

Resilience Summit IV:
The Future of Meat?

March 6, 2020

WELCOME TO RSIV

The rise in global meat-eating threatens to increase deforestation in the Amazon and other parts of the world, with the expansion of land needed for pasture, corn, and soybeans. Yet, many people around the world are protein-deficient and nutritionists argue that meat can help fill that need. What is the future of meat?

RESILIENCE SUMMIT IV

The Future of Meat



March 6, 2020

Pace University
New York City



Dyson

College of
Arts and Sciences

INSTITUTE FOR SUSTAINABILITY
AND THE ENVIRONMENT



DARTMOUTH

WELCOME TO RESILIENCE SUMMIT IV: THE FUTURE OF MEAT?

THANK YOU TO OUR COSPONSOR, DARTMOUTH COLLEGE



THANK YOU TO OUR SUMMIT ORGANIZER:

Melanie DuPuis
Chair and Professor, Environmental Studies and
Science Department, Pace University

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www.pace.edu/meatqs

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#TheFutureofMeatatPaceU

NOW, A NOTE FROM US

Welcome to Pace University and the Dyson College Resilience Summit IV: The Future of Meat?, our latest offering in the resilience summit series, bringing together thought leaders in academia, business, and non-governmental organizations to discuss the global impact of sustainable action. The Future of Meat? examines our food preferences, how food is sourced, and the delicate balance that exists between food and natural systems. Leaders from key industries, non-profits, and research institutions will present the impact of these interdependent connections upon our planet and provide examples of resilient and sustainable food economies. Through these conversations and presentations, we will learn how food impacts our planet and the role that we can play in shaping a sustainable food economy. I am delighted that you can join us today at this important event and look forward to our discussions.

Vanya Quiñones, PhD

Provost and Executive Vice President for Academic Affairs

Welcome to the Fourth Summit on Resilience: The Future of Meat? This Summit is part of a series that Dyson College of Arts and Sciences originated and continues to host at Pace University to explore current approaches to managing local, regional, and national issues in order to improve sustainability and enhance resilience.

We are proud to continue this tradition of providing the setting where thought leaders have the opportunity to collaborate, share knowledge, bring new ideas forward, and develop potential solutions for the critical challenges we face. Our goal for this Fourth Summit is to bring together the perspectives of scientists, farmers, ethicists, and activists on how we should produce and consume protein in the future, as well as provide facts and dispel misconceptions on how eating meat relates to our climate, land, health, and policymaking. Additionally, our students will learn, by observing experts discussing an issue from various perspectives, how to engage in critical thinking about controversial issues and find consensus among concerned stakeholders with different viewpoints when the stakes are high.

We hope you will find this Summit thought provoking, intellectually challenging and practically oriented, with a focus on exploring potential solutions and their implementation, rather than just chronicling challenges.

Thank you for participating in this important event.

Nira Herrmann, PhD

Dean, Dyson College of Arts and Sciences, Pace University

On behalf of the Dyson College Institute for Sustainability and the Environment (DCISE), I want to welcome you to the Fourth Summit on Resilience: The Future of Meat? DCISE has as its mission the integration of all of the environmentally-related academic and cocurricular activities within Dyson College, as well as to engage faculty and students in other areas of Pace University who have interest in various aspects of environmental and sustainability issues. DCISE is also charged with engaging environmentally-conscious outside organizations in both academic and outreach capacities, so that our students may have experiences outside of the traditional classroom setting.

This conference is the fourth in a series of meetings aimed at highlighting important issues of sustainability in various arenas, in this case, issues surrounding the production and consumption of meat products vs plant-based meat alternatives. These issues have implications for a number of areas in addition to nutrition, such as climate change and animal rights. We anticipate that today's Summit will enlighten all of us to the myriad issues surrounding this topic.

Richard D. Schlesinger, PhD

Fellow A.T.S.

Senior Associate Dean for Academic Affairs and Administration
Dyson College of Arts and Sciences

AGENDA*

(noun): schedule for the conference

* Subject to change

8:45 a.m.

Welcome

Nira Herrmann

Dean, Dyson College of Arts and Sciences

9:00–10:15 a.m.

Keynote: The Future of Meat

Pace President **Marvin Krislov** interviews:

Nicolette Hahn Niman

Rancher

Author of *Defending Beef*

Timothy D. Searchinger

Research Scholar, Woodrow Wilson School, Princeton University

10:15–10:30 a.m.

Break

10:30–11:45 a.m.

Meat and Climate

What is the difference between livestock production and climate change? What are different answers to that question and why do answers differ?

Avery Cohn

Food and Agriculture Strategist, ClimateWorks

Jeffrey Creque

Director, Rangeland and Agroecosystem Management

Carbon Cycle Institute

Sara Place

Animal Scientist

Senior Director, National Cattlemen's Beef Association

Moderator **Matthew Garcia**

Professor, Dartmouth College

11:45 a.m.–1:00 p.m.

Lunch

Agenda continues on next page.

1:00–2:15 p.m.

Consumers: Health, Rights and Animal Welfare

What are the ethical and health issues of giving consumers the advice to eat less meat? What are the responses to that advice?

Garrett Broad

Assistant Professor, Fordham University

David Cassuto

Professor, Elisabeth Haub School of Law, Pace University

Adele Hite

Research Scholar, Ronin Institute
Senior Writer, DietDoctor.com

Smita Narula

Professor, Elisabeth Haub School of Law, Pace University

Moderator E. Melanie DuPuis

Chair and Professor, Environmental Studies and Science Department, Pace University; Summit Organizer

2:15–2:30 p.m.

Break

2:30–3:15 p.m.

Reflections on Alternative Proteins

How will the world get its protein in the future? Who will decide?

Julie Guthman

Author, *Weighing In* and *Wilted*

3:15–4:00 p.m.

*Wrap-Up Panel***Jonathan Brown**

Professor, Elisabeth Haub School of Law, Pace University
Director, Food and Beverage Law Clinic

Diana Mincyte

Associate Professor, City University of New York, New York City College of Technology

Matt Watson

Student, Elisabeth Haub School of Law, Pace University
Legal Intern, Food and Beverage Law Clinic
Extern, Natural Resources Defense Council

Lauren White Davis

Graduate Student, Lienhard School of Nursing, Pace University
Wellness Coach

Moderator Jenna Liut

Host, "Eating Matters," Heritage Radio Network

4:00–5:00 p.m.

Reception

“A hundred different paths may lighten the world’s load of suffering. Giving up meat is one path; giving up bananas is another. The more we know about our food system, the more we are called into complex choices. It seems facile to declare one single forbidden fruit, when humans live under so many different kinds of trees.”

Barbara Kingsolver, *Animal, Vegetable, Miracle: A Year of Food Life*

PACE UNIVERSITY ADMINISTRATION

Marvin Krislov

President, Pace University

Vanya Quiñones

Provost, Pace University

Nira Herrmann

Dean, Dyson College of Arts and Sciences, Pace University

Richard Schlesinger

*Director, Dyson College Institute for Sustainability
and the Environment, Pace University*



**MARVIN
KRISLOV, JD**

President, Pace University

Marvin Krislov, JD, the eighth president of Pace University, is deeply committed to Pace's mission of Opportunitas—providing all students, regardless of economic background, access to the transformative power of education. He is guiding Pace through its New York City Master Plan to overhaul our downtown campus, and he's working to bolster Pace's status as the nation's leading four-year private college for driving economic mobility.

Prior to Krislov's appointment at Pace, he served for 10 years as the president of Oberlin College, and before that he was vice president and general counsel at the University of Michigan, where he led the legal defense of the University's admission policies that resulted in the 2003 Supreme Court decision recognizing the importance of student body diversity. Before entering academic life, Krislov served as acting solicitor and then deputy solicitor of national operations in the US Department of Labor. He previously served as associate counsel in the Office of Counsel to the President under President Bill Clinton.

Pace Provost Vanya Quiñones, PhD, is a neurobiologist, biopsychologist, and respected researcher with decades of experience in scientific research, academic administration, program, and research-focused fundraising, and a long record of working successfully to improve diversity in science and the arts. When Dr. Quiñones began her career, she was struck by the lack of diversity in the sciences and has worked relentlessly to diversify the workforce. From her early days as a researcher at The Rockefeller University, Quiñones brought passion and commitment to the need to create improved opportunities for underrepresented students across STEM disciplines and within the arts, with an aim to increase diversity in academia and an underlying desire to provide a foundation of fairness as well as a culture of inclusion and participation.

Prior to joining Pace, she served as associate provost for Student Success and Retention at the City University of New York (CUNY), Hunter College, where she worked for 20 years.

**VANYA
QUIÑONES, PhD**

Provost, Pace University



Nira Herrmann became dean of Dyson College of Arts and Sciences at Pace University in 2004. During her tenure, the College has grown to have approximately 5,100 students as well as 257 full-time and more than 600 part-time faculty. With campuses in Manhattan and Westchester County, New York, the College offers more than 50 undergraduate and 15 graduate major programs in the arts, humanities, social sciences, mathematics, natural sciences, and in its Pace School of Performing Arts and Actors Studio Drama School. Herrmann received her BA in Mathematics from the University of California, Berkeley, her MS and PhD in Statistics from Stanford University, and an MS in Computer Science from Rutgers University. She has created and taught numerous undergraduate and graduate courses and also published papers in computer science, expert systems, database analysis, mathematical and applied statistics, biostatistics, epidemiology, and bioinformatics.



**NIRA
HERRMANN, PhD**

*Dean, Dyson College of
Arts and Sciences, Pace
University*

**RICHARD
SCHLESINGER, PhD**

*Director, Dyson College
Institute for Sustainability
and the Environment, Pace
University*



Richard Schlesinger joined Dyson College, Pace University in 2002 as chair of the department of Biology and director of the Environmental Science program, becoming associate dean for Academic Affairs in 2006. He received a BA in Biology from CUNY, Queens College, and an MS and PhD in Biology/Environmental Health Science from New York University, is recipient of the Career Achievement Award from the Inhalation Specialty Section of the Society of Toxicology, the Herbert E. Stokinger Award for contributions to the field of industrial and environmental toxicology, and is a fellow of the Academy of Toxicological Sciences. Schlesinger has taught undergraduate and graduate courses in toxicology and environmental science, and is coauthor of a textbook, Environmental Health Science, the second edition of which was published in 2019. Schlesinger has served on a number of National Academy of Science committees and as an advisor to various agencies, including USEPA and WHO, and is currently a science advisor to the New York State Energy Research and Development Authority.

SPEAKERS

Julie Guthman

Author, Weighing In and Wilted

Nicolette Hahn Niman

Rancher

Author, Defending Beef

Timothy D. Searchinger

Research Scholar, Woodrow Wilson School, Princeton University

Julie Guthman holds a PhD in geography from the University of California (UC), Berkeley, and is currently a professor of social sciences at UC, Santa Cruz, where she teaches multiple courses on the politics of food and agriculture. With a research emphasis on the conditions of possibility for food system transformation in the US, her prior publications include three multi-award winning monographs, an edited collection, and over forty articles in peer-reviewed journals. Guthman is currently heading up the AFTeR Project, a multi-UC campus collaboration, exploring the cultural and political economic influences on the emerging Bay Area Food and Ag Tech Sector, and how entrepreneurs are defining problems and solutions and responding to public concerns. Her research and writing has been supported by the National Science Foundation, the USDA, the John Simon Guggenheim Foundation, the Radcliffe Institute for Advanced Study, and the Rockefeller Foundation Bellagio Center. In addition, she is a recipient of the Excellence in Research Award from the Agriculture, Food and Human Values Society.



JULIE GUTHMAN, PhD

Author, *Weighing In and Wilted*



TIMOTHY D. SEARCHINGER, JD

Research Scholar, Woodrow Wilson School, Princeton University

Timothy Searchinger is a research scholar at Princeton University, and a senior fellow at the World Resources Institute (WRI). Although trained as a lawyer, his work today combines ecology, agronomy and economics to analyze how to feed a growing world population while reducing deforestation and greenhouse gas emissions. Searchinger authored a series of five papers in *Science and Nature* (2008-2018) addressing the land use demands and climate consequences of agriculture and bioenergy. He is the lead author of a recent Synthesis Report for WRI, the World Bank, and the United Nations on the global food and climate challenge, titled *Creating a Sustainable Food Future*. He is a graduate, *summa cum laude*, of Amherst College, holds a JD from Yale Law School, where he was senior editor of the *Yale Law Journal*, and worked as a lawyer at the Environmental Defense Fund before turning to science.

NICOLETTE HAHN NIMAN

Rancher
Author, *Defending Beef*



Nicolette Hahn Niman is a writer, attorney, and livestock rancher. She authored the books *Defending Beef: The Case for Sustainable Meat Production* (2014) and *Righteous Porkchop: Finding a Life and Good Food Beyond Factory Farms* (2009), as well as numerous essays for *The New York Times*, *Wall Street Journal*, and *Los Angeles Times*. She has also written for *The Atlantic*, *the San Francisco Chronicle*, and *Earth Island Journal*, among others. Hahn Niman is a frequent speaker at national and international conferences, and was one of just 23 speakers from around the world at the *Nobel Week Dialogue 2016* in Stockholm, Sweden. She has also appeared on the *PBS NewsHour* and *The Dr. Oz Show*, and in numerous films and documentaries, including *Eating Animals* and *Sustainable*. Previously, she was senior attorney for the environmental organization *Waterkeeper*, where she focused on agriculture and food production; before that, she was an environmental lawyer for the *National Wildlife Federation*. Hahn Niman also served two terms on the *City Commission for Kalamazoo, Michigan*. Today, she lives in Northern California with her two sons, and her husband, Bill Niman, founder of the natural meat companies *Niman Ranch* and *BN Ranch*.

PANELISTS

Garrett Broad

Assistant Professor, Fordham University

Jonathan Brown

*Professor, Elisabeth Haub School of Law, Pace University
Director, Food and Beverage Law Clinic*

David Cassuto

Professor, Elisabeth Haub School of Law, Pace University

Avery Cohn

Food and Agriculture Strategist, ClimateWorks

Jeffrey Creque

*Director, Rangeland and Agroecosystem Management
Carbon Cycle Institute*

Adele Hite

*Research Scholar, Ronin Institute
Senior Writer, DietDoctor.com*

Diana Mincyte

Associate Professor, CUNY, New York City College of Technology

Smita Narula

Professor, Elisabeth Haub School of Law, Pace University

Sara Place

*Animal Scientist
Senior Director, National Cattlemen's Beef Association*

Matt Watson

*Student, Elisabeth Haub School of Law, Pace University
Legal Intern, Food and Beverage Law Clinic
Extern, Natural Resources Defense Council*

Lauren White Davis

*Graduate Student, Lienhard School of Nursing, Pace University
Wellness Coach*

Garrett Broad is an assistant professor of Communication and Media Studies at Fordham University and the graduate director of the Public Media MA Program. His research investigates the role of storytelling and communication technology in promoting networked movements for social justice. Much of his work focuses on local and global food systems, as he explores how food can best contribute to improved neighborhood health, environmental sustainability, and the rights and welfare of animals. An engaged scholar, Professor Broad produces theoretical and empirical work for academic audiences, develops collaborative research projects with community-based organizations, and strives for teaching excellence in the classroom and across digital spaces. He is the author of More Than Just Food: Food Justice and Community Change (University of California Press, 2016), an ethnographic exploration of community-based food justice organizing in urban America. His current work examines the possibilities of what he calls "food tech justice," seeking ways to use new food innovations to advance health and equity in the food system and beyond.

GARRETT BROAD, PhD

*Assistant Professor
Fordham University*



DAVID CASSUTO, PhD, JD

*Professor, Elisabeth Haub
School of Law, Pace University*

David N. Cassuto is a professor of law and member of the Global Center for Environmental Legal Studies at Pace University's Elisabeth Haub School of Law, where he also directs the Brazil-American Institute for Law and Environment. He is also the "Class of 1946 Distinguished Professor of Environmental Studies" at Williams College, a Fulbright fellow, a visiting professor at law schools in both Brazil and Spain, and the senior counsel for international affairs for the Animal Legal Defense Fund.

Cassuto has written extensively on the interweaving of environmental and animal law, as well as the larger legal issues raised by industrial agriculture and the human-animal relationship. He holds a JD from the University of California, Berkeley, a PhD from Indiana University, and a BA from Wesleyan University. Prior to entering legal academia, he was a professor of English and founder of the Literature and Environment program at the University of Missouri-Rolla.

Avery Cohn leads food and agriculture activities at ClimateWorks as well as the Healthy Diets/Healthy Planet workstream of the Climate and Land Use Alliance, a grantmaking strategy promoting a future for protein consistent with climate and development goals. Cohn joined ClimateWorks in 2019, following over 15 years of research and policy work on a food system compatible with a livable climate. During this period, Cohn served as a professor at Tufts University, where he retains an affiliation in the Friedman School of Nutrition Science and Policy. Cohn holds a BS from the University of California, Davis, an MA from Yale University, and a PhD from the University of California, Berkeley.



AVERY COHN, PhD

Food and Agriculture Strategist, ClimateWorks

Jeffrey Creque is a cofounder of the Marin Carbon Project and director of Rangeland and Agroecosystem Management at the Carbon Cycle Institute, where he is engaged in training ranchers, farmers, resource conservation districts, and others in strategies for increasing carbon capture and sequestration on working lands within a whole-farm planning and implementation framework known as Carbon Farm Planning. In 1984, after a four-year apprenticeship in biodynamic-French-intensive horticulture, Creque assumed directorship of a highly diversified farm and watershed restoration project on the Northern California coast, where he began his 20-year hands-on investigation into the role of livestock in landscape restoration and agroecosystem sustainability, as well as gave up vegetarianism. In addition, Creque served as field conservationist for the Marin County Resource Conservation District from 2004 to 2008, and as agroecologist for Nan Tucker McEvoy's Marin County Olive Ranch from 1997 to 2014. Creque has published on various aspects of the intersection between land management and the carbon cycle, and participated in the development of the USDA-NRCS on-farm greenhouse gas-planning tool, COMET-Planner. Creque holds a PhD in Rangeland Ecology and is a California State Board of Forestry certified rangeland manager and USDA certified conservation planner.

JEFFREY CREQUE, PhD

Director, Rangeland and Agroecosystem Management Carbon Cycle Institute



ADELE HITE, PhD

Research Scholar, Ronin Institute Senior Writer, DietDoctor.com

Adele Hite, PhD, MPH, RDN is a registered dietitian with a background in rhetoric and communication, nutritional epidemiology, and public health. Her work combines biomedical and cultural studies, approaches to food politics, nutrition science, and public health nutrition guidance, with a specific focus on the historical, scientific, and sociocultural contexts surrounding the creation and evolution of the US Dietary Guidelines for Americans.

Her most recent project was leading a global effort to create a general protocol to guide health care professionals in using therapeutic carbohydrate restriction to treat metabolic disease. She is a senior writer for Diet Doctor, a Swedish health information company that takes no funding from industry, investors, or sales of products, and also a research scholar with the Ronin Institute.



SMITA NARULA, JD

Professor, Elisabeth Haub School of Law, Pace University

Professor Smita Narula is the inaugural distinguished chair of International Law at the Elisabeth Haub School of Law at Pace University. She is author of dozens of widely-cited publications, and has helped formulate policy, legal, and community-led responses to a range of social justice and environmental issues worldwide. Prior to joining Pace, she was distinguished lecturer and interim director of the Human Rights Program at the Roosevelt House Public Policy Institute at Hunter College. Prior to Hunter, she was associate professor of Clinical Law at New York University School of Law, where she taught at the International Human Rights Clinic and served as faculty director of the Center for Human Rights and Global Justice. In 2008, Professor Narula was appointed legal advisor to the United Nations Special Rapporteur on the Right to Food, and served in this capacity for the duration of the Rapporteur's six-year mandate. She has led key research and advocacy initiatives to promote sustainability and justice in our food systems, paying particular attention to the increasing commodification of land and natural resources, and to structural violence against communities marginalized on the basis of their race, gender, caste, or indigenous status.

Sara Place is the chief sustainability officer at Elanco. Prior to Elanco, she was the senior director for sustainable beef production research at the National Cattlemen's Beef Association and an assistant professor in sustainable beef cattle systems at Oklahoma State University. She received her PhD in Animal Biology from the University of California, Davis, a BS in Animal Science from Cornell University, and an AAS in Agriculture Business from Morrisville State College.



**SARA
PLACE, PhD**

*Animal Scientist; Senior
Director, National
Cattlemen's Beef Association*

MODERATORS

E. Melanie DuPuis

*Chair and Professor, Environmental Studies and Science Department, Pace University
Summit Organizer*

Matthew Garcia

Professor, Dartmouth College

Jenna Liut

Host, "Eating Matters," Heritage Radio Network



**E. MELANIE
DUPUIS, PhD**

*Chair and Professor
Environmental Studies and
Science Department, Pace
University; Summit Organizer*

E. Melanie DuPuis is professor and chair of Environmental Studies and Science, Pace University and professor emerita, University of California, Santa Cruz. She has a BA in Anthropology from Harvard University and a PhD in Development Sociology from Cornell University. She is author of Nature's Perfect Food: How Milk Became America's Drink, coauthor of Alternative Food Politics: Knowledge, Practice and Politics, with David and Mike Goodman, and editor of two edited collections: Smoke and Mirrors: The Politics and Culture of Air Pollution and Creating the Countryside: The Politics of Rural and Environmental Discourse. Her latest book, Dangerous Digestion: The Politics of American Dietary Advice, was published by UC Press in October of 2015. She is also coeditor, with Matthew Garcia and Don Mitchell, of Food Across Borders.

Matthew Garcia is the Ralph and Richard Lazarus Professor of History, Latin American, Latino, and Caribbean Studies, and Human Relations at Dartmouth College. He previously taught at Arizona State University, Brown University, the University of Oregon, and the University of Illinois, Urbana-Champaign. He is the author of A World of Its Own: Race, Labor and Citrus in the Making of Greater Los Angeles, 1900-1970, which won the award for the Best Book from the Oral History Association in 2003. His book, From the Jaws of Victory: The Triumph and Tragedy of Cesar Chavez and the Farm Worker Movement, won the Philip Taft Award for Best Book in Labor History in 2013. In addition, he is the coeditor of Food Across Borders with Melanie DuPuis and Don Mitchell, published by Rutgers University Press in 2017. Garcia served as the outreach director and co-primary investigator for the Bracero Archive Project, which received a National Endowment for the Humanities Grant in 2008, and was the recipient of the Best Public History Award by the National Council for Public History in 2009-10. He is currently the chair of Latin American, Latino, and Caribbean Studies at Dartmouth and will be a fellow at the American Council of Learned Societies (ACLS) in 2020.

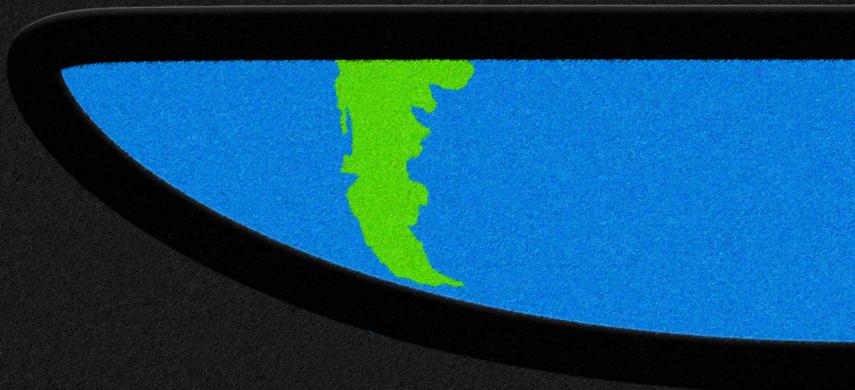
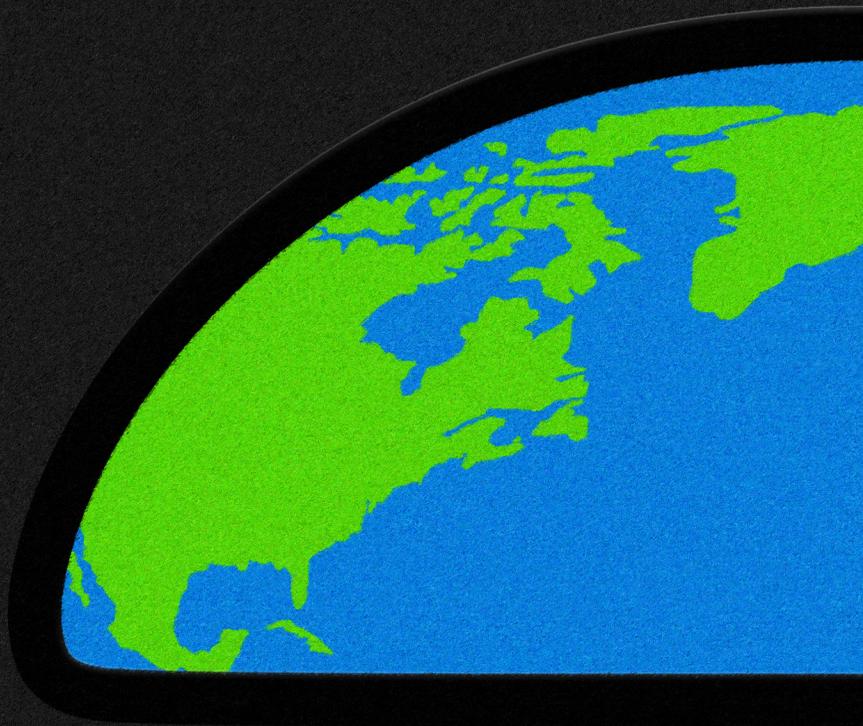
**MATTHEW
GARCIA**

*Professor
Dartmouth College*



WHERE DO WE GO FROM HERE?

Can regenerative agriculture provide the protein necessary to feed the world in the coming decades? Or should we work to get more food out of less land, leaving the rest uncultivated? Should we move to a more plant-based diet and eat more plant-based and/or cellular 'in-vitro' meat? What is the protein-production system of the future?



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