



GLOBAL AGENDA FOR  
SUSTAINABLE LIVESTOCK

**KANSAS STATE**  
UNIVERSITY

9TH MULTI-STAKEHOLDER PARTNERSHIP

# GLOBAL AGENDA FOR SUSTAINABLE LIVESTOCK

INNOVATION FOR SUSTAINABLE LIVESTOCK SYSTEMS

KANSAS STATE UNIVERSITY  
MANHATTAN, KANSAS, USA  
SEPTEMBER 9-12, 2019

**2019 GASL** more than 300 participants from 33 countries learning, discussing, & developing ideas for sustainability in the global livestock sector through innovation





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## WELCOME TO THE 2019 MULTI-STAKEHOLDER PARTNERSHIP MEETING

The 9th annual Global Agenda for Sustainable Livestock (GASL) Multi-Stakeholder Partnership (MSP) Meeting took place at Kansas State University in Manhattan, Kansas, in the United States on 9 to 12 September 2019. More than 300 participants from 33 countries representing the livestock industry, agricultural research, global non-governmental organizations, social movements, and several governments came to Kansas to focus on identified challenges, discuss their visions for the future, and work toward sustainability for this critical sector.

*“Farming needs to be progressive, looking into the future, along with people who are feeding the world while simultaneously helping other sectors, such as the environment.”*



- Nitya Sambamurti Ghotge  
ANTHRA

The theme for the week, **“Innovation for Sustainable Livestock Systems,”** provided a valuable framework for presentations, discussions, and tours to

expand knowledge and drive participants toward innovative integrated solutions

and firm commitment for action from all stakeholders. MSP meeting attendees had the opportunity to network, learn, share research and experiences, and help foster dialogues to address livestock sustainability at the regional and global level. Presentations, panels, posters, field tours, and discussion during the week focused on the theme by highlighting examples from throughout the world of innovative solutions to address sustainable livestock production and agrifood systems.

Throughout the week, participants focused on the four global sustainability domains adopted by GASL from the 2018 Global Forum for Food and Agriculture Communiqué and which guide GASL’s work:

- Food and Nutrition Security
- Livelihoods and Economic Growth
- Animal Health and Welfare
- Climate and Natural Resource Use

For the first time, the annual event was hosted at a university, demonstrating the role that research and higher education can play in achieving the objectives shared by GASL members. Universities are uniquely equipped, by virtue of their broad ranging subject matter expertise and

global experience, to respond to the multi-dimensional issues that impact global food security and natural resources.

## DAY 1 ▪ SCIENCE DAY

The conference began with a welcome from Dr. Chuck Taber, provost and executive vice president of Kansas State University, who welcomed the event to the first operational land-grant university in the United States. Kansas State University has been leading the way in agriculture, food, and natural resources in the U.S. since 1863, and remains committed to serving Kansans and the world through learning, discovery, and engagement. Kelsey Olson, the assistant secretary for the Kansas Department of Agriculture, also welcomed the visitors to Kansas, which has been a hub of livestock production throughout the state’s history.

The four global sustainability domains provided the basis for the plenary sessions featuring a breadth of expertise and perspectives. The first session, **Food and Nutrition Security**, focused on the critical nature of animal-based protein for the advancement of food security and proper nutrition across the globe, especially in low-

# 300+

participants  
at the 2019 GASL meeting





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and middle-income countries. Presenters spoke about the contributions of animal-source foods to nutrition and food security, especially for infants and young children. They also addressed innovative methods to nourish the world in a safe, responsible and sustainable way with a strong link toward environmental stewardship.

The second session concentrated on the issue of **Livelihoods and Economic Growth**,

### Improving collaboration between research and private sector to get sustainable livestock innovation into use

During one parallel presentation, Shirley Tarawali and Tom Randolph from the International Livestock Research Institute (ILRI) provided examples of improved collaborations between research and the private sector.

As described during their presentation, livestock are the mainstay of sustainable livelihoods across the developing world and provide people with basic livelihoods, incomes, food and nutrition. Yet the hard evidence behind these statements is scattered and recommendations are complex due to the multiple roles livestock play in development. As part of a wider effort bringing together evidence showing why investment in sustainable livestock development is necessary, ILRI shared examples of “change stories” from projects showing how their innovative livestock interventions are making a positive difference to the lives and livelihoods of people in developing countries.

examining the contribution of sustainable livestock on economic development, with an emphasis on diversity and growth. Awareness and engagement by participants can ensure that livestock roles in livelihoods and economic growth are included in the development of policies and agendas that support business and trade innovations. Speakers discussed how technological innovations help small farmers improve their livelihoods and thus their economic base, especially in remote areas.

**Animal Health and Welfare** was the focus of the third session, which included an examination of the potential impact of animal diseases, the threat of zoonoses and pandemics, the risk of foodborne diseases, the emergence of antimicrobial resistance, and the importance of animal welfare. Presenters shared information about innovative efforts to address these issues in unique and effective ways, from a grassroots initiative for on-farm animal care to one that could be adapted for different countries’ specific circumstances, all with a goal of ensuring better animal and human health.

The final session, **Climate and Natural Resource Use**, addressed the role of livestock production within the context of larger climate discussions. The variety of viewpoints shared by presenters reflected the wide

diversity of production methods, from small farms with a few head of cattle to intensive cattle feedlots with thousands of cattle. The contribution of livestock production to the food supply and to future food security was considered with an eye toward the environmental impacts. Better use of resources — including nutrients, water, and energy — was part of the discussion.

During the lunch session, Dr. Alison Van Eenennaam from the University of California, Davis, shared her expertise on the use of biotechnology and genomics in sustainable livestock systems.

The remainder of the first day consisted of opportunities for dialogue on focused topic areas, with leaders in those fields providing expertise on the subject matter. These parallel programs included **Innovations for Smallholders** which featured discussions on the impacts of a pay-it-forward livestock transfer and training program in rural Nepal, equal access to technology and innovation across livestock systems, boosting sustainable rural livelihoods and economic growth, connecting nomadic camel milk producers to supermarkets in Indian metros, and innovation awareness raising campaign towards SDG2. The program on **Livestock Research Methodology** featured speakers discussing proper design and



38  
posters presented  
at the 2019 GASL meeting





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conducting of livestock and field research and demonstration, and the challenge of harmonizing farmer interview data from 30+ countries and conducting coherent analyses. The program on **Dairy** featured speakers discussing contributions of dairy products to environmental impacts and nutritional supplies from United States agriculture, determinants for dairy farmer decision-making on manure management strategies, U.S. Dairy-coordinated agricultural projects overview and projects, and lifetime performance as key to sustainable dairy production. The program on **Tools and Frameworks** featured speakers discussing the long-term challenges for livestock sustainability, common frameworks of reference for sustainable livestock — an integrative approach to measuring sustainability, the manure challenge — an expedited pathway to circular farm systems, and supporting innovations for sustainable livestock in smallholder livestock systems.

One of the key initiatives of GASL is the Action Networks where the bulk of the analysis and field work of GASL occurs. The program on **GASL Action Networks** featured speakers discussing closing the efficiency gap, livestock for social development, the livestock antimicrobial partnership (LAMP), and livestock

environmental assessment and performance (LEAP).

## DAY 2 ▪ POLICY DAY

The second day of the GASL conference began with a report from the experts in the Action Networks, who shared examples of implementation of activities and evidence of information exchange, including:

- Addressing challenges related to regional ownership and financial sustainability.
- Evaluating the evidence of a positive causal relationship between ownership of dairy animals, dairy consumption, and child growth in low- and middle-income countries.
- Promoting the use of common animal welfare indicators and sharing case studies for animal welfare and sustainability.
- Measuring practice change and modeling sustainable livestock options and the adoption process.
- Identifying sustainable cattle ranching options.
- Sharing good practices for responsible use of antibiotics.
- Creating constructive conversations to guide policy, identify shared solutions, educate, and lead to more integrative knowledge and consistency of the whole system.

The Policy Panels then shared reflections across the four global livestock sustainability domains.

The morning panel discussion provided five viewpoints on the **Role of Innovation in Sustainable Livestock Systems**. They developed a consensus on the definition of “innovation” and then analyzed what kind of disruptive innovations may be on the horizon, and where they may have an impact in the supply chain, both positively and negatively. Several of the disruptive innovations identified by the panelists are functions of digital agriculture and

### Connecting nomadic camel milk producers to supermarkets in Indian metros: lessons learned

*The journey of Camel Charisma, a social enterprise set up to support Rajasthan’s traditional camel nomads with product development and marketing, was the topic of one parallel program. During the presentation, Ilse Köhler-Rollefson shared some of the innovative aspects of this nomadic system such as putting in place a traceability mechanism, imposing animal welfare standards (no separation of mother and calf), and deep freezing the milk to increase its shelf life to 3 months. Additional benefits of the system include income for camel breeders, lower methane emissions, and the revival of camel numbers.*



# 33

countries represented  
at the 2019 GASL meeting



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technology, including access to real-time information, data management, and social media. In addition, scientific advancements including artificial intelligence, biotechnology, and advanced genetics all open up opportunities to increase production and enhance sustainability.

The afternoon panel turned the discussion to the **Role of International Trade in**

**Sustainable Livestock Systems.** The five panelists addressed the fact that the definition of sustainability varies widely, which adds difficulty when governments are negotiating trade agreements.

*“We are producing the world’s most efficient protein and need to share our practices. We have to find ways to create a global system that’s efficient and at the same time produce a safe and affordable product.”*



- John Niemann  
Cargill

Sustainability includes environmental, social, and economic factors, all of which can look different in different countries. The panelists acknowledged there are trade barriers, saying it’s important to work on vectors of disease, factors in climate change, communicating research to producers and the public, and

streamlining government regulatory systems in order to improve response times.

Small roundtable discussions then allowed for reflection and discussion of the presentations, panels, and the future of sustainable livestock agrifood systems. The various cluster groups focused on public sector and donors, private sector, academia/research, non-governmental organizations and social movements, and multilateral and intergovernmental organizations.

The evening provided several parallel programs focused on separate unique topics. The program on **Land Management and Biodiversity** featured speakers discussing: new directions for silvopasture research at the center for agroforestry; sustainable ranchland management in sub-Saharan Africa; the Mongolian agenda for sustainable livestock; and a 5-layered strategy for improved cattle health, milk quality and biodiversity. The program on **Measuring Impact** featured speakers discussing: a smallholder broiler production model for increased income and improved nutrition, improving the consumption of livestock data, development of two indicators for the qualification of food and land competition of dairy production, and measuring to

manage. The program on **Private Sector Engagement** featured speakers discussing: prize competitions to drive private sector-led growth in livestock production, improving collaboration between research and the private sector to get sustainable livestock innovation into use, a real-world approach to sustainable beef production, and the economics of biosecurity efforts by U.S. swine and cattle producers. The program on **GASL Action Networks** featured speakers discussing: animal welfare, restoring value to grasslands, dairy Asia, and the global network on silvopastoral systems. The Action Networks also examined the multiple functions derived from livestock-grazed grassland systems and a simulation tool for multiple stakeholders to work on together to view the impact of policy and behavior change — both synergies and tradeoffs.

## DAY 3 ■ FIELD TOURS

The third day of the GASL conference consisted of field tours to a variety of agricultural operations throughout the state in four content areas: livestock and environment; animal health, welfare, and antimicrobial resistance; livestock agrifood systems, from farm to fork; and the Kansas State Fair. The Livestock and

# 4

field tours  
at the 2019 GASL meeting





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Environment tour visited a large cattle company, a biological research station, and an agricultural research farm. The Animal Health, Welfare, and Antimicrobial Resistance tour visited a veterinary diagnostic lab, a large livestock market, and a major biosecurity research facility. The Livestock Agrifood Systems tour visited a commercial dairy, a cheesemaker, and a bison ranch. The fourth tour visited the Kansas State Fair in Hutchinson, Kansas.

## DAY 4 ▪ OPPORTUNITIES for INNOVATION

The 9th MSP Meeting of GASL concluded discussions by highlighting opportunities for innovations for sustainable livestock systems. Representatives from the Cluster Groups reported feedback from roundtable discussions related to lessons learned from the Science and Policy days. Participants were challenged to explore how livestock will look in the future. Photo essays and highlights from the field tours were presented by the K-State Research and Extension agricultural communications faculty.

GASL partners from Cluster Groups, Action Networks, and other stakeholders in attendance were invited to share the voluntary actions that will be implemented to use innovation as a booster for sustainable livestock development. GASL partners highlighted the need to support a greater number of farmers to attend future MSP meetings.

GASL Chair Mr. Fritz Schneider provided an introduction to the 2019-2021 GASL Action Plan which seeks to enhance the contribution of the livestock sector to the United Nations Sustainable Development Goals with a multi-stakeholder approach. Alwin Kopse with the Federal Office for Agriculture invited attendees to the 10th MSP Meeting to be held in Delémont, Switzerland, on 14 to 20 June 2020. Jim Butler, a member of the GASL 9th MSP Meeting planning committee and livestock producer, shared his reflections on the diversity of innovations in sustainable livestock systems highlighted during the week. Dr. Ernie Minton, Dean of the College of Agriculture and Director of K-State Research and Extension at Kansas State University, expressed appreciation for the unique opportunity for students, staff, faculty, and Kansas livestock

industry representatives to interact with such a committed and diverse group of stakeholders. Donald Moore, Global Dairy Platform, expressed appreciation for the meeting sponsors.

Berhe Tekola, FAO Director, Animal Production and Health, provided the closing address noting that the 9th MSP Meeting advanced the discussion of scientific evidence on how innovation

can enhance food security, livelihoods and economic growth, animal health and welfare, and climate and natural resource use to promote inclusive growth and foster social and economic justice through livestock production and trade. The 9th MSP Meeting of GASL was closed by GASL Chair Mr. Fritz Schneider, who expressed gratitude to all supporters, sponsors, meeting planners, and participants.

All are invited to continue the dialogue in 2020 in Switzerland.

*“We need good science to control disease. Different perspectives do not mean disagreement. It’s important to reach consensus. Sustainability is a journey rather than a destination.”*



- Jean-Phillipe Dop  
World Organization for Animal Health



34  
parallel programs presented  
at the 2019 GASL meeting





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### KEY MESSAGES from MSP MEETING

- Livestock must be in balance with nature and community needs and analyzed in the context of a broader food system. The system should be integrated into a circular economy aimed at reducing waste and the efficient use of resources.
- Once a new technology or innovation is developed, focus must shift toward its adoption. Emphasis must include the process and adaptation to local needs, not just replication of the new technology.
- Innovation goes at different speeds, with consumers often forging ahead and producers “lagging” behind.
- Traditional knowledge needs to be retained and considered, but it needs to be balanced with scientific research as well.
- Measures to gauge efficiency must be adaptable to capture the diversity of systems.
- Consumers drive production, so there is an increasing need to educate consumers about agriculture and livestock.
- Evidence on the efficiency of sustainable livestock systems can provide consumers a factual basis for diet choices and buying decisions.

- Defining sustainability from the outset is important to spur broader, more holistic conversations.
- Innovations should meet multiple Sustainable Development Goals.
- Given the diversity of livestock systems, there is a need for integrated solutions that meet the specific geographic, economic, and cultural contexts.
- The future of livestock will be increasingly driven by better informed policies and better educated consumers.
- The livestock sector plays an important role in global greenhouse gas emissions and it needs a greater focus on innovations to reduce emission intensity.

### CONCLUDING REFLECTIONS

- Sustainability is a journey rather than a destination.
- Livestock systems are very important to provide sustainable protein for the world.
- An unprecedented global partnership is required to face global sustainability challenges.
- The diversity of livestock systems provides both a challenge and an opportunity

- to develop a diversity of sustainable pathways.
- Harnessing the diversity of views is the only way to produce effective solutions for sustainable livestock.
- Innovation is essential for sustainable livestock development.
- Innovative change in practice can lead to innovative change in policy.
- GASL MSP meetings should consider inviting those who do not support livestock production to attend and share a breadth of viewpoints.
- More farmers and pastoralists should be encouraged and enabled to attend GASL MSPs.
- COAG 2020 on Livestock and 2020 UNFCCC on Agriculture are important opportunities for GASL.

### NEXT STEPS

- GASL will continue the implementation of the 2019-2021 Action Plan.
- GASL will continue its focus in regional and national meetings.
- GASL will organize the global 2020 MSP in Switzerland and the 2021 MSP in China.





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