Journal of Pest Science. (2014)

Saija, P., L. Lindstrom, A. Lyytinen, J. Mappes, Y.H. Chen, V.M. Izzo, A. Grapputo. "Pre-invasion history and demography shape the genetic variation in the insecticide resistance-related acetylcholinesterase 2 gene in the invasive Colorado potato beetle." BMC Evolutionary Biology 13:13. (2013)

PROFESSIONAL PRESENTATIONS

Izzo, V. and M. Nouri Aiin. Exploring non-chemical management options for Allium pest insects. Entomological Society of America Annual Meeting. Phoenix, AZ. (2024)

Nouri Aiin, M. and V. Izzo. Eco-friendly pest management strategies for late-season root crops: Integrating entomopathogenic fungi and RNA interference in Northeastern diversified farms. ESA Annual Meeting. Phoenix, AZ. (2024)

Izzo, V. and S.A. Lewins. Pre- and post-harvest strategies for leek moth control on diversified vegetable farms in Vermont. ESA Annual Meeting. National Harbor, MD. (2023)

Izzo, V. and S.A. Lewins. Assessment of potential trap crop varieties for swede midge control in kale plantings. ESA Annual Meeting. Vancouver, BC. (2022)

Izzo, V. and S.A. Lewins. Using biocontrol strategies for the control of pests in allium and sweet potatoes. New England Vegetable and Fruit Conference; Virtual. (2021)

Izzo, V. and S.A. Lewins. [INVITED SYMPOSIUM] On PAR with pests: Participatory Action Research (PAR) and the promotion of ecological pest management. ESA Annual Meeting; Denver, CO. (2021)

Lewins, S.A. and V. Izzo. Strategies and Opportunities in Leek Moth Management. New England Vegetable and Fruit Conference; Manchester, NH. (2019)

Izzo, V. and S.A. Lewins. Our onions are crying: Pre- and post-harvest tactics for the management of leek moth, Acrolepiosis assectella. ESA Annual Meeting; St. Louis, MO. (2019)

Izzo, V. and S.A. Lewins. (Biological) Agents of Change: Managing Natural Enemies for Sustainable Pest Control. NOFA Vermont 37th Annual Winter Conference, Burlington VT. (2019)

Hazelrigg, A., V. Izzo, S.A. Lewins. Disease and Pest Problems. NOFA Vermont 37th Annual Winter Conference, Burlington VT. (2019)

Lewins, S.A. and V. Izzo. Locally adapted entomopathogenic nematodes for long-term sustainable pest management in vegetable agroecosystems. ESA Annual Meeting; Denver, CO. (2018)

Lewins, S.A. and V. Izzo. Getting more from your beneficial nematodes. NOFA Vermont 36th Annual Winter Conference, Burlington VT. (2018)

Izzo, V. and S.A. Lewins. Garlic and onions and leeks, oh no! Monitoring and management of the invasive leek moth, Acrolepiopsis assectella. ESA Annual Meeting; Denver, CO. (2017)

AWARDS & ACCOLADES

- 2025 NOMINATED Kroepsch-Maurice Excellence in Teaching Award – Nominated for Excellence in Teaching
- 2025 NOMINATED President's Distinguished Senior Lecturer
- 2020 Joseph E. Carrigan Award – Awarded for Excellence in Teaching – College of Agriculture and Life Sciences (UVM)
- 2019 Joseph E. Carrigan Award – Nominated for Excellence in Teaching – College of Agriculture and Life Sciences (UVM)
- 2017 Teaching Award of Merit – North American Colleges & Teachers of Agriculture (NACTA)
- 2010 Teaching Assistant of the Year Award – Plant and Soil Science Department, University of Vermont
- 2010 Graduate Student Teaching Award of Merit – North American Colleges & Teachers of Agriculture (NACTA)
- 2006 T. Polgar Hudson River Research Summer Fellowship
- 2003 Drexel University Research Day Poster Award (Natural and Applied Science) – 1st Place

- 2002 Drexel University Teaching Assistant of the Year

CURRICULUM AND COURSE DEVELOPMENT

Agroecology and Livelihoods Collaborative (ALC) Undergraduate Research Fellowship Program
Primary curriculum developer for this 6-credit agroecology and leadership fellows program. Provides undergraduate students the opportunity to develop skills and knowledge to apply agroecological principles in various contexts. A one-year program integrating leadership training, field applications, and agroecological studies.

Agroecology Extension (AX) Summer Research Fellowship
Co-developer of the AX Fellowship, tailored for students seeking to deepen their knowledge of sustainable agricultural approaches and transdisciplinary research and outreach skills. Prepares students for careers and graduate education in agroecology and extension.
https://www.uvm.edu/instituteforagroecology/agroecology-extension-ax-summer-research-fellowship

Certificate in Graduate Studies in Agroecology (CGSA)
Primary curriculum developer and academic advisor for this 15-credit, low-residency certificate program. Encourages students to integrate ecological, social, and economic perspectives in developing practical solutions to contemporary agrifood system problems. Includes one residential hybrid course, three foundational online classes, and a final synthesis seminar.
https://www.uvm.edu/agroecology/learning/cgsa/

Micro-Certificate in Graduate Studies in Agroecology (mCGSA)
Led the modification of the CGSA into the first micro-certificate offered within CALS. Students complete the three foundational CGSA courses, representing the three dimensions of agroecology: science, movement, and practice.
https://learn.uvm.edu/program/micro-certificate-of-graduate-study-in-agroecology-2/

Breakthrough Leaders for Sustainable Food Systems Professional Certificate
Primary curriculum developer and facilitator for this non-credit leadership and food systems certificate. An innovative hybrid (3-week online + 1 week on-campus) cross-disciplinary program focused on developing visionary leaders to explore solutions to the social, environmental, diet, and health impacts of our food system.
https://learn.uvm.edu/program/sustainable-food-systems/

TEACHING

Undergraduate Courses:
- Introduction to Agroecology (3 credits) – Primary Instructor, ~100–150 students
- A Bug's Life (3 credits) – Primary Instructor, ~150 students
- Entomology and Pest Management (4 credits) – Primary Instructor, ~30 students
- Weed Ecology and Management (3 credits) – Primary/Co-Instructor, ~20 students
- Permaculture (3 credits) – Primary Instructor, ~40 students
- Agriculture & The Environment (3 credits) – Primary Instructor, ~40 students
- Advanced Agroecology (4 credits + Service Learning) – Capstone course, ~40 students

Graduate Courses:
- Introduction to Agroecology (3 credits, graduate) – Co-Instructed, 15–25 students/year
- Ecological Foundations of Agroecology (3 credits, online) – 8–10 students; CGSA core course

- Agroecology, Food Sovereignty, and Social Movements (3 credits) – 12–15 students
- CDE Breakthrough Leaders Program (non-credit) – Co-Instructed, ~20 students/year

MENTORING AND SUPERVISION

Current Primary Advising and Supervision:

Postdoctoral Researcher (2021–Present):

- Dr. Maryam Nouri Aiin – Development of novel biological control methods to support IPM programs on Northeastern organic farming systems

Graduate Students:

- Jessica Cole – Ph.D. Student (2024–Present) | Research: Ecological and evolutionary interactions of community gardens and agroecosystems
- Laura Johnson – Ph.D. Student (2024–Present) | Research: Pollination ecology and cover crops

Undergraduate Research Advisees:

- Amanda Hutson – Honor's College (2023–Present) | Thesis: Farmer-to-farmer networks and knowledge transfer: An Evaluation of The Vermont Vegetable and Berry Growers Association Listserv

Graduate Committees (Current):

- Michele Nikfarjam – Ph.D., Food Systems Graduate Program (2023–Present)
- Leslie Spencer – Ph.D., Food Systems Graduate Program (2023–Present)
- Jorge Ruiz-Arocho – Ph.D., ALE Department (2023–Present)

Past Advising and Supervision:

Graduate Committees:

- Ali Brooks – M.S. Food Systems (2022) | Thesis: Social Justice and the US Food System: A critical course on the human dimensions of food

Undergraduate Research Advisees:

- Julia Lees '17, B.A. Anthropology – Thesis: Testing different feed stocks and temperature regimes for rearing mealworms to maximize population growth rates
- Nell Carpenter '18, B.S. Environmental Studies – Thesis: Community garden efforts and diversity in Vermont through agroecology movements
- Meghan Conway '19, B.S. Environmental Studies – Thesis: Evaluating the success of food assistance programs that provide community access to healthy food throughout Burlington, VT
- Carlin Molander '22, B.S. Food Systems – Thesis: Assessing vegetable growers' perspectives on tarping practices in temperate agroecosystems
- Avi Bauer '22, B.S. Community International Development – Thesis: Evaluating the performance of political agroecological principles in urban/peri-urban agriculture
- Malachi Witt '23, B.S. Agroecology – Thesis: Exploring the effects of low and no-till approaches on compaction and their associated tradeoffs in pumpkin crops
- Lilah Krugman '23, B.S. Food Systems – Thesis: Evaluation of the Addison County Relocalization Network's Farmacy Program