PROCEEDINGS OF THE WORKSHOP NEW WORLD SCREWWORM: ADVANCING INTERNATIONAL COOPERATION AGAINST A TRANSBOUNDARY AGRICULTURAL THREAT

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Participant Institutions

Introduction

This document presents the main points discussed during the Virtual Workshop "New World Screwworm: Advancing international cooperation against a transboundary agricultural threat", organized by FONTAGRO in collaboration with the University of Florida and partner institutions. The workshop was held on August 29, 2025, via the Zoom platform, with simultaneous interpretation in English and Spanish.

The objective of the workshop was to examine the current status of NWS in the region, share technological advances and research priorities, and promote regional collaboration to strengthen surveillance, develop innovative control measures, and mobilize resources for long-term eradication efforts.

The meeting brought together experts from the University of Florida, the Inter-American Institute for Cooperation on Agriculture (IICA), Texas A&M University, Oklahoma State University, the National Institute of Agriculture Technology (INIA) of Uruguay and the Foundation for Food and Agriculture Research (FFAR), along with representatives of FONTAGRO member countries, international organizations such as FAO and WOAH, and private sector actors.

The discussions covered key thematic areas: surveillance and outbreak response, sterile insect technique (SIT) and technological innovations, on-farm prevention and treatment strategies, private sector engagement, and international cooperation for sustainable financing and governance.

The workshop opened with remarks from Eugenia Saini (FONTAGRO), who underlined the urgency of the challenge and FONTAGRO's role in convening actors across science, government, and producer organizations. Dr. Andrew Short (University of Florida) highlighted the commitment of leading U.S. universities to bring their expertise in veterinary entomology to bear on this issue. Dr. Adegbola Adesogan (University of Florida) emphasized the need for coordinated research and partnerships across sectors, while Dr. José Urdaz (IICA Costa Rica) stressed the importance of continuous vigilance, behavior change, and shared responsibility in animal health, noting IICA's ongoing technical cooperation with national agencies.

Panel 1, Surveillance, Outbreak Response, and Risk Modeling, featured Dr. Phil Kaufman (Texas A&M), who drew on U.S. and Latin American experiences to stress the importance of early detection and integrated pest management, and Dr. Lindsay Campbell (University of Florida), who presented advances in GIS-based risk modeling and laboratory diagnostic standards.

Panel 2, Sterile Insect Technique (SIT) and New Biotechnologies, included Dr. Daniel Hahn (University of Florida), who discussed phased conditional approaches to SIT deployment and the operational realities of eradication programs, and Dr. Alejo Menchaca (INIA Uruguay), who outlined the potential of CRISPR-based technologies and gene drives for pest control, while stressing the need for cautious validation and governance.

Panel 3, On-Farm Control Measures and Private Sector Involvement, brought practical perspectives. Dr. Phil Kaufman emphasized the role of farm management practices, such as wound care, tick control, and producer training, in reducing vulnerability to infestations. Dr. Ted Burgess (University of Florida) reviewed chemical treatment options, resistance risks, and the urgent need for new insecticides, while Alejandra Díaz (IICA Costa Rica) highlighted opportunities for engaging the private sector and aligning on-farm measures with national animal health systems.

The closing session, led by Eugenia Saini (FONTAGRO), Andrew Short (University of Florida), and Adegbola Adesogan (University of Florida), drew together the day's insights. Speakers emphasized the consensus around a coordinated, team-based approach involving universities, national animal health agencies, and private industry. They stressed the importance of building on existing research, maintaining updated economic impact estimates, and mobilizing funding to advance from planning to action. Participants also flagged opportunities for collaboration on novel surveillance methods, including AI-enabled traps and environmental DNA. Organizers committed to preparing a technical note and policy brief for circulation and input, followed by an in-person meeting at the University of Florida later in the year.

To access the recording of the event, please click here.

Challenge Addressed

The New World Screwworm (NWS, Cochliomyia hominivorax) remains one of the most destructive parasites affecting livestock in the Americas. As an obligate parasite feeding on the living tissue of warm-blooded animals, its infestations result in severe animal suffering, reduced productivity, and in many cases mortality. For small and medium-scale farmers, these losses represent a significant threat to income and livelihoods.

The pest is particularly challenging due to its rapid reproductive cycle, ability to disperse long distances, and transboundary nature. Past successes with the Sterile Insect Technique (SIT), particularly through the Panama barrier, underscore the feasibility of control, but reinfestations highlight the fragility of these gains. Current outbreaks in Central America and Mexico demonstrate the urgent need for renewed action.

Detection remains difficult, treatments are costly, and no vaccine or preventive drug is available. Moreover, control strategies require high levels of infrastructure, cross-border coordination, and political commitment. Climate change may further expand the potential range of NWS, exacerbating the threat.

Countries in Latin America and the Caribbean face a dual challenge: on one hand, the region is a major contributor to global livestock production, but on the other, it must address persistent gaps in surveillance, farmer awareness, and financing for control programs. Without regional cooperation, national efforts alone are insufficient to contain or eradicate this pest.

Agenda

	New World Screwworm: Advancing international cooperation against a transboundary agricultural threat **Friday, August 29 - Zoom virtual meeting** ***(All times in EDT)***
9:00 - 9:10	**Opening Session** Welcome remarks from FONTAGRO, the University of Florida and IICA. Overview of the workshop objectives, expected outcomes, and relevance for regional coordination. *Speakers:* **Eugenia Saini**, FONTAGRO **Dr. Andrew Short**, University of Florida **Dr. Adegbola Adesogan**, University of Florida **Dr. José Urdaz**, IICA Costa Rica
9:10 - 10:10	**Panel 1: Surveillance, Outbreak Response, and Risk Modelling** Focus: Best practices for case detection, traps, GIS models, and genetic tools for tracing outbreaks; lab quality assurance and quality control, data standards. *Panelists:* **Dr. Phil Kaufman**, Texas A&M **Dr. Lindsay Campbell**, University of Florida *Moderator*: Andrew Short, University of Florida
10:10 - 10:55	**Panel 2: Sterile Insect Technique and New Biotechnologies** Focus: Status of SIT programs, development of transgenic strains, cost-sharing models *Panelists:* **Dr. Daniel Hahn**, University of Florida **Dr. Alejo Menchaca**, INIA Uruguay *Moderator*: Joshua Taylor, FONTAGRO
10:55 - 11:00	**Break**
11:00 - 11:10	**Special Presentation: International Capacity Building** **Justin Talley**, Oklahoma State University
11:10 - 12:00	**Panel 3: On-Farm Control Measures and Private Sector Involvement** Focus: Practical strategies for producers; treatment protocols, resistance management, development of new treatments, extension, and private sector engagement *Panelist:* **Dr. Phil Kaufman**, Texas A&M **Dr. Edwin Burgess**, University of Florida **Alejandra Díaz**, IICA Costa Rica *Moderator*: Jasmine Bruno, FFAR
12:00 - 12:30	**Closing Discussion and Action Points** - Open discussion and strategic recommendations - Identify steering group follow-up responsibilities - Define timeline for proposal submission and next in-person meeting *Speakers: Joshua Taylor, Andrew Short and Adegbola Adesogan*

Opening Session. Welcome remarks from FONTAGRO, the University of Florida and IICA. Eugenia Saini, FONTAGRO; Dr. Andrew Short, University of Florida; Dr. Adegbola Adesogan, University of Florida; Dr. José Urdaz, IICA Costa Rica

The workshop opened with a series of welcoming remarks that framed the urgency and scope of the New World Screwworm (NWS) challenge. Speakers underscored that the pest is not only a veterinary concern but a direct threat to livestock production, rural livelihoods, and regional trade, with transboundary implications that demand coordinated action.

The event was inaugurated by Eugenia Saini, Executive Secretary of FONTAGRO, noting that the reemergence of NWS represents one of the most significant animal health challenges of our time. The biological nature of the pest, which infests living tissue, leads to severe animal suffering and economic losses, especially for small and medium-scale farmers. Past outbreaks have demonstrated the enormous costs associated with the pest. She emphasized that because the screwworm does not recognize borders, collective responsibility and cooperation across countries, institutions, and disciplines are essential. Farmers were described as the first line of defense, but their efforts must be supported by strong surveillance, effective eradication strategies, and scientific innovation. FONTAGRO's role, it was stressed, is precisely to build bridges among producer associations, research institutions, and governments, and this meeting represented a concrete step toward that mission.

Dr. Andrew Short, Chair of the Department of Entomology and Nematology at the University of Florida, echoed these points by highlighting the joint responsibility of research institutions in both the United States and Latin America. He noted that while the screwworm had reemerged as a new threat in Central America and the U.S., for many parts of Latin America it has remained a persistent problem. The University of Florida, Texas A&M, and Oklahoma State University had therefore convened as institutions with strong veterinary entomology programs to contribute their expertise to identifying knowledge gaps, sharing experiences, and advancing potential solutions.

Dr. Adegbola Adesogan, Associate Vice President and Director of the Global Food Systems Institute, further underlined the importance of collective vision, coordinated research, and sustained partnerships. He emphasized the university's commitment to mobilizing science, innovation, and global collaboration to address the urgent threat posed by NWS, including its first confirmed human case in the U.S. He thanked FONTAGRO and donors such as FFAR, USDA, and other institutional partners for their support, noting that the University of Florida was proud to stand at the intersection of science and international cooperation.

Finally, José Urdaz of the Inter-American Institute for Cooperation on Agriculture (IICA) placed the outbreak in a regional perspective. He stressed that sanitary achievements can only be maintained through continuous vigilance, investment, and effective cooperation. IICA has already mobilized technical assistance, risk communication, and community engagement in partnership with USDA and national governments. Urdaz reminded participants that while the Sterile Insect Technique remains a cornerstone of eradication, it must be accompanied by improved livestock practices, timely wound treatment, biosecurity measures, and farmer education. He concluded by affirming that eradication is not optional but a shared responsibility, and this workshop offered an opportunity to strengthen the link between science and international cooperation.

Together, these opening remarks established the central themes of the workshop: the scale of the NWS threat, the need for integrated and cross-sectoral approaches, and the importance of mobilizing partnerships across the hemisphere to move from control to eradication.

Panel 1: Surveillance, Outbreak Response, and Risk Modelling. Dr. Phil Kaufman, Texas A&M; Dr. Lindsay Campbell, University of Florida; Moderator: Andrew Short, University of Florida

Dr. Phil Kaufman. Best practices for case detection, traps, GIS models, and genetic tools for tracing outbreaks; lab quality assurance and quality control, data standards.

Dr. Phil Kaufman opened with the current U.S. readiness posture, underscoring Texas as the most likely point of establishment given proximity to ongoing cases in southern Mexico. He described proactive efforts with livestock and wildlife associations and close coordination with USDA APHIS and USDA-ARS, noting that ARS leads U.S. screwworm research and quality control for sterile fly production through COPEG. He reviewed "best practices" and their limitations: surveillance remains heavily reliant on traps baited with Swarm Lure on adhesive PVC devices, which attract many blowfly species and require time-intensive sorting to distinguish New World screwworm from look-alikes (e.g., secondary screwworm). A newly formulated Swarm Lure 5 solves a shipping constraint but does not improve species specificity. Because U.S. lab work with live screwworm is highly restricted, much research must be coordinated abroad, and trials that could interfere with mass-rearing (e.g., insecticide testing) are generally not possible within production plants. He outlined Texas's contingency plan: upon confirmation, rapid delimiting surveillance around the index site, immediate sterile fly releases (within ~48 hours), and a 6.5-km quarantine with "stop animal movement" measures to prevent spread and avoid statewide trade disruptions. Texas would redirect COPEG production to support aerial and ground releases for several weeks, while leveraging existing traceback/trace-out systems used for other regulated pests to identify animal movements and get ahead of secondary foci. On genetic traceback, he noted USDA's use of SNP "fingerprinting" tied to regional reference panels, but warned that low diversity in the current Central American incursion (linked to a narrow Colombian source) can limit fine-scale attribution and case-to-case linkage. He closed by emphasizing the need for better attractants or pheromones, contemporary genetic reference material, and robust producer reporting-acknowledging that producer notification, though imperfect, remains a critical detection pathway.

Dr. Lindsay Campbell. New World Screwworm: Geospatial data & models as decision support tools

Dr. Lindsay Campbell then situated surveillance and response within a modern geospatial and modelling toolbox. She contrasted historical, hand-drawn distribution maps with today's near-real-time dashboards and freely available environmental datasets (temperature, precipitation, humidity) and higher-resolution satellite products that differentiate land uses and livestock intensity. She reviewed modelling approaches that inform where and when to act: species distribution models that fuse historical occurrence with climate to flag environmentally suitable areas; population dynamics models that integrate temperature-dependent development to optimize timing of interventions (including SIT); and dispersal/connectivity models that incorporate host densities, landscape "friction" (e.g., altitude, distance to roads), and wind events to anticipate likely movement corridors and "pinch points" for targeted surveillance or control. She highlighted advances in next-generation sequencing and landscape genetics to infer connectivity among populations, while echoing Kaufman that low genetic diversity can constrain resolution. Her throughline was integration: data streams and models are most valuable when embedded in decision-support systems that improve transboundary communication, guide resource allocation in time and space, prioritize where SIT could be most effective, support education and outreach targeting, and enable evaluation of control performance.

In discussion, the panel converged on surveillance as the weakest link and a priority for innovation: more specific lures or pheromones to reduce bycatch and labor, standardized and interoperable data workflows across borders, and mechanisms to fuse producer reports with geospatial and genetic intelligence. Participants underscored the importance of rapid, pre-planned outbreak operations (quarantine, movement controls, immediate SIT) that minimize trade impacts, and the need to expand contemporary genetic reference collections to strengthen traceback. The overarching message was that preparedness depends on coupling operational readiness (quarantine and SIT logistics) with improved detection sensitivity and modern, decision-oriented modelling.

Panel 2: Sterile Insect Technique and New Biotechnologies Dr. Daniel Hahn, University of Florida; Dr. Alejo Menchaca, INIA Uruguay; Moderator: Joshua Taylor, FONTAGRO

Dr. Dan Hahn. An overview of phased conditional approaches to sterile insect technique (SIT) for the New World Screwworm in Latin America challenges and opportunities

Dr. Daniel Hahn framed SIT as the immediately available tool for NWS control and situated it within a phased, conditional pathway to operations. Drawing on experience from mosquitoes, fruit flies and moths, he emphasized that program success depends on site selection and baseline data, followed by small pilots that evolve into operational releases only after performance criteria are met. He distinguished four SIT use cases - suppression, containment, prevention and eradication - and argued that, in the current Latin American context, local suppression is a realistic medium-term objective, with eradication reserved as a longer-term ambition. He reviewed practical bottlenecks in the NWS pipeline - strain choice and mating compatibility, mass-rearing, the absence of an efficient male-only line, sterilization, process and product quality control, transport and release logistics - and noted that universities can help optimize these steps. He cited prior Southern Cone pilots (2007-2009) that demonstrated dispersal and measurable suppression, while observing that timing (avoiding peak season) and adequate fly supply are critical. He also outlined viable financing models seen in other SIT programs (public, joint governmental, public-private, and producer-funded) and stressed that innovation (e.g., sex separation, improved sterilization and workflow QA/QC) can improve both efficacy and cost-effectiveness.

Dr. Alejo Menchaca. Potential contribution of CRISPR-based technology for pest control.

Dr. Menchaca introduced Uruguay's pioneering research into CRISPR-based gene drives. He described proof-of-concept studies targeting female fertility genes, aimed at driving population collapse. He stressed that such technologies are still in early development and require strict containment and phased testing. The INIA program is advancing gene-drive concepts targeting female fertility, but remains in R&D and will require phased validation under containment, robust biosafety assessments, and coordinated regulatory pathways before any field consideration. He positioned these technologies as future additions to an integrated toolbox-intended to complement, not replace, SIT and conventional measures. He called for regional collaboration on biosafety and regulatory frameworks, warning that fragmented oversight could slow progress.

In discussion, the panel compared deployment timelines and regulatory prospects. Hahn reiterated that traditional, radiation-based SIT is the only deployable option today, whereas gene-drive approaches-while promising-face R&D and regulatory lead times. Both speakers agreed the two strategies are complementary: gene drives would still require substantial production and rigorous process/product quality control, much like SIT. On regulation, the panel noted that acceptance can accelerate under pressing public-health or agricultural threats, but emphasized the importance of laying groundwork now-harmonized, case-by-case biosafety frameworks, social and environmental impact assessment, and transparent communication-so that innovative tools can move more quickly once technically validated. The overarching message was pragmatic: start by building demonstrated successes in contained geographies with SIT and integrated management, while investing in the science, capacity and governance needed to bring next-generation genetic tools online responsibly.

Special Presentation: Workforce Development for NWS in Latin America and US. Dr. Justin Talley, Oklahoma State University

Dr. Justin Talley, Head of the Department of Entomology and Plant Pathology at Oklahoma State University, addressed the theme of workforce development for NWS control. He began by emphasizing the critical role of veterinary entomologists in understanding the biology and ecology of the pest, as well as the host–parasite relationship in livestock systems. Veterinary entomologists, he noted, not only bring technical expertise to species identification and pest management but were also central to the development of the Sterile Insect Technique (SIT). However, he underlined a concerning decline in veterinary entomology capacity within academic institutions, which has left gaps in training and expertise just as NWS poses renewed risks in the Americas.

Dr. Talley argued that building workforce capacity requires intentional partnerships across institutions and countries. He described recent initiatives where undergraduate and graduate students from the United States were taken to the COPEG facility in Panama to gain exposure to SIT operations and surveillance systems. Such immersive experiences, he explained, help create a pipeline of trained professionals capable of addressing foreign animal disease challenges like NWS. FONTAGRO, in his view, already offers a strong framework to expand these types of capacity-building collaborations across the region.

He then outlined a phased approach to training. The first phase would provide foundational knowledge on NWS biology, surveillance, and foreign animal disease response, in partnership with Latin American institutions. The second phase would immerse students in operational settings such as COPEG and other regional facilities, exposing them to mass-rearing procedures, quality control systems, field surveillance, and pilot testing of new monitoring tools. A third phase would focus on long-term impacts by building a sustainable exchange model in which students from both the United States and Latin America can train across institutions, creating a truly two-way learning process.

Dr. Talley also linked this workforce development agenda to broader goals of biosecurity and agricultural resilience. Drawing on his role as Director of the Institute of Biosecurity and Microbial Forensics, he stressed that training must not only build technical skills but also prepare future professionals to engage effectively with government stakeholders, producers, and local communities. In his conclusion, he underscored that Latin American expertise is indispensable to this process, and that strengthening institutional collaboration will be essential for developing a generation of professionals equipped to confront the challenges posed by NWS in the region.

Panel 3: On-Farm Control Measures and Private Sector Involvement. Dr. Phil Kaufman, Texas A&M; Dr. Edwin Burgess, University of Florida; Alejandra Díaz, IICA Costa Rica; Moderator: Jasmine Bruno, FFAR

Dr. Philip Kaufman (Texas A&M University)

Kaufman emphasized that eradication of NWS requires more than the Sterile Insect Technique (SIT); it must be supported by integrated pest management and strong producer engagement. He described on-farm practices that reduce NWS infestations, such as routine animal inspections, prevention of wounds through facility maintenance, ectoparasite control (notably ticks), and treatment of newborn umbilical cords. He underscored the need for immediate reporting, stressing that sterile flies can only be released effectively where infestations are detected.

Dr. Kaufman also discussed the regulatory gap in the U.S.: many insecticides effective against NWS are not formally registered for this use, creating legal and practical challenges. Producers are being trained to recognize symptoms (e.g., painful lesions, distinctive odor, visible larvae) and to submit larvae through official diagnostic channels. He urged farms to develop proactive management plans for procedures like castration or dehorning and ensure supplies and veterinary support are readily available. Looking ahead, he identified short- and medium-term needs, including updated treatment protocols, development of new systemic insecticides, and evaluation of lethal bait systems. He also stressed the importance of extension services in producer training and dissemination of best practices.

Dr. Ted Burgess (University of Florida)

Burgess focused on the role of chemical controls and the challenge of insecticide resistance. He explained the life cycle of NWS and how current treatments mainly target larvae in wounds or adult flies, often through wound dressings, prophylactic applications, or broader ectoparasite control products. He highlighted knowledge gaps, particularly the limited scientific confirmation of resistance mechanisms in NWS. Although metabolic resistance linked to esterase activity has been suggested, robust studies confirming these mechanisms are lacking.

Burgess reviewed available chemical classes (organophosphates, pyrethroids, avermectins, isoxazolines) and noted that while resistance has been reported in some, the data remain thin and outdated. He advocated for confirmatory studies using toxicological and molecular methods to characterize resistance mechanisms more reliably. In terms of innovation, he pointed to novel or re-imagined chemistries (such as spinosyns, microbial toxins, diamides, and selective organophosphates) as promising avenues. He emphasized the importance of rotating insecticides with different modes of action to slow resistance and of exploring species-specific chemistries that could minimize risks to livestock and humans.

Dr. Alejandra Díaz, IICA

Alejandra Díaz emphasized that producers are the first line of defense. She presented extension messages such as “sin heridas, no hay GBG”, highlighting wound prevention, safe infrastructure, and rapid treatment. She shared examples of communication campaigns through fairs, radio, and social media, underscoring that farmer education is as critical as technology.

In discussion, panelists stressed that private sector actors - particularly veterinary pharmaceutical companies and producer associations - have critical roles in addressing current gaps. Kaufman highlighted the importance of maintaining updated estimates of economic impacts, which can influence political decisions and trade policies, noting that cattle imports from Mexico to the U.S. remain halted until NWS is controlled. Burgess added that greater transparency on product use and producer practices in Latin America would help private companies align their investments with field realities and accelerate the development of new tools.

Overall, the panel reinforced that while SIT remains central to eradication strategies, sustainable control in the short to medium term depends on effective farm-level management, improved chemical tools, resistance monitoring, and strong collaboration with the private sector.

Closing Discussion and Action Points

Overview

The closing session of the workshop emphasized broad consensus on the urgent need for a coordinated and team-based response to the New World Screwworm (NWS) across Latin America and the Caribbean. Participants highlighted that progress will depend on combining the expertise of universities with the operational capacity of public agencies and the innovation of the private sector. They also underscored the importance of bringing in additional partners, such as the USDA, to strengthen the collective effort.

Speakers agreed that future strategies must build on the extensive body of research and institutional experience that already exists. Rather than starting from scratch, the group stressed the need to update and integrate ongoing work, while simultaneously addressing critical gaps such as surveillance capacity, producer engagement, and regulatory alignment.

Cross-Cutting Themes

Several themes emerged consistently across the panels and discussions. First, surveillance remains the weakest link in the regional defense system. Workshop participants pointed to the need for modernized tools, harmonized standards, and improved coordination, with promising opportunities in artificial intelligence-enabled trapping and environmental DNA methods.

Second, while the Sterile Insect Technique (SIT) continues to be the foundation for NWS control, it must be complemented by new technologies to ensure long-term sustainability. Genetic innovations, novel chemistries, and expanded extension services were all noted as essential elements of future strategies.

Third, on-farm practices and producer engagement are indispensable. Without farmer awareness, routine wound management, and adherence to treatment protocols, no national eradication program will succeed. Several panelists underlined the importance of developing farm-level management plans and extending training not only to producers but also to livestock transport operators.

Finally, the group reiterated that NWS is a transboundary challenge, requiring robust regional cooperation. Cross-border coordination, financing mechanisms, and harmonized regulations are indispensable to prevent reinvasion and to ultimately move from control to eradication. Updated assessments of the economic impact of outbreaks were also identified as critical for maintaining political will, shaping trade policies, and mobilizing resources.

Next Steps

Organizers confirmed that a technical note and a policy brief will be prepared to capture the main outcomes of the workshop. These documents will be circulated to participants for feedback and refinement. Planning is also underway for an in-person meeting at the University of Florida after October 2025, which will provide a platform to advance technical and policy dialogue. A bilingual recording of the workshop will be made available on YouTube to ensure wide accessibility.

Looking forward, participants expressed strong interest in developing a roadmap not only for control but also for eradication. This roadmap will align short-, medium-, and long-term actions, spanning immediate on-farm measures, medium-term research and validation of new tools, and long-term eradication goals.

Executive-Level Priorities

At the executive level, five priorities were identified:

1. **Finalize proof and validation** (Phase II): Advance laboratory and contained field trials to confirm the safety, effectiveness, and ecological stability of gene drive systems and other emerging technologies.
2. **Strengthen infrastructure**: Scale up laboratories, mass-rearing facilities, and monitoring systems, while training technical teams across the region.
3. **Establish a regulatory roadmap**: Work with national biosafety authorities to build harmonized, case-by-case frameworks for genome editing and gene drive oversight at the hemispheric level.

4. **Mobilize resources and partnerships**: Secure blended funding from governments, development banks, and philanthropic foundations, while deepening collaboration among universities, animal health agencies, and One Health networks.
5. **Prepare for implementation** (Phase III): Design national control program blueprints, communication strategies, and farmer engagement models to enable safe and region-wide eradication.

Scientific and Technical Priorities

The scientific agenda ahead includes completing proof-of-concept trials, scaling up mass-rearing and laboratory infrastructure, and establishing monitoring systems to track gene drive spread, potential resistance, and ecological impacts. Resistance management and the development of novel chemistries were also identified as critical priorities.

Regulatory and Governance Priorities

A harmonized regional framework is required to avoid fragmented national approaches. Countries will need to strengthen their regulatory systems for biosafety and gene editing while also conducting rigorous social, environmental, and economic impact assessments. Mitigation strategies for unintended consequences must form part of this regulatory roadmap.

Partnerships and Coordination Priorities

Sustained scientific collaboration was highlighted as essential. The workshop reaffirmed the importance of building on the partnerships already established with universities such as NC State, Texas A&M, and the University of Florida, as well as with institutions like INIA Uruguay, IDB, and FFAR. Expanding this network to include public health authorities was also proposed, recognizing NWS as a One Health challenge.

Funding was identified as a decisive factor. The group proposed blending government contributions with development bank financing and philanthropic support from organizations such as the Gates Foundation, Rockefeller Foundation, and Bezos Earth Fund. A long-term financial mechanism will be required to ensure continuity in eradication efforts and population monitoring.

Conclusion

The workshop closed with a strong sense of momentum and shared responsibility. There was consensus that the eradication of the New World Screwworm is an ambitious but achievable goal, provided that partners act collectively, invest in both proven and emerging tools, and sustain coordination across borders. The outcomes of this workshop mark the beginning of a structured process to move from discussion to concrete action, with the clear aspiration of delivering not only control but eventual eradication of NWS in the region.

Annex. I Participant Bios

Opening Session

	**Eugenia Saini** **Executive Secretary of FONTAGRO.** Agronomist and Doctor in Agricultural Sciences, born in Argentina, with a deep-rooted passion for advancing agriculture, improving food security, and enhancing the lives of farmers. I am committed to fostering impactful public and private alliances that drive international collaboration in food and agricultural science, innovation, and sustainable agribusiness. My career spans both public and private sectors, with experience at national and global levels. Honored to have been a Fulbright Scholar at Cornell University and, more recently, an Abshire-Inamori Leadership Academy (AILA) Scholar at the Center for Strategic & International Studies (CSIS) in Washington, D.C., I continue to dedicate my work to building resilient food systems and promoting innovation in agriculture globally.
	**Dr. Andrew Short** **Chair and Professor, Insect Biodiversity** Dr. Short joined the Entomology and Nematology Department as Chair and Professor in 2023. Dr. Short's research focuses on the evolution and biodiversity of aquatic insects grouped into three primary areas: 1. Biodiversity discovery through fieldwork and taxonomic revisions 2. Inferring evolutionary relationships among lineages using varied sources and data, and 3. Exploring macroevolutionary patterns and the processes that generate them using these phylogenetic relationships.
	**Dr. Adegbola Adesogan** Dr. Adegbola Adesogan is the **Director of the Global Food Systems Institute and Professor of Ruminant Nutrition at the University of Florida**, where he also serves as Associate Vice President for Global Engagement. He leads the Feed the Future Innovation Lab for Livestock Systems, which manages over 60 projects that use animal-source foods to improve nutrition, health, and incomes in nine African and Asian countries. His research focuses on enhancing the productivity and sustainability of livestock systems through improved forages, feed additives, and nutritional strategies. Dr. Adesogan holds a B.S. in Agriculture from the University of Ibadan and earned his M.S. and Ph.D. in Animal and Forage Science from the University of Reading in the United Kingdom. He has published more than 200 scientific papers and secured over $65 million in research funding. He is a recipient of several honors, including the Bouffault International Animal Agriculture Award from the American Society of Animal Science, and is widely recognized for his contributions to sustainable livestock development and international agricultural research.
	**José Urdaz** José H. Urdaz-Rodríguez, Doctor of Veterinary Medicine (DVM), Master of Preventive Veterinary Medicine (MPVM), and Doctor of Clinical Sciences in Animal Production, is a recognized leader in the fields of agricultural health, food safety, and veterinary public health, with over 25 years of international experience. He currently serves as the Manager of the Agricultural Health, Food Safety, and Quality Program (SAIA) at the Inter-American Institute for Cooperation on Agriculture (IICA). Throughout his career, Dr. Urdaz-Rodríguez has designed and managed high-impact programs in Latin America, the Caribbean, North America, and Europe, driving the strengthening of national capacities in animal health, plant health, food safety, and agri-food quality. His work has been key in the modernization of veterinary services, responses to transboundary health emergencies, and the promotion of science-based public policies. Prior to his current role at IICA, he held multiple strategic positions at the United States Department of Agriculture (USDA), including serving as Senior Animal Health Advisor at the Food and Agriculture Organization (FAO) of the United Nations. At the USDA, he led national programs such as the Bovine Spongiform Encephalopathy (BSE) program and coordinated bilateral animal health relations between the United States and Mexico. His integrative approach is deeply aligned with the principles of One Health, promoting collaboration among the human, animal, and environmental health sectors. He has also demonstrated outstanding skills in building strategic alliances, mobilizing resources, and managing multicultural teams, always guided by a commitment to sustainability, innovation, and institutional strengthening. José H. Urdaz-Rodríguez is also a passionate advocate of lifelong learning, as evidenced by his executive leadership studies at renowned institutions. In his personal life, he finds inspiration in his family, enjoys outdoor activities, and explores new cultures through travel and gastronomy.

Panel 1: Surveillance, Outbreak Response, and Risk Modelling

	**Dr. Phil Kaufman** Phillip Kaufman, PhD, is a professor in the Department of Entomology at Texas A&M University. His research program focuses on the development of new pest management tools for livestock and companion animal systems. Beef cattle, dairy cattle and horses are the predominant livestock in Texas and are one focus of this program; while investigations on improvement for ectoparasite management on companion animals and wildlife are the second focus. Insecticide resistance and control failures are commonplace for many fly and tick pests; therefore, innovative systems are needed to assist in their management. However, to successfully manage these pests, studies investigating their biology and ecology are needed. The role that biological control can play in assisting with pest control is another research avenue. Producer pesticide selection and the resultant impacts on non-target, beneficial arthropods in grazing systems are of particular interest. He has secured $3.9M in research support and has published over 118 peer-reviewed manuscripts and over 85 Extension publications. He currently serves as Department Head for Entomology.
	**Dr. Lindsay Campbell** Assistant Professor, Spatial Ecology. I am interdisciplinary scientist with a focus on the spatial ecology of medically important arthropod vectors. My research focuses on investigating distributions, abundances, and functional connectivity of vector species. I use a variety of tool sets to investigate these questions, including geographic information systems and remotely-sensed satellite imagery, and I draw from methods developed in the fields of distributional ecology, landscape ecology, and landscape genetics. Identifying the potential distribution of medically important vector species provides a first step toward understanding where pathogen transmission may occur. Several factors influence vector distributions, including broad-scale climatic factors, such as temperature and precipitation patterns, and local biotic habitats, including land use and cover. Changes in vector distributions may result from a variety of sources, including movement of vector species into new geographic regions, human disturbance to the landscape, and climate change. Advances in modeling approaches facilitate prediction of vector species distributions across geographic areas, and outputs from these models produces maps showing where there may be suitable habitats for a species to survive. These maps can be used to inform veterinary and public health agencies, along with vector control districts, to help improve surveillance efforts.

Panel 2: Sterile Insect Technique and New Biotechnologies

	**Dr. Daniel Hahn** Daniel A. “Dan” Hahn is a Professor in the Department of Entomology & Nematology at the University of Florida. Dan has worked with sterile insect technique in agricultural insect pests for more than 15 years and in the last 5 years has worked extensively on mosquitoes in collaboration with Lee County Mosquito Control District & Anastasia Mosquito Control District in Florida, USA as well numerous international programs through his consultancy with the United Nations FAO/IAEA Insect Pest Control Subsection. Dan has a Bachelor of Science from Florida State University, a PhD in Insect Science from University of Arizona, postdoctoral experience at Ohio State University, and has been at University of Florida since 2005. Although Dan is an evolutionary biologist and physiologist by training, he has become increasingly involved in understanding how to structure SIT programs for maximum efficiency in producing sterile males (process quality control) and to produce the highest quality sterile males for use in the field (product quality control). Dan’s other interests include genetic techniques for improving sterile male quality and development of phytosanitary irradiation treatments.
	**Dr. Alejo Menchaca** Dr. Alejo Menchaca is Director of the Animal Health Research Platform at INIA Uruguay. A veterinarian with a PhD in animal reproduction and biotechnology, he has more than 20 years of experience in reproductive physiology, assisted reproductive technologies, and genetic innovation applied to livestock. Dr. Menchaca has led national and international projects on different reprodutive technolgies and gene editing, contributing significantly to the advancement of reproductive biotechnology in South America. He currently directs a pioneering research program at INIA that explores the use of CRISPR-based technologies to control the New World Screwworm, in adviser with international partners including North Carolina State University. His work bridges applied research and regional cooperation, aiming to deliver innovative solutions to protect livestock health, productivity and sustainability in Latin America.

Panel 3: On-Farm Control Measures and Private Sector Involvement

Dr. Edwin Burgess

Assistant Professor, Veterinary Entomology.

Dr. Burgess is an Assistant Professor of Veterinary Entomology at the University of Florida. His research focuses on the development of control tools, especially pesticides, for the management of arthropod pests in livestock as well as pests of public health concern. Dr. Burgess uses an interdisciplinary approach to his research, combining molecular, biochemical, toxicological, and electrophysiological skillsets to achieve his research goals. As part of his appointment at the University of Florida, Dr. Burgess interacts with state cattle producers to help solve problems that lead to improved profitability and animal welfare. Dr. Burgess has spent most of his career studying flies, including house flies, horn flies, stable flies, blow flies, eye gnats, and mosquitoes. Dr. Burgess also has numerous historical and current collaborations with the pesticide product development industry, which he leverages to meet stakeholder needs in the state of Florida.

Dr. Phil Kaufman

Phillip Kaufman, PhD, is a professor in the Department of Entomology at Texas A&M University. His research program focuses on the development of new pest management tools for livestock and companion animal systems. Beef cattle, dairy cattle and horses are the predominant livestock in Texas and are one focus of this program; while investigations on improvement for ectoparasite management on companion animals and wildlife are the second focus. Insecticide resistance and control failures are commonplace for many fly and tick pests; therefore, innovative systems are needed to assist in their management. However, to successfully manage these pests, studies investigating their biology and ecology are needed. The role that biological control can play in assisting with pest control is another research avenue. Producer pesticide selection and the resultant impacts on non-target, beneficial arthropods in grazing systems are of particular interest. He has secured $3.9M in research support and has published over 118 peer-reviewed manuscripts and over 85 Extension publications. He currently serves as Department Head for Entomology.

Alejandra Díaz Rodríguez

International Specialist in Agricultural Health and Food Safety – IICA

Ms. Díaz is an International Specialist in Agricultural Health and Food Safety at the Inter-American Institute for Cooperation on Agriculture (IICA). She holds a degree in Food Industry Engineering and a Master of Science in Food Technology from the Universidad Nacional Agraria La Molina in Peru.

Her professional profile combines deep expertise in international standards, food safety and quality management systems, traceability, agricultural health, and regional agri-food policies. With a strong foundation in regulatory processes at national and regional levels, Ms. Díaz has also worked extensively on the development of strategies to enhance business competitiveness and facilitate agri-food exports. Her academic career includes teaching roles at several leading universities.

Since 2024, she has served as Regional Coordinator of the IICA–APHIS/USDA Work Plan for training and risk communication related to the New World Screwworm (NWS) in Central America and Mexico. In this role, she leads efforts to build capacities and promote behavioral change among producers, veterinarians, health workers, communities, and media professionals. Her work fosters an integrated sanitary management approach, rooted in One Health principles, and emphasizes good livestock practices, wound care, community education, and multisectoral coordination.

Ms. Díaz has received recognition from national and regional producer and exporter associations for her contributions to improving the quality and competitiveness of agri-food systems. Her published work covers topics such as good agricultural and manufacturing practices, risk management, animal emergency response, and traceability.

Dr. Jasmine Bruno. Moderator.

Dr. Jasmine Bruno joined the Foundation for Food & Agriculture Research (FFAR) in August 2023 as a scientific program director. She manages the Animal Production portfolio within FFAR's Cultivating Thriving Production Systems Priority Area.

Prior to joining FFAR, Bruno worked at the International Livestock Research Institute (ILRI), researching system-appropriate genetics to support food security and livelihoods in sub-Saharan Africa. While at ILRI, Bruno collaboratively designed and implemented large-scale research for a development program working with households in Ethiopia, Nigeria and Tanzania to identify local and tropically adapted poultry breeds appropriate for low-input production systems.

Prior to her role at ILRI, Bruno worked with the livestock team at the Bill & Melinda Gates Foundation. She contributed to the livestock team's strategy and served as a relationship manager with several organizations. Bruno also conducted research in the U.S. beef sector, examining the causes and consequences of social and ecological change in northeastern Colorado ranching communities. She has co-authored multiple publications, including articles on the diffusion of innovations in livestock systems, land-use change and livestock system transformations.


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